

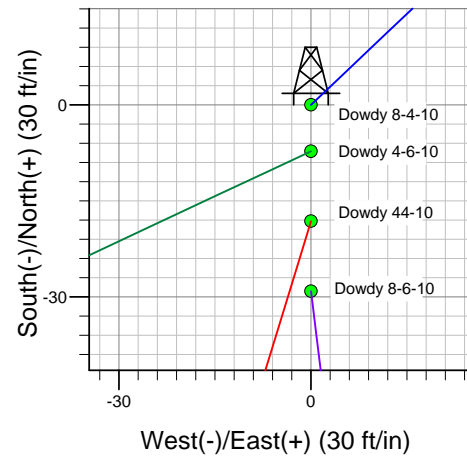
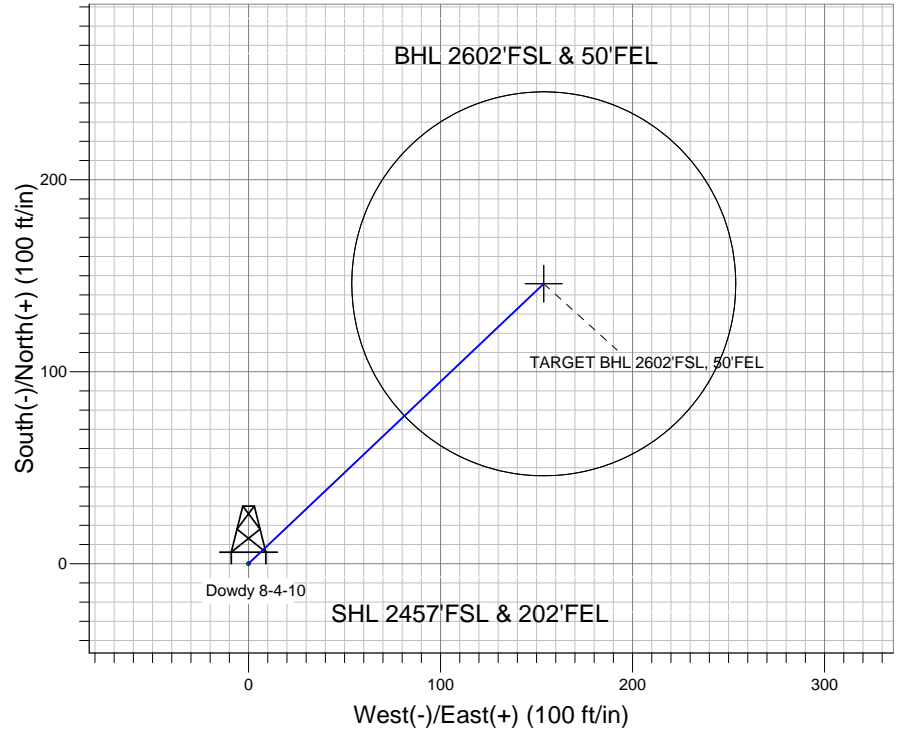
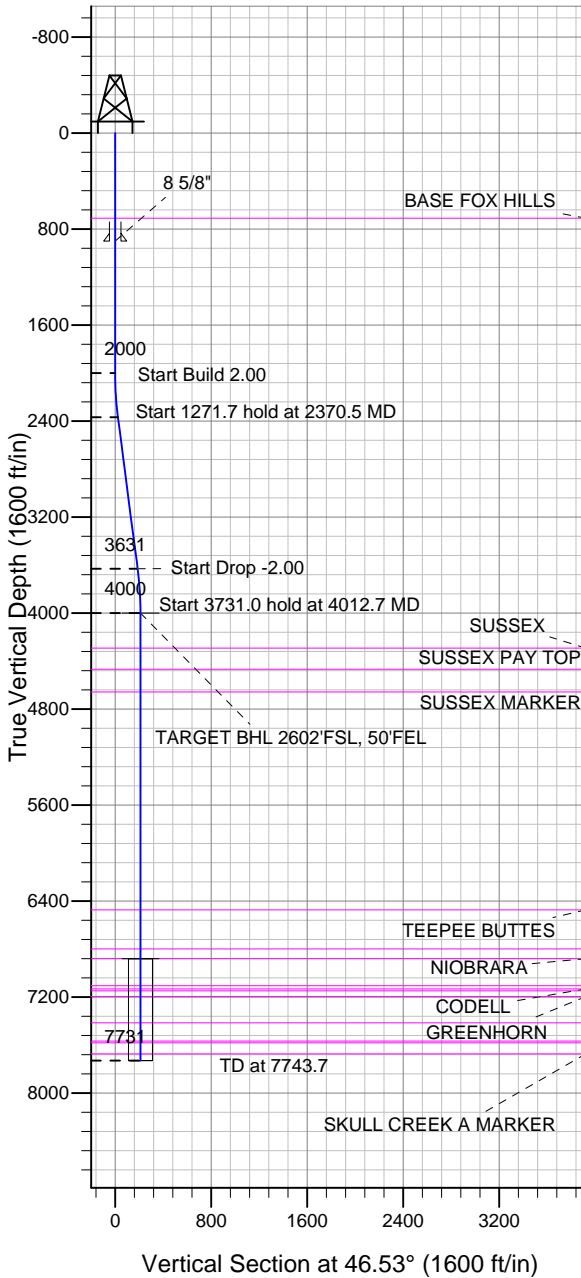
ENSIGN

Directional

Well Name: Dowdy 8-4-10

Surface Location: Dowdy 8-4-10 Pad Sec.10-T2N-R65W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4861.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1299627.01 3240047.91 40.152680 -104.641220
 Original Well Elev WELL @ 4874.0ft (Original Well Elev)

EnCana Oil & Gas Weld County CO



Dowdy 8-4-10 Pad Sec.10-T2N-R65W
 Dowdy 8-4-10
 Plan #1 (7-09-12)
 15:25, July 09 2012



Azimuths to True North
 Magnetic North: 8.63°

Magnetic Field
 Strength: 52901.9snT
 Dip Angle: 66.83°
 Date: 7/9/2012
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2602'FSL, 50'FEL	4000.0	145.7	153.7	40.153080	-104.640670	Point
TARGET CIRCLE 2602'FSL & 50'FEL	6880.0	145.7	153.7	40.153080	-104.640670	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	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2370.5	7.41	46.53	2369.4	16.5	17.4	2.00	46.53	23.9	
4	3642.2	7.41	46.53	3630.6	129.3	136.4	0.00	0.00	187.9	
5	4012.7	0.00	0.00	4000.0	145.7	153.7	2.00	180.00	211.8	TARGET BHL 2602'FSL, 50'FEL
6	7743.7	0.00	0.00	7731.0	145.7	153.7	0.00	0.00	211.8	



Directional

EnCana Oil & Gas Weld County CO

SEC.10-T2N-R65W

Dowdy 8-4-10 Pad Sec.10-T2N-R65W

Dowdy 8-4-10

Wellbore #1

Plan: Plan #1 (7-09-12)

Standard Planning Report

09 July, 2012

Database:	Landmark	Local Co-ordinate Reference:	Well Dowdy 8-4-10
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 4874.0ft (Original Well Elev)
Project:	SEC.10-T2N-R65W	MD Reference:	WELL @ 4874.0ft (Original Well Elev)
Site:	Dowdy 8-4-10 Pad Sec.10-T2N-R65W	North Reference:	True
Well:	Dowdy 8-4-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (7-09-12)		

