

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

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

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 478-3460 Fax: (505) 478-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

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

Submit one copy to appropriate
District Office

☒ AS-DRILLED
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35863		² Pool Code 98080	³ Pool Name NAGEEZI UNIT; MANCOS
⁴ Property Code 315244	⁵ Property Name NAGEEZI UNIT		⁶ Well Number 502H
⁷ OGRID No. 282327	⁸ Operator Name ENCANA OIL & GAS (USA) INC.		⁹ Elevation 6780'

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
G	3	23N	9W		2567'	NORTH	1528'	EAST	SAN JUAN

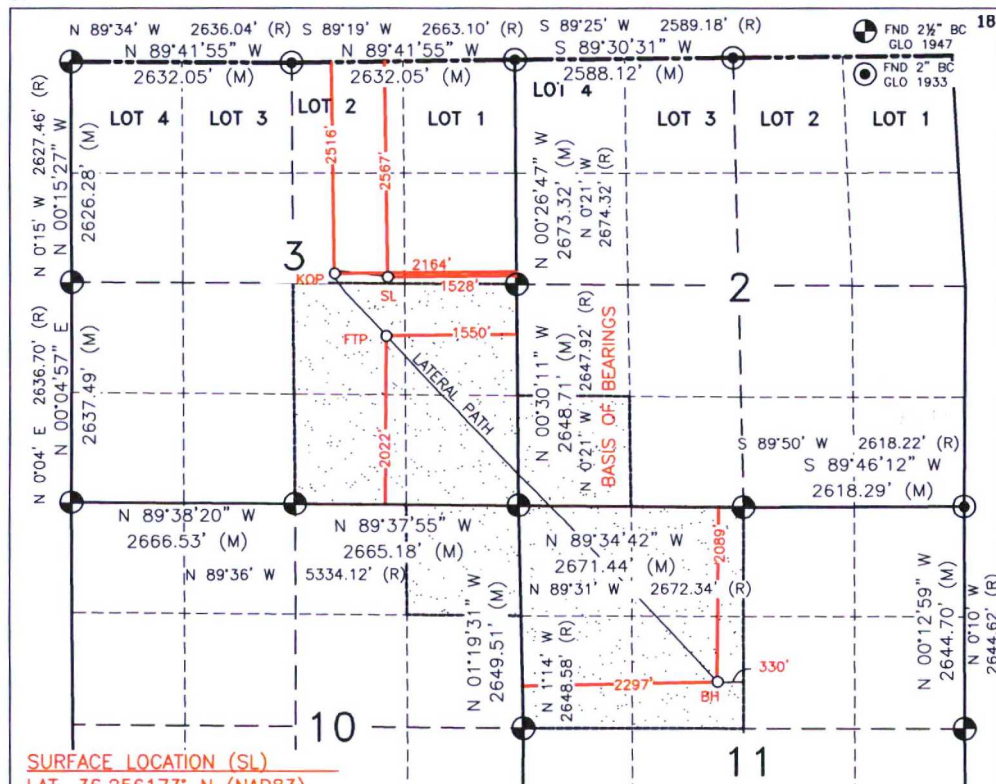
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	11	23N	9W		2089'	NORTH	2297'	WEST	SAN JUAN

¹² Dedicated Acres SE/4 SEC. 3 (160 AC); SW/SW SEC. 2 (40 AC); NE/NE SEC. 10 (40 AC); NW/4 SEC. 11 (160 AC) = 400.00 ACRES TOTAL	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16



SURFACE LOCATION (SL)
LAT. 36.256173° N (NAD83)
LONG. 107.772554° W (NAD83)
LAT. 36.256161° N (NAD27)
LONG. 107.771940° W (NAD27)
KICK OFF POINT (KOP)
LAT. 36.256288° N (NAD83)
LONG. 107.774712° W (NAD83)
LAT. 36.256276° N (NAD27)
LONG. 107.774098° W (NAD27)

FIRST TAKE POINT (FTP)
LAT. 36.254250° N (NAD83)
LONG. 107.772608° W (NAD83)
LAT. 36.254238° N (NAD27)
LONG. 107.771994° W (NAD27)
LAST TAKE POINT (LTP)
LAT. 36.242878° N (NAD83)
LONG. 107.759341° W (NAD83)
LAT. 36.242865° N (NAD27)
LONG. 107.758727° 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.

