

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Tony Delfin
Acting 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: 7-6-16

Well information;

Operator Encana, Well Name and Number Nagoez Unit # 325H

API# 30-045-35785, Section 33 Township 24 N/S, Range 9 E/W

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
- ☐ Submit Gas Capture Plan form prior to spudding or initiating recompletion operations
- ☒ 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.

Charles Herr
NMOCD Approved by Signature

2-2-2017
Date

H13Kaduan
lessee - Dugan
onsite 4/27/16

NOS: 4/7/16
APDP: 5
MP:
SMA: BLM
BOND: COB000235
CA/PA: NM 132981A

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM 12374
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator ENCANA OIL & GAS (USA) INC		7. If Unit or CA Agreement, Name and No. INITAL MANCOS PA / NMNM132981A
3a. Address 370 17TH STREET, SUITE 1700 DENVER CO		8. Lease Name and Well No. NAGEEZI UNIT / 325H
3b. Phone No. (include area code) (720)876-5331		9. API Well No. 30-015-35785
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface NWNE / 181 FNL / 2461 FEL / LAT 36.277294 / LONG -107.793704 At proposed prod. zone NENW / 1000 FNL / 1740 FWL / LAT 36.260437 / LONG -107.776562		10. Field and Pool, or Exploratory Wildcat
14. Distance in miles and direction from nearest town or post office* 34.8 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 33 / T24N / R9W / NMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 3590 feet	16. No. of acres in lease 2240	12. County or Parish SAN JUAN
18. Distance from proposed location* to nearest well, drilling, completed, 30 feet applied for, on this lease, ft.	19. Proposed Depth 4982 feet / 11952 feet	13. State NM
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6954 feet	22. Approximate date work will start* 01/02/2017	20. BLM/BIA Bond No. on file FED: COB000235
23. Estimated duration 20 days		

OIL CONS. DIV DIST. 3

DEC 01 2016

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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 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). | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature (Electronic Submission)	Name (Printed/Typed) Katie Wegner / Ph: (720)876-3533	Date 07/06/2016
Title Regulatory Analyst		
Approved by (Signature) Chip Harraden	Name (Printed/Typed) Chip Harraden	Date 1/29/16
Title Acting AFM - Minerals	Office FARMINGTON	

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)

*(Instructions 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 LANDS

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

NMOCDAV

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
Phone: (505) 393-6161 Fax: (505) 393-0720

DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (505) 748-1283 Fax: (505) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 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

Form C-102
Revised August 1, 2011

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

OIL CONS. DIV DIST. 3
Submit one copy to appropriate District Office
DEC 09 2016 ☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35785		*Pool Code 98080	*Pool Name NAGEEZI UNIT; Mancos Coil
*Property Code 315244	*Property Name NAGEEZI UNIT		*Well Number 325H
*OGRID No. 282327	*Operator Name ENCANA OIL & GAS (USA) INC.		*Elevation 6954'

¹⁰ Surface Location

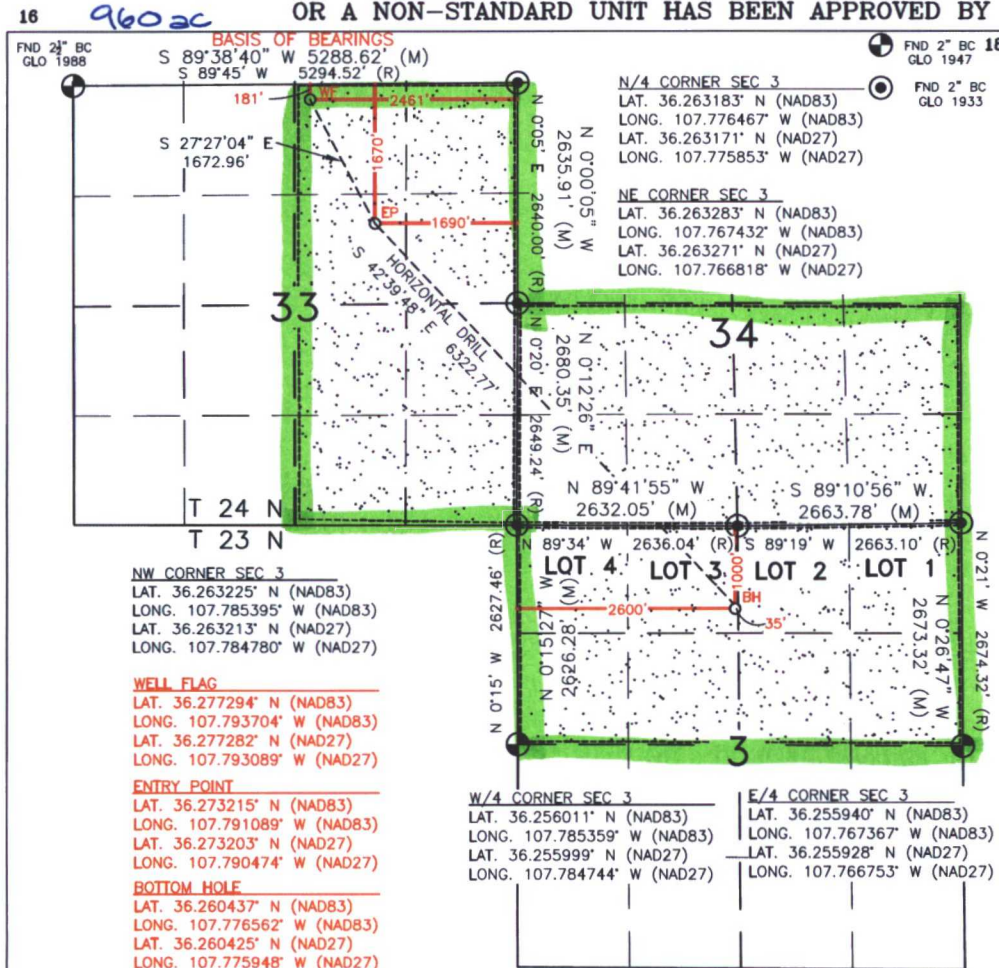
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	33	24N	9W		181'	NORTH	2461'	EAST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	3	23N	9W	3	1000'	NORTH	2600'	WEST	SAN JUAN

¹² Dedicated Acres PENETRATED SPACING UNIT; E/2 SEC. 33 (320 ACRES), S/2 SEC. 34 (320 ACRES), N/2 SEC. 3 (320 ACRES) = TOTAL 10,415.12 ACRES; SEC. 21-23 (S/2); 25-28, 33-36, 1-4, 9-10 (ALL); 5 (W/2); 11 (NW/4) = UNDIVIDED UNIT	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-13856-A (10,415.12 acres)
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Katie Wegner 12/06/16
Signature Date

Katie Wegner

Printed Name

katie.wegner@encana.com

E-mail Address

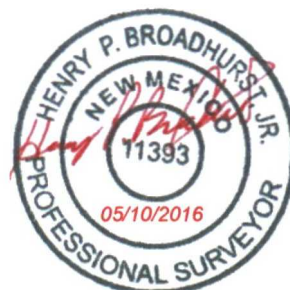
SURVEYOR CERTIFICATION

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

APRIL 28, 2016

Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number 11393

SHEET A-1

Nageezi Unit 325H

SHL: NW/4 NE/4 Sec 33 T24N R9W, 181' FNL, 2461' FEL

BHL: NE/4 Nw/4 Sec 3 T23N R9W, 1000' FNL, 2600' FEL

San Juan, New Mexico

OIL CONS. DIV DIST. 3

DEC 12 2016

**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.	839
Kirtland Shale	1,016
Fruitland Coal	1,325
Pictured Cliffs Ss.	1,605
Lewis Shale	1,699
Cliffhouse Ss.	2,350
Menefee Fn.	3,103
Point Lookout Ss.	4,065
Mancos Shale	4,208
Mancos Silt	4,760
Gallup Fn.	5,020
Base Gallup	5,344

The referenced surface elevation is 6954', KB 6970'

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

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	1,325
Oil/Gas	Pictured Cliffs Ss.	1,605
Oil/Gas	Cliffhouse Ss.	2,350
Gas	Menefee Fn.	3,103
Oil/Gas	Point Lookout Ss.	4,065
Oil/Gas	Mancos Shale	4,208
Oil/Gas	Mancos Silt	4,760
Oil/Gas	Gallup Fn.	5,020

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

Nageezi Unit 325H

SHL: NW/4 NE/4 Sec 33 T24N R9W, 181' FNL, 2461' FEL

BHL: NE/4 Nw/4 Sec 3 T23N R9W, 1000' FNL, 2600' FEL

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'-5250'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5150'-11952'	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.

Nageezi Unit 325H**SHL: NW/4 NE/4 Sec 33 T24N R9W, 181' FNL, 2461' FEL****BHL: NE/4 Nw/4 Sec 3 T23N R9W, 1000' FNL, 2600' FEL****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	Design	Centralizers
Conductor	0'-60'	100 sks	Type I Neat 16 ppg @ 4.5 ft ³ /sk	Surface	None
Surface	0'-500'	228 sks	Type III Cement 14.6 ppg + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.2% bwoc FL-52A + 58.9% Fresh Water @ 1.38 ft ³ /sk	Surface	1 per joint on bottom 3 joints
Intermediate	0'-5250'	100% open hole excess Stage 1 Lead: 487 sks Stage 1 Tail: 374 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 1.38 ft ³ /sk	Surface	1 every 3 joints through water bearing zones
Production Liner	5150'-11952'	50% OH excess Stage 1 Blend Total: 380sks	Blend: Premium Lite High Strength FM 13.5 ppg + 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 800'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	4982'/11952'	Gallup

Nageezi Unit 325H

SHL: NW/4 NE/4 Sec 33 T24N R9W, 181' FNL, 2461' FEL

BHL: NE/4 Nw/4 Sec 3 T23N R9W, 1000' FNL, 2600' FEL

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'-4978'/5250'	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"	4978'/5250'- 4982'/11952'	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 test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH. Sized LCM material (such as sawdust & wood fiber) will be kept on location in order to mitigate lost circulation. Electronic PVT totalizers will be used to monitor drilling fluid volumes.
- 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 +/- 2332 psi based on a 9.0 ppg at 4982' TVD of the horizontal lateral target. No abnormal pressure or temperatures are anticipated. Expected bottom hole temperature is 170 deg F.

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 3, 2016. 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.

Nageezi Unit 325H**SHL: NW/4 NE/4 Sec 33 T24N R9W, 181' FNL, 2461' FEL****BHL: NE/4 Nw/4 Sec 3 T23N R9W, 1000' FNL, 2600' FEL****San Juan, New Mexico****Lease Number: NMNM 12374, NMNM 90843, BIA NO-G-1403-1916 & BIA NO-G-1401-1838****CASING 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.

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'-5250'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5150'-11952'	6 1/8"	4 1/2"	11.6#	B80*, LTC New

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

*B80 pipe specifications are attached.

Casing design is subject to revision based on geologic conditions encountered.

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

Nageezi Unit 325H

**SHL: NWNE Section 33, T24N, R9W
181 FNL and 2461 FEL**

**BHL: NENW Section 3, T23N, R9W
1000 FNL and 2600 FWL**

San Juan County, New Mexico

Unit Number: NMNM 132981A

Lease Numbers: NMNM 90843, BIA NO-G-1403-1916, BIA NO-G-1401-1838

Any trees smaller than 3-inches in diameter, slash and brush will be chipped, shredded or mulched and incorporated into the topsoil for later use in interim reclamation.

Remaining brush will be brush-hogged or scalped at ground-level prior to ground disturbance.

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

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

5. All construction materials for the pipeline will consist of native borrow and subsoil accumulated during pipeline 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.
6. Construction equipment may include chain saws, a brush hog, scraper, maintainer, excavator, dozer, backhoe, hydrovac, welder, trencher, side-boom, and misc. specialty equipment. Construction of the pipeline will take approximately 2-4 weeks.

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.

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.



