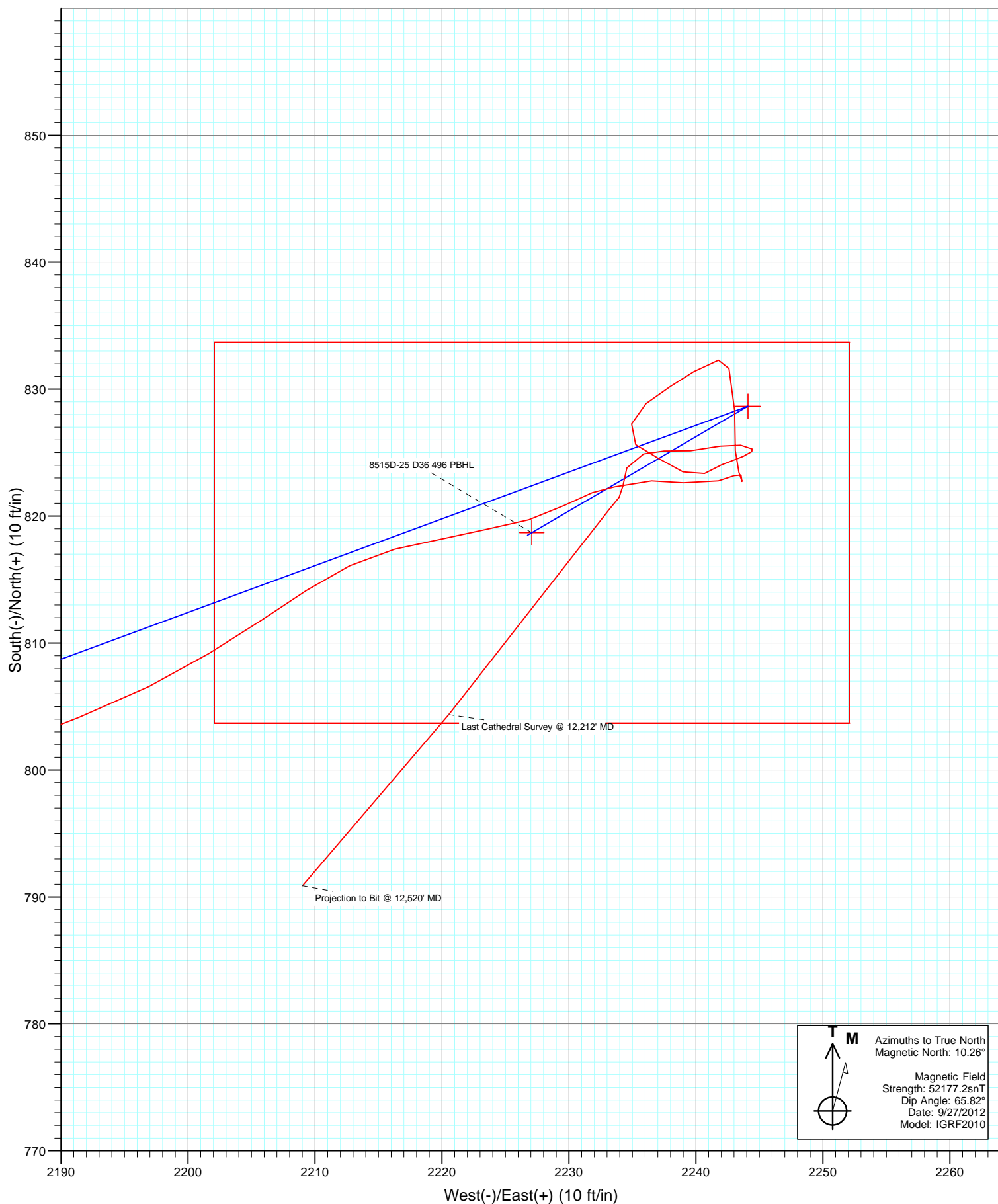


Azimuths to True North  
 Magnetic North: 10.26°

Magnetic Field  
 Strength: 52177.2snT  
 Dip Angle: 65.82°  
 Date: 9/27/2012  
 Model: IGRF2010

FINAL 8515D-25 (was 8512A-25) 125545 193955; LR KB @ 8324.0ft (Patterson 306) GL @ 8291.0 North American Datum 1983 Well 8515D-25 (was 8512A-25), True North							
Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD	
	8515D-25 D36 496 PBHL	69.82	Slot	0.0	0.0	0.0	
	TVD	+N/-S	+E/-W	Latitude		Longitude	
8515D-25 D36 496 TGT	8436.0	828.7	2244.1	39° 40'	3.11 N	108° 6'	52.92 W
8515D-25 D36 496 PBHL	12912.0	818.7	2227.1	39° 40'	3.01 N	108° 6'	53.14 W



