

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

David R. Catanach  
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: 9-18-14

Well information;

Operator Encana, Well Name and Number Good Times E24 2410 #02H

API# 30-045-35596, Section 24, Township 24 N, Range 10 E

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 NSL 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
- ☒ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ☒ 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. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ☒ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

Chuck Serin  
NMOCD Approved by Signature

2-25-15  
Date  
RC

RECEIVED

FEB 02 2015

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
NMOCD DISTRICT III  
APPLICATION FOR PERMIT TO DRILL OR REENTERFORM APPROVED  
OMB No. 1004-0137  
Expires July 31, 20105. Lease Serial No.  
NM 25842, NM 5991  
6. If Indian, Allottee or Tribe Name  
N/A1a. Type of work: ☒ DRILL ☐ REENTER7. If Unit or CA Agreement, Name and No.  
Pending1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone8. Lease Name and Well No.  
Good Times E24-2410 02H

2. Name of Operator Encana Oil &amp; Gas (USA) Inc.

9. API Well No.

30-045-35596

3a. Address 370 17th Street, Suite 1700  
Denver, CO 802023b. Phone No. (include area code)  
720-876-353310. Field and Pool, or Exploratory  
Basin Mancos

4. Location of Well (Report location clearly and in accordance with any State requirements.)\*

At surface 2402' FNL and 1168' FWL Section 24, T24N, R10W SWNW

At proposed prod. zone 2314' FNL and 2010' FWL Section 25, T24N, R10W SENW

11. Sec., T. R. M. or Blk. and Survey or Area

SHL Section 24, T24N, R10W NMPM

BHL Sec 25, T25N, R10W

14. Distance in miles and direction from nearest town or post office\*

+/- 33.7 miles southeast of the intersection of US Hwy 550 &amp; US Hwy 64 in Bloomfield, NM

12. County or Parish  
San Juan13. State  
NM15. Distance from proposed\*  
location to nearest  
property or lease line, ft.  
(Also to nearest drig. unit line, if any)BHL is 2010' from west lease  
line Section 25, T24N, R10W16. No. of acres in lease  
NM 25842- 320 ac.  
NM 5991- 640 ac.17. Spacing Unit dedicated to this well  
318.30 acres

320.00 acres

18. Distance from proposed location\*  
to nearest well, drilling, completed,  
applied for, on this lease, ft.Good Times Unit E24-24  
01H is +/-30'W from SHL19. Proposed Depth  
5139' T.VD/ 10363.9' MD20. BLM/BIA Bond No. on file  
COB-00023521. Elevations (Show whether DF, KDB, RT, GL, etc.)  
6919.8' GL, 6935.8' KB22. Approximate date work will start\*  
03/18/201523. Estimated duration  
20 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:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature

Name (Printed/Typed)  
Katie WegnerDate  
9/18/14

Title

Regulatory Analyst

Approved by (Signature)

Name (Printed/Typed)

Date

1/29/15

Title

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)  
DRILLING OPERATIONS  
AUTHORIZED ARE SUBJECT TO  
COMPLIANCE WITH ATTACHED  
"GENERAL REQUIREMENTS"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 LANDSThis action is subject to technical  
and procedural review pursuant to  
43 CFR 3165.3 and appeal  
pursuant to 43 CFR 3165.4

NMOCD

District I  
1625 N. French Dr., Hobbs, NM 88240  
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 Rio Brazos Road, Aztec, NM 87410  
Phone (505) 334-8178 Fax: (505) 334-8170  
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

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office  
AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045-35596		<sup>2</sup> Pool Code 97232		<sup>3</sup> Pool Name BASIN MANCOS	
<sup>4</sup> Property Code 314186		<sup>5</sup> Property Name GOOD TIMES E24-2410			<sup>6</sup> Well Number 02H
<sup>7</sup> OGRID No. 282327		<sup>8</sup> Operator Name ENCANA OIL & GAS (USA) INC.			<sup>9</sup> Elevation 6919.8'

<sup>10</sup> Surface Location

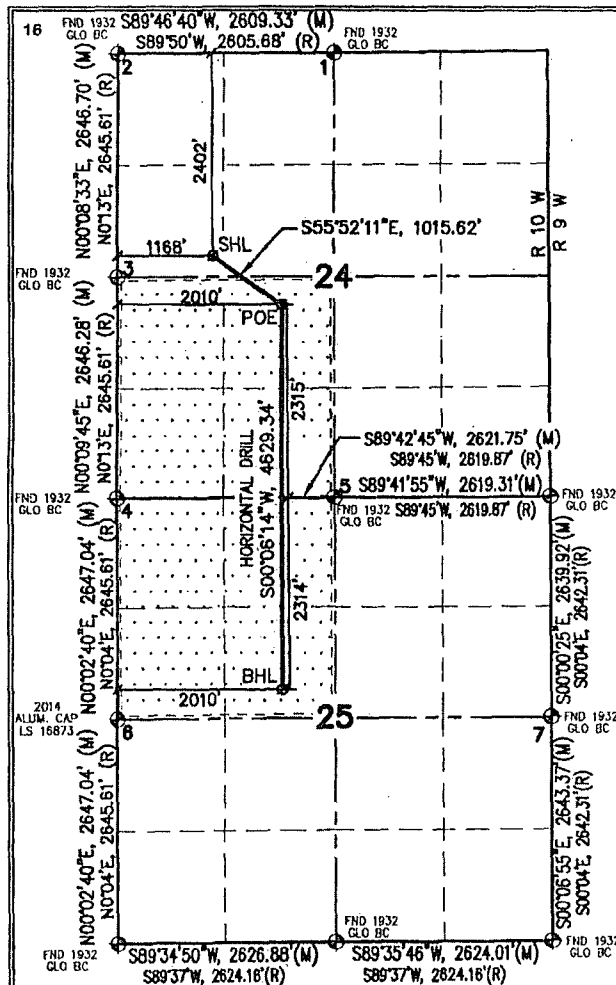
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West Line	County
E	24	24N	10W		2402	NORTH	1168	WEST	SAN JUAN

<sup>11</sup> 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
F	25	24N	10W		2314	NORTH	2010	WEST	SAN JUAN

<sup>12</sup> Dedicated Acres 318.30 ACRES 350.00		PROJECT AREA SW/4 SECTION 24 NW/4 SECTION 25		<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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.