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	
3	1626.92	16.54	159.86	1615.48	-111.27	40.81	2.00	159.86	109.50	
4	4684.06	16.54	159.86	4546.15	-928.28	340.48	0.00	0.00	913.51	
5	5628.40	90.80	137.36	5070.45	-1484.85	770.81	8.00	-23.27	1614.43	NAGEEZI UNIT 325H POE
6	11951.61	90.80	137.36	4982.17	-6135.91	5053.66	0.00	0.00	7937.02	NAGEEZI UNIT 325H PBHL

Project: San Juan County, NM
Site: S33-T24N-R9W
Well: NAGEEZI UNIT 325H
Wellbore: OH
Design: PLAN #1

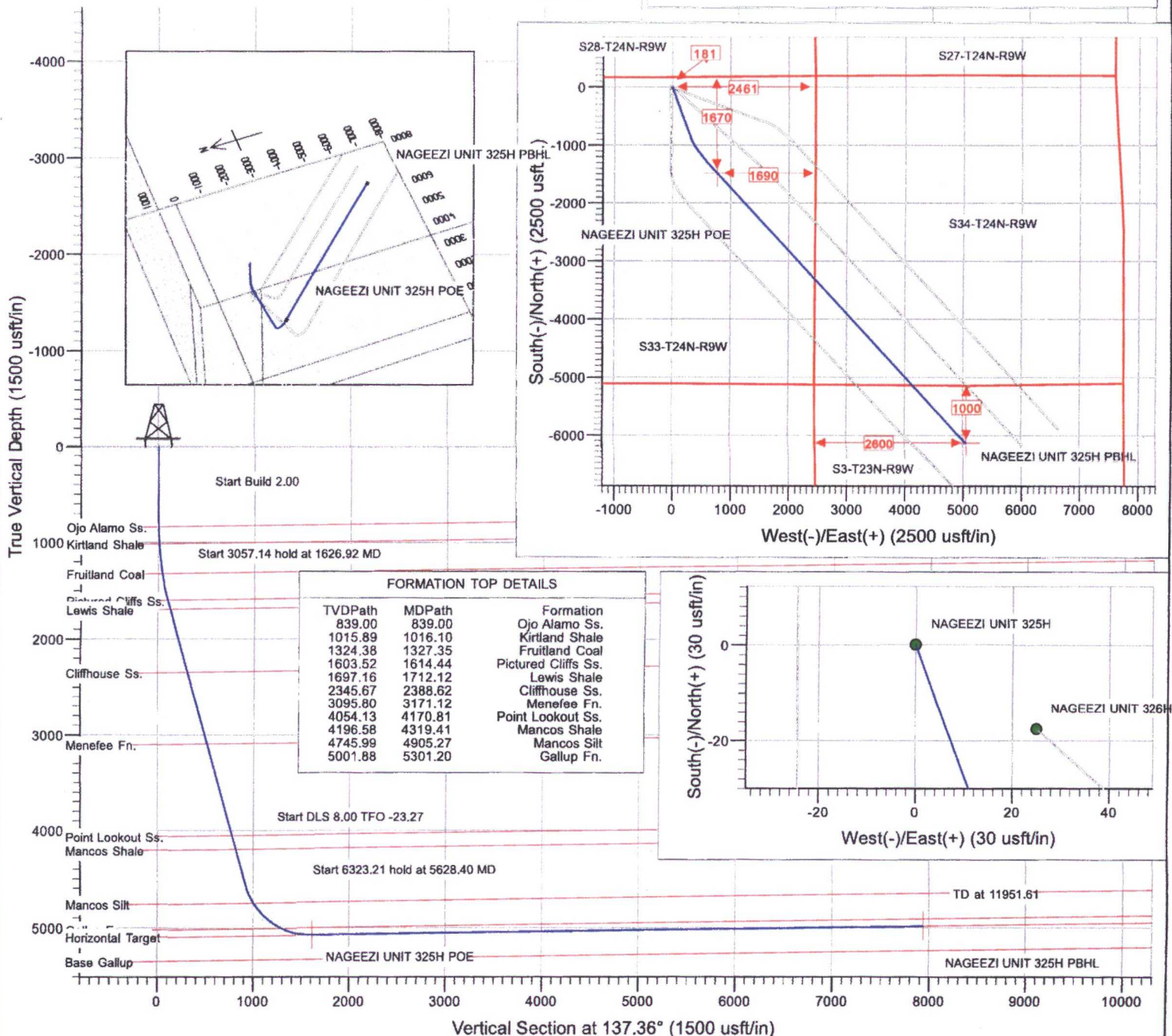


Azimuths to True North
Magnetic North: 9.13°

Magnetic Field
Strength: 49822.2nT
Dip Angle: 62.92°
Date: 5/23/2016
Model: HDGM

PLAN #1
NAGEEZI UNIT 325H
18" X 8" @ 80/100 DASH
Ground Level @ 6954.00
North American Datum 1983
Well NAGEEZI UNIT 325H, True North

Type	Target	Altitude	Origin	Type	N/S	E/W	From TVD
NAGEEZI UNIT 325H PBHL	181	4982.17	0135.01	N/S	0.00	0.00	0.00
NAGEEZI UNIT 325H POE	1670	5070.45	-1484.85	E/W	0.00	770.81	0.00



WELL DETAILS: NAGEEZI UNIT 325H

+N/-S	+E/-W	Northing	Ground Level: Easting	Latitude	Longitude
0.00	0.00	1920236.57	2734772.35	36.277294	-107.793704



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well NAGEEZI UNIT 325H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	16' KB @ 6970.00usft
Project:	San Juan County, NM	MD Reference:	16' KB @ 6970.00usft
Site:	S33-T24N-R9W	North Reference:	True
Well:	NAGEEZI UNIT 325H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

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

Site		S33-T24N-R9W			
Position:		Northing:	1,920,253.67 usft	Latitude:	36.277341
From:	Lat/Long	Easting:	2,734,747.88 usft	Longitude:	-107.793787
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.02 °

Well		NAGEEZI UNIT 325H				
Position	+N/-S	0.00 usft	Northing:	1,920,236.57 usft	Latitude:	36.277294
	+E/-W	0.00 usft	Easting:	2,734,772.35 usft	Longitude:	-107.793704
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,954.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/23/2016	9.13	62.92	49,822

Design	PLAN #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	137.36

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,626.92	16.54	159.86	1,615.48	-111.27	40.81	2.00	2.00	0.00	159.86	
4,684.06	16.54	159.86	4,546.15	-928.28	340.48	0.00	0.00	0.00	0.00	
5,628.40	90.80	137.36	5,070.45	-1,484.85	770.81	8.00	7.86	-2.38	-23.27	NAGEEZI UNIT 325H
11,951.61	90.80	137.36	4,982.17	-8,135.91	5,053.66	0.00	0.00	0.00	0.00	NAGEEZI UNIT 325H

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S33-T24N-R9W
Well: NAGEEZI UNIT 325H
Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well NAGEEZI UNIT 325H
16' KB @ 6970.00usft
16' KB @ 6970.00usft
True
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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
839.00	0.78	159.86	839.00	-0.25	0.09	0.25	2.00	2.00	Ojo Alamo Ss.
900.00	2.00	159.86	899.98	-1.64	0.60	1.61	2.00	2.00	
1,000.00	4.00	159.86	999.84	-6.55	2.40	6.45	2.00	2.00	
1,016.10	4.32	159.86	1,015.89	-7.65	2.81	7.53	2.00	2.00	Kirtland Shale
1,100.00	6.00	159.86	1,099.45	-14.73	5.40	14.50	2.00	2.00	
1,200.00	8.00	159.86	1,198.70	-26.17	9.60	25.76	2.00	2.00	
1,300.00	10.00	159.86	1,297.47	-40.86	14.99	40.21	2.00	2.00	
1,327.35	10.55	159.86	1,324.38	-45.44	16.67	44.72	2.00	2.00	Fruitland Coal
1,400.00	12.00	159.86	1,395.62	-58.77	21.56	57.84	2.00	2.00	
1,500.00	14.00	159.86	1,493.06	-79.89	29.30	78.62	2.00	2.00	
1,600.00	16.00	159.86	1,589.64	-104.19	38.22	102.53	2.00	2.00	
1,614.44	16.29	159.86	1,603.52	-107.96	39.60	106.24	2.00	2.00	Pictured Cliffs Ss.
1,626.92	16.54	159.86	1,615.48	-111.27	40.81	109.50	2.00	2.00	Start 3057.14 hold at 1626.92 MD
1,700.00	16.54	159.86	1,685.54	-130.80	47.98	128.72	0.00	0.00	
1,712.12	16.54	159.86	1,697.16	-134.04	49.16	131.91	0.00	0.00	Lewis Shale
1,800.00	16.54	159.86	1,781.40	-157.53	57.78	155.02	0.00	0.00	
1,900.00	16.54	159.86	1,877.27	-184.25	67.58	181.32	0.00	0.00	
2,000.00	16.54	159.86	1,973.13	-210.97	77.38	207.62	0.00	0.00	
2,100.00	16.54	159.86	2,068.99	-237.70	87.19	233.92	0.00	0.00	
2,200.00	16.54	159.86	2,164.86	-264.42	96.99	260.21	0.00	0.00	
2,300.00	16.54	159.86	2,260.72	-291.15	106.79	286.51	0.00	0.00	
2,388.62	16.54	159.86	2,345.67	-314.83	115.48	309.82	0.00	0.00	Cliffhouse Ss.
2,400.00	16.54	159.86	2,356.58	-317.87	116.59	312.81	0.00	0.00	
2,500.00	16.54	159.86	2,452.45	-344.60	126.39	339.11	0.00	0.00	
2,600.00	16.54	159.86	2,548.31	-371.32	136.20	365.41	0.00	0.00	
2,700.00	16.54	159.86	2,644.17	-398.05	146.00	391.71	0.00	0.00	
2,800.00	16.54	159.86	2,740.03	-424.77	155.80	418.01	0.00	0.00	
2,900.00	16.54	159.86	2,835.90	-451.50	165.60	444.31	0.00	0.00	
3,000.00	16.54	159.86	2,931.76	-478.22	175.41	470.61	0.00	0.00	
3,100.00	16.54	159.86	3,027.62	-504.95	185.21	496.91	0.00	0.00	
3,171.12	16.54	159.86	3,095.80	-523.95	192.18	515.61	0.00	0.00	Menefee Fn.
3,200.00	16.54	159.86	3,123.49	-531.67	195.01	523.21	0.00	0.00	
3,300.00	16.54	159.86	3,219.35	-558.40	204.81	549.51	0.00	0.00	
3,400.00	16.54	159.86	3,315.21	-585.12	214.62	575.81	0.00	0.00	
3,500.00	16.54	159.86	3,411.07	-611.84	224.42	602.11	0.00	0.00	
3,600.00	16.54	159.86	3,506.94	-638.57	234.22	628.41	0.00	0.00	
3,700.00	16.54	159.86	3,602.80	-665.29	244.02	654.70	0.00	0.00	
3,800.00	16.54	159.86	3,698.66	-692.02	253.82	681.00	0.00	0.00	
3,900.00	16.54	159.86	3,794.53	-718.74	263.63	707.30	0.00	0.00	
4,000.00	16.54	159.86	3,890.39	-745.47	273.43	733.60	0.00	0.00	
4,100.00	16.54	159.86	3,986.25	-772.19	283.23	759.90	0.00	0.00	
4,170.81	16.54	159.86	4,054.13	-791.12	290.17	778.52	0.00	0.00	Point Lookout Ss.
4,200.00	16.54	159.86	4,082.12	-798.92	293.03	786.20	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well NAGEEZI UNIT 325H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	16' KB @ 6970.00usft
Project:	San Juan County, NM	MD Reference:	16' KB @ 6970.00usft
Site:	S33-T24N-R9W	North Reference:	True
Well:	NAGEEZI UNIT 325H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

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
4,300.00	16.54	159.86	4,177.98	-825.64	302.84	812.50	0.00	0.00	
4,319.41	16.54	159.86	4,196.58	-830.83	304.74	817.60	0.00	0.00	Mancos Shale
4,400.00	16.54	159.86	4,273.84	-852.37	312.64	838.80	0.00	0.00	
4,500.00	16.54	159.86	4,369.70	-879.09	322.44	865.10	0.00	0.00	
4,600.00	16.54	159.86	4,465.57	-905.82	332.24	891.40	0.00	0.00	
4,684.06	16.54	159.86	4,546.15	-928.28	340.48	913.51	0.00	0.00	Start DLS 8.00 TFO -23.27
4,700.00	17.72	158.20	4,561.38	-932.66	342.16	917.87	8.00	7.39	
4,800.00	25.32	151.29	4,654.36	-965.60	358.11	952.90	8.00	7.60	
4,900.00	33.10	147.45	4,741.59	-1,007.44	383.11	1,000.61	8.00	7.78	
4,905.27	33.51	147.29	4,745.99	-1,009.87	384.67	1,003.46	8.00	7.83	Mancos Silt
5,000.00	40.96	144.94	4,821.36	-1,057.36	416.68	1,060.08	8.00	7.86	
5,100.00	48.85	143.13	4,892.14	-1,114.40	458.17	1,130.14	8.00	7.90	
5,200.00	56.77	141.70	4,952.53	-1,177.45	506.76	1,209.43	8.00	7.92	
5,300.00	64.71	140.52	5,001.37	-1,245.27	561.51	1,296.42	8.00	7.93	
5,301.20	64.80	140.50	5,001.88	-1,246.11	562.20	1,297.50	8.00	7.94	Gallup Fn.
5,400.00	72.65	139.48	5,037.71	-1,316.56	621.37	1,389.40	8.00	7.94	
5,500.00	80.59	138.53	5,060.83	-1,389.91	685.15	1,486.57	8.00	7.95	
5,600.00	88.54	137.62	5,070.29	-1,463.91	751.62	1,586.03	8.00	7.95	
5,628.40	90.80	137.36	5,070.45	-1,484.85	770.81	1,614.43	8.00	7.95	Start 6323.21 hold at 5628.40 MD
5,700.00	90.80	137.36	5,069.45	-1,537.51	819.30	1,686.02	0.00	0.00	
5,800.00	90.80	137.36	5,068.05	-1,611.07	887.04	1,786.01	0.00	0.00	
5,900.00	90.80	137.36	5,066.66	-1,684.62	954.77	1,886.00	0.00	0.00	
6,000.00	90.80	137.36	5,065.26	-1,758.18	1,022.50	1,985.99	0.00	0.00	
6,100.00	90.80	137.36	5,063.87	-1,831.73	1,090.23	2,085.98	0.00	0.00	
6,200.00	90.80	137.36	5,062.47	-1,905.29	1,157.97	2,185.97	0.00	0.00	
6,300.00	90.80	137.36	5,061.07	-1,978.84	1,225.70	2,285.96	0.00	0.00	
6,400.00	90.80	137.36	5,059.68	-2,052.40	1,293.43	2,385.95	0.00	0.00	
6,500.00	90.80	137.36	5,058.28	-2,125.95	1,361.16	2,485.94	0.00	0.00	
6,600.00	90.80	137.36	5,056.89	-2,199.51	1,428.89	2,585.93	0.00	0.00	
6,700.00	90.80	137.36	5,055.49	-2,273.07	1,496.63	2,685.92	0.00	0.00	
6,800.00	90.80	137.36	5,054.09	-2,346.62	1,564.36	2,785.91	0.00	0.00	
6,900.00	90.80	137.36	5,052.70	-2,420.18	1,632.09	2,885.90	0.00	0.00	
7,000.00	90.80	137.36	5,051.30	-2,493.73	1,699.82	2,985.89	0.00	0.00	
7,100.00	90.80	137.36	5,049.90	-2,567.29	1,767.56	3,085.88	0.00	0.00	
7,200.00	90.80	137.36	5,048.51	-2,640.84	1,835.29	3,185.87	0.00	0.00	
7,300.00	90.80	137.36	5,047.11	-2,714.40	1,903.02	3,285.86	0.00	0.00	
7,400.00	90.80	137.36	5,045.72	-2,787.95	1,970.75	3,385.85	0.00	0.00	
7,500.00	90.80	137.36	5,044.32	-2,861.51	2,038.49	3,485.84	0.00	0.00	
7,600.00	90.80	137.36	5,042.92	-2,935.06	2,106.22	3,585.83	0.00	0.00	
7,700.00	90.80	137.36	5,041.53	-3,008.62	2,173.95	3,685.82	0.00	0.00	
7,800.00	90.80	137.36	5,040.13	-3,082.17	2,241.68	3,785.82	0.00	0.00	
7,900.00	90.80	137.36	5,038.74	-3,155.73	2,309.41	3,885.81	0.00	0.00	
8,000.00	90.80	137.36	5,037.34	-3,229.29	2,377.15	3,985.80	0.00	0.00	
8,100.00	90.80	137.36	5,035.94	-3,302.84	2,444.88	4,085.79	0.00	0.00	
8,200.00	90.80	137.36	5,034.55	-3,376.40	2,512.61	4,185.78	0.00	0.00	
8,300.00	90.80	137.36	5,033.15	-3,449.95	2,580.34	4,285.77	0.00	0.00	
8,400.00	90.80	137.36	5,031.75	-3,523.51	2,648.08	4,385.76	0.00	0.00	
8,500.00	90.80	137.36	5,030.36	-3,597.06	2,715.81	4,485.75	0.00	0.00	
8,600.00	90.80	137.36	5,028.96	-3,670.62	2,783.54	4,585.74	0.00	0.00	
8,700.00	90.80	137.36	5,027.57	-3,744.17	2,851.27	4,685.73	0.00	0.00	
8,800.00	90.80	137.36	5,026.17	-3,817.73	2,919.00	4,785.72	0.00	0.00	
8,900.00	90.80	137.36	5,024.77	-3,891.28	2,986.74	4,885.71	0.00	0.00	