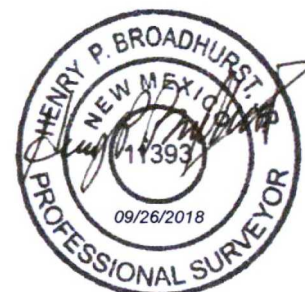
Steven Merrell 09/28/18
Signature Date
Steven Merrell
Printed Name
Steven.Merrell@encana.com
E-mail Address

SURVEYOR CERTIFICATION

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

SEPTEMBER 11, 2018

Date of Survey
Signature and Seal of Professional Surveyor:



Certificate Number 11393

CONFIDENTIAL

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OIL CONSERVATION DIVISION

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Santa Fe, NM 87505

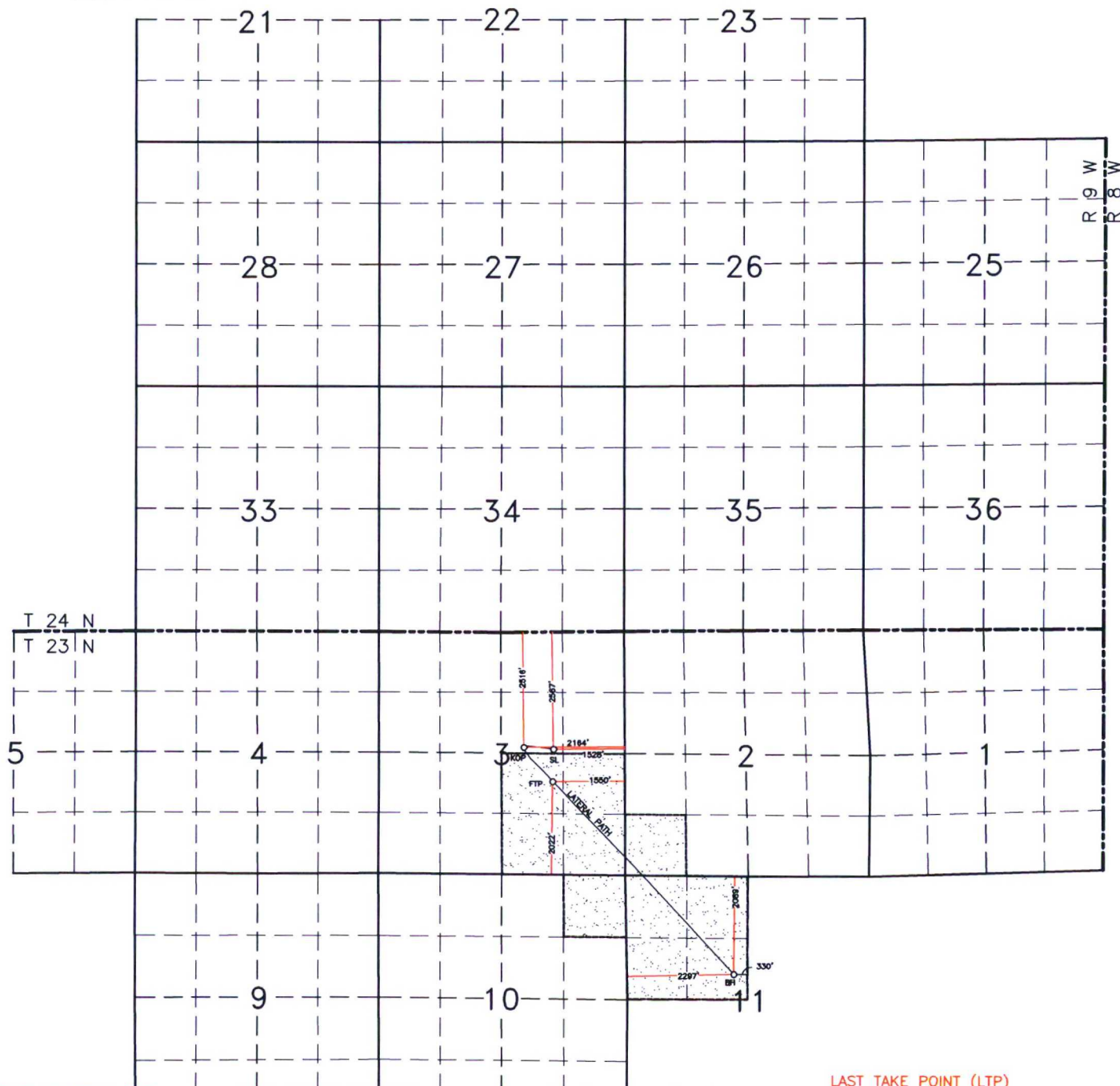
Form C-102
Revised August 1, 2011

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☒ AS-DRILLED
☐ AMENDED REPORT

ENCANA OIL & GAS (USA) INC.
NAGEEZI UNIT #502H

PENETRATED SPACING UNIT: SE/4 SEC. 3 (160 AC);
SW/4 SEC. 2 (40 AC.); NE/NE SEC. 10 (40 AC.);
NW/4 SEC. 11 (160 AC) = 400.00 ACRES TOTAL
TOTAL 10,415.12 ACRES: T24N R9W, SEC. 21-23 (S/2),
25-28, 33-36, 1-4, 9-10 (ALL); T23N R9W, SEC. 5 (W/2), 11
(NW/4) - UNDIVIDED UNIT