**E24-2410 02H WELL**  
**SHL (WELL FLAG)**  
LAT. 36.300153 N (NAD83)  
LONG. 107.852973 W (NAD83)  
LAT. 36.300142 N (NAD27)  
LONG. 107.852356 W (NAD27)  
**POE (POINT OF ENTRY)**  
LAT. 36.298588 N (NAD83)  
LONG. 107.850121 W (NAD83)  
LAT. 36.298576 N (NAD27)  
LONG. 107.849504 W (NAD27)  
**BHL (BOTTOM HOLE LOCATION)**  
LAT. 36.285875 N (NAD83)  
LONG. 107.850121 W (NAD83)  
LAT. 36.285864 N (NAD27)  
LONG. 107.849537 W (NAD27)

**SECTION CORNERS**  
**1** LAT. 36.308764 N (NAD83)  
LONG. 107.848060 W (NAD83)  
LAT. 36.308753 N (NAD27)  
LONG. 107.847443 W (NAD27)  
**2** LAT. 36.308738 N (NAD83)  
LONG. 107.856913 W (NAD83)  
LAT. 36.308727 N (NAD27)  
LONG. 107.856295 W (NAD27)  
**3** LAT. 36.299470 N (NAD83)  
LONG. 107.856937 W (NAD83)  
LAT. 36.299459 N (NAD27)  
LONG. 107.856319 W (NAD27)  
**4** LAT. 36.292203 N (NAD83)  
LONG. 107.856984 W (NAD83)  
LAT. 36.292192 N (NAD27)  
LONG. 107.856347 W (NAD27)  
**5** LAT. 36.292238 N (NAD83)  
LONG. 107.848071 W (NAD83)  
LAT. 36.292226 N (NAD27)  
LONG. 107.847454 W (NAD27)  
**6** LAT. 36.284935 N (NAD83)  
LONG. 107.856972 W (NAD83)  
LAT. 36.284923 N (NAD27)  
LONG. 107.856355 W (NAD27)  
**7** LAT. 36.285024 N (NAD83)  
LONG. 107.839188 W (NAD83)  
LAT. 36.285012 N (NAD27)  
LONG. 107.838572 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.  
Signature: *Katie Wegner* Date: 9/10/14  
Printed Name: Katie Wegner  
E-mail Address: Kathryn.Wegner@encana.com

**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.  
April 22, 2014  
Date of Survey  
Signature and Seal of Professional Surveyor:  
*Richard L. Mulliken*  
RICHARD L. MULLIKEN  
NEW MEXICO  
16873  
7-8-14  
PROFESSIONAL SURVEYOR  
RICHARD L. MULLIKEN  
Certificate Number 16873

Good Times E24-2410 02H

SHL: 2402'FNL & 1168'FWL Sec 24 24N10W

BHL: 2314'FNL & 2010'FWL Sec 25 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:

<b>Formation</b>	<b>Depth (TVD) units = feet</b>
San Jose Fn.	n/a
Nacimiento Fn.	surface
Ojo Alamo Ss.	803
Kirtland Shale	963
Fruitland Coal	1,275
Pictured Cliffs Ss.	1,591
Lewis Shale	1,699
Cliffhouse Ss.	2,328
Menefee Fn.	3,084
Point Lookout Ss.	3,967
Mancos Shale	4,199
Mancos Silt	4,753
Gallup Fn.	5,028
Base Gallup	5,356

The referenced surface elevation is 6920', KB 6936'

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

<b>Substance</b>	<b>Formation</b>	<b>Depth (TVD) units = feet</b>
Water/Gas	Fruitland Coal	1,275
Oil/Gas	Pictured Cliffs Ss.	1,591
Oil/Gas	Cliffhouse Ss.	2,328
Gas	Menefee Fn.	3,084
Oil/Gas	Point Lookout Ss.	3,967
Oil/Gas	Mancos Shale	4,199
Oil/Gas	Mancos Silt	4,753
Oil/Gas	Gallup Fn.	5,028

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

Good Times E24-2410 02H

SHL: 2402'FNL & 1168'FWL Sec 24 24N10W

BHL: 2314'FNL & 2010'FWL Sec 25 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'-5342'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5242'-10364'	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.

**Good Times E24-2410 02H**

**SHL: 2402'FNL & 1168'FWL Sec 24 24N10W**

**BHL: 2314'FNL & 2010'FWL Sec 25 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'	276 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'-5342'	100% open hole excess Stage 1 Lead: 708 sks Stage 1 Tail: 538 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	5242'-10364'	50% OH excess Stage 1 Blend Total: 279sks	Blend: 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	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 2500'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5139'/10364'	Gallup

Good Times E24-2410 02H

SHL: 2402'FNL & 1168'FWL Sec 24 24N10W

BHL: 2314'FNL & 2010'FWL Sec 25 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'-5140'/5342'	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"	5140'/5342'- 5139'/10364'	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 +/- 2464 psi based on a 9.0 ppg at 5266' TVD of the horizontal lateral target. No abnormal pressure or temperatures are anticipated.

No hydrogen sulfide gas is anticipated, however, if H<sub>2</sub>S 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 March 18, 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.



