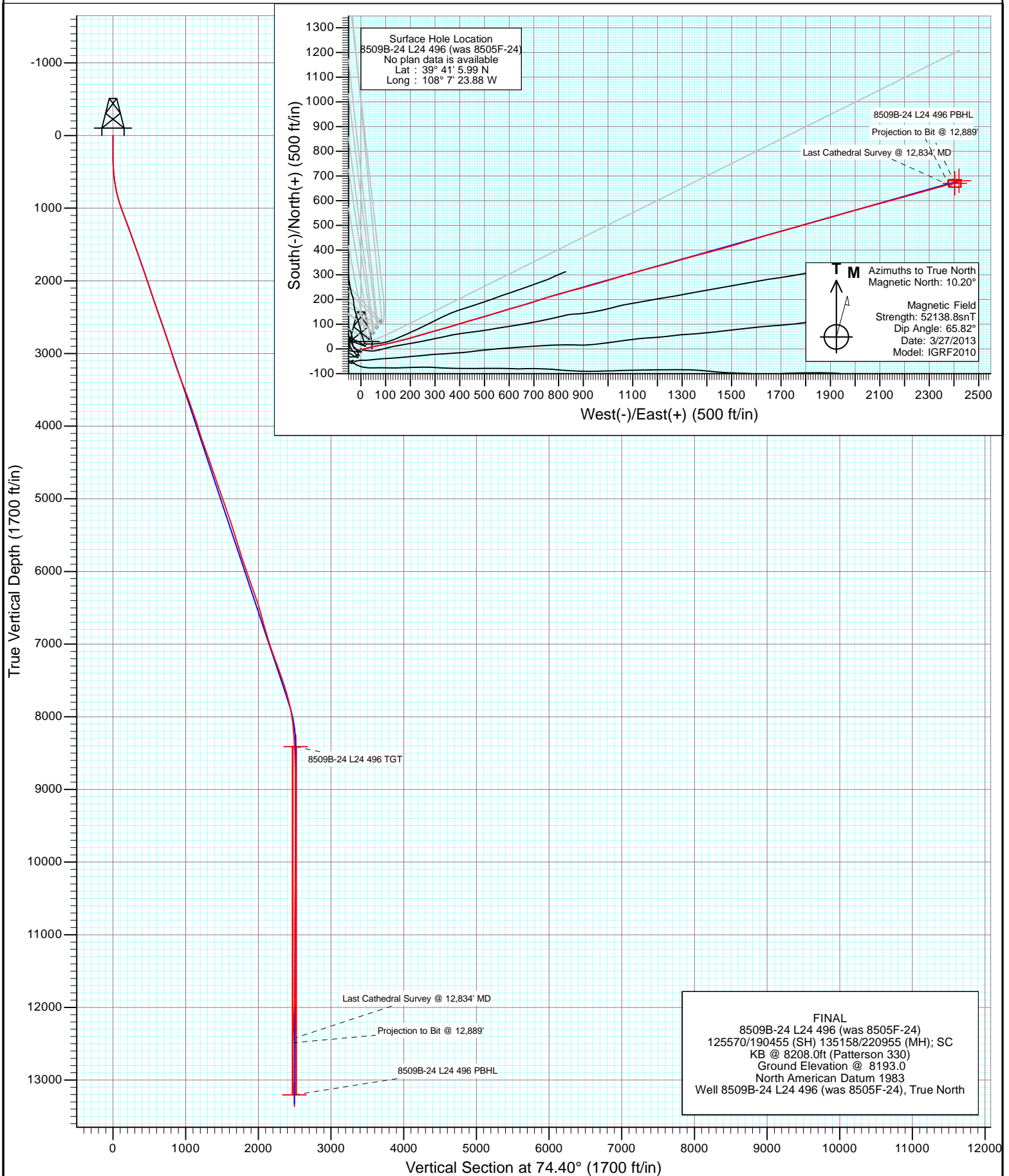


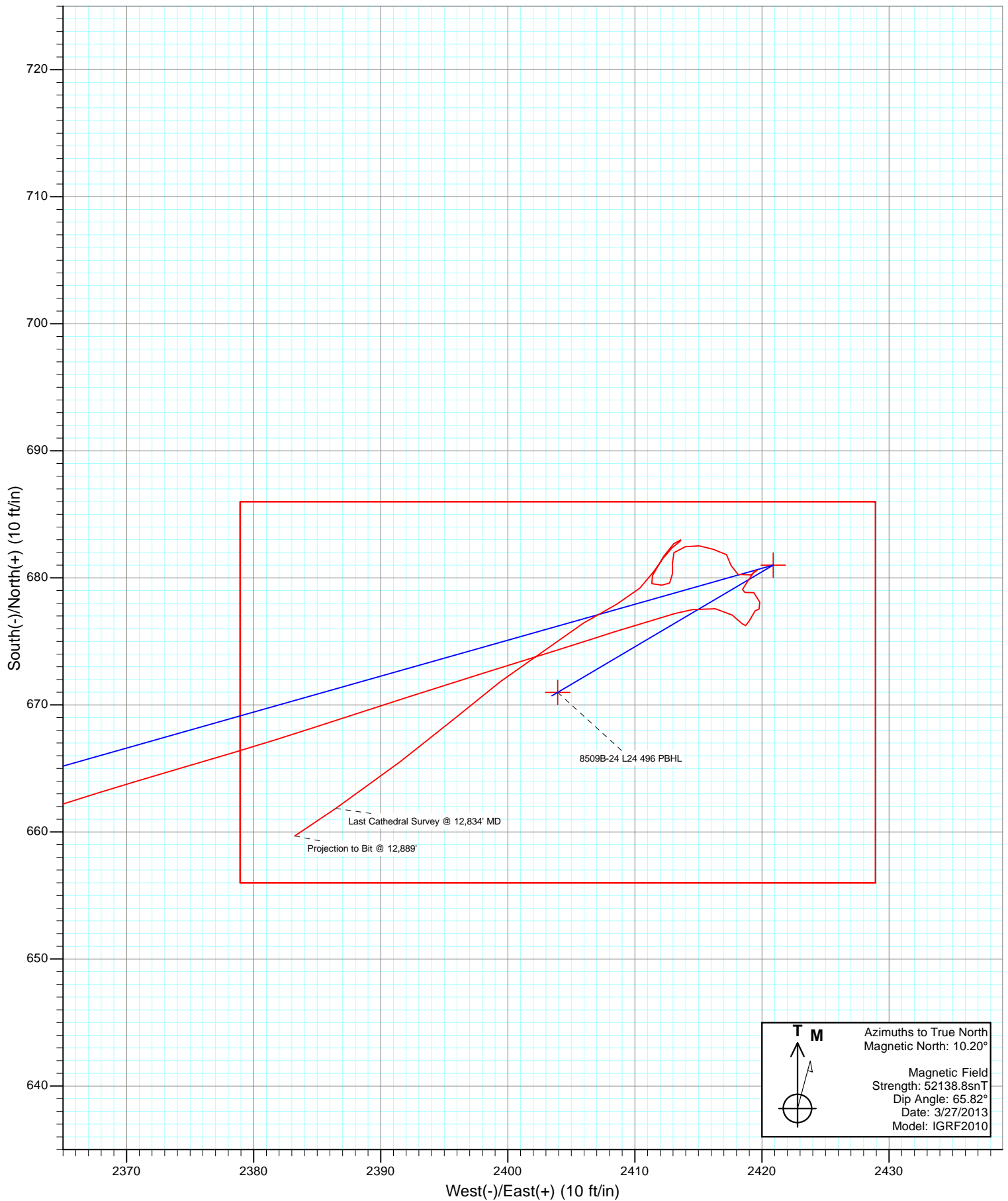


Project: Story Gulch
Site: L24 496
Well: 8509B-24 L24 496 (was 8505F-24)
Wellbore: DD
Design: FINAL





Project: Story Gulch
Site: L24 496
Well: 8509B-24 L24 496 (was 8505F-24)
Wellbore: DD
Design: FINAL



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8509B-24 L24 496 (was 8505F-24)
Project:	Story Gulch	TVD Reference:	KB @ 8208.0ft (Patterson 330)
Site:	L24 496	MD Reference:	KB @ 8208.0ft (Patterson 330)
Well:	8509B-24 L24 496 (was 8505F-24)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

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

Site	L24 496			
Site Position:		Northing:	1,685,024.52 ft	Latitude: 39° 41' 5.72 N
From:	Lat/Long	Easting:	2,261,789.15 ft	Longitude: 108° 7' 23.99 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence: -1.65 °

Well	8509B-24 L24 496 (was 8505F-24)			
Well Position	+N/-S	0.0 ft	Northing:	1,685,051.56 ft
	+E/-W	0.0 ft	Easting:	2,261,798.54 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level: 8,193.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/27/2013	10.20	65.82	52,139

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	74.40

Survey Program	Date	4/16/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
237.0	12,889.0	Survey #1 (DD)	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	
237.0	0.50	166.30	237.0	-1.0	0.2	0.0	0.21	0.21	
267.0	0.70	130.80	267.0	-1.3	0.4	0.1	1.37	0.67	
298.0	0.60	135.20	298.0	-1.5	0.7	0.2	0.36	-0.32	
329.0	1.00	105.30	329.0	-1.7	1.0	0.6	1.82	1.29	
360.0	1.30	97.90	360.0	-1.8	1.7	1.1	1.08	0.97	
390.0	1.90	96.10	390.0	-1.9	2.5	1.9	2.01	2.00	
421.0	2.60	86.60	420.9	-1.9	3.7	3.1	2.55	2.26	
452.0	2.90	86.10	451.9	-1.8	5.2	4.5	0.97	0.97	