SURFACE LOCATION (SL)
LAT. 36.256173° N (NAD83)
LONG. 107.772554° W (NAD83)
LAT. 36.256161° N (NAD27)
LONG. 107.771940° W (NAD27)

KICK OFF POINT (KOP)
LAT. 36.256288° N (NAD83)
LONG. 107.774712° W (NAD83)
LAT. 36.256276° N (NAD27)
LONG. 107.774098° W (NAD27)

FIRST TAKE POINT (FTP)
LAT. 36.254250° N (NAD83)
LONG. 107.772608° W (NAD83)
LAT. 36.254238° N (NAD27)
LONG. 107.771994° W (NAD27)

LAST TAKE POINT (LTP)
BOTTOM HOLE (BHI)
LAT. 36.242878° N (NAD83)
LONG. 107.759341° W (NAD83)
LAT. 36.242865° N (NAD27)
LONG. 107.758727° W (NAD27)



Scientific Drilling

Directional Survey Certification

2948 I-70 Business Loop
Grand Junction, CO 81504
(970)-245-9447 Fax (970)-245-9454

Operator	EnCana
Well Name & No.	Nageezi Unit 502H
County & State	San Juan County, NM
SDI Job No.	OP.0012632
Rig	Aztec 920

I, Janie Collins, having personal knowledge of all the facts, hereby certify that the attached directional survey run from a measured depth of 366 feet to a measured depth of 11,353 feet is true and correct as determined from all available records.


Signature

24-Sep-18
Date

Janie Collins

Colorado District Well Planner
Scientific Drilling International



Scientific Drilling, Intl
Survey Report



Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM NAD83
Site: Nageezi Unit
Well: NU 502H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NU 502H
TVD Reference: GL 6783' & GL 14' @ 6797.00ft (Aztec 920)
MD Reference: GL 6783' & GL 14' @ 6797.00ft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Grand Junction District

Project San Juan County, NM NAD83

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Western Zone

System Datum: Mean Sea Level

Site Nageezi Unit

Site Position:
From: Lat/Long
Position Uncertainty: 0.00 ft
Northing: 1,909,590.56 usft
Easting: 2,736,924.75 usft
Slot Radius: 13.200 in
Latitude: 36.2480460
Longitude: -107.7864190
Grid Convergence: 0.03 °

Well NU 502H

Well Position +N/-S 0.00 ft
+E/-W 0.00 ft
Position Uncertainty 0.00 ft
Northing: 1,912,551.25 usft
Easting: 2,741,011.10 usft
Wellhead Elevation: 0.00 ft
Latitude: 36.2561730
Longitude: -107.7725541
Ground Level: 6,783.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/15/2018	8.93	62.82	49,554

Design OH

Audit Notes:

Version: 1.0
Phase: ACTUAL
Tie On Depth: 0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	140.92

Survey Program Date 9/4/2018

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
366.00	4,243.00	Survey #1 - Surface MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM
4,273.00	5,577.00	Survey #2 - Curve MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM
5,641.00	11,353.00	Survey #3 - Lateral MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
366.00	0.62	106.84	365.99	-0.57	1.90	1.64	0.17	0.17	0.00
427.00	0.71	106.38	426.99	-0.78	2.57	2.22	0.15	0.15	-0.75
488.00	0.45	139.92	487.99	-1.07	3.09	2.78	0.68	-0.43	54.98
550.00	0.41	105.96	549.98	-1.31	3.46	3.20	0.41	-0.06	-54.77
611.00	0.41	117.03	610.98	-1.47	3.86	3.58	0.13	0.00	18.15
672.00	0.17	322.70	671.98	-1.50	4.00	3.69	0.93	-0.39	-253.00
732.00	0.69	318.70	731.98	-1.16	3.71	3.24	0.87	0.87	-6.67
792.00	0.79	310.78	791.98	-0.62	3.16	2.47	0.24	0.17	-13.20



Scientific Drilling, Intl
Survey Report



Company: EnCana Oil & Gas (USA) Inc
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Site: Nageezi Unit
Well: NU 502H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NU 502H
TVD Reference: GL 6783' & GL 14' @ 6797.00ft (Aztec 920)
MD Reference: GL 6783' & GL 14' @ 6797.00ft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Grand Junction District