Project	SEC.10-T2N-R65W, 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	Dowdy 8-4-10 Pad Sec.10-T2N-R65W				
Site Position:		Northing:	1,299,627.04 ft	Latitude:	40.152680
From:	Lat/Long	Easting:	3,240,047.91 ft	Longitude:	-104.641220
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.55 °

Well	Dowdy 8-4-10					
Well Position	+N-S	0.0 ft	Northing:	1,299,627.01 ft	Latitude:	40.152680
	+E-W	0.0 ft	Easting:	3,240,047.91 ft	Longitude:	-104.641220
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,861.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/9/2012	8.63	66.83	52,902

Design	Plan #1 (7-09-12)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	46.53

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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,370.5	7.41	46.53	2,369.4	16.5	17.4	2.00	2.00	0.00	46.53	
3,642.2	7.41	46.53	3,630.6	129.3	136.4	0.00	0.00	0.00	0.00	
4,012.7	0.00	0.00	4,000.0	145.7	153.7	2.00	-2.00	0.00	180.00	TARGET BHL 2602
7,743.7	0.00	0.00	7,731.0	145.7	153.7	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Dowdy 8-4-10
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 4874.0ft (Original Well Elev)
Project:	SEC.10-T2N-R65W	MD Reference:	WELL @ 4874.0ft (Original Well Elev)
Site:	Dowdy 8-4-10 Pad Sec.10-T2N-R65W	North Reference:	True
Well:	Dowdy 8-4-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (7-09-12)		

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
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
710.0	0.00	0.00	710.0	0.0	0.0	0.0	0.00	0.00	0.00
BASE FOX HILLS									
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
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
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

Database:	Landmark	Local Co-ordinate Reference:	Well Dowdy 8-4-10
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 4874.0ft (Original Well Elev)
Project:	SEC.10-T2N-R65W	MD Reference:	WELL @ 4874.0ft (Original Well Elev)
Site:	Dowdy 8-4-10 Pad Sec.10-T2N-R65W	North Reference:	True
Well:	Dowdy 8-4-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (7-09-12)		

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)
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,040.0	0.80	46.53	2,040.0	0.2	0.2	0.3	2.00	2.00	0.00
2,080.0	1.60	46.53	2,080.0	0.8	0.8	1.1	2.00	2.00	0.00
2,120.0	2.40	46.53	2,120.0	1.7	1.8	2.5	2.00	2.00	0.00
2,160.0	3.20	46.53	2,159.9	3.1	3.2	4.5	2.00	2.00	0.00
2,200.0	4.00	46.53	2,199.8	4.8	5.1	7.0	2.00	2.00	0.00
2,240.0	4.80	46.53	2,239.7	6.9	7.3	10.0	2.00	2.00	0.00
2,280.0	5.60	46.53	2,279.6	9.4	9.9	13.7	2.00	2.00	0.00
2,320.0	6.40	46.53	2,319.3	12.3	13.0	17.9	2.00	2.00	0.00
2,360.0	7.20	46.53	2,359.1	15.5	16.4	22.6	2.00	2.00	0.00
2,370.5	7.41	46.53	2,369.4	16.5	17.4	23.9	2.00	2.00	0.00
2,400.0	7.41	46.53	2,398.7	19.1	20.1	27.7	0.00	0.00	0.00
2,440.0	7.41	46.53	2,438.4	22.6	23.9	32.9	0.00	0.00	0.00
2,480.0	7.41	46.53	2,478.1	26.2	27.6	38.0	0.00	0.00	0.00
2,520.0	7.41	46.53	2,517.7	29.7	31.4	43.2	0.00	0.00	0.00
2,560.0	7.41	46.53	2,557.4	33.3	35.1	48.4	0.00	0.00	0.00
2,600.0	7.41	46.53	2,597.1	36.8	38.8	53.5	0.00	0.00	0.00
2,640.0	7.41	46.53	2,636.7	40.4	42.6	58.7	0.00	0.00	0.00
2,680.0	7.41	46.53	2,676.4	43.9	46.3	63.8	0.00	0.00	0.00
2,720.0	7.41	46.53	2,716.0	47.5	50.1	69.0	0.00	0.00	0.00
2,760.0	7.41	46.53	2,755.7	51.0	53.8	74.2	0.00	0.00	0.00
2,800.0	7.41	46.53	2,795.4	54.6	57.6	79.3	0.00	0.00	0.00
2,840.0	7.41	46.53	2,835.0	58.1	61.3	84.5	0.00	0.00	0.00
2,880.0	7.41	46.53	2,874.7	61.7	65.0	89.6	0.00	0.00	0.00
2,920.0	7.41	46.53	2,914.4	65.2	68.8	94.8	0.00	0.00	0.00
2,960.0	7.41	46.53	2,954.0	68.8	72.5	99.9	0.00	0.00	0.00
3,000.0	7.41	46.53	2,993.7	72.3	76.3	105.1	0.00	0.00	0.00
3,040.0	7.41	46.53	3,033.4	75.9	80.0	110.3	0.00	0.00	0.00
3,080.0	7.41	46.53	3,073.0	79.4	83.8	115.4	0.00	0.00	0.00
3,120.0	7.41	46.53	3,112.7	83.0	87.5	120.6	0.00	0.00	0.00
3,160.0	7.41	46.53	3,152.4	86.5	91.3	125.7	0.00	0.00	0.00
3,200.0	7.41	46.53	3,192.0	90.1	95.0	130.9	0.00	0.00	0.00
3,240.0	7.41	46.53	3,231.7	93.6	98.7	136.1	0.00	0.00	0.00
3,280.0	7.41	46.53	3,271.4	97.2	102.5	141.2	0.00	0.00	0.00
3,320.0	7.41	46.53	3,311.0	100.7	106.2	146.4	0.00	0.00	0.00
3,360.0	7.41	46.53	3,350.7	104.2	110.0	151.5	0.00	0.00	0.00
3,400.0	7.41	46.53	3,390.4	107.8	113.7	156.7	0.00	0.00	0.00
3,440.0	7.41	46.53	3,430.0	111.3	117.5	161.8	0.00	0.00	0.00
3,480.0	7.41	46.53	3,469.7	114.9	121.2	167.0	0.00	0.00	0.00
3,520.0	7.41	46.53	3,509.4	118.4	124.9	172.2	0.00	0.00	0.00
3,560.0	7.41	46.53	3,549.0	122.0	128.7	177.3	0.00	0.00	0.00
3,600.0	7.41	46.53	3,588.7	125.5	132.4	182.5	0.00	0.00	0.00
3,640.0	7.41	46.53	3,628.4	129.1	136.2	187.6	0.00	0.00	0.00
3,642.2	7.41	46.53	3,630.6	129.3	136.4	187.9	0.00	0.00	0.00
3,680.0	6.65	46.53	3,668.1	132.5	139.7	192.6	2.00	-2.00	0.00
3,720.0	5.85	46.53	3,707.8	135.5	142.9	196.9	2.00	-2.00	0.00
3,760.0	5.05	46.53	3,747.6	138.1	145.7	200.7	2.00	-2.00	0.00
3,800.0	4.25	46.53	3,787.5	140.3	148.0	204.0	2.00	-2.00	0.00
3,840.0	3.45	46.53	3,827.4	142.2	150.0	206.6	2.00	-2.00	0.00
3,880.0	2.65	46.53	3,867.4	143.6	151.5	208.8	2.00	-2.00	0.00
3,920.0	1.85	46.53	3,907.3	144.7	152.7	210.3	2.00	-2.00	0.00
3,960.0	1.05	46.53	3,947.3	145.4	153.4	211.4	2.00	-2.00	0.00
4,000.0	0.25	46.53	3,987.3	145.7	153.7	211.8	2.00	-2.00	0.00
4,012.7	0.00	0.00	4,000.0	145.7	153.7	211.8	2.00	-2.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Dowdy 8-4-10
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 4874.0ft (Original Well Elev)
Project:	SEC.10-T2N-R65W	MD Reference:	WELL @ 4874.0ft (Original Well Elev)
Site:	Dowdy 8-4-10 Pad Sec.10-T2N-R65W	North Reference:	True
Well:	Dowdy 8-4-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (7-09-12)		