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8515D-25 (was 8512A-25)
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Site:</b>	S36-T4S-R96W (D36 496)	<b>MD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Well:</b>	8515D-25 (was 8512A-25)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

<b>Project</b>	Story Gulch		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Central Zone		

Site		S36-T4S-R96W (D36 496)			
Site Position:		Northing:	1,677,701.75 ft	Latitude:	39° 39' 53.35 N
From:	Lat/Long	Easting:	2,261,687.16 ft	Longitude:	108° 7' 22.59 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.65 °

Well	8515D-25 (was 8512A-25)					
Well Position	+N/-S	0.0 ft	Northing:	1,677,858.33 ft	Latitude:	39° 39' 54.92 N
	+E/-W	0.0 ft	Easting:	2,261,767.57 ft	Longitude:	108° 7' 21.62 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,291.0 ft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	9/27/2012	10.26	65.82	52,177

<b>Design</b>	FINAL				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	69.82	

<b>Survey Program</b>	<b>Date</b>	10/24/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
178.0	12,520.0	Survey #1 (DD)	MWD	Geolink MWD	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Formations / Comments</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
178.0	1.70	111.20	178.0	-1.0	2.5	2.0	0.96	0.96		
208.0	2.10	109.50	208.0	-1.3	3.4	2.7	1.35	1.33		
239.0	2.30	119.00	238.9	-1.8	4.5	3.6	1.34	0.65		
269.0	2.60	72.30	268.9	-1.9	5.6	4.7	6.54	1.00		
300.0	3.50	56.50	299.9	-1.1	7.1	6.3	3.95	2.90		
330.0	4.40	50.80	329.8	0.1	8.8	8.3	3.27	3.00		
361.0	5.00	54.70	360.7	1.6	10.8	10.7	2.19	1.94		
391.0	5.70	61.40	390.6	3.1	13.2	13.4	3.12	2.33		
421.0	6.90	65.70	420.4	4.5	16.1	16.7	4.30	4.00		
452.0	8.10	69.20	451.1	6.1	19.9	20.7	4.14	3.87		
482.0	9.30	68.30	480.8	7.7	24.1	25.3	4.03	4.00		
513.0	10.40	68.50	511.3	9.7	29.0	30.6	3.55	3.55		