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
853.00	0.68	299.83	852.97	-0.16	2.53	1.72	0.29	-0.18	-17.95
913.00	0.84	291.04	912.96	0.17	1.81	1.01	0.33	0.27	-14.65
974.00	0.85	285.43	973.96	0.46	0.96	0.25	0.14	0.02	-9.20
1,035.00	0.68	284.43	1,034.95	0.67	0.17	-0.41	0.28	-0.28	-1.64
1,096.00	0.57	290.21	1,095.95	0.86	-0.47	-0.96	0.21	-0.18	9.48
1,157.00	0.72	289.64	1,156.95	1.09	-1.11	-1.55	0.25	0.25	-0.93
1,218.00	0.72	292.73	1,217.94	1.37	-1.83	-2.22	0.06	0.00	5.07
1,279.00	0.60	272.46	1,278.94	1.53	-2.50	-2.77	0.43	-0.20	-33.23
1,339.00	0.50	280.00	1,338.93	1.59	-3.07	-3.17	0.21	-0.17	12.57
1,400.00	0.62	276.49	1,399.93	1.68	-3.66	-3.61	0.20	0.20	-5.75
1,461.00	0.77	277.51	1,460.93	1.77	-4.40	-4.14	0.25	0.25	1.67
1,522.00	0.98	279.86	1,521.92	1.91	-5.32	-4.83	0.35	0.34	3.85
1,583.00	1.14	277.70	1,582.91	2.08	-6.43	-5.67	0.27	0.26	-3.54
1,644.00	1.91	287.12	1,643.89	2.46	-8.00	-6.96	1.32	1.26	15.44
1,705.00	2.51	283.12	1,704.84	3.06	-10.28	-8.86	1.01	0.98	-6.56
1,766.00	2.76	281.65	1,765.78	3.66	-13.02	-11.05	0.42	0.41	-2.41
1,827.00	4.12	283.00	1,826.67	4.45	-16.59	-13.91	2.23	2.23	2.21
1,887.00	5.58	281.93	1,886.45	5.54	-21.54	-17.88	2.44	2.43	-1.78
1,949.00	6.90	279.72	1,948.08	6.79	-28.16	-23.03	2.16	2.13	-3.56
2,010.00	7.21	277.02	2,008.62	7.88	-35.57	-28.54	0.74	0.51	-4.43
2,072.00	8.19	275.39	2,070.06	8.77	-43.83	-34.44	1.62	1.58	-2.63
2,133.00	9.10	278.31	2,130.37	9.87	-52.93	-41.03	1.66	1.49	4.79
2,193.00	10.47	280.16	2,189.49	11.52	-62.99	-48.66	2.34	2.28	3.08
2,254.00	11.77	279.67	2,249.34	13.54	-74.58	-57.53	2.14	2.13	-0.80
2,316.00	13.12	278.81	2,309.89	15.68	-87.77	-67.51	2.20	2.18	-1.39
2,376.00	14.44	278.05	2,368.16	17.78	-101.91	-78.04	2.22	2.20	-1.27
2,435.00	15.85	276.12	2,425.11	19.66	-117.20	-89.15	2.54	2.39	-3.27
2,496.00	16.72	276.24	2,483.66	21.51	-134.21	-101.30	1.43	1.43	0.20
2,557.00	16.80	276.14	2,542.07	23.40	-151.70	-113.80	0.14	0.13	-0.16
2,618.00	17.20	276.58	2,600.40	25.38	-169.42	-126.51	0.69	0.66	0.72
2,678.00	17.20	275.53	2,657.72	27.25	-187.07	-139.08	0.52	0.00	-1.75
2,738.00	16.87	273.67	2,715.09	28.66	-204.58	-151.22	1.06	-0.55	-3.10
2,799.00	17.37	273.30	2,773.39	29.75	-222.51	-163.37	0.84	0.82	-0.61
2,860.00	17.67	273.14	2,831.56	30.78	-240.84	-175.72	0.50	0.49	-0.26
2,921.00	17.00	274.23	2,889.78	31.95	-258.98	-188.06	1.22	-1.10	1.79
2,982.00	17.16	274.19	2,948.09	33.27	-276.85	-200.35	0.26	0.26	-0.07
3,042.00	17.25	273.56	3,005.41	34.46	-294.55	-212.44	0.34	0.15	-1.05
3,104.00	16.94	275.98	3,064.67	35.98	-312.71	-225.06	1.25	-0.50	3.90
3,165.00	17.17	279.52	3,122.99	38.39	-330.43	-238.11	1.74	0.38	5.80
3,226.00	17.69	279.30	3,181.19	41.38	-348.46	-251.79	0.86	0.85	-0.36
3,286.00	17.85	279.11	3,238.33	44.31	-366.53	-265.46	0.28	0.27	-0.32
3,346.00	17.66	278.35	3,295.47	47.08	-384.62	-279.01	0.50	-0.32	-1.27
3,406.00	17.57	277.19	3,352.66	49.54	-402.61	-292.26	0.60	-0.15	-1.93



Scientific Drilling, Intl
Survey Report



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Wellbore: OH
Design: OH

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MD Reference: GL 6783' & GL 14' @ 6797.00ft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Grand Junction District

