Form 3160-5 (August 2007) DE BUI	UNITED STATES PARTMENT OF THE II REAU OF LAND MANA	NTERIOR NGEMENT		FIND EC	FORM APPROVED DMB No. 1004-0137 xpires: July 31, 2010
SUNDRY Do not use this abandoned well.	NOTICES AND REPO form for proposals to Use Form 3160-3 (Al	RTS ON WELLS o drill or to re-enter a PD) for such proposa	APR 02	Affindian, Allottee o	or Tribe Name
SUBM	IIT IN TRIPLICATE – Other i	nstructions on page[2urea	u of Land	alf Unit of CA/Agre	ement, Name and/or No.
1. Type of Well Gas	Well Other		8	Well Name and No	1U
2. Name of Operator Encana Oil & Gas (USA) Inc.			9	API Well No.	
3a. Address 370 17th Street, Suite 1700		Bb. Phone No. (include area c	code) 1	0. Field and Pool or	Exploratory Area
Denver, CO 80202 4. Location of Well (Footage, Sec., 7		720-876-5353		1. Country or Parish.	State
SHL: 1109' FNL and 509' FWL Sec 34, T24N, BHL: 585' FNL and 330' FWL Sec 33, T24N, F	R9W R9W			San Juan, NM	٠ • • • • • • • • • • • • • • • • • • •
12. CHE	CK THE APPROPRIATE BO	K(ES) TO INDICATE NATU	RE OF NOTICE	E, REPORT OR OTH	ER DATA
TYPE OF SUBMISSION		Т	YPE OF ACTIO	DN	
Notice of Intent	Acidize	Deepen Fracture Treat	Produc	tion (Start/Resume)	Water Shut-Off Well Integrity
Construction Subsequent Report	Casing Repair	New Construction	Recom	plete	Other
Final Abandonment Notice	Convert to Injection	Plug and Abandon Plug Back	Water	rarily Abandon Disposal	
Encana Oil & Gas (USA) Inc. (Enc change the intermediate hole size drilling plan and wellbore diagram.	ana) would like to revise inte from 8 1/2" to 8 3/4" and inc Drilling is estimated to com	rmediate hole size and rem ease the intermediate cem mence on August 15, 2013.	iove pilot for th ent plan to acc	e Escrito D34-2409 comidate the larger	9 01H well. Encana would like to hole. Please see attached 10 point
BLMPS ALTRIDIVAL OR AN ACTION BOILS NOT LIEL OPERATOR FROM OFTA AUTHORIZATION REQU ON FEDERAL AND INDI Hold C104 for Directional Survey and "As Drilled" plat	Ocleptance of Thes Leve The Lessee and Uning any other Illed for offerations an lands			CONDITION Adhere to previ	NS OF APPROVAL Pour Journal of the strength of
 I hereby certify that the foregoing is Name (<i>Printed/Typed</i>) 	true and correct.				
Amie Weis		Title Operat	tions Engineer		
Signature Anie i	NM)	Date 4	11/201	3	
	THIS SPACE I	OR FEDERAL OR S	TATE OFF		· ·
Approved by Klilliam Tambe	kou	Title Pe	troleum	Engineer	Date 04/02/2013
Conditions of approval, if any, are attach that the applicant holds legal or equitable entitle the applicant to conduct operation	ed. Approval of this notice does title to those rights in the subject s thereon	not warrant or certify lease which would Office	FFD		
Title 18 U.S.C. Section 1001 and Title 4 fictitious or fraudulent statements or rep	3 U.S.C. Section 1212, make it a resentations as to any matter with	crime for any person knowingly in its jurisdiction.	and willfully to	make to any departme	nt or agency of the United States any false,
(Instructions on page 2)					

