

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

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

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 3160-4 or 3160-5 form.

Operator Signature Date: 12/2/14

Well information:

API WELL #	Well Name	Well #	Operator Name	Type	Stat	County	Surf. Owner	UL	Sec	Twp	N/S	Rng	W/E	Feet	NS	Ft	EW
30-045-35590-00-00	ESCRITO D19 2409	001H	ENCANA OIL & GAS (USA) INC.	G	N	San Juan	F	D	19	24	N	9	W	715	N	325	W

Application Type:

- ☐ P&A ☐ Drilling/Casing Change ☒ Location Change
☐ Recomplete/DHC (For hydraulic fracturing operations review EPA Underground injection control Guidance #84)
☐ Other:

Conditions of Approval:

Notify NMOCD 24hrs prior to beginning operations, casing & cement

See APD Conditions of approval regarding Hydraulic Fracturing, Oil base muds and Well-bore communication.

Hold C104 for DS/As Drilled Plat/NSL/NSP/DHC

Charlie T. Lerrin

NMOCD Approved by Signature

12-9-14
Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NM 62973, NM 54983, & NMNM 131057

6. If Indian, Allottee or Tribe Name
N/A

SUBMIT IN TRIPLICATE - Other instructions on page 2.

7. If Unit of CA/Agreement, Name and/or No.
N/A

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
Escrito D19-2409 01H

2. Name of Operator
Encana Oil & Gas USA Inc.

9. API Well No.
30-045-35590

3a. Address
370 17th Street, Suite 1700
Denver, CO 80202

3b. Phone No. (include area code)
720-876-3448

10. Field and Pool or Exploratory Area
Bisti-Lower Gallup/ Basin Mancos Gas Pool

4. Location of Well (Latitude, Section, T-R, A, or Survey Description)
SHL: 715' FNL and 325' FWL Section 19, T24N, R09W, 11E
BHL: 400' FNL and 2345' FWL Section 23, T24N, R10W

11. County or Parish, State
San Juan County, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

The BHL for the: Escrito D19-2409 01H was also modified from 400' FNL, 330' FWL (Section 24, T24N, R10W) to 400' FNL, 2345' FWL (Section 23, T24N, R10W). Attached is a C-102, Directional Plan, Drilling Plan and Wellbore Diagram, which have been updated to reflect this change in BHL.

OIL CONS. DIV DIST. 3

DEC 02 2014

CONDITIONS OF APPROVAL

Adhere to previously issued stipulations

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

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Christopher Simmons

Title: Regulatory Analyst

Signature

Date: 11/26/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

William Tambekou

Title: Petroleum Engineer

Date: 12/02/2014

Conditions of approval, if any, are attached. Approval of this notice 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.

Office: FFO

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.

(Instructions on page 2)

NMOCDA

DEC 02 2014

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

District I
1625 N. French Dr., Hobbs, NM 88420
Phone (575) 393-6161 Fax: (575) 393-0720

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

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35590	² Pool Code 5890 / 97232	³ Pool Name BISTI-LOWER GALLUP / BASIN MANCOS
⁴ Property Code 313859	⁵ Property Name ESCRITO D19-2409	⁶ Well Number 01H
⁷ OGRID No. 282327	⁸ Operator Name ENCANA OIL & GAS (USA) INC.	⁹ Elevation 6984'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West Line	County
D	19	24N	09W	1	715	NORTH	325	WEST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no. B	Section 23	Township 24N	Range 10W	Lot Idn	Feet from the 400	North/South line NORTH	Feet from the 2345	East/West Line EAST	County SAN JUAN
¹² Dedicated Acres 475.64 ACRES PROJECT AREA S/2 NW/4 S.24 & S/2 NE/4 S.23- BASIN MANCOS NE/4, N/2 NW/4 S. 24 & N/2 NE/4 S. 23- R.L. GALLUP					¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.		

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. Basis: 11/1/05 = 1180, 3/1/06 = 1200, 6/1/06 = 1200

16 FND 1932 GLO BC CALCULATED (WASHED OUT IN DRAINAGE) FND 1932 GLO BC FND 1932 GLO BC FND 1932 GLO BC

S89°49'13"W, 2603.42'(M) S89°51'W, 2603.37'(R) S89°46'40"W, 2609.33'(M) S89°50'W, 2605.68'(R) S89°45'53"W, 2603.81'(M) S89°50'W, 2605.68'(R) S89°47'18"E, 2630.39'(M) S89°40'E, 2626.80'(R)