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,467.00	16.86	276.01	3,410.92	51.62	-420.54	-305.18	1.30	-1.16	-1.93
3,528.00	16.69	276.05	3,469.33	53.47	-438.05	-317.65	0.28	-0.28	0.07
3,589.00	16.82	276.93	3,527.74	55.46	-455.52	-330.21	0.47	0.21	1.44
3,650.00	17.33	276.92	3,586.05	57.62	-473.30	-343.09	0.84	0.84	-0.02
3,711.00	16.93	275.43	3,644.34	59.55	-491.16	-355.86	0.97	-0.66	-2.44
3,773.00	17.61	277.73	3,703.55	61.67	-509.44	-369.02	1.55	1.10	3.71
3,833.00	18.40	279.91	3,760.61	64.52	-527.76	-382.79	1.73	1.32	3.63
3,895.00	17.74	277.20	3,819.55	67.38	-546.77	-397.00	1.72	-1.06	-4.37
3,956.00	15.56	272.99	3,877.99	68.98	-564.17	-409.20	4.08	-3.57	-6.90
3,998.00	14.43	271.33	3,918.56	69.39	-575.02	-416.36	2.88	-2.69	-3.95
4,029.00	13.88	270.55	3,948.62	69.52	-582.60	-421.24	1.88	-1.77	-2.52
4,059.00	14.35	265.95	3,977.72	69.29	-589.91	-425.67	4.05	1.57	-15.33
4,090.00	15.03	258.89	4,007.71	68.24	-597.69	-429.76	6.17	2.19	-22.77
4,120.00	15.71	251.83	4,036.63	66.23	-605.36	-433.03	6.63	2.27	-23.53
4,151.00	16.01	244.47	4,066.46	63.08	-613.21	-435.53	6.56	0.97	-23.74
4,182.00	15.76	235.04	4,096.28	58.82	-620.52	-436.84	8.36	-0.81	-30.42
4,212.00	14.99	227.82	4,125.21	53.88	-626.73	-436.92	6.87	-2.57	-24.07
4,243.00	14.89	218.05	4,155.16	48.05	-632.16	-435.82	8.12	-0.32	-31.52
4,273.00	15.38	208.11	4,184.13	41.51	-636.41	-433.42	8.79	1.63	-33.13
4,304.00	16.02	198.56	4,213.98	33.82	-639.71	-429.53	8.58	2.06	-30.81
4,334.00	16.30	188.97	4,242.80	25.74	-641.69	-424.50	8.94	0.93	-31.97
4,365.00	16.87	180.42	4,272.51	16.94	-642.40	-418.12	8.08	1.84	-27.58
4,395.00	16.73	170.55	4,301.24	8.33	-641.72	-411.01	9.51	-0.47	-32.90
4,427.00	16.78	159.68	4,331.89	-0.55	-639.36	-402.63	9.78	0.16	-33.97
4,458.00	18.20	151.55	4,361.46	-9.00	-635.50	-393.63	9.11	4.58	-26.23
4,490.00	20.18	147.42	4,391.68	-18.05	-630.14	-383.23	7.50	6.19	-12.91
4,521.00	21.90	146.05	4,420.61	-27.35	-624.04	-372.16	5.77	5.55	-4.42
4,553.00	24.13	145.21	4,450.06	-37.68	-616.97	-359.69	7.04	6.97	-2.63
4,584.00	26.40	144.85	4,478.09	-48.52	-609.39	-346.50	7.34	7.32	-1.16
4,616.00	28.94	145.16	4,506.43	-60.69	-600.87	-331.68	7.95	7.94	0.97
4,647.00	30.69	143.86	4,533.33	-73.24	-591.91	-316.30	6.02	5.65	-4.19
4,678.00	31.83	142.95	4,559.83	-86.15	-582.32	-300.22	3.98	3.68	-2.94
4,711.00	33.68	142.96	4,587.58	-100.40	-571.57	-282.38	5.61	5.61	0.03
4,742.00	36.19	143.60	4,612.99	-114.63	-560.96	-264.65	8.18	8.10	2.06
4,773.00	38.47	144.28	4,637.64	-129.83	-549.89	-245.88	7.47	7.35	2.19
4,805.00	40.97	145.41	4,662.25	-146.55	-538.13	-225.48	8.13	7.81	3.53
4,837.00	43.42	142.94	4,685.96	-163.96	-525.54	-204.02	9.25	7.66	-7.72
4,868.00	46.23	140.73	4,707.95	-181.13	-512.03	-182.18	10.36	9.06	-7.13
4,900.00	49.26	139.70	4,729.46	-199.33	-496.87	-158.50	9.76	9.47	-3.22
4,932.00	52.20	138.39	4,749.71	-218.03	-480.63	-133.74	9.72	9.19	-4.09
4,964.00	54.42	137.87	4,768.83	-237.14	-463.51	-108.11	7.06	6.94	-1.63
4,996.00	56.79	137.37	4,786.91	-256.64	-445.71	-81.75	7.52	7.41	-1.56
5,028.00	58.95	136.75	4,803.93	-276.48	-427.25	-54.72	6.95	6.75	-1.94