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8515D-25 (was 8512A-25)
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Site:</b>	S36-T4S-R96W (D36 496)	<b>MD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Well:</b>	8515D-25 (was 8512A-25)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	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
560.0	11.90	66.20	557.4	13.2	37.4	39.7	3.33	3.19	
607.0	13.60	68.20	603.3	17.2	47.0	50.0	3.74	3.62	
699.0	17.30	67.80	691.9	26.4	69.7	74.5	4.02	4.02	
790.0	20.60	68.10	778.0	37.5	97.1	104.0	3.63	3.63	
882.0	21.40	69.30	863.9	49.5	127.8	137.0	0.99	0.87	
974.0	21.00	69.40	949.6	61.2	158.9	170.3	0.44	-0.43	
1,065.0	20.80	68.70	1,034.7	72.8	189.2	202.7	0.35	-0.22	
1,157.0	20.30	67.40	1,120.8	84.9	219.2	235.0	0.74	-0.54	
1,249.0	19.60	65.80	1,207.3	97.3	248.0	266.3	0.96	-0.76	
1,340.0	19.50	68.50	1,293.0	109.1	276.0	296.8	1.00	-0.11	
1,432.0	19.00	69.70	1,379.9	120.0	304.4	327.1	0.69	-0.54	
1,524.0	18.20	68.90	1,467.1	130.3	331.8	356.4	0.91	-0.87	
1,615.0	17.70	69.70	1,553.7	140.2	358.1	384.5	0.61	-0.55	
1,707.0	17.00	74.20	1,641.5	148.8	384.1	411.9	1.64	-0.76	
1,799.0	16.60	76.00	1,729.5	155.6	409.8	438.3	0.71	-0.43	
1,891.0	17.20	75.10	1,817.6	162.3	435.7	464.9	0.71	0.65	
1,982.0	17.80	72.10	1,904.4	170.0	461.9	492.2	1.19	0.66	
2,074.0	17.20	69.80	1,992.1	179.0	488.1	519.9	1.00	-0.65	
2,165.0	17.30	68.90	2,079.0	188.6	513.3	546.9	0.31	0.11	
2,257.0	16.90	68.10	2,166.9	198.5	538.5	573.9	0.50	-0.43	
2,348.0	16.50	69.60	2,254.1	207.9	562.9	600.1	0.65	-0.44	
2,440.0	16.80	69.70	2,342.2	217.1	587.6	626.4	0.33	0.33	
2,531.0	16.40	68.50	2,429.5	226.3	611.9	652.4	0.58	-0.44	
2,623.0	15.90	66.90	2,517.8	236.0	635.6	678.0	0.73	-0.54	
2,714.0	16.80	68.40	2,605.1	245.8	659.3	703.6	1.09	0.99	
2,805.0	18.10	70.30	2,692.0	255.4	684.8	730.9	1.56	1.43	
2,897.0	17.90	70.60	2,779.5	264.9	711.6	759.3	0.24	-0.22	
2,965.0	16.90	70.60	2,844.3	271.7	730.8	779.6	1.47	-1.47	
3,078.0	14.90	72.70	2,953.0	281.4	760.1	810.6	1.84	-1.77	
3,169.0	13.70	70.40	3,041.2	288.5	781.5	833.0	1.46	-1.32	
3,261.0	14.00	69.10	3,130.5	296.1	802.1	855.1	0.47	0.33	
3,352.0	16.70	69.10	3,218.3	304.7	824.6	879.1	2.97	2.97	
3,443.0	17.10	69.60	3,305.3	314.1	849.4	905.6	0.47	0.44	
3,535.0	17.40	72.50	3,393.2	322.9	875.2	932.9	0.99	0.33	
3,626.0	18.30	69.90	3,479.8	331.9	901.6	960.7	1.32	0.99	
3,718.0	17.10	71.10	3,567.5	341.3	927.9	988.7	1.36	-1.30	
3,809.0	16.40	69.10	3,654.6	350.2	952.6	1,014.9	1.00	-0.77	
3,900.0	16.70	66.60	3,741.8	360.0	976.6	1,040.8	0.85	0.33	
3,992.0	16.60	67.70	3,830.0	370.2	1,000.9	1,067.2	0.36	-0.11	
4,083.0	15.60	65.00	3,917.4	380.3	1,024.0	1,092.3	1.37	-1.10	
4,174.0	16.80	69.40	4,004.8	390.1	1,047.4	1,117.7	1.89	1.32	
4,266.0	18.50	68.40	4,092.5	400.1	1,073.4	1,145.6	1.88	1.85	
4,357.0	19.20	68.00	4,178.6	411.1	1,100.7	1,175.0	0.78	0.77	
4,449.0	19.10	67.80	4,265.5	422.4	1,128.7	1,205.1	0.13	-0.11	
4,541.0	19.70	68.40	4,352.3	433.8	1,157.0	1,235.7	0.69	0.65	
4,632.0	19.80	69.10	4,437.9	445.0	1,185.7	1,266.4	0.28	0.11	
4,723.0	19.10	70.30	4,523.7	455.5	1,214.1	1,296.7	0.89	-0.77	
4,815.0	19.60	71.90	4,610.5	465.3	1,243.0	1,327.2	0.79	0.54	
4,906.0	20.60	70.50	4,696.0	475.4	1,272.6	1,358.4	1.22	1.10	