400' BHL 2345' HORIZONTAL DRILL S89°47'15"W, 7230.38' N64°21'35"W, 728.15' POE 715' SHL 325' 1

BISTI LOWER GALLUP BASIN MANCOS BASIN MANCOS BISTI LOWER GALLUP

23 24 19

S00°08'33"W, 2846.70'(M) N00°13'E, 2845.61'(R) S00°09'45"E, 2846.28'(M) N01°3'E, 2845.61'(R) S00°10'24"E, 2643.87'(M) S0°04'E, 2642.31'(R) S00°07'33"E, 2643.00'(M) S0°04'E, 2642.31'(R)

FND 1932 GLO BC FND 1932 GLO BC FND 1932 GLO BC FND 1932 GLO BC

S89°43'W, 2627.13'(R) S89°43'24"W, 2628.24'(M) S89°45'W, 2619.87'(R) S89°42'45"W, 2621.75'(M) S89°45'W, 2619.87'(R) S89°41'55"W, 2619.31'(M) S89°35'E, 2636.70'(R) S89°39'26"E, 2631.96'(M)

FND 1932 GLO BC FND 1932 GLO BC FND 1932 GLO BC FND 1932 GLO BC

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.

Christopher Simmons
Signature Date
Christopher Simmons
Printed Name
Christopher Simmons
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.

November 20, 2014
Date of Survey

Signature and Seal of Professional Surveyor:
Richard L. Mulliken
RICHARD L. MULLIKEN
NEW MEXICO
16873
11-21-14
PROFESSIONAL SURVEYOR

RICHARD L. MULLIKEN
Certificate Number 16873

ESCRITO D19-2409 01H WELL

SHL (WELL FLAG)
LAT. 36.304823 °N (NAD83)
LONG. 107.838115 °W (NAD83)
LAT. 36.304812 °N (NAD27)
LONG. 107.837499 °W (NAD27)

POE (POINT OF ENTRY)
LAT. 36.305689 °N (NAD83)
LONG. 107.840342 °W (NAD83)
LAT. 36.305678 °N (NAD27)
LONG. 107.839725 °W (NAD27)

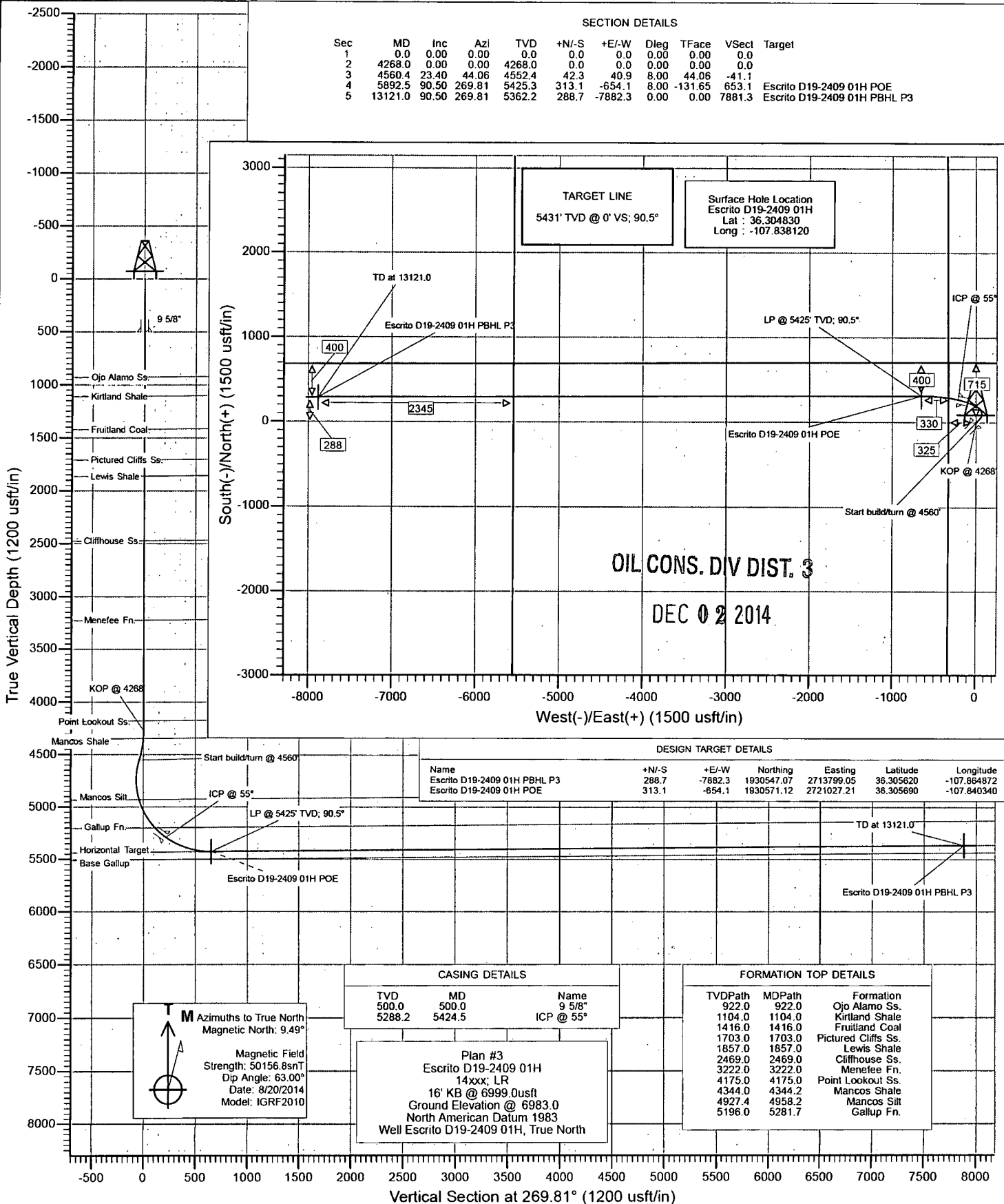
BHL (BOTTOM HOLE LOCATION)
LAT. 36.305620 °N (NAD83)
LONG. 107.864872 °W (NAD83)
LAT. 36.305609 °N (NAD27)
LONG. 107.864255 °W (NAD27)

