

Well Name: **Bearden 2-4-6**

Surface Location: Bearden 2-8-6 Pad Sec.6-T1N-R68W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone

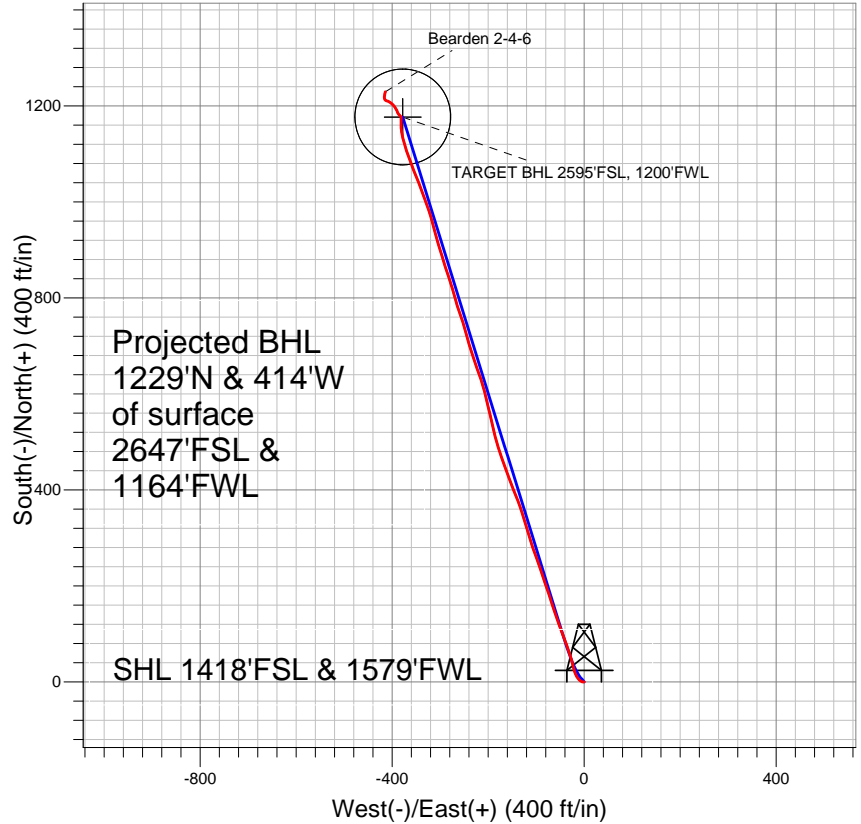
Ground Elevation: 4978.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1271179.40	3125982.39	40.076900	-105.049800

Original Well Elev WELL @ 4991.0ft (Original Well Elev)