## 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

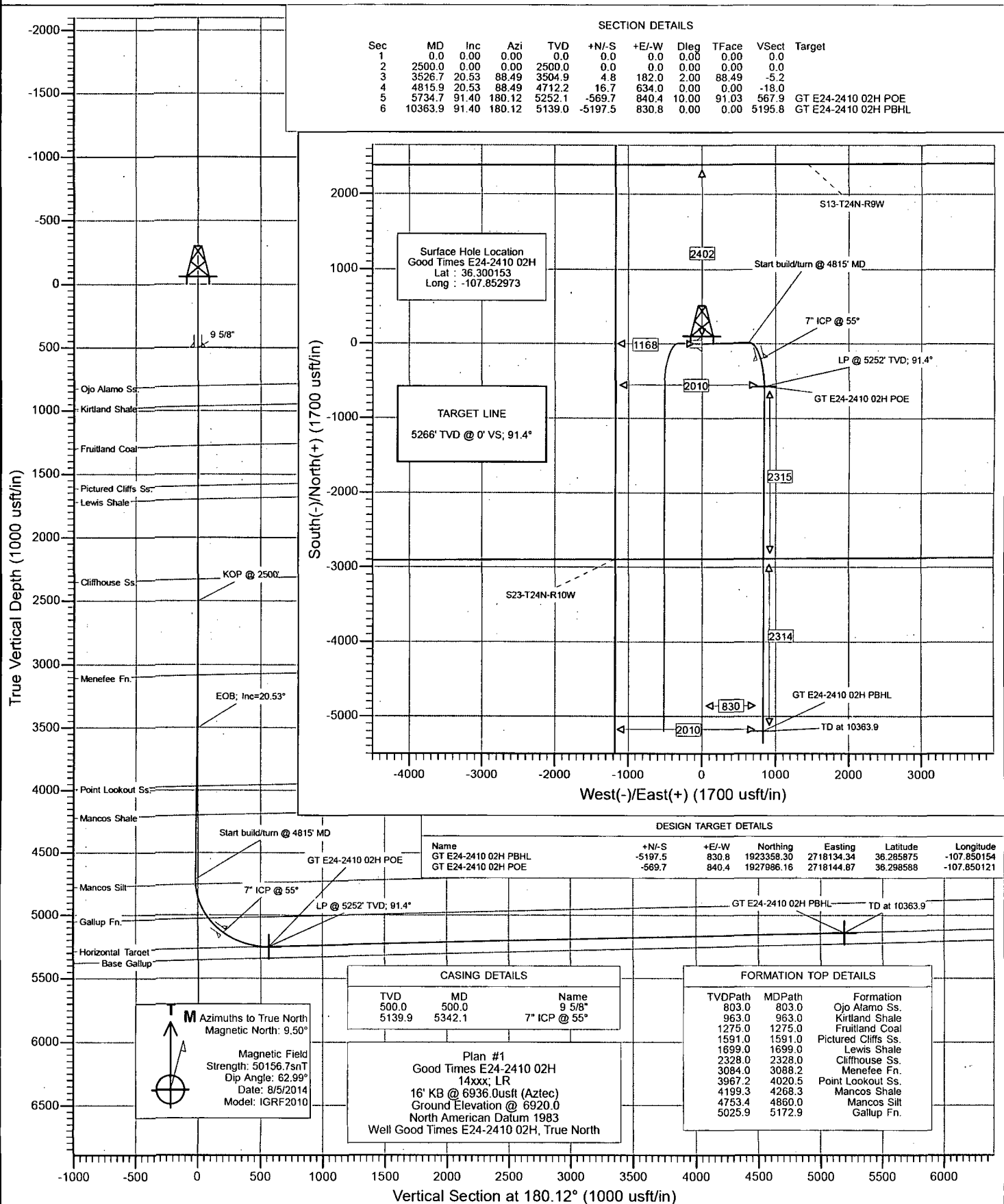
Coupling Internal Yield (psi)	_____	10,660
Pipe Body Internal Yield (psi)	_____	7,780
Leak @ E1 or E7 plane (psi)	_____	17,920

Pipe Hydrostatic Test Pressure @ 80 % SMYS	_____	7,100
--	-------	-------



encana

Project: San Juan County, NM  
Site: S24-T24N-R10W  
Well: Good Times E24-2410 02H  
Wellbore: Hz  
Design: Plan #1



# Planning Report

Database: USA EDM 5000 Multi Users DB  
 Company: EnCana Oil & Gas (USA) Inc  
 Project: San Juan County, NM  
 Site: S24-T24N-R10W  
 Well: Good Times E24-2410 02H  
 Wellbore: Hz  
 Design: Plan #1

Local Co-ordinate Reference: Well Good Times E24-2410 02H  
 TVD Reference: 16' KB @ 6936.0usft (Aztec)  
 MD Reference: 16' KB @ 6936.0usft (Aztec)  
 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		S24-T24N-R10W			
Site Position:		Northing:	1,928,556.02 usft	Latitude:	36.300153
From:	Lat/Long	Easting:	2,717,274.54 usft	Longitude:	-107.853075
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	-0.01 °

Well	Good Times E24-2410 02H					
Well Position	+N/-S	0.0 usft	Northing:	1,928,556.02 usft	Latitude:	36.300153
	+E/-W	0.0 usft	Easting:	2,717,304.59 usft	Longitude:	-107.852973
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	6,920.0 usft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/5/2014	9.50	62.99	50,157

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	180.12

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	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,526.7	20.53	88.49	3,504.9	4.8	182.0	2.00	2.00	0.00	88.49	
4,815.9	20.53	88.49	4,712.2	16.7	634.0	0.00	0.00	0.00	0.00	
5,734.7	91.40	180.12	5,252.1	-569.7	840.4	10.00	7.71	9.97	91.03	GT E24-2410 02H PC
10,363.9	91.40	180.12	5,139.0	-5,197.5	830.8	0.00	0.00	0.00	0.00	GT E24-2410 02H PB

# Planning Report

Database: USA EDM 5000 Multi Users DB  
 Company: EnCana Oil & Gas (USA) Inc  
 Project: San Juan County, NM  
 Site: S24-T24N-R10W  
 Well: Good Times E24-2410 02H  
 Wellbore: Hz  
 Design: Plan #1

