

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

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

Jami Bailey, Division Director
Oil Conservation Division



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

Operator Signature Date: 2/25/14

Well information;

Operator Encana, Well Name and Number Escrito M32-2408 1H

API# 30-045-35521, Section 31, Township 24 NS, Range 8 EW

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 NSI NSP, DHC
- Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils

Charli Perini
NMOCD Approved by Signature

4-17-2014
Date AV

RECEIVED

Form 3160-3
(August 2007)

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

FEB 26 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT Farmington Field Office

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM 118133
6. If Indian, Allottee or Tribe Name
N/A

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No. N/A
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. Escrito M32-2408 01H
2. Name of Operator Encana Oil & Gas (USA) Inc.		9. API Well No. 30-045-35521
3a. Address 370 17th Street, Suite 1700 Denver, CO 80202	3b. Phone No. (include area code) 720-876-3533	10. Field and Pool, or Exploratory Basin Mancos Gas
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 413' FSL and 60' FWL Section 32, T24N, R8W At proposed prod. zone 400' FSL and 330' FWL Section 31, T24N, R8W		11. Sec., T. R. M. or Blk. and Survey or Area Section 31, T24N, R8W NMPM
14. Distance in miles and direction from nearest town or post office* +/- 37.9 miles southeast of the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM		12. County or Parish San Juan
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) BHL is 330' from west lease line Section 31, T24N, R8W		13. State NM
16. No. of acres in lease NMNM 118133 - 1,240.0 11664.80	17. Spacing Unit dedicated to this well 640 acres - All of Section 31, T24N, R8W 643.00	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. New Mexico State 2 is +/- 1000' NE of wellhead	19. Proposed Depth 5,321' TVD/10,108' MD	20. BLM/BIA Bond No. on file COB-000235 RCVD MAR 31 '14 OIL CONS. DIV.
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,914' GL, 6,930' KB	22. Approximate date work will start* 09/04/2014	23. Estimated duration 25 days DIST. 3

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	Name (Printed/Typed) Katie Wegner	Date 2/25/14
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Title
Regulatory Analyst

Approved by (Signature) 	Name (Printed/Typed) Troy Salyers	Date 3/27/2014
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Title
Petroleum Engineer (Acting AFM) EFO

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, or to knowingly and willfully obstruct any officer or employee of this

(Continued on reverse)
**DRILLING OPERATIONS
AUTHORIZED ARE SUBJECT TO
COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"**

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

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

NMOCDA

DISTRICT I
1626 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 593-6161 Fax: (575) 593-0720

DISTRICT II
811 E. First St., Artesia, N.M. 86810
Phone: (575) 748-1263 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Artesia, N.M. 87410
Phone: (505) 334-6176 Fax: (505) 334-6170

DISTRICT IV
1820 E. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3468

OIL CONSERVATION DIVISION FEB 26 2014

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

Farmington Field Office AMENDED REPORT
Bureau of Land Management

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35521		*Pool Code 97232	*Pool Name BASIN MANCOS GAS
*Property Code 313135	*Property Name ESCRITO M32-2408		*Well Number 01H
*GRID No. 282327	*Operator Name ENCANA OIL & GAS (USA) INC.		*Elevation 6913.5'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	WEST/West line	County
M	32	24N	8W		413'	SOUTH	60'	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	WEST/West line	County
M	31	24N	8W	4	400'	SOUTH	330'	WEST	SAN JUAN

*Dedicated Acres 643 640.00 ACRES ALL OF SEC. 31	*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

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BOTTOM HOLE
LAT. 36.264652° N (NAD83)
LONG. 107.731065° W (NAD83)
LAT. 36.264640° N (NAD27)
LONG. 107.730452° W (NAD27)

ENTRY POINT
LAT. 36.264700° N (NAD83)
LONG. 107.715313° W (NAD83)
LAT. 36.264687° N (NAD27)
LONG. 107.714701° W (NAD27)

WELL FLAG
LAT. 36.264735° N (NAD83)
LONG. 107.713990° W (NAD83)
LAT. 36.264722° N (NAD27)
LONG. 107.713378° 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.

Katie Wegner 2/10/14
Signature Date

Katie Wegner
Printed Name

Katie.Wegner@encana.com
E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JULY 31, 2013
Date of Survey

David Russell
Signature and Seal of Professional Surveyor

DAVID RUSSELL
Certificate Number 10201

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1 LAT. 36.270813° N (NAD83) 3 LAT. 36.270838° N (NAD83)
LONG. 107.732137° W (NAD83) LONG. 107.714150° W (NAD83)
LAT. 36.270801° N (NAD27) LAT. 36.270826° N (NAD27)
LONG. 107.731524° W (NAD27) LONG. 107.713538° W (NAD27)

2 LAT. 36.263546° N (NAD83) 4 LAT. 36.263601° N (NAD83)
LONG. 107.732193° W (NAD83) LONG. 107.714203° W (NAD83)
LAT. 36.263534° N (NAD27) LAT. 36.263588° N (NAD27)
LONG. 107.731580° W (NAD27) LONG. 107.713591° W (NAD27)

ENCANA OIL & GAS (USA) INC.