Slot

EnCana Oil & Gas Weld County CO



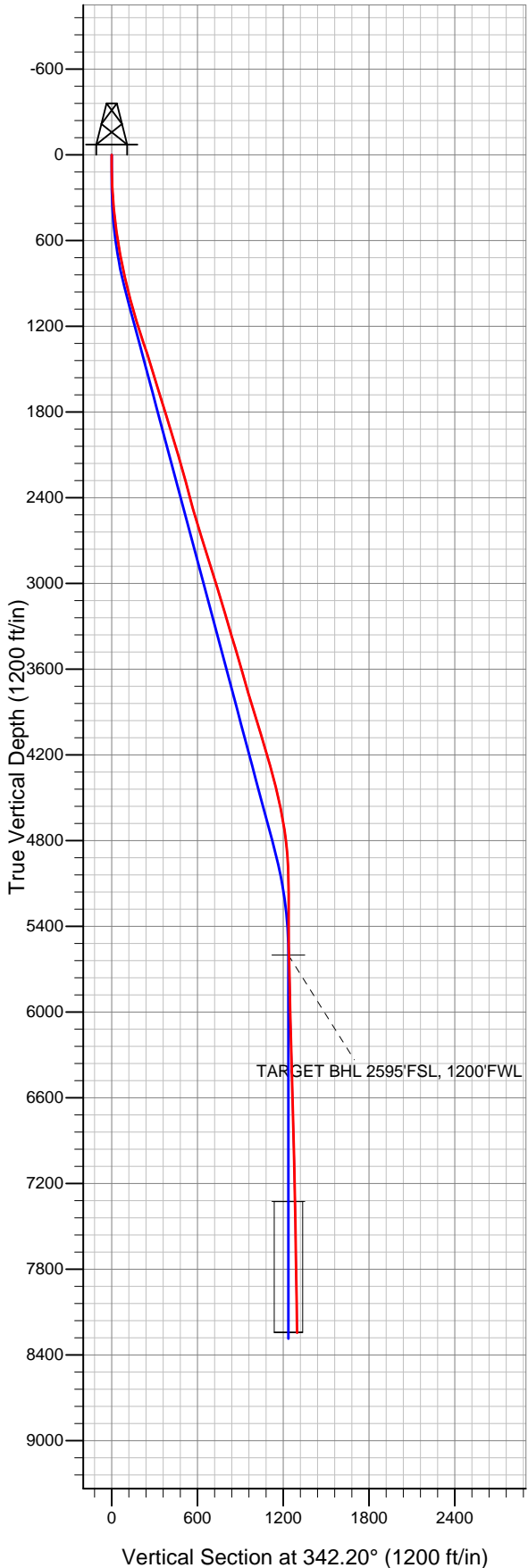
LEGEND

- △ Bearden 2-4-6, Wellbore #1, Plan #1 (2-19-13)R V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 8414'MD & 8245'TVD @ 1297'VS
 1.1 deg Inc 17.2 deg AZ

Project: SEC.6-T1N-R68W
 Site: Bearden 2-8-6 Pad Sec.6-T1N-R68W
 Well: Bearden 2-4-6
 Plan: Wellbore #1





Directional

EnCana Oil & Gas Weld County CO

SEC.6-T1N-R68W

Bearden 2-8-6 Pad Sec.6-T1N-R68W

Bearden 2-4-6

Wellbore #1

Survey: Survey #1

Standard Survey Report

25 February, 2013

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Bearden 2-4-6
Project:	SEC.6-T1N-R68W	TVD Reference:	WELL @ 4991.0ft (Original Well Elev)
Site:	Bearden 2-8-6 Pad Sec.6-T1N-R68W	MD Reference:	WELL @ 4991.0ft (Original Well Elev)
Well:	Bearden 2-4-6	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.6-T1N-R68W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Bearden 2-8-6 Pad Sec.6-T1N-R68W				
Site Position:		Northing:	1,271,131.87 ft	Latitude:	40.076770
From:	Lat/Long	Easting:	3,125,946.25 ft	Longitude:	-105.049930
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.29 °

Well	Bearden 2-4-6					
Well Position	+N/-S	0.0 ft	Northing:	1,271,179.40 ft	Latitude:	40.076900
	+E/-W	0.0 ft	Easting:	3,125,982.39 ft	Longitude:	-105.049800
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,978.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/19/2013	8.76	66.68	52,752

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	342.20	

Survey Program	Date	2/25/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
76.0	8,414.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
76.0	1.70	260.00	76.0	-0.2	-1.1	0.2	2.24	2.24	0.00	
136.0	2.40	281.20	136.0	-0.1	-3.2	0.9	1.70	1.17	35.33	
196.0	3.30	297.60	195.9	0.9	-6.0	2.7	2.01	1.50	27.33	
256.0	4.10	310.10	255.8	3.1	-9.2	5.8	1.89	1.33	20.83	
316.0	5.00	320.80	315.6	6.5	-12.4	10.0	2.06	1.50	17.83	
374.0	5.40	329.60	373.3	10.8	-15.4	15.0	1.54	0.69	15.17	
435.0	6.00	338.00	434.0	16.3	-18.1	21.0	1.68	0.98	13.77	
496.0	6.80	343.80	494.6	22.7	-20.3	27.8	1.68	1.31	9.51	
556.0	7.90	347.00	554.2	30.1	-22.2	35.5	1.96	1.83	5.33	
617.0	9.00	346.30	614.5	38.8	-24.3	44.4	1.81	1.80	-1.15	
678.0	10.00	341.50	674.7	48.5	-27.1	54.5	2.09	1.64	-7.87	
710.0	10.60	341.20	706.1	53.9	-28.9	60.2	1.88	1.88	-0.94	

