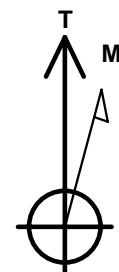
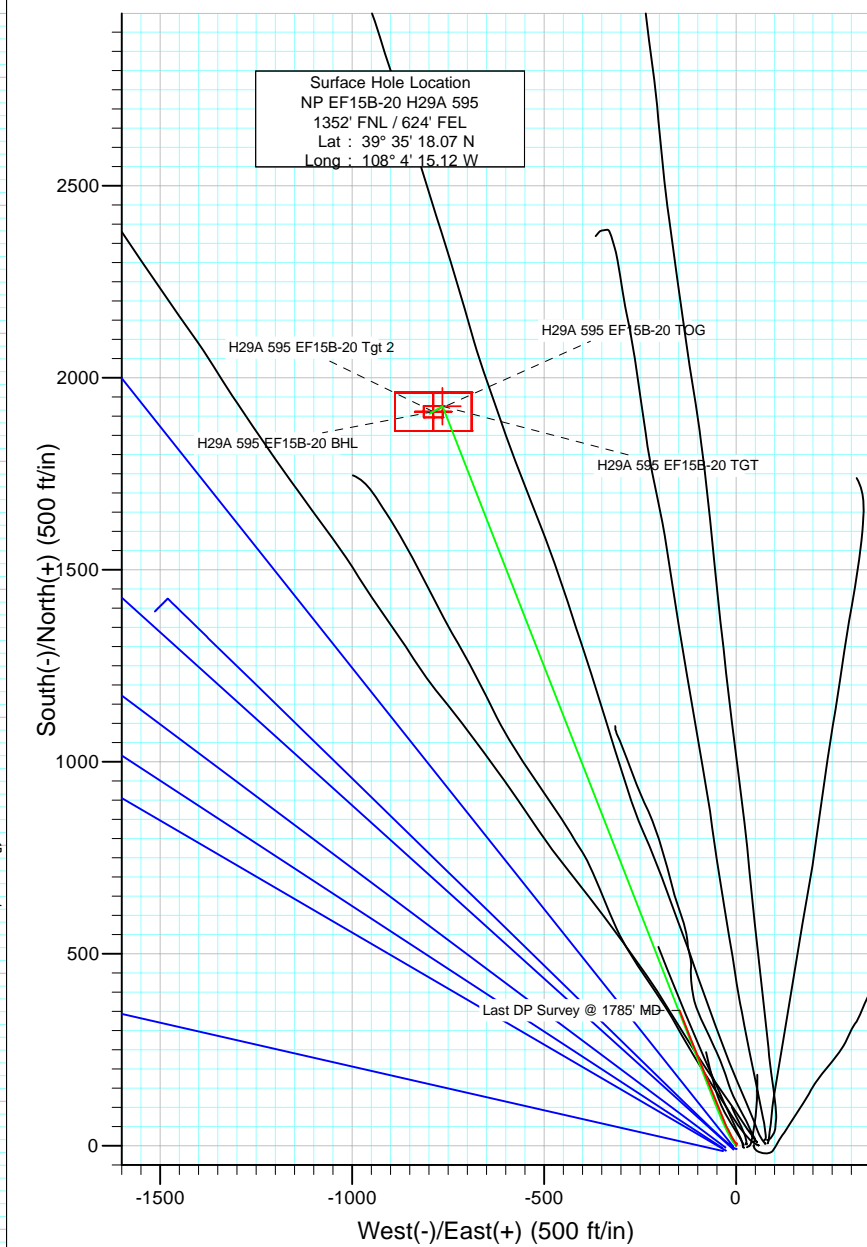