4,997.0	21.10	70.00	4,781.0	486.4	1,303.0	1,390.8	0.58	0.55	
5,089.0	19.20	70.40	4,867.4	497.1	1,332.9	1,422.5	2.07	-2.07	
5,180.0	20.80	71.00	4,952.9	507.4	1,362.2	1,453.6	1.77	1.76	
5,271.0	19.50	69.90	5,038.3	517.9	1,391.8	1,485.0	1.49	-1.43	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8515D-25 (was 8512A-25)
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Site:</b>	S36-T4S-R96W (D36 496)	<b>MD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Well:</b>	8515D-25 (was 8512A-25)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	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
5,363.0	19.50	70.50	5,125.0	528.3	1,420.7	1,515.7	0.22	0.00	
5,453.0	18.10	70.00	5,210.2	538.1	1,448.0	1,544.7	1.57	-1.56	
5,545.0	19.50	70.90	5,297.3	548.0	1,475.9	1,574.3	1.55	1.52	
5,637.0	17.60	70.30	5,384.5	557.7	1,503.5	1,603.6	2.08	-2.07	
5,728.0	17.90	69.80	5,471.2	567.2	1,529.6	1,631.3	0.37	0.33	
5,820.0	18.60	67.70	5,558.6	577.6	1,556.4	1,660.2	1.04	0.76	
5,911.0	16.80	67.20	5,645.3	588.2	1,582.0	1,687.8	1.99	-1.98	
6,002.0	16.80	70.30	5,732.4	597.8	1,606.5	1,714.1	0.98	0.00	
6,093.0	16.80	70.40	5,819.5	606.6	1,631.3	1,740.4	0.03	0.00	
6,185.0	17.10	69.80	5,907.5	615.7	1,656.5	1,767.2	0.38	0.33	
6,276.0	15.80	70.30	5,994.8	624.5	1,680.7	1,793.0	1.44	-1.43	
6,367.0	16.80	72.70	6,082.1	632.6	1,704.9	1,818.5	1.32	1.10	
6,458.0	17.90	72.00	6,169.0	640.8	1,730.8	1,845.6	1.23	1.21	
6,549.0	16.30	68.70	6,256.0	649.8	1,756.0	1,872.3	2.06	-1.76	
6,641.0	15.00	66.70	6,344.6	659.2	1,778.9	1,897.1	1.53	-1.41	
6,732.0	13.20	70.40	6,432.8	667.4	1,799.5	1,919.3	2.21	-1.98	
6,823.0	11.90	72.80	6,521.6	673.6	1,818.3	1,939.1	1.54	-1.43	
6,915.0	14.80	70.00	6,611.1	680.4	1,838.4	1,960.3	3.23	3.15	
7,006.0	14.20	69.30	6,699.2	688.4	1,859.8	1,983.1	0.69	-0.66	
7,097.0	16.50	68.80	6,787.0	697.0	1,882.3	2,007.2	2.53	2.53	
7,189.0	17.80	69.70	6,874.9	706.6	1,907.6	2,034.3	1.44	1.41	
7,280.0	18.60	71.50	6,961.3	716.0	1,934.4	2,062.7	1.07	0.88	
7,372.0	18.50	73.70	7,048.6	724.8	1,962.4	2,091.9	0.77	-0.11	
7,463.0	18.90	74.90	7,134.8	732.7	1,990.5	2,121.0	0.61	0.44	
7,555.0	19.00	70.40	7,221.8	741.6	2,018.9	2,150.8	1.59	0.11	
7,646.0	17.40	72.50	7,308.2	750.6	2,045.9	2,179.2	1.90	-1.76	
7,738.0	17.40	69.10	7,396.0	759.7	2,071.9	2,206.7	1.11	0.00	
7,829.0	16.00	70.70	7,483.2	768.7	2,096.4	2,232.9	1.62	-1.54	
7,920.0	14.90	68.60	7,570.9	777.1	2,119.1	2,257.1	1.36	-1.21	
8,012.0	14.20	70.20	7,659.9	785.2	2,140.8	2,280.2	0.88	-0.76	
8,103.0	13.20	69.00	7,748.3	792.7	2,161.0	2,301.8	1.14	-1.10	
8,194.0	10.00	70.10	7,837.5	799.1	2,178.1	2,320.1	3.52	-3.52	
8,285.0	8.00	68.50	7,927.4	804.1	2,191.4	2,334.3	2.21	-2.20	
8,376.0	6.50	58.10	8,017.6	809.2	2,201.7	2,345.7	2.18	-1.65	
8,467.0	5.00	55.80	8,108.2	814.1	2,209.3	2,354.6	1.67	-1.65	
8,559.0	4.70	74.70	8,199.8	817.4	2,216.3	2,362.2	1.76	-0.33	
8,650.0	4.60	80.90	8,290.5	819.0	2,223.5	2,369.5	0.56	-0.11	
8,742.0	3.50	62.50	8,382.3	820.8	2,229.6	2,375.9	1.84	-1.20	
8,796.4	2.50	71.64	8,436.6	822.0	2,232.2	2,378.8	2.03	-1.83	8515D-25 D36 496 TGT
8,833.0	1.90	83.00	8,473.2	822.3	2,233.6	2,380.1	2.03	-1.65	
8,925.0	1.80	78.60	8,565.2	822.8	2,236.5	2,383.1	0.19	-0.11	
9,013.0	1.60	110.00	8,653.1	822.6	2,239.0	2,385.4	1.07	-0.23	