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Bearden 2-4-6
Project:	SEC.6-T1N-R68W	TVD Reference:	WELL @ 4991.0ft (Original Well Elev)
Site:	Bearden 2-8-6 Pad Sec.6-T1N-R68W	MD Reference:	WELL @ 4991.0ft (Original Well Elev)
Well:	Bearden 2-4-6	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
765.0	11.60	341.90	760.1	64.0	-32.3	70.8	1.83	1.82	1.27	
826.0	12.40	342.80	819.8	76.1	-36.1	83.4	1.35	1.31	1.48	
912.0	12.90	339.10	903.7	93.8	-42.3	102.3	1.11	0.58	-4.30	
998.0	14.80	338.20	987.2	113.0	-49.8	122.8	2.22	2.21	-1.05	
1,084.0	16.50	341.30	1,070.0	134.8	-57.8	146.0	2.20	1.98	3.60	
1,169.0	17.40	342.90	1,151.3	158.4	-65.4	170.8	1.19	1.06	1.88	
1,255.0	17.90	340.80	1,233.3	183.1	-73.5	196.8	0.94	0.58	-2.44	
1,341.0	17.90	341.00	1,315.1	208.1	-82.1	223.3	0.07	0.00	0.23	
1,426.0	17.50	341.90	1,396.1	232.6	-90.4	249.1	0.57	-0.47	1.06	
1,512.0	17.00	340.50	1,478.2	256.8	-98.6	274.6	0.76	-0.58	-1.63	
1,598.0	16.90	340.60	1,560.5	280.4	-106.9	299.7	0.12	-0.12	0.12	
1,684.0	17.10	343.30	1,642.7	304.3	-114.7	324.8	0.95	0.23	3.14	
1,769.0	17.40	342.90	1,723.9	328.4	-122.0	350.0	0.38	0.35	-0.47	
1,855.0	17.30	342.90	1,806.0	352.9	-129.6	375.6	0.12	-0.12	0.00	
1,941.0	17.00	338.50	1,888.1	376.8	-137.9	401.0	1.55	-0.35	-5.12	
2,027.0	16.80	339.10	1,970.4	400.2	-147.0	425.9	0.31	-0.23	0.70	
2,112.0	16.70	338.70	2,051.8	423.0	-155.8	450.4	0.18	-0.12	-0.47	
2,198.0	16.30	340.60	2,134.3	445.9	-164.3	474.8	0.78	-0.47	2.21	
2,284.0	15.60	340.60	2,217.0	468.2	-172.2	498.4	0.81	-0.81	0.00	
2,369.0	15.10	342.80	2,298.9	489.6	-179.2	520.9	0.90	-0.59	2.59	
2,455.0	14.40	345.70	2,382.1	510.6	-185.2	542.8	1.18	-0.81	3.37	
2,541.0	15.00	347.30	2,465.3	531.8	-190.3	564.5	0.84	0.70	1.86	
2,627.0	17.10	346.80	2,547.9	555.0	-195.6	588.2	2.45	2.44	-0.58	
2,712.0	17.80	347.10	2,629.0	579.8	-201.4	613.6	0.83	0.82	0.35	
2,798.0	17.30	345.40	2,711.0	605.0	-207.5	639.5	0.83	-0.58	-1.98	
2,884.0	16.80	340.80	2,793.2	629.1	-214.8	664.7	1.67	-0.58	-5.35	
2,970.0	17.30	341.20	2,875.5	653.0	-223.0	689.9	0.60	0.58	0.47	
3,055.0	17.60	341.70	2,956.6	677.1	-231.1	715.4	0.39	0.35	0.59	
3,141.0	17.20	342.80	3,038.6	701.6	-239.0	741.1	0.60	-0.47	1.28	
3,227.0	16.60	345.00	3,120.9	725.6	-245.9	766.1	1.02	-0.70	2.56	
3,313.0	16.20	341.70	3,203.4	748.9	-252.9	790.4	1.18	-0.47	-3.84	
3,398.0	16.50	341.20	3,285.0	771.6	-260.5	814.3	0.39	0.35	-0.59	
3,484.0	16.40	345.70	3,367.5	794.9	-267.4	838.6	1.49	-0.12	5.23	
3,570.0	16.90	342.80	3,449.9	818.6	-274.1	863.2	1.13	0.58	-3.37	
3,655.0	16.40	341.00	3,531.3	841.8	-281.7	887.6	0.85	-0.59	-2.12	
3,741.0	16.20	342.20	3,613.8	864.7	-289.3	911.7	0.46	-0.23	1.40	
3,827.0	16.40	343.50	3,696.4	887.7	-296.4	935.8	0.48	0.23	1.51	
3,913.0	16.30	342.80	3,778.9	910.9	-303.4	960.1	0.26	-0.12	-0.81	
3,998.0	16.50	345.60	3,860.4	934.0	-310.0	984.0	0.96	0.24	3.29	
4,084.0	16.40	345.00	3,942.9	957.5	-316.1	1,008.3	0.23	-0.12	-0.70	
4,170.0	16.50	341.00	4,025.4	980.8	-323.2	1,032.7	1.32	0.12	-4.65	
4,256.0	17.40	339.90	4,107.7	1,004.4	-331.6	1,057.7	1.11	1.05	-1.28	
4,341.0	17.10	340.30	4,188.8	1,028.1	-340.2	1,082.9	0.38	-0.35	0.47	
4,427.0	15.70	337.70	4,271.3	1,050.8	-348.9	1,107.2	1.84	-1.63	-3.02	
4,513.0	14.30	338.00	4,354.4	1,071.4	-357.3	1,129.4	1.63	-1.63	0.35	
4,599.0	13.70	340.60	4,437.9	1,090.9	-364.7	1,150.1	1.01	-0.70	3.02	
4,684.0	12.60	342.10	4,520.6	1,109.2	-370.9	1,169.5	1.35	-1.29	1.76	
4,770.0	11.30	344.20	4,604.8	1,126.2	-376.0	1,187.3	1.59	-1.51	2.44	
4,856.0	9.40	349.80	4,689.4	1,141.3	-379.6	1,202.7	2.50	-2.21	6.51	
4,941.0	7.70	358.80	4,773.4	1,153.8	-380.9	1,215.0	2.54	-2.00	10.59	
5,027.0	5.50	0.50	4,858.8	1,163.7	-381.0	1,224.4	2.57	-2.56	1.98	
5,113.0	3.90	357.50	4,944.5	1,170.7	-381.1	1,231.2	1.88	-1.86	-3.49	
5,199.0	1.80	358.60	5,030.4	1,175.0	-381.3	1,235.3	2.44	-2.44	1.28	
5,284.0	0.20	76.80	5,115.4	1,176.3	-381.1	1,236.6	2.08	-1.88	92.00	