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 S33-T24N-R9W
 NAGEEZI UNIT 325H
 Wellbore: OH
 Design: PLAN #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Well NAGEEZI UNIT 325H
 16' KB @ 6970.00usft
 16' KB @ 6970.00usft
 True
 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
9,000.00	90.80	137.36	5,023.38	-3,964.84	3,054.47	4,985.70	0.00	0.00	
9,100.00	90.80	137.36	5,021.98	-4,038.39	3,122.20	5,085.69	0.00	0.00	
9,200.00	90.80	137.36	5,020.59	-4,111.95	3,189.93	5,185.68	0.00	0.00	
9,300.00	90.80	137.36	5,019.19	-4,185.50	3,257.67	5,285.67	0.00	0.00	
9,400.00	90.80	137.36	5,017.79	-4,259.06	3,325.40	5,385.66	0.00	0.00	
9,500.00	90.80	137.36	5,016.40	-4,332.62	3,393.13	5,485.65	0.00	0.00	
9,600.00	90.80	137.36	5,015.00	-4,406.17	3,460.86	5,585.64	0.00	0.00	
9,700.00	90.80	137.36	5,013.61	-4,479.73	3,528.60	5,685.63	0.00	0.00	
9,800.00	90.80	137.36	5,012.21	-4,553.28	3,596.33	5,785.62	0.00	0.00	
9,900.00	90.80	137.36	5,010.81	-4,626.84	3,664.06	5,885.61	0.00	0.00	
10,000.00	90.80	137.36	5,009.42	-4,700.39	3,731.79	5,985.60	0.00	0.00	
10,100.00	90.80	137.36	5,008.02	-4,773.95	3,799.52	6,085.59	0.00	0.00	
10,200.00	90.80	137.36	5,006.62	-4,847.50	3,867.26	6,185.58	0.00	0.00	
10,300.00	90.80	137.36	5,005.23	-4,921.06	3,934.99	6,285.57	0.00	0.00	
10,400.00	90.80	137.36	5,003.83	-4,994.61	4,002.72	6,385.56	0.00	0.00	
10,500.00	90.80	137.36	5,002.44	-5,068.17	4,070.45	6,485.55	0.00	0.00	
10,600.00	90.80	137.36	5,001.04	-5,141.72	4,138.19	6,585.54	0.00	0.00	
10,700.00	90.80	137.36	4,999.64	-5,215.28	4,205.92	6,685.53	0.00	0.00	
10,800.00	90.80	137.36	4,998.25	-5,288.84	4,273.65	6,785.52	0.00	0.00	
10,900.00	90.80	137.36	4,996.85	-5,362.39	4,341.38	6,885.51	0.00	0.00	
11,000.00	90.80	137.36	4,995.46	-5,435.95	4,409.12	6,985.50	0.00	0.00	
11,100.00	90.80	137.36	4,994.06	-5,509.50	4,476.85	7,085.49	0.00	0.00	
11,200.00	90.80	137.36	4,992.66	-5,583.06	4,544.58	7,185.48	0.00	0.00	
11,300.00	90.80	137.36	4,991.27	-5,656.61	4,612.31	7,285.47	0.00	0.00	
11,400.00	90.80	137.36	4,989.87	-5,730.17	4,680.04	7,385.46	0.00	0.00	
11,500.00	90.80	137.36	4,988.48	-5,803.72	4,747.78	7,485.45	0.00	0.00	
11,600.00	90.80	137.36	4,987.08	-5,877.28	4,815.51	7,585.44	0.00	0.00	
11,700.00	90.80	137.36	4,985.68	-5,950.83	4,883.24	7,685.43	0.00	0.00	
11,800.00	90.80	137.36	4,984.29	-6,024.39	4,950.97	7,785.43	0.00	0.00	
11,900.00	90.80	137.36	4,982.89	-6,097.94	5,018.71	7,885.42	0.00	0.00	
11,951.61	90.80	137.36	4,982.17	-6,135.91	5,053.66	7,937.02	0.00	0.00	TD at 11951.61

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
NAGEEZI UNIT 325H PI - plan hits target center - Point	0.00	0.00	5,070.45	-1,484.85	770.81	1,918,752.04	2,735,543.77	36.273215	-107.791089
NAGEEZI UNIT 325H PI - plan hits target center - Point	0.00	0.00	4,982.17	-6,135.91	5,053.66	1,914,102.73	2,739,828.53	36.260437	-107.776562

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S33-T24N-R9W
Well: NAGEEZI UNIT 325H
Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well NAGEEZI UNIT 325H
 16' KB @ 6970.00usft
 16' KB @ 6970.00usft
 True
 Minimum Curvature

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (")	Dip Direction (")
839.00	839.00	Ojo Alamo Ss.		-0.80	137.36
1,016.10	1,016.00	Kirtland Shale		-0.80	137.36
1,327.35	1,325.00	Fruitland Coal		-0.80	137.36
1,614.44	1,605.00	Pictured Cliffs Ss.		-0.80	137.36
1,712.12	1,699.00	Lewis Shale		-0.80	137.36
2,388.62	2,350.00	Cliffhouse Ss.		-0.80	137.36
3,171.12	3,103.00	Menefee Fn.		-0.80	137.36
4,170.81	4,065.00	Point Lookout Ss.		-0.80	137.36
4,319.41	4,208.00	Mancos Shale		-0.80	137.36
4,905.27	4,760.00	Mancos Silt		-0.80	137.36
5,301.20	5,020.00	Gallup Fn.		-0.80	137.36

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
800.00	800.00	0.00	0.00	Start Build 2.00
1,626.92	1,615.48	-111.27	40.81	Start 3057.14 hold at 1626.92 MD
4,684.06	4,546.15	-928.28	340.48	Start DLS 8.00 TFO -23.27
5,628.40	5,070.45	-1,484.85	770.81	Start 6323.21 hold at 5628.40 MD
11,951.61	4,982.17	-6,135.91	5,053.66	TD at 11951.61

EnCana Oil & Gas (USA) Inc

San Juan County, NM

S33-T24N-R9W

NAGEEZI UNIT 325H

OH

PLAN #1

Anticollision Report

23 May, 2016

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NAGEEZI UNIT 325H
Project:	San Juan County, NM	TVD Reference:	16' KB @ 6970.00usft
Reference Site:	S33-T24N-R9W	MD Reference:	16' KB @ 6970.00usft
Site Error:	0.00usft	North Reference:	True
Reference Well:	NAGEEZI UNIT 325H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

Reference	PLAN #1
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD Interval 100.00usft
Depth Range:	387.00 to 9,999,999.00usft
Results Limited by:	Maximum center-center distance of 1,500.00usft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	Systematic Ellipse
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic

Survey Tool Program	Date	5/23/2016
From (usft)	To (usft)	Survey (Wellbore)
0.00	11,951.61	PLAN #1 (OH)
		Tool Name
		MWD+HDGM
		Description
		OWSG MWD + HDGM

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S33-T24N-R9W						
NAGEEZI UNIT 324H - OH - PLAN #1	787.00	787.00	29.85	24.63	5.712	CC, ES
NAGEEZI UNIT 324H - OH - PLAN #1	11,887.00	12,105.84	719.19	366.73	2.041	SF
NAGEEZI UNIT 326H - OH - PLAN #1	687.00	687.00	30.54	26.04	6.773	CC, ES
NAGEEZI UNIT 326H - OH - PLAN #1	11,887.00	11,344.74	718.78	369.71	2.059	SF
NAGEEZI UNIT 327H - OH - PLAN #1	587.00	587.00	60.40	56.61	15.925	CC, ES
NAGEEZI UNIT 327H - OH - PLAN #1	11,887.00	11,537.61	1,337.13	968.67	3.629	SF

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Reference Site: S33-T24N-R9W
Site Error: 0.00usft
Reference Well: NAGEEZI UNIT 325H
Well Error: 0.00usft
Reference Wellbore: OH
Reference Design: PLAN #1

