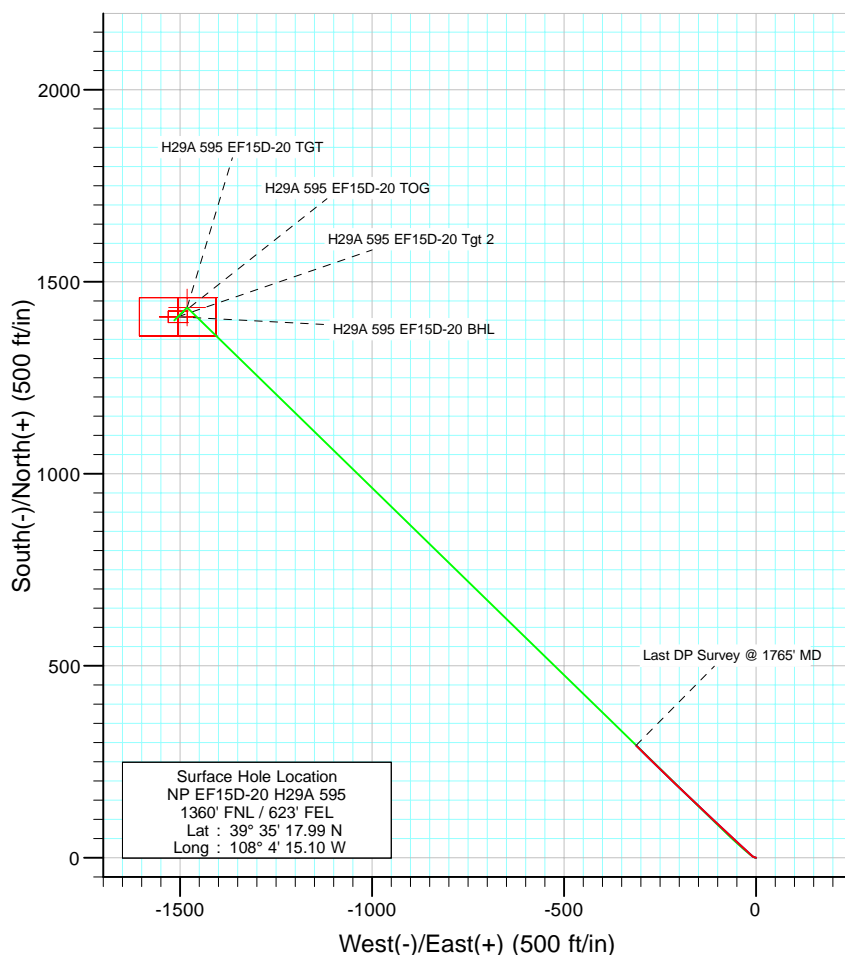
