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 3160-4 or 3160-5 form.

Operator Signature Date: 1/12/2014
Well information:

API WELL #	Well Name	Well #	Operator Name	Type	Stat	County	Surf_Owner	UL	Sec	Twp	N/S	Rng	W/E
30-045-35557-00-00	NAGEEZI UNIT A28 2409	002H	ENCANA OIL & GAS (USA) INC.	O	N	San Juan	F	A	28	24	N	9	W

Drilling/Casing Change

Conditions of Approval:
(See the below checked and additional 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

☐ Ensure compliance with 19.15.17

☐ 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.

Additional requirements

Charlie T. Perrin

NMOCD Approved by Signature

1-15-15
Date

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JAN 08 2015

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

***SUBMIT IN TRIPLICATE** – Other instructions on page 2.*

1. Type of Well ☐ Oil Well ☑ Gas Well ☐ Other	5. Lease Serial No. NMNM 12374
	6. If Indian, Allottee or Tribe Name N/A
	7. If Unit of CA/Agreement, Name and/or No. R-13856
	8. Well Name and No. Nageezi A28-2409 02H
2. Name of Operator Encana Oil & Gas (USA) Inc.	9. API Well No. 30-045-35557
3a. Address 370 17th Street, Suite 1700, Denver, CO 80202 3b. Phone No. *(include area code)* 720-876-5994	10. Field and Pool or Exploratory Area Bisti Lower - Gallup/Basin Mancos
4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)* SHL: 1234' FNL, 318' FEL, Section 28, Township 24N, Range 9W BHL: 1860' FNL, 330' FWL, Section 28, Township 24N, Range 9W	11. Country or Parish, State San Juan County, New Mexico

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

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

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

The BHL for the Nageezi A28-2409 02H was modified from 1400' FNL, 330' FWL (Section 28, T24N, R9W) to 1860' FNL, 330' FWL (Section 28, T24N, R9W). The POE for the Nageezi A28-2409 02H was also modified from 1400' FNL, 330' FEL (Section 28, T24N, R9W) to 1860' FSL, 330' FEL (Section 28 T24N, R9W). The well pad has been rotate 6° to the NW holding Corner 5, and Corner 6 of the pad has been rounded to keep fill within the edge of disturbance. Attached is a C-102, Well Pad Diagram, Directional Plan, Drilling Plan and Wellbore Diagram, which have been updated to reflect these changes. The plans were also updated to to include a cemented production liner, instead of running open hole swell packers, as previously planned. Finally, the 7" ICP was moved from approximately 72 degrees to 55 degrees.

OIL CONS. DIV DIST. 3

JAN 14 2015

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

CONDITIONS OF APPROVAL

Adhere to previously issued stipulations

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)* Shawn Turk	Title Regulatory Analyst
Signature	Date 1/7/15

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by William Tambekou	Title Petroleum Engineer	Date 1/12/2015
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office FFO	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

NMOCD PV

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) 334-6178 Fax: (505) 334-6170
District IV
1220 S St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-045-35557	98080	NAGEEZI UNIT HZ (OIL)

[4] Property Code	[5] Property Name	[6] Well Number
313758	NAGEEZI UNIT A28-2409	02H

[7] OGRID No.	[8] Operator Name	[9] Elevation
282327	ENCANA OIL & GAS (USA) INC.	6863'

[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
A	28	24N	9W		1234	NORTH	318	EAST	SAN JUAN

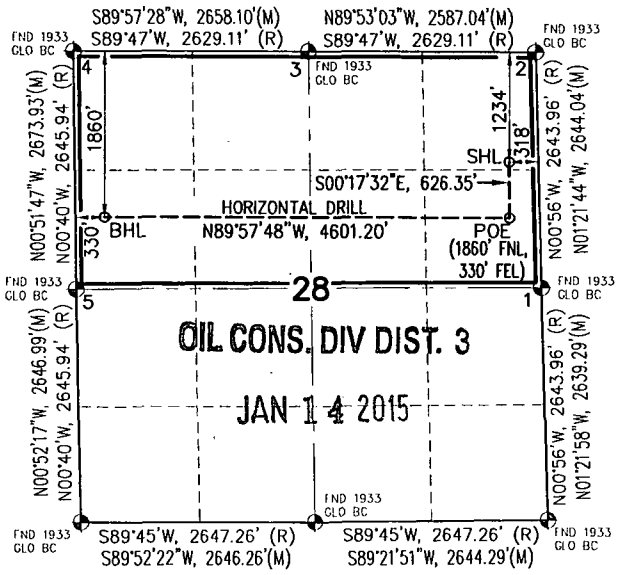
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West Line	County
E	28	24N	9W		1860	NORTH	330	WEST	SAN JUAN

[12] Dedicated Acres		[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320 ~~321.03~~ ACRES	PROJECT AREA N/2 SECTION 28			R-13856 9135.51 Acres

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.

16



A28-2409 02H WELL

SHL (WELL FLAG)
LAT. 36.288949 'N (NAD83)
LONG. 107.786748 'W (NAD83)
LAT. 36.288937 'N (NAD27)
LONG. 107.786134 'W (NAD27)

POE (POINT OF ENTRY)
LAT. 36.287229 'N (NAD83)
LONG. 107.786739 'W (NAD83)
LAT. 36.287217 'N (NAD27)
LONG. 107.786125 'W (NAD27)

BHL (BOTTOM HOLE LOCATION)
LAT. 36.287247 'N (NAD83)
LONG. 107.802346 'W (NAD83)
LAT. 36.287235 'N (NAD27)
LONG. 107.801731 'W (NAD27)

SECTION CORNERS

1 LAT. 36.285075 'N (NAD83)
LONG. 107.785559 'W (NAD83)
LAT. 36.285063 'N (NAD27)
LONG. 107.784944 'W (NAD27)

2 LAT. 36.292334 'N (NAD83)
LONG. 107.785764 'W (NAD83)
LAT. 36.292322 'N (NAD27)
LONG. 107.785149 'W (NAD27)

3 LAT. 36.292354 'N (NAD83)
LONG. 107.794539 'W (NAD83)
LAT. 36.292343 'N (NAD27)
LONG. 107.793924 'N (NAD27)

4 LAT. 36.292355 'N (NAD83)
LONG. 107.803556 'W (NAD83)
LAT. 36.292343 'N (NAD27)
LONG. 107.802940 'W (NAD27)

5 LAT. 36.285013 'N (NAD83)
LONG. 107.803426 'W (NAD83)
LAT. 36.285001 'N (NAD27)
LONG. 107.802811 '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 1/7/14 Date

Shawn Turk
Printed Name

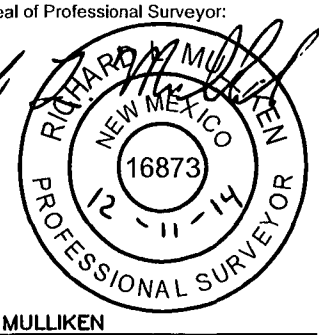
shawn.turk@encana.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

December 10, 2014
Date of Survey

Signature and Seal of Professional Surveyor:



RICHARD L. MULLIKEN
Certificate Number 16873

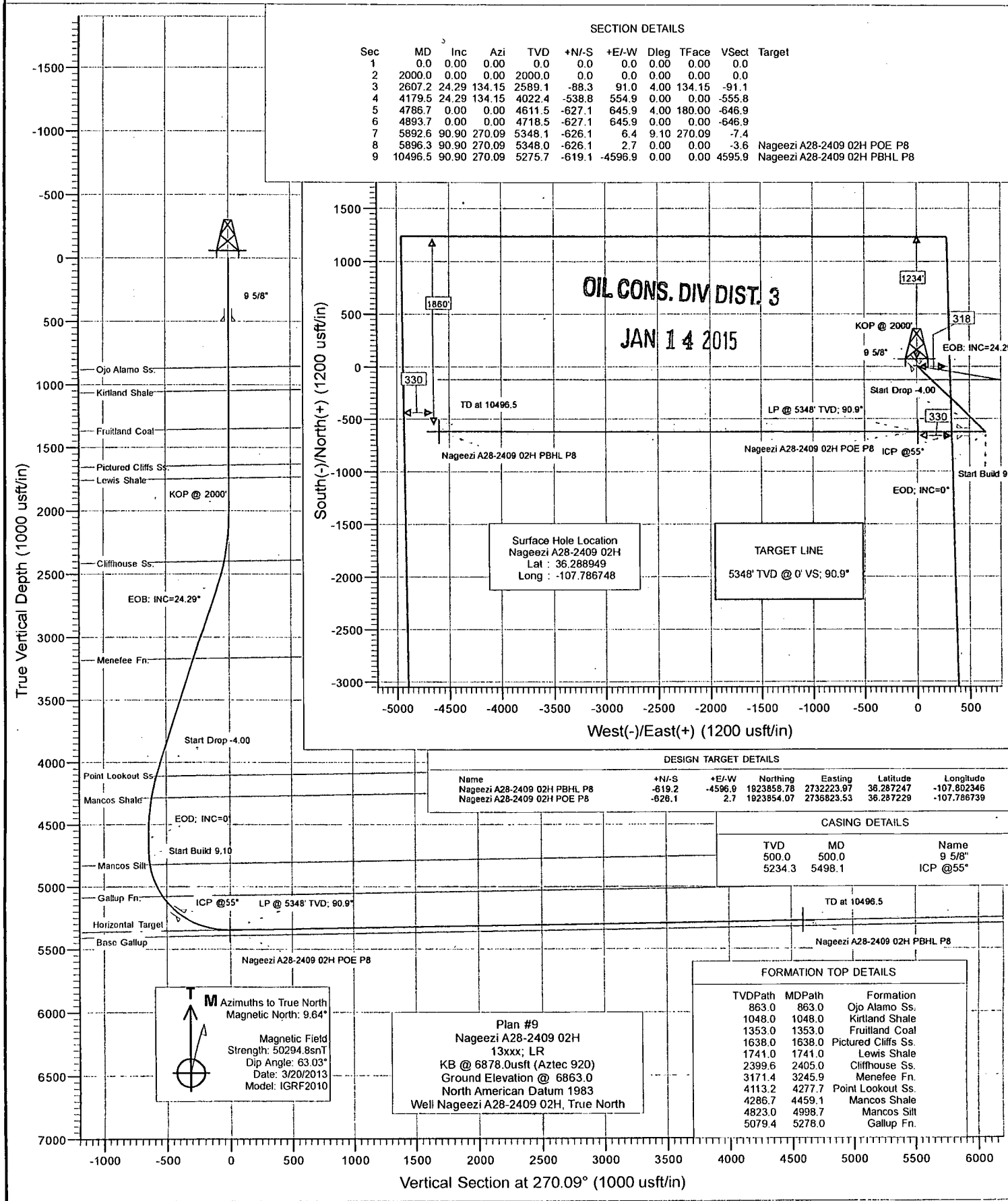
encana natural gas

Project: San Juan County, NM
Site: S28-T24N-R9W
Well: Nageezi A28-2409 02H
Wellbore: Hz
Design: Plan #9

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2607.2	24.29	134.15	2589.1	-88.3	91.0	4.00	134.15	-91.1	
4	4179.5	24.29	134.15	4022.4	-538.8	554.9	0.00	0.00	-555.8	
5	4786.7	0.00	0.00	4611.5	-627.1	645.9	4.00	180.00	-646.9	
6	4893.7	0.00	0.00	4718.5	-627.1	645.9	0.00	0.00	-646.9	
7	5892.6	90.90	270.09	5348.1	-626.1	6.4	9.10	270.09	-7.4	
8	5896.3	90.90	270.09	5348.0	-626.1	2.7	0.00	0.00	-3.6	Nageezi A28-2409 02H POE P8
9	10496.5	90.90	270.09	5275.7	-619.1	-4596.9	0.00	0.00	4595.9	Nageezi A28-2409 02H PBHL P8



OIL CONS. DIV DIST. 3
JAN 14 2015

DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Nageezi A28-2409 02H PBHL P8	-619.2	-4596.9	1923858.78	2732223.97	36.287247	-107.802346
Nageezi A28-2409 02H POE P8	-626.1	2.7	1923854.07	2736823.53	36.287229	-107.786739

CASING DETAILS

TVD	MD	Name
500.0	500.0	9 5/8"
5234.3	5498.1	ICP @55°

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
863.0	863.0	Ojo Alamo Ss.
1048.0	1048.0	Kirtland Shale
1353.0	1353.0	Fruitland Coal
1638.0	1638.0	Pictured Cliffs Ss.
1741.0	1741.0	Lewis Shale
2399.6	2405.0	Cliffhouse Ss.
3171.4	3245.9	Menefee Fn.
4113.2	4277.7	Point Lookout Ss.
4286.7	4459.1	Mancos Shale
4823.0	4998.7	Mancos Silt
5079.4	5278.0	Gallup Fn.

T M Azimuths to True North
Magnetic North: 9.64°

Magnetic Field
Strength: 50294.8snT
Dip Angle: 63.03°
Date: 3/20/2013
Model: IGRF2010

Plan #9
Nageezi A28-2409 02H
13xxx; LR
KB @ 6878.0usft (Aztec 920)
Ground Elevation @ 6863.0
North American Datum 1983
Well Nageezi A28-2409 02H, True North

OIL CONS. DIV DIST. 3

JAN 14 2015

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Project:	San Juan County, NM	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site:	S28-T24N-R9W	**North Reference:**	True
Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #9		

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 S28-T24N-R9W

Site Position:		**Northing:**	1,924,425.96 usft	**Latitude:**	36.288800
From:	Lat/Long	**Easting:**	2,736,837.70 usft	**Longitude:**	-107.786690
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16"	**Grid Convergence:**	0.03 °

Well Nageezi A28-2409 02H

Well Position	**+N/-S**	0.0 usft	**Northing:**	1,924,480.19 usft	**Latitude:**	36.288949
	+E/-W	0.0 usft	**Easting:**	2,736,820.58 usft	**Longitude:**	-107.786748
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	6,863.0 usft

Wellbore Hz

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/20/2013	9.64	63.03	50,295

Design Plan #9

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	270.09

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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,607.2	24.29	134.15	2,589.1	-88.3	91.0	4.00	4.00	0.00	134.15	
4,179.5	24.29	134.15	4,022.4	-538.8	554.9	0.00	0.00	0.00	0.00	
4,786.7	0.00	0.00	4,611.5	-627.1	645.9	4.00	-4.00	0.00	180.00	
4,893.7	0.00	0.00	4,718.5	-627.1	645.9	0.00	0.00	0.00	0.00	
5,892.6	90.90	270.09	5,348.1	-626.1	6.4	9.10	9.10	0.00	270.09	
5,896.3	90.90	270.09	5,348.0	-626.1	2.7	0.00	0.00	0.00	0.00	Nageezi A28-2409 02
10,496.5	90.90	270.09	5,275.7	-619.1	-4,596.9	0.00	0.00	0.00	0.00	Nageezi A28-2409 02

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Project:	San Juan County, NM	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site:	S28-T24N-R9W	**North Reference:**	True
Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #9		

