

Well Name: Dowdy 44-10

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
 Easting 3240048.09 Latitude 40.152630 Longitude -104.641220
 Original Well Elev WELL @ 4874.0ft (Original Well Elev)

+N/-S 0.0
 +E/-W 0.0

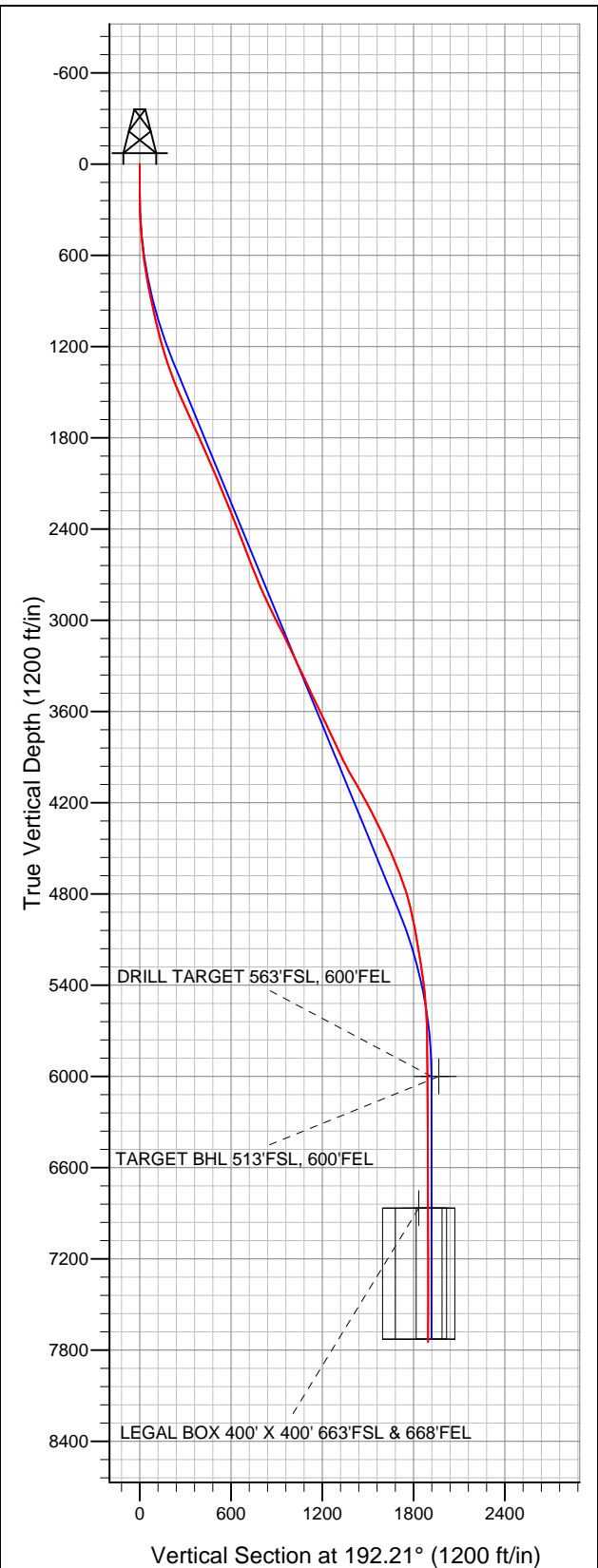
Northing 1299608.81

Easting 3240048.09

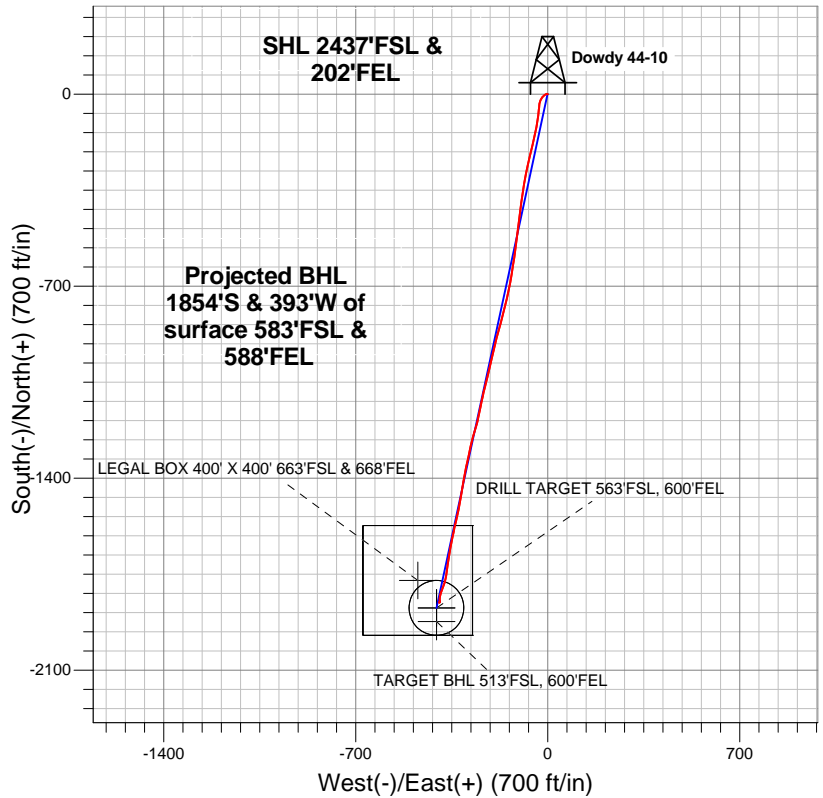
Latitude 40.152630

Longitude -104.641220

Slot



EnCana Oil & Gas Weld County CO



LEGEND

- Dowdy 44-10, Wellbore #1, Plan #2 (10-03-12) R V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 8120'MD & 7746'TVD @ 1895'VS
 0.10 deg Inc 357.60 deg AZ

Project: SEC.10-T2N-R65W
 Site: Dowdy 8-4-10 Pad Sec.10-T2N-R65W
 Well: Dowdy 44-10
 Plan: Wellbore #1



Directional

EnCana Oil & Gas Weld County CO

SEC.10-T2N-R65W

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

Dowdy 44-10

Wellbore #1

Survey: Survey #1

Standard Survey Report

09 October, 2012

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Dowdy 44-10
Project:	SEC.10-T2N-R65W	TVD Reference:	WELL @ 4874.0ft (Original Well Elev)
Site:	Dowdy 8-4-10 Pad Sec.10-T2N-R65W	MD Reference:	WELL @ 4874.0ft (Original Well Elev)
Well:	Dowdy 44-10	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

