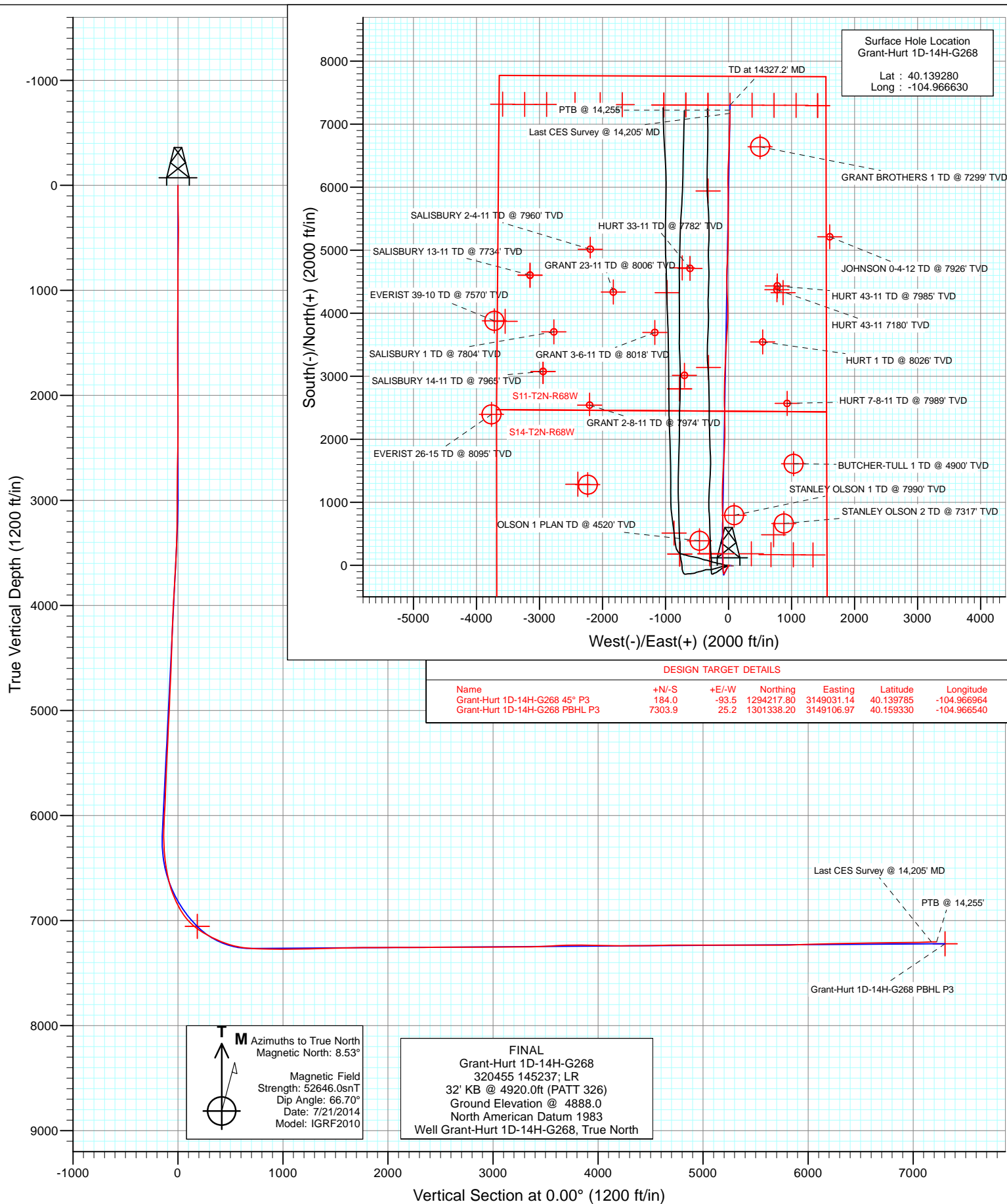


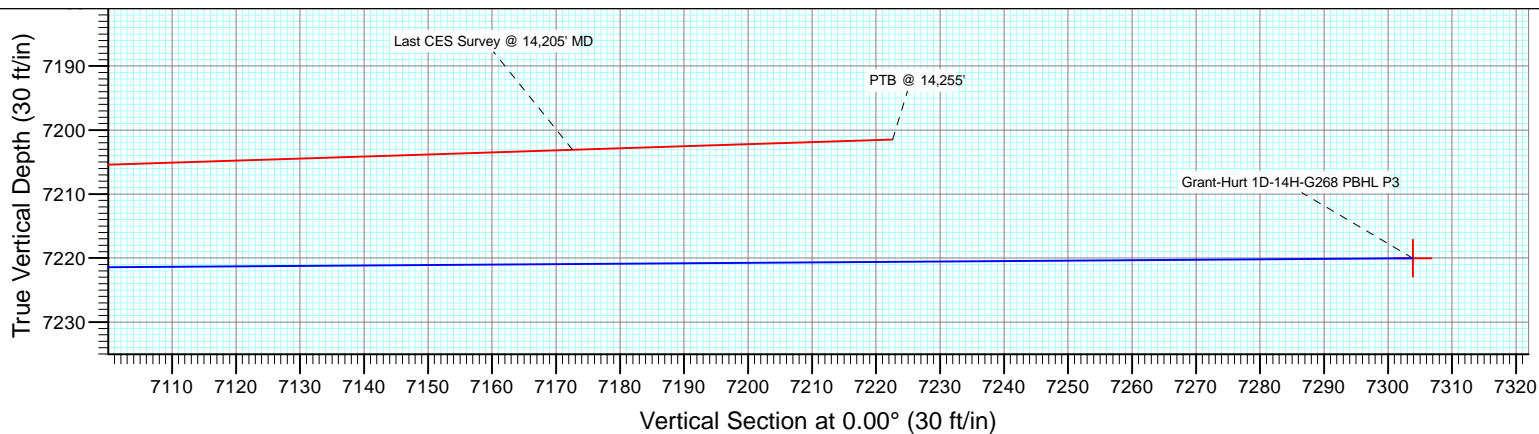
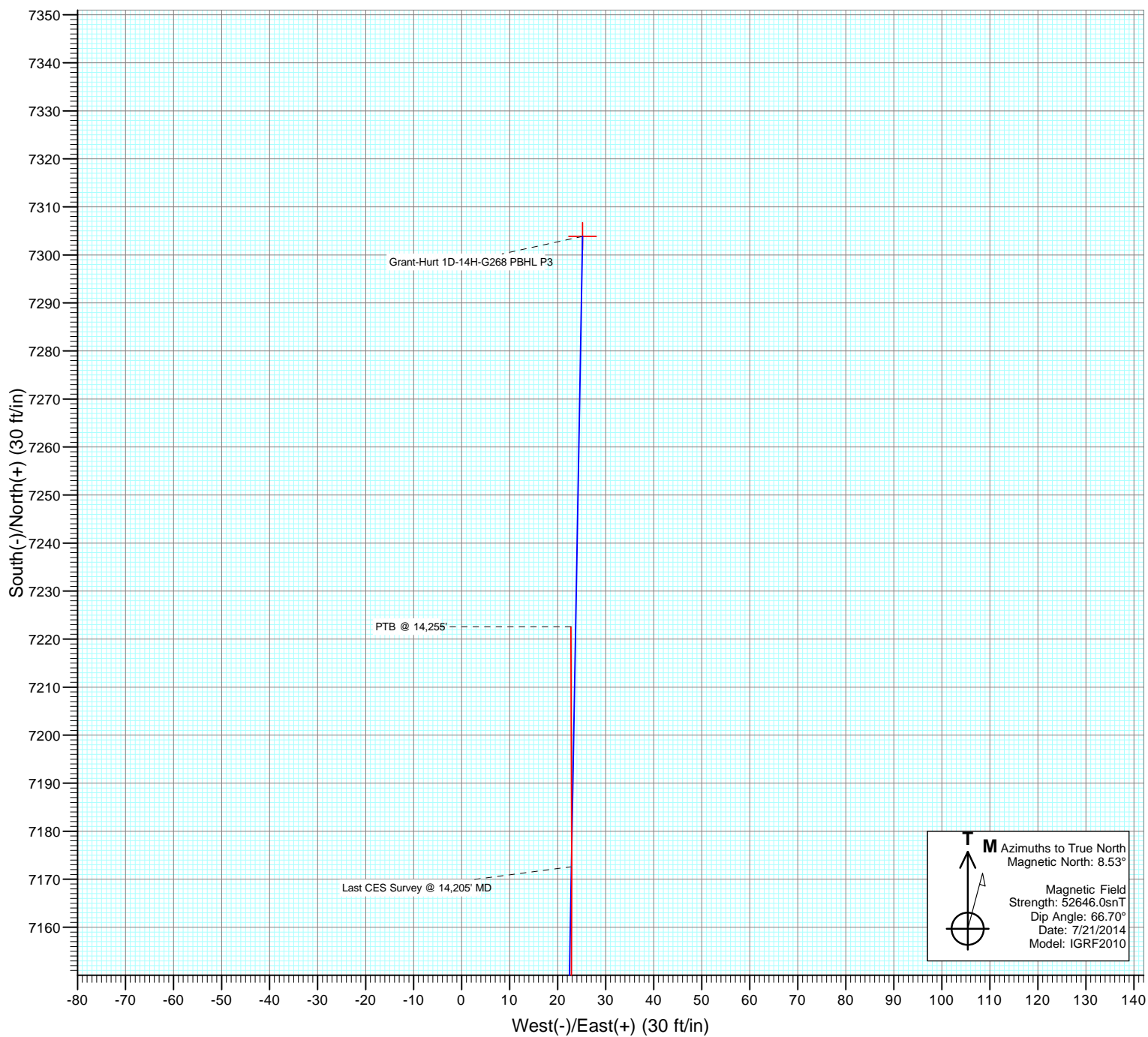