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	
863.0	0.00	0.00	863.0	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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	
1,048.0	0.00	0.00	1,048.0	0.0	0.0	0.0	0.00	0.00	Kirtland Shale
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	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	
1,353.0	0.00	0.00	1,353.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	
1,638.0	0.00	0.00	1,638.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	
1,741.0	0.00	0.00	1,741.0	0.0	0.0	0.0	0.00	0.00	Lewis Shale
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	KOP @ 2000'
2,100.0	4.00	134.15	2,099.9	-2.4	2.5	-2.5	4.00	4.00	
2,200.0	8.00	134.15	2,199.4	-9.7	10.0	-10.0	4.00	4.00	
2,300.0	12.00	134.15	2,297.8	-21.8	22.5	-22.5	4.00	4.00	
2,400.0	16.00	134.15	2,394.8	-38.7	39.8	-39.9	4.00	4.00	
2,405.0	16.20	134.15	2,399.6	-39.6	40.8	-40.9	4.00	4.00	Cliffhouse Ss.
2,500.0	20.00	134.15	2,489.9	-60.2	62.0	-62.1	4.00	4.00	
2,600.0	24.00	134.15	2,582.6	-86.3	88.8	-89.0	4.00	4.00	
2,607.2	24.29	134.15	2,589.1	-88.3	91.0	-91.1	4.00	4.00	EOB: INC=24.29°
2,700.0	24.29	134.15	2,673.8	-114.9	118.3	-118.5	0.00	0.00	
2,800.0	24.29	134.15	2,764.9	-143.6	147.9	-148.1	0.00	0.00	
2,900.0	24.29	134.15	2,856.1	-172.2	177.4	-177.6	0.00	0.00	
3,000.0	24.29	134.15	2,947.2	-200.9	206.9	-207.2	0.00	0.00	
3,100.0	24.29	134.15	3,038.4	-229.5	236.4	-236.7	0.00	0.00	
3,200.0	24.29	134.15	3,129.5	-258.2	265.9	-266.3	0.00	0.00	
3,245.9	24.29	134.15	3,171.4	-271.3	279.5	-279.9	0.00	0.00	Menefee Fn.
3,300.0	24.29	134.15	3,220.7	-286.8	295.4	-295.9	0.00	0.00	
3,400.0	24.29	134.15	3,311.8	-315.5	324.9	-325.4	0.00	0.00	
3,500.0	24.29	134.15	3,403.0	-344.1	354.4	-355.0	0.00	0.00	
3,600.0	24.29	134.15	3,494.1	-372.8	383.9	-384.5	0.00	0.00	
3,700.0	24.29	134.15	3,585.3	-401.4	413.4	-414.1	0.00	0.00	
3,800.0	24.29	134.15	3,676.4	-430.1	443.0	-443.6	0.00	0.00	
3,900.0	24.29	134.15	3,767.6	-458.7	472.5	-473.2	0.00	0.00	
4,000.0	24.29	134.15	3,858.7	-487.4	502.0	-502.7	0.00	0.00	
4,100.0	24.29	134.15	3,949.9	-516.0	531.5	-532.3	0.00	0.00	
4,179.5	24.29	134.15	4,022.4	-538.8	554.9	-555.8	0.00	0.00	Start Drop -4.00
4,200.0	23.47	134.15	4,041.1	-544.6	560.9	-561.7	4.00	-4.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Project:	San Juan County, NM	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site:	S28-T24N-R9W	**North Reference:**	True
Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #9		

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
4,277.7	20.36	134.15	4,113.2	-564.8	581.7	-582.6	4.00	-4.00	Point Lookout Ss.
4,300.0	19.47	134.15	4,134.1	-570.1	587.1	-588.0	4.00	-4.00	
4,400.0	15.47	134.15	4,229.5	-591.0	608.7	-609.6	4.00	-4.00	
4,459.1	13.10	134.15	4,286.7	-601.1	619.1	-620.1	4.00	-4.00	Mancos Shale
4,500.0	11.47	134.15	4,326.7	-607.2	625.4	-626.3	4.00	-4.00	
4,600.0	7.47	134.15	4,425.3	-618.6	637.2	-638.2	4.00	-4.00	
4,700.0	3.47	134.15	4,524.9	-625.3	644.0	-645.0	4.00	-4.00	
4,786.7	0.00	0.00	4,611.5	-627.1	645.9	-646.9	4.00	-4.00	EOD; INC=0°
4,800.0	0.00	0.00	4,624.8	-627.1	645.9	-646.9	0.00	0.00	
4,893.7	0.00	0.00	4,718.5	-627.1	645.9	-646.9	0.00	0.00	Start Build 9.10
4,900.0	0.57	270.09	4,724.8	-627.1	645.9	-646.9	9.10	9.10	
4,998.7	9.55	270.09	4,823.0	-627.1	637.2	-638.1	9.10	9.10	Mancos Silt
5,000.0	9.67	270.09	4,824.3	-627.1	636.9	-637.9	9.10	9.10	
5,100.0	18.77	270.09	4,921.1	-627.0	612.4	-613.4	9.10	9.10	
5,200.0	27.87	270.09	5,012.9	-627.0	572.9	-573.8	9.10	9.10	
5,278.0	34.97	270.09	5,079.4	-626.9	532.2	-533.2	9.10	9.10	Gallup Fn.
5,300.0	36.97	270.09	5,097.2	-626.9	519.3	-520.3	9.10	9.10	
5,400.0	46.07	270.09	5,172.0	-626.8	453.1	-454.1	9.10	9.10	
5,498.1	55.00	270.09	5,234.3	-626.7	377.4	-378.4	9.10	9.10	ICP @55°
5,500.0	55.17	270.09	5,235.4	-626.7	375.9	-376.8	9.10	9.10	
5,600.0	64.27	270.09	5,285.7	-626.6	289.6	-290.6	9.10	9.10	
5,700.0	73.37	270.09	5,321.8	-626.4	196.4	-197.4	9.10	9.10	
5,800.0	82.47	270.09	5,342.7	-626.3	98.8	-99.7	9.10	9.10	
5,892.6	90.90	270.09	5,348.1	-626.1	6.4	-7.4	9.10	9.10	LP @ 5348' TVD; 90.9°
5,896.3	90.90	270.09	5,348.0	-626.1	2.7	-3.6	0.00	0.00	
5,900.0	90.90	270.09	5,347.9	-626.1	-1.0	0.0	0.00	0.00	
6,000.0	90.90	270.09	5,346.4	-626.0	-101.0	100.0	0.00	0.00	
6,100.0	90.90	270.09	5,344.8	-625.8	-201.0	200.0	0.00	0.00	
6,200.0	90.90	270.09	5,343.2	-625.7	-301.0	300.0	0.00	0.00	
6,300.0	90.90	270.09	5,341.7	-625.5	-401.0	400.0	0.00	0.00	
6,400.0	90.90	270.09	5,340.1	-625.4	-500.9	500.0	0.00	0.00	
6,500.0	90.90	270.09	5,338.5	-625.2	-600.9	599.9	0.00	0.00	
6,600.0	90.90	270.09	5,336.9	-625.1	-700.9	699.9	0.00	0.00	
6,700.0	90.90	270.09	5,335.4	-624.9	-800.9	799.9	0.00	0.00	
6,800.0	90.90	270.09	5,333.8	-624.8	-900.9	899.9	0.00	0.00	
6,900.0	90.90	270.09	5,332.2	-624.6	-1,000.9	999.9	0.00	0.00	
7,000.0	90.90	270.09	5,330.7	-624.4	-1,100.9	1,099.9	0.00	0.00	
7,100.0	90.90	270.09	5,329.1	-624.3	-1,200.9	1,199.9	0.00	0.00	
7,200.0	90.90	270.09	5,327.5	-624.1	-1,300.8	1,299.9	0.00	0.00	
7,300.0	90.90	270.09	5,326.0	-624.0	-1,400.8	1,399.9	0.00	0.00	
7,400.0	90.90	270.09	5,324.4	-623.8	-1,500.8	1,499.8	0.00	0.00	
7,500.0	90.90	270.09	5,322.8	-623.7	-1,600.8	1,599.8	0.00	0.00	
7,600.0	90.90	270.09	5,321.2	-623.5	-1,700.8	1,699.8	0.00	0.00	
7,700.0	90.90	270.09	5,319.7	-623.4	-1,800.8	1,799.8	0.00	0.00	
7,800.0	90.90	270.09	5,318.1	-623.2	-1,900.8	1,899.8	0.00	0.00	
7,900.0	90.90	270.09	5,316.5	-623.1	-2,000.8	1,999.8	0.00	0.00	
8,000.0	90.90	270.09	5,315.0	-622.9	-2,100.7	2,099.8	0.00	0.00	
8,100.0	90.90	270.09	5,313.4	-622.8	-2,200.7	2,199.8	0.00	0.00	
8,200.0	90.90	270.09	5,311.8	-622.6	-2,300.7	2,299.7	0.00	0.00	
8,300.0	90.90	270.09	5,310.2	-622.5	-2,400.7	2,399.7	0.00	0.00	
8,400.0	90.90	270.09	5,308.7	-622.3	-2,500.7	2,499.7	0.00	0.00	
8,500.0	90.90	270.09	5,307.1	-622.2	-2,600.7	2,599.7	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Project:	San Juan County, NM	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site:	S28-T24N-R9W	**North Reference:**	True
Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #9		

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
8,600.0	90.90	270.09	5,305.5	-622.0	-2,700.7	2,699.7	0.00	0.00	
8,700.0	90.90	270.09	5,304.0	-621.9	-2,800.7	2,799.7	0.00	0.00	
8,800.0	90.90	270.09	5,302.4	-621.7	-2,900.6	2,899.7	0.00	0.00	
8,900.0	90.90	270.09	5,300.8	-621.6	-3,000.6	2,999.7	0.00	0.00	
9,000.0	90.90	270.09	5,299.2	-621.4	-3,100.6	3,099.6	0.00	0.00	
9,100.0	90.90	270.09	5,297.7	-621.3	-3,200.6	3,199.6	0.00	0.00	
9,200.0	90.90	270.09	5,296.1	-621.1	-3,300.6	3,299.6	0.00	0.00	
9,300.0	90.90	270.09	5,294.5	-621.0	-3,400.6	3,399.6	0.00	0.00	
9,400.0	90.90	270.09	5,293.0	-620.8	-3,500.6	3,499.6	0.00	0.00	
9,500.0	90.90	270.09	5,291.4	-620.7	-3,600.6	3,599.6	0.00	0.00	
9,600.0	90.90	270.09	5,289.8	-620.5	-3,700.5	3,699.6	0.00	0.00	
9,700.0	90.90	270.09	5,288.3	-620.3	-3,800.5	3,799.6	0.00	0.00	
9,800.0	90.90	270.09	5,286.7	-620.2	-3,900.5	3,899.5	0.00	0.00	
9,900.0	90.90	270.09	5,285.1	-620.0	-4,000.5	3,999.5	0.00	0.00	
10,000.0	90.90	270.09	5,283.5	-619.9	-4,100.5	4,099.5	0.00	0.00	
10,100.0	90.90	270.09	5,282.0	-619.7	-4,200.5	4,199.5	0.00	0.00	
10,200.0	90.90	270.09	5,280.4	-619.6	-4,300.5	4,299.5	0.00	0.00	
10,300.0	90.90	270.09	5,278.8	-619.4	-4,400.5	4,399.5	0.00	0.00	
10,400.0	90.90	270.09	5,277.3	-619.3	-4,500.4	4,499.5	0.00	0.00	
10,496.5	90.90	270.09	5,275.7	-619.1	-4,596.9	4,595.9	0.00	0.00	TD at 10496.5

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Escrito A28-2409 02H Pl	0.00	0.00	5,309.9	-167.1	-9.4	1,924,313.10	2,736,811.23	36.288490	-107.786780
- plan misses target center by 460.6usft at 5909.7usft MD (5347.8 TVD, -626.1 N, -10.7 E)									
- Point									
Nageezi A28-2409 02H I	0.00	0.00	5,275.8	-619.2	-4,596.9	1,923,858.78	2,732,223.97	36.287247	-107.802346
- plan misses target center by 0.1usft at 10496.5usft MD (5275.7 TVD, -619.1 N, -4596.9 E)									
- Point									
Nageezi A28-2409 02H I	0.00	0.00	5,309.9	-167.1	-9.4	1,924,313.10	2,736,811.23	36.288490	-107.786780
- plan misses target center by 460.6usft at 5909.7usft MD (5347.8 TVD, -626.1 N, -10.7 E)									
- Point									
Nageezi A28-2409 02H I	0.00	0.00	5,348.0	-626.1	2.7	1,923,854.07	2,736,823.53	36.287229	-107.786739
- plan hits target center									
- Point									
Escrito A28-2409 02H Pl	0.00	0.00	5,174.8	-159.4	-4,603.9	1,924,318.54	2,732,216.75	36.288510	-107.802370
- plan misses target center by 470.7usft at 10496.5usft MD (5275.7 TVD, -619.1 N, -4596.9 E)									
- Point									
Nageezi A28-2409 02H I	0.00	0.00	5,261.8	-159.4	-4,603.9	1,924,318.54	2,732,216.75	36.288510	-107.802370
- plan misses target center by 460.0usft at 10496.5usft MD (5275.7 TVD, -619.1 N, -4596.9 E)									
- Point									

	500.0	500.0	9 5/8"	0	0
	5,498.1	5,234.3	ICP @55°	0	0

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Project:	San Juan County, NM	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site:	S28-T24N-R9W	**North Reference:**	True
Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #9		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
863.0	863.0	Ojo Alamo Ss.		-0.90	270.09
1,048.0	1,048.0	Kirtland Shale		-0.90	270.09
1,353.0	1,353.0	Fruitland Coal		-0.90	270.09
1,638.0	1,638.0	Pictured Cliffs Ss.		-0.90	270.09
1,741.0	1,741.0	Lewis Shale		-0.90	270.09
2,405.0	2,399.0	Cliffhouse Ss.		-0.90	270.09
3,245.9	3,167.0	Menefee Fn.		-0.90	270.09
4,277.7	4,104.0	Point Lookout Ss.		-0.90	270.09
4,459.1	4,277.0	Mancos Shale		-0.90	270.09
4,998.7	4,813.0	Mancos Silt		-0.90	270.09
5,278.0	5,071.0	Gallup Fn.		-0.90	270.09

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,000.0	2,000.0	0.0	0.0	KOP @ 2000'
2,607.2	2,589.1	-88.3	91.0	EOB: INC=24.29°
4,179.5	4,022.4	-538.8	554.9	Start Drop -4.00
4,786.7	4,611.5	-627.1	645.9	EOD; INC=0°
4,893.7	4,718.5	-627.1	645.9	Start Build 9.10
5,892.6	5,348.1	-626.1	6.4	LP @ 5348' TVD; 90.9°
10,496.5	5,275.7	-626.1	2.7	TD at 10496.5

EnCana Oil & Gas (USA) Inc

San Juan County, NM
S28-T24N-R9W
Nageezi A28-2409 02H
Hz
Plan #9

Anticollision Report

17 December, 2014

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Project:	San Juan County, NM	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Reference Site:	S28-T24N-R9W	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site Error:	0.0usft	**North Reference:**	True
Reference Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #9	**Offset TVD Reference:**	Offset Datum

Reference Plan #9

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0usft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 12/17/2014

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	10,496.5	Plan #9 (Hz)	MWD	Geolink MWD