ESCRITO M32-2408 #01H

413' FSL & 60' FWL

LOCATED IN THE SW/4 SW/4 OF SECTION 32,

T24N, R8W, N.M.P.M.,

SAN JUAN COUNTY, NEW MEXICO

DIRECTIONS

- 1) FROM THE INTERSECTION OF HWY 64 & HWY 550 IN BLOOMFIELD, GO SOUTH ON HWY 550, 35.0 MILES TO M.P. 116.6 (ISR 459).
- 2) TURN LEFT ONTO ISR 459 AND GO 0.7 MILES TO "Y" INTERSECTION.
- 3) TURN RIGHT AND GO 1.9 MILES.
- 4) TURN RIGHT AND GO 0.30 MILES TO PROPOSED L32-2408 WELL PAD WHERE ACCESS IS STAKED BEFORE EAST SIDE OF PAD.

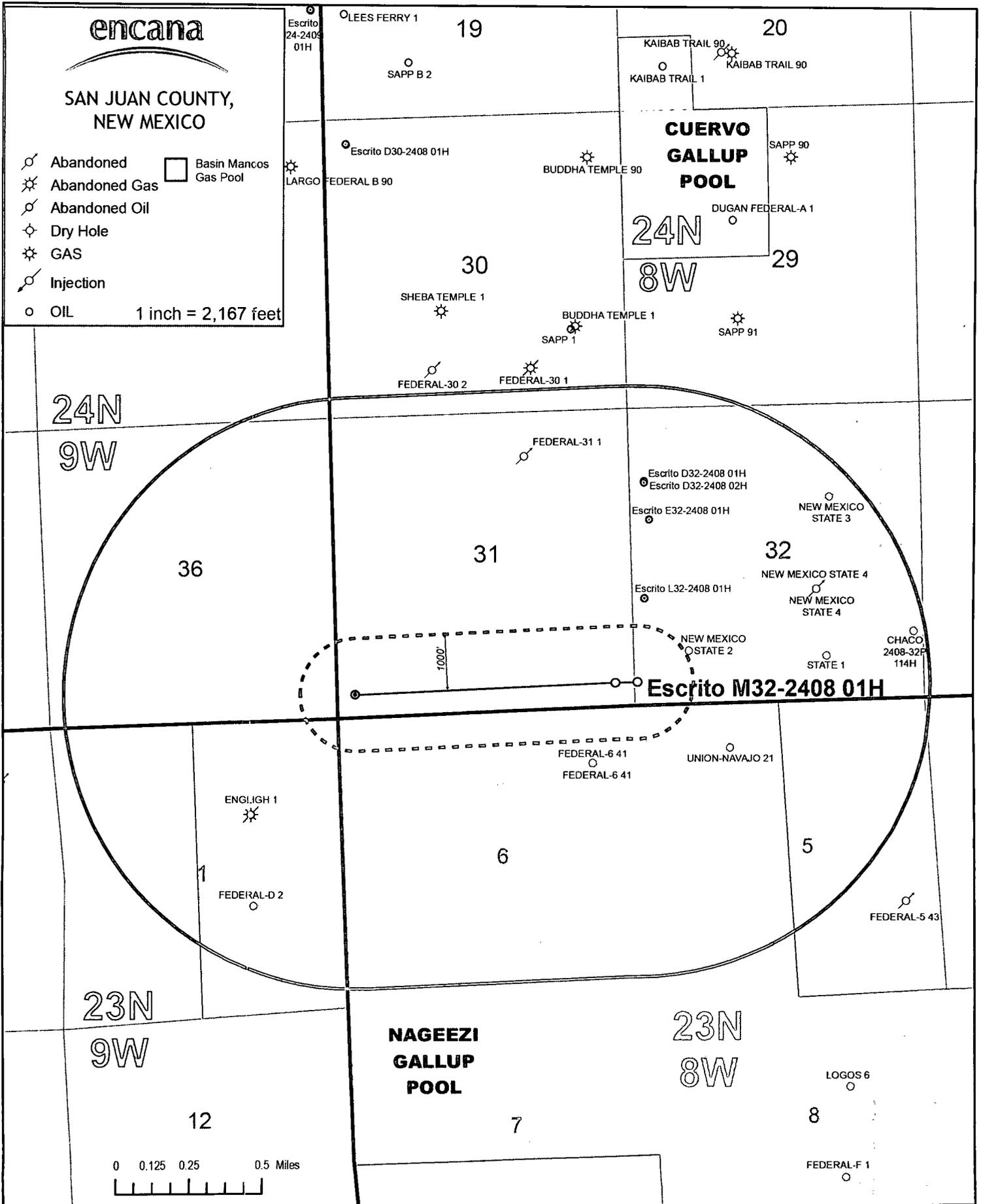
WELL FLAG LOCATED AT LAT. 36.264735° N, LONG.107.713990° W (NAD 83).



encana

SAN JUAN COUNTY,
NEW MEXICO

-  Abandoned
 -  Abandoned Gas
 -  Abandoned Oil
 -  Dry Hole
 -  GAS
 -  Injection
 -  OIL
 -  Basin Mancos Gas Pool
- 1 inch = 2,167 feet



Escrito M32-2408 02H

SHL: SWSW 32 24N 8W

413 FSL 60 FWL

BHL: SWSW 31 24N 8W

400 FSL 330 FWL

Lease Number:

San Juan County, New Mexico

Encana Oil & Gas (USA) Inc. Drilling Plan

1. ESTIMATED TOPS OF GEOLOGICAL MARKERS (TVD)

The estimated tops of important geologic markers are as follows:

Formation	Depth (TVD) units = feet
Ojo Alamo Ss.	929
Kirtland Shale	1,154
Fruitland Coal	1,359
Pictured Cliffs Ss.	1,659
Lewis Shale	1,814
Cliffhouse Ss.	2,441
Menefee Fn.	3,174
Point Lookout Ss.	4,054
Mancos Shale	4,244
Mancos Silt	4,804
Gallup Fn.	5,062

The referenced surface elevation is 6914', KB 6930'

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

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	1,359
Oil/Gas	Pictured Cliffs Ss.	1,659
Oil/Gas	Cliffhouse Ss.	2,441
Gas	Menefee Fn.	3,174
Oil/Gas	Point Lookout Ss.	4,054
Oil/Gas	Mancos Shale	4,244
Oil/Gas	Mancos Silt	4,804
Oil/Gas	Gallup Fn.	5,062

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

3. PRESSURE CONTROL

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

Escrito M32-2408 02H

SHL: SWSW 32 24N 8W

413 FSL 60 FWL

BHL: SWSW 31 24N 8W

400 FSL 330 FWL

Lease Number:

San Juan County, New Mexico

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

Proposed BOP and choke manifold arrangements are attached.

4. CASING & CEMENTING PROGRAM

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

a) The proposed casing design is as follows:

Casing	Depth (MD)	Hole Size	Csg Size	Weight	Grade
Conductor	0'-60'	30"	20"	94#	H40, STC New
Surface	0'-500'	12 1/4"	9 5/8"	36#	J55, STC New
Intermediate	0'-5506'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5306'-10108'	6 1/8"	4 1/2"	11.6#	B80*, LTC New

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

*B80 pipe specifications are attached

Casing design is subject to revision based on geologic conditions encountered

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

Escrito M32-2408 02H

SHL: SWSW 32 24N 8W

413 FSL 60 FWL

BHL: SWSW 31 24N 8W

400 FSL 330 FWL

Lease Number:

San Juan County, New Mexico

b) The proposed cementing program is as follows

Casing	Depth (MD)	Cement Volume (sacks)	Cement Type & Yield	Designed TOC	Centralizers
Conductor	0'-60'	100 sks	Type I Neat 16 ppg	Surface	None
Surface	0'-500'	201 sks	Type III Cement + 1% CaCl + 0.25lb/sk Cello Flake + 0.2% FL, 16ppg, 1.38cuf/sk	Surface	1 per joint on bottom 3 joints
Intermediate	0'-5506'	30% open hole excess Stage 1 Lead: 299 sks Stage 1 Tail: 269 sks Stage 2 Lead: 184 sks	Lead (Stages 1 and 2): PremLite + 3% CaCl + 0.25lb/sk CelloFlake + 5lb/sk LCM, 12.1ppg 2.13cuf/sk Tail (Stage 1): Type III Cmt + 1% CaCl + 0.25lb/sk Cello Flake 14.5ppg 1.38cuf/sk	Surface	1 every 3 joints through water bearing zones
Production Liner	5306'-10108'	None - External Casing Packers	N/A	N/A	N/A

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

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

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

5. WELL PLAN & DIRECTIONAL DRILLING PROGRAM

The proposed horizontal well will have a kick off point of 4726'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5321'/10108'	Gallup

6. DRILLING FLUIDS PROGRAM

a) Surface through Intermediate Casing Point:

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
30"	0-60'/60'	Fresh Water	8.3-9.2	38-100	4-28
12 1/4"	0'-500'/500'	Fresh Water	8.4-8.6	60-70	NC
8 3/4"	500'/500'-5313'/5506'	Fresh Water LSND	9.5-8.8	40-50	8-10

Escrito M32-2408 02H

SHL: SWSW 32 24N 8W

413 FSL 60 FWL

BHL: SWSW 31 24N 8W

400 FSL 330 FWL

Lease Number:

San Juan County, New Mexico

b) Intermediate Casing Point to TD:

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
6 1/8"	5313'/5506'- 5321'/10108'	Synthetic Oil Based Mud	8.6-9.0	15-25	<15

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

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

7. TESTING, CORING, & LOGGING

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

Cased Hole:

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

8. ABNORMAL PRESSURES & HYDROGEN SULFIDE

The anticipated bottom hole pressure is +/- 2502 psi based on a 9.0 ppg at 5347' 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 August 22, 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 20 days.