Project: DJ Wattenberg
 Site: S14-T2N-R68W (Grant Elmquist/Salisbury/Hu
 Well: Grant-Hurt 1D-14H-G268
 Wellbore: Hz
 Design: FINAL





Project: DJ Wattenberg
Site: S14-T2N-R68W (Grant Elmquist/Salisbury/Hu
Well: Grant-Hurt 1D-14H-G268
Wellbore: Hz
Design: FINAL



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant-Hurt 1D-14H-G268
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 4920.0ft (PATT 326)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	32' KB @ 4920.0ft (PATT 326)
Well:	Grant-Hurt 1D-14H-G268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Project	DJ Wattenberg		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)			
Site Position:		Northing:	1,295,686.81 ft	Latitude:	40.143850
From:	Lat/Long	Easting:	3,147,060.98 ft	Longitude:	-104.973980
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.34 °

Well	Grant-Hurt 1D-14H-G268					
Well Position	+N/-S	0.0 ft	Northing:	1,294,034.33 ft	Latitude:	40.139280
	+E/-W	0.0 ft	Easting:	3,149,125.75 ft	Longitude:	-104.966630
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,888.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/21/2014	8.53	66.70	52,646

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	0.00	

Survey Program	Date	8/24/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
146.0	14,255.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD	

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		
146.0	0.40	6.40	146.0	0.5	0.1	0.5	0.27	0.27		
241.0	1.00	3.20	241.0	1.7	0.1	1.7	0.63	0.63		
335.0	0.90	331.00	335.0	3.1	-0.2	3.1	0.57	-0.11		
430.0	0.60	239.80	430.0	3.5	-1.0	3.5	1.15	-0.32		
525.0	0.50	171.40	525.0	2.9	-1.3	2.9	0.66	-0.11		
620.0	0.70	194.40	620.0	1.9	-1.4	1.9	0.33	0.21		
714.0	0.70	118.00	714.0	1.1	-1.0	1.1	0.92	0.00		
809.0	0.60	136.90	809.0	0.4	-0.2	0.4	0.25	-0.11		
840.0	0.50	157.60	840.0	0.2	0.0	0.2	0.71	-0.32		
921.0	0.40	177.30	921.0	-0.4	0.1	-0.4	0.23	-0.12		
1,016.0	0.40	181.40	1,015.9	-1.1	0.1	-1.1	0.03	0.00		
1,109.0	0.30	236.30	1,108.9	-1.5	-0.1	-1.5	0.36	-0.11		

