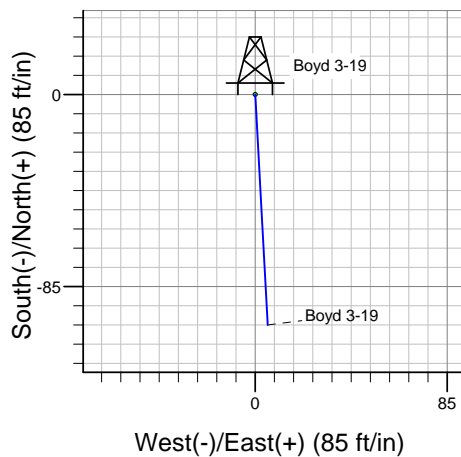
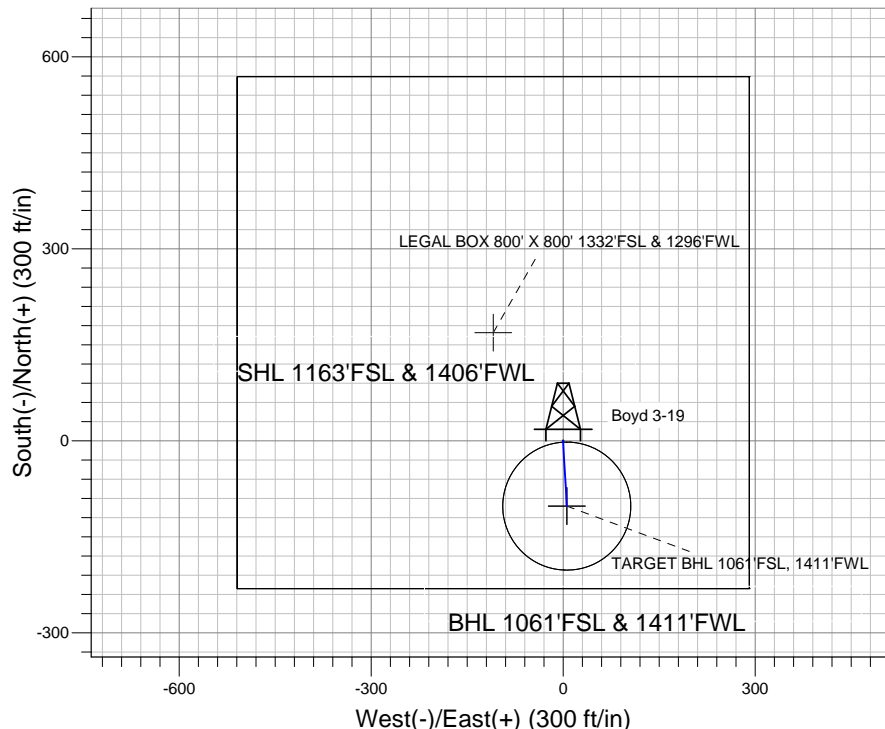
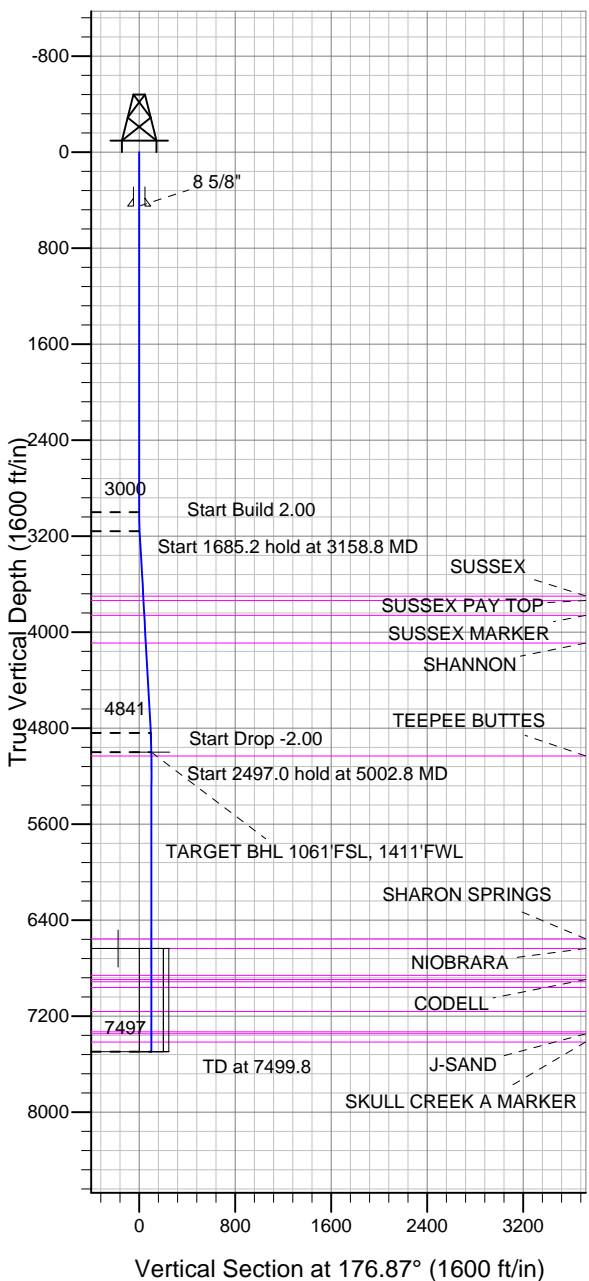