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
S27-T24N-R9W						
Escrito L27-2409 01H - Hz - FINAL	5,772.6	5,866.0	513.0	485.7	18.797	CC
Escrito L27-2409 01H - Hz - FINAL	10,496.5	10,563.0	535.2	285.8	2.146	ES, SF
Escrito L27-2409 02H - Hz - FINAL	5,095.6	4,992.7	1,024.9	1,000.5	42.093	CC
Escrito L27-2409 02H - Hz - FINAL	10,496.5	10,140.0	1,079.5	836.1	4.436	ES, SF
S28-T24N-R9W						
Nageezi A28-2409 01H - Hz - Plan #13	2,000.0	2,000.0	30.1	23.1	4.340	CC, ES
Nageezi A28-2409 01H - Hz - Plan #13	10,496.5	10,637.8	499.2	259.8	2.085	SF
Nageezi A28-2409 01H - Pilot Hole - Pilot Hole	2,000.0	1,999.0	30.1	23.1	4.340	CC, ES, SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Project:	San Juan County, NM	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Reference Site:	S28-T24N-R9W	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site Error:	0.0usft	**North Reference:**	True
Reference Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #9	**Offset TVD Reference:**	Offset Datum

Offset Design S27-T24N-R9W - Escrito L27-2409 01H - Hz - FINAL — Offset Site Error: 0.0 usft

Survey Program: 110-Geolink MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	58.7	58.7	0.0	0.1	157.28	-1,645.2	688.9	1,783.6				
100.0	100.0	159.0	159.0	0.1	0.3	157.31	-1,645.8	688.0	1,783.8	1,783.4	0.40	4,478.024	
200.0	200.0	260.0	260.0	0.3	0.4	157.33	-1,646.1	687.5	1,783.9	1,783.2	0.75	2,381.242	
300.0	300.0	366.4	366.4	0.5	0.6	157.34	-1,646.2	687.2	1,783.9	1,782.8	1.11	1,607.912	
400.0	400.0	465.0	465.0	0.7	0.8	157.34	-1,646.0	687.2	1,783.7	1,782.2	1.46	1,225.170	
500.0	500.0	566.0	566.0	0.8	1.0	157.33	-1,645.7	687.3	1,783.4	1,781.6	1.81	987.108	
561.6	561.6	622.6	622.6	1.0	1.1	157.33	-1,645.6	687.4	1,783.4	1,781.3	2.01	885.887	
600.0	600.0	661.5	661.5	1.0	1.1	157.33	-1,645.6	687.4	1,783.4	1,781.2	2.15	830.295	
700.0	700.0	766.6	766.6	1.2	1.3	157.31	-1,645.3	687.8	1,783.3	1,780.8	2.51	711.696	
800.0	800.0	865.8	865.8	1.4	1.5	157.30	-1,644.9	688.0	1,783.0	1,780.1	2.85	624.870	
900.0	900.0	963.8	963.8	1.5	1.7	157.30	-1,644.7	688.0	1,782.8	1,779.6	3.20	557.322	
1,000.0	1,000.0	1,067.7	1,067.7	1.7	1.8	157.30	-1,644.5	688.0	1,782.6	1,779.1	3.55	501.461	
1,100.0	1,100.0	1,162.1	1,162.1	1.9	2.0	157.30	-1,644.4	687.9	1,782.5	1,778.6	3.89	457.726	
1,102.1	1,102.1	1,164.1	1,164.1	1.9	2.0	157.30	-1,644.4	687.9	1,782.5	1,778.6	3.90	456.880	
1,200.0	1,200.0	1,261.9	1,261.9	2.1	2.2	157.30	-1,644.4	688.0	1,782.5	1,778.2	4.24	420.113	
1,300.0	1,300.0	1,359.4	1,359.4	2.2	2.3	157.30	-1,644.4	688.0	1,782.5	1,778.0	4.59	388.561	
1,400.0	1,400.0	1,446.7	1,446.7	2.4	2.5	157.30	-1,644.9	688.0	1,783.1	1,778.2	4.91	362.830	
1,500.0	1,500.0	1,544.4	1,544.4	2.6	2.7	157.31	-1,645.9	688.1	1,784.0	1,778.8	5.26	339.215	
1,600.0	1,600.0	1,640.8	1,640.7	2.8	2.8	157.31	-1,646.8	688.5	1,785.1	1,779.5	5.60	318.642	
1,700.0	1,700.0	1,732.1	1,732.1	2.9	3.0	157.30	-1,647.9	689.3	1,786.5	1,780.6	5.94	300.957	
1,800.0	1,800.0	1,853.4	1,853.4	3.1	3.2	157.30	-1,649.1	689.8	1,787.5	1,781.2	6.32	282.727	
1,900.0	1,900.0	1,957.6	1,957.6	3.3	3.4	157.31	-1,649.6	689.6	1,788.0	1,781.3	6.68	267.703	
2,000.0	2,000.0	2,075.4	2,075.3	3.5	3.6	157.30	-1,649.1	690.0	1,787.6	1,780.6	7.06	253.243	
2,100.0	2,099.9	2,174.2	2,174.2	3.6	3.8	23.22	-1,648.1	690.4	1,783.7	1,776.3	7.40	241.164	
2,200.0	2,199.4	2,274.7	2,274.6	3.8	3.9	23.50	-1,647.2	690.7	1,773.4	1,765.7	7.72	229.776	
2,300.0	2,297.8	2,370.8	2,370.8	4.1	4.1	23.98	-1,646.4	690.9	1,756.8	1,748.8	8.02	219.150	
2,400.0	2,394.8	2,469.8	2,469.7	4.3	4.3	24.69	-1,645.7	690.9	1,734.0	1,725.7	8.31	208.649	
2,500.0	2,489.9	2,561.3	2,561.2	4.7	4.4	25.61	-1,645.0	690.9	1,705.1	1,696.5	8.59	198.407	
2,607.2	2,589.1	2,658.0	2,657.9	5.2	4.6	26.88	-1,644.4	691.2	1,667.9	1,659.0	8.92	187.053	
2,700.0	2,673.8	2,744.9	2,744.8	5.7	4.8	27.47	-1,643.9	691.5	1,632.9	1,623.6	9.33	175.065	
2,800.0	2,764.9	2,833.1	2,833.0	6.3	4.9	28.11	-1,643.3	691.7	1,595.4	1,585.6	9.78	163.080	
2,900.0	2,856.1	2,921.9	2,921.8	7.0	5.1	28.77	-1,642.9	692.0	1,558.1	1,547.9	10.26	151.825	
3,000.0	2,947.2	3,010.7	3,010.7	7.6	5.2	29.47	-1,642.7	692.2	1,521.3	1,510.6	10.77	141.302	
3,100.0	3,038.4	3,099.1	3,099.0	8.3	5.4	30.21	-1,642.6	692.3	1,484.8	1,473.5	11.29	131.480	
3,200.0	3,129.5	3,190.0	3,189.9	9.0	5.5	31.00	-1,642.8	692.5	1,448.8	1,437.0	11.85	122.264	
3,300.0	3,220.7	3,278.9	3,278.8	9.7	5.7	31.80	-1,642.8	692.8	1,413.0	1,400.6	12.43	113.713	
3,400.0	3,311.8	3,375.1	3,375.1	10.4	5.9	32.70	-1,642.8	693.5	1,377.6	1,364.6	13.05	105.602	
3,500.0	3,403.0	3,474.2	3,474.1	11.1	6.0	33.65	-1,642.1	694.6	1,341.8	1,328.1	13.70	97.967	
3,600.0	3,494.1	3,569.3	3,569.2	11.8	6.2	34.64	-1,641.2	695.0	1,306.1	1,291.7	14.37	90.896	
3,700.0	3,585.3	3,658.4	3,658.3	12.6	6.4	35.65	-1,640.4	694.8	1,270.6	1,255.5	15.06	84.384	
3,800.0	3,676.4	3,747.7	3,747.6	13.3	6.5	36.71	-1,639.7	694.6	1,235.5	1,219.8	15.78	78.321	
3,900.0	3,767.6	3,839.5	3,839.3	14.0	6.7	37.86	-1,639.0	694.3	1,201.0	1,184.5	16.53	72.640	
4,000.0	3,858.7	3,928.2	3,928.1	14.8	6.8	39.06	-1,638.5	693.7	1,167.1	1,149.7	17.32	67.391	
4,100.0	3,949.9	4,019.0	4,018.9	15.5	7.0	40.37	-1,638.1	692.6	1,133.6	1,115.5	18.15	62.466	
4,179.5	4,022.4	4,090.8	4,090.6	16.1	7.1	41.47	-1,637.8	691.5	1,107.5	1,088.6	18.83	58.798	
4,200.0	4,041.1	4,107.5	4,107.4	16.3	7.1	41.55	-1,637.7	691.2	1,100.9	1,081.9	19.00	57.958	
4,300.0	4,134.1	4,194.0	4,193.9	16.9	7.3	41.96	-1,637.8	690.6	1,072.7	1,053.0	19.72	54.402	
4,400.0	4,229.5	4,289.4	4,289.3	17.4	7.5	42.41	-1,638.0	690.5	1,050.2	1,029.8	20.38	51.523	
4,500.0	4,326.7	4,379.4	4,379.3	17.8	7.6	42.74	-1,638.4	690.5	1,033.3	1,012.4	20.94	49.356	
4,600.0	4,425.3	5,073.9	5,030.9	18.1	9.6	48.88	-1,445.2	650.4	989.3	965.9	23.43	42.233	
4,700.0	4,524.9	5,271.8	5,181.5	18.2	11.0	52.24	-1,330.5	594.2	923.8	899.1	24.72	37.365	
4,786.7	4,611.5	5,375.8	5,249.3	18.3	12.0	-171.43	-1,265.7	549.7	865.2	841.2	23.98	36.073	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Project:	San Juan County, NM	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Reference Site:	S28-T24N-R9W	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site Error:	0.0usft	**North Reference:**	True
Reference Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #9	**Offset TVD Reference:**	Offset Datum

Offset Design S27-T24N-R9W - Escrito L27-2409 01H - Hz - FINAL — Offset Site Error: 0.0 usft

Survey Program: 110-Geolink MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
4,800.0	4,624.8	5,385.7	5,255.2	18.3	12.1	-170.90	-1,259.6	544.5	856.4	832.4	23.95	35.748	
4,893.7	4,718.5	5,417.0	5,273.1	18.4	12.4	-169.02	-1,241.1	526.8	796.1	772.3	23.86	33.361	
4,900.0	4,724.8	5,417.0	5,273.1	18.4	12.4	-79.55	-1,241.1	526.8	792.3	765.8	26.44	29.966	
4,950.0	4,774.7	5,433.3	5,282.2	18.4	12.6	-81.96	-1,232.0	516.7	761.9	735.8	26.09	29.203	
5,000.0	4,824.3	5,449.0	5,290.9	18.3	12.8	-84.29	-1,223.8	506.5	732.6	706.9	25.67	28.542	
5,050.0	4,873.2	5,467.6	5,300.7	18.2	13.0	-86.30	-1,214.5	493.8	704.5	679.2	25.28	27.867	
5,100.0	4,921.1	5,489.0	5,311.5	18.1	13.2	-87.97	-1,204.6	478.2	677.8	652.8	24.94	27.178	
5,150.0	4,967.8	5,512.0	5,322.3	17.9	13.5	-89.36	-1,194.5	460.5	652.4	627.7	24.63	26.488	
5,200.0	5,012.9	5,533.2	5,331.4	17.7	13.8	-90.64	-1,186.0	443.4	628.6	604.3	24.32	25.851	
5,250.0	5,056.1	5,552.5	5,339.1	17.5	14.0	-91.80	-1,179.1	427.1	606.8	582.8	23.99	25.290	
5,300.0	5,097.2	5,575.0	5,347.2	17.2	14.3	-92.55	-1,172.0	407.4	587.4	563.6	23.78	24.699	
5,350.0	5,135.9	5,590.7	5,352.4	16.9	14.5	-93.41	-1,167.8	393.1	570.5	547.0	23.50	24.280	
5,400.0	5,172.0	5,613.4	5,359.1	16.6	14.8	-93.69	-1,162.7	372.1	556.2	532.8	23.41	23.755	
5,450.0	5,205.2	5,645.0	5,367.0	16.3	15.2	-93.34	-1,156.8	342.1	544.4	520.8	23.59	23.074	
5,500.0	5,235.4	5,669.6	5,372.5	16.0	15.5	-93.19	-1,153.0	318.4	534.8	511.1	23.70	22.567	
5,550.0	5,262.3	5,702.4	5,379.3	15.8	16.0	-92.65	-1,149.1	286.6	527.5	503.4	24.04	21.936	
5,600.0	5,285.7	5,740.0	5,385.8	15.5	16.6	-91.91	-1,145.3	249.7	521.7	497.1	24.59	21.219	
5,650.0	5,305.6	5,780.3	5,390.8	15.4	17.2	-91.08	-1,142.0	209.9	517.2	491.9	25.30	20.445	
5,700.0	5,321.8	5,813.3	5,394.0	15.2	17.8	-90.50	-1,140.2	177.1	514.3	488.3	25.97	19.802	
5,750.0	5,334.2	5,847.6	5,396.5	15.2	18.3	-89.94	-1,139.5	142.9	513.1	486.3	26.80	19.147	
5,772.6	5,338.5	5,866.0	5,397.6	15.2	18.6	-89.66	-1,139.3	124.5	513.0	485.7	27.29	18.797 CC	
5,800.0	5,342.7	5,889.0	5,398.6	15.2	19.0	-89.37	-1,139.4	101.5	513.2	485.3	27.91	18.386	
5,850.0	5,347.3	5,930.0	5,399.8	15.3	19.8	-89.01	-1,140.2	60.6	514.2	485.0	29.14	17.642	
5,892.6	5,348.1	5,961.0	5,400.1	15.4	20.3	-88.86	-1,141.3	29.6	515.8	485.6	30.22	17.071	
5,896.3	5,348.0	5,961.0	5,400.1	15.5	20.3	-88.86	-1,141.3	29.6	516.0	485.7	30.26	17.053	
5,900.0	5,347.9	5,969.2	5,400.2	15.5	20.5	-88.87	-1,141.7	21.4	516.1	485.6	30.47	16.937	
6,000.0	5,346.4	6,058.6	5,400.6	16.2	22.1	-89.09	-1,146.9	-67.9	522.1	488.4	33.71	15.487	
6,100.0	5,344.8	6,175.7	5,399.6	17.5	24.5	-89.18	-1,152.3	-184.8	526.8	488.9	37.92	13.894	
6,200.0	5,343.2	6,271.8	5,398.0	19.0	26.5	-89.19	-1,155.5	-280.8	530.3	488.4	41.92	12.651	
6,300.0	5,341.7	6,378.7	5,397.1	20.8	28.8	-89.28	-1,158.6	-387.7	533.3	486.9	46.35	11.504	
6,400.0	5,340.1	6,481.1	5,395.7	22.7	31.1	-89.30	-1,161.0	-490.0	535.8	485.0	50.82	10.542	
6,500.0	5,338.5	6,578.9	5,394.3	24.7	33.3	-89.31	-1,162.9	-587.8	537.9	482.6	55.28	9.731	
6,600.0	5,336.9	6,698.3	5,391.0	26.8	36.1	-89.16	-1,163.6	-707.1	538.6	478.3	60.33	8.929	
6,690.2	5,335.5	6,783.0	5,387.2	28.7	38.0	-88.90	-1,162.7	-791.8	537.9	473.5	64.38	8.355	
6,700.0	5,335.4	6,792.2	5,386.8	28.9	38.2	-88.88	-1,162.7	-801.0	537.9	473.1	64.82	8.299	
6,800.0	5,333.8	6,884.1	5,384.5	31.1	40.4	-88.78	-1,163.1	-892.8	538.6	469.3	69.31	7.770	
6,900.0	5,332.2	6,994.4	5,385.3	33.4	43.0	-89.05	-1,164.3	-1,003.1	539.8	465.5	74.29	7.266	
7,000.0	5,330.7	7,099.0	5,383.3	35.6	45.5	-89.02	-1,163.0	-1,107.7	538.7	459.5	79.16	6.805	
7,049.2	5,329.9	7,142.0	5,382.3	36.8	46.5	-88.98	-1,162.5	-1,150.7	538.2	456.9	81.36	6.616	
7,100.0	5,329.1	7,191.2	5,381.6	37.9	47.7	-88.99	-1,162.7	-1,199.9	538.5	454.8	83.75	6.430	
7,197.8	5,327.6	7,290.7	5,380.0	40.2	50.0	-88.99	-1,162.4	-1,299.4	538.4	449.9	88.48	6.084	
7,200.0	5,327.5	7,292.8	5,380.0	40.2	50.1	-88.98	-1,162.4	-1,301.4	538.4	449.8	88.58	6.077	
7,300.0	5,326.0	7,389.0	5,378.0	42.6	52.4	-88.94	-1,162.6	-1,397.7	538.8	445.5	93.31	5.774	
7,400.0	5,324.4	7,489.7	5,376.1	44.9	54.8	-88.90	-1,163.3	-1,498.3	539.6	441.4	98.15	5.498	
7,478.5	5,323.1	7,571.3	5,374.2	46.8	56.8	-88.84	-1,163.1	-1,579.9	539.4	437.4	102.02	5.288	
7,500.0	5,322.8	7,590.3	5,373.8	47.3	57.2	-88.82	-1,163.1	-1,598.9	539.5	436.5	103.00	5.238	
7,600.0	5,321.2	7,689.8	5,371.6	49.6	59.7	-88.75	-1,163.3	-1,698.4	539.9	432.0	107.83	5.006	
7,700.0	5,319.7	7,783.9	5,370.1	52.0	61.9	-88.76	-1,164.6	-1,792.4	541.4	428.9	112.55	4.811	
7,800.0	5,318.1	7,894.0	5,367.9	54.4	64.6	-88.71	-1,165.5	-1,902.5	542.4	424.7	117.66	4.610	
7,900.0	5,316.5	8,006.8	5,366.0	56.8	67.3	-88.70	-1,163.4	-2,015.3	540.7	417.9	122.84	4.402	
8,000.0	5,315.0	8,097.5	5,364.6	59.2	69.5	-88.69	-1,161.5	-2,105.9	538.7	411.2	127.49	4.225	
8,100.0	5,313.4	8,193.1	5,363.0	61.6	71.9	-88.68	-1,160.9	-2,201.5	538.2	406.0	132.27	4.069	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Project:	San Juan County, NM	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Reference Site:	S28-T24N-R9W	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site Error:	0.0usft	**North Reference:**	True
Reference Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #9	**Offset TVD Reference:**	Offset Datum