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant-Hurt 1D-14H-G268
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 4920.0ft (PATT 326)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	32' KB @ 4920.0ft (PATT 326)
Well:	Grant-Hurt 1D-14H-G268	North Reference:	True
Wellbore:	Hz	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
1,202.0	0.40	157.20	1,201.9	-2.0	-0.2	-2.0	0.49	0.11	
1,294.0	0.40	166.90	1,293.9	-2.6	0.0	-2.6	0.07	0.00	
1,387.0	0.20	186.90	1,386.9	-3.1	0.1	-3.1	0.24	-0.22	
1,479.0	0.20	201.00	1,478.9	-3.4	0.0	-3.4	0.05	0.00	
1,571.0	0.10	266.70	1,570.9	-3.5	-0.1	-3.5	0.20	-0.11	
1,662.0	0.20	338.80	1,661.9	-3.4	-0.3	-3.4	0.21	0.11	
1,754.0	0.40	349.50	1,753.9	-2.9	-0.4	-2.9	0.22	0.22	
1,847.0	0.70	353.00	1,846.9	-2.0	-0.5	-2.0	0.32	0.32	
1,939.0	1.00	0.30	1,938.9	-0.7	-0.6	-0.7	0.35	0.33	
2,031.0	0.80	287.30	2,030.9	0.3	-1.2	0.3	1.18	-0.22	
2,123.0	0.30	285.60	2,122.9	0.6	-2.0	0.6	0.54	-0.54	
2,214.0	0.40	299.30	2,213.9	0.8	-2.5	0.8	0.14	0.11	
2,306.0	0.40	314.60	2,305.9	1.2	-3.0	1.2	0.12	0.00	
2,398.0	1.10	176.90	2,397.9	0.5	-3.2	0.5	1.55	0.76	
2,492.0	1.10	188.90	2,491.9	-1.3	-3.3	-1.3	0.24	0.00	
2,587.0	1.00	181.10	2,586.9	-3.0	-3.5	-3.0	0.18	-0.11	
2,682.0	0.90	166.00	2,681.9	-4.5	-3.3	-4.5	0.28	-0.11	
2,776.0	0.70	160.80	2,775.9	-5.8	-2.9	-5.8	0.23	-0.21	
2,871.0	0.60	158.70	2,870.8	-6.8	-2.6	-6.8	0.11	-0.11	
2,965.0	0.60	190.60	2,964.8	-7.8	-2.5	-7.8	0.35	0.00	
3,060.0	0.40	205.90	3,059.8	-8.5	-2.7	-8.5	0.25	-0.21	
3,155.0	0.30	213.10	3,154.8	-9.1	-3.0	-9.1	0.11	-0.11	
3,249.0	0.30	161.50	3,248.8	-9.5	-3.1	-9.5	0.28	0.00	
3,344.0	1.20	196.30	3,343.8	-10.7	-3.3	-10.7	1.02	0.95	
3,439.0	2.40	197.40	3,438.8	-13.5	-4.1	-13.5	1.26	1.26	
3,535.0	4.00	200.90	3,534.6	-18.6	-5.9	-18.6	1.68	1.67	
3,629.0	3.50	204.50	3,628.4	-24.3	-8.3	-24.3	0.59	-0.53	
3,723.0	2.90	204.50	3,722.3	-29.0	-10.5	-29.0	0.64	-0.64	
3,818.0	3.70	210.60	3,817.1	-33.9	-13.0	-33.9	0.92	0.84	
3,913.0	3.70	215.90	3,911.9	-39.0	-16.4	-39.0	0.36	0.00	
4,008.0	3.70	219.60	4,006.7	-43.8	-20.1	-43.8	0.25	0.00	
4,103.0	3.70	222.50	4,101.5	-48.4	-24.2	-48.4	0.20	0.00	
4,198.0	2.60	218.50	4,196.4	-52.4	-27.6	-52.4	1.18	-1.16	
4,293.0	2.80	225.50	4,291.3	-55.7	-30.6	-55.7	0.41	0.21	
4,388.0	2.60	216.40	4,386.2	-59.1	-33.5	-59.1	0.50	-0.21	
4,483.0	2.20	190.60	4,481.1	-62.6	-35.1	-62.6	1.20	-0.42	
4,578.0	2.00	187.70	4,576.0	-66.0	-35.7	-66.0	0.24	-0.21	
4,673.0	2.50	199.40	4,671.0	-69.6	-36.6	-69.6	0.71	0.53	
4,768.0	2.90	207.00	4,765.9	-73.7	-38.4	-73.7	0.56	0.42	
4,863.0	2.60	211.40	4,860.7	-77.7	-40.6	-77.7	0.39	-0.32	
4,957.0	3.40	210.40	4,954.6	-81.9	-43.1	-81.9	0.85	0.85	
5,052.0	3.30	212.30	5,049.4	-86.7	-46.0	-86.7	0.16	-0.11	
5,147.0	2.60	213.10	5,144.3	-90.8	-48.6	-90.8	0.74	-0.74	
5,242.0	3.50	207.00	5,239.2	-95.2	-51.1	-95.2	1.01	0.95	
5,336.0	3.00	210.60	5,333.0	-99.8	-53.7	-99.8	0.57	-0.53	
5,430.0	3.70	209.20	5,426.9	-104.6	-56.4	-104.6	0.75	0.74	
5,525.0	3.00	212.20	5,521.7	-109.4	-59.2	-109.4	0.76	-0.74	
5,620.0	1.20	200.30	5,616.6	-112.4	-60.9	-112.4	1.94	-1.89	
5,714.0	2.50	210.00	5,710.6	-115.1	-62.3	-115.1	1.42	1.38	
5,809.0	3.60	212.90	5,805.5	-119.4	-64.9	-119.4	1.17	1.16	
5,904.0	3.10	202.80	5,900.3	-124.3	-67.5	-124.3	0.81	-0.53	
5,999.0	3.50	206.50	5,995.1	-129.3	-69.8	-129.3	0.48	0.42	
6,094.0	2.20	205.70	6,090.0	-133.5	-71.9	-133.5	1.37	-1.37	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant-Hurt 1D-14H-G268
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 4920.0ft (PATT 326)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	32' KB @ 4920.0ft (PATT 326)
Well:	Grant-Hurt 1D-14H-G268	North Reference:	True
Wellbore:	Hz	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
6,141.0	1.80	203.90	6,137.0	-135.0	-72.6	-135.0	0.86	-0.85	
6,188.0	1.30	234.60	6,184.0	-136.0	-73.3	-136.0	2.02	-1.06	
6,235.0	1.70	300.90	6,231.0	-135.9	-74.4	-135.9	3.56	0.85	
6,283.0	3.20	328.10	6,278.9	-134.4	-75.7	-134.4	3.87	3.12	
6,330.0	4.30	337.90	6,325.8	-131.7	-77.0	-131.7	2.70	2.34	
6,378.0	5.80	342.60	6,373.6	-127.7	-78.4	-127.7	3.24	3.12	
6,425.0	7.00	343.40	6,420.3	-122.7	-80.0	-122.7	2.56	2.55	
6,473.0	8.50	349.50	6,467.9	-116.4	-81.4	-116.4	3.56	3.12	
6,520.0	9.50	352.90	6,514.3	-109.1	-82.6	-109.1	2.41	2.13	
6,567.0	11.50	353.90	6,560.5	-100.6	-83.5	-100.6	4.27	4.26	
6,614.0	13.20	355.40	6,606.4	-90.6	-84.5	-90.6	3.68	3.62	
6,662.0	15.20	358.70	6,653.0	-78.9	-85.0	-78.9	4.49	4.17	
6,709.0	17.80	358.90	6,698.0	-65.5	-85.3	-65.5	5.53	5.53	
6,756.0	20.70	357.40	6,742.4	-50.0	-85.8	-50.0	6.26	6.17	
6,803.0	22.90	358.20	6,786.0	-32.6	-86.5	-32.6	4.72	4.68	
6,851.0	25.70	359.70	6,829.8	-12.8	-86.8	-12.8	5.97	5.83	
6,898.0	28.90	358.90	6,871.5	8.7	-87.1	8.7	6.85	6.81	
6,946.0	31.80	0.30	6,913.0	33.0	-87.3	33.0	6.22	6.04	
6,993.0	35.60	0.40	6,952.1	59.0	-87.1	59.0	8.09	8.09	
7,040.0	40.40	0.40	6,989.1	88.0	-86.9	88.0	10.21	10.21	
7,087.0	46.20	0.30	7,023.3	120.2	-86.7	120.2	12.34	12.34	
7,135.0	50.40	358.90	7,055.2	156.0	-87.0	156.0	9.02	8.75	
7,182.0	54.50	358.10	7,083.8	193.3	-88.0	193.3	8.83	8.72	
7,229.0	58.10	359.30	7,109.9	232.3	-88.8	232.3	7.95	7.66	
7,276.0	60.70	358.80	7,133.8	272.8	-89.5	272.8	5.61	5.53	
7,323.0	63.50	359.70	7,155.8	314.3	-90.1	314.3	6.19	5.96	
7,370.0	65.80	0.80	7,175.9	356.8	-89.9	356.8	5.33	4.89	