Local Co-ordinate Reference: Well Good Times E24-2410 02H  
 TVD Reference: 16' KB @ 6936.0usft (Aztec)  
 MD Reference: 16' KB @ 6936.0usft (Aztec)  
 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	
803.0	0.00	0.00	803.0	0.0	0.0	0.0	0.00	0.00	Ojo Alamo Ss.
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
963.0	0.00	0.00	963.0	0.0	0.0	0.0	0.00	0.00	Kirtland Shale
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	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	
1,275.0	0.00	0.00	1,275.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
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	
1,591.0	0.00	0.00	1,591.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	
1,699.0	0.00	0.00	1,699.0	0.0	0.0	0.0	0.00	0.00	Lewis Shale
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	
1,900.0	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	
2,328.0	0.00	0.00	2,328.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
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	KOP @ 2500'
2,600.0	2.00	88.49	2,600.0	0.0	1.7	0.0	2.00	2.00	
2,700.0	4.00	88.49	2,699.8	0.2	7.0	-0.2	2.00	2.00	
2,800.0	6.00	88.49	2,799.4	0.4	15.7	-0.4	2.00	2.00	
2,900.0	8.00	88.49	2,898.7	0.7	27.9	-0.8	2.00	2.00	
3,000.0	10.00	88.49	2,997.5	1.1	43.5	-1.2	2.00	2.00	
3,088.2	11.76	88.49	3,084.0	1.6	60.1	-1.7	2.00	2.00	Menefee Fn.
3,100.0	12.00	88.49	3,095.6	1.6	62.6	-1.8	2.00	2.00	
3,200.0	14.00	88.49	3,193.0	2.2	85.1	-2.4	2.00	2.00	
3,300.0	16.00	88.49	3,289.6	2.9	110.9	-3.2	2.00	2.00	
3,400.0	18.00	88.49	3,385.3	3.7	140.2	-4.0	2.00	2.00	
3,500.0	20.00	88.49	3,479.8	4.5	172.7	-4.9	2.00	2.00	
3,526.7	20.53	88.49	3,504.9	4.8	182.0	-5.2	2.00	2.00	EOB; Inc=20.53°
3,600.0	20.53	88.49	3,573.5	5.5	207.7	-5.9	0.00	0.00	
3,700.0	20.53	88.49	3,667.1	6.4	242.7	-6.9	0.00	0.00	
3,800.0	20.53	88.49	3,760.8	7.3	277.8	-7.9	0.00	0.00	
3,900.0	20.53	88.49	3,854.4	8.2	312.9	-8.9	0.00	0.00	
4,000.0	20.53	88.49	3,948.1	9.2	347.9	-9.9	0.00	0.00	
4,020.5	20.53	88.49	3,967.2	9.3	355.1	-10.1	0.00	0.00	Point Lookout Ss.
4,100.0	20.53	88.49	4,041.7	10.1	383.0	-10.9	0.00	0.00	
4,200.0	20.53	88.49	4,135.4	11.0	418.0	-11.9	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:** S24-T24N-R10W  
**Well:** Good Times E24-2410 02H  
**Wellbore:** Hz  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Good Times E24-2410 02H  
**TVD Reference:** 16' KB @ 6936.0usft (Aztec)  
**MD Reference:** 16' KB @ 6936.0usft (Aztec)  
**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
4,268.3	20.53	88.49	4,199.3	11.6	442.0	-12.6	0.00	0.00	Mancos Shale
4,300.0	20.53	88.49	4,229.0	11.9	453.1	-12.9	0.00	0.00	
4,400.0	20.53	88.49	4,322.7	12.8	488.2	-13.9	0.00	0.00	
4,500.0	20.53	88.49	4,416.3	13.8	523.2	-14.9	0.00	0.00	
4,600.0	20.53	88.49	4,510.0	14.7	558.3	-15.9	0.00	0.00	
4,700.0	20.53	88.49	4,603.6	15.6	593.4	-16.9	0.00	0.00	
4,800.0	20.53	88.49	4,697.2	16.5	628.4	-17.9	0.00	0.00	
4,815.9	20.53	88.49	4,712.2	16.7	634.0	-18.0	0.00	0.00	Start build/turn @ 4815' MD
4,860.0	20.90	100.93	4,753.4	15.4	649.5	-16.8	10.00	0.84	Mancos Silt
4,900.0	21.98	111.48	4,790.6	11.3	663.5	-12.7	10.00	2.69	
5,000.0	27.06	132.44	4,881.8	-11.0	697.7	9.5	10.00	5.08	
5,100.0	34.24	146.21	4,967.9	-49.8	730.3	48.3	10.00	7.18	
5,172.9	40.16	153.25	5,025.9	-87.8	752.3	86.3	10.00	8.13	Gallup Fn.
5,200.0	42.46	155.43	5,046.3	-104.0	760.0	102.4	10.00	8.47	
5,300.0	51.22	162.08	5,114.7	-172.0	786.1	170.3	10.00	8.76	
5,342.1	55.00	164.39	5,139.9	-204.2	795.8	202.5	10.00	8.99	7" ICP @ 55°
5,400.0	60.27	167.24	5,170.9	-251.6	807.7	249.9	10.00	9.10	
5,500.0	69.48	171.54	5,213.3	-340.5	824.3	338.7	10.00	9.22	
5,600.0	78.79	175.34	5,240.7	-435.9	835.2	434.2	10.00	9.31	
5,700.0	88.15	178.90	5,252.0	-535.0	840.1	533.3	10.00	9.35	
5,734.7	91.40	180.12	5,252.2	-569.7	840.4	567.9	10.02	9.38	LP @ 5252' TVD; 91.4° - GT E24-2410 02H PO
5,800.0	91.40	180.12	5,250.5	-635.0	840.3	633.2	0.00	0.00	
5,900.0	91.40	180.12	5,248.1	-735.0	840.1	733.2	0.00	0.00	
6,000.0	91.40	180.12	5,245.6	-834.9	839.8	833.2	0.00	0.00	
6,100.0	91.40	180.12	5,243.2	-934.9	839.6	933.1	0.00	0.00	
6,200.0	91.40	180.12	5,240.7	-1,034.9	839.4	1,033.1	0.00	0.00	
6,300.0	91.40	180.12	5,238.3	-1,134.8	839.2	1,133.1	0.00	0.00	
6,400.0	91.40	180.12	5,235.8	-1,234.8	839.0	1,233.0	0.00	0.00	
6,500.0	91.40	180.12	5,233.4	-1,334.8	838.8	1,333.0	0.00	0.00	
6,600.0	91.40	180.12	5,231.0	-1,434.7	838.6	1,433.0	0.00	0.00	
6,700.0	91.40	180.12	5,228.5	-1,534.7	838.4	1,533.0	0.00	0.00	
6,800.0	91.40	180.12	5,226.1	-1,634.7	838.2	1,632.9	0.00	0.00	
6,900.0	91.40	180.12	5,223.6	-1,734.7	838.0	1,732.9	0.00	0.00	
7,000.0	91.40	180.12	5,221.2	-1,834.6	837.8	1,832.9	0.00	0.00	
7,100.0	91.40	180.12	5,218.7	-1,934.6	837.6	1,932.8	0.00	0.00	
7,200.0	91.40	180.12	5,216.3	-2,034.6	837.4	2,032.8	0.00	0.00	
7,300.0	91.40	180.12	5,213.9	-2,134.5	837.2	2,132.8	0.00	0.00	
7,400.0	91.40	180.12	5,211.4	-2,234.5	836.9	2,232.7	0.00	0.00	
7,500.0	91.40	180.12	5,209.0	-2,334.5	836.7	2,332.7	0.00	0.00	
7,600.0	91.40	180.12	5,206.5	-2,434.4	836.5	2,432.7	0.00	0.00	
7,700.0	91.40	180.12	5,204.1	-2,534.4	836.3	2,532.7	0.00	0.00	
7,800.0	91.40	180.12	5,201.6	-2,634.4	836.1	2,632.6	0.00	0.00	
7,900.0	91.40	180.12	5,199.2	-2,734.4	835.9	2,732.6	0.00	0.00	
8,000.0	91.40	180.12	5,196.8	-2,834.3	835.7	2,832.6	0.00	0.00	
8,100.0	91.40	180.12	5,194.3	-2,934.3	835.5	2,932.5	0.00	0.00	
8,200.0	91.40	180.12	5,191.9	-3,034.3	835.3	3,032.5	0.00	0.00	
8,300.0	91.40	180.12	5,189.4	-3,134.2	835.1	3,132.5	0.00	0.00	
8,400.0	91.40	180.12	5,187.0	-3,234.2	834.9	3,232.4	0.00	0.00	
8,500.0	91.40	180.12	5,184.5	-3,334.2	834.7	3,332.4	0.00	0.00	
8,600.0	91.40	180.12	5,182.1	-3,434.1	834.5	3,432.4	0.00	0.00	
8,700.0	91.40	180.12	5,179.7	-3,534.1	834.3	3,532.4	0.00	0.00	
8,800.0	91.40	180.12	5,177.2	-3,634.1	834.0	3,632.3	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:** S24-T24N-R10W  
**Well:** Good Times E24-2410 02H  
**Wellbore:** Hz  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Good Times E24-2410 02H  
**TVD Reference:** 16' KB @ 6936.0usft (Aztec)  
**MD Reference:** 16' KB @ 6936.0usft (Aztec)  
**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	91.40	180.12	5,174.8	-3,734.1	833.8	3,732.3	0.00	0.00	
9,000.0	91.40	180.12	5,172.3	-3,834.0	833.6	3,832.3	0.00	0.00	
9,100.0	91.40	180.12	5,169.9	-3,934.0	833.4	3,932.2	0.00	0.00	
9,200.0	91.40	180.12	5,167.4	-4,034.0	833.2	4,032.2	0.00	0.00	
9,300.0	91.40	180.12	5,165.0	-4,133.9	833.0	4,132.2	0.00	0.00	
9,400.0	91.40	180.12	5,162.6	-4,233.9	832.8	4,232.1	0.00	0.00	
9,500.0	91.40	180.12	5,160.1	-4,333.9	832.6	4,332.1	0.00	0.00	
9,600.0	91.40	180.12	5,157.7	-4,433.8	832.4	4,432.1	0.00	0.00	
9,700.0	91.40	180.12	5,155.2	-4,533.8	832.2	4,532.1	0.00	0.00	
9,800.0	91.40	180.12	5,152.8	-4,633.8	832.0	4,632.0	0.00	0.00	
9,900.0	91.40	180.12	5,150.3	-4,733.7	831.8	4,732.0	0.00	0.00	
10,000.0	91.40	180.12	5,147.9	-4,833.7	831.6	4,832.0	0.00	0.00	
10,100.0	91.40	180.12	5,145.4	-4,933.7	831.4	4,931.9	0.00	0.00	
10,200.0	91.40	180.12	5,143.0	-5,033.7	831.1	5,031.9	0.00	0.00	
10,300.0	91.40	180.12	5,140.6	-5,133.6	830.9	5,131.9	0.00	0.00	
10,363.9	91.40	180.12	5,139.0	-5,197.5	830.8	5,195.8	0.00	0.00	TD at 10363.9 - GT E24-2410 02H PBHL