Local Co-ordinate Reference: Well NAGEEZI UNIT 325H
TVD Reference: 16' KB @ 6970.00usft
MD Reference: 16' KB @ 6970.00usft
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 S33-T24N-R9W - NAGEEZI UNIT 324H - OH - PLAN #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HOGM													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Total		Separation		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	Factor	
387.00	387.00	387.00	387.00	1.18	1.18	-55.03	17.11	-24.46	29.85	27.49	2.36	12.656	
487.00	487.00	487.00	487.00	1.54	1.54	-55.03	17.11	-24.46	29.85	26.78	3.08	9.706	
587.00	587.00	587.00	587.00	1.90	1.90	-55.03	17.11	-24.46	29.85	26.06	3.79	7.871	
687.00	687.00	687.00	687.00	2.25	2.25	-55.03	17.11	-24.46	29.85	25.34	4.51	6.620	
787.00	787.00	787.00	787.00	2.61	2.61	-55.03	17.11	-24.46	29.85	24.63	5.23	5.712 CC, ES	
887.00	886.99	886.99	886.99	2.96	2.97	146.50	17.11	-24.46	30.95	25.02	5.93	5.220	
987.00	986.87	987.54	987.53	3.29	3.32	149.11	15.77	-24.46	34.18	27.57	6.61	5.171	
1,087.00	1,086.52	1,088.27	1,088.13	3.63	3.65	149.85	10.93	-24.44	38.24	30.95	7.29	5.245	
1,187.00	1,185.82	1,189.06	1,188.57	3.97	3.99	149.16	2.54	-24.42	43.07	35.08	7.99	5.392	
1,287.00	1,284.66	1,289.90	1,288.70	4.34	4.33	147.49	-9.38	-24.38	48.68	39.98	8.70	5.597	
1,387.00	1,382.90	1,390.76	1,388.37	4.71	4.69	145.21	-24.82	-24.33	55.14	45.71	9.43	5.850	
1,487.00	1,480.43	1,491.62	1,487.43	5.11	5.07	142.60	-43.76	-24.26	62.51	52.33	10.18	6.142	
1,587.00	1,577.14	1,592.46	1,585.74	5.54	5.47	139.88	-86.17	-24.19	70.85	59.89	10.96	6.465	
1,687.00	1,673.08	1,693.28	1,683.18	5.99	5.89	136.89	-92.02	-24.10	79.76	67.98	11.78	6.770	
1,787.00	1,768.94	1,794.05	1,779.60	6.46	6.33	132.60	-121.27	-24.01	87.58	74.93	12.65	6.921	
1,887.00	1,864.81	1,894.53	1,874.68	6.94	6.81	127.03	-153.79	-23.90	94.67	81.08	13.59	6.965	
1,987.00	1,960.67	1,994.49	1,968.06	7.43	7.31	120.38	-189.43	-23.78	101.78	87.18	14.60	6.971	
2,087.00	2,056.53	2,093.69	2,069.44	7.92	7.85	112.92	-228.00	-23.66	109.78	94.11	15.67	7.006	
2,187.00	2,152.39	2,192.04	2,148.85	8.43	8.41	105.18	-268.98	-23.52	119.56	102.79	16.77	7.131	
2,287.00	2,248.26	2,290.26	2,237.96	8.94	9.00	98.51	-310.30	-23.39	131.28	113.43	17.85	7.355	
2,387.00	2,344.12	2,388.49	2,327.07	9.46	9.60	92.96	-351.62	-23.25	144.49	125.58	18.91	7.642	
2,487.00	2,439.98	2,486.71	2,416.19	9.97	10.21	88.37	-392.93	-23.11	158.82	138.88	19.94	7.964	
2,587.00	2,535.85	2,584.94	2,505.30	10.50	10.83	84.55	-434.25	-22.98	174.00	153.04	20.96	8.302	
2,687.00	2,631.71	2,683.16	2,594.41	11.02	11.46	81.34	-475.57	-22.84	189.82	167.85	21.96	8.642	
2,787.00	2,727.57	2,781.38	2,683.52	11.55	12.09	78.63	-516.89	-22.71	206.13	183.17	22.96	8.978	
2,887.00	2,823.43	2,879.61	2,772.63	12.08	12.73	76.32	-558.21	-22.57	222.83	198.88	23.95	9.303	
2,987.00	2,919.30	2,977.83	2,861.74	12.61	13.38	74.33	-599.53	-22.43	239.84	214.90	24.94	9.617	
3,087.00	3,015.16	3,076.06	2,950.85	13.15	14.03	72.61	-640.85	-22.30	257.09	231.16	25.92	9.917	
3,187.00	3,111.02	3,174.28	3,039.96	13.68	14.68	71.10	-682.17	-22.16	274.54	247.63	26.91	10.202	
3,287.00	3,206.89	3,272.50	3,129.07	14.22	15.34	69.78	-723.49	-22.03	292.15	264.25	27.89	10.474	
3,387.00	3,302.75	3,370.73	3,218.18	14.76	16.00	68.60	-764.81	-21.89	309.89	281.02	28.88	10.731	
3,487.00	3,398.61	3,468.95	3,307.29	15.30	16.66	67.55	-806.13	-21.75	327.75	297.89	29.86	10.975	
3,587.00	3,494.48	3,567.18	3,396.40	15.84	17.32	66.61	-847.45	-21.62	345.71	314.86	30.85	11.206	
3,687.00	3,590.34	3,665.40	3,485.51	16.38	17.99	65.76	-888.77	-21.48	363.75	331.91	31.84	11.425	
3,787.00	3,686.20	3,763.62	3,574.62	16.92	18.66	64.99	-930.09	-21.35	381.85	349.03	32.83	11.633	
3,887.00	3,782.06	3,861.85	3,663.73	17.46	19.33	64.30	-971.41	-21.21	400.02	366.21	33.82	11.830	
3,987.00	3,877.93	3,960.07	3,752.84	18.00	20.00	63.66	-1,012.73	-21.07	418.24	383.44	34.81	12.016	
4,087.00	3,973.79	4,058.30	3,841.95	18.54	20.67	63.07	-1,054.04	-20.94	436.51	400.71	35.80	12.194	
4,187.00	4,069.65	4,156.52	3,931.06	19.09	21.35	62.54	-1,095.36	-20.80	454.81	418.02	36.79	12.362	
4,287.00	4,165.52	4,254.74	4,020.17	19.63	22.02	62.04	-1,136.68	-20.67	473.16	435.37	37.78	12.523	
4,387.00	4,261.38	4,352.97	4,109.28	20.18	22.70	61.58	-1,178.00	-20.53	491.53	452.75	38.78	12.675	
4,487.00	4,357.24	4,451.19	4,198.39	20.72	23.37	61.16	-1,219.32	-20.39	509.93	470.16	39.77	12.821	
4,587.00	4,453.10	4,549.42	4,287.50	21.27	24.05	60.76	-1,260.64	-20.26	528.36	487.59	40.77	12.959	
4,687.00	4,548.97	4,647.64	4,376.61	21.81	24.73	60.66	-1,301.96	-20.12	546.81	505.04	41.77	13.091	
4,787.00	4,642.56	4,745.92	4,465.77	22.43	25.41	60.76	-1,343.30	-19.99	564.42	521.45	42.97	13.135	
4,887.00	4,730.63	4,842.98	4,553.83	23.18	26.08	70.82	-1,384.13	-19.85	580.54	535.99	44.55	13.031	
4,987.00	4,811.47	4,936.94	4,639.07	24.07	26.73	74.54	-1,423.66	-19.72	596.04	549.55	46.49	12.820	
5,087.00	4,883.50	5,026.87	4,719.84	25.10	27.35	78.23	-1,461.11	-19.60	612.52	563.75	48.77	12.559	
5,187.00	4,945.31	5,112.08	4,797.85	26.29	27.95	81.91	-1,497.56	-19.22	631.98	580.63	51.35	12.307	
5,287.00	4,995.71	5,213.57	4,886.30	27.64	28.73	85.90	-1,546.58	-11.69	654.51	600.21	54.30	12.053	
5,387.00	5,033.72	5,327.91	4,978.17	29.15	29.73	89.81	-1,611.26	8.88	678.93	621.58	57.35	11.838	
5,487.00	5,058.59	5,459.73	5,070.93	30.80	31.03	93.74	-1,696.17	47.77	703.88	643.60	60.28	11.677	

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	Local Co-ordinate Reference:	Well NAGEEZI UNIT 325H
Project:	San Juan County, NM	TVD Reference:	16' KB @ 6970.00usft
Reference Site:	S33-T24N-R9W	MD Reference:	16' KB @ 6970.00usft
Site Error:	0.00usft	North Reference:	True
Reference Well:	NAGEEZI UNIT 325H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

Offset Design S33-T24N-R9W - NAGEEZI UNIT 324H - OH - PLAN #1														Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)							
5,587.00	5,089.84	5,614.43	5,158.02	32.57	32.76	97.71	-1,806.51	112.80	727.37	664.49	62.87	11.569			
5,687.00	5,069.63	5,600.40	5,225.60	34.43	35.14	102.07	-1,946.41	213.11	745.86	680.83	65.03	11.469			
5,787.00	5,068.24	6,005.96	5,248.98	36.37	38.16	103.92	-2,100.72	345.83	751.89	684.50	67.39	11.157			
5,887.00	5,066.84	6,105.96	5,247.76	38.37	39.76	103.94	-2,173.86	414.00	751.35	680.21	71.14	10.562			
5,987.00	5,065.44	6,205.96	5,246.54	40.44	41.45	103.96	-2,247.01	482.17	750.81	675.78	75.02	10.008			
6,087.00	5,064.05	6,305.96	5,245.32	42.55	43.22	103.99	-2,320.16	560.34	750.27	671.24	79.03	9.494			
6,187.00	5,062.65	6,405.95	5,244.10	44.72	45.07	104.01	-2,393.31	618.52	749.73	668.60	83.13	9.019			
6,287.00	5,061.26	6,505.95	5,242.87	46.92	46.99	104.04	-2,466.46	686.69	749.19	661.87	87.32	8.580			
6,387.00	5,059.86	6,605.95	5,241.65	49.15	48.97	104.06	-2,539.60	754.86	748.65	657.07	91.58	8.175			
6,487.00	5,058.46	6,705.95	5,240.43	51.41	51.00	104.08	-2,612.75	823.03	748.11	652.21	95.91	7.801			
6,587.00	5,057.07	6,805.95	5,239.21	53.69	53.07	104.11	-2,685.90	891.20	747.57	647.29	100.29	7.454			
6,687.00	5,055.67	6,905.94	5,237.99	56.00	55.19	104.13	-2,759.05	959.38	747.03	642.32	104.72	7.134			
6,787.00	5,054.27	7,005.94	5,236.77	58.33	57.34	104.16	-2,832.20	1,027.55	746.49	637.31	109.19	6.837			
6,887.00	5,052.88	7,105.94	5,235.54	60.67	59.53	104.18	-2,905.34	1,095.72	745.95	632.26	113.70	6.561			
6,987.00	5,051.48	7,205.94	5,234.32	63.03	61.75	104.20	-2,978.49	1,163.89	745.42	627.18	118.24	6.304			
7,087.00	5,050.09	7,305.94	5,233.10	65.40	63.99	104.23	-3,051.64	1,232.07	744.88	622.07	122.81	6.065			
7,187.00	5,048.69	7,405.93	5,231.88	67.78	66.25	104.25	-3,124.79	1,300.24	744.34	616.93	127.41	5.842			
7,287.00	5,047.29	7,505.93	5,230.66	70.18	68.54	104.28	-3,197.94	1,368.41	743.80	611.77	132.03	5.634			
7,387.00	5,045.90	7,605.93	5,229.44	72.58	70.84	104.30	-3,271.08	1,436.58	743.26	606.59	136.67	5.438			
7,487.00	5,044.50	7,705.93	5,228.21	75.00	73.16	104.33	-3,344.23	1,504.76	742.72	601.40	141.33	5.255			
7,587.00	5,043.11	7,805.93	5,226.99	77.42	75.50	104.35	-3,417.38	1,572.93	742.19	596.18	146.00	5.083			
7,687.00	5,041.71	7,905.92	5,225.77	79.84	77.85	104.38	-3,490.53	1,641.10	741.65	590.96	150.69	4.922			
7,787.00	5,040.31	8,005.92	5,224.55	82.28	80.21	104.40	-3,563.68	1,709.27	741.11	585.71	155.40	4.769			
7,887.00	5,038.92	8,105.92	5,223.33	84.72	82.58	104.42	-3,636.82	1,777.45	740.57	580.46	160.11	4.625			
7,987.00	5,037.52	8,205.92	5,222.10	87.16	84.97	104.45	-3,709.97	1,845.62	740.04	575.20	164.84	4.489			
8,087.00	5,036.12	8,305.92	5,220.88	89.62	87.36	104.47	-3,783.12	1,913.79	739.50	569.92	169.58	4.361			
8,187.00	5,034.73	8,405.91	5,219.66	92.07	89.76	104.50	-3,856.27	1,981.96	738.96	564.64	174.32	4.239			
8,287.00	5,033.33	8,505.91	5,218.44	94.53	92.17	104.52	-3,929.42	2,050.14	738.43	559.35	179.08	4.124			
8,387.00	5,031.94	8,605.91	5,217.22	96.99	94.59	104.55	-4,002.56	2,118.31	737.89	554.05	183.84	4.014			
8,487.00	5,030.54	8,705.91	5,216.00	99.46	97.01	104.57	-4,075.71	2,186.48	737.35	548.75	188.61	3.909			
8,587.00	5,029.14	8,805.91	5,214.77	101.93	99.44	104.60	-4,148.86	2,254.65	736.82	543.44	193.38	3.810			
8,687.00	5,027.75	8,905.90	5,213.55	104.41	101.88	104.62	-4,222.01	2,322.83	736.28	538.12	198.16	3.716			
8,787.00	5,026.35	9,005.90	5,212.33	106.88	104.32	104.65	-4,295.16	2,391.00	735.74	532.80	202.95	3.625			
8,887.00	5,024.96	9,105.90	5,211.11	109.36	106.77	104.67	-4,368.30	2,459.17	735.21	527.47	207.74	3.539			
8,987.00	5,023.56	9,205.90	5,209.89	111.84	109.22	104.70	-4,441.45	2,527.34	734.67	522.14	212.53	3.457			
9,087.00	5,022.16	9,305.90	5,208.66	114.33	111.67	104.72	-4,514.60	2,595.52	734.13	516.80	217.33	3.378			
9,187.00	5,020.77	9,405.89	5,207.44	116.81	114.13	104.75	-4,587.75	2,663.69	733.60	511.47	222.13	3.303			
9,287.00	5,019.37	9,505.89	5,206.22	119.30	116.59	104.77	-4,660.90	2,731.86	733.06	506.13	226.94	3.230			
9,387.00	5,017.98	9,605.89	5,205.00	121.79	119.06	104.80	-4,734.04	2,800.03	732.53	500.78	231.75	3.161			
9,487.00	5,016.58	9,705.89	5,203.78	124.29	121.53	104.82	-4,807.19	2,868.21	731.99	495.43	236.56	3.094			
9,587.00	5,015.18	9,805.89	5,202.56	126.78	124.00	104.85	-4,880.34	2,936.38	731.46	490.08	241.37	3.030			
9,687.00	5,013.79	9,905.89	5,201.33	129.28	126.48	104.87	-4,953.49	3,004.55	730.92	484.73	246.19	2.969			
9,787.00	5,012.39	10,005.88	5,200.11	131.77	128.95	104.90	-5,026.64	3,072.72	730.39	479.38	251.01	2.910			
9,887.00	5,010.99	10,105.88	5,198.89	134.27	131.43	104.92	-5,099.78	3,140.90	729.85	474.02	255.83	2.853			
9,987.00	5,009.60	10,205.88	5,197.67	136.77	133.92	104.95	-5,172.93	3,209.07	729.32	468.67	260.65	2.798			
10,087.00	5,008.20	10,305.88	5,196.45	139.27	136.40	104.98	-5,246.08	3,277.24	728.78	463.31	265.48	2.745			
10,187.00	5,006.81	10,405.88	5,195.23	141.78	138.89	105.00	-5,319.23	3,345.41	728.25	457.95	270.30	2.694			
10,287.00	5,005.41	10,505.87	5,194.00	144.28	141.38	105.03	-5,392.38	3,413.59	727.72	452.59	275.13	2.645			
10,387.00	5,004.01	10,605.87	5,192.78	146.78	143.87	105.05	-5,465.52	3,481.76	727.18	447.22	279.96	2.597			
10,487.00	5,002.62	10,705.87	5,191.56	149.29	146.37	105.08	-5,538.67	3,549.93	726.65	441.86	284.79	2.552			
10,587.00	5,001.22	10,805.87	5,190.34	151.80	148.86	105.10	-5,611.82	3,618.10	726.11	436.50	289.62	2.507			
10,687.00	4,999.83	10,905.87	5,189.12	154.30	151.36	105.13	-5,684.97	3,686.28	725.58	431.13	294.45	2.464			

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	Local Co-ordinate Reference:	Well NAGEEZI UNIT 325H
Project:	San Juan County, NM	TVD Reference:	16' KB @ 6970.00usft
Reference Site:	S33-T24N-R9W	MD Reference:	16' KB @ 6970.00usft
Site Error:	0.00usft	North Reference:	True
Reference Well:	NAGEEZI UNIT 325H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