Offset Design S28-T24N-R9W - Nageezi A28-2409 01H - Hz - Plan #13 — Offset Site Error: 0.0 usft

Survey Program: 0-MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
8,900.0	5,300.8	9,041.3	5,309.3	81.0	80.5	90.97	-122.3	-3,000.0	499.3	338.4	160.92	3.103	
9,000.0	5,299.2	9,141.3	5,307.7	83.4	83.0	90.97	-122.2	-3,100.0	499.3	333.5	165.82	3.011	
9,100.0	5,297.7	9,241.3	5,306.2	85.9	85.4	90.97	-122.1	-3,200.0	499.3	328.6	170.72	2.925	
9,200.0	5,296.1	9,341.3	5,304.6	88.3	87.9	90.97	-121.9	-3,300.0	499.3	323.6	175.63	2.843	
9,300.0	5,294.5	9,441.3	5,303.0	90.7	90.4	90.97	-121.8	-3,400.0	499.3	318.7	180.54	2.765	
9,400.0	5,293.0	9,541.3	5,301.4	93.2	92.8	90.97	-121.6	-3,500.0	499.3	313.8	185.45	2.692	
9,500.0	5,291.4	9,641.3	5,299.9	95.6	95.3	90.97	-121.5	-3,599.9	499.3	308.9	190.36	2.623	
9,600.0	5,289.8	9,741.3	5,298.3	98.1	97.7	90.97	-121.3	-3,699.9	499.3	304.0	195.28	2.557	
9,700.0	5,288.3	9,841.3	5,296.7	100.5	100.2	90.97	-121.2	-3,799.9	499.3	299.1	200.20	2.494	
9,800.0	5,286.7	9,941.3	5,295.2	103.0	102.6	90.97	-121.0	-3,899.9	499.3	294.1	205.11	2.434	
9,900.0	5,285.1	10,041.3	5,293.6	105.4	105.1	90.97	-120.9	-3,999.9	499.3	289.2	210.03	2.377	
10,000.0	5,283.5	10,141.3	5,292.0	107.9	107.6	90.97	-120.7	-4,099.9	499.3	284.3	214.95	2.323	
10,100.0	5,282.0	10,241.3	5,290.4	110.3	110.0	90.97	-120.6	-4,199.9	499.3	279.4	219.88	2.271	
10,200.0	5,280.4	10,341.3	5,288.9	112.8	112.5	90.97	-120.4	-4,299.9	499.3	274.5	224.80	2.221	
10,300.0	5,278.8	10,441.3	5,287.3	115.2	114.9	90.97	-120.3	-4,399.8	499.2	269.5	229.72	2.173	
10,400.0	5,277.3	10,541.3	5,285.7	117.7	117.4	90.97	-120.1	-4,499.8	499.2	264.6	234.65	2.128	
10,496.5	5,275.7	10,637.8	5,284.2	120.1	119.8	90.97	-120.0	-4,596.3	499.2	259.8	239.40	2.085 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Project:	San Juan County, NM	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Reference Site:	S28-T24N-R9W	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site Error:	0.0usft	**North Reference:**	True
Reference Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #9	**Offset TVD Reference:**	Offset Datum

Offset Design S28-T24N-R9W - Nageezi A28-2409 01H - Pilot Hole - Pilot Hole — Offset Site Error: 0.0 usft

Survey Program: 0-MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-70.19	10.2	-28.3	30.1				
100.0	100.0	99.0	99.0	0.1	0.1	-70.19	10.2	-28.3	30.1	29.8	0.30	101.267	
200.0	200.0	199.0	199.0	0.3	0.3	-70.19	10.2	-28.3	30.1	29.4	0.65	46.567	
300.0	300.0	299.0	299.0	0.5	0.5	-70.19	10.2	-28.3	30.1	29.1	0.99	30.228	
400.0	400.0	399.0	399.0	0.7	0.7	-70.19	10.2	-28.3	30.1	28.7	1.34	22.376	
500.0	500.0	499.0	499.0	0.8	0.8	-70.19	10.2	-28.3	30.1	28.4	1.69	17.763	
600.0	600.0	599.0	599.0	1.0	1.0	-70.19	10.2	-28.3	30.1	28.0	2.04	14.726	
700.0	700.0	699.0	699.0	1.2	1.2	-70.19	10.2	-28.3	30.1	27.7	2.39	12.577	
800.0	800.0	799.0	799.0	1.4	1.4	-70.19	10.2	-28.3	30.1	27.3	2.74	10.974	
900.0	900.0	899.0	899.0	1.5	1.5	-70.19	10.2	-28.3	30.1	27.0	3.09	9.734	
1,000.0	1,000.0	999.0	999.0	1.7	1.7	-70.19	10.2	-28.3	30.1	26.6	3.44	8.746	
1,100.0	1,100.0	1,099.0	1,099.0	1.9	1.9	-70.19	10.2	-28.3	30.1	26.3	3.79	7.940	
1,200.0	1,200.0	1,199.0	1,199.0	2.1	2.1	-70.19	10.2	-28.3	30.1	25.9	4.14	7.270	
1,300.0	1,300.0	1,299.0	1,299.0	2.2	2.2	-70.19	10.2	-28.3	30.1	25.6	4.49	6.704	
1,400.0	1,400.0	1,399.0	1,399.0	2.4	2.4	-70.19	10.2	-28.3	30.1	25.2	4.83	6.220	
1,500.0	1,500.0	1,499.0	1,499.0	2.6	2.6	-70.19	10.2	-28.3	30.1	24.9	5.18	5.801	
1,600.0	1,600.0	1,599.0	1,599.0	2.8	2.8	-70.19	10.2	-28.3	30.1	24.5	5.53	5.435	
1,700.0	1,700.0	1,699.0	1,699.0	2.9	2.9	-70.19	10.2	-28.3	30.1	24.2	5.88	5.113	
1,800.0	1,800.0	1,799.0	1,799.0	3.1	3.1	-70.19	10.2	-28.3	30.1	23.8	6.23	4.826	
1,900.0	1,900.0	1,899.0	1,899.0	3.3	3.3	-70.19	10.2	-28.3	30.1	23.5	6.58	4.570	
2,000.0	2,000.0	1,999.0	1,999.0	3.5	3.5	-70.19	10.2	-28.3	30.1	23.1	6.93	4.340	CC, ES, SF
2,100.0	2,099.9	2,098.9	2,098.9	3.6	3.6	158.09	10.2	-28.3	33.3	26.0	7.27	4.579	
2,200.0	2,199.4	2,198.3	2,198.3	3.8	3.8	163.15	10.2	-28.3	43.2	35.6	7.58	5.691	
2,300.0	2,297.8	2,296.8	2,296.8	4.1	4.0	167.82	10.2	-28.3	60.0	52.1	7.87	7.623	
2,400.0	2,394.8	2,393.8	2,393.8	4.3	4.2	171.16	10.2	-28.3	83.8	75.7	8.13	10.314	
2,500.0	2,489.9	2,488.9	2,488.9	4.7	4.3	173.39	10.2	-28.3	114.5	106.1	8.35	13.706	
2,607.2	2,589.1	2,588.1	2,588.1	5.2	4.5	174.96	10.2	-28.3	154.7	146.1	8.56	18.078	
2,700.0	2,673.8	2,672.8	2,672.8	5.7	4.6	175.96	10.2	-28.3	192.7	183.9	8.86	21.746	
2,800.0	2,764.9	2,763.9	2,763.9	6.3	4.8	176.67	10.2	-28.3	233.8	224.6	9.20	25.425	
2,900.0	2,856.1	2,855.1	2,855.1	7.0	5.0	177.17	10.2	-28.3	274.9	265.4	9.53	28.850	
3,000.0	2,947.2	2,946.2	2,946.2	7.6	5.1	177.53	10.2	-28.3	316.0	306.1	9.86	32.047	
3,100.0	3,038.4	3,037.4	3,037.4	8.3	5.3	177.82	10.2	-28.3	357.1	346.9	10.19	35.036	
3,200.0	3,129.5	3,128.5	3,128.5	9.0	5.4	178.04	10.2	-28.3	398.2	387.7	10.52	37.839	
3,300.0	3,220.7	3,219.7	3,219.7	9.7	5.6	178.23	10.2	-28.3	439.3	428.4	10.85	40.471	
3,400.0	3,311.8	3,310.8	3,310.8	10.4	5.8	178.38	10.2	-28.3	480.4	469.2	11.19	42.949	
3,500.0	3,403.0	3,402.0	3,402.0	11.1	5.9	178.51	10.2	-28.3	521.5	510.0	11.52	45.284	
3,600.0	3,494.1	3,493.1	3,493.1	11.8	6.1	178.62	10.2	-28.3	562.7	550.8	11.85	47.491	
3,700.0	3,585.3	3,584.3	3,584.3	12.6	6.2	178.71	10.2	-28.3	603.8	591.6	12.18	49.578	
3,800.0	3,676.4	3,675.4	3,675.4	13.3	6.4	178.79	10.2	-28.3	644.9	632.4	12.51	51.556	
3,900.0	3,767.6	3,766.6	3,766.6	14.0	6.5	178.86	10.2	-28.3	686.0	673.2	12.84	53.432	
4,000.0	3,858.7	3,857.7	3,857.7	14.8	6.7	178.93	10.2	-28.3	727.1	714.0	13.17	55.215	
4,100.0	3,949.9	3,948.9	3,948.9	15.5	6.9	178.99	10.2	-28.3	768.3	754.8	13.50	56.911	
4,179.5	4,022.4	4,021.3	4,021.3	16.1	7.0	179.03	10.2	-28.3	801.0	787.2	13.76	58.202	
4,200.0	4,041.1	4,040.1	4,040.1	16.3	7.0	179.04	10.2	-28.3	809.3	795.4	13.87	58.342	
4,300.0	4,134.1	4,133.1	4,133.1	16.9	7.2	179.11	10.2	-28.3	845.8	831.5	14.38	58.810	
4,400.0	4,229.5	4,228.5	4,228.5	17.4	7.4	179.16	10.2	-28.3	875.9	861.0	14.86	58.950	
4,500.0	4,326.7	4,325.7	4,325.7	17.8	7.5	179.19	10.2	-28.3	899.1	883.8	15.29	58.798	
4,600.0	4,425.3	4,424.3	4,424.3	18.1	7.7	179.22	10.2	-28.3	915.6	899.9	15.68	58.381	
4,700.0	4,524.9	4,523.8	4,523.8	18.2	7.9	179.23	10.2	-28.3	925.1	909.1	16.03	57.723	
4,786.7	4,611.5	4,610.5	4,610.5	18.3	8.0	-46.61	10.2	-28.3	927.7	901.4	26.32	35.254	
4,800.0	4,624.8	4,623.8	4,623.8	18.3	8.0	-46.61	10.2	-28.3	927.7	901.4	26.35	35.209	
4,893.7	4,718.5	4,717.5	4,717.5	18.4	8.2	-46.61	10.2	-28.3	927.7	901.1	26.59	34.893	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Project:	San Juan County, NM	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Reference Site:	S28-T24N-R9W	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site Error:	0.0usft	**North Reference:**	True
Reference Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #9	**Offset TVD Reference:**	Offset Datum

Offset Design S28-T24N-R9W - Nageezi A28-2409 01H - Pilot Hole - Pilot Hole — Offset Site Error: 0.0 usft