7,418.0	66.60	1.90	7,195.3	400.7	-88.8	400.7	2.68	1.67	
7,465.0	69.30	1.80	7,213.0	444.2	-87.4	444.2	5.75	5.74	
7,513.0	72.80	0.00	7,228.5	489.6	-86.7	489.6	8.11	7.29	
7,560.0	76.50	359.70	7,241.0	534.9	-86.8	534.9	7.90	7.87	
7,607.0	79.40	358.60	7,250.8	580.9	-87.5	580.9	6.58	6.17	
7,654.0	82.20	358.60	7,258.3	627.3	-88.7	627.3	5.96	5.96	
7,702.0	84.70	358.60	7,263.8	674.9	-89.8	674.9	5.21	5.21	
7,736.0	87.00	359.20	7,266.2	708.8	-90.5	708.8	6.99	6.76	
7,804.0	88.40	358.90	7,269.0	776.8	-91.6	776.8	2.11	2.06	
7,896.0	89.40	358.90	7,270.7	868.7	-93.4	868.7	1.09	1.09	
7,989.0	90.00	357.80	7,271.2	961.7	-96.0	961.7	1.35	0.65	
8,081.0	90.10	0.50	7,271.1	1,053.7	-97.4	1,053.7	2.94	0.11	
8,173.0	90.70	0.30	7,270.5	1,145.7	-96.8	1,145.7	0.69	0.65	
8,265.0	90.80	0.80	7,269.3	1,237.6	-95.9	1,237.6	0.55	0.11	
8,357.0	91.30	3.30	7,267.6	1,329.6	-92.6	1,329.6	2.77	0.54	
8,448.0	90.90	2.20	7,265.9	1,420.4	-88.2	1,420.4	1.29	-0.44	
8,540.0	92.70	4.70	7,263.0	1,512.2	-82.7	1,512.2	3.35	1.96	
8,632.0	91.80	3.30	7,259.4	1,603.9	-76.3	1,603.9	1.81	-0.98	
8,723.0	90.50	2.30	7,257.5	1,694.8	-71.8	1,694.8	1.80	-1.43	
8,816.0	90.50	3.30	7,256.7	1,787.7	-67.3	1,787.7	1.08	0.00	
8,908.0	89.60	1.80	7,256.6	1,879.6	-63.2	1,879.6	1.90	-0.98	
9,001.0	90.80	1.10	7,256.3	1,972.5	-60.8	1,972.5	1.49	1.29	
9,093.0	90.10	0.10	7,255.6	2,064.5	-59.9	2,064.5	1.33	-0.76	
9,184.0	90.20	1.00	7,255.4	2,155.5	-59.0	2,155.5	1.00	0.11	
9,277.0	89.70	359.30	7,255.4	2,248.5	-58.8	2,248.5	1.91	-0.54	
9,370.0	90.80	0.20	7,255.0	2,341.5	-59.2	2,341.5	1.53	1.18	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant-Hurt 1D-14H-G268
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 4920.0ft (PATT 326)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	32' KB @ 4920.0ft (PATT 326)
Well:	Grant-Hurt 1D-14H-G268	North Reference:	True
Wellbore:	Hz	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
9,462.0	90.00	359.00	7,254.4	2,433.5	-59.8	2,433.5	1.57	-0.87	
9,554.0	89.70	357.70	7,254.6	2,525.5	-62.5	2,525.5	1.45	-0.33	
9,645.0	90.30	359.40	7,254.6	2,616.4	-64.8	2,616.4	1.98	0.66	
9,737.0	90.20	0.10	7,254.2	2,708.4	-65.2	2,708.4	0.77	-0.11	
9,829.0	90.70	0.10	7,253.5	2,800.4	-65.0	2,800.4	0.54	0.54	
9,921.0	90.60	1.70	7,252.5	2,892.4	-63.6	2,892.4	1.74	-0.11	
10,016.0	90.10	2.90	7,251.9	2,987.3	-59.8	2,987.3	1.37	-0.53	
10,111.0	90.00	1.60	7,251.8	3,082.3	-56.0	3,082.3	1.37	-0.11	
10,206.0	90.90	3.30	7,251.1	3,177.2	-52.0	3,177.2	2.02	0.95	
10,300.0	90.40	2.90	7,250.0	3,271.0	-46.9	3,271.0	0.68	-0.53	
10,395.0	90.30	2.60	7,249.4	3,365.9	-42.3	3,365.9	0.33	-0.11	
10,490.0	92.00	2.10	7,247.5	3,460.8	-38.4	3,460.8	1.87	1.79	
10,585.0	93.70	3.20	7,242.8	3,555.6	-34.0	3,555.6	2.13	1.79	
10,680.0	93.90	4.20	7,236.5	3,650.2	-27.9	3,650.2	1.07	0.21	
10,774.0	89.70	3.50	7,233.5	3,743.9	-21.6	3,743.9	4.53	-4.47	
10,869.0	90.00	4.00	7,233.8	3,838.7	-15.4	3,838.7	0.61	0.32	
10,964.0	88.50	1.30	7,235.0	3,933.6	-11.0	3,933.6	3.25	-1.58	
11,059.0	88.80	358.90	7,237.3	4,028.5	-10.8	4,028.5	2.55	0.32	
11,154.0	89.30	357.80	7,238.8	4,123.5	-13.6	4,123.5	1.27	0.53	
11,249.0	90.40	356.70	7,239.1	4,218.4	-18.1	4,218.4	1.64	1.16	
11,344.0	90.50	359.20	7,238.3	4,313.3	-21.5	4,313.3	2.63	0.11	
11,438.0	89.90	358.20	7,238.0	4,407.3	-23.7	4,407.3	1.24	-0.64	
11,533.0	90.20	359.50	7,237.9	4,502.2	-25.6	4,502.2	1.40	0.32	
11,628.0	91.60	359.80	7,236.4	4,597.2	-26.2	4,597.2	1.51	1.47	
11,723.0	91.30	2.00	7,234.0	4,692.2	-24.7	4,692.2	2.34	-0.32	
11,818.0	89.90	3.80	7,233.0	4,787.0	-19.9	4,787.0	2.40	-1.47	
11,913.0	89.40	1.90	7,233.6	4,881.9	-15.1	4,881.9	2.07	-0.53	
12,008.0	90.30	2.60	7,233.9	4,976.8	-11.4	4,976.8	1.20	0.95	
12,102.0	90.10	1.90	7,233.5	5,070.8	-7.7	5,070.8	0.77	-0.21	
12,197.0	90.00	0.70	7,233.5	5,165.7	-5.6	5,165.7	1.27	-0.11	
12,292.0	89.50	359.70	7,233.9	5,260.7	-5.2	5,260.7	1.18	-0.53	
12,387.0	90.60	0.40	7,233.8	5,355.7	-5.1	5,355.7	1.37	1.16	
12,482.0	90.30	1.10	7,233.0	5,450.7	-3.9	5,450.7	0.80	-0.32	
12,577.0	90.00	0.50	7,232.8	5,545.7	-2.6	5,545.7	0.71	-0.32	
12,671.0	89.50	0.20	7,233.2	5,639.7	-2.0	5,639.7	0.62	-0.53	
12,766.0	89.50	358.60	7,234.0	5,734.7	-3.0	5,734.7	1.68	0.00	
12,860.0	91.80	359.70	7,233.0	5,828.7	-4.4	5,828.7	2.71	2.45	
12,954.0	91.70	358.90	7,230.1	5,922.6	-5.5	5,922.6	0.86	-0.11	
13,047.0	92.10	358.50	7,227.0	6,015.5	-7.6	6,015.5	0.61	0.43	
13,142.0	91.90	0.20	7,223.7	6,110.5	-8.7	6,110.5	1.80	-0.21	
13,236.0	92.00	1.10	7,220.5	6,204.4	-7.7	6,204.4	0.96	0.11	
13,331.0	91.90	1.40	7,217.3	6,299.3	-5.6	6,299.3	0.33	-0.11	
13,425.0	90.10	3.40	7,215.6	6,393.2	-1.7	6,393.2	2.86	-1.91	
13,520.0	90.50	3.70	7,215.1	6,488.1	4.2	6,488.1	0.53	0.42	
13,614.0	90.70	2.20	7,214.1	6,581.9	9.1	6,581.9	1.61	0.21	
13,709.0	90.70	1.50	7,213.0	6,676.9	12.1	6,676.9	0.74	0.00	
13,803.0	91.20	0.80	7,211.4	6,770.8	14.0	6,770.8	0.92	0.53	
13,898.0	90.20	1.50	7,210.3	6,865.8	15.9	6,865.8	1.28	-1.05	
13,993.0	91.20	2.50	7,209.1	6,960.7	19.2	6,960.7	1.49	1.05	
14,087.0	91.60	0.70	7,206.8	7,054.7	21.9	7,054.7	1.96	0.43	
14,182.0	92.00	0.50	7,203.8	7,149.6	22.9	7,149.6	0.47	0.42	
14,205.0	91.80	359.80	7,203.1	7,172.6	22.9	7,172.6	3.16	-0.87	Last CES Survey @ 14,205' MD
14,255.0	91.80	359.80	7,201.5	7,222.6	22.7	7,222.6	0.00	0.00	PTB @ 14,255'