LOC: Sec 3 County: San	4-T24N-R9W			E	ncana Natural Gas		encana.	ENG: J. Fox/ A. RIG:	4/1/13
WELL: ESCR	to D34-2409 (D1H		,	WELL SUMMARY		natural gas	GLE: 6857 RKBE: 6870	
MWD	OPEN HOLE		DEPTH			HOLE	CASING	MW	DEVIATION
LWD	LOGGING	FORM	TVD	MD		SIZE	SPECS	MUD TYPE	INFORMATION
			60	60'		30	20" 94# 100sx Type I Neat 48.8ppg cmt	Fresh wtr 8.3-9.2	
Surveys	None						9 5/8" 36ppf J55 STC	Fresh wtr	Vertical
After csg is run						12 1/4		8.4-8.6	<1°
			500	500			TOC @ surface 178 sks Type III Cmt		
· · ····		Ojo Alamo Kirtland	758 932	····· · ·	· · · · · · · · · · · · · · · · · · ·		······································		• •••• •• ••• •••
	No OH logs	Fruitland Coal	1177				7" 26ppf J55 LTC	Fresh Wtr	
Surveys every 500'		Pictured Cliffs Ss	1503 1615		t Stage tool @1550'	8 3/4		8.5-8.8	Vertical <1°
		Menefee En	2258 3020				TOC @ surface		
	Mud logger onsite	Point Lookout Ss Mancos Sh	3930 4088				Stage 1 Lead: 277 sks Stage 1 Tail: 190 sks Stage 2 Lead: 135 sks		
		KICK OFF PT	4600						
		Mancos Silt	4648						
		Gallup Top	4905						KOP 4600 10 deg/100'
			5212	5869					
		horz target	5212	5870		6 1/8	200' overlap at liner top		.25deg updip 5163'TVD
		Base Gallup	5250				4725' Lateral	8.6-9.0 OBM	TD = 10595' MD
Surveys every 500'	No OH Logs						4 1/2" 11.6ppf SB80 LTC	Switch to OBM 8.6-9.0	
at CP MWD							Running external swellable csg packers for isolation of prod string		
Directional							Plan on setting top packer within 100' of intermediate casing shoe		

. .

ς.

 (\cdot)

. .

. .

NOTES: 1) Drill with 30" bit to 60', set 20" 94# conductor pipe

2) Drill surface to 500', R&C 9 5/8" casing

a) N/U BOP and surface equipment
b) Drill to KOP of 4600', 8 3/4" hole size,

5) PU directional tools and start curve at 10deg/100' build rate

6) Drill to casing point of 5869' MD

7) R&C 7" casing, circ cmt to surface, switch to OBM
8) Land at 90deg, drill 4725' lateral to 10595', run 4 1/2" liner with external swellable csg packers

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	<u>Depth (TVD)</u>
Ojo Alamo	758'
Kirtland	932'
Fruitland Coal	1177'
Pictured Cliffs	1503'
Lewis	1615'
Cliffhouse	2258'
Menefee	3020'
Point Lookout	3930'
Mancos	4088'
Gallup	4905'

The referenced surface elevation is 6857', KB 6870'

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

<u>Substance</u>	<u>Formation</u>	Depth (TVD)
Water	Ojo Alamo	758'
Gas	Fruitland Coal	1177'
Gas	Pictured Cliffs	1503'
Gas	Cliffhouse	2258'
Gas	Point Lookout	3930'
Oil/Gas	Mancos	4088'

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.
- 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.

- 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).
- I) 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.

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'-5869'MD	8 3/4"	7"	26#	J55, LTC New
Production Liner	5669'-10595'MD	6 1/8"	4 1/2"	11.6#	B80*, LTC New

a)	The proposed	l casing o	design	is as f	follows:
----	--------------	------------	--------	---------	----------

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.

.

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	5212'TVD/ 5869'MD	30% open hole excess Stage 1 Lead: 277sk Stage 1 Tail: 190sk Stage 2 Lead: 135sk	Lead (Stages 1 and 2): PremLite + 3% CaCl + 0.25lb/sk CelloFlake + 5lb/sk LCM, 12.1ppg 2.13cuft/sk Tail (Stage 1): Type III Cmt + 1% CaCl + 0.25lb/sk Cello Flake 14.5ppg 1.38cuft/sk	Surface	1 per joint for bottom 3 joints, 1 every 3 joints for remaining joints
Production Liner*	5669'MD- 10595'MD	None – External casing packers	N/A	N/A	N/A

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

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

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

5. WELL PLAN & DIRECTIONAL DRILLING PROGRAM

The proposed horizontal well will have a kick off point of 4600'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation	
Horizontal Lateral	5163'/10595'	Gallup	

6. DRILLING FLUIDS PROGRAM

.

a) Surface through Intermediate Casing Point:

Hole Size (in)	TVD (ft)	Mud Type	Density (Ib/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 3/4"	500'TVD- 5212'TVD/5869'MD	Fresh Water LSND	8.5-8.8	40-50	8-10

b) Intermediate Casing Point to TD:

Hole Size (in)	Depth (ft)	Mud Type	Density (Ib/gal)	Viscosity (sec/qt)	Fluid Loss (cc)
6 1/8"	5869'MD- 10595'MD	Synthetic Oil Based Mud	8.6-9.0	15-25	<15

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

7. TESTING, CORING and LOGGING

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

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

8. ABNORMAL PRESSURES & HYDROGEN SULFIDE

The anticipated bottom hole pressure is +/- 2,439 psi based on a 9.0 ppg at 5212' TVD of the vertical pilot hole. No abnormal pressure or temperatures are anticipated.

No hydrogen sulfide gas is anticipated, however, if H_2S 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 15, 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.