SECTION CORNERS

1 LAT. 36.306761 °N (NAD83) LONG. 107.830302 °W (NAD83) LAT. 36.306750 °N (NAD27) LONG. 107.829686 °W (NAD27)	5 LAT. 36.306738 °N (NAD83) LONG. 107.856913 °W (NAD83) LAT. 36.306727 °N (NAD27) LONG. 107.856295 °W (NAD27)
2 LAT. 36.306791 °N (NAD83) LONG. 107.839226 °W (NAD83) LAT. 36.306780 °N (NAD27) LONG. 107.83861 °W (NAD27)	6 LAT. 36.299470 °N (NAD83) LONG. 107.856937 °W (NAD83) LAT. 36.299459 °N (NAD27) LONG. 107.856319 °W (NAD27)
3 LAT. 36.299531 °N (NAD83) LONG. 107.839202 °W (NAD83) LAT. 36.299520 °N (NAD27) LONG. 107.838586 °W (NAD27)	7 LAT. 36.306716 °N (NAD83) LONG. 107.865745 °W (NAD83) LAT. 36.306705 °N (NAD27) LONG. 107.865128 °W (NAD27)
4 LAT. 36.306764 °N (NAD83) LONG. 107.848060 °W (NAD83) LAT. 36.306753 °N (NAD27) LONG. 107.847443 °W (NAD27)	8 LAT. 36.306694 °N (NAD83) LONG. 107.874578 °W (NAD83) LAT. 36.306683 °N (NAD27) LONG. 107.87396 °W (NAD27)



Project: San Juan County, NM
Site: S19-T24N-R9W
Well: Escrito D19-2409 01H
Wellbore: HZ
Design: Plan #3



Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S19-T24N-R9W
Well: Escrito D19-2409 01H
Wellbore: HZ
Design: Plan #3

Local Co-ordinate Reference: Well Escrito D19-2409 01H
TVD Reference: 16' KB @ 6999.0usft
MD Reference: 16' KB @ 6999.0usft
North Reference: True
Survey Calculation Method: Minimum Curvature

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

Site	S19-T24N-R9W			
Site Position:		Northing:	1,930,258.01 usft	Latitude: 36.304830
From:	Lat/Long	Easting:	2,721,681.30 usft	Longitude: -107.838120
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence: 0.00 °

Well	Escrito D19-2409 01H			
Well Position	+N/-S	0.0 usft	Northing: 1,930,258.01 usft	Latitude: 36.304830
	+E/-W	0.0 usft	Easting: 2,721,681.30 usft	Longitude: -107.838120
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level: 6,983.0 usft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	8/20/2014	(°) 9.49	(°) 63.00	(nT) 50,157

Design	Plan #3			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	269.81

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,268.0	0.00	0.00	4,268.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,560.4	23.40	44.06	4,552.4	42.3	40.9	8.00	8.00	0.00	44.06	
5,892.5	90.50	269.81	5,425.3	313.1	-654.1	8.00	5.04	-10.08	-131.65	Escrito D19-2409 01H
13,121.0	90.50	269.81	5,362.2	288.7	-7,882.3	0.00	0.00	0.00	0.00	Escrito D19-2409 01H

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S19-T24N-R9W
 Well: Escrito D19-2409 01H
 Wellbore: HZ
 Design: Plan #3