Survey Program: 0-MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
4,900.0	4,724.8	4,723.8	4,723.8	18.4	8.2	43.30	10.2	-28.3	927.7	911.0	16.67	55.636	
4,950.0	4,774.7	4,773.7	4,773.7	18.4	8.3	43.52	10.2	-28.3	925.9	909.1	16.77	55.226	
5,000.0	4,824.3	4,823.3	4,823.3	18.3	8.4	44.09	10.2	-28.3	921.2	904.4	16.82	54.761	
5,050.0	4,873.2	4,872.2	4,872.2	18.2	8.5	45.02	10.2	-28.3	913.8	896.9	16.86	54.207	
5,100.0	4,921.1	4,920.1	4,920.1	18.1	8.6	46.32	10.2	-28.3	903.6	886.8	16.89	53.517	
5,150.0	4,967.8	4,966.8	4,966.8	17.9	8.6	48.01	10.2	-28.3	891.0	874.1	16.93	52.634	
5,200.0	5,012.9	5,011.9	5,011.9	17.7	8.7	50.09	10.2	-28.3	876.0	859.0	17.01	51.506	
5,250.0	5,056.1	5,055.1	5,055.1	17.5	8.8	52.57	10.2	-28.3	858.9	841.8	17.15	50.097	
5,300.0	5,097.2	5,096.2	5,096.2	17.2	8.9	55.44	10.2	-28.3	840.1	822.7	17.35	48.410	
5,350.0	5,135.9	5,134.9	5,134.9	16.9	8.9	58.69	10.2	-28.3	819.8	802.2	17.63	46.492	
5,400.0	5,172.0	5,171.0	5,171.0	16.6	9.0	62.26	10.2	-28.3	798.4	780.5	17.97	44.432	
5,450.0	5,205.2	5,204.2	5,204.2	16.3	9.1	66.07	10.2	-28.3	776.4	758.1	18.34	42.343	
5,500.0	5,235.4	5,234.3	5,234.3	16.0	9.1	70.02	10.2	-28.3	754.3	735.6	18.70	40.331	
5,550.0	5,262.3	5,261.2	5,261.2	15.8	9.2	73.95	10.2	-28.3	732.5	713.5	19.04	38.477	
5,600.0	5,285.7	5,284.7	5,284.7	15.5	9.2	77.73	10.2	-28.3	711.7	692.4	19.33	36.820	
5,650.0	5,305.6	5,304.6	5,304.6	15.4	9.2	81.19	10.2	-28.3	692.4	672.8	19.58	35.357	
5,700.0	5,321.8	5,320.8	5,320.8	15.2	9.3	84.20	10.2	-28.3	675.1	655.3	19.82	34.056	
5,750.0	5,334.2	5,333.2	5,333.2	15.2	9.3	86.66	10.2	-28.3	660.5	640.4	20.09	32.876	
5,800.0	5,342.7	5,341.7	5,341.7	15.2	9.3	88.49	10.2	-28.3	649.0	628.6	20.42	31.780	
5,850.0	5,347.3	5,346.3	5,346.3	15.3	9.3	89.63	10.2	-28.3	641.1	620.2	20.84	30.757	
5,892.6	5,348.1	5,347.0	5,347.0	15.4	9.3	90.05	10.2	-28.3	637.3	616.0	21.28	29.952	
5,896.3	5,348.0	5,347.0	5,347.0	15.5	9.3	90.05	10.2	-28.3	637.1	615.8	21.32	29.885	
5,900.0	5,347.9	5,346.9	5,346.9	15.5	9.3	90.04	10.2	-28.3	636.9	615.5	21.36	29.820	
5,928.3	5,347.5	5,346.5	5,346.5	15.6	9.3	90.00	10.2	-28.3	636.3	614.5	21.73	29.285	
6,000.0	5,346.4	5,345.4	5,345.4	16.2	9.3	89.90	10.2	-28.3	640.3	617.6	22.66	28.254	
6,100.0	5,344.8	5,343.8	5,343.8	17.5	9.3	89.76	10.2	-28.3	659.0	634.8	24.26	27.161	
6,200.0	5,343.2	5,342.2	5,342.2	19.0	9.3	89.62	10.2	-28.3	691.9	665.8	26.08	26.530	
6,300.0	5,341.7	5,340.6	5,340.6	20.8	9.3	89.47	10.2	-28.3	736.9	708.8	28.04	26.277	
6,400.0	5,340.1	5,339.1	5,339.1	22.7	9.3	89.33	10.2	-28.3	792.0	761.9	30.12	26.300	
6,500.0	5,338.5	5,337.5	5,337.5	24.7	9.3	89.19	10.2	-28.3	855.4	823.1	32.27	26.509	
6,600.0	5,336.9	5,335.9	5,335.9	26.8	9.3	89.05	10.2	-28.3	925.2	890.7	34.48	26.835	
6,700.0	5,335.4	5,334.4	5,334.4	28.9	9.3	88.91	10.2	-28.3	1,000.1	963.4	36.73	27.230	
6,800.0	5,333.8	5,332.8	5,332.8	31.1	9.3	88.77	10.2	-28.3	1,079.2	1,040.1	39.02	27.659	
6,900.0	5,332.2	5,331.2	5,331.2	33.4	9.3	88.63	10.2	-28.3	1,161.4	1,120.1	41.33	28.100	
7,000.0	5,330.7	5,329.7	5,329.7	35.6	9.3	88.48	10.2	-28.3	1,246.3	1,202.6	43.67	28.541	
7,100.0	5,329.1	5,328.1	5,328.1	37.9	9.3	88.34	10.2	-28.3	1,333.2	1,287.2	46.02	28.972	
7,200.0	5,327.5	5,326.5	5,326.5	40.2	9.3	88.20	10.2	-28.3	1,421.9	1,373.5	48.38	29.388	
7,300.0	5,326.0	5,324.9	5,324.9	42.6	9.3	88.06	10.2	-28.3	1,512.0	1,461.2	50.76	29.787	
7,400.0	5,324.4	5,323.4	5,323.4	44.9	9.3	87.92	10.2	-28.3	1,603.2	1,550.1	53.15	30.166	
7,500.0	5,322.8	5,321.8	5,321.8	47.3	9.3	87.78	10.2	-28.3	1,695.5	1,639.9	55.54	30.527	
7,600.0	5,321.2	5,320.2	5,320.2	49.6	9.3	87.64	10.2	-28.3	1,788.5	1,730.6	57.94	30.869	
7,700.0	5,319.7	5,318.7	5,318.7	52.0	9.3	87.50	10.2	-28.3	1,882.3	1,822.0	60.34	31.193	
7,800.0	5,318.1	5,317.1	5,317.1	54.4	9.3	87.35	10.2	-28.3	1,976.7	1,914.0	62.75	31.499	
7,900.0	5,316.5	5,315.5	5,315.5	56.8	9.3	87.21	10.2	-28.3	2,071.6	2,006.5	65.17	31.789	
8,000.0	5,315.0	5,313.9	5,313.9	59.2	9.3	87.07	10.2	-28.3	2,167.0	2,099.4	67.58	32.064	
8,100.0	5,313.4	5,312.4	5,312.4	61.6	9.2	86.93	10.2	-28.3	2,262.8	2,192.8	70.00	32.324	
8,200.0	5,311.8	5,310.8	5,310.8	64.0	9.2	86.79	10.2	-28.3	2,358.9	2,286.5	72.42	32.571	
8,300.0	5,310.2	5,309.2	5,309.2	66.4	9.2	86.65	10.2	-28.3	2,455.3	2,380.5	74.85	32.805	
8,400.0	5,308.7	5,307.7	5,307.7	68.8	9.2	86.51	10.2	-28.3	2,552.0	2,474.8	77.27	33.027	
8,500.0	5,307.1	5,306.1	5,306.1	71.3	9.2	86.37	10.2	-28.3	2,649.0	2,569.3	79.70	33.239	
8,600.0	5,305.5	5,304.5	5,304.5	73.7	9.2	86.23	10.2	-28.3	2,746.1	2,664.0	82.12	33.440	
8,700.0	5,304.0	5,302.9	5,302.9	76.1	9.2	86.09	10.2	-28.3	2,843.5	2,759.0	84.55	33.632	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Project:	San Juan County, NM	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Reference Site:	S28-T24N-R9W	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site Error:	0.0usft	**North Reference:**	True
Reference Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #9	**Offset TVD Reference:**	Offset Datum

Offset Design S27-T24N-R9W - Escrito L27-2409 02H - Hz - FINAL — Offset Site Error: 0.0 usft

Survey Program: 587-Geolink MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
8,200.0	5,311.8	7,868.0	5,155.2	64.0	73.6	-78.07	-1,657.6	-2,298.4	1,057.8	923.7	134.11	7.887	
8,300.0	5,310.2	7,965.3	5,153.1	66.4	76.0	-78.04	-1,657.4	-2,395.7	1,057.9	919.1	138.83	7.620	
8,400.0	5,308.7	8,074.8	5,150.4	68.8	78.7	-77.99	-1,657.1	-2,505.1	1,058.0	914.2	143.82	7.356	
8,450.5	5,307.9	8,119.0	5,150.0	70.1	79.8	-78.00	-1,657.0	-2,549.3	1,057.8	911.8	146.09	7.241	
8,500.0	5,307.1	8,159.9	5,150.4	71.3	80.8	-78.06	-1,657.3	-2,590.2	1,058.1	909.8	148.30	7.135	
8,600.0	5,305.5	8,245.0	5,152.4	73.7	82.9	-78.26	-1,659.3	-2,675.2	1,059.7	906.9	152.84	6.933	
8,700.0	5,304.0	8,345.3	5,152.6	76.1	85.4	-78.39	-1,661.8	-2,775.5	1,061.9	904.2	157.72	6.733	
8,800.0	5,302.4	8,455.2	5,149.4	78.6	88.1	-78.33	-1,663.3	-2,885.3	1,063.6	900.9	162.73	6.536	
8,900.0	5,300.8	8,554.0	5,143.5	81.0	90.5	-78.11	-1,663.8	-2,983.9	1,065.2	897.8	167.38	6.364	
9,000.0	5,299.2	8,649.3	5,142.5	83.4	92.8	-78.15	-1,665.3	-3,079.2	1,066.8	894.7	172.10	6.199	
9,100.0	5,297.7	8,784.7	5,142.5	85.9	96.2	-78.28	-1,666.6	-3,214.6	1,067.7	889.9	177.84	6.004	
9,200.0	5,296.1	8,873.0	5,138.7	88.3	98.3	-78.12	-1,664.0	-3,302.8	1,065.7	883.4	182.27	5.847	
9,227.1	5,295.7	8,896.0	5,137.9	89.0	98.9	-78.10	-1,663.7	-3,325.8	1,065.5	882.0	183.46	5.808	
9,300.0	5,294.5	8,936.0	5,137.4	90.7	99.9	-78.11	-1,664.3	-3,365.7	1,066.7	880.5	186.19	5.729	
9,400.0	5,293.0	9,068.8	5,136.1	93.2	103.2	-78.17	-1,666.1	-3,498.5	1,068.0	876.1	191.84	5.567	
9,500.0	5,291.4	9,155.3	5,134.2	95.6	105.3	-78.15	-1,666.4	-3,584.9	1,068.6	872.3	196.31	5.443	
9,600.0	5,289.8	9,247.8	5,130.5	98.1	107.6	-78.05	-1,667.5	-3,677.4	1,070.4	869.5	200.87	5.329	
9,700.0	5,288.3	9,313.0	5,128.0	100.5	109.2	-77.99	-1,669.3	-3,742.5	1,073.8	869.0	204.81	5.243	
9,800.0	5,286.7	9,394.1	5,125.7	103.0	111.2	-77.99	-1,674.3	-3,823.4	1,080.2	871.0	209.17	5.164	
9,900.0	5,285.1	9,503.0	5,120.9	105.4	113.8	-77.90	-1,680.2	-3,932.0	1,086.2	872.1	214.12	5.073	
10,000.0	5,283.5	9,611.8	5,117.0	107.9	116.5	-77.86	-1,687.1	-4,040.6	1,093.0	873.9	219.11	4.988	
10,100.0	5,282.0	9,738.7	5,113.5	110.3	119.6	-77.83	-1,691.1	-4,167.4	1,096.4	871.8	224.55	4.882	
10,200.0	5,280.4	9,912.2	5,108.7	112.8	123.9	-77.71	-1,689.0	-4,340.7	1,095.4	864.4	231.03	4.741	
10,300.0	5,278.8	10,072.0	5,104.5	115.2	127.8	-77.50	-1,678.3	-4,500.1	1,089.5	852.4	237.09	4.595	
10,400.0	5,277.3	10,140.0	5,103.1	117.7	129.5	-77.42	-1,672.4	-4,567.8	1,081.3	840.3	241.05	4.486	
10,469.5	5,276.2	10,140.0	5,103.1	119.4	129.5	-77.42	-1,672.4	-4,567.8	1,079.1	836.4	242.72	4.446	
10,496.5	5,275.7	10,140.0	5,103.1	120.1	129.5	-77.42	-1,672.4	-4,567.8	1,079.5	836.1	243.37	4.436	ES, SF

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Project:	San Juan County, NM	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Reference Site:	S28-T24N-R9W	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site Error:	0.0usft	**North Reference:**	True
Reference Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #9	**Offset TVD Reference:**	Offset Datum

Offset Design S28-T24N-R9W - Nageezi A28-2409 01H - Hz - Plan #13 — Offset Site Error: 0.0 usft