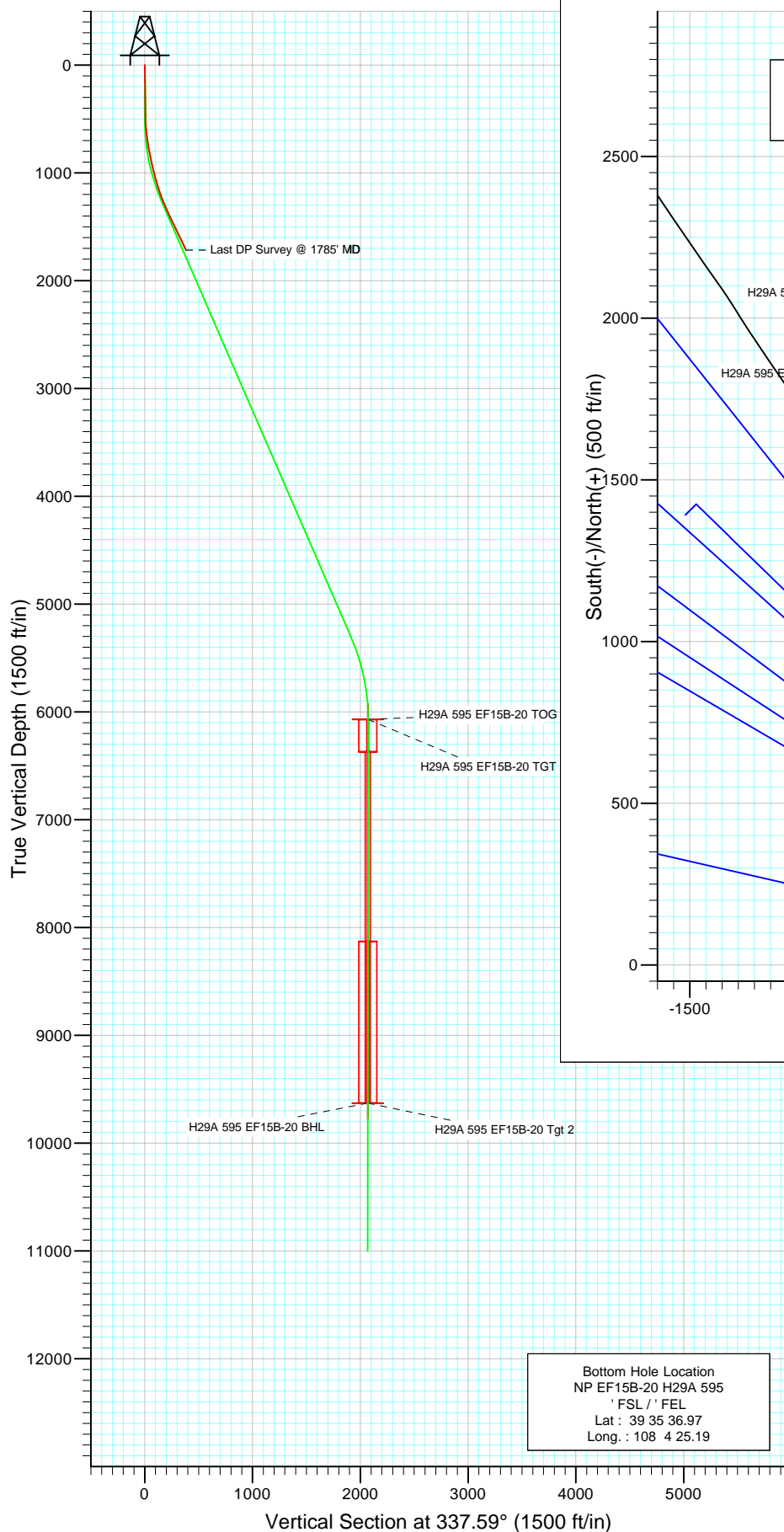