LOC: Sec 12-T23N-R6W County: Rio Arriba WELL: Lybrook A12-2306 01H			Encana Natural Gas WELL SUMMARY				ENG: S Kuykendall 2/6/14 RIG: TBD GLE: 6693 RKBE: 6709	
MWD LWD	OPEN HOLE LOGGING	FORM	DEPTH		HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION INFORMATION
			TVD	MD				
			60	60'		20" 94# 100sx Type I Neat 16.0ppg cmt	Fresh wtr 8.3-9.2	
Multi-Well pad take survey every stand and run anti-collision report prior to spud	None	Nacimiento 9 5/8" Csg	0 500			9 5/8" 36ppf J55 STC TOC Surface - 201 sks of Type III Cement	Fresh wtr 8.4-8.6	Vertical <1°
Survey Every 60'-120', updating anticollision report after surveys. Stop operations and contact drilling engineer if separation factor approaches 1.5	No OH logs	Ojo Alamo Ss. Kirtland Shale Fruitland Coal Pictured Cliffs Ss Lewis Shale Cliffhouse Ss. Menefee Fn. Point Lookout Ss. Mancos Shale	945 1,170 1,375 1,675 1,830 2,457 3,190 4,070 4,260		Stage tool @ -1,900'	7" 26ppf J55 LTC TOC @ surface 30% OH excess: 567 sksTotal. Stage 1 Lead: 299 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: 269 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. Stage 2: 168 sks Premium Lite FM + 3% CaCl2 + 0.25/sk Cello Flake + 5#/sk LCM-1 + 8% Bentonite + 0.4% FL-52A + 0.4% Sodium Metasilicate. Mixed at 12.1 ppg. Yield 2.13 cuft/sk.	Fresh Wtr 8.5-8.8	Vertical <1° Build Rate
Surveys every 30' through the curve	Mud logger onsite	KOP Mancos Silt Gallup Fn. 7" Csg	4,726 4,820 5,078 5,313	4,726.0 5,505.8		8 3/4 6 1/8	200' overlap at liner top 5.094' Drilled Lat. 4.634' Completable	Horizontal Inclination Horizontal TVD 8.6-9.0 OBM
Surveys every stand to TD unless directed otherwise by Geologist	No OH Logs	Horizontal Target TD Base Gallup	5,347 5,321 5,405	10,107.8		4 1/2" 11.6ppf SB80 LTC Running external swellable csg packers for isolation of prod string Plan on setting top packer within 100' of intermediate casing shoe	Horizontal Inclination Horizontal TVD 8.6-9.0	Horz Inc/TVD 90.3/5346.5 TD = 10,107.8 MD
MWD Gamma Directional								

NOTES:



Boomerang Tube LLC

CASING (OR) TUBING DESCRIPTION AND PERFORMANCE PROPERTIES

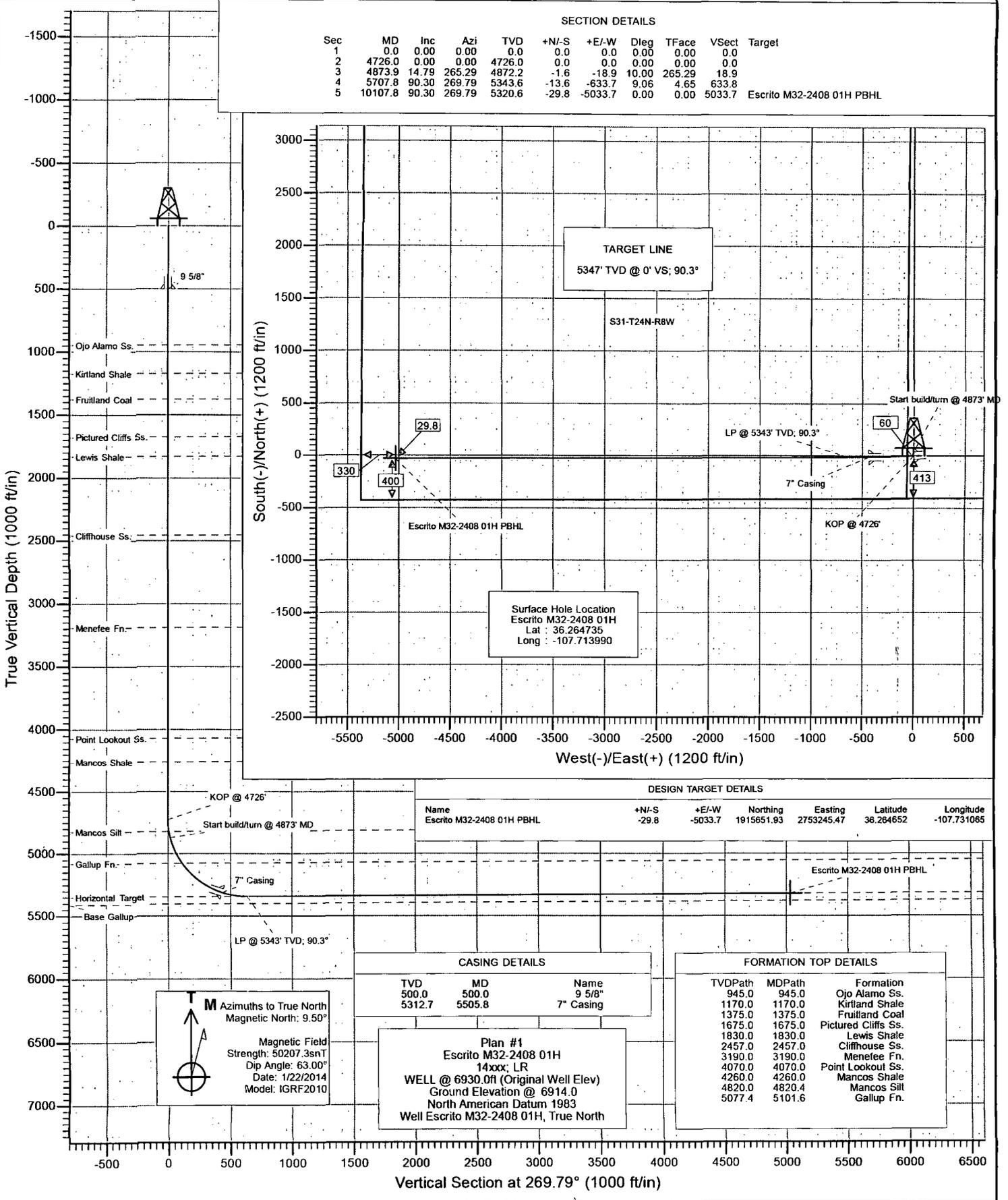
Pipe Outside Diameter (ins)	_____	4.500
Pipe Wall Thickness (ins)	_____	0.250
Nominal Weight Per Foot (lbs)	_____	11.60
Thread Name	_____	Long Thread CSG
Grade Name	_____	SB-80
Pipe Minimum Yield (psi)	_____	80,000
Pipe Minimum Ultimate (psi)	_____	90,000
Coupling Minimum Yield (psi)	_____	80,000
Coupling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