### 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
GT E24-2410 02H POE - plan misses target center by 0.1usft at 5734.7usft MD (5252.2 TVD, -569.7 N, 840.4 E) - Point	0.00	0.00	5,252.1	-569.7	840.4	1,927,986.16	2,718,144.87	36.298588	-107.850121
GT E24-2410 02H PBHL - plan hits target center - Point	0.00	0.00	5,139.0	-5,197.5	830.8	1,923,358.30	2,718,134.34	36.285875	-107.850154

### Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
500.0	500.0	9 5/8"	0	0
5,342.1	5,139.9	7" ICP @ 55°	0	0

## Planning Report

**Database:** USA EDM 5000 Multi Users DB  
**Company:** EnCana Oil & Gas (USA) Inc  
**Project:** San Juan County, NM  
**Site:** S24-T24N-R10W  
**Well:** Good Times E24-2410 02H  
**Wellbore:** Hz  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Good Times E24-2410 02H  
**TVD Reference:** 16' KB @ 6936.0usft (Aztec)  
**MD Reference:** 16' KB @ 6936.0usft (Aztec)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
803.0	803.0	Ojo Alamo Ss.		-1.40	180.12
963.0	963.0	Kirtland Shale		-1.40	180.12
1,275.0	1,275.0	Fruitland Coal		-1.40	180.12
1,591.0	1,591.0	Pictured Cliffs Ss.		-1.40	180.12
1,699.0	1,699.0	Lewis Shale		-1.40	180.12
2,328.0	2,328.0	Cliffhouse Ss.		-1.40	180.12
3,088.2	3,084.0	Menefee Fn.		-1.40	180.12
4,020.5	3,967.0	Point Lookout Ss.		-1.40	180.12
4,268.3	4,199.0	Mancos Shale		-1.40	180.12
4,860.0	4,753.0	Mancos Sill		-1.40	180.12
5,172.9	5,028.0	Gallup Fn.		-1.40	180.12

### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,500.0	2,500.0	0.0	0.0	KOP @ 2500'
3,526.7	3,504.9	4.8	182.0	EOB; Inc=20.53°
4,815.9	4,712.2	16.7	634.0	Start build/turn @ 4815' MD
5,734.7	5,252.2	-569.7	840.4	LP @ 5252' TVD; 91.4°
10,363.9	5,139.0	-5,197.5	830.8	TD at 10363.9

# **EnCana Oil & Gas (USA) Inc**

**San Juan County, NM**

**S24-T24N-R10W**

**Good Times E24-2410 02H**

**Hz**

**Plan #1**

## **Anticollision Report**

**06 August, 2014**

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Good Times E24-2410 02H
<b>Project:</b>	San Juan County, NM	<b>TVD Reference:</b>	16' KB @ 6936.0usft (Aztec)
<b>Reference Site:</b>	S24-T24N-R10W	<b>MD Reference:</b>	16' KB @ 6936.0usft (Aztec)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Good Times E24-2410 02H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria
<b>Interpolation Method:</b>	MD Interval 100.0usft
<b>Depth Range:</b>	Unlimited
<b>Results Limited by:</b>	Maximum center-center distance of 1,236.4usft
<b>Warning Levels Evaluated at:</b>	2.00 Sigma
<b>Error Model:</b>	Systematic Ellipse
<b>Scan Method:</b>	Closest Approach 3D
<b>Error Surface:</b>	Elliptical Conic

<b>Survey Tool Program</b>	<b>Date</b>	8/6/2014
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>
0.0	10,363.9	Plan #1 (Hz)
	<b>Tool Name</b>	<b>Description</b>
	Geolink MWD	Geolink MWD