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)
4,040.0	0.00	0.00	4,027.3	145.7	153.7	211.8	0.00	0.00	0.00
4,080.0	0.00	0.00	4,067.3	145.7	153.7	211.8	0.00	0.00	0.00
4,120.0	0.00	0.00	4,107.3	145.7	153.7	211.8	0.00	0.00	0.00
4,160.0	0.00	0.00	4,147.3	145.7	153.7	211.8	0.00	0.00	0.00
4,200.0	0.00	0.00	4,187.3	145.7	153.7	211.8	0.00	0.00	0.00
4,240.0	0.00	0.00	4,227.3	145.7	153.7	211.8	0.00	0.00	0.00
4,280.0	0.00	0.00	4,267.3	145.7	153.7	211.8	0.00	0.00	0.00
4,304.7	0.00	0.00	4,292.0	145.7	153.7	211.8	0.00	0.00	0.00
SUSSEX									
4,320.0	0.00	0.00	4,307.3	145.7	153.7	211.8	0.00	0.00	0.00
4,360.0	0.00	0.00	4,347.3	145.7	153.7	211.8	0.00	0.00	0.00
4,400.0	0.00	0.00	4,387.3	145.7	153.7	211.8	0.00	0.00	0.00
4,440.0	0.00	0.00	4,427.3	145.7	153.7	211.8	0.00	0.00	0.00
4,480.0	0.00	0.00	4,467.3	145.7	153.7	211.8	0.00	0.00	0.00
4,480.7	0.00	0.00	4,468.0	145.7	153.7	211.8	0.00	0.00	0.00
SUSSEX PAY TOP									
4,520.0	0.00	0.00	4,507.3	145.7	153.7	211.8	0.00	0.00	0.00
4,560.0	0.00	0.00	4,547.3	145.7	153.7	211.8	0.00	0.00	0.00
4,600.0	0.00	0.00	4,587.3	145.7	153.7	211.8	0.00	0.00	0.00
4,640.0	0.00	0.00	4,627.3	145.7	153.7	211.8	0.00	0.00	0.00
4,671.7	0.00	0.00	4,659.0	145.7	153.7	211.8	0.00	0.00	0.00
SUSSEX MARKER									
4,680.0	0.00	0.00	4,667.3	145.7	153.7	211.8	0.00	0.00	0.00
4,720.0	0.00	0.00	4,707.3	145.7	153.7	211.8	0.00	0.00	0.00
4,760.0	0.00	0.00	4,747.3	145.7	153.7	211.8	0.00	0.00	0.00
4,800.0	0.00	0.00	4,787.3	145.7	153.7	211.8	0.00	0.00	0.00
4,840.0	0.00	0.00	4,827.3	145.7	153.7	211.8	0.00	0.00	0.00
4,880.0	0.00	0.00	4,867.3	145.7	153.7	211.8	0.00	0.00	0.00
4,920.0	0.00	0.00	4,907.3	145.7	153.7	211.8	0.00	0.00	0.00
4,960.0	0.00	0.00	4,947.3	145.7	153.7	211.8	0.00	0.00	0.00
5,000.0	0.00	0.00	4,987.3	145.7	153.7	211.8	0.00	0.00	0.00
5,040.0	0.00	0.00	5,027.3	145.7	153.7	211.8	0.00	0.00	0.00
5,080.0	0.00	0.00	5,067.3	145.7	153.7	211.8	0.00	0.00	0.00
5,120.0	0.00	0.00	5,107.3	145.7	153.7	211.8	0.00	0.00	0.00
5,160.0	0.00	0.00	5,147.3	145.7	153.7	211.8	0.00	0.00	0.00
5,200.0	0.00	0.00	5,187.3	145.7	153.7	211.8	0.00	0.00	0.00
5,240.0	0.00	0.00	5,227.3	145.7	153.7	211.8	0.00	0.00	0.00
5,280.0	0.00	0.00	5,267.3	145.7	153.7	211.8	0.00	0.00	0.00
5,320.0	0.00	0.00	5,307.3	145.7	153.7	211.8	0.00	0.00	0.00
5,360.0	0.00	0.00	5,347.3	145.7	153.7	211.8	0.00	0.00	0.00
5,400.0	0.00	0.00	5,387.3	145.7	153.7	211.8	0.00	0.00	0.00
5,440.0	0.00	0.00	5,427.3	145.7	153.7	211.8	0.00	0.00	0.00
5,480.0	0.00	0.00	5,467.3	145.7	153.7	211.8	0.00	0.00	0.00
5,520.0	0.00	0.00	5,507.3	145.7	153.7	211.8	0.00	0.00	0.00
5,560.0	0.00	0.00	5,547.3	145.7	153.7	211.8	0.00	0.00	0.00
5,600.0	0.00	0.00	5,587.3	145.7	153.7	211.8	0.00	0.00	0.00
5,640.0	0.00	0.00	5,627.3	145.7	153.7	211.8	0.00	0.00	0.00
5,680.0	0.00	0.00	5,667.3	145.7	153.7	211.8	0.00	0.00	0.00
5,720.0	0.00	0.00	5,707.3	145.7	153.7	211.8	0.00	0.00	0.00
5,760.0	0.00	0.00	5,747.3	145.7	153.7	211.8	0.00	0.00	0.00
5,800.0	0.00	0.00	5,787.3	145.7	153.7	211.8	0.00	0.00	0.00
5,840.0	0.00	0.00	5,827.3	145.7	153.7	211.8	0.00	0.00	0.00
5,880.0	0.00	0.00	5,867.3	145.7	153.7	211.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Dowdy 8-4-10
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 4874.0ft (Original Well Elev)
Project:	SEC.10-T2N-R65W	MD Reference:	WELL @ 4874.0ft (Original Well Elev)
Site:	Dowdy 8-4-10 Pad Sec.10-T2N-R65W	North Reference:	True
Well:	Dowdy 8-4-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (7-09-12)		