Project: North Piceance  
 Site: H29A 595 Pad (SENE S29-T5S-R95W)  
 Well: NP EF15B-20 H29A 595  
 Wellbore: DD  
 Design: DD



Azimuths to True North  
 Magnetic North: 10.69°

Magnetic Field  
 Strength: 52555.2snT  
 Dip Angle: 65.88°  
 Date: 1/21/2009  
 Model: IGRF200510

DESIGN DETAILS: DD

Job#: 95036;LR  
 KBE @ 6259.0ft (Patterson 306)

Target	Azimuth	Origin	N/S	E/W	From TVD
H29A 595 EF15B-20 BHL	337.59	Slot	0.0	0.0	0.0

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well NP EF15B-20 H29A 595
<b>Project:</b>	North Piceance	<b>TVD Reference:</b>	KBE @ 6259.0ft (Patterson 306)
<b>Site:</b>	H29A 595 Pad (SENE S29-T5S-R95W)	<b>MD Reference:</b>	KBE @ 6259.0ft (Patterson 306)
<b>Well:</b>	NP EF15B-20 H29A 595	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	EDM 2003.21 US Multi Users DB

<b>Project</b>	North Piceance		
<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		

<b>Site</b>	H29A 595 Pad (SENE S29-T5S-R95W)			
<b>Site Position:</b>		<b>Northing:</b>	1,649,445.22 ft	<b>Latitude:</b> 39° 35' 18.14 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,275,636.58 ft	<b>Longitude:</b> 108° 4' 14.06 W
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	0.000 in	<b>Grid Convergence:</b> -1.62 °

<b>Well</b>	NP EF15B-20 H29A 595			
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,649,440.56 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	2,275,553.66 ft
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b> 6,236.0 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>
	IGRF200510	1/21/2009	10.69	65.88	52,555

<b>Design</b>	DD			
<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	337.59

<b>Survey Program</b>	<b>Date</b>	2/4/2009		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
237.0	1,785.0	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	
237.0	2.40	20.90	236.9	4.6	1.8	3.6	1.01	1.01	
329.0	0.30	272.40	328.9	6.4	2.2	5.1	2.73	-2.28	
421.0	0.80	226.30	420.9	6.0	1.5	5.0	0.69	0.54	
513.0	2.50	309.40	512.9	6.8	-0.5	6.5	2.75	1.85	
604.0	5.60	327.50	603.6	11.8	-4.4	12.6	3.64	3.41	
696.0	8.50	331.00	694.9	21.6	-10.1	23.8	3.19	3.15	
788.0	10.80	333.10	785.6	35.2	-17.3	39.2	2.53	2.50	
879.0	12.10	331.80	874.8	51.2	-25.7	57.2	1.46	1.43	
971.0	13.40	340.60	964.5	69.8	-33.8	77.4	2.54	1.41	
1,063.0	15.20	338.60	1,053.7	91.1	-41.7	100.1	2.03	1.96	
1,156.0	17.40	337.30	1,142.9	115.3	-51.6	126.2	2.40	2.37	
1,246.0	20.70	337.90	1,228.0	142.4	-62.7	155.6	3.67	3.67	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well NP EF15B-20 H29A 595
<b>Project:</b>	North Piceance	<b>TVD Reference:</b>	KBE @ 6259.0ft (Patterson 306)
<b>Site:</b>	H29A 595 Pad (SENE S29-T5S-R95W)	<b>MD Reference:</b>	KBE @ 6259.0ft (Patterson 306)
<b>Well:</b>	NP EF15B-20 H29A 595	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	EDM 2003.21 US 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
1,338.0	24.30	337.60	1,313.0	175.0	-76.1	190.8	3.92	3.91	
1,430.0	25.10	337.70	1,396.6	210.5	-90.7	229.2	0.87	0.87	
1,521.0	25.80	338.10	1,478.7	246.8	-105.4	268.3	0.79	0.77	
1,613.0	25.70	338.50	1,561.6	283.9	-120.2	308.3	0.22	-0.11	
1,705.0	25.30	338.30	1,644.6	320.7	-134.8	347.9	0.44	-0.43	
1,785.0	25.30	339.00	1,717.0	352.6	-147.2	382.1	0.37	0.00	Last DP Survey @ 1785' MD

### 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
H29A 595 EF15B-20 Tg - survey misses target center by 8089.8ft at 1785.0ft MD (1717.0 TVD, 352.6 N, -147.2 E) - Rectangle (sides W100.0 H200.0 D0.0)	0.00	0.00	9,629.0	1,912.3	-788.5	1,651,374.36	2,274,819.57	39° 35' 36.97 N	108° 4' 25.19 W
H29A 595 EF15B-20 TC - survey misses target center by 4667.3ft at 1785.0ft MD (1717.0 TVD, 352.6 N, -147.2 E) - Rectangle (sides W100.0 H200.0 D300.0)	0.00	0.00	6,069.0	1,912.3	-788.5	1,651,374.36	2,274,819.57	39° 35' 36.97 N	108° 4' 25.19 W

### Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
1,785.0	1,717.0	352.6	-147.2	Last DP Survey @ 1785' MD

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