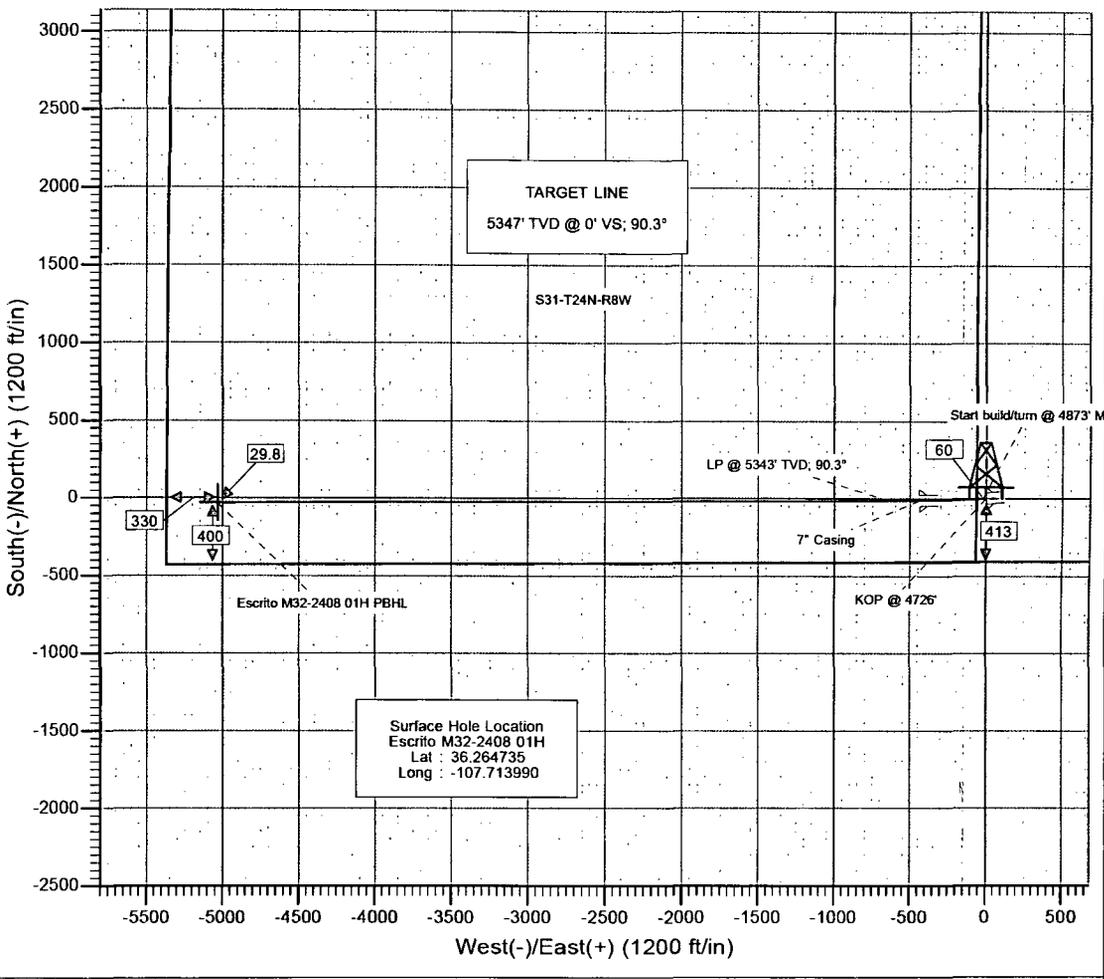
API RELATED VALUES and INTERMEDIATE CALCULATION RESULTS

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	4726.0	0.00	0.00	4726.0	0.0	0.0	0.00	0.00	0.0	
3	4873.9	14.79	265.29	4872.2	-1.6	-18.9	10.00	265.29	18.9	
4	5707.8	90.30	269.79	5343.6	-13.6	-633.7	9.06	4.65	633.8	
5	10107.8	90.30	269.79	5320.6	-29.8	-5033.7	0.00	0.00	5033.7	Escrito M32-2408 01H PBHL