Scientific Drilling, Intl
Survey Report



Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM NAD83
Site: Nageezi Unit
Well: NU 502H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well NU 502H
TVD Reference: GL 6783' & GL 14' @ 6797.00ft (Aztec 920)
MD Reference: GL 6783' & GL 14' @ 6797.00ft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Grand Junction District

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,059.00	61.40	136.42	4,819.34	-296.01	-408.76	-27.90	7.96	7.90	-1.06
5,091.00	64.32	136.34	4,833.94	-316.62	-389.12	0.48	9.13	9.13	-0.25
5,131.00	68.70	135.63	4,849.88	-343.00	-363.63	37.02	11.07	10.95	-1.78
5,199.00	71.28	134.99	4,873.15	-388.41	-318.70	100.60	3.90	3.79	-0.94
5,231.00	71.62	134.90	4,883.33	-409.85	-297.23	130.78	1.10	1.06	-0.28
5,262.00	73.01	134.75	4,892.74	-430.67	-276.28	160.14	4.51	4.48	-0.48
5,294.00	74.82	134.02	4,901.61	-452.17	-254.31	190.69	6.07	5.66	-2.28
5,324.00	76.36	133.99	4,909.07	-472.36	-233.41	219.53	5.13	5.13	-0.10
5,354.00	78.87	134.64	4,915.51	-492.83	-212.44	248.64	8.63	8.37	2.17
5,385.00	81.59	134.71	4,920.77	-514.30	-190.72	279.00	8.78	8.77	0.23
5,420.00	82.64	135.06	4,925.57	-538.77	-166.16	313.48	3.16	3.00	1.00
5,452.00	86.24	135.79	4,928.67	-561.45	-143.81	345.18	11.48	11.25	2.28
5,483.00	88.22	136.97	4,930.17	-583.87	-122.45	376.04	7.43	6.39	3.81
5,514.00	89.56	137.57	4,930.77	-606.63	-101.42	406.97	4.74	4.32	1.94
5,577.00	91.21	137.49	4,930.34	-653.10	-58.88	469.86	2.62	2.62	-0.13
5,641.00	90.74	137.37	4,929.26	-700.23	-15.60	533.73	0.76	-0.73	-0.19
5,704.00	90.60	138.14	4,928.52	-746.86	26.76	596.63	1.24	-0.22	1.22
5,767.00	91.57	137.25	4,927.33	-793.44	69.15	659.52	2.09	1.54	-1.41
5,831.00	91.51	136.80	4,925.61	-840.25	112.76	723.35	0.71	-0.09	-0.70
5,894.00	91.84	136.17	4,923.76	-885.92	156.12	786.13	1.13	0.52	-1.00
5,957.00	91.31	136.00	4,922.03	-931.29	199.80	848.88	0.88	-0.84	-0.27
6,020.00	91.37	135.30	4,920.56	-976.32	243.83	911.60	1.11	0.10	-1.11
6,082.00	91.54	135.70	4,918.99	-1,020.53	287.27	973.30	0.70	0.27	0.65
6,146.00	91.75	136.06	4,917.15	-1,066.46	331.81	1,037.03	0.65	0.33	0.56
6,209.00	91.14	135.68	4,915.56	-1,111.66	375.66	1,099.76	1.14	-0.97	-0.60
6,272.00	90.67	136.81	4,914.56	-1,157.16	419.22	1,162.54	1.94	-0.75	1.79
6,334.00	91.81	137.31	4,913.22	-1,202.54	461.45	1,224.39	2.01	1.84	0.81
6,397.00	92.65	138.28	4,910.77	-1,249.17	503.74	1,287.25	2.04	1.33	1.54
6,461.00	91.51	139.08	4,908.45	-1,297.20	545.97	1,351.15	2.18	-1.78	1.25
6,524.00	91.11	138.90	4,907.01	-1,344.73	587.30	1,414.10	0.70	-0.63	-0.29
6,587.00	91.17	138.35	4,905.75	-1,391.99	628.93	1,477.04	0.88	0.10	-0.87
6,648.00	90.97	137.70	4,904.62	-1,437.33	669.72	1,537.95	1.11	-0.33	-1.07
6,709.00	91.21	137.56	4,903.46	-1,482.39	710.82	1,598.84	0.46	0.39	-0.23
6,769.00	91.04	137.49	4,902.28	-1,526.64	751.33	1,658.72	0.31	-0.28	-0.12
6,830.00	90.77	136.57	4,901.31	-1,571.27	792.90	1,719.57	1.57	-0.44	-1.51
6,891.00	90.70	136.55	4,900.53	-1,615.56	834.84	1,780.39	0.12	-0.11	-0.03
6,952.00	90.17	136.35	4,900.07	-1,659.76	876.87	1,841.20	0.93	-0.87	-0.33
7,013.00	91.21	136.04	4,899.33	-1,703.78	919.09	1,901.99	1.78	1.70	-0.51
7,075.00	91.14	136.73	4,898.06	-1,748.66	961.85	1,963.78	1.12	-0.11	1.11
7,136.00	90.60	135.69	4,897.14	-1,792.69	1,004.06	2,024.57	1.92	-0.89	-1.70
7,197.00	90.34	135.28	4,896.64	-1,836.19	1,046.82	2,085.29	0.80	-0.43	-0.67
7,257.00	90.17	134.67	4,896.37	-1,878.59	1,089.26	2,144.97	1.06	-0.28	-1.02
7,317.00	90.84	136.08	4,895.84	-1,921.29	1,131.41	2,204.68	2.60	1.12	2.35
7,378.00	91.21	137.05	4,894.75	-1,965.58	1,173.34	2,265.50	1.70	0.61	1.59