Local Co-ordinate Reference: Well Escrito D19-2409 01H
 TVD Reference: 16' KB @ 6999.0usft
 MD Reference: 16' KB @ 6999.0usft
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	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	
922.0	0.00	0.00	922.0	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	
1,104.0	0.00	0.00	1,104.0	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	
1,416.0	0.00	0.00	1,416.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
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	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	
1,703.0	0.00	0.00	1,703.0	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	
1,857.0	0.00	0.00	1,857.0	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	
2,469.0	0.00	0.00	2,469.0	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	
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	
3,222.0	0.00	0.00	3,222.0	0.0	0.0	0.0	0.00	0.00	Menefee Fn.
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	
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	
4,175.0	0.00	0.00	4,175.0	0.0	0.0	0.0	0.00	0.00	Point Lookout Ss.
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	
4,268.0	0.00	0.00	4,268.0	0.0	0.0	0.0	0.00	0.00	KOP @ 4268'

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S19-T24N-R9W
 Well: Escrito D19-2409 01H
 Wellbore: HZ
 Design: Plan #3

Local Co-ordinate Reference: Well Escrito D19-2409 01H
 TVD Reference: 16' KB @ 6999.0usft
 MD Reference: 16' KB @ 6999.0usft
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
4,300.0	2.56	44.06	4,300.0	0.5	0.5	-0.5	8.00	8.00	
4,344.2	6.09	44.06	4,344.0	2.9	2.8	-2.8	8.00	8.00	Mancos Shale
4,400.0	10.56	44.06	4,399.2	8.7	8.4	-8.5	8.00	8.00	
4,500.0	18.56	44.06	4,496.0	26.8	25.9	-26.0	8.00	8.00	
4,560.4	23.40	44.06	4,552.4	42.3	40.9	-41.1	8.00	8.00	Start build/turn @ 4560'
4,600.0	21.42	37.57	4,588.9	53.7	50.8	-51.0	8.00	-5.00	
4,700.0	17.92	16.01	4,683.2	83.0	66.2	-66.5	8.00	-3.50	
4,800.0	17.53	349.54	4,778.6	112.6	67.7	-68.1	8.00	-0.38	
4,900.0	20.44	326.43	4,873.3	142.0	55.3	-55.8	8.00	2.91	
4,958.2	23.22	316.36	4,927.4	158.8	41.8	-42.3	8.00	4.78	Mancos Silt
5,000.0	25.54	310.52	4,965.4	170.6	29.2	-29.8	8.00	5.55	
5,100.0	31.79	300.04	5,053.2	197.9	-10.0	9.4	8.00	6.25	
5,200.0	38.64	292.83	5,134.9	223.2	-61.7	61.0	8.00	6.85	
5,281.7	44.49	288.40	5,196.0	242.2	-112.4	111.6	8.00	7.15	Gallup Fn.
5,300.0	45.81	287.54	5,208.9	246.2	-124.8	123.9	8.00	7.27	