Offset Design S33-T24N-R9W - NAGEEZI UNIT 324H - OH - PLAN #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 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		
10,787.00	4,998.43	11,005.88	5,187.89	156.81	153.86	105.15	-5,758.12	3,754.45	725.05	425.77	299.28	2.423		
10,887.00	4,997.03	11,105.86	5,186.67	159.32	156.36	105.18	-5,831.27	3,822.62	724.51	420.40	304.11	2.382		
10,987.00	4,995.64	11,205.86	5,185.45	161.83	158.86	105.21	-5,904.41	3,890.79	723.98	415.03	308.95	2.343		
11,087.00	4,994.24	11,305.86	5,184.23	164.34	161.36	105.23	-5,977.56	3,958.97	723.45	409.67	313.78	2.306		
11,187.00	4,992.84	11,405.86	5,183.01	166.85	163.86	105.26	-6,050.71	4,027.14	722.92	404.30	318.61	2.269		
11,287.00	4,991.45	11,505.85	5,181.79	169.37	166.37	105.28	-6,123.86	4,095.31	722.38	398.93	323.45	2.233		
11,387.00	4,990.05	11,605.85	5,180.56	171.88	168.87	105.31	-6,197.01	4,163.48	721.85	393.57	328.28	2.199		
11,487.00	4,988.66	11,705.85	5,179.34	174.39	171.38	105.33	-6,270.15	4,231.66	721.32	388.20	333.12	2.165		
11,587.00	4,987.26	11,805.85	5,178.12	176.91	173.89	105.36	-6,343.30	4,299.83	720.79	382.83	337.95	2.133		
11,687.00	4,985.86	11,905.85	5,176.90	179.42	176.40	105.39	-6,416.45	4,368.00	720.25	377.47	342.79	2.101		
11,787.00	4,984.47	12,005.84	5,175.68	181.94	178.91	105.41	-6,489.60	4,436.17	719.72	372.10	347.62	2.070		
11,887.00	4,983.07	12,105.84	5,174.45	184.46	181.42	105.44	-6,562.75	4,504.35	719.19	366.73	352.46	2.041 SF		

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Reference Site: S33-T24N-R9W
Site Error: 0.00usft
Reference Well: NAGEEZI UNIT 325H
Well Error: 0.00usft
Reference Wellbore: OH
Reference Design: PLAN #1

Local Co-ordinate Reference: Well NAGEEZI UNIT 325H
TVD Reference: 16' KB @ 6970.00usft
MD Reference: 16' KB @ 6970.00usft
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 S33-T24N-R9W - NAGEEZI UNIT 326H - OH - PLAN #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Between Centres (usft)	Between Ellipses (usft)					
387.00	387.00	387.00	387.00	1.18	1.18	124.89	-17.47	25.05	30.54	28.19	2.36	12.950	
487.00	487.00	487.00	487.00	1.54	1.54	124.89	-17.47	25.05	30.54	27.47	3.08	9.931	
587.00	587.00	587.00	587.00	1.90	1.90	124.89	-17.47	25.05	30.54	26.75	3.79	8.054	
687.00	687.00	687.00	687.00	2.25	2.25	124.89	-17.47	25.05	30.54	26.04	4.51	6.773 CC, ES	
787.00	787.00	786.06	786.05	2.61	2.60	125.19	-18.34	26.01	31.84	26.62	5.23	6.092	
887.00	886.99	884.85	884.72	2.96	2.93	-34.92	-21.47	29.48	35.45	29.50	5.95	5.963	
987.00	986.87	983.47	983.00	3.29	3.27	-37.32	-26.87	35.45	39.67	33.01	6.67	5.952	
1,087.00	1,086.52	1,081.88	1,080.75	3.63	3.62	-41.14	-34.52	43.90	44.65	37.25	7.40	6.037	
1,187.00	1,185.82	1,180.06	1,177.82	3.97	3.98	-45.77	-44.39	54.82	50.60	42.47	8.13	6.224	
1,287.00	1,284.66	1,277.96	1,274.05	4.34	4.36	-50.70	-56.45	68.15	57.74	48.87	8.87	6.510	
1,387.00	1,382.90	1,375.56	1,369.31	4.71	4.76	-55.56	-70.65	83.86	66.25	56.63	9.62	6.887	
1,487.00	1,480.43	1,472.81	1,463.47	5.11	5.18	-60.10	-86.97	101.90	76.25	65.86	10.39	7.337	
1,587.00	1,577.14	1,569.69	1,558.39	5.54	5.64	-64.20	-105.34	122.22	87.83	76.63	11.20	7.841	
1,687.00	1,673.08	1,666.17	1,647.96	5.99	6.12	-67.85	-125.72	144.75	101.23	89.18	12.06	8.397	
1,787.00	1,768.94	1,762.12	1,737.96	6.46	6.65	-69.38	-148.03	169.42	117.25	104.30	12.95	9.056	
1,887.00	1,864.81	1,857.35	1,826.12	6.94	7.21	-69.73	-172.15	196.10	135.71	121.85	13.86	9.792	
1,987.00	1,960.67	1,951.64	1,912.20	7.43	7.82	-69.19	-197.97	224.65	156.54	141.75	14.78	10.590	
2,087.00	2,056.53	2,044.83	1,995.98	7.92	8.47	-68.10	-225.33	254.91	179.74	164.03	15.70	11.446	
2,187.00	2,152.39	2,136.72	2,077.25	8.43	9.16	-66.89	-254.09	286.71	205.36	188.75	16.61	12.362	
2,287.00	2,248.26	2,227.17	2,155.86	8.94	9.90	-65.14	-284.09	319.88	233.46	215.96	17.50	13.339	
2,387.00	2,344.12	2,317.40	2,232.87	9.46	10.69	-63.51	-315.62	354.75	264.02	245.63	18.39	14.359	
2,487.00	2,439.98	2,412.07	2,313.21	9.97	11.55	-62.04	-349.22	391.91	295.49	276.14	19.35	15.274	
2,587.00	2,535.85	2,506.75	2,393.54	10.50	12.43	-60.86	-382.82	429.06	327.10	306.78	20.32	16.101	
2,687.00	2,631.71	2,601.42	2,473.88	11.02	13.33	-59.88	-416.42	466.22	358.81	337.52	21.29	16.850	
2,787.00	2,727.57	2,696.10	2,554.22	11.55	14.24	-59.06	-450.02	503.37	390.60	368.32	22.28	17.530	
2,887.00	2,823.43	2,790.78	2,634.55	12.08	15.16	-58.37	-483.82	540.53	422.46	399.18	23.28	18.149	
2,987.00	2,919.30	2,885.45	2,714.89	12.61	16.09	-57.77	-517.22	577.68	454.36	430.08	24.28	18.713	
3,087.00	3,015.16	2,980.13	2,795.23	13.15	17.02	-57.25	-550.82	614.84	486.30	461.01	25.29	19.230	
3,187.00	3,111.02	3,074.80	2,875.56	13.68	17.96	-56.80	-584.42	652.00	518.27	491.97	26.30	19.703	
3,287.00	3,206.89	3,169.48	2,955.90	14.22	18.90	-56.39	-618.02	689.15	550.27	522.95	27.32	20.139	
3,387.00	3,302.75	3,264.15	3,036.23	14.76	19.85	-56.03	-651.62	726.31	582.29	553.94	28.35	20.541	
3,487.00	3,398.61	3,358.83	3,116.57	15.30	20.81	-55.71	-685.22	763.46	614.33	584.95	29.38	20.912	
3,587.00	3,494.48	3,453.50	3,196.91	15.84	21.76	-55.42	-718.82	800.62	646.38	615.97	30.41	21.257	
3,687.00	3,590.34	3,548.18	3,277.24	16.38	22.72	-55.16	-752.42	837.77	678.45	647.01	31.44	21.577	
3,787.00	3,686.20	3,642.85	3,357.58	16.92	23.68	-54.92	-786.02	874.93	710.53	678.05	32.48	21.874	
3,887.00	3,782.06	3,737.53	3,437.92	17.46	24.64	-54.71	-819.63	912.09	742.62	709.09	33.52	22.152	
3,987.00	3,877.93	3,832.21	3,518.25	18.00	25.61	-54.51	-853.23	949.24	774.72	740.15	34.57	22.412	
4,087.00	3,973.79	3,926.88	3,598.59	18.54	26.58	-54.32	-886.83	986.40	806.82	771.21	35.61	22.655	
4,187.00	4,069.65	4,021.56	3,678.93	19.09	27.54	-54.15	-920.43	1,023.55	838.93	802.27	36.66	22.883	
4,287.00	4,165.52	4,116.23	3,759.26	19.63	28.51	-54.00	-954.03	1,060.71	871.05	833.34	37.71	23.097	
4,387.00	4,261.38	4,210.91	3,839.60	20.18	29.48	-53.85	-987.63	1,097.86	903.18	864.41	38.76	23.299	
4,487.00	4,357.24	4,305.58	3,919.93	20.72	30.46	-53.71	-1,021.23	1,135.02	935.31	895.49	39.82	23.489	
4,587.00	4,453.10	4,400.26	4,000.27	21.27	31.43	-53.59	-1,054.83	1,172.17	967.44	926.57	40.87	23.669	
4,687.00	4,548.97	4,494.94	4,080.61	21.81	32.40	-53.12	-1,088.43	1,209.33	999.57	957.64	41.93	23.838	
4,787.00	4,642.56	4,591.40	4,162.46	22.43	33.40	-52.04	-1,122.86	1,247.19	1,025.56	982.45	43.11	23.790	
4,887.00	4,730.63	4,689.94	4,246.08	23.18	34.41	-41.34	-1,157.64	1,285.86	1,039.66	995.15	44.51	23.356	
4,987.00	4,811.47	4,788.65	4,329.84	24.07	35.43	-39.96	-1,192.67	1,324.60	1,041.78	995.63	46.15	22.575	
5,087.00	4,883.50	4,865.60	4,412.11	25.10	36.43	-40.19	-1,227.07	1,362.65	1,032.16	984.14	48.02	21.494	
5,187.00	4,945.31	4,978.90	4,491.28	26.29	37.39	-41.80	-1,260.19	1,399.27	1,011.44	961.29	50.15	20.167	
5,287.00	4,995.71	5,066.74	4,565.81	27.64	38.30	-44.73	-1,291.36	1,433.74	980.63	928.05	52.58	18.649	
5,387.00	5,033.72	5,147.41	4,634.27	29.15	39.13	-49.03	-1,319.99	1,465.40	941.13	885.78	55.35	17.002	
5,487.00	5,058.59	5,219.34	4,695.30	30.80	39.88	-54.71	-1,345.52	1,493.63	894.76	836.24	58.52	15.291	

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: S33-T24N-R9W
Site Error: 0.00usft
Reference Well: NAGEEZI UNIT 325H
Well Error: 0.00usft
Reference Wellbore: OH
Reference Design: PLAN #1