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Survey Report



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Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,438.00	90.60	137.28	4,893.80	-2,009.58	1,214.13	2,325.36	1.09	-1.02	0.38
7,499.00	90.80	136.56	4,893.06	-2,054.13	1,255.79	2,386.21	1.22	0.33	-1.18
7,559.00	90.84	136.99	4,892.20	-2,097.84	1,296.88	2,446.04	0.72	0.07	0.72
7,621.00	91.14	136.37	4,891.13	-2,142.94	1,339.41	2,507.86	1.11	0.48	-1.00
7,682.00	91.01	135.71	4,889.98	-2,186.84	1,381.74	2,568.63	1.10	-0.21	-1.08
7,743.00	90.74	135.48	4,889.05	-2,230.42	1,424.42	2,629.36	0.58	-0.44	-0.38
7,803.00	90.23	134.93	4,888.54	-2,272.99	1,466.69	2,689.06	1.25	-0.85	-0.92
7,864.00	90.30	134.66	4,888.26	-2,315.97	1,509.98	2,749.71	0.46	0.11	-0.44
7,925.00	90.23	134.52	4,887.98	-2,358.79	1,553.42	2,810.34	0.26	-0.11	-0.23
7,986.00	90.60	135.09	4,887.54	-2,401.78	1,596.70	2,870.99	1.11	0.61	0.93
8,046.00	90.77	135.59	4,886.82	-2,444.45	1,638.87	2,930.70	0.88	0.28	0.83
8,107.00	90.60	135.66	4,886.09	-2,488.05	1,681.53	2,991.44	0.30	-0.28	0.11
8,168.00	89.77	134.50	4,885.89	-2,531.24	1,724.60	3,052.12	2.34	-1.36	-1.90
8,230.00	90.37	135.29	4,885.82	-2,575.00	1,768.52	3,113.77	1.60	0.97	1.27
8,291.00	91.51	136.43	4,884.82	-2,618.77	1,811.00	3,174.53	2.64	1.87	1.87
8,352.00	91.24	137.64	4,883.35	-2,663.40	1,852.56	3,235.37	2.03	-0.44	1.98
8,412.00	91.47	137.31	4,881.93	-2,707.60	1,893.10	3,295.24	0.67	0.38	-0.55
8,474.00	91.58	137.12	4,880.28	-2,753.09	1,935.20	3,357.09	0.35	0.18	-0.31
8,534.00	90.84	135.90	4,879.02	-2,796.61	1,976.48	3,416.90	2.38	-1.23	-2.03
8,596.00	91.07	135.11	4,877.98	-2,840.83	2,019.93	3,478.61	1.33	0.37	-1.27
8,657.00	90.87	134.56	4,876.95	-2,883.83	2,063.18	3,539.26	0.96	-0.33	-0.90
8,718.00	91.17	135.45	4,875.86	-2,926.96	2,106.30	3,599.92	1.54	0.49	1.46
8,779.00	90.77	136.75	4,874.83	-2,970.91	2,148.59	3,660.70	2.23	-0.66	2.13
8,841.00	90.91	136.43	4,873.92	-3,015.94	2,191.20	3,722.51	0.56	0.23	-0.52
8,901.00	90.70	135.71	4,873.08	-3,059.15	2,232.82	3,782.29	1.25	-0.35	-1.20
8,960.00	90.07	134.76	4,872.68	-3,101.04	2,274.36	3,841.00	1.93	-1.07	-1.61
9,021.00	88.66	133.92	4,873.36	-3,143.67	2,317.99	3,901.59	2.69	-2.31	-1.38
9,082.00	88.32	134.16	4,874.97	-3,186.06	2,361.82	3,962.13	0.68	-0.56	0.39
9,143.00	90.17	135.26	4,875.77	-3,228.97	2,405.17	4,022.77	3.53	3.03	1.80
9,203.00	90.87	137.13	4,875.23	-3,272.26	2,446.70	4,082.56	3.33	1.17	3.12
9,263.00	90.03	136.70	4,874.75	-3,316.08	2,487.68	4,142.41	1.57	-1.40	-0.72
9,324.00	89.90	136.31	4,874.79	-3,360.33	2,529.66	4,203.23	0.67	-0.21	-0.64
9,385.00	90.44	136.78	4,874.61	-3,404.61	2,571.62	4,264.05	1.17	0.89	0.77
9,445.00	90.80	136.37	4,873.96	-3,448.19	2,612.86	4,323.87	0.91	0.60	-0.68
9,507.00	90.57	135.93	4,873.22	-3,492.90	2,655.81	4,385.65	0.80	-0.37	-0.71
9,567.00	91.01	136.17	4,872.39	-3,536.09	2,697.45	4,445.43	0.84	0.73	0.40
9,629.00	90.91	138.41	4,871.35	-3,581.64	2,739.49	4,507.29	3.62	-0.16	3.61
9,690.00	89.16	138.51	4,871.32	-3,627.29	2,779.94	4,568.23	2.87	-2.87	0.16
9,751.00	89.93	137.89	4,871.80	-3,672.76	2,820.60	4,629.16	1.62	1.26	-1.02
9,811.00	90.31	137.43	4,871.68	-3,717.11	2,861.01	4,689.07	0.99	0.63	-0.77
9,871.00	89.93	136.59	4,871.55	-3,761.00	2,901.92	4,748.93	1.54	-0.63	-1.40
9,931.00	90.44	137.52	4,871.36	-3,804.92	2,942.80	4,808.79	1.77	0.85	1.55
9,992.00	90.84	138.24	4,870.67	-3,850.16	2,983.71	4,869.70	1.35	0.66	1.18