482.0	4.00	80.70	481.9	-1.6	7.0	6.3	3.82	3.67	
512.0	4.80	74.20	511.8	-1.1	9.2	8.6	3.14	2.67	
561.0	6.30	72.60	560.5	0.3	13.8	13.3	3.08	3.06	
607.0	7.90	73.50	606.2	1.9	19.2	19.0	3.49	3.48	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8509B-24 L24 496 (was 8505F-24)
Project:	Story Gulch	TVD Reference:	KB @ 8208.0ft (Patterson 330)
Site:	L24 496	MD Reference:	KB @ 8208.0ft (Patterson 330)
Well:	8509B-24 L24 496 (was 8505F-24)	North Reference:	True
Wellbore:	DD	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
652.0	9.40	74.20	650.7	3.8	25.7	25.8	3.34	3.33	
698.0	10.40	76.10	696.0	5.8	33.3	33.7	2.29	2.17	
744.0	11.70	78.60	741.1	7.8	41.9	42.5	3.01	2.83	
790.0	12.80	78.70	786.1	9.7	51.5	52.2	2.39	2.39	
836.0	14.00	78.70	830.8	11.8	62.0	62.8	2.61	2.61	
882.0	15.60	77.80	875.3	14.2	73.5	74.6	3.51	3.48	
928.0	17.00	77.60	919.5	16.9	86.1	87.5	3.05	3.04	
973.0	18.60	78.00	962.3	19.8	99.5	101.2	3.57	3.56	
1,065.0	20.90	76.60	1,048.9	26.7	129.8	132.2	2.55	2.50	
1,156.0	20.30	77.50	1,134.1	33.8	161.0	164.2	0.75	-0.66	
1,248.0	20.20	74.30	1,220.4	41.6	191.9	196.0	1.21	-0.11	
1,340.0	20.10	72.90	1,306.7	50.5	222.3	227.7	0.54	-0.11	
1,431.0	19.10	73.30	1,392.5	59.4	251.5	258.2	1.11	-1.10	
1,523.0	20.00	74.60	1,479.2	67.9	281.1	289.0	1.09	0.98	
1,615.0	20.10	75.00	1,565.6	76.2	311.6	320.6	0.18	0.11	
1,706.0	19.40	74.20	1,651.2	84.4	341.2	351.3	0.82	-0.77	
1,798.0	18.90	73.50	1,738.1	92.7	370.2	381.5	0.60	-0.54	
1,889.0	19.60	71.70	1,824.1	101.7	398.8	411.5	1.01	0.77	
1,981.0	19.20	73.80	1,910.8	110.8	428.0	442.0	0.87	-0.43	
2,072.0	18.30	74.60	1,997.0	118.8	456.1	471.3	1.03	-0.99	
2,164.0	18.10	75.00	2,084.4	126.3	483.9	500.0	0.26	-0.22	
2,256.0	18.50	72.90	2,171.8	134.3	511.6	528.9	0.84	0.43	
2,347.0	18.90	72.50	2,258.0	143.0	539.5	558.0	0.46	0.44	