Local Co-ordinate Reference: Well NAGEEZI UNIT 325H
TVD Reference: 16' KB @ 6970.00usft
MD Reference: 16' KB @ 6970.00usft
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 S33-T24N-R9W - NAGEEZI UNIT 326H - OH - PLAN #1														Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HDGM														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance		Total Uncertainty Axis	Separation Factor	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)	
5,587.00	5,069.84	5,281.13	4,747.73	32.57	40.52	-81.80	-1,367.45	1,517.87	843.76	781.65	62.11	13.585		
5,687.00	5,069.63	5,333.63	4,792.28	34.43	41.06	-66.71	-1,386.08	1,538.48	791.84	725.70	66.14	11.972		
5,787.00	5,068.24	5,385.13	4,835.98	36.37	41.59	-70.24	-1,404.36	1,558.69	745.54	674.99	70.56	10.567		
5,887.00	5,066.84	5,436.63	4,879.68	38.37	42.12	-73.90	-1,422.63	1,578.90	706.65	631.45	75.21	9.396		
5,987.00	5,065.44	5,488.13	4,923.38	40.44	42.66	-77.67	-1,440.91	1,599.11	676.44	596.60	79.84	8.472		
6,087.00	5,064.05	5,534.69	4,962.55	42.55	43.16	-81.12	-1,457.83	1,617.73	656.25	572.21	84.04	7.809		
6,187.00	5,062.65	5,587.01	5,004.65	44.72	43.78	-84.88	-1,478.95	1,640.47	646.88	559.18	87.89	7.376		
6,230.49	5,062.04	5,613.39	5,025.00	45.67	44.11	-86.71	-1,490.48	1,652.69	645.98	556.85	89.13	7.248		
6,287.00	5,061.26	5,651.56	5,053.31	46.92	44.63	-89.26	-1,508.14	1,671.20	647.38	556.53	90.85	7.126		
6,387.00	5,059.86	5,731.89	5,108.11	49.15	45.85	-94.16	-1,548.85	1,713.09	655.70	562.01	93.69	6.999		
6,487.00	5,058.46	5,830.93	5,166.41	51.41	47.56	-99.27	-1,605.39	1,769.98	668.72	572.18	96.54	6.927		
6,587.00	5,057.07	5,951.67	5,221.80	53.69	49.90	-103.96	-1,681.85	1,845.16	682.59	582.77	99.82	6.838		
6,687.00	5,055.67	6,092.61	5,262.23	56.00	52.89	-107.33	-1,778.97	1,938.52	693.23	589.33	103.90	6.672		
6,787.00	5,054.27	6,244.79	5,275.67	58.33	56.26	-108.51	-1,889.25	2,042.11	697.34	588.43	108.91	6.403		
6,887.00	5,052.88	6,344.79	5,274.28	60.67	58.50	-108.50	-1,962.50	2,110.16	697.76	584.47	113.29	6.159		
6,987.00	5,051.48	6,444.79	5,272.88	63.03	60.76	-108.49	-2,035.76	2,178.22	698.18	580.47	117.71	5.931		
7,087.00	5,050.09	6,544.79	5,271.49	65.40	63.04	-108.48	-2,109.01	2,246.28	698.60	576.43	122.17	5.718		
7,187.00	5,048.69	6,644.79	5,270.09	67.78	65.34	-108.46	-2,182.28	2,314.33	699.02	572.37	126.65	5.519		
7,287.00	5,047.29	6,744.78	5,268.69	70.18	67.65	-108.45	-2,255.52	2,382.39	699.44	568.28	131.16	5.333		
7,387.00	5,045.90	6,844.78	5,267.30	72.58	69.99	-108.44	-2,328.77	2,450.45	699.86	564.17	135.69	5.158		
7,487.00	5,044.50	6,944.78	5,265.90	75.00	72.33	-108.43	-2,402.03	2,518.50	700.28	560.04	140.24	4.993		
7,587.00	5,043.11	7,044.78	5,264.50	77.42	74.69	-108.42	-2,475.28	2,586.56	700.70	555.89	144.81	4.839		
7,687.00	5,041.71	7,144.78	5,263.11	79.84	77.06	-108.41	-2,548.54	2,654.62	701.12	551.71	149.41	4.693		
7,787.00	5,040.31	7,244.78	5,261.71	82.28	79.44	-108.39	-2,621.79	2,722.67	701.54	547.53	154.01	4.555		
7,887.00	5,038.92	7,344.78	5,260.31	84.72	81.83	-108.38	-2,695.04	2,790.73	701.96	543.32	158.64	4.425		
7,987.00	5,037.52	7,444.78	5,258.92	87.16	84.23	-108.37	-2,768.30	2,858.79	702.38	539.11	163.27	4.302		
8,087.00	5,036.12	7,544.78	5,257.52	89.62	86.64	-108.36	-2,841.55	2,926.84	702.80	534.88	167.92	4.185		
8,187.00	5,034.73	7,644.78	5,256.13	92.07	89.06	-108.35	-2,914.81	2,994.90	703.22	530.64	172.58	4.075		
8,287.00	5,033.33	7,744.77	5,254.73	94.53	91.48	-108.34	-2,988.06	3,062.96	703.64	526.39	177.25	3.970		
8,387.00	5,031.94	7,844.77	5,253.33	96.99	93.91	-108.33	-3,061.31	3,131.01	704.06	522.13	181.93	3.870		
8,487.00	5,030.54	7,944.77	5,251.94	99.46	96.34	-108.32	-3,134.57	3,199.07	704.48	517.85	186.62	3.775		
8,587.00	5,029.14	8,044.77	5,250.54	101.93	98.78	-108.30	-3,207.82	3,267.12	704.90	513.58	191.32	3.684		
8,687.00	5,027.75	8,144.77	5,249.14	104.41	101.22	-108.29	-3,281.08	3,335.18	705.32	509.29	196.03	3.598		
8,787.00	5,026.35	8,244.77	5,247.75	106.88	103.67	-108.28	-3,354.33	3,403.24	705.74	504.99	200.75	3.516		
8,887.00	5,024.96	8,344.77	5,246.35	109.36	106.12	-108.27	-3,427.58	3,471.29	706.16	500.69	205.47	3.437		
8,987.00	5,023.56	8,444.77	5,244.95	111.84	108.58	-108.26	-3,500.84	3,539.35	706.58	496.38	210.20	3.362		
9,087.00	5,022.16	8,544.77	5,243.56	114.33	111.04	-108.25	-3,574.09	3,607.41	707.00	492.07	214.93	3.289		
9,187.00	5,020.77	8,644.77	5,242.16	116.81	113.51	-108.24	-3,647.35	3,675.46	707.42	487.75	219.67	3.220		
9,287.00	5,019.37	8,744.76	5,240.76	119.30	115.98	-108.22	-3,720.60	3,743.52	707.84	483.42	224.42	3.154		
9,387.00	5,017.98	8,844.76	5,239.37	121.79	118.45	-108.21	-3,793.85	3,811.58	708.26	479.09	229.17	3.091		
9,487.00	5,016.58	8,944.76	5,237.97	124.29	120.92	-108.20	-3,867.11	3,879.63	708.68	474.76	233.93	3.030		
9,587.00	5,015.18	9,044.76	5,236.58	126.78	123.40	-108.19	-3,940.36	3,947.69	709.10	470.42	238.69	2.971		
9,687.00	5,013.79	9,144.76	5,235.18	129.28	125.88	-108.18	-4,013.62	4,015.75	709.52	466.07	243.45	2.914		
9,787.00	5,012.39	9,244.76	5,233.78	131.77	128.36	-108.17	-4,086.87	4,083.80	709.94	461.72	248.22	2.860		
9,887.00	5,010.99	9,344.76	5,232.39	134.27	130.84	-108.16	-4,160.12	4,151.86	710.36	457.37	252.99	2.808		
9,987.00	5,009.60	9,444.76	5,230.99	136.77	133.33	-108.15	-4,233.38	4,219.92	710.78	453.01	257.77	2.757		
10,087.00	5,008.20	9,544.76	5,229.59	139.27	135.82	-108.14	-4,306.63	4,287.97	711.21	448.65	262.55	2.709		
10,187.00	5,006.81	9,644.76	5,228.20	141.78	138.31	-108.12	-4,379.89	4,356.03	711.63	444.29	267.34	2.662		
10,287.00	5,005.41	9,744.75	5,226.80	144.28	140.80	-108.11	-4,453.14	4,424.09	712.05	439.92	272.12	2.617		
10,387.00	5,004.01	9,844.75	5,225.40	146.78	143.29	-108.10	-4,526.40	4,492.14	712.47	435.55	276.91	2.573		
10,487.00	5,002.62	9,944.75	5,224.01	149.29	145.79	-108.09	-4,599.65	4,560.20	712.89	431.18	281.71	2.531		
10,587.00	5,001.22	10,044.75	5,222.61	151.80	148.28	-108.08	-4,672.90	4,628.26	713.31	426.81	286.50	2.490		

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: S33-T24N-R9W
Site Error: 0.00usft
Reference Well: NAGEEZI UNIT 325H
Well Error: 0.00usft
Reference Wellbore: OH
Reference Design: PLAN #1

Local Co-ordinate Reference: Well NAGEEZI UNIT 325H
TVD Reference: 16' KB @ 6970.00usft
MD Reference: 16' KB @ 6970.00usft
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 S33-T24N-R9W - NAGEEZI UNIT 326H - OH - PLAN #1														Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
10,687.00	4,999.83	10,144.75	5,221.22	154.30	150.78	-108.07	-4,746.16	4,896.31	713.73	422.43	291.30	2.450			
10,787.00	4,998.43	10,244.75	5,219.82	156.81	153.28	-108.06	-4,819.41	4,764.37	714.15	418.05	296.10	2.412			
10,887.00	4,997.03	10,344.75	5,218.42	159.32	155.78	-108.05	-4,892.67	4,832.43	714.57	413.66	300.91	2.375			
10,987.00	4,995.64	10,444.75	5,217.03	161.83	158.29	-108.04	-4,965.92	4,900.48	714.99	409.28	305.71	2.339			
11,087.00	4,994.24	10,544.75	5,215.63	164.34	160.79	-108.02	-5,039.17	4,968.54	715.41	404.89	310.52	2.304			
11,187.00	4,992.84	10,644.75	5,214.23	166.85	163.29	-108.01	-5,112.43	5,036.60	715.83	400.50	315.33	2.270			
11,287.00	4,991.45	10,744.75	5,212.84	169.37	165.80	-108.00	-5,185.68	5,104.65	716.25	396.11	320.15	2.237			
11,387.00	4,990.05	10,844.74	5,211.44	171.88	168.31	-107.99	-5,258.94	5,172.71	716.67	391.71	324.96	2.205			
11,487.00	4,988.66	10,944.74	5,210.04	174.39	170.81	-107.98	-5,332.19	5,240.76	717.10	387.31	329.78	2.174			
11,587.00	4,987.26	11,044.74	5,208.65	176.91	173.32	-107.97	-5,405.44	5,308.82	717.52	382.92	334.60	2.144			
11,687.00	4,985.86	11,144.74	5,207.25	179.42	175.83	-107.96	-5,478.70	5,376.88	717.94	378.51	339.42	2.115			
11,787.00	4,984.47	11,244.74	5,205.86	181.94	178.34	-107.95	-5,551.95	5,444.93	718.36	374.11	344.25	2.087			
11,887.00	4,983.07	11,344.74	5,204.46	184.46	180.86	-107.94	-5,625.21	5,512.99	718.78	369.71	349.07	2.059 SF			

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Reference Site: S33-T24N-R9W
Site Error: 0.00usft
Reference Well: NAGEEZI UNIT 325H
Well Error: 0.00usft
Reference Wellbore: OH
Reference Design: PLAN #1

Local Co-ordinate Reference: Well NAGEEZI UNIT 325H
TVD Reference: 16' KB @ 6970.00usft
MD Reference: 16' KB @ 6970.00usft
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 S33-T24N-R9W - NAGEEZI UNIT 327H - OH - PLAN #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Total		Separation		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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis	Factor	
387.00	387.00	387.00	387.00	1.18	1.18	124.93	-34.58	49.52	60.40	58.04	2.36	25.606	
487.00	487.00	487.00	487.00	1.54	1.54	124.93	-34.58	49.52	60.40	57.32	3.08	19.637	
587.00	587.00	587.00	587.00	1.90	1.90	124.93	-34.58	49.52	60.40	56.61	3.79	15.925 CC, ES	
687.00	687.00	685.24	685.22	2.25	2.24	124.63	-35.02	50.71	61.65	57.14	4.51	13.664	
787.00	787.00	783.01	782.89	2.61	2.58	123.64	-36.60	55.00	66.19	60.94	5.25	12.597	
887.00	886.99	880.43	879.99	2.96	2.92	-38.18	-39.32	62.39	73.04	67.04	6.00	12.175	
987.00	986.87	977.45	976.36	3.29	3.27	-41.70	-43.16	72.82	80.70	73.96	6.74	11.972	
1,087.00	1,086.52	1,073.95	1,071.79	3.63	3.63	-46.24	-48.10	86.22	89.56	82.07	7.49	11.960	
1,187.00	1,185.82	1,169.82	1,166.07	3.97	4.00	-51.34	-54.10	102.52	100.07	91.84	8.24	12.151	
1,287.00	1,284.66	1,264.96	1,259.01	4.34	4.40	-56.57	-61.13	121.62	112.66	103.67	8.98	12.540	
1,387.00	1,382.90	1,359.28	1,350.43	4.71	4.82	-61.63	-69.14	143.39	127.63	117.89	9.74	13.110	
1,487.00	1,480.43	1,452.69	1,440.16	5.11	5.26	-66.32	-78.10	167.73	145.20	134.70	10.50	13.833	
1,587.00	1,577.14	1,545.10	1,528.05	5.54	5.74	-70.52	-87.96	194.49	165.48	154.20	11.28	14.670	
1,687.00	1,673.08	1,636.48	1,614.02	5.99	6.24	-74.32	-98.66	223.56	188.65	176.56	12.09	15.598	
1,787.00	1,768.94	1,726.84	1,698.01	6.46	6.79	-77.08	-110.17	254.82	215.14	202.21	12.94	16.631	
1,887.00	1,864.81	1,816.04	1,779.85	6.94	7.37	-78.88	-122.42	288.10	244.57	230.78	13.80	17.727	
1,987.00	1,960.67	1,903.93	1,859.37	7.43	8.00	-79.96	-135.35	323.22	276.64	261.97	14.67	18.859	
2,087.00	2,056.53	1,996.21	1,941.99	7.92	8.70	-80.85	-149.55	361.80	310.49	294.90	15.60	19.907	
2,187.00	2,152.39	2,090.22	2,026.12	8.43	9.44	-81.20	-164.05	401.18	344.45	327.88	16.57	20.792	
2,287.00	2,248.26	2,184.24	2,110.24	8.94	10.19	-81.65	-178.55	440.56	378.43	360.87	17.56	21.550	
2,387.00	2,344.12	2,278.25	2,194.37	9.46	10.96	-82.03	-193.04	479.93	412.43	393.85	18.57	22.203	
2,487.00	2,439.98	2,372.26	2,278.50	9.97	11.74	-82.35	-207.54	519.31	446.44	426.83	19.61	22.770	
2,587.00	2,535.85	2,466.27	2,362.63	10.50	12.52	-82.63	-222.04	558.69	480.46	459.81	20.65	23.263	
2,687.00	2,631.71	2,560.28	2,446.75	11.02	13.31	-82.87	-236.53	598.06	514.49	492.78	21.71	23.697	
2,787.00	2,727.57	2,654.29	2,530.88	11.55	14.11	-83.08	-251.03	637.44	548.53	525.75	22.78	24.079	
2,887.00	2,823.43	2,748.30	2,615.01	12.08	14.92	-83.26	-265.53	676.81	582.57	558.71	23.86	24.417	
2,987.00	2,919.30	2,842.31	2,699.14	12.61	15.72	-83.43	-280.02	716.19	616.62	591.67	24.94	24.719	
3,087.00	3,015.16	2,936.33	2,783.26	13.15	16.53	-83.58	-294.52	755.57	650.67	624.63	26.04	24.989	
3,187.00	3,111.02	3,030.34	2,867.39	13.68	17.35	-83.71	-309.02	794.94	684.72	657.59	27.14	25.232	
3,287.00	3,206.89	3,124.35	2,951.52	14.22	18.17	-83.83	-323.51	834.32	718.78	690.54	28.24	25.452	
3,387.00	3,302.75	3,218.36	3,035.65	14.76	18.98	-83.94	-338.01	873.70	752.84	723.49	29.35	25.651	
3,487.00	3,398.61	3,312.37	3,119.77	15.30	19.81	-84.04	-352.51	913.07	786.91	756.44	30.46	25.832	
3,587.00	3,494.48	3,406.38	3,203.90	15.84	20.63	-84.13	-367.01	952.45	820.97	789.39	31.58	25.997	
3,687.00	3,590.34	3,500.39	3,288.03	16.38	21.45	-84.21	-381.50	991.83	855.04	822.34	32.70	26.148	
3,787.00	3,686.20	3,594.40	3,372.16	16.92	22.28	-84.29	-396.00	1,031.20	889.11	855.28	33.82	26.287	
3,887.00	3,782.06	3,688.42	3,456.28	17.46	23.10	-84.36	-410.50	1,070.58	923.18	888.23	34.95	26.415	
3,987.00	3,877.93	3,782.43	3,540.41	18.00	23.93	-84.43	-424.99	1,109.96	957.25	921.17	36.08	26.533	
4,087.00	3,973.79	3,876.44	3,624.54	18.54	24.76	-84.49	-439.49	1,149.33	991.32	954.11	37.21	26.643	
4,187.00	4,069.65	3,970.45	3,708.67	19.09	25.59	-84.55	-453.99	1,188.71	1,025.39	987.05	38.34	26.745	
4,287.00	4,165.52	4,064.46	3,792.79	19.63	26.42	-84.61	-468.48	1,228.09	1,059.46	1,019.99	39.47	26.839	
4,387.00	4,261.38	4,158.47	3,876.92	20.18	27.25	-84.66	-482.98	1,267.46	1,093.54	1,052.93	40.61	26.928	
4,487.00	4,357.24	4,252.48	3,961.05	20.72	28.09	-84.70	-497.48	1,306.84	1,127.61	1,085.87	41.75	27.010	
4,587.00	4,453.10	4,346.49	4,045.18	21.27	28.92	-84.75	-511.97	1,346.22	1,161.69	1,118.80	42.89	27.087	
4,687.00	4,548.97	4,440.51	4,129.31	21.81	29.75	-84.41	-526.47	1,385.59	1,195.76	1,151.74	44.03	27.160	
4,787.00	4,642.56	4,535.33	4,214.16	22.43	30.59	-75.41	-541.09	1,425.31	1,228.43	1,181.12	45.31	27.088	
4,887.00	4,730.63	4,630.41	4,299.24	23.18	31.44	-70.97	-555.75	1,465.14	1,250.48	1,203.63	46.85	26.890	
4,987.00	4,811.47	4,723.90	4,382.90	24.07	32.27	-68.97	-570.17	1,504.29	1,267.97	1,219.32	48.65	26.062	
5,087.00	4,883.50	4,813.98	4,463.51	25.10	33.07	-68.52	-584.06	1,542.02	1,279.39	1,228.68	50.71	25.230	
5,187.00	4,945.31	4,898.90	4,539.50	26.29	33.82	-69.17	-597.16	1,577.59	1,285.57	1,232.56	53.01	24.251	
5,287.00	4,995.71	4,976.99	4,609.39	27.64	34.52	-70.58	-609.20	1,610.30	1,287.64	1,232.10	55.54	23.184	
5,387.00	5,033.72	5,046.76	4,671.82	29.15	35.14	-72.45	-619.96	1,639.52	1,286.96	1,228.70	58.26	22.091	
5,487.00	5,058.59	5,100.00	4,719.12	30.80	35.62	-74.21	-628.79	1,662.30	1,285.10	1,224.10	60.99	21.069	