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)
5,920.0	0.00	0.00	5,907.3	145.7	153.7	211.8	0.00	0.00	0.00
5,960.0	0.00	0.00	5,947.3	145.7	153.7	211.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,987.3	145.7	153.7	211.8	0.00	0.00	0.00
6,040.0	0.00	0.00	6,027.3	145.7	153.7	211.8	0.00	0.00	0.00
6,080.0	0.00	0.00	6,067.3	145.7	153.7	211.8	0.00	0.00	0.00
6,120.0	0.00	0.00	6,107.3	145.7	153.7	211.8	0.00	0.00	0.00
6,160.0	0.00	0.00	6,147.3	145.7	153.7	211.8	0.00	0.00	0.00
6,200.0	0.00	0.00	6,187.3	145.7	153.7	211.8	0.00	0.00	0.00
6,240.0	0.00	0.00	6,227.3	145.7	153.7	211.8	0.00	0.00	0.00
6,280.0	0.00	0.00	6,267.3	145.7	153.7	211.8	0.00	0.00	0.00
6,320.0	0.00	0.00	6,307.3	145.7	153.7	211.8	0.00	0.00	0.00
6,360.0	0.00	0.00	6,347.3	145.7	153.7	211.8	0.00	0.00	0.00
6,400.0	0.00	0.00	6,387.3	145.7	153.7	211.8	0.00	0.00	0.00
6,440.0	0.00	0.00	6,427.3	145.7	153.7	211.8	0.00	0.00	0.00
6,480.0	0.00	0.00	6,467.3	145.7	153.7	211.8	0.00	0.00	0.00
6,486.7	0.00	0.00	6,474.0	145.7	153.7	211.8	0.00	0.00	0.00
TEEPEE BUTTES									
6,520.0	0.00	0.00	6,507.3	145.7	153.7	211.8	0.00	0.00	0.00
6,560.0	0.00	0.00	6,547.3	145.7	153.7	211.8	0.00	0.00	0.00
6,600.0	0.00	0.00	6,587.3	145.7	153.7	211.8	0.00	0.00	0.00
6,640.0	0.00	0.00	6,627.3	145.7	153.7	211.8	0.00	0.00	0.00
6,680.0	0.00	0.00	6,667.3	145.7	153.7	211.8	0.00	0.00	0.00
6,720.0	0.00	0.00	6,707.3	145.7	153.7	211.8	0.00	0.00	0.00
6,760.0	0.00	0.00	6,747.3	145.7	153.7	211.8	0.00	0.00	0.00
6,800.0	0.00	0.00	6,787.3	145.7	153.7	211.8	0.00	0.00	0.00
6,811.7	0.00	0.00	6,799.0	145.7	153.7	211.8	0.00	0.00	0.00
SHARON SPRINGS									
6,840.0	0.00	0.00	6,827.3	145.7	153.7	211.8	0.00	0.00	0.00
6,880.0	0.00	0.00	6,867.3	145.7	153.7	211.8	0.00	0.00	0.00
6,892.7	0.00	0.00	6,880.0	145.7	153.7	211.8	0.00	0.00	0.00
NIOBRARA									
6,920.0	0.00	0.00	6,907.3	145.7	153.7	211.8	0.00	0.00	0.00
6,960.0	0.00	0.00	6,947.3	145.7	153.7	211.8	0.00	0.00	0.00
7,000.0	0.00	0.00	6,987.3	145.7	153.7	211.8	0.00	0.00	0.00
7,040.0	0.00	0.00	7,027.3	145.7	153.7	211.8	0.00	0.00	0.00
7,080.0	0.00	0.00	7,067.3	145.7	153.7	211.8	0.00	0.00	0.00
7,118.7	0.00	0.00	7,106.0	145.7	153.7	211.8	0.00	0.00	0.00
FT. HAYES									
7,120.0	0.00	0.00	7,107.3	145.7	153.7	211.8	0.00	0.00	0.00
7,144.7	0.00	0.00	7,132.0	145.7	153.7	211.8	0.00	0.00	0.00
CODELL									
7,160.0	0.00	0.00	7,147.3	145.7	153.7	211.8	0.00	0.00	0.00
7,160.7	0.00	0.00	7,148.0	145.7	153.7	211.8	0.00	0.00	0.00
FAIRPORT									
7,200.0	0.00	0.00	7,187.3	145.7	153.7	211.8	0.00	0.00	0.00
7,208.7	0.00	0.00	7,196.0	145.7	153.7	211.8	0.00	0.00	0.00
GREENHORN									
7,240.0	0.00	0.00	7,227.3	145.7	153.7	211.8	0.00	0.00	0.00
7,280.0	0.00	0.00	7,267.3	145.7	153.7	211.8	0.00	0.00	0.00
7,320.0	0.00	0.00	7,307.3	145.7	153.7	211.8	0.00	0.00	0.00
7,360.0	0.00	0.00	7,347.3	145.7	153.7	211.8	0.00	0.00	0.00
7,400.0	0.00	0.00	7,387.3	145.7	153.7	211.8	0.00	0.00	0.00
7,427.7	0.00	0.00	7,415.0	145.7	153.7	211.8	0.00	0.00	0.00

Formations						
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	710.0	710.0	BASE FOX HILLS		0.00	
	4,304.7	4,292.0	SUSSEX		0.00	
	4,480.7	4,468.0	SUSSEX PAY TOP		0.00	
	4,671.7	4,659.0	SUSSEX MARKER		0.00	
	6,486.7	6,474.0	TEEPEE BUTTES		0.00	
	6,811.7	6,799.0	SHARON SPRINGS		0.00	
	6,892.7	6,880.0	NIOBRARA		0.00	
	7,118.7	7,106.0	FT. HAYES		0.00	
	7,144.7	7,132.0	CODELL		0.00	
	7,160.7	7,148.0	FAIRPORT		0.00	
	7,208.7	7,196.0	GREENHORN		0.00	
	7,427.7	7,415.0	GRANEROS		0.00	
	7,579.7	7,567.0	MOWRY		0.00	
	7,593.7	7,581.0	J-SAND		0.00	
	7,687.7	7,675.0	SKULL CREEK A MARKER		0.00	



Directional

EnCana Oil & Gas Weld County CO

SEC.10-T2N-R65W

Dowdy 8-4-10 Pad Sec.10-T2N-R65W

Dowdy 8-4-10

Wellbore #1

Plan #1 (7-09-12)