2,439.0	19.20	72.70	2,344.9	151.9	568.1	588.1	0.33	0.33	
2,530.0	19.70	72.80	2,430.7	160.9	597.1	618.3	0.55	0.55	
2,622.0	20.00	74.40	2,517.3	169.7	627.0	649.6	0.67	0.33	
2,714.0	19.10	75.20	2,603.9	177.8	656.7	680.4	1.02	-0.98	
2,805.0	18.70	72.70	2,690.0	186.0	685.1	709.8	0.99	-0.44	
2,897.0	18.90	71.30	2,777.1	195.1	713.3	739.5	0.54	0.22	
2,978.0	18.30	72.30	2,853.9	203.2	737.8	765.3	0.84	-0.74	
3,086.0	16.10	73.50	2,957.1	212.6	768.3	797.2	2.06	-2.04	
3,178.0	17.30	76.40	3,045.2	219.4	793.8	823.6	1.59	1.30	
3,270.0	18.30	72.00	3,132.8	227.1	820.9	851.7	1.82	1.09	
3,362.0	20.30	75.90	3,219.6	235.5	850.1	882.1	2.59	2.17	
3,454.0	20.30	74.70	3,305.9	243.6	881.0	914.0	0.45	0.00	
3,545.0	21.50	74.40	3,390.9	252.2	912.3	946.5	1.32	1.32	
3,637.0	21.00	75.10	3,476.7	261.0	944.4	979.8	0.61	-0.54	
3,729.0	21.40	72.60	3,562.4	270.3	976.4	1,013.1	1.07	0.43	
3,821.0	19.40	72.80	3,648.7	279.8	1,007.0	1,045.1	2.18	-2.17	
3,913.0	19.30	72.90	3,735.5	288.8	1,036.1	1,075.6	0.11	-0.11	
4,005.0	19.50	73.50	3,822.2	297.6	1,065.4	1,106.2	0.31	0.22	
4,097.0	19.60	74.80	3,908.9	306.0	1,095.0	1,136.9	0.49	0.11	
4,189.0	15.70	72.30	3,996.6	313.9	1,121.7	1,164.8	4.32	-4.24	
4,281.0	17.20	76.00	4,084.8	320.9	1,146.8	1,190.9	1.99	1.63	
4,372.0	19.00	75.20	4,171.3	328.0	1,174.2	1,219.1	2.00	1.98	
4,464.0	19.50	75.90	4,258.2	335.5	1,203.6	1,249.5	0.60	0.54	
4,556.0	20.20	74.70	4,344.7	343.5	1,233.8	1,280.7	0.88	0.76	
4,648.0	19.40	74.40	4,431.3	351.8	1,263.8	1,311.8	0.88	-0.87	
4,739.0	20.00	74.00	4,516.9	360.1	1,293.3	1,342.5	0.68	0.66	
4,831.0	17.80	73.20	4,604.0	368.5	1,321.9	1,372.3	2.41	-2.39	
4,923.0	18.30	75.80	4,691.4	376.1	1,349.4	1,400.8	1.03	0.54	
5,015.0	19.00	75.00	4,778.6	383.6	1,377.8	1,430.2	0.81	0.76	