5,400.0	53.17	283.42	5,273.8	266.3	-198.0	197.1	8.00	7.36	
5,424.5	55.00	282.53	5,288.2	270.8	-217.3	216.4	8.00	7.44	ICP @ 55°
5,500.0	60.65	280.02	5,328.4	283.2	-280.0	279.0	8.00	7.49	
5,600.0	68.21	277.10	5,371.5	296.6	-369.1	368.1	8.00	7.55	
5,700.0	75.81	274.47	5,402.4	306.1	-463.7	462.6	8.00	7.60	
5,800.0	83.43	272.01	5,420.4	311.6	-561.8	560.7	8.00	7.63	
5,892.5	90.50	269.81	5,425.3	313.1	-654.1	653.1	8.00	7.64	LP @ 5425' TVD; 90.5°
5,900.0	90.50	269.81	5,425.2	313.0	-661.6	660.5	0.00	0.00	
6,000.0	90.50	269.81	5,424.4	312.7	-761.6	760.5	0.00	0.00	
6,100.0	90.50	269.81	5,423.5	312.4	-861.6	860.5	0.00	0.00	
6,200.0	90.50	269.81	5,422.6	312.0	-961.6	960.5	0.00	0.00	
6,300.0	90.50	269.81	5,421.7	311.7	-1,061.6	1,060.5	0.00	0.00	
6,400.0	90.50	269.81	5,420.9	311.4	-1,161.6	1,160.5	0.00	0.00	
6,500.0	90.50	269.81	5,420.0	311.0	-1,261.5	1,260.5	0.00	0.00	
6,600.0	90.50	269.81	5,419.1	310.7	-1,361.5	1,360.5	0.00	0.00	
6,700.0	90.50	269.81	5,418.3	310.3	-1,461.5	1,460.5	0.00	0.00	
6,800.0	90.50	269.81	5,417.4	310.0	-1,561.5	1,560.5	0.00	0.00	
6,900.0	90.50	269.81	5,416.5	309.7	-1,661.5	1,660.5	0.00	0.00	
7,000.0	90.50	269.81	5,415.6	309.3	-1,761.5	1,760.5	0.00	0.00	
7,100.0	90.50	269.81	5,414.8	309.0	-1,861.5	1,860.5	0.00	0.00	
7,200.0	90.50	269.81	5,413.9	308.7	-1,961.5	1,960.5	0.00	0.00	
7,300.0	90.50	269.81	5,413.0	308.3	-2,061.5	2,060.5	0.00	0.00	
7,400.0	90.50	269.81	5,412.1	308.0	-2,161.5	2,160.5	0.00	0.00	
7,500.0	90.50	269.81	5,411.3	307.6	-2,261.5	2,260.5	0.00	0.00	
7,600.0	90.50	269.81	5,410.4	307.3	-2,361.5	2,360.5	0.00	0.00	
7,700.0	90.50	269.81	5,409.5	307.0	-2,461.5	2,460.5	0.00	0.00	
7,800.0	90.50	269.81	5,408.6	306.6	-2,561.5	2,560.5	0.00	0.00	
7,900.0	90.50	269.81	5,407.8	306.3	-2,661.5	2,660.5	0.00	0.00	
8,000.0	90.50	269.81	5,406.9	306.0	-2,761.5	2,760.4	0.00	0.00	
8,100.0	90.50	269.81	5,406.0	305.6	-2,861.5	2,860.4	0.00	0.00	
8,200.0	90.50	269.81	5,405.2	305.3	-2,961.5	2,960.4	0.00	0.00	
8,300.0	90.50	269.81	5,404.3	304.9	-3,061.5	3,060.4	0.00	0.00	
8,400.0	90.50	269.81	5,403.4	304.6	-3,161.5	3,160.4	0.00	0.00	
8,500.0	90.50	269.81	5,402.5	304.3	-3,261.5	3,260.4	0.00	0.00	
8,600.0	90.50	269.81	5,401.7	303.9	-3,361.5	3,360.4	0.00	0.00	
8,700.0	90.50	269.81	5,400.8	303.6	-3,461.4	3,460.4	0.00	0.00	
8,800.0	90.50	269.81	5,399.9	303.3	-3,561.4	3,560.4	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: S19-T24N-R9W
Well: Escrito D19-2409 01H
Wellbore: HZ
Design: Plan #3