Well Name: Boyd 3-19

Surface Location: Boyd 3-19 Pad Sec.19-T3N-R68W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 5019.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1318523.80 3125647.05 40.206870 -105.050140
 Original Well Elev WELL @ 5032.0ft (Original Well Elev)

EnCana Oil & Gas Weld County CO



Boyd 3-19 Pad Sec.19-T3N-R68W
 Boyd 3-19
 Plan #1 (1-08-13)



Azimuths to True North
 Magnetic North: 8.79°

Magnetic Field
 Strength: 52832.4snT
 Dip Angle: 66.79°
 Date: 1/8/2013
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1061'FSL, 1411'FWL	5000.0	-102.0	5.6	40.206590	-105.050120	Point
LEGAL BOX 800' X 800' 1332'FSL & 1296'FWL	6637.0	169.0	-109.4	40.207334	-105.050532	Rectangle (Sides: L800.0 W800.0)
TARGET CIRCLE 1061'FSL & 1411'FWL	6637.0	-102.0	5.6	40.206590	-105.050120	Circle (Radius: 100.0)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	3158.8	3.18	176.87	3158.7	-4.4	0.2	2.00	176.87	4.4	
4	4844.0	3.18	176.87	4841.3	-97.6	5.3	0.00	0.00	97.8	
5	5002.8	0.00	0.00	5000.0	-102.0	5.6	2.00	180.00	102.2	TARGET BHL 1061'FSL, 1411'FWL
6	7499.8	0.00	0.00	7497.0	-102.0	5.6	0.00	0.00	102.2	



Directional

EnCana Oil & Gas Weld County CO

SEC.19-T3N-R68W

Boyd 3-19 Pad Sec.19-T3N-R68W

Boyd 3-19

Wellbore #1

Plan: Plan #1 (1-08-13)

Standard Planning Report

08 January, 2013

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,158.8	3.18	176.87	3,158.7	-4.4	0.2	2.00	2.00	0.00	176.87	
4,844.0	3.18	176.87	4,841.3	-97.6	5.3	0.00	0.00	0.00	0.00	
5,002.8	0.00	0.00	5,000.0	-102.0	5.6	2.00	-2.00	0.00	180.00	TARGET BHL 1061
7,499.8	0.00	0.00	7,497.0	-102.0	5.6	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Boyd 3-19
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 5032.0ft (Original Well Elev)
Project:	SEC.19-T3N-R68W	MD Reference:	WELL @ 5032.0ft (Original Well Elev)
Site:	Boyd 3-19 Pad Sec.19-T3N-R68W	North Reference:	True
Well:	Boyd 3-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-08-13)		