DESIGN TARGET DETAILS

Name	+N-S	+E-W	Northing	Easting	Latitude	Longitude
Escrito M32-2408 01H PBHL	-29.8	-5033.7	1915651.83	2753245.47	36.264652	-107.731065

CASING DETAILS

TVD	MD	Name
500.0	500.0	9 5/8"
5312.7	5505.8	7" Casing

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
945.0	945.0	Ojo Alamo Ss.
1170.0	1170.0	Kirtland Shale
1375.0	1375.0	Fruitland Coal
1675.0	1675.0	Pictured Cliffs Ss.
1830.0	1830.0	Lewis Shale
2457.0	2457.0	Cliffhouse Ss.
3190.0	3190.0	Menefee Fn.
4070.0	4070.0	Point Lookout Ss.
4260.0	4260.0	Mancos Shale
4820.0	4820.4	Mancos Silt
5077.4	5101.6	Gallup Fn.

M Azimuths to True North
Magnetic North: 9.50°

Magnetic Field
Strength: 50207.3snT
Dip Angle: 63.00°
Date: 1/22/2014
Model: IGRF2010

Plan #1
Escrito M32-2408 01H
14xxx; LR
WELL @ 6930.0ft (Original Well Elev)
Ground Elevation @ 6914.0
North American Datum 1983
Well Escrito M32-2408 01H, True North

Vertical Section at 269.79° (1000 ft/in)

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S32-T24N-R8W (Escrito)
 Well: Escrito M32-2408 01H
 Wellbore: Hz
 Design: Plan #1

Local Co-ordinate Reference: Well Escrito M32-2408 01H
 TVD Reference: WELL @ 6930.0ft (Original Well Elev)
 MD Reference: WELL @ 6930.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

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

Site	S32-T24N-R8W (Escrito)				
Site Position:		Northing:	1,917,175.15 ft	Latitude:	36.268820
From:	Lat/Long	Easting:	2,758,448.22 ft	Longitude:	-107.713410
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.07 °

Well	Escrito M32-2408 01H					
Well Position	+N/-S	0.0 ft	Northing:	1,915,687.90 ft	Latitude:	36.264735
	+E/-W	0.0 ft	Easting:	2,758,279.08 ft	Longitude:	-107.713990
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,914.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/22/2014	9.50	63.00	50,207

Design	Plan #1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	269.79	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,726.0	0.00	0.00	4,726.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,873.9	14.79	265.29	4,872.2	-1.6	-18.9	10.00	10.00	0.00	265.29	
5,707.8	90.30	269.79	5,343.6	-13.6	-633.7	9.06	9.05	0.54	4.65	
10,107.8	90.30	269.79	5,320.6	-29.8	-5,033.7	0.00	0.00	0.00	0.00	Escrito M32-2408 01H

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S32-T24N-R8W (Escrito)
Well: Escrito M32-2408 01H
Wellbore: Hz
Design: Plan #1

Local Co-ordinate Reference: Well Escrito M32-2408 01H
TVD Reference: WELL @ 6930.0ft (Original Well Elev)
MD Reference: WELL @ 6930.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	9 5/8"
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
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	
1,170.0	0.00	0.00	1,170.0	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	
1,375.0	0.00	0.00	1,375.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
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	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	
1,675.0	0.00	0.00	1,675.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	
1,830.0	0.00	0.00	1,830.0	0.0	0.0	0.0	0.00	0.00	Lewis Shale
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	
2,100.0	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	
2,457.0	0.00	0.00	2,457.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	
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	
3,190.0	0.00	0.00	3,190.0	0.0	0.0	0.0	0.00	0.00	Menefee Fn.
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	
3,700.0	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	
4,070.0	0.00	0.00	4,070.0	0.0	0.0	0.0	0.00	0.00	Point Lookout Ss.
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	
4,260.0	0.00	0.00	4,260.0	0.0	0.0	0.0	0.00	0.00	Mancos Shale

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S32-T24N-R8W (Escrito)
Well: Escrito M32-2408 01H
Wellbore: Hz
Design: Plan #1