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
S24-T24N-R10W						
Good Times E24-2410 01H - Hz - Plan #1	2,500.0	2,500.0	30.1	21.4	3.466	CC, ES, SF
S25-T24N-R10W						
Good Times P25-2410 01H - Hz - Plan #1	10,363.9	8,237.0	794.6	705.6	8.924	CC, ES, SF



# Anticollision Report

Company: EnCana Oil & Gas (USA) Inc  
 Project: San Juan County, NM  
 Reference Site: S24-T24N-R10W  
 Site Error: 0.0usft  
 Reference Well: Good Times E24-2410 02H  
 Well Error: 0.0usft  
 Reference Wellbore: Hz  
 Reference Design: Plan #1

Local Co-ordinate Reference: Well Good Times E24-2410 02H  
 TVD Reference: 16' KB @ 6936.0usft (Aztec)  
 MD Reference: 16' KB @ 6936.0usft (Aztec)  
 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 S24-T24N-R10W - Good Times E24-2410 01H - Hz - Plan #1														Offset Site Error: 0.0 usft
Survey Program: 0-Geolink MWD														Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-30.1	30.1					
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-30.1	30.1	29.8	0.29	102.503		
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-30.1	30.1	29.4	0.64	46.795		
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-30.1	30.1	29.1	0.99	30.318		
400.0	400.0	400.0	400.0	0.7	0.7	-90.00	0.0	-30.1	30.1	28.7	1.34	22.423		
500.0	500.0	500.0	500.0	0.8	0.8	-90.00	0.0	-30.1	30.1	28.4	1.69	17.790		
600.0	600.0	600.0	600.0	1.0	1.0	-90.00	0.0	-30.1	30.1	28.0	2.04	14.744		
700.0	700.0	700.0	700.0	1.2	1.2	-90.00	0.0	-30.1	30.1	27.7	2.39	12.588		
800.0	800.0	800.0	800.0	1.4	1.4	-90.00	0.0	-30.1	30.1	27.3	2.74	10.983		
900.0	900.0	900.0	900.0	1.5	1.5	-90.00	0.0	-30.1	30.1	27.0	3.09	9.740		
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	-90.00	0.0	-30.1	30.1	26.6	3.43	8.750		
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	-90.00	0.0	-30.1	30.1	26.3	3.78	7.943		
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	-90.00	0.0	-30.1	30.1	25.9	4.13	7.272		
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	-90.00	0.0	-30.1	30.1	25.6	4.48	6.706		
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	-90.00	0.0	-30.1	30.1	25.2	4.83	6.221		
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	-90.00	0.0	-30.1	30.1	24.9	5.18	5.802		
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	-90.00	0.0	-30.1	30.1	24.5	5.53	5.436		
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	-90.00	0.0	-30.1	30.1	24.2	5.88	5.113		
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	-90.00	0.0	-30.1	30.1	23.8	6.23	4.826		
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	-90.00	0.0	-30.1	30.1	23.5	6.58	4.570		
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	-90.00	0.0	-30.1	30.1	23.1	6.93	4.340		
2,100.0	2,100.0	2,100.0	2,100.0	3.6	3.6	-90.00	0.0	-30.1	30.1	22.8	7.27	4.132		
2,200.0	2,200.0	2,200.0	2,200.0	3.8	3.8	-90.00	0.0	-30.1	30.1	22.4	7.62	3.942		
2,300.0	2,300.0	2,300.0	2,300.0	4.0	4.0	-90.00	0.0	-30.1	30.1	22.1	7.97	3.770		
2,400.0	2,400.0	2,400.0	2,400.0	4.2	4.2	-90.00	0.0	-30.1	30.1	21.7	8.32	3.612		
2,500.0	2,500.0	2,500.0	2,500.0	4.3	4.3	-90.00	0.0	-30.1	30.1	21.4	8.67	3.466 CC, ES, SF		
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	-178.57	0.0	-30.1	31.8	22.8	9.02	3.527		
2,700.0	2,699.8	2,699.8	2,699.8	4.7	4.7	-178.77	0.0	-30.1	37.0	27.7	9.35	3.959		
2,800.0	2,799.5	2,799.5	2,799.5	4.9	4.9	-179.00	0.0	-30.1	45.7	36.1	9.68	4.724		
2,900.0	2,898.7	2,898.7	2,898.7	5.1	5.0	-179.21	0.0	-30.1	57.9	47.9	10.00	5.791		
3,000.0	2,997.5	2,997.5	2,997.5	5.3	5.2	-179.37	0.0	-30.1	73.6	63.3	10.31	7.133		
3,100.0	3,095.6	3,095.6	3,095.6	5.5	5.4	-179.50	0.0	-30.1	92.7	82.0	10.61	8.729		
3,200.0	3,193.1	3,193.1	3,193.1	5.8	5.5	-179.59	0.0	-30.1	115.1	104.2	10.90	10.560		
3,300.0	3,289.6	3,289.6	3,289.6	6.1	5.7	-179.67	0.0	-30.1	141.0	129.8	11.18	12.611		
3,400.0	3,385.3	3,385.3	3,385.3	6.5	5.9	-179.72	0.0	-30.1	170.3	158.8	11.45	14.870		
3,500.0	3,479.8	3,479.8	3,479.8	7.0	6.0	-179.76	0.0	-30.1	202.8	191.1	11.70	17.328		
3,600.0	3,573.5	3,566.9	3,566.9	7.5	6.2	-179.78	0.0	-31.0	238.8	226.8	12.01	19.888		
3,700.0	3,667.2	3,649.9	3,649.8	8.0	6.3	-179.76	0.2	-34.7	278.1	265.7	12.33	22.560		
3,800.0	3,760.8	3,730.5	3,730.2	8.5	6.5	-179.71	0.4	-41.1	320.4	307.8	12.64	25.353		
3,900.0	3,854.4	3,808.5	3,807.7	9.0	6.6	-179.64	0.7	-49.8	365.7	352.8	12.95	28.252		
4,000.0	3,948.1	3,884.0	3,882.4	9.6	6.8	-179.57	1.1	-60.6	413.9	400.6	13.25	31.240		
4,100.0	4,041.7	3,956.8	3,954.1	10.2	6.9	-179.49	1.6	-73.3	464.7	451.2	13.55	34.307		
4,200.0	4,135.4	4,027.1	4,022.9	10.8	7.1	-179.42	2.1	-87.6	518.1	504.2	13.84	37.438		
4,300.0	4,229.0	4,100.0	4,093.8	11.4	7.3	-179.34	2.7	-104.5	573.9	559.7	14.13	40.602		
4,400.0	4,322.7	4,159.9	4,151.6	12.0	7.5	-179.28	3.3	-120.0	631.9	617.4	14.41	43.855		
4,500.0	4,416.3	4,222.5	4,211.7	12.6	7.7	-179.21	3.9	-137.8	692.0	677.3	14.69	47.122		
4,600.0	4,510.0	4,282.7	4,269.0	13.2	7.9	-179.15	4.6	-156.3	754.2	739.2	14.96	50.417		
4,700.0	4,603.6	4,347.4	4,330.0	13.9	8.1	-179.08	5.4	-177.6	818.2	802.9	15.24	53.690		
4,800.0	4,697.3	4,423.9	4,402.1	14.5	8.4	-179.01	6.3	-203.2	882.6	867.0	15.54	56.804		
4,900.0	4,790.7	4,500.1	4,473.9	15.1	8.7	153.04	7.2	-228.7	946.8	930.7	16.02	59.117		
5,000.0	4,881.8	4,574.3	4,543.8	15.7	9.1	127.56	8.1	-253.5	1,009.7	992.7	16.98	59.457		
5,100.0	4,967.9	4,644.0	4,609.5	16.3	9.4	110.57	9.0	-276.9	1,070.6	1,052.4	18.19	58.866		