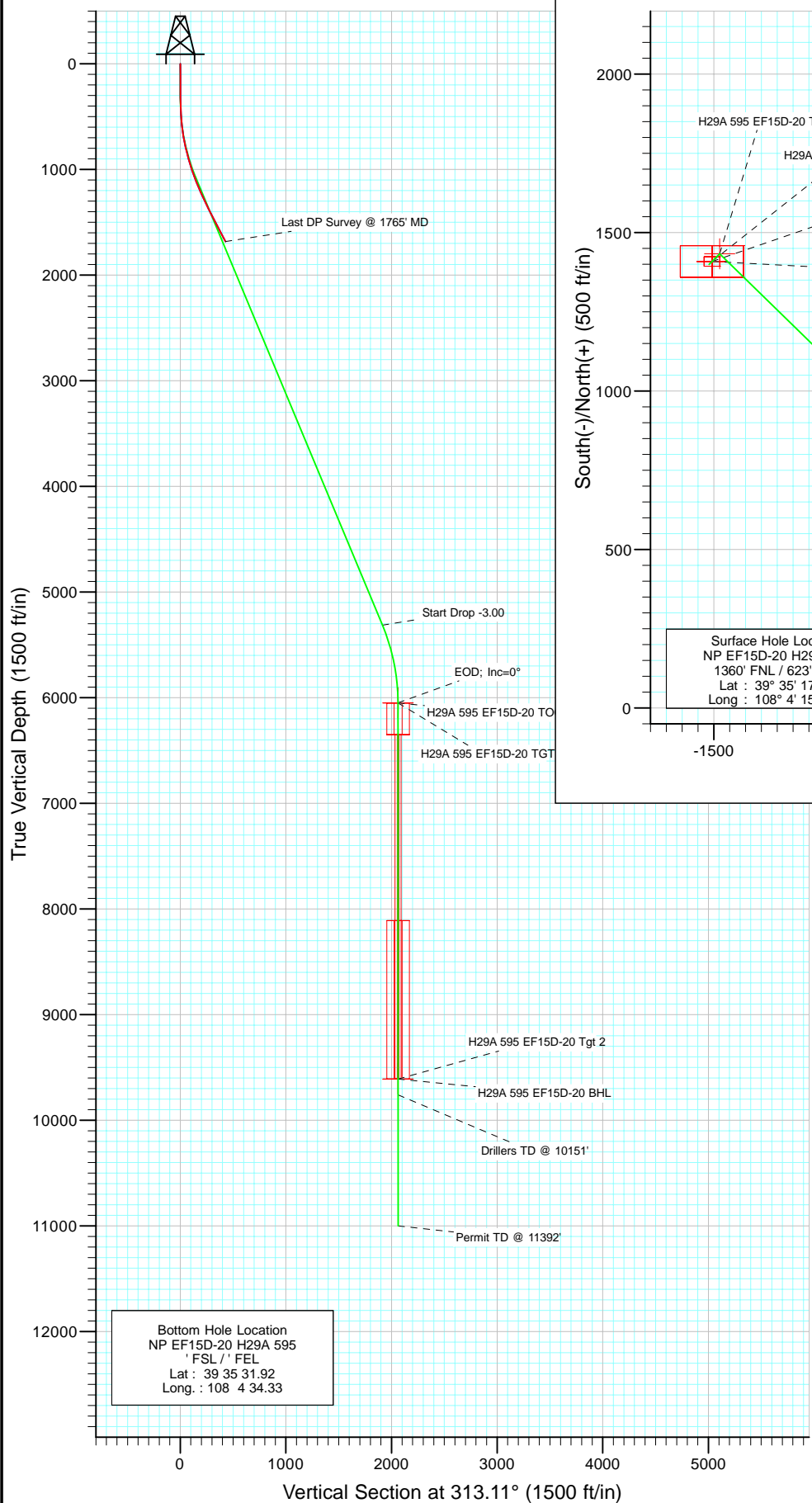