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: S33-T24N-R9W
Site Error: 0.00usft
Reference Well: NAGEEZI UNIT 325H
Well Error: 0.00usft
Reference Wellbore: OH
Reference Design: PLAN #1

Local Co-ordinate Reference: Well NAGEEZI UNIT 325H
TVD Reference: 16' KB @ 6970.00usft
MD Reference: 16' KB @ 6970.00usft
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 S33-T24N-R9W - NAGEEZI UNIT 327H - OH - PLAN #1													Offset Site Error: 0.00 usft
Survey Program: O-MWD+HDGM													Offset Well Error: 0.00 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)	Ellipses (usft)	Uncertainty Axis		
5,587.00	5,089.84	5,150.00	4,762.07	32.57	36.14	-76.07	-639.54	1,885.51	1,283.41	1,219.51	63.90	20.085	
5,624.78	5,071.07	5,169.46	4,778.33	32.27	36.36	-76.81	-644.39	1,695.03	1,283.15	1,218.09	65.06	19.723	
5,687.00	5,069.63	5,202.54	4,805.35	34.43	36.74	-78.09	-653.49	1,711.81	1,283.31	1,216.32	66.99	19.158	
5,787.00	5,068.24	5,268.39	4,856.56	36.37	37.59	-80.46	-674.71	1,747.30	1,288.04	1,217.71	70.33	18.315	
5,887.00	5,066.84	5,353.59	4,917.17	38.37	38.82	-83.25	-708.05	1,796.96	1,296.81	1,222.77	74.03	17.516	
5,987.00	5,065.44	5,464.33	4,985.11	40.44	40.64	-86.36	-760.57	1,866.71	1,307.79	1,229.51	78.29	16.705	
6,087.00	5,064.05	5,605.90	5,051.79	42.55	43.26	-89.39	-840.93	1,961.96	1,318.46	1,235.23	83.23	15.842	
6,187.00	5,062.65	5,777.32	5,098.90	44.72	46.71	-91.53	-953.83	2,081.44	1,325.76	1,236.96	88.80	14.930	
6,287.00	5,061.26	5,937.61	5,108.08	46.92	50.01	-92.02	-1,069.40	2,191.74	1,327.52	1,233.37	94.14	14.101	
6,387.00	5,059.86	6,037.61	5,106.89	49.15	52.09	-92.02	-1,142.84	2,259.60	1,327.69	1,229.12	98.57	13.470	
6,487.00	5,058.46	6,137.61	5,105.29	51.41	54.20	-92.02	-1,216.28	2,327.45	1,327.86	1,224.81	103.05	12.886	
6,587.00	5,057.07	6,237.61	5,103.89	53.69	56.35	-92.02	-1,289.72	2,395.31	1,328.03	1,220.45	107.58	12.344	
6,687.00	5,055.67	6,337.61	5,102.50	56.00	58.53	-92.02	-1,363.16	2,463.17	1,328.20	1,216.04	112.16	11.842	
6,787.00	5,054.27	6,437.61	5,101.10	58.33	60.74	-92.02	-1,436.60	2,531.03	1,328.38	1,211.59	116.79	11.374	
6,887.00	5,052.88	6,537.61	5,099.70	60.67	62.97	-92.02	-1,510.03	2,598.89	1,328.55	1,207.10	121.44	10.940	
6,987.00	5,051.48	6,637.61	5,098.31	63.03	65.22	-92.02	-1,583.47	2,666.75	1,328.72	1,202.59	126.13	10.534	
7,087.00	5,050.09	6,737.61	5,096.91	65.40	67.50	-92.02	-1,656.91	2,734.61	1,328.89	1,198.04	130.85	10.156	
7,187.00	5,048.69	6,837.61	5,095.52	67.78	69.79	-92.02	-1,730.35	2,802.46	1,329.06	1,193.47	135.59	9.802	
7,287.00	5,047.29	6,937.61	5,094.12	70.18	72.10	-92.02	-1,803.79	2,870.32	1,329.23	1,188.88	140.36	9.470	
7,387.00	5,045.90	7,037.61	5,092.72	72.58	74.42	-92.02	-1,877.23	2,938.18	1,329.41	1,184.26	145.14	9.159	
7,487.00	5,044.50	7,137.61	5,091.33	75.00	76.76	-92.02	-1,950.67	3,006.04	1,329.58	1,179.63	149.95	8.867	
7,587.00	5,043.11	7,237.61	5,089.93	77.42	79.17	-92.02	-2,024.11	3,073.90	1,329.75	1,174.98	154.77	8.592	
7,687.00	5,041.71	7,337.61	5,088.53	79.84	81.47	-92.02	-2,097.54	3,141.76	1,329.92	1,170.31	159.61	8.332	
7,787.00	5,040.31	7,437.61	5,087.14	82.28	83.84	-92.02	-2,170.98	3,209.61	1,330.09	1,165.63	164.46	8.088	
7,887.00	5,038.92	7,537.61	5,085.74	84.72	86.22	-92.02	-2,244.42	3,277.47	1,330.26	1,160.94	169.32	7.856	
7,987.00	5,037.52	7,637.61	5,084.35	87.16	88.61	-92.02	-2,317.86	3,345.33	1,330.44	1,156.24	174.20	7.638	
8,087.00	5,036.12	7,737.61	5,082.95	89.62	91.01	-92.02	-2,391.30	3,413.19	1,330.61	1,151.52	179.08	7.430	
8,187.00	5,034.73	7,837.61	5,081.55	92.07	93.42	-92.02	-2,464.74	3,481.05	1,330.78	1,146.80	183.98	7.233	
8,287.00	5,033.33	7,937.61	5,080.16	94.53	95.83	-92.01	-2,538.18	3,548.91	1,330.95	1,142.06	188.89	7.046	
8,387.00	5,031.94	8,037.61	5,078.76	96.99	98.25	-92.01	-2,611.62	3,616.77	1,331.12	1,137.32	193.80	6.869	
8,487.00	5,030.54	8,137.61	5,077.37	99.46	100.67	-92.01	-2,685.05	3,684.62	1,331.29	1,132.57	198.72	6.699	
8,587.00	5,029.14	8,237.61	5,075.97	101.93	103.10	-92.01	-2,758.49	3,752.48	1,331.47	1,127.81	203.65	6.538	
8,687.00	5,027.75	8,337.61	5,074.57	104.41	105.54	-92.01	-2,831.93	3,820.34	1,331.64	1,123.05	208.59	6.384	
8,787.00	5,026.35	8,437.61	5,073.18	106.88	107.98	-92.01	-2,905.37	3,888.20	1,331.81	1,118.28	213.53	6.237	
8,887.00	5,024.96	8,537.61	5,071.78	109.36	110.42	-92.01	-2,978.81	3,956.06	1,331.98	1,113.50	218.48	6.097	
8,987.00	5,023.56	8,637.61	5,070.38	111.84	112.87	-92.01	-3,052.25	4,023.92	1,332.15	1,108.72	223.43	5.962	
9,087.00	5,022.16	8,737.61	5,068.99	114.33	115.32	-92.01	-3,125.69	4,091.77	1,332.32	1,103.94	228.39	5.834	
9,187.00	5,020.77	8,837.61	5,067.59	116.81	117.78	-92.01	-3,199.13	4,159.63	1,332.50	1,099.14	233.35	5.710	
9,287.00	5,019.37	8,937.61	5,066.20	119.30	120.24	-92.01	-3,272.56	4,227.49	1,332.67	1,094.35	238.32	5.592	
9,387.00	5,017.98	9,037.61	5,064.80	121.79	122.70	-92.01	-3,346.00	4,295.35	1,332.84	1,089.55	243.29	5.478	
9,487.00	5,016.58	9,137.61	5,063.40	124.29	125.17	-92.01	-3,419.44	4,363.21	1,333.01	1,084.74	248.27	5.369	
9,587.00	5,015.18	9,237.61	5,062.01	126.78	127.64	-92.01	-3,492.88	4,431.07	1,333.18	1,079.93	253.25	5.264	
9,687.00	5,013.79	9,337.61	5,060.61	129.28	130.11	-92.01	-3,566.32	4,498.93	1,333.35	1,075.12	258.23	5.163	
9,787.00	5,012.39	9,437.61	5,059.21	131.77	132.58	-92.01	-3,639.76	4,566.78	1,333.53	1,070.31	263.22	5.066	
9,887.00	5,010.99	9,537.61	5,057.82	134.27	135.06	-92.01	-3,713.20	4,634.64	1,333.70	1,065.49	268.21	4.973	
9,987.00	5,009.60	9,637.61	5,056.42	136.77	137.53	-92.01	-3,786.63	4,702.50	1,333.87	1,060.67	273.20	4.882	
10,087.00	5,008.20	9,737.61	5,055.03	139.27	140.02	-92.01	-3,860.07	4,770.36	1,334.04	1,055.85	278.20	4.795	
10,187.00	5,006.81	9,837.61	5,053.63	141.78	142.50	-92.01	-3,933.51	4,838.22	1,334.21	1,051.02	283.19	4.711	
10,287.00	5,005.41	9,937.61	5,052.23	144.28	144.98	-92.01	-4,006.95	4,906.08	1,334.39	1,046.19	288.20	4.630	
10,387.00	5,004.01	10,037.61	5,050.84	146.78	147.47	-92.01	-4,080.39	4,973.94	1,334.56	1,041.36	293.20	4.552	
10,487.00	5,002.62	10,137.61	5,049.44	149.29	149.96	-92.01	-4,153.83	5,041.79	1,334.73	1,036.52	298.20	4.476	
10,587.00	5,001.22	10,237.61	5,048.04	151.80	152.45	-92.01	-4,227.27	5,109.65	1,334.90	1,031.69	303.21	4.403	

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: S33-T24N-R9W
Site Error: 0.00usft
Reference Well: NAGEEZI UNIT 325H
Well Error: 0.00usft
Reference Wellbore: OH
Reference Design: PLAN #1