Anticollision Report

09 July, 2012

Dowdy 8-4-10 Pad Sec.10-T2N-R65W - Dowdy 44-10 - Wellbore #1 - Plan #1 (7-09-12)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
2,300.0	2,299.5	2,152.2	2,058.4	5.0	11.3	149.30	-534.4	-158.0	619.7	609.0	10.63	58.282		
2,370.5	2,369.4	2,213.9	2,115.2	5.2	11.7	149.29	-557.3	-165.0	653.5	642.6	10.93	59.798		
2,400.0	2,398.7	2,239.6	2,138.9	5.3	11.9	149.46	-566.9	-167.9	668.0	656.9	11.07	60.335		
2,500.0	2,497.9	2,326.6	2,219.0	5.5	12.6	149.99	-599.2	-177.8	717.0	705.4	11.56	62.039		
2,600.0	2,597.1	2,413.6	2,299.2	5.8	13.3	150.45	-631.6	-187.7	766.1	754.0	12.05	63.579		
2,700.0	2,696.2	2,500.6	2,379.3	6.0	13.9	150.85	-663.9	-197.6	815.1	802.6	12.55	64.977		
2,800.0	2,795.4	2,587.5	2,459.4	6.3	14.6	151.21	-696.3	-207.5	864.3	851.2	13.05	66.249		
2,900.0	2,894.5	2,674.5	2,539.6	6.6	15.3	151.53	-728.7	-217.4	913.4	899.8	13.55	67.412		
3,000.0	2,993.7	2,761.5	2,619.7	6.8	16.0	151.81	-761.0	-227.3	962.5	948.5	14.06	68.478		
3,100.0	3,092.9	2,848.5	2,699.8	7.1	16.6	152.07	-793.4	-237.2	1,011.7	997.2	14.57	69.458		
3,200.0	3,192.0	2,935.5	2,780.0	7.4	17.3	152.31	-825.7	-247.2	1,060.9	1,045.8	15.08	70.362		
3,300.0	3,291.2	3,022.5	2,860.1	7.7	18.0	152.52	-858.1	-257.1	1,110.1	1,094.5	15.59	71.197		
3,400.0	3,390.4	3,109.5	2,940.3	8.0	18.6	152.72	-890.4	-267.0	1,159.3	1,143.2	16.11	71.971		
3,500.0	3,489.5	3,196.5	3,020.4	8.3	19.3	152.90	-922.8	-276.9	1,208.5	1,191.9	16.63	72.690		
3,600.0	3,588.7	3,283.5	3,100.5	8.6	20.0	153.06	-955.2	-286.8	1,257.8	1,240.6	17.15	73.360		
3,642.2	3,630.6	3,320.2	3,134.3	8.7	20.3	153.13	-968.8	-290.9	1,278.5	1,261.2	17.36	73.628		
3,700.0	3,687.9	3,370.7	3,180.9	8.8	20.6	153.49	-987.6	-296.7	1,306.5	1,288.8	17.73	73.676		
3,800.0	3,787.5	3,459.3	3,262.6	9.1	21.3	154.02	-1,020.6	-306.8	1,352.8	1,334.5	18.34	73.756		
3,900.0	3,887.3	3,549.4	3,345.5	9.3	22.0	154.42	-1,054.1	-317.0	1,396.3	1,377.4	18.94	73.706		
4,000.0	3,987.3	3,640.7	3,429.7	9.4	22.7	154.73	-1,088.1	-327.4	1,436.9	1,417.4	19.54	73.551		
4,012.7	4,000.0	3,652.4	3,440.4	9.5	22.8	-158.71	-1,092.4	-328.8	1,441.9	1,422.2	19.61	73.525		
4,100.0	4,087.3	3,732.9	3,514.5	9.6	23.4	-158.81	-1,122.3	-337.9	1,475.7	1,455.7	20.04	73.632		
4,200.0	4,187.3	3,825.0	3,599.4	9.8	24.2	-158.91	-1,156.6	-348.4	1,514.6	1,494.0	20.56	73.668		
4,300.0	4,287.3	3,917.1	3,684.3	10.0	24.9	-159.02	-1,190.9	-358.9	1,553.4	1,532.3	21.08	73.701		
4,400.0	4,387.3	4,009.2	3,769.1	10.2	25.6	-159.11	-1,225.1	-369.4	1,592.2	1,570.6	21.60	73.730		
4,500.0	4,487.3	4,101.3	3,854.0	10.4	26.3	-159.20	-1,259.4	-379.9	1,631.0	1,608.9	22.11	73.757		
4,600.0	4,587.3	4,193.5	3,938.9	10.6	27.0	-159.29	-1,293.7	-390.4	1,669.9	1,647.2	22.63	73.780		
4,700.0	4,687.3	4,285.6	4,023.7	10.9	27.7	-159.38	-1,327.9	-400.9	1,708.7	1,685.5	23.15	73.802		
4,800.0	4,787.3	4,377.7	4,108.6	11.1	28.4	-159.46	-1,362.2	-411.3	1,747.5	1,723.9	23.67	73.821		
4,900.0	4,887.3	4,469.8	4,193.5	11.3	29.1	-159.53	-1,396.5	-421.8	1,786.4	1,762.2	24.19	73.838		
5,000.0	4,987.3	4,562.0	4,278.3	11.5	29.8	-159.61	-1,430.7	-432.3	1,825.2	1,800.5	24.71	73.853		
5,100.0	5,087.3	4,654.1	4,363.2	11.7	30.6	-159.68	-1,465.0	-442.8	1,864.1	1,838.8	25.24	73.866		
5,200.0	5,187.3	4,746.2	4,448.1	11.9	31.3	-159.75	-1,499.3	-453.3	1,902.9	1,877.2	25.76	73.878		
5,300.0	5,287.3	4,838.3	4,532.9	12.1	32.0	-159.81	-1,533.5	-463.8	1,941.8	1,915.5	26.28	73.889		
5,400.0	5,387.3	4,930.5	4,617.8	12.3	32.7	-159.87	-1,567.8	-474.3	1,980.6	1,953.8	26.80	73.898		
5,500.0	5,487.3	5,022.6	4,702.7	12.5	33.4	-159.93	-1,602.1	-484.8	2,019.5	1,992.1	27.32	73.906		
5,600.0	5,587.3	5,114.7	4,787.5	12.8	34.1	-159.99	-1,636.3	-495.2	2,058.3	2,030.5	27.85	73.913		
5,700.0	5,687.3	5,206.8	4,872.4	13.0	34.8	-160.05	-1,670.6	-505.7	2,097.2	2,068.8	28.37	73.919		
5,800.0	5,787.3	5,525.0	5,171.2	13.2	36.5	-160.20	-1,774.6	-537.6	2,131.9	2,102.4	29.49	72.283		
5,900.0	5,887.3	5,910.9	5,547.1	13.4	37.8	-160.31	-1,857.2	-562.9	2,154.4	2,123.7	30.61	70.387		
6,000.0	5,987.3	6,314.1	5,948.4	13.6	38.5	-160.36	-1,891.3	-573.3	2,163.2	2,131.7	31.50	68.665		
6,100.0	6,087.3	6,453.1	6,087.3	13.8	38.6	-160.36	-1,891.7	-573.4	2,163.3	2,131.4	31.91	67.796		
6,200.0	6,187.3	6,553.1	6,187.3	14.0	38.7	-160.36	-1,891.7	-573.4	2,163.3	2,131.1	32.26	67.068		
6,300.0	6,287.3	6,653.1	6,287.3	14.3	38.8	-160.36	-1,891.7	-573.4	2,163.3	2,130.7	32.60	66.351		
6,400.0	6,387.3	6,753.1	6,387.3	14.5	38.8	-160.36	-1,891.7	-573.4	2,163.3	2,130.4	32.95	65.645		
6,500.0	6,487.3	6,853.1	6,487.3	14.7	38.9	-160.36	-1,891.7	-573.4	2,163.3	2,130.0	33.31	64.951		
6,600.0	6,587.3	6,953.1	6,587.3	14.9	38.9	-160.36	-1,891.7	-573.4	2,163.3	2,129.6	33.66	64.267		
6,700.0	6,687.3	7,053.1	6,687.3	15.1	39.0	-160.36	-1,891.7	-573.4	2,163.3	2,129.3	34.02	63.595		
6,800.0	6,787.3	7,153.1	6,787.3	15.3	39.1	-160.36	-1,891.7	-573.4	2,163.3	2,128.9	34.37	62.933		
6,900.0	6,887.3	7,253.1	6,887.3	15.6	39.1	-160.36	-1,891.7	-573.4	2,163.3	2,128.6	34.73	62.282		
7,000.0	6,987.3	7,353.1	6,987.3	15.8	39.2	-160.36	-1,891.7	-573.4	2,163.3	2,128.2	35.10	61.641		
7,100.0	7,087.3	7,453.1	7,087.3	16.0	39.3	-160.36	-1,891.7	-573.4	2,163.3	2,127.9	35.46	61.010		