Local Co-ordinate Reference: Well Escrito D19-2409 01H
TVD Reference: 16' KB @ 6999.0usft
MD Reference: 16' KB @ 6999.0usft
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
8,900.0	90.50	269.81	5,399.0	302.9	-3,661.4	3,660.4	0.00	0.00	
9,000.0	90.50	269.81	5,398.2	302.6	-3,761.4	3,760.4	0.00	0.00	
9,100.0	90.50	269.81	5,397.3	302.2	-3,861.4	3,860.4	0.00	0.00	
9,200.0	90.50	269.81	5,396.4	301.9	-3,961.4	3,960.4	0.00	0.00	
9,300.0	90.50	269.81	5,395.6	301.6	-4,061.4	4,060.4	0.00	0.00	
9,400.0	90.50	269.81	5,394.7	301.2	-4,161.4	4,160.4	0.00	0.00	
9,500.0	90.50	269.81	5,393.8	300.9	-4,261.4	4,260.4	0.00	0.00	
9,600.0	90.50	269.81	5,392.9	300.6	-4,361.4	4,360.4	0.00	0.00	
9,700.0	90.50	269.81	5,392.1	300.2	-4,461.4	4,460.4	0.00	0.00	
9,800.0	90.50	269.81	5,391.2	299.9	-4,561.4	4,560.4	0.00	0.00	
9,900.0	90.50	269.81	5,390.3	299.5	-4,661.4	4,660.4	0.00	0.00	
10,000.0	90.50	269.81	5,389.4	299.2	-4,761.4	4,760.4	0.00	0.00	
10,100.0	90.50	269.81	5,388.6	298.9	-4,861.4	4,860.4	0.00	0.00	
10,200.0	90.50	269.81	5,387.7	298.5	-4,961.4	4,960.4	0.00	0.00	
10,300.0	90.50	269.81	5,386.8	298.2	-5,061.4	5,060.4	0.00	0.00	
10,400.0	90.50	269.81	5,386.0	297.9	-5,161.4	5,160.4	0.00	0.00	
10,500.0	90.50	269.81	5,385.1	297.5	-5,261.4	5,260.3	0.00	0.00	
10,600.0	90.50	269.81	5,384.2	297.2	-5,361.4	5,360.3	0.00	0.00	
10,700.0	90.50	269.81	5,383.3	296.8	-5,461.4	5,460.3	0.00	0.00	
10,800.0	90.50	269.81	5,382.5	296.5	-5,561.3	5,560.3	0.00	0.00	
10,900.0	90.50	269.81	5,381.6	296.2	-5,661.3	5,660.3	0.00	0.00	
11,000.0	90.50	269.81	5,380.7	295.8	-5,761.3	5,760.3	0.00	0.00	
11,100.0	90.50	269.81	5,379.8	295.5	-5,861.3	5,860.3	0.00	0.00	
11,200.0	90.50	269.81	5,379.0	295.2	-5,961.3	5,960.3	0.00	0.00	
11,300.0	90.50	269.81	5,378.1	294.8	-6,061.3	6,060.3	0.00	0.00	
11,400.0	90.50	269.81	5,377.2	294.5	-6,161.3	6,160.3	0.00	0.00	
11,500.0	90.50	269.81	5,376.4	294.1	-6,261.3	6,260.3	0.00	0.00	
11,600.0	90.50	269.81	5,375.5	293.8	-6,361.3	6,360.3	0.00	0.00	
11,700.0	90.50	269.81	5,374.6	293.5	-6,461.3	6,460.3	0.00	0.00	
11,800.0	90.50	269.81	5,373.7	293.1	-6,561.3	6,560.3	0.00	0.00	
11,900.0	90.50	269.81	5,372.9	292.8	-6,661.3	6,660.3	0.00	0.00	
12,000.0	90.50	269.81	5,372.0	292.5	-6,761.3	6,760.3	0.00	0.00	
12,100.0	90.50	269.81	5,371.1	292.1	-6,861.3	6,860.3	0.00	0.00	
12,200.0	90.50	269.81	5,370.2	291.8	-6,961.3	6,960.3	0.00	0.00	
12,300.0	90.50	269.81	5,369.4	291.4	-7,061.3	7,060.3	0.00	0.00	
12,400.0	90.50	269.81	5,368.5	291.1	-7,161.3	7,160.3	0.00	0.00	
12,500.0	90.50	269.81	5,367.6	290.8	-7,261.3	7,260.3	0.00	0.00	
12,600.0	90.50	269.81	5,366.7	290.4	-7,361.3	7,360.3	0.00	0.00	
12,700.0	90.50	269.81	5,365.9	290.1	-7,461.3	7,460.3	0.00	0.00	
12,800.0	90.50	269.81	5,365.0	289.8	-7,561.3	7,560.3	0.00	0.00	
12,900.0	90.50	269.81	5,364.1	289.4	-7,661.3	7,660.3	0.00	0.00	
13,000.0	90.50	269.81	5,363.3	289.1	-7,761.2	7,760.2	0.00	0.00	
13,100.0	90.50	269.81	5,362.4	288.7	-7,861.2	7,860.2	0.00	0.00	
13,121.0	90.50	269.81	5,362.2	288.7	-7,882.3	7,881.3	0.00	0.00	TD at 13121.0