Planned 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
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,040.0	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00
1,160.0	0.00	0.00	1,160.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,240.0	0.00	0.00	1,240.0	0.0	0.0	0.0	0.00	0.00	0.00
1,280.0	0.00	0.00	1,280.0	0.0	0.0	0.0	0.00	0.00	0.00
1,320.0	0.00	0.00	1,320.0	0.0	0.0	0.0	0.00	0.00	0.00
1,360.0	0.00	0.00	1,360.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,440.0	0.00	0.00	1,440.0	0.0	0.0	0.0	0.00	0.00	0.00
1,480.0	0.00	0.00	1,480.0	0.0	0.0	0.0	0.00	0.00	0.00
1,520.0	0.00	0.00	1,520.0	0.0	0.0	0.0	0.00	0.00	0.00
1,560.0	0.00	0.00	1,560.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,640.0	0.00	0.00	1,640.0	0.0	0.0	0.0	0.00	0.00	0.00
1,680.0	0.00	0.00	1,680.0	0.0	0.0	0.0	0.00	0.00	0.00
1,720.0	0.00	0.00	1,720.0	0.0	0.0	0.0	0.00	0.00	0.00
1,760.0	0.00	0.00	1,760.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,840.0	0.00	0.00	1,840.0	0.0	0.0	0.0	0.00	0.00	0.00
1,880.0	0.00	0.00	1,880.0	0.0	0.0	0.0	0.00	0.00	0.00
1,920.0	0.00	0.00	1,920.0	0.0	0.0	0.0	0.00	0.00	0.00
1,960.0	0.00	0.00	1,960.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,040.0	0.00	0.00	2,040.0	0.0	0.0	0.0	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Boyd 3-19
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 5032.0ft (Original Well Elev)
Project:	SEC.19-T3N-R68W	MD Reference:	WELL @ 5032.0ft (Original Well Elev)
Site:	Boyd 3-19 Pad Sec.19-T3N-R68W	North Reference:	True
Well:	Boyd 3-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-08-13)		

Planned 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)
2,080.0	0.00	0.00	2,080.0	0.0	0.0	0.0	0.00	0.00	0.00
2,120.0	0.00	0.00	2,120.0	0.0	0.0	0.0	0.00	0.00	0.00
2,160.0	0.00	0.00	2,160.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,240.0	0.00	0.00	2,240.0	0.0	0.0	0.0	0.00	0.00	0.00
2,280.0	0.00	0.00	2,280.0	0.0	0.0	0.0	0.00	0.00	0.00
2,320.0	0.00	0.00	2,320.0	0.0	0.0	0.0	0.00	0.00	0.00
2,360.0	0.00	0.00	2,360.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,440.0	0.00	0.00	2,440.0	0.0	0.0	0.0	0.00	0.00	0.00
2,480.0	0.00	0.00	2,480.0	0.0	0.0	0.0	0.00	0.00	0.00
2,520.0	0.00	0.00	2,520.0	0.0	0.0	0.0	0.00	0.00	0.00
2,560.0	0.00	0.00	2,560.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,640.0	0.00	0.00	2,640.0	0.0	0.0	0.0	0.00	0.00	0.00
2,680.0	0.00	0.00	2,680.0	0.0	0.0	0.0	0.00	0.00	0.00
2,720.0	0.00	0.00	2,720.0	0.0	0.0	0.0	0.00	0.00	0.00
2,760.0	0.00	0.00	2,760.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,840.0	0.00	0.00	2,840.0	0.0	0.0	0.0	0.00	0.00	0.00
2,880.0	0.00	0.00	2,880.0	0.0	0.0	0.0	0.00	0.00	0.00
2,920.0	0.00	0.00	2,920.0	0.0	0.0	0.0	0.00	0.00	0.00
2,960.0	0.00	0.00	2,960.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,040.0	0.80	176.87	3,040.0	-0.3	0.0	0.3	2.00	2.00	0.00
3,080.0	1.60	176.87	3,080.0	-1.1	0.1	1.1	2.00	2.00	0.00
3,120.0	2.40	176.87	3,120.0	-2.5	0.1	2.5	2.00	2.00	0.00
3,158.8	3.18	176.87	3,158.7	-4.4	0.2	4.4	2.00	2.00	0.00
3,160.0	3.18	176.87	3,159.9	-4.5	0.2	4.5	0.00	0.00	0.00
3,200.0	3.18	176.87	3,199.9	-6.7	0.4	6.7	0.00	0.00	0.00
3,240.0	3.18	176.87	3,239.8	-8.9	0.5	8.9	0.00	0.00	0.00
3,280.0	3.18	176.87	3,279.7	-11.1	0.6	11.1	0.00	0.00	0.00
3,320.0	3.18	176.87	3,319.7	-13.3	0.7	13.3	0.00	0.00	0.00
3,360.0	3.18	176.87	3,359.6	-15.5	0.9	15.5	0.00	0.00	0.00
3,400.0	3.18	176.87	3,399.5	-17.7	1.0	17.8	0.00	0.00	0.00
3,440.0	3.18	176.87	3,439.5	-19.9	1.1	20.0	0.00	0.00	0.00
3,480.0	3.18	176.87	3,479.4	-22.2	1.2	22.2	0.00	0.00	0.00
3,520.0	3.18	176.87	3,519.4	-24.4	1.3	24.4	0.00	0.00	0.00
3,560.0	3.18	176.87	3,559.3	-26.6	1.5	26.6	0.00	0.00	0.00
3,600.0	3.18	176.87	3,599.2	-28.8	1.6	28.8	0.00	0.00	0.00
3,640.0	3.18	176.87	3,639.2	-31.0	1.7	31.1	0.00	0.00	0.00
3,680.0	3.18	176.87	3,679.1	-33.2	1.8	33.3	0.00	0.00	0.00
3,702.9	3.18	176.87	3,702.0	-34.5	1.9	34.5	0.00	0.00	0.00
SUSSEX									
3,720.0	3.18	176.87	3,719.1	-35.4	1.9	35.5	0.00	0.00	0.00
3,738.0	3.18	176.87	3,737.0	-36.4	2.0	36.5	0.00	0.00	0.00
SUSSEX PAY TOP									
3,760.0	3.18	176.87	3,759.0	-37.6	2.1	37.7	0.00	0.00	0.00
3,800.0	3.18	176.87	3,798.9	-39.9	2.2	39.9	0.00	0.00	0.00
3,840.0	3.18	176.87	3,838.9	-42.1	2.3	42.1	0.00	0.00	0.00
3,863.2	3.18	176.87	3,862.0	-43.4	2.4	43.4	0.00	0.00	0.00
SUSSEX MARKER									
3,880.0	3.18	176.87	3,878.8	-44.3	2.4	44.4	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Boyd 3-19
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 5032.0ft (Original Well Elev)
Project:	SEC.19-T3N-R68W	MD Reference:	WELL @ 5032.0ft (Original Well Elev)
Site:	Boyd 3-19 Pad Sec.19-T3N-R68W	North Reference:	True
Well:	Boyd 3-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-08-13)		