Project: North Piceance
Site: H29A 595 Pad (SENE S29-T5S-R95W)
Well: NP EF15D-20 H29A 595
Wellbore: DD
Design: DD



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#:95035;LR
KBE @ 6259.0ft (Patterson 177)

Target	Azimuth	Origin	N/S	E/W	From TVD
No Target (Freehand)	313.11	Slot	0.0	0.0	0.0

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP EF15D-20 H29A 595
Project:	North Piceance	TVD Reference:	KBE @ 6259.0ft (Patterson 177)
Site:	H29A 595 Pad (SENE S29-T5S-R95W)	MD Reference:	KBE @ 6259.0ft (Patterson 177)
Well:	NP EF15D-20 H29A 595	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	US EDM 2003.21 Multi Users DB

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

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

Well	NP EF15D-20 H29A 595			
Well Position	+N/-S	0.0 ft	Northing:	1,649,432.60 ft
	+E/-W	0.0 ft	Easting:	2,275,554.63 ft
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft
			Ground Level:	6,237.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	1/21/2009	10.69	65.88	52,555

Design	DD			
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	313.11

Survey Program	Date	1/25/2009		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
237.0	1,765.0	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	322.30	237.0	0.8	-0.6	1.0	0.21	0.21	
328.0	1.20	280.70	328.0	1.3	-1.8	2.2	0.98	0.77	
420.0	1.80	279.30	420.0	1.7	-4.2	4.2	0.65	0.65	
512.0	3.90	305.70	511.8	3.8	-8.2	8.5	2.63	2.28	
603.0	6.90	312.20	602.4	9.3	-14.7	17.1	3.36	3.30	
695.0	10.30	314.50	693.4	18.7	-24.7	30.8	3.71	3.70	
787.0	13.00	312.50	783.5	31.5	-38.2	49.4	2.97	2.93	
879.0	15.30	313.60	872.7	46.9	-54.6	71.9	2.52	2.50	
970.0	17.40	312.10	960.0	64.3	-73.4	97.5	2.35	2.31	
1,062.0	18.90	312.90	1,047.4	83.6	-94.5	126.2	1.65	1.63	
1,154.0	20.80	312.60	1,133.9	104.8	-117.5	157.4	2.07	2.07	
1,246.0	24.60	314.10	1,218.8	129.2	-143.2	192.9	4.18	4.13	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP EF15D-20 H29A 595
Project:	North Piceance	TVD Reference:	KBE @ 6259.0ft (Patterson 177)
Site:	H29A 595 Pad (SENE S29-T5S-R95W)	MD Reference:	KBE @ 6259.0ft (Patterson 177)
Well:	NP EF15D-20 H29A 595	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	US EDM 2003.21 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	26.40	314.10	1,301.8	156.8	-171.7	232.5	1.96	1.96	
1,430.0	27.00	313.60	1,384.0	185.4	-201.5	273.8	0.70	0.65	
1,521.0	27.60	313.60	1,464.9	214.2	-231.7	315.6	0.66	0.66	
1,613.0	28.00	314.30	1,546.3	244.0	-262.6	358.5	0.56	0.43	
1,705.0	27.20	314.70	1,627.8	273.9	-293.0	401.1	0.89	-0.87	
1,765.0	26.40	314.00	1,681.4	292.8	-312.4	428.1	1.43	-1.33	

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 EF15D-20 Tg - survey misses target center by 8094.3ft at 1765.0ft MD (1681.4 TVD, 292.8 N, -312.4 E) - Rectangle (sides W100.0 H200.0 D0.0)	0.00	0.00	9,609.0	1,409.2	-1,505.2	1,650,883.88	2,274,089.88	39° 35' 31.92 N	108° 4' 34.33 W
H29A 595 EF15D-20 TC - survey misses target center by 4663.2ft at 1765.0ft MD (1681.4 TVD, 292.8 N, -312.4 E) - Rectangle (sides W100.0 H200.0 D300.0)	0.00	0.00	6,049.0	1,409.2	-1,505.2	1,650,883.88	2,274,089.88	39° 35' 31.92 N	108° 4' 34.33 W
H29A 595 EF15B-20 BH - survey misses target center by 8126.6ft at 1765.0ft MD (1681.4 TVD, 292.8 N, -312.4 E) - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	9,629.0	1,920.2	-789.7	1,651,374.36	2,274,819.57	39° 35' 36.97 N	108° 4' 25.19 W
H29A 595 EF15D-20 BH - survey misses target center by 8094.3ft at 1765.0ft MD (1681.4 TVD, 292.8 N, -312.4 E) - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	9,609.0	1,409.2	-1,505.2	1,650,883.88	2,274,089.88	39° 35' 31.92 N	108° 4' 34.33 W
H29A 595 EF15B-20 TG - survey misses target center by 4706.5ft at 1765.0ft MD (1681.4 TVD, 292.8 N, -312.4 E) - Point	0.00	0.00	6,069.0	1,934.2	-765.7	1,651,387.72	2,274,843.97	39° 35' 37.11 N	108° 4' 24.88 W
H29A 595 EF15D-20 TG - survey misses target center by 4663.0ft at 1765.0ft MD (1681.4 TVD, 292.8 N, -312.4 E) - Point	0.00	0.00	6,049.0	1,433.2	-1,481.2	1,650,907.14	2,274,114.58	39° 35' 32.16 N	108° 4' 34.02 W

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
1,765.0	1,681.4	292.8	-312.4	Last DP Survey @ 1765' MD

Checked By: _____ Approved By: _____ Date: _____