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Dowdy 8-4-10
Project:	SEC.10-T2N-R65W	TVD Reference:	WELL @ 4874.0ft (Original Well Elev)
Reference Site:	Dowdy 8-4-10 Pad Sec.10-T2N-R65W	MD Reference:	WELL @ 4874.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dowdy 8-4-10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (7-09-12)	Offset TVD Reference:	Offset Datum

Offset Design Dowdy 8-4-10 Pad Sec.10-T2N-R65W - Dowdy 44-10 - Wellbore #1 - Plan #1 (7-09-12)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,200.0	7,187.3	7,553.1	7,187.3	16.2	39.3	-160.36	-1,891.7	-573.4	2,163.3	2,127.5	35.82	60.389	
7,300.0	7,287.3	7,653.1	7,287.3	16.4	39.4	-160.36	-1,891.7	-573.4	2,163.3	2,127.1	36.19	59.778	
7,400.0	7,387.3	7,753.1	7,387.3	16.6	39.5	-160.36	-1,891.7	-573.4	2,163.3	2,126.8	36.56	59.177	
7,500.0	7,487.3	7,853.1	7,487.3	16.9	39.6	-160.36	-1,891.7	-573.4	2,163.3	2,126.4	36.93	58.586	
7,600.0	7,587.3	7,953.1	7,587.3	17.1	39.6	-160.36	-1,891.7	-573.4	2,163.3	2,126.0	37.30	58.004	
7,700.0	7,687.3	8,053.1	7,687.3	17.3	39.7	-160.36	-1,891.7	-573.4	2,163.3	2,125.6	37.67	57.431	
7,728.0	7,715.4	8,081.1	7,715.4	17.4	39.7	-160.36	-1,891.7	-573.4	2,163.3	2,125.5	37.77	57.272	
7,743.7	7,731.0	8,093.8	7,728.0	17.4	39.7	-160.36	-1,891.7	-573.4	2,163.3	2,125.5	37.83	57.190	

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Dowdy 8-4-10
Project:	SEC.10-T2N-R65W	TVD Reference:	WELL @ 4874.0ft (Original Well Elev)
Reference Site:	Dowdy 8-4-10 Pad Sec.10-T2N-R65W	MD Reference:	WELL @ 4874.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dowdy 8-4-10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (7-09-12)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-7.3	0.0	7.3	7.3	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-7.3	0.0	7.3	7.0	0.22	32.341		
178.9	178.9	178.9	178.9	0.3	0.3	180.00	-7.3	0.0	7.3	6.7	0.58	12.548		
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-7.3	0.0	7.3	6.6	0.67	10.780 CC, ES		
300.0	300.0	299.9	299.8	0.6	0.5	-168.87	-8.0	-1.6	8.2	7.1	1.11	7.368 SF		
400.0	400.0	399.5	399.3	0.8	0.8	-148.40	-10.2	-6.3	12.0	10.5	1.55	7.754		
500.0	500.0	498.6	498.1	1.0	1.0	-134.57	-13.9	-14.1	19.9	17.8	2.02	9.838		
600.0	600.0	597.0	595.7	1.2	1.3	-127.28	-18.9	-24.9	31.5	29.0	2.51	12.558		
700.0	700.0	694.5	692.0	1.5	1.6	-123.32	-25.3	-38.5	46.8	43.8	3.03	15.450		
800.0	800.0	790.8	786.7	1.7	2.0	-121.01	-33.0	-55.0	65.5	61.9	3.58	18.322		
900.0	900.0	885.8	879.3	1.9	2.4	-119.56	-42.0	-74.0	87.5	83.4	4.15	21.087		
1,000.0	1,000.0	979.3	969.8	2.1	2.9	-118.59	-52.0	-95.4	112.8	108.0	4.76	23.710		
1,100.0	1,100.0	1,071.1	1,057.8	2.4	3.4	-117.92	-63.1	-119.0	141.1	135.8	5.39	26.177		
1,200.0	1,200.0	1,161.2	1,143.2	2.6	4.0	-117.43	-75.1	-144.6	172.6	166.5	6.06	28.490		
1,300.0	1,300.0	1,249.2	1,225.9	2.8	4.6	-117.07	-87.9	-172.0	206.9	200.2	6.75	30.658		
1,400.0	1,400.0	1,335.3	1,305.8	3.0	5.2	-116.79	-101.5	-201.0	244.1	236.6	7.47	32.694		
1,500.0	1,500.0	1,419.2	1,382.8	3.3	5.9	-116.58	-115.8	-231.4	284.0	275.8	8.21	34.614		
1,600.0	1,600.0	1,500.0	1,455.8	3.5	6.6	-116.41	-130.3	-262.5	326.6	317.7	8.96	36.462		
1,700.0	1,700.0	1,580.6	1,527.7	3.7	7.4	-116.26	-145.8	-295.4	371.7	362.0	9.75	38.125		
1,800.0	1,800.0	1,661.6	1,599.0	3.9	8.2	-116.14	-162.1	-330.2	419.1	408.6	10.57	39.650		
1,900.0	1,900.0	1,749.3	1,676.0	4.2	9.0	-116.04	-179.9	-368.3	467.1	455.6	11.45	40.779		
2,000.0	2,000.0	1,837.1	1,753.1	4.4	9.9	-115.95	-197.8	-406.4	515.0	502.7	12.34	41.731		
2,100.0	2,100.0	1,924.0	1,829.4	4.6	10.8	-162.13	-215.5	-444.1	564.4	554.7	9.72	58.068		
2,200.0	2,199.8	2,009.3	1,904.2	4.8	11.7	-161.86	-232.9	-481.1	616.7	606.5	10.16	60.721		
2,300.0	2,299.5	2,092.7	1,977.4	5.0	12.5	-161.64	-249.8	-517.4	671.8	661.2	10.57	63.566		
2,370.5	2,369.4	2,150.4	2,028.0	5.2	13.1	-161.52	-261.6	-542.4	712.2	701.4	10.84	65.679		
2,400.0	2,398.7	2,174.3	2,049.0	5.3	13.4	-161.60	-266.5	-552.8	729.4	718.5	10.98	66.423		
2,500.0	2,497.9	2,255.5	2,120.2	5.5	14.2	-161.86	-283.0	-588.1	787.8	776.4	11.45	68.787		
2,600.0	2,597.1	2,336.6	2,191.5	5.8	15.0	-162.07	-299.5	-623.3	846.2	834.3	11.93	70.939		
2,700.0	2,696.2	2,417.8	2,262.7	6.0	15.9	-162.26	-316.0	-658.5	904.6	892.2	12.41	72.904		
2,800.0	2,795.4	2,498.9	2,333.9	6.3	16.7	-162.43	-332.5	-693.8	963.0	950.1	12.89	74.703		
2,900.0	2,894.5	2,580.1	2,405.1	6.6	17.6	-162.58	-349.0	-729.0	1,021.4	1,008.0	13.38	76.352		
3,000.0	2,993.7	2,661.2	2,476.3	6.8	18.4	-162.71	-365.6	-764.2	1,079.8	1,065.9	13.87	77.871		
3,100.0	3,092.9	2,742.4	2,547.5	7.1	19.2	-162.83	-382.1	-799.5	1,138.2	1,123.8	14.36	79.274		
3,200.0	3,192.0	2,823.5	2,618.7	7.4	20.1	-162.94	-398.6	-834.7	1,196.6	1,181.7	14.85	80.573		
3,300.0	3,291.2	2,904.7	2,689.9	7.7	20.9	-163.04	-415.1	-869.9	1,255.0	1,239.6	15.35	81.778		
3,400.0	3,390.4	2,985.9	2,761.2	8.0	21.7	-163.12	-431.6	-905.2	1,313.4	1,297.5	15.84	82.897		
3,500.0	3,489.5	3,067.0	2,832.4	8.3	22.6	-163.21	-448.2	-940.4	1,371.8	1,355.5	16.34	83.940		
3,600.0	3,588.7	3,148.2	2,903.6	8.6	23.4	-163.28	-464.7	-975.6	1,430.2	1,413.4	16.84	84.914		
3,642.2	3,630.6	3,182.4	2,933.6	8.7	23.8	-163.31	-471.6	-990.5	1,454.9	1,437.8	17.05	85.306		
3,700.0	3,687.9	3,229.6	2,975.1	8.8	24.3	-163.57	-481.3	-1,011.0	1,488.2	1,470.7	17.44	85.352		
3,800.0	3,787.5	3,312.8	3,048.1	9.1	25.1	-163.96	-498.2	-1,047.1	1,543.6	1,525.5	18.07	85.406		
3,900.0	3,887.3	3,397.9	3,122.7	9.3	26.0	-164.27	-515.5	-1,084.0	1,596.2	1,577.5	18.71	85.312		
4,000.0	3,987.3	3,484.6	3,198.8	9.4	26.9	-164.52	-533.2	-1,121.7	1,646.0	1,626.6	19.34	85.097		
4,012.7	4,000.0	3,495.7	3,208.6	9.5	27.0	-118.02	-535.4	-1,126.5	1,652.1	1,632.7	19.42	85.063		
4,100.0	4,087.3	3,572.3	3,275.8	9.6	27.8	-117.94	-551.0	-1,159.8	1,693.9	1,674.1	19.86	85.275		
4,200.0	4,187.3	3,660.1	3,352.8	9.8	28.7	-117.87	-568.9	-1,197.9	1,741.8	1,721.4	20.39	85.417		
4,300.0	4,287.3	3,747.9	3,429.8	10.0	29.6	-117.79	-586.7	-1,236.0	1,789.7	1,768.8	20.92	85.549		
4,400.0	4,387.3	3,835.6	3,506.9	10.2	30.5	-117.72	-604.6	-1,274.1	1,837.6	1,816.2	21.45	85.672		
4,500.0	4,487.3	3,923.4	3,583.9	10.4	31.5	-117.66	-622.5	-1,312.2	1,885.6	1,863.6	21.98	85.787		
4,600.0	4,587.3	4,011.1	3,660.9	10.6	32.4	-117.59	-640.3	-1,350.3	1,933.5	1,911.0	22.51	85.895		
4,700.0	4,687.3	4,098.9	3,737.9	10.9	33.3	-117.53	-658.2	-1,388.4	1,981.4	1,958.4	23.04	85.995		