Local Co-ordinate Reference: Well Escrito M32-2408 01H
TVD Reference: WELL @ 6930.0ft (Original Well Elev)
MD Reference: WELL @ 6930.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	
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	
4,726.0	0.00	0.00	4,726.0	0.0	0.0	0.0	0.00	0.00	KOP @ 4726'
4,800.0	7.40	265.29	4,799.8	-0.4	-4.8	4.8	10.00	10.00	
4,820.4	9.44	265.29	4,820.0	-0.6	-7.7	7.7	10.00	10.00	Mancos Silt
4,873.9	14.79	265.29	4,872.2	-1.6	-18.9	18.9	10.00	10.00	Start build/turn @ 4873' MD
4,900.0	17.15	265.94	4,897.4	-2.1	-26.1	26.1	9.06	9.03	
5,000.0	26.19	267.37	4,990.2	-4.2	-62.9	62.9	9.06	9.05	
5,100.0	35.25	268.11	5,076.1	-6.1	-113.9	113.9	9.06	9.05	
5,101.6	35.39	268.12	5,077.4	-6.2	-114.8	114.9	9.06	9.05	Gallup Fn.
5,200.0	44.30	268.57	5,152.8	-8.0	-177.8	177.8	9.06	9.06	
5,300.0	53.36	268.90	5,218.6	-9.6	-253.0	253.0	9.06	9.06	
5,400.0	62.41	269.16	5,271.7	-11.0	-337.6	337.6	9.06	9.06	
5,500.0	71.47	269.39	5,310.8	-12.2	-429.5	429.5	9.06	9.06	
5,505.8	72.00	269.40	5,312.7	-12.2	-435.0	435.0	9.06	9.06	7" Casing
5,600.0	80.53	269.59	5,335.0	-13.0	-526.4	526.4	9.06	9.06	
5,700.0	89.59	269.78	5,343.6	-13.6	-625.9	626.0	9.06	9.06	
5,707.8	90.30	269.79	5,343.6	-13.6	-633.8	633.8	9.06	9.06	LP @ 5343' TVD; 90.3°
5,800.0	90.30	269.79	5,343.1	-14.0	-725.9	725.9	0.00	0.00	
5,900.0	90.30	269.79	5,342.6	-14.3	-825.9	825.9	0.00	0.00	
6,000.0	90.30	269.79	5,342.1	-14.7	-925.9	925.9	0.00	0.00	
6,100.0	90.30	269.79	5,341.6	-15.1	-1,025.9	1,025.9	0.00	0.00	
6,200.0	90.30	269.79	5,341.1	-15.4	-1,125.9	1,125.9	0.00	0.00	
6,300.0	90.30	269.79	5,340.5	-15.8	-1,225.9	1,225.9	0.00	0.00	
6,400.0	90.30	269.79	5,340.0	-16.2	-1,325.9	1,325.9	0.00	0.00	
6,500.0	90.30	269.79	5,339.5	-16.5	-1,425.9	1,425.9	0.00	0.00	
6,600.0	90.30	269.79	5,339.0	-16.9	-1,525.9	1,525.9	0.00	0.00	
6,700.0	90.30	269.79	5,338.4	-17.3	-1,625.9	1,625.9	0.00	0.00	
6,800.0	90.30	269.79	5,337.9	-17.6	-1,725.9	1,725.9	0.00	0.00	
6,900.0	90.30	269.79	5,337.4	-18.0	-1,825.9	1,825.9	0.00	0.00	
7,000.0	90.30	269.79	5,336.9	-18.4	-1,925.9	1,925.9	0.00	0.00	
7,100.0	90.30	269.79	5,336.4	-18.7	-2,025.9	2,025.9	0.00	0.00	
7,200.0	90.30	269.79	5,335.8	-19.1	-2,125.9	2,125.9	0.00	0.00	
7,300.0	90.30	269.79	5,335.3	-19.5	-2,225.9	2,225.9	0.00	0.00	
7,400.0	90.30	269.79	5,334.8	-19.8	-2,325.9	2,325.9	0.00	0.00	
7,500.0	90.30	269.79	5,334.3	-20.2	-2,425.9	2,425.9	0.00	0.00	
7,600.0	90.30	269.79	5,333.7	-20.6	-2,525.9	2,525.9	0.00	0.00	
7,700.0	90.30	269.79	5,333.2	-20.9	-2,625.9	2,625.9	0.00	0.00	
7,800.0	90.30	269.79	5,332.7	-21.3	-2,725.9	2,725.9	0.00	0.00	
7,900.0	90.30	269.79	5,332.2	-21.7	-2,825.9	2,825.9	0.00	0.00	
8,000.0	90.30	269.79	5,331.7	-22.0	-2,925.9	2,925.9	0.00	0.00	
8,100.0	90.30	269.79	5,331.1	-22.4	-3,025.9	3,025.9	0.00	0.00	
8,200.0	90.30	269.79	5,330.6	-22.8	-3,125.8	3,125.9	0.00	0.00	
8,300.0	90.30	269.79	5,330.1	-23.1	-3,225.8	3,225.9	0.00	0.00	
8,400.0	90.30	269.79	5,329.6	-23.5	-3,325.8	3,325.9	0.00	0.00	
8,500.0	90.30	269.79	5,329.0	-23.9	-3,425.8	3,425.9	0.00	0.00	
8,600.0	90.30	269.79	5,328.5	-24.2	-3,525.8	3,525.9	0.00	0.00	
8,700.0	90.30	269.79	5,328.0	-24.6	-3,625.8	3,625.9	0.00	0.00	
8,800.0	90.30	269.79	5,327.5	-25.0	-3,725.8	3,725.9	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: S32-T24N-R8W (Escrito)
Well: Escrito M32-2408 01H
Wellbore: Hz
Design: Plan #1