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S19-T24N-R9W
Well: Escrito D19-2409 01H
Wellbore: HZ
Design: Plan #3

Local Co-ordinate Reference: Well Escrito D19-2409 01H
TVD Reference: 16' KB @ 6999.0usft
MD Reference: 16' KB @ 6999.0usft
North Reference: True
Survey Calculation Method: Minimum Curvature

Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Escrito D19-2409 01H P - plan hits target center - Point	0.00	0.00	5,362.2	288.7	-7,882.3	1,930,547.07	2,713,799.05	36.305620	-107.864872
Escrito D19-2409 01H P - plan misses target center by 1.3usft at 10447.9usft MD (5385.5 TVD, 297.7 N, -5209.3 E) - Point	0.00	0.00	5,385.5	299.0	-5,209.3	1,930,557.25	2,716,472.05	36.305650	-107.855800
Escrito D19-2409 01H P - plan hits target center - Point	0.00	0.00	5,425.3	313.1	-654.1	1,930,571.12	2,721,027.21	36.305690	-107.840340

5,424.5 5,288.2 ICP @ 55°
 500.0 500.0 9 5/8"

0 0
 0 0

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
922.0	922.0	Ojo Alamo Ss.		-0.50	269.82
1,104.0	1,104.0	Kirtland Shale		-0.50	269.82
1,416.0	1,416.0	Fruitland Coal		-0.50	269.82
1,703.0	1,703.0	Pictured Cliffs Ss.		-0.50	269.82
1,857.0	1,857.0	Lewis Shale		-0.50	269.82
2,469.0	2,469.0	Cliffhouse Ss.		-0.50	269.82
3,222.0	3,222.0	Menefee Fn.		-0.50	269.82
4,175.0	4,175.0	Point Lookout Ss.		-0.50	269.82
4,344.2	4,344.0	Mancos Shale		-0.50	269.82
4,958.2	4,927.0	Mancos Silt		-0.50	269.82
5,281.7	5,197.0	Gallup Fn.		-0.50	269.82

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,268.0	4,268.0	0.0	0.0	KOP @ 4268'
4,560.4	4,552.4	42.3	40.9	Start build/turn @ 4560'
5,892.5	5,425.3	313.1	-654.1	LP @ 5425' TVD; 90.5°
13,121.0	5,362.2	288.7	-7,882.3	TD at 13121.0

Escrito D19-2409 01H
 SHL: 325'FWL & 715'FNL Sec 19 24N09W
 BHL: 2345' FEL & 400' FNL Sec 23 24N10W
 San Juan, 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
San Jose Fn.	n/a
Nacimiento Fn.	surface
Ojo Alamo Ss.	921
Kirtland Shale	1,103
Fruitland Coal	1,415
Pictured Cliffs Ss.	1,702
Lewis Shale	1,856
Cliffhouse Ss.	2,468
Menefee Fn.	3,221
Point Lookout Ss.	4,174
Mancos Shale	4,343
Mancos Silt	4,927
Gallup Fn.	5,197
Base Gallup	5,503

The referenced surface elevation is 6983', KB 6999'

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

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	1,415
Oil/Gas	Pictured Cliffs Ss.	1,702
Oil/Gas	Cliffhouse Ss.	2,468
Gas	Menefee Fn.	3,221
Oil/Gas	Point Lookout Ss.	4,174
Oil/Gas	Mancos Shale	4,343
Oil/Gas	Mancos Silt	4,927
Oil/Gas	Gallup Fn.	5,197

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

Escrito D19-2409 01H

SHL: 325'FWL & 715'FNL Sec 19 24N09W

BHL: 2345' FEL & 400' FNL Sec 23 24N10W

San Juan, New Mexico

3. PRESSURE CONTROL

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

Proposed BOP and choke manifold arrangements are attached.

4. CASING & CEMENTING PROGRAM

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

- a) The proposed casing design is as follows:

Casing	Depth (MD)	Hole Size	Csg Size	Weight	Grade
Conductor	0'-60'	26"	16"	42.09#	
Surface	0'-500'	12 1/4"	9 5/8"	36#	J55, STC New
Intermediate	0'-5425'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5325'-13121'	6 1/8"	4 1/2"	11.6#	B80*, LTC New

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

*B80 pipe specifications are attached

Casing design is subject to revision based on geologic conditions encountered

Escrito D19-2409 01H

SHL: 325'FWL & 715'FNL Sec 19 24N09W

BHL: 2345' FEL & 400' FNL Sec 23 24N10W

San Juan, New Mexico

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

b) The proposed cementing program is as follows

Casing	Depth (MD)	Cement Volume (sacks)	Cement Type & Yield	Designed TOC	Centralizers
Conductor	0'-60'	100 sks	Type I Neat 16 ppg	Surface	None
Surface	0'-500'	228 sks	Type III Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.2% bwoc FL-52A + 58.9% Fresh Water	Surface	1 per joint on bottom 3 joints
Intermediate	0'-5425'	100% open hole excess Stage 1 Lead: 505 sks Stage 1 Tail: 386 sks	Lead: PremLite + 3% CaCl + 0.25lb/sk CelloFlake + 5lb/sk LCM, 12.1ppg 2.13cuft/sk Tail: Type III Cmt + 1% CaCl + 0.25lb/sk Cello Flake 14.5ppg 1.38cuft/sk	Surface	1 every 3 joints through water bearing zones
Production Liner	5325'-13121'	50% OH excess Stage 1 Blend Total: 434sks	Blend: Premium Lite High Strength FM + 0.7% bwoc R-3 + 3% bwoc Potassium Chloride + 0.25lbs/sack Cello Flake + 0.5% bwoc CD-32 + 1.15% bwoc FL- 52A + 60 lbs/sack Calcium Carbonate + 124.4% Fresh Water. Yield 2.63 cuft/sk	Liner Hanger	N/A

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

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

5. WELL PLAN & DIRECTIONAL DRILLING PROGRAM

The proposed horizontal well will have a kick off point of 4268'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5362'/13121'	Gallup