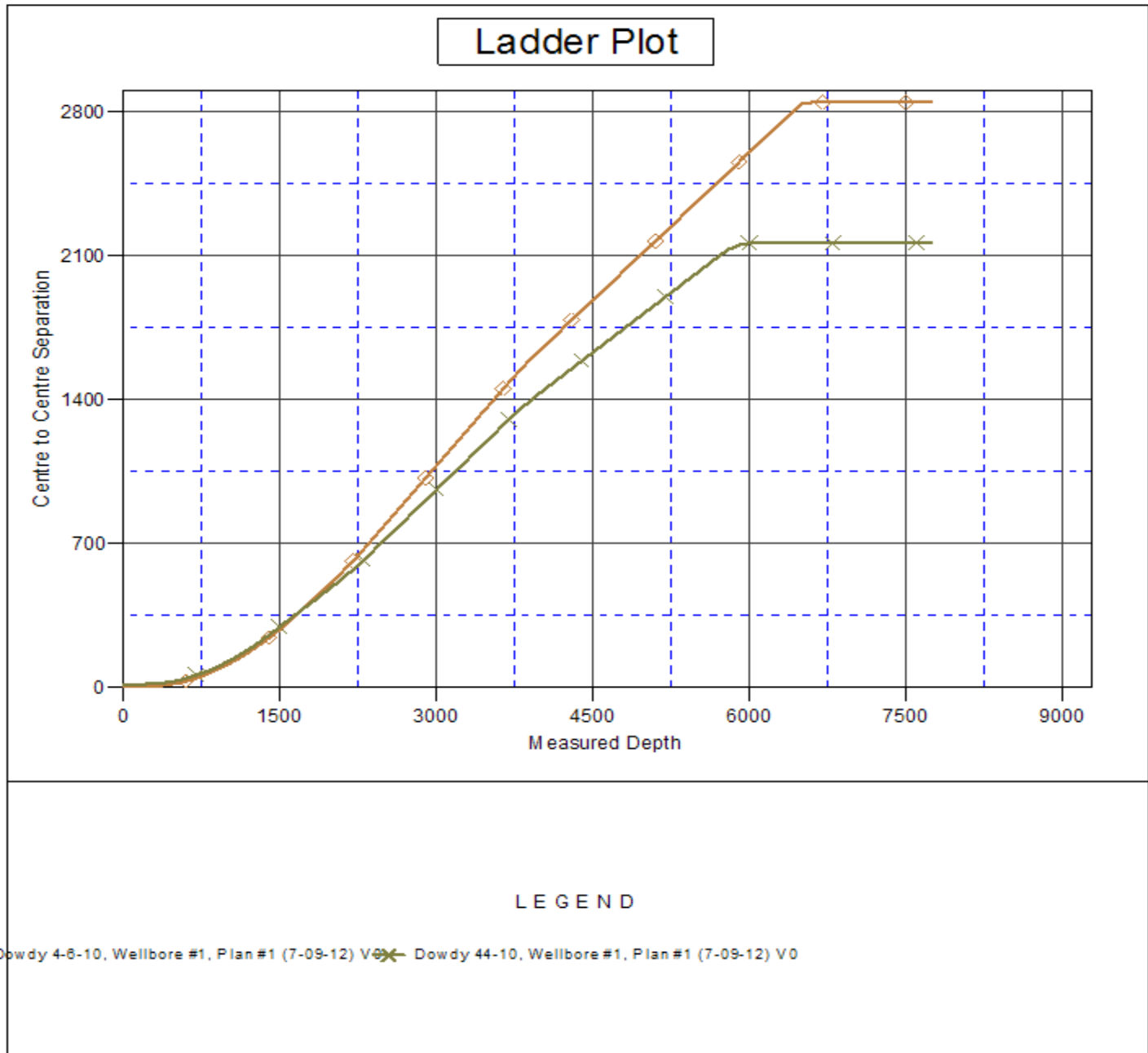
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Dowdy 8-4-10
Project:	SEC.10-T2N-R65W	TVD Reference:	WELL @ 4874.0ft (Original Well Elev)
Reference Site:	Dowdy 8-4-10 Pad Sec.10-T2N-R65W	MD Reference:	WELL @ 4874.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dowdy 8-4-10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (7-09-12)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Dowdy 8-4-10 Pad Sec.10-T2N-R65W - Dowdy 4-6-10 - Wellbore #1 - Plan #1 (7-09-12)												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,800.0	4,787.3	4,186.6	3,814.9	11.1	34.2	-117.48	-676.1	-1,426.5	2,029.3	2,005.7	23.57	86.089	
4,900.0	4,887.3	4,274.4	3,891.9	11.3	35.1	-117.42	-693.9	-1,464.6	2,077.2	2,053.1	24.10	86.178	
5,000.0	4,987.3	4,362.1	3,968.9	11.5	36.0	-117.37	-711.8	-1,502.7	2,125.2	2,100.5	24.64	86.260	
5,100.0	5,087.3	4,449.9	4,045.9	11.7	36.9	-117.32	-729.6	-1,540.8	2,173.1	2,147.9	25.17	86.338	
5,200.0	5,187.3	4,537.6	4,122.9	11.9	37.8	-117.27	-747.5	-1,578.9	2,221.0	2,195.3	25.70	86.411	
5,300.0	5,287.3	4,625.4	4,199.9	12.1	38.7	-117.23	-765.4	-1,617.0	2,268.9	2,242.7	26.24	86.480	
5,400.0	5,387.3	4,713.1	4,276.9	12.3	39.7	-117.18	-783.2	-1,655.1	2,316.9	2,290.1	26.77	86.545	
5,500.0	5,487.3	4,800.9	4,353.9	12.5	40.6	-117.14	-801.1	-1,693.2	2,364.8	2,337.5	27.31	86.606	
5,600.0	5,587.3	4,888.6	4,430.9	12.8	41.5	-117.10	-819.0	-1,731.3	2,412.7	2,384.9	27.84	86.663	
5,700.0	5,687.3	4,976.4	4,507.9	13.0	42.4	-117.06	-836.8	-1,769.4	2,460.6	2,432.3	28.38	86.718	
5,800.0	5,787.3	5,064.2	4,584.9	13.2	43.3	-117.03	-854.7	-1,807.5	2,508.6	2,479.7	28.91	86.769	
5,900.0	5,887.3	5,151.9	4,662.0	13.4	44.2	-116.99	-872.5	-1,845.6	2,556.5	2,527.1	29.45	86.817	
6,000.0	5,987.3	5,239.7	4,739.0	13.6	45.1	-116.96	-890.4	-1,883.7	2,604.4	2,574.4	29.98	86.863	
6,100.0	6,087.3	5,327.4	4,816.0	13.8	46.0	-116.92	-908.3	-1,921.8	2,652.4	2,621.8	30.52	86.906	
6,200.0	6,187.3	5,415.2	4,893.0	14.0	46.9	-116.89	-926.1	-1,959.9	2,700.3	2,669.2	31.06	86.947	
6,300.0	6,287.3	5,502.9	4,970.0	14.3	47.9	-116.86	-944.0	-1,998.0	2,748.2	2,716.6	31.59	86.986	
6,400.0	6,387.3	5,590.7	5,047.0	14.5	48.8	-116.83	-961.9	-2,036.1	2,796.2	2,764.0	32.13	87.022	
6,500.0	6,487.3	5,678.4	5,124.0	14.7	49.7	-116.80	-979.7	-2,074.2	2,844.1	2,811.4	32.67	87.057	