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Bearden 2-4-6
Project:	SEC.6-T1N-R68W	TVD Reference:	WELL @ 4991.0ft (Original Well Elev)
Site:	Bearden 2-8-6 Pad Sec.6-T1N-R68W	MD Reference:	WELL @ 4991.0ft (Original Well Elev)
Well:	Bearden 2-4-6	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,456.0	0.10	301.00	5,287.4	1,176.5	-381.0	1,236.6	0.16	-0.06	-78.95
5,627.0	0.70	317.10	5,458.4	1,177.3	-381.8	1,237.7	0.35	0.35	9.42
5,768.5	1.03	316.66	5,599.9	1,178.9	-383.3	1,239.6	0.23	0.23	-0.31
TARGET BHL 2595'FSL, 1200'FWL									
5,799.0	1.10	316.60	5,630.4	1,179.3	-383.7	1,240.1	0.23	0.23	-0.20
5,970.0	1.50	316.20	5,801.4	1,182.1	-386.3	1,243.6	0.23	0.23	-0.23
6,142.0	1.50	342.80	5,973.3	1,185.9	-388.6	1,247.9	0.40	0.00	15.47
6,313.0	1.40	337.50	6,144.2	1,190.0	-390.0	1,252.2	0.10	-0.06	-3.10
6,485.0	1.60	328.34	6,316.2	1,193.9	-392.1	1,256.6	0.18	0.12	-5.33
6,656.0	1.50	318.10	6,487.1	1,197.6	-394.8	1,261.0	0.17	-0.06	-5.99
6,828.0	2.30	323.20	6,659.0	1,202.1	-398.4	1,266.3	0.47	0.47	2.97
6,999.0	2.20	303.20	6,829.9	1,206.6	-403.2	1,272.1	0.46	-0.06	-11.70
7,170.0	1.70	293.90	7,000.8	1,209.5	-408.3	1,276.4	0.35	-0.29	-5.44
7,342.0	1.00	280.90	7,172.7	1,210.8	-412.1	1,278.8	0.44	-0.41	-7.56
7,494.4	1.07	316.41	7,325.1	1,212.0	-414.4	1,280.7	0.42	0.04	23.30
TARGET CIRCLE 2595'FSL & 1200'FWL									
7,513.0	1.10	320.10	7,343.7	1,212.3	-414.6	1,281.0	0.42	0.18	19.86
7,685.0	1.10	349.60	7,515.7	1,215.2	-416.0	1,284.2	0.33	0.00	17.15
7,856.0	1.20	1.40	7,686.7	1,218.6	-416.2	1,287.5	0.15	0.06	6.90
8,028.0	1.10	17.70	7,858.6	1,222.0	-415.7	1,290.5	0.20	-0.06	9.48
8,199.0	1.10	5.10	8,029.6	1,225.2	-415.0	1,293.4	0.14	0.00	-7.37
8,371.0	1.10	17.20	8,201.6	1,228.4	-414.4	1,296.3	0.13	0.00	7.03
8,414.0	1.10	17.20	8,244.5	1,229.2	-414.1	1,296.9	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____