Local Co-ordinate Reference: Well NAGEEZI UNIT 325H
TVD Reference: 16' KB @ 6970.00usft
MD Reference: 16' KB @ 6970.00usft
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 S33-T24N-R9W - NAGEEZI UNIT 327H - OH - PLAN #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Total		Separation		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	Factor		
10,687.00	4,999.83	10,337.61	5,046.85	154.30	154.94	-92.01	-4,300.71	5,177.51	1,335.07	1,026.85	308.22	4.332		
10,787.00	4,998.43	10,437.61	5,045.25	156.81	157.43	-92.01	-4,374.14	5,245.37	1,335.24	1,022.01	313.23	4.263		
10,887.00	4,997.03	10,537.61	5,043.86	159.32	159.92	-92.01	-4,447.58	5,313.23	1,335.42	1,017.17	318.25	4.196		
10,987.00	4,995.64	10,637.61	5,042.46	161.83	162.42	-92.01	-4,521.02	5,381.09	1,335.59	1,012.33	323.26	4.132		
11,087.00	4,994.24	10,737.61	5,041.06	164.34	164.92	-92.01	-4,594.46	5,448.94	1,335.76	1,007.48	328.28	4.069		
11,187.00	4,992.84	10,837.61	5,039.67	166.85	167.42	-92.01	-4,667.90	5,516.80	1,335.93	1,002.64	333.30	4.008		
11,287.00	4,991.45	10,937.61	5,038.27	169.37	169.91	-92.01	-4,741.34	5,584.66	1,336.10	997.79	338.32	3.949		
11,387.00	4,990.05	11,037.61	5,036.88	171.88	172.41	-92.01	-4,814.78	5,652.52	1,336.27	992.94	343.34	3.892		
11,487.00	4,988.66	11,137.61	5,035.48	174.39	174.92	-92.01	-4,888.22	5,720.38	1,336.45	988.09	348.36	3.836		
11,587.00	4,987.26	11,237.61	5,034.08	176.91	177.42	-92.01	-4,961.65	5,788.24	1,336.62	983.23	353.38	3.782		
11,687.00	4,985.86	11,337.61	5,032.69	179.42	179.92	-92.01	-5,035.09	5,856.10	1,336.79	978.38	358.41	3.730		
11,787.00	4,984.47	11,437.61	5,031.29	181.94	182.43	-92.01	-5,108.53	5,923.95	1,336.96	973.53	363.44	3.679		
11,887.00	4,983.07	11,537.61	5,029.89	184.46	184.93	-92.01	-5,181.97	5,991.81	1,337.13	968.67	368.46	3.629 SF		

Anticollision Report

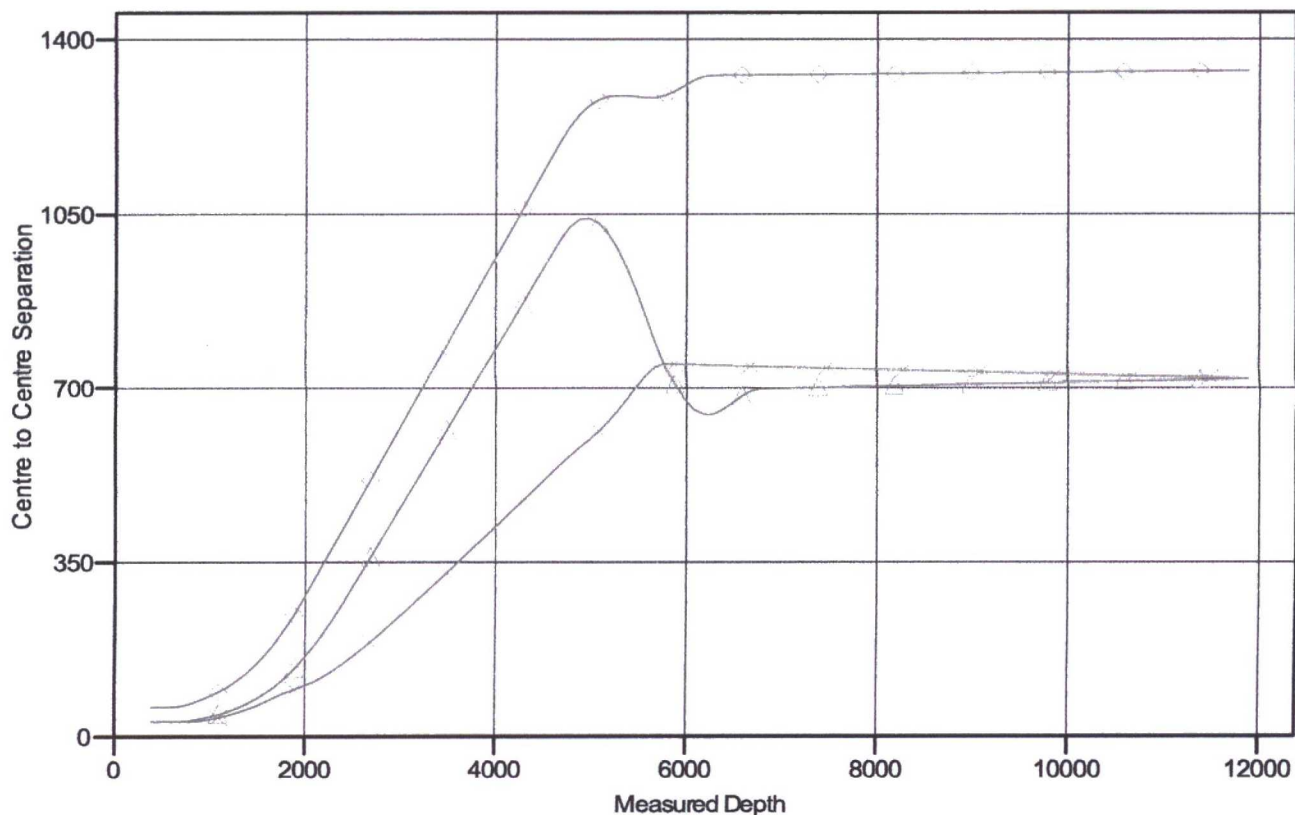
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Reference Site: S33-T24N-R9W
Site Error: 0.00usft
Reference Well: NAGEEZI UNIT 325H
Well Error: 0.00usft
Reference Wellbore: OH
Reference Design: PLAN #1

Local Co-ordinate Reference: Well NAGEEZI UNIT 325H
TVD Reference: 16' KB @ 6970.00usft
MD Reference: 16' KB @ 6970.00usft
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 @ 6970.00usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.833333 °

Coordinates are relative to: NAGEEZI UNIT 325H
 Coordinate System is US State Plane 1983, New Mexico Western Zone
 Grid Convergence at Surface is: 0.02°

Ladder Plot



LEGEND

✕ NAGEEZI UNIT 324H, OH, PLAN #1 V0 A NAGEEZI UNIT 326H, OH, PLAN #1 V0 D NAGEEZI UNIT 327H, OH, PLAN #1 V0

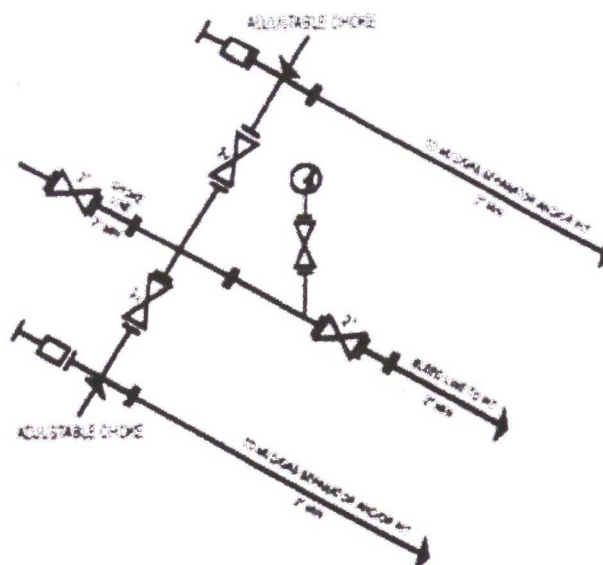
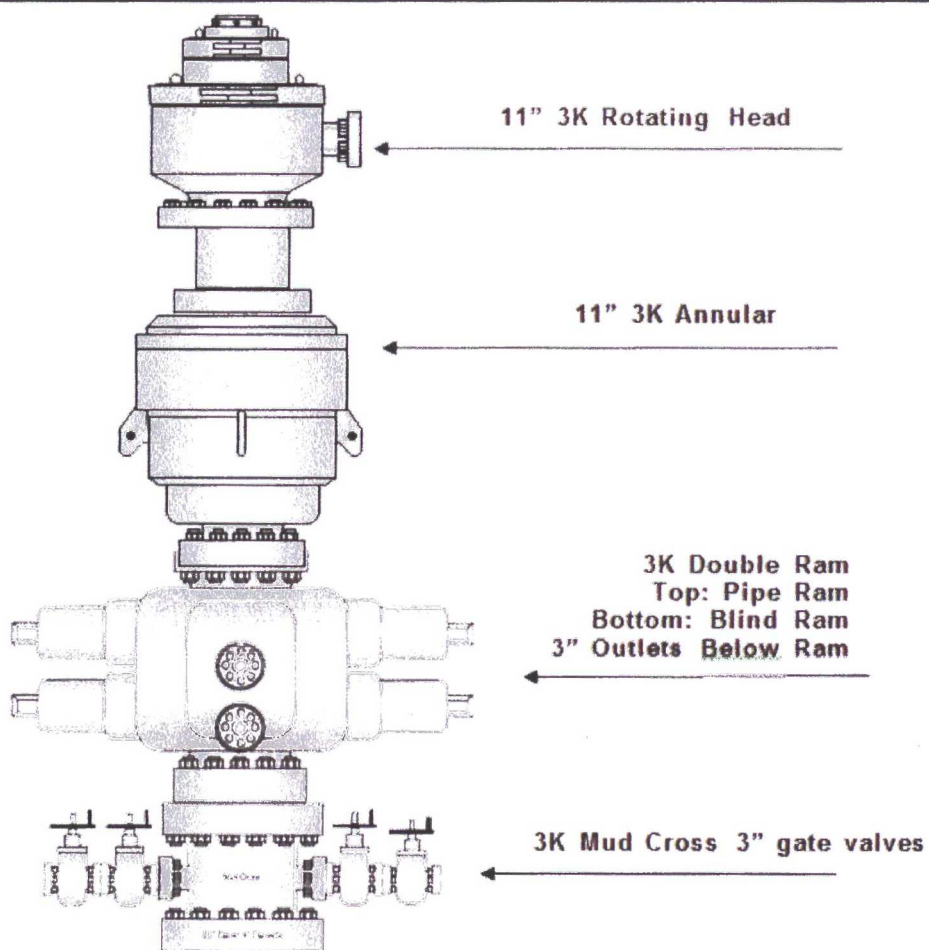
LOC: NW/4 NE/4 Sec 33 T24N R9W, 181' FNL County: San Juan WELL: Nageezi Unit 325H			Encana Oil & Gas (USA) Inc. WELL SUMMARY			ENG: 0 RIG: Unassigned GLE: 0954.2 RKBE: 0070.2			12-12-16
MWD LWD	OPEN HOLE LOGGING	FORM	DEPTH			HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION INFORMATION
			TVD	MD					
			60	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.	0			12 1/4	9 5/8" 36ppf J55 LTC 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°
		Nacimiento Fn. 9 5/8" Csg	surface 500	500.00					
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.	839			8 3/4	7" 26ppf J55 LTC TOC @ surface (100% OH excess - 70% Lead 30% Tail) Stage 1 Total: 862sks Stage 1 Lead: 487 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: 374 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°
		Kirtland Shale	1,016						
		Fruitland Coal	1,325						
		Pictured Cliffs Ss.	1,605						
		Lewis Shale	1,699						
		Cliffhouse Ss.	2,350						
Surveys every 30' through the curve	Mud logger onsite	Menefee Fn.	3,103						
		Point Lookout Ss.	4,065						
		Mancos Shale	4,208						
		KOP	800	800					
Surveys every stand to TD unless directed otherwise by Geologist	No OH Logs	Mancos Silt	4,760			6 1/8	100' overlap at liner top 6702' Drilled Lateral	WBM 8.3-10	Horz Inc/TVD 90.8deg/5093.2ft TD = 11951.61 MD
		Gallup Fn.	5,020						
		7" Csg	4,978	5,250'					
MWD Gamma Directional		Horizontal Target TD	4,982				4 1/2" 11.6ppf SB80 LTC TOC @ hanger (50% OH excess) Stage 1 Total: 380sks Stage 1 Blend: 380 sks 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.		
		Base Gallup	5,344	11,952					

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 800', 8 3/4 inch holesize
- 5) Start curve at 10deg/100' build rate
- 6) Drill to csg point of 5250' MD
- 7) R&C 7" csg, circ cmt to surface
- 8) Land at ~55 deg, drill lateral to 11952' run 4 1/2 inch cemented liner

encana

Well Name and Number:
Nageezi Unit 325H



ENCANA OIL & GAS (USA) INC.

NAGEEZI UNIT #325H

LOCATED IN THE NW/4 NE/4 OF SECTION 33,
T24N, R9W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO

DIRECTIONS

- 1) FROM THE INTERSECTION OF HWY 64 & HWY 550 IN BLOOMFIELD, GO SOUTH ON HWY 550, 32.0 MILES TO MP 119.6.
- 2) TURN RIGHT AND GO 2.8 MILES TO WHERE ACCESS IS STAKED ON RIGHT SIDE OF ROAD.

WELL FLAG LOCATED AT LAT. 36.277294° N, LONG. 107.793704° W (NAD 83).



JOB No.: NAGEEZI UNIT #324H_REV2

DATE: 05/05/16

DRA

Y:

CCI

CHENAULT CONSULTING

2225 CHENault BLVD.
SUITE 201
PARMINGTON, NM 87402
(505) 842-7707