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant-Hurt 1D-14H-G268
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 4920.0ft (PATT 326)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	32' KB @ 4920.0ft (PATT 326)
Well:	Grant-Hurt 1D-14H-G268	North Reference:	True
Wellbore:	Hz	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
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Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Grant-Hurt 1D-14H-G26: - actual wellpath misses target center by 18.3ft at 7157.6ft MD (7069.3 TVD, 173.6 N, -87.4 E) - Point	0.00	0.00	7,055.5	184.0	-93.5	1,294,217.80	3,149,031.14	40.139785	-104.966964
Grant-Hurt 1D-14H-G26: - actual wellpath misses target center by 83.4ft at 14255.0ft MD (7201.5 TVD, 7222.6 N, 22.7 E) - Point	0.00	0.00	7,220.0	7,303.9	25.2	1,301,338.20	3,149,106.97	40.159330	-104.966540

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
14,205.0	7,203.1	7,172.6	22.9	Last CES Survey @ 14,205' MD
14,255.0	7,201.5	7,222.6	22.7	PTB @ 14,255'

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)

Grant-Hurt 1D-14H-G268

Hz

Design: FINAL

Survey Report - Geographic

25 August, 2014

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant-Hurt 1D-14H-G268
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 4920.0ft (PATT 326)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	32' KB @ 4920.0ft (PATT 326)
Well:	Grant-Hurt 1D-14H-G268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Project	DJ Wattenberg		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)				
Site Position:		Northing:	1,295,686.81 ft	Latitude:	40.143850
From:	Lat/Long	Easting:	3,147,060.98 ft	Longitude:	-104.973980
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.34 °

Well		Grant-Hurt 1D-14H-G268				
Well Position	+N/-S	0.0 ft	Northing:	1,294,034.33 ft	Latitude:	40.139280
	+E/-W	0.0 ft	Easting:	3,149,125.75 ft	Longitude:	-104.966630
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,888.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	7/21/2014	8.53	66.70	52,646

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	0.00	

Survey Program	Date	8/24/2014			
From	To	Survey (Wellbore)	Tool Name	Description	
(ft)	(ft)				
146.0	14,255.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD	

Survey										
Measured	Vertical	Map	Map	Latitude	Longitude					
Depth	Depth	Northing	Easting							
(ft)	(ft)	(ft)	(ft)							
0.0	0.0	0.0	0.0	0.0	0.0	1,294,034.33	3,149,125.75	40.139280	-104.966630	
146.0	0.40	6.40	146.0	0.5	0.1	1,294,034.84	3,149,125.80	40.139281	-104.966630	
241.0	1.00	3.20	241.0	1.7	0.1	1,294,035.99	3,149,125.88	40.139285	-104.966630	
335.0	0.90	331.00	335.0	3.1	-0.2	1,294,037.46	3,149,125.56	40.139289	-104.966631	
430.0	0.60	239.80	430.0	3.5	-1.0	1,294,037.85	3,149,124.76	40.139290	-104.966634	
525.0	0.50	171.40	525.0	2.9	-1.3	1,294,037.19	3,149,124.40	40.139288	-104.966635	
620.0	0.70	194.40	620.0	1.9	-1.4	1,294,036.22	3,149,124.32	40.139285	-104.966635	
714.0	0.70	118.00	714.0	1.1	-1.0	1,294,035.40	3,149,124.69	40.139283	-104.966634	
809.0	0.60	136.90	809.0	0.4	-0.2	1,294,034.77	3,149,125.55	40.139281	-104.966631	
840.0	0.50	157.60	840.0	0.2	0.0	1,294,034.52	3,149,125.71	40.139281	-104.966630	
921.0	0.40	177.30	921.0	-0.4	0.1	1,294,033.91	3,149,125.86	40.139279	-104.966630	
1,016.0	0.40	181.40	1,015.9	-1.1	0.1	1,294,033.25	3,149,125.87	40.139277	-104.966630	