Planned 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)
3,920.0	3.18	176.87	3,918.7	-46.5	2.5	46.6	0.00	0.00	0.00
3,960.0	3.18	176.87	3,958.7	-48.7	2.7	48.8	0.00	0.00	0.00
4,000.0	3.18	176.87	3,998.6	-50.9	2.8	51.0	0.00	0.00	0.00
4,040.0	3.18	176.87	4,038.6	-53.1	2.9	53.2	0.00	0.00	0.00
4,080.0	3.18	176.87	4,078.5	-55.3	3.0	55.4	0.00	0.00	0.00
4,093.5	3.18	176.87	4,092.0	-56.1	3.1	56.2	0.00	0.00	0.00
SHANNON									
4,120.0	3.18	176.87	4,118.4	-57.6	3.2	57.6	0.00	0.00	0.00
4,160.0	3.18	176.87	4,158.4	-59.8	3.3	59.9	0.00	0.00	0.00
4,200.0	3.18	176.87	4,198.3	-62.0	3.4	62.1	0.00	0.00	0.00
4,240.0	3.18	176.87	4,238.3	-64.2	3.5	64.3	0.00	0.00	0.00
4,280.0	3.18	176.87	4,278.2	-66.4	3.6	66.5	0.00	0.00	0.00
4,320.0	3.18	176.87	4,318.1	-68.6	3.8	68.7	0.00	0.00	0.00
4,360.0	3.18	176.87	4,358.1	-70.8	3.9	70.9	0.00	0.00	0.00
4,400.0	3.18	176.87	4,398.0	-73.0	4.0	73.2	0.00	0.00	0.00
4,440.0	3.18	176.87	4,438.0	-75.3	4.1	75.4	0.00	0.00	0.00
4,480.0	3.18	176.87	4,477.9	-77.5	4.2	77.6	0.00	0.00	0.00
4,520.0	3.18	176.87	4,517.8	-79.7	4.4	79.8	0.00	0.00	0.00
4,560.0	3.18	176.87	4,557.8	-81.9	4.5	82.0	0.00	0.00	0.00
4,600.0	3.18	176.87	4,597.7	-84.1	4.6	84.2	0.00	0.00	0.00
4,640.0	3.18	176.87	4,637.6	-86.3	4.7	86.5	0.00	0.00	0.00
4,680.0	3.18	176.87	4,677.6	-88.5	4.8	88.7	0.00	0.00	0.00
4,720.0	3.18	176.87	4,717.5	-90.8	5.0	90.9	0.00	0.00	0.00
4,760.0	3.18	176.87	4,757.5	-93.0	5.1	93.1	0.00	0.00	0.00
4,800.0	3.18	176.87	4,797.4	-95.2	5.2	95.3	0.00	0.00	0.00
4,840.0	3.18	176.87	4,837.3	-97.4	5.3	97.5	0.00	0.00	0.00
4,844.0	3.18	176.87	4,841.3	-97.6	5.3	97.8	0.00	0.00	0.00
4,880.0	2.46	176.87	4,877.3	-99.4	5.4	99.5	2.00	-2.00	0.00
4,920.0	1.66	176.87	4,917.3	-100.8	5.5	101.0	2.00	-2.00	0.00
4,960.0	0.86	176.87	4,957.3	-101.7	5.6	101.8	2.00	-2.00	0.00
5,000.0	0.06	176.87	4,997.2	-102.0	5.6	102.2	2.00	-2.00	0.00
5,002.8	0.00	0.00	5,000.0	-102.0	5.6	102.2	2.00	-2.00	0.00
5,034.8	0.00	0.00	5,032.0	-102.0	5.6	102.2	0.00	0.00	0.00
TEEPEE BUTTES									
5,040.0	0.00	0.00	5,037.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,080.0	0.00	0.00	5,077.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,120.0	0.00	0.00	5,117.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,160.0	0.00	0.00	5,157.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,200.0	0.00	0.00	5,197.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,240.0	0.00	0.00	5,237.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,280.0	0.00	0.00	5,277.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,320.0	0.00	0.00	5,317.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,360.0	0.00	0.00	5,357.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,400.0	0.00	0.00	5,397.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,440.0	0.00	0.00	5,437.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,480.0	0.00	0.00	5,477.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,520.0	0.00	0.00	5,517.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,560.0	0.00	0.00	5,557.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,597.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,640.0	0.00	0.00	5,637.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,680.0	0.00	0.00	5,677.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,720.0	0.00	0.00	5,717.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,760.0	0.00	0.00	5,757.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,797.2	-102.0	5.6	102.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Boyd 3-19
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 5032.0ft (Original Well Elev)
Project:	SEC.19-T3N-R68W	MD Reference:	WELL @ 5032.0ft (Original Well Elev)
Site:	Boyd 3-19 Pad Sec.19-T3N-R68W	North Reference:	True
Well:	Boyd 3-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-08-13)		

