

DISTRICT I

1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II

811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III

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

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3480 Fax: (505) 476-3482

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

☒ AMENDED REPORT
☒ AS-DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-043-21296		² Pool Code 98174	³ Pool Name ALAMITO MANCOS N (OIL)
⁴ Property Code 317188	⁵ Property Name NORTH ALAMITO UNIT		⁶ Well Number 308H
⁷ OGRID No. 282327	⁸ Operator Name ENCANA OIL & GAS (USA) INC.		⁹ Elevation 6893'

OIL CONS. DIV DIST. 3

MAY 03 2017

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
L	34	23N	7W		1463'	SOUTH	774'	WEST	SANDOVAL

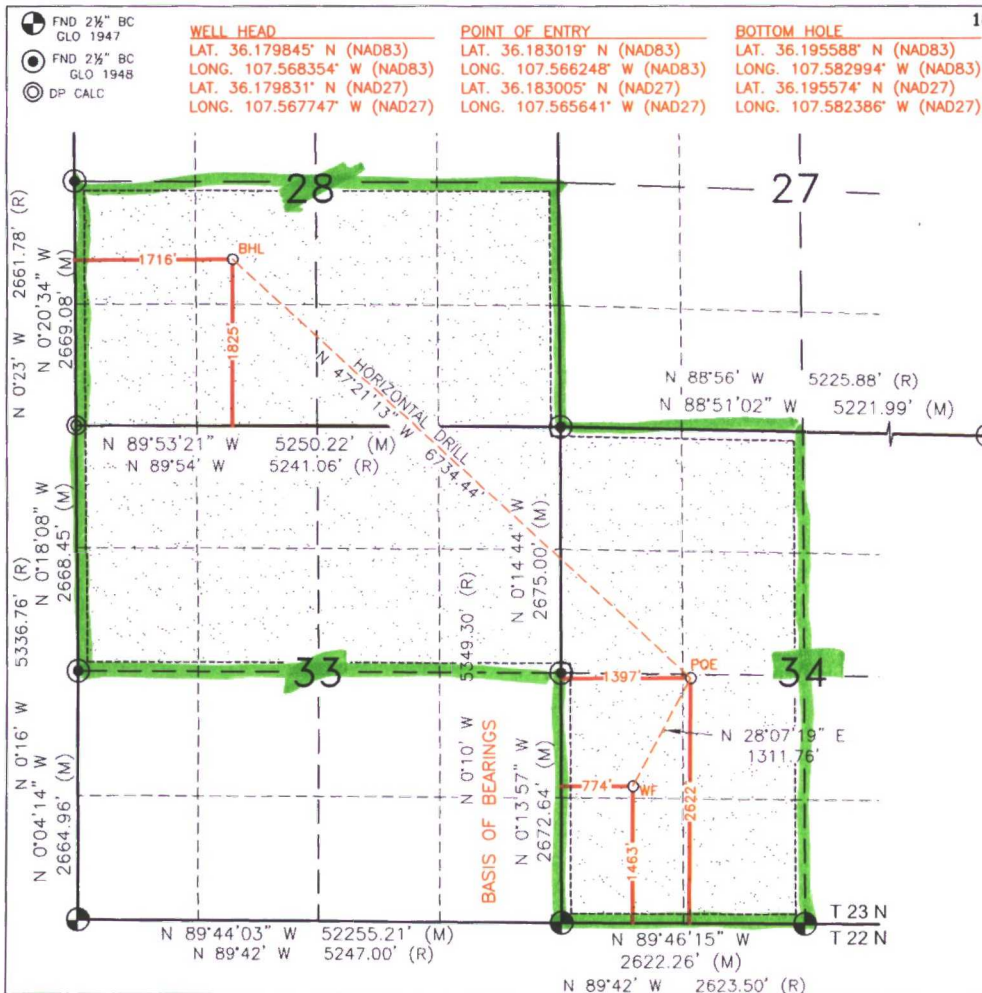
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	28	23N	7W		1825'	SOUTH	1716'	WEST	SANDOVAL

¹² Dedicated Acres PENETRATED SPACING UNIT: S/2 SEC. 28 (320 ACRES), N/2 SEC. 33 (320 ACRES), W/2 SEC. 34 (320 ACRES)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-14081-A (14,262.78 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