9,104.0	2.10	69.50	8,744.1	822.8	2,241.8	2,388.0	1.50	0.55	
9,196.0	0.30	123.40	8,836.1	823.2	2,243.6	2,389.8	2.11	-1.96	
9,287.0	0.50	198.40	8,927.1	822.7	2,243.6	2,389.7	0.56	0.22	
9,378.0	1.40	354.40	9,018.1	823.5	2,243.4	2,389.8	2.05	0.99	
9,469.0	0.80	342.60	9,109.0	825.2	2,243.1	2,390.1	0.70	-0.66	
9,560.0	3.20	3.30	9,200.0	828.3	2,243.1	2,391.1	2.71	2.64	
9,652.0	1.20	321.50	9,291.9	831.6	2,242.6	2,391.8	2.65	-2.17	
9,744.0	0.30	246.60	9,383.9	832.3	2,241.8	2,391.3	1.26	-0.98	
9,836.0	0.70	243.80	9,475.9	831.9	2,241.1	2,390.5	0.44	0.43	
9,927.0	1.00	246.50	9,566.9	831.4	2,239.8	2,389.1	0.33	0.33	
10,018.0	1.80	232.80	9,657.9	830.2	2,238.0	2,387.0	0.95	0.88	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8515D-25 (was 8512A-25)
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Site:</b>	S36-T4S-R96W (D36 496)	<b>MD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Well:</b>	8515D-25 (was 8512A-25)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	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
10,110.0	1.10	237.90	9,749.8	828.9	2,236.1	2,384.7	0.77	-0.76	
10,201.0	1.50	198.90	9,840.8	827.3	2,234.9	2,383.1	1.04	0.44	
10,292.0	1.10	125.70	9,931.8	825.6	2,235.3	2,382.9	1.74	-0.44	
10,384.0	1.40	117.50	10,023.8	824.6	2,237.0	2,384.1	0.38	0.33	
10,475.0	1.50	119.90	10,114.7	823.5	2,239.0	2,385.6	0.13	0.11	
10,567.0	1.00	53.60	10,206.7	823.4	2,240.7	2,387.2	1.55	-0.54	
10,658.0	0.90	73.80	10,297.7	824.0	2,242.0	2,388.6	0.38	-0.11	
10,750.0	1.40	65.20	10,389.7	824.7	2,243.7	2,390.5	0.57	0.54	
10,841.0	0.40	290.50	10,480.7	825.3	2,244.4	2,391.4	1.87	-1.10	
10,932.0	0.80	287.60	10,571.7	825.6	2,243.5	2,390.6	0.44	0.44	
11,024.0	1.30	255.10	10,663.7	825.5	2,241.9	2,389.1	0.82	0.54	
11,115.0	1.70	265.70	10,754.6	825.1	2,239.6	2,386.7	0.53	0.44	
11,207.0	0.90	276.70	10,846.6	825.1	2,237.5	2,384.8	0.91	-0.87	
11,298.0	1.20	250.60	10,937.6	824.9	2,235.9	2,383.2	0.61	0.33	
11,390.0	1.10	207.30	11,029.6	823.8	2,234.6	2,381.6	0.93	-0.11	
11,481.0	0.80	171.90	11,120.6	822.4	2,234.3	2,380.8	0.71	-0.33	
11,573.0	0.60	234.90	11,212.6	821.5	2,234.0	2,380.2	0.82	-0.22	
11,664.0	1.00	209.90	11,303.5	820.5	2,233.2	2,379.1	0.57	0.44	
12,212.0	3.30	220.50	11,851.1	804.4	2,220.5	2,361.7	0.42	0.42	Last Cathedral Survey @ 12,212' MD
12,520.0	3.30	220.50	12,158.6	790.9	2,209.0	2,346.3	0.00	0.00	Projection to Bit @ 12,520' MD - 8515D-25 D36 4

Targets									
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	
- Shape									Latitude Longitude
8515D-25 D36 496 PBH		0.00	0.00	12,912.0	818.7	2,227.1	1,678,612.40	2,264,017.36	39° 40' 3.01 N 108° 6' 53.14 W
- actual wellpath misses target center by 754.1ft at 12520.0ft MD (12158.6 TVD, 790.9 N, 2209.0 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
8515D-25 D36 496 TGT		0.00	0.00	8,436.0	828.7	2,244.1	1,678,621.87	2,264,034.66	39° 40' 3.11 N 108° 6' 52.92 W
- actual wellpath misses target center by 13.6ft at 8796.4ft MD (8436.6 TVD, 822.0 N, 2232.2 E)									
- Point									

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
12,212.0	11,851.1	804.4	2,220.5	Last Cathedral Survey @ 12,212' MD	
12,520.0	12,158.6	790.9	2,209.0	Projection to Bit @ 12,520' MD	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_