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant-Hurt 1D-14H-G268
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 4920.0ft (PATT 326)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	32' KB @ 4920.0ft (PATT 326)
Well:	Grant-Hurt 1D-14H-G268	North Reference:	True
Wellbore:	Hz	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)	Map Northing (ft)	Map Easting (ft)	Latitude		
1,109.0	0.30	236.30	1,108.9	-1.5	-0.1	1,294,032.79	3,149,125.67	40.139276		-104.966631
1,202.0	0.40	157.20	1,201.9	-2.0	-0.2	1,294,032.36	3,149,125.59	40.139275		-104.966631
1,294.0	0.40	166.90	1,293.9	-2.6	0.0	1,294,031.75	3,149,125.79	40.139273		-104.966630
1,387.0	0.20	186.90	1,386.9	-3.1	0.1	1,294,031.27	3,149,125.85	40.139272		-104.966630
1,479.0	0.20	201.00	1,478.9	-3.4	0.0	1,294,030.96	3,149,125.77	40.139271		-104.966630
1,571.0	0.10	266.70	1,570.9	-3.5	-0.1	1,294,030.81	3,149,125.64	40.139270		-104.966631
1,662.0	0.20	338.80	1,661.9	-3.4	-0.3	1,294,030.95	3,149,125.50	40.139271		-104.966631
1,754.0	0.40	349.50	1,753.9	-2.9	-0.4	1,294,031.41	3,149,125.38	40.139272		-104.966632
1,847.0	0.70	353.00	1,846.9	-2.0	-0.5	1,294,032.30	3,149,125.25	40.139274		-104.966632
1,939.0	1.00	0.30	1,938.9	-0.7	-0.6	1,294,033.66	3,149,125.17	40.139278		-104.966632
2,031.0	0.80	287.30	2,030.9	0.3	-1.2	1,294,034.65	3,149,124.56	40.139281		-104.966635
2,123.0	0.30	285.60	2,122.9	0.6	-2.0	1,294,034.90	3,149,123.71	40.139282		-104.966638
2,214.0	0.40	299.30	2,213.9	0.8	-2.5	1,294,035.11	3,149,123.20	40.139282		-104.966639
2,306.0	0.40	314.60	2,305.9	1.2	-3.0	1,294,035.49	3,149,122.69	40.139283		-104.966641
2,398.0	1.10	176.90	2,397.9	0.5	-3.2	1,294,034.84	3,149,122.52	40.139281		-104.966642
2,492.0	1.10	188.90	2,491.9	-1.3	-3.3	1,294,033.04	3,149,122.44	40.139277		-104.966642
2,587.0	1.00	181.10	2,586.9	-3.0	-3.5	1,294,031.31	3,149,122.29	40.139272		-104.966643
2,682.0	0.90	166.00	2,681.9	-4.5	-3.3	1,294,029.76	3,149,122.46	40.139268		-104.966642
2,776.0	0.70	160.80	2,775.9	-5.8	-2.9	1,294,028.50	3,149,122.84	40.139264		-104.966641
2,871.0	0.60	158.70	2,870.8	-6.8	-2.6	1,294,027.50	3,149,123.22	40.139261		-104.966639
2,965.0	0.60	190.60	2,964.8	-7.8	-2.5	1,294,026.55	3,149,123.31	40.139259		-104.966639
3,060.0	0.40	205.90	3,059.8	-8.5	-2.7	1,294,025.76	3,149,123.08	40.139257		-104.966640
3,155.0	0.30	213.10	3,154.8	-9.1	-3.0	1,294,025.26	3,149,122.80	40.139255		-104.966641
3,249.0	0.30	161.50	3,248.8	-9.5	-3.1	1,294,024.82	3,149,122.75	40.139254		-104.966641
3,344.0	1.20	196.30	3,343.8	-10.7	-3.3	1,294,023.62	3,149,122.55	40.139251		-104.966642
3,439.0	2.40	197.40	3,438.8	-13.5	-4.1	1,294,020.77	3,149,121.70	40.139243		-104.966645
3,535.0	4.00	200.90	3,534.6	-18.6	-5.9	1,294,015.71	3,149,119.93	40.139229		-104.966651
3,629.0	3.50	204.50	3,628.4	-24.3	-8.3	1,294,010.02	3,149,117.61	40.139213		-104.966660
3,723.0	2.90	204.50	3,722.3	-29.0	-10.5	1,294,005.23	3,149,115.46	40.139200		-104.966668
3,818.0	3.70	210.60	3,817.1	-33.9	-13.0	1,294,000.39	3,149,112.93	40.139187		-104.966677
3,913.0	3.70	215.90	3,911.9	-39.0	-16.4	1,293,995.25	3,149,109.61	40.139173		-104.966689
4,008.0	3.70	219.60	4,006.7	-43.8	-20.1	1,293,990.38	3,149,105.88	40.139160		-104.966702
4,103.0	3.70	222.50	4,101.5	-48.4	-24.2	1,293,985.74	3,149,101.89	40.139147		-104.966717
4,198.0	2.60	218.50	4,196.4	-52.4	-27.6	1,293,981.77	3,149,098.50	40.139136		-104.966729
4,293.0	2.80	225.50	4,291.3	-55.7	-30.6	1,293,978.44	3,149,095.52	40.139127		-104.966740
4,388.0	2.60	216.40	4,386.2	-59.1	-33.5	1,293,975.06	3,149,092.61	40.139118		-104.966750
4,483.0	2.20	190.60	4,481.1	-62.6	-35.1	1,293,971.53	3,149,091.01	40.139108		-104.966756
4,578.0	2.00	187.70	4,576.0	-66.0	-35.7	1,293,968.09	3,149,090.48	40.139099		-104.966758
4,673.0	2.50	199.40	4,671.0	-69.6	-36.6	1,293,964.49	3,149,089.59	40.139089		-104.966761
4,768.0	2.90	207.00	4,765.9	-73.7	-38.4	1,293,960.38	3,149,087.83	40.139078		-104.966767
4,863.0	2.60	211.40	4,860.7	-77.7	-40.6	1,293,956.39	3,149,085.65	40.139067		-104.966775
4,957.0	3.40	210.40	4,954.6	-81.9	-43.1	1,293,952.15	3,149,083.15	40.139055		-104.966784
5,052.0	3.30	212.30	5,049.4	-86.7	-46.0	1,293,947.39	3,149,080.29	40.139042		-104.966795
5,147.0	2.60	213.10	5,144.3	-90.8	-48.6	1,293,943.26	3,149,077.68	40.139031		-104.966804
5,242.0	3.50	207.00	5,239.2	-95.2	-51.1	1,293,938.85	3,149,075.21	40.139019		-104.966813
5,336.0	3.00	210.60	5,333.0	-99.8	-53.7	1,293,934.16	3,149,072.68	40.139006		-104.966822
5,430.0	3.70	209.20	5,426.9	-104.6	-56.4	1,293,929.38	3,149,069.98	40.138993		-104.966832
5,525.0	3.00	212.20	5,521.7	-109.4	-59.2	1,293,924.59	3,149,067.19	40.138980		-104.966842
5,620.0	1.20	200.30	5,616.6	-112.4	-60.9	1,293,921.54	3,149,065.54	40.138971		-104.966848
5,714.0	2.50	210.00	5,710.6	-115.1	-62.3	1,293,918.83	3,149,064.19	40.138964		-104.966853
5,809.0	3.60	212.90	5,805.5	-119.4	-64.9	1,293,914.52	3,149,061.56	40.138952		-104.966862
5,904.0	3.10	202.80	5,900.3	-124.3	-67.5	1,293,909.63	3,149,058.97	40.138939		-104.966872
5,999.0	3.50	206.50	5,995.1	-129.3	-69.8	1,293,904.65	3,149,056.71	40.138925		-104.966880
6,094.0	2.20	205.70	6,090.0	-133.5	-71.9	1,293,900.40	3,149,054.65	40.138914		-104.966887
6,141.0	1.80	203.90	6,137.0	-135.0	-72.6	1,293,898.91	3,149,053.97	40.138909		-104.966890