DISTRICT I

1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II

811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III

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

DISTRICT IV

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

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

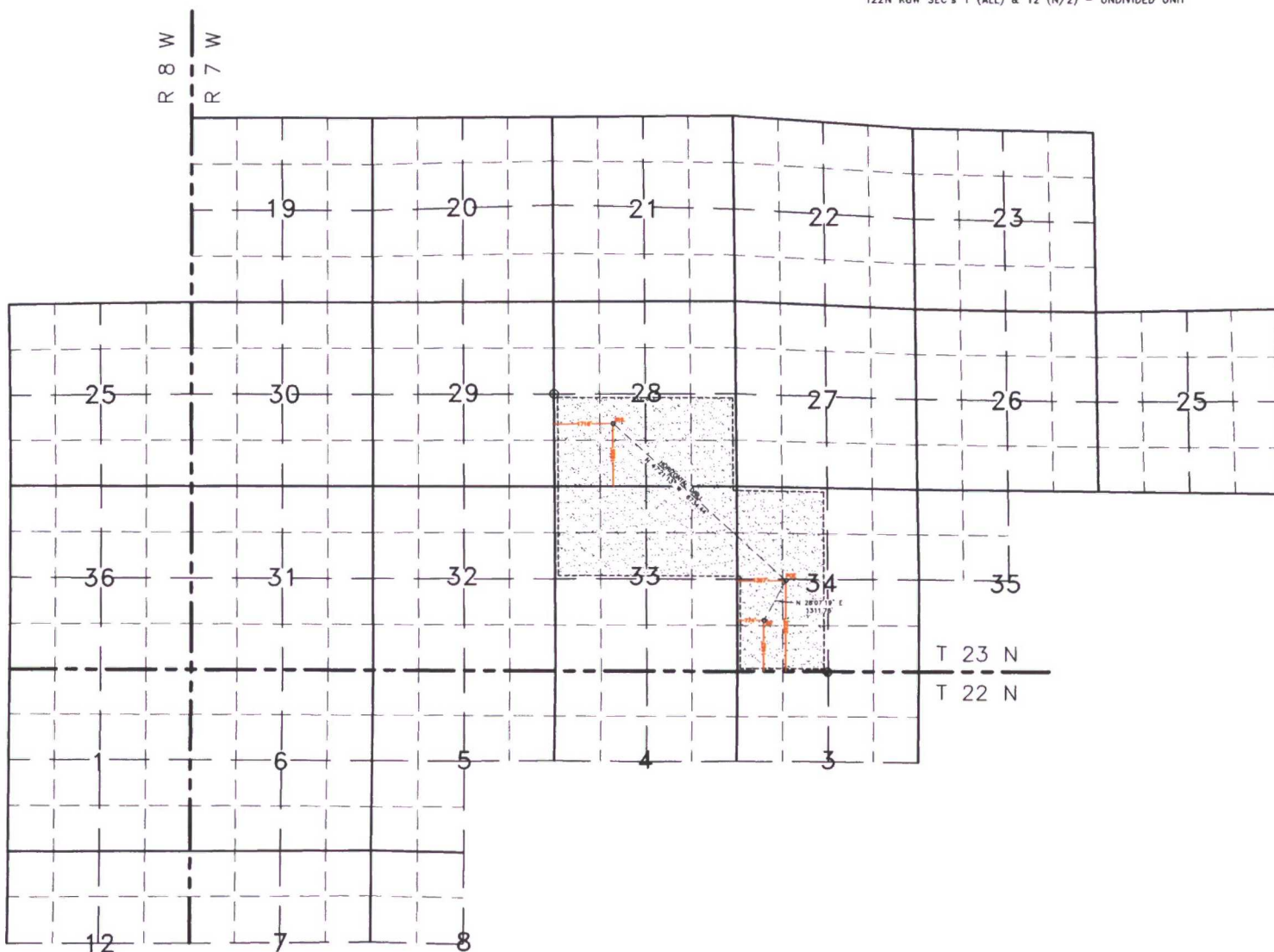
OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

☒ AMENDED REPORT
☒ AS-DRILLED

ENCANA OIL & GAS (USA) INC.
NORTH ALAMITO UNIT #308H

PENETRATED SPACING UNIT; S/2 SEC. 28 (320 ACRES), N/2 SEC.
33 (320 ACRES), W/2 SEC. 34 (320 ACRES)
TOTAL 14,262.78 ACRES: T23N R7W SEC's 19-23 (ALL); 25-34 (ALL); 35 (NW/4);
T22N R7W SEC's 3 (N/2); 4 (N/2); 5 (N/2, SW/4); 6 (ALL); 7 (N/2); 8 (NW/4);
T23N R8W SEC's 25 & 36 (ALL);
T22N R8W SEC's 1 (ALL) & 12 (N/2) - UNDIVIDED UNIT

**WELL HEAD**

LAT. 36.179845° N (NAD83)
LONG. 107.568354° W (NAD83)
LAT. 36.179831° N (NAD27)
LONG. 107.567747° W (NAD27)

POINT OF ENTRY

LAT. 36.183019° N (NAD83)
LONG. 107.566248° W (NAD83)
LAT. 36.183005° N (NAD27)
LONG. 107.565641° W (NAD27)

BOTTOM HOLE

LAT. 36.195588° N (NAD83)
LONG. 107.582994° W (NAD83)
LAT. 36.195574° N (NAD27)
LONG. 107.582386° W (NAD27)