5,107.0	19.70	75.20	4,865.4	391.4	1,407.3	1,460.7	0.76	0.76	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8509B-24 L24 496 (was 8505F-24)
Project:	Story Gulch	TVD Reference:	KB @ 8208.0ft (Patterson 330)
Site:	L24 496	MD Reference:	KB @ 8208.0ft (Patterson 330)
Well:	8509B-24 L24 496 (was 8505F-24)	North Reference:	True
Wellbore:	DD	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
5,199.0	20.30	74.70	4,951.9	399.6	1,437.7	1,492.2	0.68	0.65	
5,290.0	19.00	74.10	5,037.6	407.8	1,467.2	1,522.8	1.45	-1.43	
5,382.0	19.20	73.90	5,124.5	416.1	1,496.1	1,552.9	0.23	0.22	
5,474.0	18.30	73.70	5,211.6	424.3	1,524.5	1,582.5	0.98	-0.98	
5,566.0	18.80	73.10	5,298.8	432.7	1,552.5	1,611.7	0.58	0.54	
5,658.0	17.80	73.40	5,386.2	441.0	1,580.2	1,640.6	1.09	-1.09	
5,750.0	18.00	72.60	5,473.7	449.3	1,607.2	1,668.9	0.34	0.22	
5,842.0	16.60	71.70	5,561.6	457.7	1,633.3	1,696.2	1.55	-1.52	
5,933.0	17.40	74.50	5,648.6	465.4	1,658.7	1,722.8	1.26	0.88	
6,033.0	17.40	75.20	5,744.0	473.2	1,687.6	1,752.7	0.21	0.00	
6,125.0	18.30	76.20	5,831.6	480.2	1,714.9	1,780.9	1.03	0.98	
6,217.0	19.20	74.40	5,918.7	487.7	1,743.5	1,810.5	1.16	0.98	
6,309.0	18.90	73.40	6,005.7	496.0	1,772.4	1,840.5	0.48	-0.33	
6,401.0	19.40	74.00	6,092.6	504.5	1,801.3	1,870.7	0.58	0.54	
6,493.0	19.10	74.00	6,179.4	512.8	1,830.5	1,901.0	0.33	-0.33	
6,585.0	19.70	73.60	6,266.2	521.4	1,859.8	1,931.5	0.67	0.65	
6,677.0	20.00	74.10	6,352.7	530.0	1,889.9	1,962.8	0.37	0.33	
6,769.0	17.90	74.80	6,439.8	538.1	1,918.6	1,992.7	2.30	-2.28	
6,860.0	16.30	72.40	6,526.7	545.6	1,944.3	2,019.4	1.92	-1.76	
6,952.0	15.00	73.10	6,615.3	553.0	1,968.0	2,044.2	1.43	-1.41	
7,044.0	14.80	76.00	6,704.2	559.3	1,990.8	2,067.9	0.84	-0.22	
7,136.0	16.70	74.90	6,792.8	565.6	2,015.0	2,092.8	2.09	2.07	