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant-Hurt 1D-14H-G268
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 4920.0ft (PATT 326)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	32' KB @ 4920.0ft (PATT 326)
Well:	Grant-Hurt 1D-14H-G268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey										
Measured			Vertical				Map	Map		
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting		Latitude	Longitude
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
6,188.0	1.30	234.60	6,184.0	-136.0	-73.3	1,293,897.92	3,149,053.24		40.138907	-104.966893
6,235.0	1.70	300.90	6,231.0	-135.9	-74.4	1,293,897.96	3,149,052.21		40.138907	-104.966896
6,283.0	3.20	328.10	6,278.9	-134.4	-75.7	1,293,899.46	3,149,050.88		40.138911	-104.966901
6,330.0	4.30	337.90	6,325.8	-131.7	-77.0	1,293,902.20	3,149,049.51		40.138919	-104.966906
6,378.0	5.80	342.60	6,373.6	-127.7	-78.4	1,293,906.17	3,149,048.08		40.138930	-104.966911
6,425.0	7.00	343.40	6,420.3	-122.7	-80.0	1,293,911.17	3,149,046.53		40.138943	-104.966916
6,473.0	8.50	349.50	6,467.9	-116.4	-81.4	1,293,917.46	3,149,045.01		40.138961	-104.966922
6,520.0	9.50	352.90	6,514.3	-109.1	-82.6	1,293,924.71	3,149,043.85		40.138980	-104.966926
6,567.0	11.50	353.90	6,560.5	-100.6	-83.5	1,293,933.22	3,149,042.82		40.139004	-104.966929
6,614.0	13.20	355.40	6,606.4	-90.6	-84.5	1,293,943.22	3,149,041.83		40.139031	-104.966932
6,662.0	15.20	358.70	6,653.0	-78.9	-85.0	1,293,954.97	3,149,041.18		40.139064	-104.966934
6,709.0	17.80	358.90	6,698.0	-65.5	-85.3	1,293,968.31	3,149,040.82		40.139100	-104.966935
6,756.0	20.70	357.40	6,742.4	-50.0	-85.8	1,293,983.79	3,149,040.21		40.139143	-104.966937
6,803.0	22.90	358.20	6,786.0	-32.6	-86.5	1,294,001.23	3,149,039.44		40.139191	-104.966940
6,851.0	25.70	359.70	6,829.8	-12.8	-86.8	1,294,020.97	3,149,038.98		40.139245	-104.966941
6,898.0	28.90	358.90	6,871.5	8.7	-87.1	1,294,042.52	3,149,038.58		40.139304	-104.966942
6,946.0	31.80	0.30	6,913.0	33.0	-87.3	1,294,066.77	3,149,038.27		40.139371	-104.966942
6,993.0	35.60	0.40	6,952.1	59.0	-87.1	1,294,092.84	3,149,038.28		40.139442	-104.966942
7,040.0	40.40	0.40	6,989.1	88.0	-86.9	1,294,121.77	3,149,038.31		40.139522	-104.966941
7,087.0	46.20	0.30	7,023.3	120.2	-86.7	1,294,153.99	3,149,038.31		40.139610	-104.966940
7,135.0	50.40	358.90	7,055.2	156.0	-87.0	1,294,189.82	3,149,037.83		40.139708	-104.966941
7,182.0	54.50	358.10	7,083.8	193.3	-88.0	1,294,227.05	3,149,036.62		40.139811	-104.966945
7,229.0	58.10	359.30	7,109.9	232.3	-88.8	1,294,266.13	3,149,035.51		40.139918	-104.966948
7,276.0	60.70	358.80	7,133.8	272.8	-89.5	1,294,306.57	3,149,034.59		40.140029	-104.966950
7,323.0	63.50	359.70	7,155.8	314.3	-90.1	1,294,348.09	3,149,033.80		40.140143	-104.966952
7,370.0	65.80	0.80	7,175.9	356.8	-89.9	1,294,390.57	3,149,033.74		40.140259	-104.966952
7,418.0	66.60	1.90	7,195.3	400.7	-88.8	1,294,434.48	3,149,034.51		40.140380	-104.966948
7,465.0	69.30	1.80	7,213.0	444.2	-87.4	1,294,478.02	3,149,035.65		40.140499	-104.966943
7,513.0	72.80	0.00	7,228.5	489.6	-86.7	1,294,523.41	3,149,036.08		40.140624	-104.966940
7,560.0	76.50	359.70	7,241.0	534.9	-86.8	1,294,568.72	3,149,035.69		40.140748	-104.966941
7,607.0	79.40	358.60	7,250.8	580.9	-87.5	1,294,614.67	3,149,034.73		40.140875	-104.966943
7,654.0	82.20	358.60	7,258.3	627.3	-88.7	1,294,661.04	3,149,033.32		40.141002	-104.966947
7,702.0	84.70	358.60	7,263.8	674.9	-89.8	1,294,708.70	3,149,031.87		40.141133	-104.966952
7,736.0	87.00	359.20	7,266.2	708.8	-90.5	1,294,742.60	3,149,031.01		40.141226	-104.966954
7,804.0	88.40	358.90	7,269.0	776.8	-91.6	1,294,810.52	3,149,029.48		40.141412	-104.966958
7,896.0	89.40	358.90	7,270.7	868.7	-93.4	1,294,902.48	3,149,027.16		40.141665	-104.966964
7,989.0	90.00	357.80	7,271.2	961.7	-96.0	1,294,995.42	3,149,023.92		40.141920	-104.966974
8,081.0	90.10	0.50	7,271.1	1,053.7	-97.4	1,295,087.39	3,149,022.00		40.142172	-104.966979
8,173.0	90.70	0.30	7,270.5	1,145.7	-96.8	1,295,179.39	3,149,022.09		40.142425	-104.966976
8,265.0	90.80	0.80	7,269.3	1,237.6	-95.9	1,295,271.38	3,149,022.42		40.142678	-104.966973
8,357.0	91.30	3.30	7,267.6	1,329.6	-92.6	1,295,363.31	3,149,025.16		40.142930	-104.966961
8,448.0	90.90	2.20	7,265.9	1,420.4	-88.2	1,295,454.21	3,149,028.98		40.143179	-104.966946
8,540.0	92.70	4.70	7,263.0	1,512.2	-82.7	1,295,546.02	3,149,033.96		40.143431	-104.966926
8,632.0	91.80	3.30	7,259.4	1,603.9	-76.3	1,295,637.76	3,149,039.82		40.143683	-104.966903
8,723.0	90.50	2.30	7,257.5	1,694.8	-71.8	1,295,728.66	3,149,043.72		40.143932	-104.966887
8,816.0	90.50	3.30	7,256.7	1,787.7	-67.3	1,295,821.57	3,149,047.70		40.144187	-104.966871
8,908.0	89.60	1.80	7,256.6	1,879.6	-63.2	1,295,913.50	3,149,051.24		40.144440	-104.966856
9,001.0	90.80	1.10	7,256.3	1,972.5	-60.8	1,296,006.48	3,149,053.03		40.144695	-104.966848
9,093.0	90.10	0.10	7,255.6	2,064.5	-59.9	1,296,098.47	3,149,053.44		40.144947	-104.966844
9,184.0	90.20	1.00	7,255.4	2,155.5	-59.0	1,296,189.47	3,149,053.77		40.145197	-104.966841
9,277.0	89.70	359.30	7,255.4	2,248.5	-58.8	1,296,282.47	3,149,053.45		40.145453	-104.966840
9,370.0	90.80	0.20	7,255.0	2,341.5	-59.2	1,296,375.46	3,149,052.49		40.145708	-104.966842
9,462.0	90.00	359.00	7,254.4	2,433.5	-59.8	1,296,467.44	3,149,051.29		40.145960	-104.966844
9,554.0	89.70	357.70	7,254.6	2,525.5	-62.5	1,296,559.39	3,149,048.09		40.146213	-104.966854
9,645.0	90.30	359.40	7,254.6	2,616.4	-64.8	1,296,650.34	3,149,045.24		40.146463	-104.966862