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NORTH ALAMITO UNIT 308H
Project:	Sandoval County, NM	TVD Reference:	14' KB @ 6909.0ft (AZTEC 920)
Site:	S34-T23N-R7W	MD Reference:	14' KB @ 6909.0ft (AZTEC 920)
Well:	NORTH ALAMITO UNIT 308H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Project	Sandoval County, NM		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site		S34-T23N-R7W			
Site Position:		Northing:	1,887,404.69 ft	Latitude:	36.179925
From:	Lat/Long	Easting:	1,251,356.59 ft	Longitude:	-107.568333
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-0.78 °

Well	NORTH ALAMITO UNIT 308H					
Well Position	+N/-S	0.0 ft	Northing:	1,887,374.52 ft	Latitude:	36.179842
	+E/-W	0.0 ft	Easting:	1,251,352.64 ft	Longitude:	-107.568345
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	6,895.0 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	2/28/2017	8.95	62.88	49,613

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	312.32	

Survey Program	Date	3/14/2017			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
356.0	12,485.0	Survey #1 (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)	Formations / Comments
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
356.0	1.06	205.91	356.0	-3.0	-1.4	-0.9	0.30	0.30	
420.0	0.92	230.35	420.0	-3.8	-2.1	-1.0	0.69	-0.22	
483.0	1.10	221.29	483.0	-4.6	-2.9	-1.0	0.38	0.29	
609.0	1.67	106.95	608.9	-6.0	-1.9	-2.6	1.86	0.45	
673.0	3.78	98.25	672.9	-6.6	1.1	-5.2	3.35	3.30	
736.0	4.22	81.02	735.7	-6.6	5.4	-8.4	2.02	0.70	
799.0	3.34	65.55	798.6	-5.4	9.4	-10.6	2.13	-1.40	
862.0	3.60	49.35	861.5	-3.4	12.5	-11.5	1.60	0.41	
925.0	5.27	38.66	924.3	0.2	15.8	-11.6	2.95	2.65	
988.0	7.03	38.39	986.9	5.4	20.0	-11.2	2.79	2.79	
1,052.0	9.32	42.96	1,050.3	12.3	26.0	-10.9	3.72	3.58	
1,112.0	11.12	45.86	1,109.3	19.9	33.5	-11.4	3.12	3.00	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NORTH ALAMITO UNIT 308H
Project:	Sandoval County, NM	TVD Reference:	14' KB @ 6909.0ft (AZTEC 920)
Site:	S34-T23N-R7W	MD Reference:	14' KB @ 6909.0ft (AZTEC 920)
Well:	NORTH ALAMITO UNIT 308H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
1,174.0	12.48	46.22	1,170.0	28.7	42.6	-12.2	2.20	2.19	
1,235.0	13.32	51.23	1,229.5	37.7	52.8	-13.7	2.29	1.38	
1,296.0	14.41	53.95	1,288.7	46.5	64.5	-16.3	2.08	1.79	
1,358.0	15.21	53.51	1,348.6	55.9	77.2	-19.5	1.30	1.29	
1,419.0	15.47	57.82	1,407.4	65.0	90.5	-23.2	1.92	0.43	
1,480.0	17.05	62.04	1,466.0	73.5	105.3	-28.4	3.23	2.59	
1,542.0	17.18	60.72	1,525.3	82.3	121.4	-34.3	0.66	0.21	
1,602.0	19.29	61.16	1,582.2	91.4	137.8	-40.3	3.52	3.52	
1,664.0	19.91	59.84	1,640.7	101.6	155.9	-46.8	1.23	1.00	
1,725.0	19.47	58.43	1,698.1	112.2	173.5	-52.8	1.06	-0.72	