Survey Program: 0-MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-70.19	10.2	-28.3	30.1				
100.0	100.0	100.0	100.0	0.1	0.1	-70.19	10.2	-28.3	30.1	29.8	0.30	101.352	
200.0	200.0	200.0	200.0	0.3	0.3	-70.19	10.2	-28.3	30.1	29.4	0.65	46.567	
300.0	300.0	300.0	300.0	0.5	0.5	-70.19	10.2	-28.3	30.1	29.1	0.99	30.228	
400.0	400.0	400.0	400.0	0.7	0.7	-70.19	10.2	-28.3	30.1	28.7	1.34	22.376	
500.0	500.0	500.0	500.0	0.8	0.8	-70.19	10.2	-28.3	30.1	28.4	1.69	17.763	
600.0	600.0	600.0	600.0	1.0	1.0	-70.19	10.2	-28.3	30.1	28.0	2.04	14.726	
700.0	700.0	700.0	700.0	1.2	1.2	-70.19	10.2	-28.3	30.1	27.7	2.39	12.577	
800.0	800.0	800.0	800.0	1.4	1.4	-70.19	10.2	-28.3	30.1	27.3	2.74	10.974	
900.0	900.0	900.0	900.0	1.5	1.5	-70.19	10.2	-28.3	30.1	27.0	3.09	9.734	
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	-70.19	10.2	-28.3	30.1	26.6	3.44	8.746	
1,100.0	1,100.0	1,100.0	1,100.0	1.9	1.9	-70.19	10.2	-28.3	30.1	26.3	3.79	7.940	
1,200.0	1,200.0	1,200.0	1,200.0	2.1	2.1	-70.19	10.2	-28.3	30.1	25.9	4.14	7.270	
1,300.0	1,300.0	1,300.0	1,300.0	2.2	2.2	-70.19	10.2	-28.3	30.1	25.6	4.49	6.704	
1,400.0	1,400.0	1,400.0	1,400.0	2.4	2.4	-70.19	10.2	-28.3	30.1	25.2	4.83	6.220	
1,500.0	1,500.0	1,500.0	1,500.0	2.6	2.6	-70.19	10.2	-28.3	30.1	24.9	5.18	5.801	
1,600.0	1,600.0	1,600.0	1,600.0	2.8	2.8	-70.19	10.2	-28.3	30.1	24.5	5.53	5.435	
1,700.0	1,700.0	1,700.0	1,700.0	2.9	2.9	-70.19	10.2	-28.3	30.1	24.2	5.88	5.113	
1,800.0	1,800.0	1,800.0	1,800.0	3.1	3.1	-70.19	10.2	-28.3	30.1	23.8	6.23	4.826	
1,900.0	1,900.0	1,900.0	1,900.0	3.3	3.3	-70.19	10.2	-28.3	30.1	23.5	6.58	4.570	
2,000.0	2,000.0	2,000.0	2,000.0	3.5	3.5	-70.19	10.2	-28.3	30.1	23.1	6.93	4.340	CC, ES
2,100.0	2,099.9	2,099.9	2,099.9	3.6	3.6	158.09	10.2	-28.3	33.3	26.0	7.27	4.579	
2,200.0	2,199.4	2,202.1	2,202.0	3.8	3.8	164.93	9.6	-24.7	39.8	32.2	7.59	5.246	
2,300.0	2,297.8	2,304.4	2,303.7	4.1	4.0	174.98	7.8	-13.9	47.3	39.4	7.88	5.998	
2,400.0	2,394.8	2,406.4	2,404.1	4.3	4.2	-173.76	4.8	3.9	57.1	48.9	8.18	6.986	
2,500.0	2,489.9	2,508.0	2,502.5	4.7	4.5	-162.96	0.7	28.6	70.5	62.0	8.56	8.241	
2,607.2	2,589.1	2,616.0	2,604.9	5.2	5.0	-152.94	-5.0	62.4	89.5	80.3	9.18	9.752	
2,700.0	2,673.8	2,708.4	2,690.3	5.7	5.4	-145.39	-10.8	97.1	107.5	97.5	10.05	10.700	
2,800.0	2,764.9	2,805.5	2,779.4	6.3	5.9	-139.05	-17.2	135.3	127.8	116.7	11.13	11.481	
2,900.0	2,856.1	2,902.6	2,868.4	7.0	6.5	-134.46	-23.6	173.5	149.2	136.9	12.30	12.129	
3,000.0	2,947.2	2,999.7	2,957.4	7.6	7.1	-131.02	-29.9	211.7	171.3	157.7	13.53	12.660	
3,100.0	3,038.4	3,096.7	3,046.5	8.3	7.7	-128.37	-36.3	249.8	193.8	179.0	14.80	13.098	
3,200.0	3,129.5	3,193.8	3,135.5	9.0	8.4	-126.28	-42.7	288.0	216.6	200.6	16.09	13.461	
3,300.0	3,220.7	3,290.9	3,224.5	9.7	9.1	-124.58	-49.1	326.2	239.7	222.3	17.41	13.765	
3,400.0	3,311.8	3,388.0	3,313.5	10.4	9.7	-123.18	-55.5	364.4	262.9	244.2	18.75	14.022	
3,500.0	3,403.0	3,485.1	3,402.6	11.1	10.4	-122.01	-61.9	402.6	286.3	266.2	20.10	14.241	
3,600.0	3,494.1	3,582.1	3,491.6	11.8	11.1	-121.01	-68.3	440.8	309.7	288.3	21.47	14.430	
3,700.0	3,585.3	3,679.2	3,580.6	12.6	11.8	-120.16	-74.7	479.0	333.3	310.4	22.84	14.594	
3,800.0	3,676.4	3,776.3	3,669.6	13.3	12.5	-119.41	-81.1	517.1	356.9	332.7	24.22	14.737	
3,900.0	3,767.6	3,873.4	3,758.7	14.0	13.2	-118.76	-87.4	555.3	380.5	354.9	25.60	14.863	
4,000.0	3,858.7	3,970.5	3,847.7	14.8	13.9	-118.19	-93.8	593.5	404.2	377.2	26.99	14.974	
4,100.0	3,949.9	4,067.5	3,936.7	15.5	14.6	-117.67	-100.2	631.7	427.9	399.5	28.39	15.074	
4,179.5	4,022.4	4,144.7	4,007.5	16.1	15.2	-117.31	-105.3	662.1	446.8	417.3	29.50	15.146	
4,200.0	4,041.1	4,164.6	4,025.8	16.3	15.4	-117.38	-106.6	669.9	451.6	421.8	29.79	15.159	
4,300.0	4,134.1	4,264.3	4,117.9	16.9	16.0	-117.40	-112.9	707.4	473.0	441.9	31.08	15.220	
4,400.0	4,229.5	4,366.1	4,214.4	17.4	16.6	-117.39	-118.2	739.4	490.7	458.5	32.15	15.261	
4,500.0	4,326.7	4,469.1	4,314.1	17.8	17.0	-117.38	-122.5	764.8	504.5	471.5	33.00	15.287	
4,600.0	4,425.3	4,573.0	4,416.2	18.1	17.3	-117.35	-125.6	783.2	514.3	480.7	33.62	15.296	
4,700.0	4,524.9	4,677.5	4,520.2	18.2	17.5	-117.29	-127.4	794.2	520.1	486.0	34.02	15.288	
4,786.7	4,611.5	4,768.5	4,611.0	18.3	17.6	16.92	-128.0	797.8	521.7	502.1	19.63	26.583	
4,800.0	4,624.8	4,782.3	4,624.8	18.3	17.6	16.93	-128.0	797.8	521.7	502.0	19.67	26.528	
4,893.7	4,718.5	4,876.0	4,718.5	18.4	17.7	16.93	-128.0	797.8	521.7	501.7	19.95	26.152	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Project:	San Juan County, NM	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Reference Site:	S28-T24N-R9W	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site Error:	0.0usft	**North Reference:**	True
Reference Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #9	**Offset TVD Reference:**	Offset Datum

Offset Design S28-T24N-R9W - Nageezi A28-2409 01H - Hz - Plan #13 — Offset Site Error: 0.0 usft

Survey Program: 0-MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
4,900.0	4,724.8	4,883.1	4,725.6	18.4	17.7	106.84	-128.0	797.8	521.7	487.3	34.39	15.171	
4,950.0	4,774.7	4,948.6	4,791.0	18.4	17.7	106.80	-128.0	794.1	521.6	487.3	34.33	15.196	
5,000.0	4,824.3	5,014.0	4,855.6	18.3	17.5	106.63	-128.0	783.7	521.2	487.1	34.06	15.300	
5,050.0	4,873.2	5,079.1	4,918.4	18.2	17.3	106.33	-128.0	766.8	520.4	486.8	33.61	15.482	
5,100.0	4,921.1	5,143.6	4,978.7	18.1	16.9	105.91	-127.9	743.9	519.3	486.4	32.98	15.745	
5,150.0	4,967.8	5,207.5	5,035.7	17.9	16.5	105.36	-127.9	715.3	518.0	485.8	32.18	16.099	
5,200.0	5,012.9	5,270.5	5,089.0	17.7	16.0	104.70	-127.8	681.6	516.5	485.3	31.22	16.546	
5,250.0	5,056.1	5,332.6	5,137.9	17.5	15.4	103.94	-127.8	643.4	514.8	484.7	30.13	17.088	
5,300.0	5,097.2	5,393.7	5,182.2	17.2	14.8	103.09	-127.7	601.4	513.0	484.0	28.94	17.724	
5,350.0	5,135.9	5,453.7	5,221.5	16.9	14.2	102.15	-127.6	556.2	511.1	483.4	27.70	18.450	
5,400.0	5,172.0	5,512.5	5,255.9	16.6	13.5	101.13	-127.6	508.4	509.2	482.8	26.46	19.248	
5,450.0	5,205.2	5,570.2	5,285.1	16.3	12.9	100.05	-127.5	458.7	507.4	482.2	25.26	20.085	
5,500.0	5,235.4	5,626.7	5,309.2	16.0	12.4	98.92	-127.4	407.6	505.7	481.5	24.18	20.911	
5,550.0	5,262.3	5,682.1	5,328.4	15.8	12.0	97.74	-127.3	355.7	504.1	480.8	23.28	21.657	
5,600.0	5,285.7	5,736.3	5,342.8	15.5	11.7	96.52	-127.3	303.4	502.7	480.1	22.60	22.241	
5,650.0	5,305.6	5,789.5	5,352.5	15.4	11.4	95.28	-127.2	251.2	501.5	479.3	22.21	22.584	
5,700.0	5,321.8	5,841.6	5,357.7	15.2	11.4	94.01	-127.1	199.3	500.6	478.5	22.12	22.633	
5,750.0	5,334.2	5,892.6	5,358.8	15.2	11.4	92.74	-127.0	148.4	499.9	477.6	22.33	22.389	
5,800.0	5,342.7	5,941.7	5,358.0	15.2	11.7	91.73	-127.0	99.3	499.5	476.6	22.89	21.825	
5,850.0	5,347.3	5,991.4	5,357.2	15.3	12.1	91.14	-126.9	49.6	499.4	475.8	23.61	21.148	
5,892.6	5,348.1	6,033.9	5,356.5	15.4	12.5	90.97	-126.8	7.0	499.4	474.9	24.48	20.399	
5,896.3	5,348.0	6,037.7	5,356.5	15.5	12.6	90.97	-126.8	3.3	499.4	474.8	24.56	20.331	
5,900.0	5,347.9	6,041.3	5,356.4	15.5	12.6	90.97	-126.8	-0.4	499.4	474.7	24.64	20.263	
6,000.0	5,346.4	6,141.3	5,354.8	16.2	13.9	90.97	-126.7	-100.4	499.4	472.2	27.21	18.355	
6,100.0	5,344.8	6,241.3	5,353.3	17.5	15.5	90.97	-126.5	-200.4	499.4	469.0	30.36	16.446	
6,200.0	5,343.2	6,341.3	5,351.7	19.0	17.3	90.97	-126.4	-300.4	499.4	465.4	33.95	14.708	
6,300.0	5,341.7	6,441.3	5,350.1	20.8	19.2	90.97	-126.2	-400.3	499.4	461.5	37.85	13.193	
6,400.0	5,340.1	6,541.3	5,348.6	22.7	21.2	90.97	-126.1	-500.3	499.4	457.4	41.97	11.898	
6,500.0	5,338.5	6,641.3	5,347.0	24.7	23.3	90.97	-125.9	-600.3	499.4	453.1	46.25	10.797	
6,600.0	5,336.9	6,741.3	5,345.4	26.8	25.5	90.97	-125.8	-700.3	499.4	448.7	50.66	9.858	
6,700.0	5,335.4	6,841.3	5,343.9	28.9	27.8	90.97	-125.6	-800.3	499.3	444.2	55.15	9.054	
6,800.0	5,333.8	6,941.3	5,342.3	31.1	30.0	90.97	-125.5	-900.3	499.3	439.6	59.72	8.361	
6,900.0	5,332.2	7,041.3	5,340.7	33.4	32.3	90.97	-125.3	-1,000.3	499.3	435.0	64.34	7.761	
7,000.0	5,330.7	7,141.3	5,339.1	35.6	34.7	90.97	-125.2	-1,100.3	499.3	430.3	69.01	7.235	
7,100.0	5,329.1	7,241.3	5,337.6	37.9	37.0	90.97	-125.0	-1,200.2	499.3	425.6	73.72	6.774	
7,200.0	5,327.5	7,341.3	5,336.0	40.2	39.4	90.97	-124.9	-1,300.2	499.3	420.9	78.45	6.365	
7,300.0	5,326.0	7,441.3	5,334.4	42.6	41.7	90.97	-124.7	-1,400.2	499.3	416.1	83.21	6.001	
7,400.0	5,324.4	7,541.3	5,332.9	44.9	44.1	90.97	-124.6	-1,500.2	499.3	411.3	87.99	5.675	
7,500.0	5,322.8	7,641.3	5,331.3	47.3	46.5	90.97	-124.4	-1,600.2	499.3	406.5	92.79	5.381	
7,600.0	5,321.2	7,741.3	5,329.7	49.6	48.9	90.97	-124.3	-1,700.2	499.3	401.7	97.60	5.116	
7,700.0	5,319.7	7,841.3	5,328.1	52.0	51.3	90.97	-124.1	-1,800.2	499.3	396.9	102.43	4.875	
7,800.0	5,318.1	7,941.3	5,326.6	54.4	53.7	90.97	-124.0	-1,900.2	499.3	392.1	107.27	4.655	
7,900.0	5,316.5	8,041.3	5,325.0	56.8	56.2	90.97	-123.8	-2,000.1	499.3	387.2	112.11	4.454	
8,000.0	5,315.0	8,141.3	5,323.4	59.2	58.6	90.97	-123.7	-2,100.1	499.3	382.3	116.97	4.269	
8,100.0	5,313.4	8,241.3	5,321.9	61.6	61.0	90.97	-123.5	-2,200.1	499.3	377.5	121.83	4.098	
8,200.0	5,311.8	8,341.3	5,320.3	64.0	63.5	90.97	-123.4	-2,300.1	499.3	372.6	126.70	3.941	
8,300.0	5,310.2	8,441.3	5,318.7	66.4	65.9	90.97	-123.2	-2,400.1	499.3	367.7	131.57	3.795	
8,400.0	5,308.7	8,541.3	5,317.2	68.8	68.3	90.97	-123.1	-2,500.1	499.3	362.8	136.45	3.659	
8,500.0	5,307.1	8,641.3	5,315.6	71.3	70.8	90.97	-122.9	-2,600.1	499.3	358.0	141.34	3.533	
8,600.0	5,305.5	8,741.3	5,314.0	73.7	73.2	90.97	-122.8	-2,700.1	499.3	353.1	146.23	3.414	
8,700.0	5,304.0	8,841.3	5,312.4	76.1	75.7	90.97	-122.6	-2,800.0	499.3	348.2	151.12	3.304	
8,800.0	5,302.4	8,941.3	5,310.9	78.6	78.1	90.97	-122.5	-2,900.0	499.3	343.3	156.02	3.200	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Project:	San Juan County, NM	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Reference Site:	S28-T24N-R9W	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site Error:	0.0usft	**North Reference:**	True
Reference Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #9	**Offset TVD Reference:**	Offset Datum

Offset Design S28-T24N-R9W - Nageezi A28-2409 01H - Hz - Plan #13 — Offset Site Error: 0.0 usft

Survey Program: 0-MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
8,900.0	5,300.8	9,041.3	5,309.3	81.0	80.5	90.97	-122.3	-3,000.0	499.3	338.4	160.92	3.103	
9,000.0	5,299.2	9,141.3	5,307.7	83.4	83.0	90.97	-122.2	-3,100.0	499.3	333.5	165.82	3.011	
9,100.0	5,297.7	9,241.3	5,306.2	85.9	85.4	90.97	-122.1	-3,200.0	499.3	328.6	170.72	2.925	
9,200.0	5,296.1	9,341.3	5,304.6	88.3	87.9	90.97	-121.9	-3,300.0	499.3	323.6	175.63	2.843	
9,300.0	5,294.5	9,441.3	5,303.0	90.7	90.4	90.97	-121.8	-3,400.0	499.3	318.7	180.54	2.765	
9,400.0	5,293.0	9,541.3	5,301.4	93.2	92.8	90.97	-121.6	-3,500.0	499.3	313.8	185.45	2.692	
9,500.0	5,291.4	9,641.3	5,299.9	95.6	95.3	90.97	-121.5	-3,599.9	499.3	308.9	190.36	2.623	
9,600.0	5,289.8	9,741.3	5,298.3	98.1	97.7	90.97	-121.3	-3,699.9	499.3	304.0	195.28	2.557	
9,700.0	5,288.3	9,841.3	5,296.7	100.5	100.2	90.97	-121.2	-3,799.9	499.3	299.1	200.20	2.494	
9,800.0	5,286.7	9,941.3	5,295.2	103.0	102.6	90.97	-121.0	-3,899.9	499.3	294.1	205.11	2.434	
9,900.0	5,285.1	10,041.3	5,293.6	105.4	105.1	90.97	-120.9	-3,999.9	499.3	289.2	210.03	2.377	
10,000.0	5,283.5	10,141.3	5,292.0	107.9	107.6	90.97	-120.7	-4,099.9	499.3	284.3	214.95	2.323	
10,100.0	5,282.0	10,241.3	5,290.4	110.3	110.0	90.97	-120.6	-4,199.9	499.3	279.4	219.88	2.271	
10,200.0	5,280.4	10,341.3	5,288.9	112.8	112.5	90.97	-120.4	-4,299.9	499.3	274.5	224.80	2.221	
10,300.0	5,278.8	10,441.3	5,287.3	115.2	114.9	90.97	-120.3	-4,399.8	499.2	269.5	229.72	2.173	
10,400.0	5,277.3	10,541.3	5,285.7	117.7	117.4	90.97	-120.1	-4,499.8	499.2	264.6	234.65	2.128	
10,496.5	5,275.7	10,637.8	5,284.2	120.1	119.8	90.97	-120.0	-4,596.3	499.2	259.8	239.40	2.085	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Project:	San Juan County, NM	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Reference Site:	S28-T24N-R9W	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site Error:	0.0usft	**North Reference:**	True
Reference Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #9	**Offset TVD Reference:**	Offset Datum