Planned 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)
5,840.0	0.00	0.00	5,837.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,880.0	0.00	0.00	5,877.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,920.0	0.00	0.00	5,917.2	-102.0	5.6	102.2	0.00	0.00	0.00
5,960.0	0.00	0.00	5,957.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,997.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,040.0	0.00	0.00	6,037.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,080.0	0.00	0.00	6,077.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,120.0	0.00	0.00	6,117.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,160.0	0.00	0.00	6,157.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,200.0	0.00	0.00	6,197.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,240.0	0.00	0.00	6,237.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,280.0	0.00	0.00	6,277.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,320.0	0.00	0.00	6,317.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,360.0	0.00	0.00	6,357.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,400.0	0.00	0.00	6,397.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,440.0	0.00	0.00	6,437.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,480.0	0.00	0.00	6,477.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,520.0	0.00	0.00	6,517.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,559.8	0.00	0.00	6,557.0	-102.0	5.6	102.2	0.00	0.00	0.00
SHARON SPRINGS									
6,560.0	0.00	0.00	6,557.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,600.0	0.00	0.00	6,597.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,639.8	0.00	0.00	6,637.0	-102.0	5.6	102.2	0.00	0.00	0.00
NIOBRARA									
6,640.0	0.00	0.00	6,637.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,680.0	0.00	0.00	6,677.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,720.0	0.00	0.00	6,717.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,760.0	0.00	0.00	6,757.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,800.0	0.00	0.00	6,797.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,840.0	0.00	0.00	6,837.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,864.8	0.00	0.00	6,862.0	-102.0	5.6	102.2	0.00	0.00	0.00
FT. HAYES									
6,880.0	0.00	0.00	6,877.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,897.8	0.00	0.00	6,895.0	-102.0	5.6	102.2	0.00	0.00	0.00
CODELL									
6,916.8	0.00	0.00	6,914.0	-102.0	5.6	102.2	0.00	0.00	0.00
FAIRPORT									
6,920.0	0.00	0.00	6,917.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,960.0	0.00	0.00	6,957.2	-102.0	5.6	102.2	0.00	0.00	0.00
6,964.8	0.00	0.00	6,962.0	-102.0	5.6	102.2	0.00	0.00	0.00
GREENHORN									
7,000.0	0.00	0.00	6,997.2	-102.0	5.6	102.2	0.00	0.00	0.00
7,040.0	0.00	0.00	7,037.2	-102.0	5.6	102.2	0.00	0.00	0.00
7,080.0	0.00	0.00	7,077.2	-102.0	5.6	102.2	0.00	0.00	0.00
7,120.0	0.00	0.00	7,117.2	-102.0	5.6	102.2	0.00	0.00	0.00
7,160.0	0.00	0.00	7,157.2	-102.0	5.6	102.2	0.00	0.00	0.00
7,164.8	0.00	0.00	7,162.0	-102.0	5.6	102.2	0.00	0.00	0.00
GRANEROS									
7,200.0	0.00	0.00	7,197.2	-102.0	5.6	102.2	0.00	0.00	0.00
7,240.0	0.00	0.00	7,237.2	-102.0	5.6	102.2	0.00	0.00	0.00
7,280.0	0.00	0.00	7,277.2	-102.0	5.6	102.2	0.00	0.00	0.00
7,320.0	0.00	0.00	7,317.2	-102.0	5.6	102.2	0.00	0.00	0.00
7,333.8	0.00	0.00	7,331.0	-102.0	5.6	102.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Boyd 3-19
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 5032.0ft (Original Well Elev)
Project:	SEC.19-T3N-R68W	MD Reference:	WELL @ 5032.0ft (Original Well Elev)
Site:	Boyd 3-19 Pad Sec.19-T3N-R68W	North Reference:	True
Well:	Boyd 3-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-08-13)		