1,786.0	18.72	57.64	1,755.7	122.7	190.4	-58.2	1.30	-1.23	
1,846.0	18.19	54.13	1,812.6	133.4	206.2	-62.6	2.05	-0.88	
1,908.0	18.59	55.62	1,871.5	144.6	222.2	-66.9	1.00	0.65	
1,969.0	18.98	54.92	1,929.2	155.8	238.3	-71.3	0.74	0.64	
2,031.0	19.82	55.44	1,987.7	167.6	255.2	-75.9	1.38	1.35	
2,091.0	19.73	58.35	2,044.2	178.6	272.2	-81.0	1.65	-0.15	
2,152.0	19.03	59.05	2,101.7	189.2	289.5	-86.7	1.21	-1.15	
2,213.0	18.37	57.64	2,159.5	199.4	306.1	-92.1	1.31	-1.08	
2,274.0	17.71	61.07	2,217.5	209.1	322.4	-97.6	2.05	-1.08	
2,337.0	17.89	60.81	2,277.5	218.4	339.2	-103.8	0.31	0.29	
2,401.0	17.40	60.81	2,338.5	227.9	356.2	-109.9	0.77	-0.77	
2,464.0	17.40	61.68	2,398.6	236.9	372.7	-116.0	0.41	0.00	
2,527.0	18.68	61.42	2,458.5	246.2	389.8	-122.5	2.04	2.03	
2,590.0	19.95	60.98	2,517.9	256.3	408.1	-129.2	2.03	2.02	
2,653.0	20.08	61.42	2,577.1	266.7	427.0	-136.2	0.32	0.21	
2,717.0	19.95	58.78	2,637.3	277.6	446.0	-142.9	1.43	-0.20	
2,780.0	19.78	58.70	2,696.5	288.7	464.3	-148.9	0.27	-0.27	
2,843.0	19.12	58.78	2,755.9	299.6	482.2	-154.8	1.05	-1.05	
2,907.0	18.46	58.96	2,816.5	310.2	499.8	-160.7	1.04	-1.03	
2,970.0	18.33	56.32	2,876.3	320.9	516.6	-166.0	1.34	-0.21	
3,033.0	18.46	60.89	2,936.1	331.2	533.6	-171.5	2.30	0.21	
3,097.0	18.28	62.74	2,996.8	340.7	551.4	-178.3	0.95	-0.28	
3,159.0	17.71	61.86	3,055.8	349.6	568.3	-184.8	1.02	-0.92	
3,222.0	17.89	56.94	3,115.8	359.4	584.9	-190.5	2.40	0.29	
3,285.0	17.31	56.24	3,175.8	369.9	600.8	-195.2	0.98	-0.92	
3,348.0	17.89	59.75	3,235.9	380.0	616.9	-200.3	1.92	0.92	
3,411.0	18.28	59.58	3,295.8	389.9	633.8	-206.1	0.62	0.62	
3,474.0	17.97	57.11	3,355.6	400.2	650.5	-211.6	1.32	-0.49	
3,537.0	18.72	60.45	3,415.4	410.4	667.5	-217.2	2.05	1.19	
3,600.0	19.73	58.70	3,474.9	420.9	685.3	-223.3	1.85	1.60	
3,663.0	18.85	59.14	3,534.4	431.7	703.2	-229.3	1.42	-1.40	
3,726.0	18.06	57.03	3,594.2	442.2	720.1	-234.7	1.64	-1.25	
3,789.0	18.46	59.84	3,654.0	452.5	736.9	-240.2	1.53	0.63	
3,852.0	18.46	60.63	3,713.7	462.4	754.2	-246.3	0.40	0.00	
3,915.0	17.67	60.89	3,773.6	472.0	771.3	-252.5	1.26	-1.25	
3,978.0	17.05	58.52	3,833.8	481.5	787.5	-258.1	1.49	-0.98	
4,041.0	17.10	62.30	3,894.0	490.6	803.6	-263.9	1.76	0.08	
4,104.0	18.11	62.04	3,954.0	499.5	820.4	-270.3	1.61	1.60	
4,167.0	17.67	61.95	4,014.0	508.6	837.5	-276.8	0.70	-0.70	
4,230.0	16.96	59.84	4,074.1	517.7	853.9	-282.8	1.50	-1.13	
4,293.0	17.84	60.37	4,134.3	527.1	870.2	-288.6	1.42	1.40	
4,355.0	17.89	60.19	4,193.3	536.5	886.8	-294.4	0.12	0.08	
4,419.0	17.18	57.20	4,254.3	546.5	903.2	-299.9	1.79	-1.11	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: S34-T23N-R7W
Well: NORTH ALAMITO UNIT 308H
Wellbore: OH
Design: FINAL