7,228.0	16.10	74.70	6,881.0	572.4	2,040.0	2,118.8	0.66	-0.65	
7,320.0	16.90	74.90	6,969.2	579.2	2,065.2	2,144.9	0.87	0.87	
7,409.0	19.80	75.10	7,053.7	586.5	2,092.3	2,172.9	3.26	3.26	
7,504.0	19.30	75.00	7,143.2	594.7	2,123.0	2,204.7	0.53	-0.53	
7,595.0	20.00	73.90	7,228.9	602.9	2,152.5	2,235.3	0.87	0.77	
7,687.0	20.80	74.00	7,315.2	611.7	2,183.3	2,267.4	0.87	0.87	
7,779.0	19.90	74.40	7,401.4	620.4	2,214.1	2,299.4	0.99	-0.98	
7,871.0	18.80	74.90	7,488.2	628.5	2,243.5	2,329.9	1.21	-1.20	
7,963.0	17.70	75.20	7,575.6	636.0	2,271.3	2,358.7	1.20	-1.20	
8,055.0	16.20	74.50	7,663.6	643.0	2,297.2	2,385.5	1.65	-1.63	
8,147.0	14.50	74.40	7,752.3	649.5	2,320.7	2,409.9	1.85	-1.85	
8,239.0	13.10	74.80	7,841.6	655.3	2,341.8	2,431.8	1.53	-1.52	
8,331.0	10.90	72.30	7,931.6	660.7	2,360.2	2,450.9	2.46	-2.39	
8,423.0	7.80	73.80	8,022.4	665.1	2,374.5	2,465.9	3.38	-3.37	
8,514.0	5.70	72.00	8,112.8	668.2	2,384.7	2,476.5	2.32	-2.31	
8,606.0	3.90	72.00	8,204.4	670.6	2,392.0	2,484.2	1.96	-1.96	
8,698.0	3.90	72.90	8,296.2	672.5	2,398.0	2,490.5	0.07	0.00	
8,790.0	3.30	72.30	8,388.0	674.2	2,403.5	2,496.3	0.65	-0.65	
8,851.0	3.00	72.60	8,448.9	675.2	2,406.7	2,499.6	0.49	-0.49	
8,884.0	3.20	71.10	8,481.9	675.8	2,408.4	2,501.4	0.65	0.61	
8,976.0	3.00	75.40	8,573.8	677.2	2,413.2	2,506.4	0.33	-0.22	
9,068.0	1.10	105.70	8,665.7	677.6	2,416.3	2,509.5	2.31	-2.07	
9,160.0	0.70	118.00	8,757.7	677.1	2,417.7	2,510.7	0.48	-0.43	
9,252.0	0.60	146.20	8,849.7	676.4	2,418.4	2,511.2	0.36	-0.11	
9,344.0	0.80	25.40	8,941.7	676.6	2,419.0	2,511.8	1.33	0.22	
9,436.0	0.40	39.20	9,033.7	677.4	2,419.5	2,512.5	0.46	-0.43	
9,527.0	0.20	128.80	9,124.7	677.6	2,419.8	2,512.9	0.49	-0.22	
9,619.0	0.80	353.00	9,216.7	678.1	2,419.8	2,513.0	1.04	0.65	
9,711.0	0.50	284.80	9,308.7	678.8	2,419.4	2,512.8	0.84	-0.33	