6,600.0	6,587.3	5,766.2	5,201.0	14.9	50.6	-116.77	-997.6	-2,112.3	2,892.0	2,858.7	33.20	87.092	
6,700.0	6,687.3	5,854.0	5,278.0	15.1	51.5	-116.74	-1,015.5	-2,150.4	2,939.9	2,906.8	33.73	87.127	
6,800.0	6,787.3	5,941.8	5,355.0	15.3	52.4	-116.71	-1,033.4	-2,188.5	2,987.8	2,954.7	34.26	87.162	
6,900.0	6,887.3	6,029.6	5,436.0	15.5	53.3	-116.68	-1,051.3	-2,226.6	3,035.7	2,999.6	34.79	87.197	
7,000.0	6,987.3	6,117.4	5,517.0	15.7	54.2	-116.65	-1,069.2	-2,264.7	3,083.6	3,047.5	35.32	87.232	
7,100.0	7,087.3	6,205.2	5,598.0	15.9	55.1	-116.62	-1,087.1	-2,302.8	3,131.5	3,095.4	35.85	87.267	
7,200.0	7,187.3	6,293.0	5,679.0	16.1	56.0	-116.59	-1,105.0	-2,340.9	3,179.4	3,143.3	36.38	87.302	
7,300.0	7,287.3	6,380.8	5,760.0	16.3	56.9	-116.56	-1,122.9	-2,379.0	3,227.3	3,191.2	36.91	87.337	
7,400.0	7,387.3	6,468.6	5,841.0	16.5	57.8	-116.53	-1,140.8	-2,417.1	3,275.2	3,239.1	37.44	87.372	
7,500.0	7,487.3	6,556.4	5,922.0	16.7	58.7	-116.50	-1,158.7	-2,455.2	3,323.1	3,287.0	37.97	87.407	
7,600.0	7,587.3	6,644.2	6,003.0	16.9	59.6	-116.47	-1,176.6	-2,493.3	3,371.0	3,334.9	38.50	87.442	
7,700.0	7,687.3	6,732.0	6,084.0	17.1	60.5	-116.44	-1,194.5	-2,531.4	3,418.9	3,382.8	39.03	87.477	
7,800.0	7,787.3	6,819.8	6,165.0	17.3	61.4	-116.41	-1,212.4	-2,569.5	3,466.8	3,430.7	39.56	87.512	
7,900.0	7,887.3	6,907.6	6,246.0	17.5	62.3	-116.38	-1,230.3	-2,607.6	3,514.7	3,478.6	40.09	87.547	
7,943.7	7,731.0	8,344.7	7,731.0	17.4	56.5	-116.59	-1,129.2	-2,393.0	2,848.0	2,807.6	40.38	70.539	

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Dowdy 8-4-10
Project:	SEC.10-T2N-R65W	TVD Reference:	WELL @ 4874.0ft (Original Well Elev)
Reference Site:	Dowdy 8-4-10 Pad Sec.10-T2N-R65W	MD Reference:	WELL @ 4874.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dowdy 8-4-10	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (7-09-12)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4874.0ft (Original Well Elev) Coordinates are relative to: Dowdy 8-4-10
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
 Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.55°



Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Dowdy 8-4-10
Project:	SEC.10-T2N-R65W	TVD Reference:	WELL @ 4874.0ft (Original Well Elev)
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