Local Co-ordinate Reference: Well NORTH ALAMITO UNIT 308H
TVD Reference: 14' KB @ 6909.0ft (AZTEC 920)
MD Reference: 14' KB @ 6909.0ft (AZTEC 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
4,482.0	17.14	56.50	4,314.5	556.7	918.8	-304.6	0.33	-0.06	
4,545.0	17.01	57.82	4,374.7	566.7	934.3	-309.3	0.65	-0.21	
4,608.0	16.30	57.38	4,435.1	576.4	949.6	-314.0	1.14	-1.13	
4,640.0	15.38	57.47	4,465.9	581.1	956.9	-316.3	2.88	-2.87	
4,662.0	16.22	55.97	4,487.0	584.4	961.9	-317.8	4.25	3.82	
4,693.0	16.70	55.53	4,516.8	589.3	969.2	-319.9	1.60	1.55	
4,725.0	17.45	49.38	4,547.3	595.0	976.6	-321.5	6.11	2.34	
4,756.0	20.08	39.27	4,576.7	602.2	983.5	-321.8	13.46	8.48	
4,787.0	21.93	35.23	4,605.6	611.0	990.2	-320.8	7.58	5.97	
4,818.0	23.20	27.58	4,634.3	621.2	996.4	-318.5	10.31	4.10	
4,850.0	24.48	22.05	4,663.5	632.9	1,001.8	-314.6	8.05	4.00	
4,881.0	25.01	12.73	4,691.7	645.3	1,005.7	-309.2	12.69	1.71	
4,913.0	25.93	4.12	4,720.6	658.9	1,007.7	-301.5	11.91	2.87	
4,945.0	27.60	355.50	4,749.2	673.2	1,007.6	-291.7	13.19	5.22	
4,976.0	28.35	351.55	4,776.6	687.7	1,005.9	-280.8	6.45	2.42	
5,007.0	28.56	344.34	4,803.8	702.1	1,002.9	-268.8	11.10	0.68	
5,039.0	29.40	337.84	4,831.8	716.7	997.8	-255.2	10.18	2.62	
5,070.0	31.07	331.16	4,858.6	730.8	991.1	-240.8	12.11	5.39	
5,102.0	32.78	328.52	4,885.8	745.4	982.6	-224.7	6.90	5.34	
5,133.0	35.11	327.11	4,911.5	760.1	973.4	-208.0	7.93	7.52	
5,165.0	38.63	327.20	4,937.1	776.2	963.0	-189.4	11.00	11.00	
5,196.0	43.51	327.99	4,960.5	793.4	952.1	-169.8	15.83	15.74	
5,228.0	47.86	328.08	4,982.8	812.8	939.9	-147.8	13.60	13.59	
5,259.0	49.92	325.71	5,003.2	832.4	927.2	-125.1	8.79	6.65	
5,291.0	52.91	323.77	5,023.2	852.8	912.7	-100.7	10.48	9.34	
5,322.0	55.42	323.16	5,041.3	873.0	897.8	-76.1	8.25	8.10	
5,354.0	58.32	321.31	5,058.8	894.1	881.4	-49.7	10.27	9.06	
5,385.0	60.16	320.26	5,074.6	914.8	864.5	-23.3	6.61	5.94	
5,417.0	63.02	320.00	5,089.9	936.4	846.5	4.6	8.97	8.94	
5,448.0	66.18	318.06	5,103.2	957.5	828.1	32.4	11.66	10.19	
5,480.0	69.30	316.66	5,115.3	979.3	808.0	61.9	10.56	9.75	
5,511.0	72.47	314.37	5,125.4	1,000.2	787.5	91.1	12.38	10.23	
5,535.0	74.31	314.11	5,132.3	1,016.2	771.0	114.1	7.74	7.67	
5,570.0	76.55	311.12	5,141.1	1,039.2	746.1	148.0	10.46	6.40	
5,587.0	76.82	311.82	5,145.0	1,050.1	733.7	164.5	4.31	1.59	
5,619.0	77.96	313.05	5,152.0	1,071.2	710.7	195.7	5.17	3.56	
5,651.0	81.08	312.79	5,157.8	1,092.6	687.6	227.2	9.78	9.75	
5,683.0	83.85	313.49	5,162.0	1,114.3	664.5	258.9	8.92	8.66	
5,714.0	86.62	312.17	5,164.6	1,135.3	641.8	289.8	9.89	8.94	
5,746.0	90.04	312.88	5,165.5	1,156.9	618.3	321.8	10.92	10.69	
5,777.0	91.41	312.26	5,165.1	1,177.9	595.4	352.8	4.85	4.42	
5,840.0	91.98	313.76	5,163.3	1,220.8	549.4	415.7	2.55	0.90	
5,903.0	91.10	314.02	5,161.6	1,264.5	504.0	478.7	1.46	-1.40	
5,967.0	90.00	316.66	5,161.0	1,310.0	459.0	542.6	4.47	-1.72	
6,030.0	90.88	316.92	5,160.5	1,355.9	415.9	605.4	1.46	1.40	
6,093.0	90.57	317.18	5,159.7	1,402.0	373.0	668.2	0.64	-0.49	
6,156.0	89.82	316.13	5,159.5	1,447.9	329.7	731.0	2.05	-1.19	
6,219.0	89.74	315.34	5,159.7	1,493.0	285.8	793.9	1.26	-0.13	
6,283.0	90.13	313.76	5,159.8	1,537.9	240.2	857.8	2.54	0.61	
6,345.0	90.26	313.84	5,159.6	1,580.8	195.4	919.8	0.25	0.21	
6,409.0	88.86	312.61	5,160.1	1,624.6	148.8	983.8	2.91	-2.19	
6,472.0	89.12	312.09	5,161.2	1,667.0	102.2	1,046.8	0.92	0.41	
6,535.0	89.74	312.35	5,161.8	1,709.4	55.6	1,109.8	1.07	0.98	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: S34-T23N-R7W
Well: NORTH ALAMITO UNIT 308H
Wellbore: OH
Design: FINAL