9,803.0	0.40	256.60	9,400.7	678.9	2,418.7	2,512.1	0.26	-0.11	
9,895.0	0.40	21.50	9,492.7	679.1	2,418.5	2,512.0	0.77	0.00	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8509B-24 L24 496 (was 8505F-24)
Project:	Story Gulch	TVD Reference:	KB @ 8208.0ft (Patterson 330)
Site:	L24 496	MD Reference:	KB @ 8208.0ft (Patterson 330)
Well:	8509B-24 L24 496 (was 8505F-24)	North Reference:	True
Wellbore:	DD	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
9,987.0	0.70	39.00	9,584.7	679.8	2,418.9	2,512.7	0.37	0.33	
10,079.0	0.40	25.60	9,676.6	680.5	2,419.4	2,513.3	0.35	-0.33	
10,171.0	0.30	169.20	9,768.6	680.6	2,419.6	2,513.5	0.72	-0.11	
10,262.0	0.70	256.70	9,859.6	680.2	2,419.1	2,512.9	0.82	0.44	
10,354.0	0.60	288.70	9,951.6	680.3	2,418.1	2,512.0	0.40	-0.11	
10,446.0	0.70	351.00	10,043.6	681.0	2,417.6	2,511.6	0.74	0.11	
10,538.0	0.50	317.20	10,135.6	681.8	2,417.2	2,511.5	0.43	-0.22	
10,630.0	1.00	280.20	10,227.6	682.3	2,416.2	2,510.6	0.73	0.54	
10,722.0	0.40	290.80	10,319.6	682.5	2,415.1	2,509.6	0.66	-0.65	
10,814.0	1.00	257.90	10,411.6	682.5	2,414.0	2,508.6	0.76	0.65	
10,906.0	0.40	199.30	10,503.6	682.0	2,413.1	2,507.6	0.94	-0.65	
10,998.0	0.70	183.00	10,595.6	681.1	2,413.0	2,507.2	0.36	0.33	
11,089.0	0.30	171.00	10,686.6	680.3	2,413.0	2,507.0	0.45	-0.44	
11,181.0	0.70	207.20	10,778.6	679.6	2,412.7	2,506.6	0.53	0.43	
11,273.0	0.60	313.20	10,870.6	679.4	2,412.1	2,506.0	1.13	-0.11	
11,365.0	0.60	244.70	10,962.6	679.5	2,411.3	2,505.3	0.73	0.00	
11,457.0	1.20	30.40	11,054.6	680.2	2,411.4	2,505.5	1.88	0.65	
11,549.0	1.00	29.30	11,146.6	681.7	2,412.3	2,506.7	0.22	-0.22	
11,641.0	0.60	54.00	11,238.6	682.7	2,413.1	2,507.8	0.56	-0.43	
11,733.0	0.20	86.30	11,330.5	683.0	2,413.6	2,508.4	0.48	-0.43	
11,824.0	0.30	241.10	11,421.5	682.9	2,413.6	2,508.3	0.54	0.11	