Escrito D19-2409 01H
 SHL: 325'FWL & 715'FNL Sec 19 24N09W
 BHL: 2345' FEL & 400' FNL Sec 23 24N10W
 San Juan, New Mexico

6. DRILLING FLUIDS PROGRAM

a) Surface through Intermediate Casing Point:

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
30"	0-60'/60'	Fresh Water	8.3-9.2	38-100	4-28
12 1/4"	0'-500'/500'	Fresh Water	8.3-10	60-70	NC
8 3/4"	500'/500'-5288'/5425'	Fresh Water LSND	8.3-10	40-50	8-10

b) Intermediate Casing Point to TD:

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
6 1/8"	5288'/5425'- 5362'/13121'	Fresh Water LSND	8.3-10	15-25	<15

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

7. TESTING, CORING, & LOGGING

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

Cased Hole:

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

8. ABNORMAL PRESSURES & HYDROGEN SULFIDE

The anticipated bottom hole pressure is +/- 2542 psi based on a 9.0 ppg at 5431' 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 November 5, 2015. It is anticipated that completion operations will begin within 30 days after the well has been drilled depending on fracture treatment schedules with various pumping service companies.

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

LOC: 325'FWL & 715'FNL Sec 19 24N09W County: San Juan WELL: Escrito D19-2409 01H			Encana Natural Gas WELL SUMMARY				ENG: Michael Sanch 11/26/14 RIG: Unassigned GLE: 6983 RKBE: 6999		
MWD LWD	OPEN HOLE LOGGING	FORM	DEPTH			HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION INFORMATION
			TVD	MD					
			60	60'		26	16" 42.09# 100sx Type I Neat 16.0ppg cmt	Fresh wtr 8.3-9.2	
Multi-Well pad take survey every stand and run anti-collision report prior to spud	None	San Jose Fn. Nacimiento Fn. 9 5/8" Csg	0 surface 500	 500.00		12 1/4	9 5/8" 36ppf J55 STC TOC Surface with 100% OH Excess: 228 sks Type III Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.2% bwoc FL-52A + 58.9% Fresh Water.	Fresh wtr 8.3-10	Vertical <1°
Survey Every 60'-120', updating anticollision report after surveys. Stop operations and contact drilling engineer if separation factor approaches 1.5	No OH logs	Ojo Alamo Ss. Kirtland Shale	921 1,103			8 3/4	7" 26ppf J55 LTC TOC @ surface (100% OH excess - 70% Lead 30% Tail) Stage 1 Total: 891sks Stage 1 Lead: 505 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: 386 sks Type III Cement + 1% CaCl2 + 0.25#/sk Cello Flake + 0.2% FL-52A. Mixed at 14.6 ppg. Yield 1.38 cuft/sk.	Fresh Wtr 8.3-10	Vertical <1°
		Fruitland Coal	1,415						
		Pictured Cliffs Ss. Lewis Shale	1,702 1,856						
		Cliffhouse Ss. Menefee Fn.	2,468 3,221						
		Point Lookout Ss. Mancos Shale	4,174 4,343						
Surveys every 30' through the curve	Mud logger onsite	KOP	4,268	4,268					
		Mancos Silt	4,927						
		Gallup Fn.	5,197						
		7" Csg	5,288	5,425'					
Surveys every stand to TD unless directed otherwise by Geologist	No OH Logs	Horizontal Target TD	5,431 5,362	13,121		6 1/8	100' overlap at liner top 7697' Drilled Lateral		Horz Inc/TVD 90.8deg/5431ft
		Base Gallup	5,503					TD = 13121 MD	
MWD Gamma Directional							4 1/2" 11.6ppf SB80 LTC TOC @ hanger (50% OH excess) Stage 1 Total: 434sks Stage 1 Blend: 434 sks Premium Lite High Strength FM + 0.7% bwoc R-3 + 3% bwow Potassium Chloride + 0.25lbs/sack Cello Flake + 0.5% bwoc CD-32 + 1.15% bwoc FL-52A + 60 lbs/sack Calcium Carbonate + 124.4% Fresh Water. Yield 2.63 cuft/sk.	WBM 8.3-10	

NOTES:

- 1) Drill with 26" bit to 60', set 16" 42.09ppf conductor pipe
- 2) Drill surface to 500', R&C 9 5/8" casing
- 3) N/U BOP and surface equipment
- 4) Drill to KOP of 4268', 8 3/4 inch holesize
- 5) Start curve at 10deg/100' build rate
- 6) Drill to csg point of 5425' MD
- 7) R&C 7" csg, circ cmt to surface
- 8) Land at ~90 deg, drill lateral to 13121' run 4 1/2 inch cemented liner