Local Co-ordinate Reference: Well NORTH ALAMITO UNIT 308H
TVD Reference: 14' KB @ 6909.0ft (AZTEC 920)
MD Reference: 14' KB @ 6909.0ft (AZTEC 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
6,598.0	90.26	311.47	5,161.8	1,751.5	8.7	1,172.8	1.62	0.83	
6,662.0	90.09	310.15	5,161.6	1,793.3	-39.8	1,236.8	2.08	-0.27	
6,725.0	89.91	309.36	5,161.6	1,833.6	-88.2	1,299.7	1.29	-0.29	
6,789.0	90.31	310.24	5,161.5	1,874.5	-137.4	1,363.6	1.51	0.62	
6,852.0	90.22	309.54	5,161.2	1,914.9	-185.7	1,426.6	1.12	-0.14	
6,915.0	90.84	311.21	5,160.6	1,955.7	-233.7	1,489.5	2.83	0.98	
6,978.0	91.41	312.09	5,159.4	1,997.6	-280.7	1,552.5	1.66	0.90	
7,041.0	91.49	314.37	5,157.8	2,040.7	-326.6	1,615.5	3.62	0.13	
7,105.0	90.26	316.39	5,156.8	2,086.3	-371.6	1,679.4	3.69	-1.92	
7,168.0	90.75	315.69	5,156.2	2,131.6	-415.3	1,742.2	1.36	0.78	
7,232.0	90.18	317.36	5,155.7	2,178.1	-459.3	1,806.1	2.76	-0.89	
7,295.0	88.68	316.57	5,156.3	2,224.1	-502.3	1,868.9	2.69	-2.38	
7,359.0	89.30	316.48	5,157.5	2,270.5	-546.4	1,932.7	0.98	0.97	
7,422.0	90.40	317.01	5,157.6	2,316.4	-589.5	1,995.5	1.94	1.75	
7,485.0	90.09	316.74	5,157.4	2,362.4	-632.6	2,058.3	0.65	-0.49	
7,549.0	89.17	315.43	5,157.8	2,408.5	-677.0	2,122.1	2.50	-1.44	
7,612.0	89.43	312.79	5,158.6	2,452.4	-722.2	2,185.1	4.21	0.41	
7,676.0	90.04	311.21	5,158.9	2,495.2	-769.8	2,249.1	2.65	0.95	
7,740.0	90.66	311.65	5,158.5	2,537.5	-817.8	2,313.1	1.19	0.97	
7,801.0	89.20	311.12	5,158.5	2,577.9	-863.5	2,374.1	2.55	-2.39	
7,862.0	89.52	311.56	5,159.2	2,618.1	-909.3	2,435.1	0.89	0.52	
7,924.0	90.26	310.94	5,159.3	2,659.0	-955.9	2,497.1	1.56	1.19	
7,986.0	90.09	309.80	5,159.1	2,699.2	-1,003.2	2,559.0	1.86	-0.27	
8,046.0	89.87	310.68	5,159.2	2,737.9	-1,049.0	2,619.0	1.51	-0.37	
8,108.0	90.22	310.42	5,159.1	2,778.2	-1,096.1	2,680.9	0.70	0.56	
8,170.0	92.15	310.59	5,157.8	2,818.5	-1,143.2	2,742.9	3.12	3.11	
8,230.0	91.58	310.59	5,155.9	2,857.5	-1,188.7	2,802.8	0.95	-0.95	
8,292.0	90.53	310.77	5,154.7	2,897.9	-1,235.8	2,864.8	1.72	-1.69	
8,353.0	89.74	311.12	5,154.6	2,937.9	-1,281.8	2,925.8	1.42	-1.30	
8,414.0	88.64	310.50	5,155.5	2,977.8	-1,328.0	2,986.8	2.07	-1.80	
8,475.0	88.81	311.47	5,156.8	3,017.8	-1,374.0	3,047.7	1.61	0.28	
8,536.0	89.47	312.35	5,157.7	3,058.5	-1,419.4	3,108.7	1.80	1.08	
8,597.0	89.34	313.84	5,158.4	3,100.2	-1,464.0	3,169.7	2.45	-0.21	
8,658.0	88.55	313.49	5,159.5	3,142.3	-1,508.1	3,230.7	1.42	-1.30	
8,719.0	89.17	313.14	5,160.7	3,184.1	-1,552.5	3,291.7	1.17	1.02	
8,780.0	90.00	312.79	5,161.1	3,225.7	-1,597.1	3,352.6	1.48	1.36	
8,841.0	89.30	313.93	5,161.5	3,267.6	-1,641.4	3,413.6	2.19	-1.15	
8,902.0	88.10	315.07	5,162.9	3,310.3	-1,684.9	3,474.6	2.71	-1.97	
8,964.0	87.01	313.84	5,165.5	3,353.7	-1,729.1	3,536.5	2.65	-1.76	
9,024.0	86.79	311.82	5,168.8	3,394.4	-1,773.1	3,596.4	3.38	-0.37	
9,086.0	87.10	311.56	5,172.1	3,435.6	-1,819.3	3,658.3	0.65	0.50	
9,147.0	88.46	310.85	5,174.5	3,475.8	-1,865.2	3,719.2	2.51	2.23	
9,209.0	89.69	310.06	5,175.5	3,516.0	-1,912.3	3,781.2	2.36	1.98	
9,270.0	89.82	311.56	5,175.7	3,555.8	-1,958.5	3,842.2	2.47	0.21	
9,331.0	89.91	311.56	5,175.9	3,596.3	-2,004.2	3,903.2	0.15	0.15	
9,392.0	90.04	311.38	5,175.9	3,636.7	-2,049.9	3,964.1	0.36	0.21	
9,454.0	88.73	312.61	5,176.6	3,678.2	-2,095.9	4,026.1	2.90	-2.11	
9,514.0	89.08	312.44	5,177.7	3,718.7	-2,140.1	4,086.1	0.65	0.58	
9,576.0	90.22	312.35	5,178.1	3,760.5	-2,185.9	4,148.1	1.84	1.84	
9,637.0	91.23	312.09	5,177.3	3,801.5	-2,231.1	4,209.1	1.71	1.66	
9,698.0	90.26	313.14	5,176.5	3,842.8	-2,276.0	4,270.1	2.34	-1.59	
9,759.0	87.72	312.17	5,177.6	3,884.1	-2,320.8	4,331.1	4.46	-4.16	
9,820.0	87.93	312.00	5,179.9	3,925.0	-2,366.1	4,392.1	0.44	0.34	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: S34-T23N-R7W
Well: NORTH ALAMITO UNIT 308H
Wellbore: OH
Design: FINAL