Planned 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)	
MOWRY										
7,349.8	0.00	0.00	7,347.0	-102.0	5.6	102.2	0.00	0.00	0.00	
J-SAND										
7,360.0	0.00	0.00	7,357.2	-102.0	5.6	102.2	0.00	0.00	0.00	
7,400.0	0.00	0.00	7,397.2	-102.0	5.6	102.2	0.00	0.00	0.00	
7,419.8	0.00	0.00	7,417.0	-102.0	5.6	102.2	0.00	0.00	0.00	
SKULL CREEK A MARKER										
7,440.0	0.00	0.00	7,437.2	-102.0	5.6	102.2	0.00	0.00	0.00	
7,480.0	0.00	0.00	7,477.2	-102.0	5.6	102.2	0.00	0.00	0.00	
7,499.8	0.00	0.00	7,497.0	-102.0	5.6	102.2	0.00	0.00	0.00	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
450.0	450.0	8 5/8"	8-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,702.9	3,702.0	SUSSEX		0.00		
3,738.0	3,737.0	SUSSEX PAY TOP		0.00		
3,863.2	3,862.0	SUSSEX MARKER		0.00		
4,093.5	4,092.0	SHANNON		0.00		
5,034.8	5,032.0	TEEPEE BUTTES		0.00		
6,559.8	6,557.0	SHARON SPRINGS		0.00		
6,639.8	6,637.0	NIOBRARA		0.00		
6,864.8	6,862.0	FT. HAYES		0.00		
6,897.8	6,895.0	CODELL		0.00		
6,916.8	6,914.0	FAIRPORT		0.00		
6,964.8	6,962.0	GREENHORN		0.00		
7,164.8	7,162.0	GRANEROS		0.00		
7,333.8	7,331.0	MOWRY		0.00		
7,349.8	7,347.0	J-SAND		0.00		
7,419.8	7,417.0	SKULL CREEK A MARKER		0.00		