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Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,053.00	90.47	137.54	4,869.98	-3,895.41	3,024.61	4,930.61	1.30	-0.61	-1.15
10,114.00	90.07	136.87	4,869.69	-3,940.17	3,066.05	4,991.48	1.28	-0.66	-1.10
10,175.00	90.94	136.13	4,869.15	-3,984.42	3,108.04	5,052.29	1.87	1.43	-1.21
10,236.00	90.64	136.71	4,868.31	-4,028.60	3,150.08	5,113.10	1.07	-0.49	0.95
10,298.00	91.44	137.10	4,867.19	-4,073.87	3,192.44	5,174.94	1.44	1.29	0.63
10,358.00	90.77	137.06	4,866.03	-4,117.80	3,233.29	5,234.79	1.12	-1.12	-0.07
10,420.00	89.90	136.25	4,865.67	-4,162.89	3,275.84	5,296.62	1.92	-1.40	-1.31
10,481.00	90.94	135.27	4,865.22	-4,206.59	3,318.40	5,357.37	2.34	1.70	-1.61
10,542.00	90.91	135.72	4,864.23	-4,250.09	3,361.15	5,418.09	0.74	-0.05	0.74
10,605.00	91.48	136.01	4,862.92	-4,295.29	3,405.01	5,480.83	1.02	0.90	0.46
10,668.00	90.64	137.12	4,861.75	-4,341.03	3,448.32	5,543.63	2.21	-1.33	1.76
10,732.00	91.38	137.62	4,860.63	-4,388.11	3,491.65	5,607.50	1.40	1.16	0.78
10,795.00	90.94	137.68	4,859.35	-4,434.66	3,534.09	5,670.38	0.70	-0.70	0.10
10,858.00	90.81	136.57	4,858.39	-4,480.82	3,576.95	5,733.24	1.77	-0.21	-1.76
10,922.00	90.50	136.42	4,857.66	-4,527.24	3,621.00	5,797.04	0.54	-0.48	-0.23
10,985.00	89.63	137.13	4,857.59	-4,573.14	3,664.15	5,859.88	1.78	-1.38	1.13
11,049.00	91.00	136.23	4,857.23	-4,619.70	3,708.05	5,923.70	2.56	2.14	-1.41
11,113.00	91.24	136.48	4,855.98	-4,666.01	3,752.22	5,987.48	0.54	0.38	0.39
11,176.00	90.87	135.53	4,854.82	-4,711.32	3,795.97	6,050.24	1.62	-0.59	-1.51
11,240.00	90.10	135.50	4,854.28	-4,756.98	3,840.81	6,113.95	1.20	-1.20	-0.05
11,295.00	90.00	135.01	4,854.23	-4,796.04	3,879.53	6,168.68	0.91	-0.18	-0.89
11,353.00	90.00	135.01	4,854.23	-4,837.06	3,920.54	6,226.37	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____