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 County, NM  
**Reference Site:** S24-T24N-R10W  
**Site Error:** 0.0usft  
**Reference Well:** Good Times E24-2410 02H  
**Well Error:** 0.0usft  
**Reference Wellbore:** Hz  
**Reference Design:** Plan #1

**Local Co-ordinate Reference:** Well Good Times E24-2410 02H  
**TVD Reference:** 16' KB @ 6936.0usft (Aztec)  
**MD Reference:** 16' KB @ 6936.0usft (Aztec)  
**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 S24-T24N-R10W - Good Times E24-2410 01H - Hz - Plan #1														Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD														Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning		
5,200.0	5,046.3	4,707.3	4,669.2	17.0	9.7	99.08	9.7	-298.1	1,129.0	1,109.6	19.39	58.218			
5,300.0	5,114.7	4,770.9	4,729.0	17.7	10.0	91.19	9.8	-319.3	1,184.8	1,164.4	20.42	58.014			

# Anticollision Report

**Company:** EnCana Oil & Gas (USA) Inc  
**Project:** San Juan County, NM  
**Reference Site:** S24-T24N-R10W  
**Site Error:** 0.0usft  
**Reference Well:** Good Times E24-2410 02H  
**Well Error:** 0.0usft  
**Reference Wellbore:** Hz  
**Reference Design:** Plan #1

**Local Co-ordinate Reference:** Well Good Times E24-2410 02H  
**TVD Reference:** 16' KB @ 6936.0usft (Aztec)  
**MD Reference:** 16' KB @ 6936.0usft (Aztec)  
**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 S25-T24N-R10W - Good Times P25-2410 01H - Hz - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
10,000.0	5,147.9	8,233.6	5,140.0	87.8	79.4	-58.74	-5,991.7	840.0	1,158.5	1,064.1	94.43	12.269		
10,100.0	5,145.4	8,234.5	5,140.0	89.5	79.5	-56.40	-5,991.7	839.1	1,058.5	964.8	93.77	11.288		
10,200.0	5,143.0	8,235.4	5,140.0	91.3	79.5	-53.72	-5,991.7	838.2	958.5	886.0	92.57	10.354		
10,300.0	5,140.6	8,236.4	5,140.0	93.0	79.5	-50.66	-5,991.7	837.2	858.5	767.8	90.69	9.467		
10,363.9	5,139.0	8,237.0	5,140.0	94.1	79.5	-48.47	-5,991.7	836.6	794.6	705.6	89.04	8.924 CC, ES, SF		

## Anticollision Report

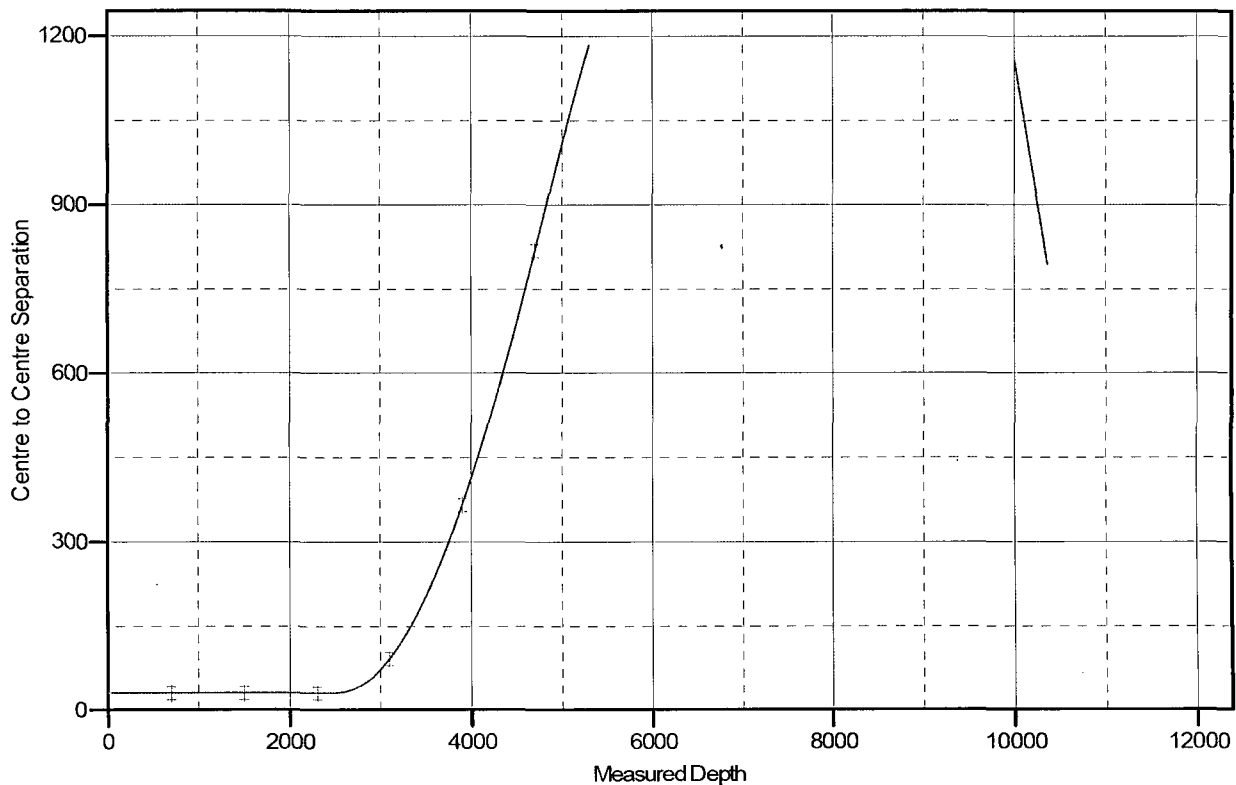
**Company:** EnCana Oil & Gas (USA) Inc  
**Project:** San Juan County, NM  
**Reference Site:** S24-T24N-R10W  
**Site Error:** 0.0usft  
**Reference Well:** Good Times E24-2410 02H  
**Well Error:** 0.0usft  
**Reference Wellbore:** Hz  
**Reference Design:** Plan #1