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 44-10					
Well Position	+N/-S	0.0 ft	Northing:	1,299,608.81 ft	Latitude:	40.152630
	+E/-W	0.0 ft	Easting:	3,240,048.09 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	10/3/2012	8.60	66.83	52,877

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 (°)	
	6,000.0	0.0	0.0	192.21	

Survey Program	Date	10/9/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
77.0	8,120.0	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	
77.0	1.00	267.60	77.0	0.0	-0.7	0.2	1.30	1.30	0.00	
165.0	1.10	295.30	165.0	0.3	-2.2	0.2	0.58	0.11	31.48	
257.0	1.60	258.90	257.0	0.4	-4.3	0.5	1.05	0.54	-39.57	
346.0	3.40	238.60	345.9	-1.2	-7.7	2.8	2.22	2.02	-22.81	
438.0	5.50	229.40	437.6	-5.5	-13.4	8.2	2.40	2.28	-10.00	
529.0	6.70	218.50	528.1	-12.5	-20.0	16.4	1.83	1.32	-11.98	
620.0	7.70	205.70	618.4	-22.1	-26.0	27.1	2.07	1.10	-14.07	
711.0	8.80	187.40	708.4	-34.5	-29.5	40.0	3.11	1.21	-20.11	
802.0	10.60	184.80	798.1	-49.8	-31.1	55.2	2.04	1.98	-2.86	
875.0	12.10	187.00	869.7	-64.0	-32.6	69.5	2.14	2.05	3.01	
968.0	12.70	186.30	960.5	-83.9	-34.9	89.4	0.67	0.65	-0.75	
1,053.0	12.80	191.10	1,043.4	-102.4	-37.8	108.1	1.25	0.12	5.65	