Offset Design S28-T24N-R9W - Nageezi A28-2409 01H - Pilot Hole - Pilot Hole — Offset Site Error: 0.0 usft

Survey Program: 0-MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-70.19	10.2	-28.3	30.1				
100.0	100.0	99.0	99.0	0.1	0.1	-70.19	10.2	-28.3	30.1	29.8	0.30	101.267	
200.0	200.0	199.0	199.0	0.3	0.3	-70.19	10.2	-28.3	30.1	29.4	0.65	46.567	
300.0	300.0	299.0	299.0	0.5	0.5	-70.19	10.2	-28.3	30.1	29.1	0.99	30.228	
400.0	400.0	399.0	399.0	0.7	0.7	-70.19	10.2	-28.3	30.1	28.7	1.34	22.376	
500.0	500.0	499.0	499.0	0.8	0.8	-70.19	10.2	-28.3	30.1	28.4	1.69	17.763	
600.0	600.0	599.0	599.0	1.0	1.0	-70.19	10.2	-28.3	30.1	28.0	2.04	14.726	
700.0	700.0	699.0	699.0	1.2	1.2	-70.19	10.2	-28.3	30.1	27.7	2.39	12.577	
800.0	800.0	799.0	799.0	1.4	1.4	-70.19	10.2	-28.3	30.1	27.3	2.74	10.974	
900.0	900.0	899.0	899.0	1.5	1.5	-70.19	10.2	-28.3	30.1	27.0	3.09	9.734	
1,000.0	1,000.0	999.0	999.0	1.7	1.7	-70.19	10.2	-28.3	30.1	26.6	3.44	8.746	
1,100.0	1,100.0	1,099.0	1,099.0	1.9	1.9	-70.19	10.2	-28.3	30.1	26.3	3.79	7.940	
1,200.0	1,200.0	1,199.0	1,199.0	2.1	2.1	-70.19	10.2	-28.3	30.1	25.9	4.14	7.270	
1,300.0	1,300.0	1,299.0	1,299.0	2.2	2.2	-70.19	10.2	-28.3	30.1	25.6	4.49	6.704	
1,400.0	1,400.0	1,399.0	1,399.0	2.4	2.4	-70.19	10.2	-28.3	30.1	25.2	4.83	6.220	
1,500.0	1,500.0	1,499.0	1,499.0	2.6	2.6	-70.19	10.2	-28.3	30.1	24.9	5.18	5.801	
1,600.0	1,600.0	1,599.0	1,599.0	2.8	2.8	-70.19	10.2	-28.3	30.1	24.5	5.53	5.435	
1,700.0	1,700.0	1,699.0	1,699.0	2.9	2.9	-70.19	10.2	-28.3	30.1	24.2	5.88	5.113	
1,800.0	1,800.0	1,799.0	1,799.0	3.1	3.1	-70.19	10.2	-28.3	30.1	23.8	6.23	4.826	
1,900.0	1,900.0	1,899.0	1,899.0	3.3	3.3	-70.19	10.2	-28.3	30.1	23.5	6.58	4.570	
2,000.0	2,000.0	1,999.0	1,999.0	3.5	3.5	-70.19	10.2	-28.3	30.1	23.1	6.93	4.340	CC, ES, SF
2,100.0	2,099.9	2,098.9	2,098.9	3.6	3.6	158.09	10.2	-28.3	33.3	26.0	7.27	4.579	
2,200.0	2,199.4	2,198.3	2,198.3	3.8	3.8	163.15	10.2	-28.3	43.2	35.6	7.58	5.691	
2,300.0	2,297.8	2,296.8	2,296.8	4.1	4.0	167.82	10.2	-28.3	60.0	52.1	7.87	7.623	
2,400.0	2,394.8	2,393.8	2,393.8	4.3	4.2	171.16	10.2	-28.3	83.8	75.7	8.13	10.314	
2,500.0	2,489.9	2,488.9	2,488.9	4.7	4.3	173.39	10.2	-28.3	114.5	106.1	8.35	13.706	
2,607.2	2,589.1	2,588.1	2,588.1	5.2	4.5	174.96	10.2	-28.3	154.7	146.1	8.56	18.078	
2,700.0	2,673.8	2,672.8	2,672.8	5.7	4.6	175.96	10.2	-28.3	192.7	183.9	8.86	21.746	
2,800.0	2,764.9	2,763.9	2,763.9	6.3	4.8	176.67	10.2	-28.3	233.8	224.6	9.20	25.425	
2,900.0	2,856.1	2,855.1	2,855.1	7.0	5.0	177.17	10.2	-28.3	274.9	265.4	9.53	28.850	
3,000.0	2,947.2	2,946.2	2,946.2	7.6	5.1	177.53	10.2	-28.3	316.0	306.1	9.86	32.047	
3,100.0	3,038.4	3,037.4	3,037.4	8.3	5.3	177.82	10.2	-28.3	357.1	346.9	10.19	35.036	
3,200.0	3,129.5	3,128.5	3,128.5	9.0	5.4	178.04	10.2	-28.3	398.2	387.7	10.52	37.839	
3,300.0	3,220.7	3,219.7	3,219.7	9.7	5.6	178.23	10.2	-28.3	439.3	428.4	10.85	40.471	
3,400.0	3,311.8	3,310.8	3,310.8	10.4	5.8	178.38	10.2	-28.3	480.4	469.2	11.19	42.949	
3,500.0	3,403.0	3,402.0	3,402.0	11.1	5.9	178.51	10.2	-28.3	521.5	510.0	11.52	45.284	
3,600.0	3,494.1	3,493.1	3,493.1	11.8	6.1	178.62	10.2	-28.3	562.7	550.8	11.85	47.491	
3,700.0	3,585.3	3,584.3	3,584.3	12.6	6.2	178.71	10.2	-28.3	603.8	591.6	12.18	49.578	
3,800.0	3,676.4	3,675.4	3,675.4	13.3	6.4	178.79	10.2	-28.3	644.9	632.4	12.51	51.556	
3,900.0	3,767.6	3,766.6	3,766.6	14.0	6.5	178.86	10.2	-28.3	686.0	673.2	12.84	53.432	
4,000.0	3,858.7	3,857.7	3,857.7	14.8	6.7	178.93	10.2	-28.3	727.1	714.0	13.17	55.215	
4,100.0	3,949.9	3,948.9	3,948.9	15.5	6.9	178.99	10.2	-28.3	768.3	754.8	13.50	56.911	
4,179.5	4,022.4	4,021.3	4,021.3	16.1	7.0	179.03	10.2	-28.3	801.0	787.2	13.76	58.202	
4,200.0	4,041.1	4,040.1	4,040.1	16.3	7.0	179.04	10.2	-28.3	809.3	795.4	13.87	58.342	
4,300.0	4,134.1	4,133.1	4,133.1	16.9	7.2	179.11	10.2	-28.3	845.8	831.5	14.38	58.810	
4,400.0	4,229.5	4,228.5	4,228.5	17.4	7.4	179.16	10.2	-28.3	875.9	861.0	14.86	58.950	
4,500.0	4,326.7	4,325.7	4,325.7	17.8	7.5	179.19	10.2	-28.3	899.1	883.8	15.29	58.798	
4,600.0	4,425.3	4,424.3	4,424.3	18.1	7.7	179.22	10.2	-28.3	915.6	899.9	15.68	58.381	
4,700.0	4,524.9	4,523.8	4,523.8	18.2	7.9	179.23	10.2	-28.3	925.1	909.1	16.03	57.723	
4,786.7	4,611.5	4,610.5	4,610.5	18.3	8.0	-46.61	10.2	-28.3	927.7	901.4	26.32	35.254	
4,800.0	4,624.8	4,623.8	4,623.8	18.3	8.0	-46.61	10.2	-28.3	927.7	901.4	26.35	35.209	
4,893.7	4,718.5	4,717.5	4,717.5	18.4	8.2	-46.61	10.2	-28.3	927.7	901.1	26.59	34.893	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Project:	San Juan County, NM	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Reference Site:	S28-T24N-R9W	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site Error:	0.0usft	**North Reference:**	True
Reference Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #9	**Offset TVD Reference:**	Offset Datum

Offset Design S28-T24N-R9W - Nageezi A28-2409 01H - Pilot Hole - Pilot Hole — Offset Site Error: 0.0 usft

Survey Program: 0-MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
4,900.0	4,724.8	4,723.8	4,723.8	18.4	8.2	43.30	10.2	-28.3	927.7	911.0	16.67	55.636	
4,950.0	4,774.7	4,773.7	4,773.7	18.4	8.3	43.52	10.2	-28.3	925.9	909.1	16.77	55.226	
5,000.0	4,824.3	4,823.3	4,823.3	18.3	8.4	44.09	10.2	-28.3	921.2	904.4	16.82	54.761	
5,050.0	4,873.2	4,872.2	4,872.2	18.2	8.5	45.02	10.2	-28.3	913.8	896.9	16.86	54.207	
5,100.0	4,921.1	4,920.1	4,920.1	18.1	8.6	46.32	10.2	-28.3	903.6	886.8	16.89	53.517	
5,150.0	4,967.8	4,966.8	4,966.8	17.9	8.6	48.01	10.2	-28.3	891.0	874.1	16.93	52.634	
5,200.0	5,012.9	5,011.9	5,011.9	17.7	8.7	50.09	10.2	-28.3	876.0	859.0	17.01	51.506	
5,250.0	5,056.1	5,055.1	5,055.1	17.5	8.8	52.57	10.2	-28.3	858.9	841.8	17.15	50.097	
5,300.0	5,097.2	5,096.2	5,096.2	17.2	8.9	55.44	10.2	-28.3	840.1	822.7	17.35	48.410	
5,350.0	5,135.9	5,134.9	5,134.9	16.9	8.9	58.69	10.2	-28.3	819.8	802.2	17.63	46.492	
5,400.0	5,172.0	5,171.0	5,171.0	16.6	9.0	62.26	10.2	-28.3	798.4	780.5	17.97	44.432	
5,450.0	5,205.2	5,204.2	5,204.2	16.3	9.1	66.07	10.2	-28.3	776.4	758.1	18.34	42.343	
5,500.0	5,235.4	5,234.3	5,234.3	16.0	9.1	70.02	10.2	-28.3	754.3	735.6	18.70	40.331	
5,550.0	5,262.3	5,261.2	5,261.2	15.8	9.2	73.95	10.2	-28.3	732.5	713.5	19.04	38.477	
5,600.0	5,285.7	5,284.7	5,284.7	15.5	9.2	77.73	10.2	-28.3	711.7	692.4	19.33	36.820	
5,650.0	5,305.6	5,304.6	5,304.6	15.4	9.2	81.19	10.2	-28.3	692.4	672.8	19.58	35.357	
5,700.0	5,321.8	5,320.8	5,320.8	15.2	9.3	84.20	10.2	-28.3	675.1	655.3	19.82	34.056	
5,750.0	5,334.2	5,333.2	5,333.2	15.2	9.3	86.66	10.2	-28.3	660.5	640.4	20.09	32.876	
5,800.0	5,342.7	5,341.7	5,341.7	15.2	9.3	88.49	10.2	-28.3	649.0	628.6	20.42	31.780	
5,850.0	5,347.3	5,346.3	5,346.3	15.3	9.3	89.63	10.2	-28.3	641.1	620.2	20.84	30.757	
5,892.6	5,348.1	5,347.0	5,347.0	15.4	9.3	90.05	10.2	-28.3	637.3	616.0	21.28	29.952	
5,896.3	5,348.0	5,347.0	5,347.0	15.5	9.3	90.05	10.2	-28.3	637.1	615.8	21.32	29.885	
5,900.0	5,347.9	5,346.9	5,346.9	15.5	9.3	90.04	10.2	-28.3	636.9	615.5	21.36	29.820	
5,928.3	5,347.5	5,346.5	5,346.5	15.6	9.3	90.00	10.2	-28.3	636.3	614.5	21.73	29.285	
6,000.0	5,346.4	5,345.4	5,345.4	16.2	9.3	89.90	10.2	-28.3	640.3	617.6	22.66	28.254	
6,100.0	5,344.8	5,343.8	5,343.8	17.5	9.3	89.76	10.2	-28.3	659.0	634.8	24.26	27.161	
6,200.0	5,343.2	5,342.2	5,342.2	19.0	9.3	89.62	10.2	-28.3	691.9	665.8	26.08	26.530	
6,300.0	5,341.7	5,340.6	5,340.6	20.8	9.3	89.47	10.2	-28.3	736.9	708.8	28.04	26.277	
6,400.0	5,340.1	5,339.1	5,339.1	22.7	9.3	89.33	10.2	-28.3	792.0	761.9	30.12	26.300	
6,500.0	5,338.5	5,337.5	5,337.5	24.7	9.3	89.19	10.2	-28.3	855.4	823.1	32.27	26.509	
6,600.0	5,336.9	5,335.9	5,335.9	26.8	9.3	89.05	10.2	-28.3	925.2	890.7	34.48	26.835	
6,700.0	5,335.4	5,334.4	5,334.4	28.9	9.3	88.91	10.2	-28.3	1,000.1	963.4	36.73	27.230	
6,800.0	5,333.8	5,332.8	5,332.8	31.1	9.3	88.77	10.2	-28.3	1,079.2	1,040.1	39.02	27.659	
6,900.0	5,332.2	5,331.2	5,331.2	33.4	9.3	88.63	10.2	-28.3	1,161.4	1,120.1	41.33	28.100	
7,000.0	5,330.7	5,329.7	5,329.7	35.6	9.3	88.48	10.2	-28.3	1,246.3	1,202.6	43.67	28.541	
7,100.0	5,329.1	5,328.1	5,328.1	37.9	9.3	88.34	10.2	-28.3	1,333.2	1,287.2	46.02	28.972	
7,200.0	5,327.5	5,326.5	5,326.5	40.2	9.3	88.20	10.2	-28.3	1,421.9	1,373.5	48.38	29.388	
7,300.0	5,326.0	5,324.9	5,324.9	42.6	9.3	88.06	10.2	-28.3	1,512.0	1,461.2	50.76	29.787	
7,400.0	5,324.4	5,323.4	5,323.4	44.9	9.3	87.92	10.2	-28.3	1,603.2	1,550.1	53.15	30.166	
7,500.0	5,322.8	5,321.8	5,321.8	47.3	9.3	87.78	10.2	-28.3	1,695.5	1,639.9	55.54	30.527	
7,600.0	5,321.2	5,320.2	5,320.2	49.6	9.3	87.64	10.2	-28.3	1,788.5	1,730.6	57.94	30.869	
7,700.0	5,319.7	5,318.7	5,318.7	52.0	9.3	87.50	10.2	-28.3	1,882.3	1,822.0	60.34	31.193	
7,800.0	5,318.1	5,317.1	5,317.1	54.4	9.3	87.35	10.2	-28.3	1,976.7	1,914.0	62.75	31.499	
7,900.0	5,316.5	5,315.5	5,315.5	56.8	9.3	87.21	10.2	-28.3	2,071.6	2,006.5	65.17	31.789	
8,000.0	5,315.0	5,313.9	5,313.9	59.2	9.3	87.07	10.2	-28.3	2,167.0	2,099.4	67.58	32.064	
8,100.0	5,313.4	5,312.4	5,312.4	61.6	9.2	86.93	10.2	-28.3	2,262.8	2,192.8	70.00	32.324	
8,200.0	5,311.8	5,310.8	5,310.8	64.0	9.2	86.79	10.2	-28.3	2,358.9	2,286.5	72.42	32.571	
8,300.0	5,310.2	5,309.2	5,309.2	66.4	9.2	86.65	10.2	-28.3	2,455.3	2,380.5	74.85	32.805	
8,400.0	5,308.7	5,307.7	5,307.7	68.8	9.2	86.51	10.2	-28.3	2,552.0	2,474.8	77.27	33.027	
8,500.0	5,307.1	5,306.1	5,306.1	71.3	9.2	86.37	10.2	-28.3	2,649.0	2,569.3	79.70	33.239	
8,600.0	5,305.5	5,304.5	5,304.5	73.7	9.2	86.23	10.2	-28.3	2,746.1	2,664.0	82.12	33.440	
8,700.0	5,304.0	5,302.9	5,302.9	76.1	9.2	86.09	10.2	-28.3	2,843.5	2,759.0	84.55	33.632	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Project:	San Juan County, NM	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Reference Site:	S28-T24N-R9W	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site Error:	0.0usft	**North Reference:**	True
Reference Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #9	**Offset TVD Reference:**	Offset Datum