**Local Co-ordinate Reference:** Well Good Times E24-2410 02H  
**TVD Reference:** 16' KB @ 6936.0usft (Aztec)  
**MD Reference:** 16' KB @ 6936.0usft (Aztec)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at:** 2.00 sigma  
**Database:** USA EDM 5000 Multi Users DB  
**Offset TVD Reference:** Offset Datum

Reference Depths are relative to 16' KB @ 6936.0usft (Aztec)  
Offset Depths are relative to Offset Datum  
Central Meridian is -107.833333 °

Coordinates are relative to: Good Times E24-2410 02H  
Coordinate System is US State Plane 1983, New Mexico Western Zone  
Grid Convergence at Surface is: -0.01°

### Ladder Plot



### LEGEND

—+— Good Times E24-2410 01H, Hz, Plan#1 V0    - - - - - Good Times P25-2410 01H, Hz, Plan#1 V0

Good Times E24-2410 02H

SHL: SWNW Section 24, T24N, R10W  
2402 FNL and 1168 FWL

BHL: SENW Section 25, T24N, R10W  
2314 FNL and 2010 FWL

San Juan County, New Mexico

Lease Number: NM 25842 & NM 5991

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 10.9 feet on the corner 2 and the maximum fill will be approximately 11.5 feet on the corner 5.

4. As determined during the onsite on June 17, 2014 the following best management practices will be implemented:
  - a. Water will be diverted around the pad above the cut from corner 6 toward corner 5 and above the cut from corner 6 toward corner 2 and toward corner 3.
  - b. One silt trap will be constructed near STA 4+62 with an overflow pipe.
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 2 to 4 weeks.

C. Pipeline

An initial Standard SF-299 Application for authorization to construct, operate, maintain and terminate a 2281 foot, up to 6-inch outside diameter, buried steel well connect pipeline that was submitted to the Bureau of Land Management on May 30, 2014.

**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.
3. A 20-mil liner will be installed under tanks, pumps, ancillary facilities, and truck loading/unloading areas associated with the closed-loop system.

**Good Times E24-2410 02H**

**SHL: SWNW Section 24, T24N, R10W  
2402 FNL and 1168 FWL**

**BHL: SENW Section 25, T24N, R10W  
2314 FNL and 2010 FWL**

**San Juan County, New Mexico**

**Lease Number: NM 25842 & NM 5991**

**B. Drilling Fluids**

1. A closed-loop system will be used. Drilling fluids will be stored onsite in above-ground storage tanks. Upon termination of drilling operations, the drilling fluids will be recycled and transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical. Residual fluids will be vacuumed from the storage tanks and disposed of at Basin Disposal, 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.
3. The closed-loop system storage tanks will be placed in bermed secondary containment sized to accommodate a minimum of 110 percent of the volume of the largest storage tank.
4. A 20-mil liner will be installed under tanks, pumps, ancillary facilities, and truck loading/unloading areas associated with the closed-loop system.

**C. Flowback Water**

1. The water-based solution that flows back to the surface during and after completion operations will be placed in storage tanks on the location.
2. Flowback water will be confined to a storage tank for a period not to exceed 90 days after initial production and will be disposed of at Basin Disposal, Inc. and/or Industrial Ecosystem, Inc. waste disposal facilities.

**D. Spills – any spills of non-freshwater fluids will be immediately cleaned up and removed to an approved disposal site.**

**E. Sewage – self-contained, chemical toilets will be provided for human waste disposal. The toilet holding tanks will be pumped, as needed, and the contents thereof disposed of in an approved sewage disposal facility. The toilets will be onsite during all operations.**

**F. Garbage and other waste material – garbage, trash and other waste materials will be collected in a portable, self-contained and fully-enclosed trash container during drilling and completion operations. The accumulated trash will be removed, as needed, and will be disposed of at an authorized sanitary landfill. No trash will be buried or burned on location.**

**G. Immediately after removal of the drilling rig, all debris and other waste materials not contained in the trash container will be cleaned up and removed from the well location.**

**H. No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing or completing of this well.**

**I. No extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completing of this well.**

**8. ANCILLARY FACILITIES**

**ENCANA OIL & GAS (USA) INC.**

GOOD TIMES E24-2410 #02H

2402' FNL & 1168' FWL

LOCATED IN THE SW/4 NW/4 OF SECTION 24

T24N, R10W, N.M.P.M.

SAN JUAN COUNTY, NEW MEXICO

2,038' +/- OF NEW ACCESS ACROSS BLM LANDS

**DIRECTIONS**

- 1) FROM THE INTERSECTION OF HWY 64 & HWY 550 IN BLOOMFIELD, NEW MEXICO, TRAVEL SOUTH ON HWY 550 28.3 MILES TO HWY 57.
- 2) TURN RIGHT (SOUTHWEST) ON HWY 57 AND TRAVEL 5.0 MILES TO NEW ACCESS ROAD ON THE LEFT (EAST).
- 3) TURN LEFT (EAST) ON NEW ACCESS ROAD AND TRAVEL 0.4 MILES TO THE WELL FLAG FOR THE PROPOSED E24-2410 WELL PAD
- 4) WELL FLAG LOCATED AT : LATITUDE: 36.300153° N, LONGITUDE: 107.852973° W ( NAD 83)

encana

11" 3K Rotating Head

11" 3K Annular

3K Double Ram  
Top: Pipe Ram  
Bottom: Blind Ram  
3" Outlets Below Ram

3K Mud Cross 3" gate valves

11" 3K x 4" 3K well