Local Co-ordinate Reference: Well NORTH ALAMITO UNIT 308H
TVD Reference: 14' KB @ 6909.0ft (AZTEC 920)
MD Reference: 14' KB @ 6909.0ft (AZTEC 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
9,881.0	89.47	311.29	5,181.3	3,965.5	-2,411.6	4,453.0	2.78	2.52	
9,943.0	90.48	311.47	5,181.3	4,006.5	-2,458.2	4,515.0	1.65	1.63	
10,004.0	91.19	311.56	5,180.4	4,046.9	-2,503.8	4,576.0	1.17	1.16	
10,065.0	90.92	312.17	5,179.3	4,087.6	-2,549.3	4,637.0	1.09	-0.44	
10,125.0	89.08	312.10	5,179.3	4,127.9	-2,593.8	4,697.0	3.07	-3.07	
10,186.0	89.03	311.03	5,180.3	4,168.4	-2,639.4	4,758.0	1.76	-0.08	
10,249.0	89.91	311.82	5,180.9	4,210.0	-2,686.6	4,821.0	1.88	1.40	
10,313.0	90.57	314.11	5,180.6	4,253.7	-2,733.5	4,885.0	3.72	1.03	
10,377.0	89.82	314.63	5,180.4	4,298.4	-2,779.2	4,948.9	1.43	-1.17	
10,440.0	90.31	314.19	5,180.3	4,342.5	-2,824.2	5,011.9	1.05	0.78	
10,503.0	89.43	314.55	5,180.5	4,386.5	-2,869.2	5,074.8	1.51	-1.40	
10,566.0	88.86	314.11	5,181.4	4,430.6	-2,914.3	5,137.8	1.14	-0.90	
10,629.0	88.55	312.26	5,182.8	4,473.7	-2,960.2	5,200.8	2.98	-0.49	
10,693.0	88.33	311.47	5,184.6	4,516.4	-3,007.9	5,264.7	1.28	-0.34	
10,757.0	90.13	310.59	5,185.4	4,558.4	-3,056.1	5,328.7	3.13	2.81	
10,820.0	91.49	311.47	5,184.6	4,599.7	-3,103.7	5,391.7	2.57	2.16	
10,883.0	91.27	313.32	5,183.0	4,642.2	-3,150.2	5,454.7	2.96	-0.35	
10,947.0	90.31	313.67	5,182.2	4,686.2	-3,196.6	5,518.6	1.60	-1.50	
11,011.0	91.06	313.76	5,181.4	4,730.5	-3,242.8	5,582.6	1.18	1.17	
11,074.0	90.13	313.49	5,180.7	4,773.9	-3,288.4	5,645.6	1.54	-1.48	
11,137.0	88.95	312.17	5,181.2	4,816.7	-3,334.6	5,708.6	2.81	-1.87	
11,202.0	89.21	311.47	5,182.3	4,860.1	-3,383.1	5,773.6	1.15	0.40	
11,265.0	90.48	312.00	5,182.5	4,902.0	-3,430.1	5,836.6	2.18	2.02	
11,329.0	89.47	310.42	5,182.5	4,944.2	-3,478.2	5,900.6	2.93	-1.58	
11,393.0	90.04	311.38	5,182.8	4,986.1	-3,526.6	5,964.5	1.74	0.89	
11,456.0	91.36	311.82	5,182.0	5,027.9	-3,573.7	6,027.5	2.21	2.10	
11,519.0	90.66	311.12	5,180.9	5,069.6	-3,620.9	6,090.5	1.57	-1.11	
11,583.0	88.68	311.73	5,181.2	5,112.0	-3,668.9	6,154.5	3.24	-3.09	
11,646.0	87.67	310.77	5,183.3	5,153.5	-3,716.2	6,217.5	2.21	-1.60	
11,709.0	88.59	310.42	5,185.3	5,194.4	-3,764.1	6,280.4	1.56	1.46	
11,773.0	89.87	311.21	5,186.2	5,236.3	-3,812.5	6,344.4	2.35	2.00	
11,836.0	91.01	311.03	5,185.7	5,277.7	-3,859.9	6,407.4	1.83	1.81	
11,899.0	89.56	310.59	5,185.4	5,318.9	-3,907.6	6,470.3	2.41	-2.30	
11,962.0	90.00	312.09	5,185.6	5,360.5	-3,954.9	6,533.3	2.48	0.70	
12,026.0	89.34	312.00	5,186.0	5,403.3	-4,002.4	6,597.3	1.04	-1.03	
12,089.0	88.90	312.26	5,187.0	5,445.6	-4,049.2	6,660.3	0.81	-0.70	
12,153.0	89.34	313.40	5,187.9	5,489.1	-4,096.1	6,724.3	1.91	0.69	
12,217.0	88.11	314.55	5,189.4	5,533.5	-4,142.1	6,788.2	2.63	-1.92	
12,280.0	88.42	314.28	5,191.3	5,577.6	-4,187.1	6,851.2	0.65	0.49	
12,343.0	89.82	314.11	5,192.2	5,621.5	-4,232.3	6,914.1	2.24	2.22	
12,407.0	90.70	313.23	5,191.9	5,665.7	-4,278.6	6,978.1	1.94	1.37	
12,435.0	90.88	313.49	5,191.6	5,684.9	-4,298.9	7,006.1	1.13	0.64	LAST SURVEY @ 12,435' MD
12,485.0	90.88	313.49	5,190.8	5,719.3	-4,335.2	7,056.1	0.00	0.00	PTB @ 12,485' MD