Local Co-ordinate Reference: Well Escrito M32-2408 01H
TVD Reference: WELL @ 6930.0ft (Original Well Elev)
MD Reference: WELL @ 6930.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,900.0	90.30	269.79	5,327.0	-25.3	-3,825.8	3,825.9	0.00	0.00	
9,000.0	90.30	269.79	5,326.4	-25.7	-3,925.8	3,925.9	0.00	0.00	
9,100.0	90.30	269.79	5,325.9	-26.1	-4,025.8	4,025.9	0.00	0.00	
9,200.0	90.30	269.79	5,325.4	-26.4	-4,125.8	4,125.9	0.00	0.00	
9,300.0	90.30	269.79	5,324.9	-26.8	-4,225.8	4,225.9	0.00	0.00	
9,400.0	90.30	269.79	5,324.3	-27.2	-4,325.8	4,325.9	0.00	0.00	
9,500.0	90.30	269.79	5,323.8	-27.5	-4,425.8	4,425.9	0.00	0.00	
9,600.0	90.30	269.79	5,323.3	-27.9	-4,525.8	4,525.9	0.00	0.00	
9,700.0	90.30	269.79	5,322.8	-28.3	-4,625.8	4,625.9	0.00	0.00	
9,800.0	90.30	269.79	5,322.2	-28.6	-4,725.8	4,725.9	0.00	0.00	
9,900.0	90.30	269.79	5,321.7	-29.0	-4,825.8	4,825.9	0.00	0.00	
10,000.0	90.30	269.79	5,321.2	-29.4	-4,925.8	4,925.9	0.00	0.00	
10,100.0	90.30	269.79	5,320.7	-29.7	-5,025.8	5,025.9	0.00	0.00	
10,107.8	90.30	269.79	5,320.6	-29.8	-5,033.7	5,033.7	0.00	0.00	TD at 10107.8

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Escrito M32-2408 01H P - hit/miss target - Shape - Point	0.00	0.00	5,320.6	-29.8	-5,033.7	1,915,651.93	2,753,245.47	36.264652	-107.731065
Escrito M32-2408 01H P - plan hits target center									
Escrito M32-2408 01H P - plan misses target center by 45.4ft at 5477.0ft MD (5303.1 TVD, -11.9 N, -407.8 E) - Point	0.00	0.00	5,344.9	-12.7	-390.0	1,915,674.68	2,757,889.08	36.264700	-107.715313

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
500.0	500.0	9 5/8"	0.000	0.000	
5,505.8	5,312.7	7" Casing	0.000	0.000	

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S32-T24N-R8W (Escrito)
Well: Escrito M32-2408 01H
Wellbore: Hz
Design: Plan #1

Local Co-ordinate Reference: Well Escrito M32-2408 01H
TVD Reference: WELL @ 6930.0ft (Original Well Elev)
MD Reference: WELL @ 6930.0ft (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.		-0.30	269.79	
1,170.0	1,170.0	Kirtland Shale		-0.30	269.79	
1,375.0	1,375.0	Fruitland Coal		-0.30	269.79	
1,675.0	1,675.0	Pictured Cliffs Ss.		-0.30	269.79	
1,830.0	1,830.0	Lewis Shale		-0.30	269.79	
2,457.0	2,457.0	Cliffhouse Ss.		-0.30	269.79	
3,190.0	3,190.0	Menefee Fn.		-0.30	269.79	
4,070.0	4,070.0	Point Lookout Ss.		-0.30	269.79	
4,260.0	4,260.0	Mancos Shale		-0.30	269.79	
4,820.4	4,820.0	Mancos Silt		-0.30	269.79	
5,101.6	5,078.0	Gallup Fn.		-0.30	269.79	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
4,726.0	4,726.0	0.0	0.0	KOP @ 4726'	
4,873.9	4,872.2	-1.6	-18.9	Start build/turn @ 4873' MD	
5,707.8	5,343.6	-13.6	-633.7	LP @ 5343' TVD; 90.3°	
10,107.8	5,320.6	-29.8	-5,033.7	TD at 10107.8	

Escrito M32-2408 01H

**SHL: SWSW Section 32, T24N, R8W
413 FSL and 60 FWL**

**BHL: SWSW Section 31, T24N, R8W
400 FSL and 330 FWL**

San Juan County, New Mexico

Lease Number: SHL: LO 29861

BHL/Producing Interval: NMNM118133

2. After removal of vegetation, topsoil will be segregated and windrowed on the edge of the well pad in the construction zone. Topsoil will be defined as the top six (6) inches of soil. The stockpiled topsoil will be free of brush and tree limbs, trunks and root balls, but may include chipped or mulched material so long as it is incorporated into the topsoil stockpile.

Topsoil will be stockpiled separate from subsoil with a noticeable gap left between the stockpiles. Vehicle/equipment traffic will be prevented from crossing topsoil stockpiles.

Topsoil will not be stripped when soils are moisture-saturated or frozen below the stripping depth.

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 4.3 feet on the South corner (corner 5) and the maximum fill will be approximately 6.2 feet on the North side (corner 2).

4. As determined during the onsite on November 26, 2013, the following best management practices will be implemented:
 - a. Water will be diverted around the pad and silt traps installed as needed upon interim reclamation.
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 4 weeks.

C. Pipeline

A pipeline right-of-way easement will be submitted to the State Land Office for authorization to construct, operate, maintain and terminate a 1482 foot, up to 6-inch outside diameter, buried steel well connect pipeline.

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.

WELLHEAD BLOWOUT CONTROL SYSTEM

encana

Well Name and Number:
Escrito M32-2408 01H