Offset Design S28-T24N-R9W - Nageezi A28-2409 01H - Pilot Hole - Pilot Hole — Offset Site Error: 0.0 usft

Survey Program: 0-MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
8,800.0	5,302.4	5,301.4	5,301.4	78.6	9.2	85.95	10.2	-28.3	2,941.0	2,854.1	86.97	33.815	
8,900.0	5,300.8	5,299.8	5,299.8	81.0	9.2	85.80	10.2	-28.3	3,038.7	2,949.3	89.40	33.990	
9,000.0	5,299.2	5,298.2	5,298.2	83.4	9.2	85.66	10.2	-28.3	3,136.6	3,044.8	91.83	34.157	
9,100.0	5,297.7	5,296.7	5,296.7	85.9	9.2	85.52	10.2	-28.3	3,234.6	3,140.3	94.26	34.317	
9,200.0	5,296.1	5,295.1	5,295.1	88.3	9.2	85.38	10.2	-28.3	3,332.6	3,236.0	96.68	34.470	
9,300.0	5,294.5	5,293.5	5,293.5	90.7	9.2	85.24	10.2	-28.3	3,430.8	3,331.7	99.11	34.617	
9,400.0	5,293.0	5,292.0	5,292.0	93.2	9.2	85.10	10.2	-28.3	3,529.1	3,427.6	101.53	34.759	
9,500.0	5,291.4	5,290.4	5,290.4	95.6	9.2	84.96	10.2	-28.3	3,627.5	3,523.6	103.96	34.894	
9,600.0	5,289.8	5,288.8	5,288.8	98.1	9.2	84.82	10.2	-28.3	3,726.0	3,619.6	106.38	35.025	
9,700.0	5,288.3	5,287.2	5,287.2	100.5	9.2	84.68	10.2	-28.3	3,824.6	3,715.8	108.80	35.151	
9,800.0	5,286.7	5,285.7	5,285.7	103.0	9.2	84.54	10.2	-28.3	3,923.2	3,812.0	111.23	35.272	
9,900.0	5,285.1	5,284.1	5,284.1	105.4	9.2	84.40	10.2	-28.3	4,021.9	3,908.3	113.65	35.389	
10,000.0	5,283.5	5,282.5	5,282.5	107.9	9.2	84.26	10.2	-28.3	4,120.7	4,004.6	116.07	35.503	
10,100.0	5,282.0	5,281.0	5,281.0	110.3	9.2	84.12	10.2	-28.3	4,219.5	4,101.0	118.48	35.612	
10,200.0	5,280.4	5,279.4	5,279.4	112.8	9.2	83.98	10.2	-28.3	4,318.3	4,197.4	120.90	35.718	
10,300.0	5,278.8	5,277.8	5,277.8	115.2	9.2	83.84	10.2	-28.3	4,417.3	4,294.0	123.32	35.820	
10,400.0	5,277.3	5,276.2	5,276.2	117.7	9.2	83.70	10.2	-28.3	4,516.2	4,390.5	125.73	35.920	
10,496.5	5,275.7	5,274.7	5,274.7	120.1	9.2	83.57	10.2	-28.3	4,611.8	4,483.7	128.06	36.013	

Cathedral Energy Services

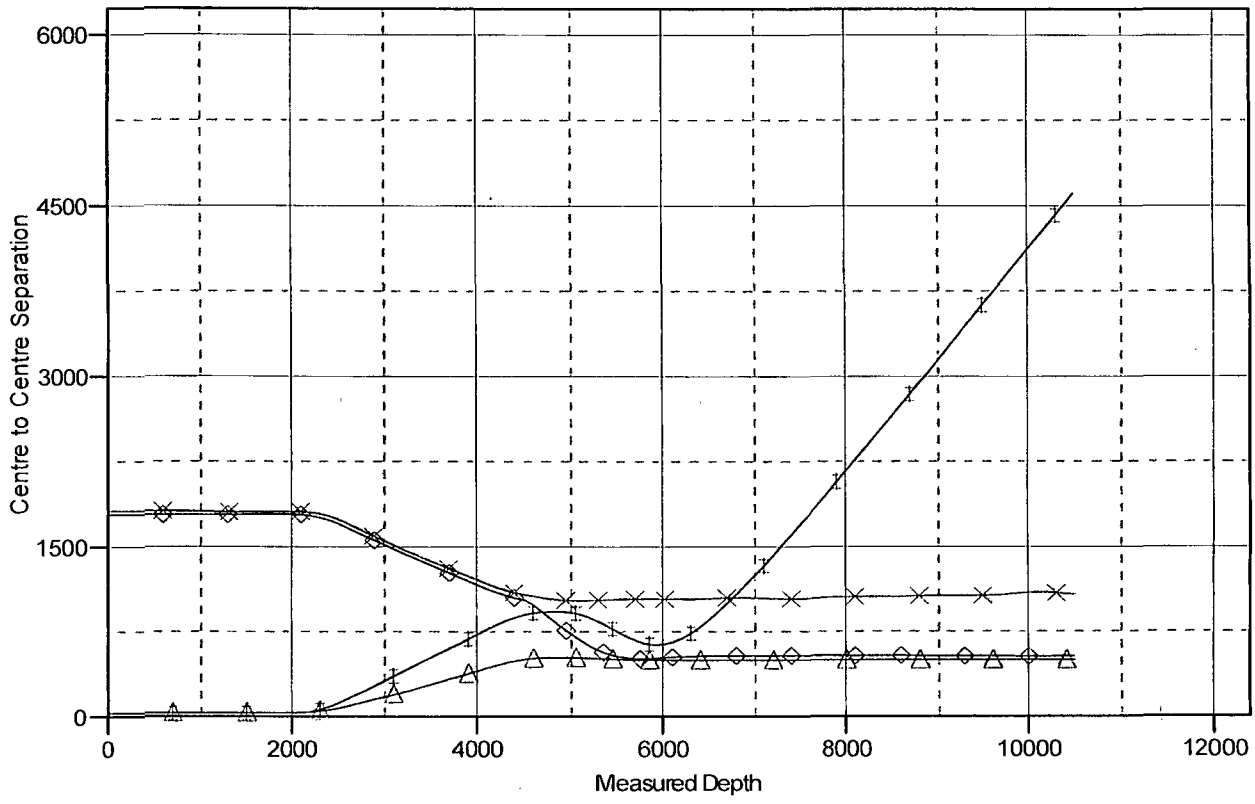
Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Nageezi A28-2409 02H
Project:	San Juan County, NM	**TVD Reference:**	KB @ 6878.0usft (Aztec 920)
Reference Site:	S28-T24N-R9W	**MD Reference:**	KB @ 6878.0usft (Aztec 920)
Site Error:	0.0usft	**North Reference:**	True
Reference Well:	Nageezi A28-2409 02H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #9	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 6878.0usft (Aztec 920)
Offset Depths are relative to Offset Datum
Central Meridian is -107.833333 °

Coordinates are relative to: Nageezi A28-2409 02H
Coordinate System is US State Plane 1983, New Mexico Western Zone
Grid Convergence at Surface is: 0.03°

Ladder Plot



LEGEND

- Nageezi A28-2409 01H, Pilot Hole, Pilot Hole V0
- Escrito L27-2409 01H, Hz, FINAL V0
- Escrito L27-2409 02H, Hz, FINAL V0
- Nageezi A28-2409 01H, Hz, Plan #13 V0

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Nageezi Unit A28-2409 02H
SHL: NE/4 NE/4 Sec 28 T24N R9W, 1234' FNL, 318' FEL
BHL: NW/4 SW/4 Sec 28 T24N R9W, 1860' FNL, 330' FWL
San Juan, New Mexico

Encana Oil & Gas (USA) Inc.
Drilling Plan

1. ESTIMATED TOPS OF GEOLOGICAL MARKERS (TVD)

The estimated tops of important geologic markers are as follows:

Formation	Depth (TVD) units = feet
San Jose Fn.	n/a
Nacimiento Fn.	surface
Ojo Alamo Ss.	863
Kirtland Shale	1,048
Fruitland Coal	1,353
Pictured Cliffs Ss.	1,638
Lewis Shale	1,741
Cliffhouse Ss.	2,399
Menefee Fn.	3,167
Point Lookout Ss.	4,104
Mancos Shale	4,277
Mancos Silt	4,813
Gallup Fn.	5,071
Base Gallup	5,393

The referenced surface elevation is 6863', KB 6878'

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

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	1,353
Oil/Gas	Pictured Cliffs Ss.	1,638
Oil/Gas	Cliffhouse Ss.	2,399
Gas	Menefee Fn.	3,167
Oil/Gas	Point Lookout Ss.	4,104
Oil/Gas	Mancos Shale	4,277
Oil/Gas	Mancos Silt	4,813
Oil/Gas	Gallup Fn.	5,071

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

Nageezi Unit A28-2409 02H
SHL: NE/4 NE/4 Sec 28 T24N R9W, 1234' FNL, 318' FEL
BHL: NW/4 SW/4 Sec 28 T24N R9W, 1860' FNL, 330' FWL
San Juan, New Mexico

3. PRESSURE CONTROL

a) Pressure contol 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'-5498'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5398'-10497'	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 A28-2409 02H
SHL: NE/4 NE/4 Sec 28 T24N R9W, 1234' FNL, 318' FEL
BHL: NW/4 SW/4 Sec 28 T24N R9W, 1860' FNL, 330' FWL
San Juan, New Mexico

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

b) The proposed cementing program is as follows

Casing	Depth (MD)	Cement Volume (sacks)	Cement Type & Yield	Designed TOC	Centralizers
Conductor	0'-60'	100 sks	Type I Neat 16 ppg	Surface	None
Surface	0'-500'	228 sks	Type III Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.2% bwoc FL-52A + 58.9% Fresh Water	Surface	1 per joint on bottom 3 joints
Intermediate	0'-5498'	100% open hole excess Stage 1 Lead: 512 sks Stage 1 Tail: 390 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	5398'-10497'	50% OH excess Stage 1 Blend Total: 289sks	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 2000'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5276'/10497'	Gallup

Nageezi Unit A28-2409 02H
SHL: NE/4 NE/4 Sec 28 T24N R9W, 1234' FNL, 318' FEL
BHL: NW/4 SW/4 Sec 28 T24N R9W, 1860' FNL, 330' FWL
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'-5234'/5498	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"	5234'/5498'-5276'/10497'	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 +/- 2503 psi based on a 9.0 ppg at 5348' TVD of the horizontal lateral target. No abnormal pressure or temperatures are anticipated.

No hydrogen sulfide gas is anticipated, however, if H_2S is encountered, the guidelines in Onshore Order No. 6 will be followed.

9. ANTICIPATED START DATE AND DURATION OF OPERATIONS

Drilling is estimated to commence on November 5, 2015. It is anticipated that completion operations will begin within 30 days after the well has been drilled depending on fracture treatment schedules with various pumping service companies.

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

LOC: NE/4 NE/4 Sec 28 T24N R9W, 1234' FNL
County: San Juan
WELL: Nageezi Unit A28-2409 02H

Encana Natural Gas

WELL SUMMARY

ENG: Michael Sanch 1-7-15
RIG: Aztec 920
GLE: 6863
RKBE: 6877.5

MWD LWD	OPEN HOLE LOGGING	FORM	DEPTH TVD	DEPTH MD	HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION INFORMATION
			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.	surface					
		9 5/8" Csg	500	500.00				
		Ojo Alamo Ss.	863					
		Kirtland Shale	1,048					
	No OH logs	Fruitland Coal	1,353			7" 26ppf J55 LTC	Fresh Wtr	
Survey Every 60'-120', updating anticollision report after surveys. Stop operations and contact drilling engineer if separation factor approaches 1.5		Pictured Cliffs Ss.	1,638		8 3/4	TOC @ surface (100% OH excess - 70% Lead 30% Tail) Stage 1 Total: 903sks	8.3-10	Vertical <1°
		Lewis Shale	1,741					
		Cliffhouse Ss.	2,399					
		Menefee Fn.	3,167			Stage 1 Lead: 512 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.		
		Point Lookout Ss.	4,104					
		Mancos Shale	4,277					
	Mud logger onsite	KOP	2,000	2,000		Stage 1 Tail: 390 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.		
Surveys every 30' through the curve		Mancos Silt	4,813					
		Gallup Fn.	5,071					
		7" Csg	5,234	5,498'				
					6 1/8	100' overlap at liner top		Horz Inc/TVD 90.9deg/5347.5ft
Surveys every stand to TD unless directed otherwise by Geologist		Horizontal Target	5,348					
		TD	5,276	10,497		4998' Drilled Lateral		TD = 10496.5 MD
	No OH Logs	Base Gallup	5,393			4 1/2" 11.6ppf SB80 LTC TOC @ hanger (50% OH excess) Stage 1 Total: 289sks Stage 1 Blend: 289 sks Premium Lite High Strength FM + 0.7% bwoc R-3 + 3% bwow Potassium Chloride + 0.25lbs/sack Cello Flake + 0.5% bwoc CD-32 + 1.15% bwoc FL-52A + 60 lbs/sack Calcium Carbonate + 124.4% Fresh Water. Yield 2.63 cuft/sk.	WBM 8.3-10	
MWD Gamma Directional								

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 2000', 8 3/4 inch holesize
5) Start curve at 10deg/100' build rate
6) Drill to csg point of 5498' MD
7) R&C 7" csg, circ cmt to surface
8) Land at ~55 deg, drill lateral to 10497' run 4 1/2 inch cemented liner