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: Sandoval County, NM
Site: S34-T23N-R7W
Well: NORTH ALAMITO UNIT 308H
Wellbore: OH
Design: FINAL

Local Co-ordinate Reference: Well NORTH ALAMITO UNIT 308H
TVD Reference: 14' KB @ 6909.0ft (AZTEC 920)
MD Reference: 14' KB @ 6909.0ft (AZTEC 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
NAU 308H PBHL 3.14	0.00	0.00	5,195.4	5,719.3	-4,338.9	1,893,152.20	1,247,091.85	36.195550	-107.583048
- actual wellpath misses target center by 5.9ft at 12485.0ft MD (5190.8 TVD, 5719.3 N, -4335.2 E)									
- Point									
NAU 308H PBHL 3.13	0.00	0.00	5,191.2	5,719.3	-4,338.9	1,893,152.20	1,247,091.85	36.195550	-107.583048
- actual wellpath misses target center by 3.7ft at 12485.0ft MD (5190.8 TVD, 5719.3 N, -4335.2 E)									
- Point									
NAU 308H POE 2.17	0.00	0.00	5,171.4	1,178.9	647.3	1,888,544.50	1,252,015.85	36.183080	-107.566152
- actual wellpath misses target center by 36.3ft at 5739.7ft MD (5165.5 TVD, 1152.6 N, 622.9 E)									
- Point									
NAU 308H PBHL 3.12	0.00	0.00	5,180.0	5,719.3	-4,338.9	1,893,152.20	1,247,091.85	36.195550	-107.583048
- actual wellpath misses target center by 11.4ft at 12485.0ft MD (5190.8 TVD, 5719.3 N, -4335.2 E)									
- Point									
NAU 308H PBHL 3.11	0.00	0.00	5,201.6	5,719.3	-4,338.9	1,893,152.20	1,247,091.85	36.195550	-107.583048
- actual wellpath misses target center by 11.4ft at 12485.0ft MD (5190.8 TVD, 5719.3 N, -4335.2 E)									
- Point									
NAU 308H PBHL 2.17	0.00	0.00	5,159.7	5,719.3	-4,338.9	1,893,152.20	1,247,091.85	36.195550	-107.583048
- actual wellpath misses target center by 31.3ft at 12485.0ft MD (5190.8 TVD, 5719.3 N, -4335.2 E)									
- Point									
NAU 308H POE 11.10	0.00	0.00	5,171.4	1,178.9	647.3	1,888,544.50	1,252,015.85	36.183080	-107.566152
- actual wellpath misses target center by 36.3ft at 5739.7ft MD (5165.5 TVD, 1152.6 N, 622.9 E)									
- Point									

Design Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
12,435.0	5,191.6	5,684.9	-4,298.9	LAST SURVEY @ 12,435' MD
12,485.0	5,190.8	5,719.3	-4,335.2	PTB @ 12,485' MD

Checked By: _____ Approved By: _____ Date: _____