11,916.0	0.70	226.80	11,513.5	682.4	2,412.9	2,507.6	0.45	0.43	
12,008.0	0.70	214.20	11,605.5	681.5	2,412.2	2,506.6	0.17	0.00	
12,100.0	0.90	216.00	11,697.5	680.5	2,411.5	2,505.6	0.22	0.22	
12,191.0	1.20	222.80	11,788.5	679.2	2,410.4	2,504.3	0.36	0.33	
12,283.0	1.60	244.20	11,880.5	677.9	2,408.6	2,502.2	0.71	0.43	
12,375.0	2.20	237.60	11,972.4	676.4	2,405.9	2,499.2	0.69	0.65	
12,558.0	2.80	232.70	12,155.3	671.8	2,399.4	2,491.7	0.35	0.33	
12,650.0	3.00	229.70	12,247.1	668.9	2,395.8	2,487.4	0.27	0.22	
12,742.0	3.80	232.90	12,339.0	665.5	2,391.5	2,482.4	0.89	0.87	
12,834.0	4.00	235.30	12,430.8	661.9	2,386.5	2,476.5	0.28	0.22	Last Cathedral Survey @ 12,834' MD
12,889.0	4.10	236.70	12,485.6	659.7	2,383.2	2,472.9	0.26	0.18	Projection to Bit @ 12,889'

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8509B-24 L24 496 (was 8505F-24)
Project:	Story Gulch	TVD Reference:	KB @ 8208.0ft (Patterson 330)
Site:	L24 496	MD Reference:	KB @ 8208.0ft (Patterson 330)
Well:	8509B-24 L24 496 (was 8505F-24)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
8509B-24 L24 496 TGT	0.00	0.00	8,411.0	681.0	2,420.9	1,685,662.39	2,264,238.09	39° 41' 12.72 N	108° 6' 52.91 W
- actual wellpath misses target center by 17.4ft at 8814.0ft MD (8412.0 TVD, 674.6 N, 2404.8 E)									
- Point									
8509B-24 L24 496 PBHI	0.00	0.00	13,203.0	671.0	2,403.9	1,685,652.86	2,264,220.84	39° 41' 12.62 N	108° 6' 53.13 W
- actual wellpath misses target center by 717.8ft at 12889.0ft MD (12485.6 TVD, 659.7 N, 2383.2 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
12,834.0	12,430.8	661.9	2,386.5	Last Cathedral Survey @ 12,834' MD
12,889.0	12,485.6	659.7	2,383.2	Projection to Bit @ 12,889'

Checked By: _____ Approved By: _____ Date: _____