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant-Hurt 1D-14H-G268
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 4920.0ft (PATT 326)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	32' KB @ 4920.0ft (PATT 326)
Well:	Grant-Hurt 1D-14H-G268	North Reference:	True
Wellbore:	Hz	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)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
9,737.0	90.20	0.10	7,254.2	2,708.4	-65.2	1,296,742.33	3,149,044.29	40.146715	-104.966863	
9,829.0	90.70	0.10	7,253.5	2,800.4	-65.0	1,296,834.33	3,149,043.89	40.146968	-104.966863	
9,921.0	90.60	1.70	7,252.5	2,892.4	-63.6	1,296,926.32	3,149,044.79	40.147220	-104.966858	
10,016.0	90.10	2.90	7,251.9	2,987.3	-59.8	1,297,021.26	3,149,048.03	40.147481	-104.966844	
10,111.0	90.00	1.60	7,251.8	3,082.3	-56.0	1,297,116.20	3,149,051.19	40.147741	-104.966831	
10,206.0	90.90	3.30	7,251.1	3,177.2	-52.0	1,297,211.13	3,149,054.68	40.148002	-104.966816	
10,300.0	90.40	2.90	7,250.0	3,271.0	-46.9	1,297,305.02	3,149,059.19	40.148259	-104.966798	
10,395.0	90.30	2.60	7,249.4	3,365.9	-42.3	1,297,399.91	3,149,063.18	40.148520	-104.966782	
10,490.0	92.00	2.10	7,247.5	3,460.8	-38.4	1,297,494.83	3,149,066.50	40.148780	-104.966768	
10,585.0	93.70	3.20	7,242.8	3,555.6	-34.0	1,297,589.63	3,149,070.32	40.149041	-104.966752	
10,680.0	93.90	4.20	7,236.5	3,650.2	-27.9	1,297,684.26	3,149,075.87	40.149300	-104.966730	
10,774.0	89.70	3.50	7,233.5	3,743.9	-21.6	1,297,778.01	3,149,081.61	40.149558	-104.966708	
10,869.0	90.00	4.00	7,233.8	3,838.7	-15.4	1,297,872.84	3,149,087.25	40.149818	-104.966685	
10,964.0	88.50	1.30	7,235.0	3,933.6	-11.0	1,297,967.75	3,149,091.07	40.150078	-104.966670	
11,059.0	88.80	358.90	7,237.3	4,028.5	-10.8	1,298,062.71	3,149,090.67	40.150339	-104.966669	
11,154.0	89.30	357.80	7,238.8	4,123.5	-13.6	1,298,157.64	3,149,087.36	40.150600	-104.966679	
11,249.0	90.40	356.70	7,239.1	4,218.4	-18.1	1,298,252.50	3,149,082.23	40.150860	-104.966695	
11,344.0	90.50	359.20	7,238.3	4,313.3	-21.5	1,298,347.41	3,149,078.26	40.151121	-104.966707	
11,438.0	89.90	358.20	7,238.0	4,407.3	-23.7	1,298,441.37	3,149,075.57	40.151379	-104.966715	
11,533.0	90.20	359.50	7,237.9	4,502.2	-25.6	1,298,536.33	3,149,073.09	40.151639	-104.966722	
11,628.0	91.60	359.80	7,236.4	4,597.2	-26.2	1,298,631.31	3,149,071.94	40.151900	-104.966724	
11,723.0	91.30	2.00	7,234.0	4,692.2	-24.7	1,298,726.27	3,149,072.86	40.152161	-104.966719	
11,818.0	89.90	3.80	7,233.0	4,787.0	-19.9	1,298,821.16	3,149,077.09	40.152421	-104.966701	
11,913.0	89.40	1.90	7,233.6	4,881.9	-15.1	1,298,916.07	3,149,081.25	40.152682	-104.966684	
12,008.0	90.30	2.60	7,233.9	4,976.8	-11.4	1,299,011.01	3,149,084.40	40.152942	-104.966671	
12,102.0	90.10	1.90	7,233.5	5,070.8	-7.7	1,299,104.96	3,149,087.53	40.153200	-104.966658	
12,197.0	90.00	0.70	7,233.5	5,165.7	-5.6	1,299,199.94	3,149,089.11	40.153461	-104.966650	
12,292.0	89.50	359.70	7,233.9	5,260.7	-5.2	1,299,294.94	3,149,088.87	40.153721	-104.966649	
12,387.0	90.60	0.40	7,233.8	5,355.7	-5.1	1,299,389.94	3,149,088.39	40.153982	-104.966649	
12,482.0	90.30	1.10	7,233.0	5,450.7	-3.9	1,299,484.93	3,149,089.06	40.154243	-104.966644	
12,577.0	90.00	0.50	7,232.8	5,545.7	-2.6	1,299,579.93	3,149,089.81	40.154504	-104.966639	
12,671.0	89.50	0.20	7,233.2	5,639.7	-2.0	1,299,673.93	3,149,089.82	40.154762	-104.966637	
12,766.0	89.50	358.60	7,234.0	5,734.7	-3.0	1,299,768.91	3,149,088.26	40.155023	-104.966641	
12,860.0	91.80	359.70	7,233.0	5,828.7	-4.4	1,299,862.87	3,149,086.30	40.155281	-104.966646	
12,954.0	91.70	358.90	7,230.1	5,922.6	-5.5	1,299,956.81	3,149,084.58	40.155538	-104.966650	
13,047.0	92.10	358.50	7,227.0	6,015.5	-7.6	1,300,049.72	3,149,081.91	40.155794	-104.966658	
13,142.0	91.90	0.20	7,223.7	6,110.5	-8.7	1,300,144.65	3,149,080.27	40.156054	-104.966661	
13,236.0	92.00	1.10	7,220.5	6,204.4	-7.7	1,300,238.59	3,149,080.77	40.156312	-104.966658	
13,331.0	91.90	1.40	7,217.3	6,299.3	-5.6	1,300,333.52	3,149,082.27	40.156573	-104.966650	
13,425.0	90.10	3.40	7,215.6	6,393.2	-1.7	1,300,427.44	3,149,085.64	40.156830	-104.966636	
13,520.0	90.50	3.70	7,215.1	6,488.1	4.2	1,300,522.29	3,149,090.95	40.157091	-104.966615	
13,614.0	90.70	2.20	7,214.1	6,581.9	9.1	1,300,616.18	3,149,095.22	40.157348	-104.966598	
13,709.0	90.70	1.50	7,213.0	6,676.9	12.1	1,300,711.14	3,149,097.72	40.157609	-104.966587	
13,803.0	91.20	0.80	7,211.4	6,770.8	14.0	1,300,805.12	3,149,099.04	40.157867	-104.966580	
13,898.0	90.20	1.50	7,210.3	6,865.8	15.9	1,300,900.10	3,149,100.38	40.158128	-104.966573	
13,993.0	91.20	2.50	7,209.1	6,960.7	19.2	1,300,995.05	3,149,103.12	40.158388	-104.966561	
14,087.0	91.60	0.70	7,206.8	7,054.7	21.9	1,301,089.00	3,149,105.18	40.158646	-104.966552	
14,182.0	92.00	0.50	7,203.8	7,149.6	22.9	1,301,183.95	3,149,105.60	40.158907	-104.966548	
14,205.0	91.80	359.80	7,203.1	7,172.6	22.9	1,301,206.94	3,149,105.52	40.158970	-104.966548	
Last CES Survey @ 14,205' MD										
14,255.0	91.80	359.80	7,201.5	7,222.6	22.7	1,301,256.91	3,149,105.05	40.159107	-104.966549	
PTB @ 14,255'										

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant-Hurt 1D-14H-G268
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 4920.0ft (PATT 326)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	32' KB @ 4920.0ft (PATT 326)
Well:	Grant-Hurt 1D-14H-G268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Design Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
Grant-Hurt 1D-14H-G268	0.00	0.00	7,055.5	184.0	-93.5	1,294,217.80	3,149,031.14	40.139785	-104.966965
- actual wellpath misses target center by 18.3ft at 7157.6ft MD (7069.3 TVD, 173.6 N, -87.4 E)									
- Point									
Grant-Hurt 1D-14H-G268	0.00	0.00	7,220.0	7,303.9	25.2	1,301,338.20	3,149,106.97	40.159330	-104.966540
- actual wellpath misses target center by 83.4ft at 14255.0ft MD (7201.5 TVD, 7222.6 N, 22.7 E)									
- Point									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
14,205.0	7,203.1	7,172.6	22.9	Last CES Survey @ 14,205' MD
14,255.0	7,201.5	7,222.6	22.7	PTB @ 14,255'

Checked By: _____ Approved By: _____ Date: _____