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Dowdy 44-10
Project:	SEC.10-T2N-R65W	TVD Reference:	WELL @ 4874.0ft (Original Well Elev)
Site:	Dowdy 8-4-10 Pad Sec.10-T2N-R65W	MD Reference:	WELL @ 4874.0ft (Original Well Elev)
Well:	Dowdy 44-10	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)
1,139.0	14.50	191.40	1,127.0	-122.3	-41.7	128.4	1.98	1.98	0.35
1,224.0	16.10	190.00	1,209.0	-144.4	-45.9	150.8	1.93	1.88	-1.65
1,310.0	18.10	194.10	1,291.2	-169.1	-51.2	176.1	2.71	2.33	4.77
1,396.0	20.00	193.40	1,372.5	-196.3	-57.9	204.1	2.23	2.21	-0.81
1,481.0	22.50	193.20	1,451.7	-226.3	-64.9	234.9	2.94	2.94	-0.24
1,567.0	23.60	193.20	1,530.8	-259.1	-72.6	268.6	1.28	1.28	0.00
1,652.0	24.40	189.90	1,608.5	-292.9	-79.5	303.1	1.84	0.94	-3.88
1,738.0	24.60	191.10	1,686.7	-328.0	-86.0	338.8	0.62	0.23	1.40
1,824.0	24.00	186.30	1,765.1	-363.0	-91.4	374.1	2.40	-0.70	-5.58
1,909.0	23.50	187.60	1,842.9	-396.9	-95.5	408.2	0.85	-0.59	1.53
1,995.0	24.30	190.00	1,921.6	-431.4	-100.9	442.9	1.46	0.93	2.79
2,080.0	24.20	186.00	1,999.1	-465.9	-105.7	477.7	1.94	-0.12	-4.71
2,166.0	23.00	185.60	2,077.9	-500.2	-109.2	512.0	1.41	-1.40	-0.47
2,252.0	22.40	187.60	2,157.2	-533.1	-113.0	545.0	1.14	-0.70	2.33
2,337.0	21.20	188.50	2,236.1	-564.4	-117.4	576.5	1.47	-1.41	1.06
2,423.0	21.70	188.10	2,316.2	-595.5	-122.0	607.8	0.61	0.58	-0.47
2,508.0	22.40	188.30	2,394.9	-627.1	-126.5	639.7	0.83	0.82	0.24
2,594.0	21.00	188.80	2,474.8	-658.5	-131.3	671.4	1.64	-1.63	0.58
2,680.0	20.80	190.70	2,555.2	-688.8	-136.4	702.0	0.82	-0.23	2.21
2,765.0	21.90	193.90	2,634.4	-719.0	-143.1	733.0	1.88	1.29	3.76
2,851.0	21.80	193.20	2,714.2	-750.1	-150.6	765.0	0.32	-0.12	-0.81
2,936.0	23.50	192.50	2,792.6	-782.0	-157.8	797.7	2.02	2.00	-0.82
3,022.0	25.40	194.40	2,870.9	-816.6	-166.1	833.3	2.39	2.21	2.21
3,108.0	26.00	196.50	2,948.4	-852.6	-176.1	870.5	1.27	0.70	2.44
3,193.0	27.30	194.40	3,024.4	-889.3	-186.2	908.6	1.89	1.53	-2.47
3,279.0	26.70	192.70	3,101.0	-927.3	-195.4	947.6	1.14	-0.70	-1.98
3,364.0	25.50	192.80	3,177.3	-963.7	-203.6	985.0	1.41	-1.41	0.12
3,450.0	24.30	193.20	3,255.3	-999.0	-211.8	1,021.2	1.41	-1.40	0.47
3,536.0	25.90	193.20	3,333.2	-1,034.5	-220.1	1,057.7	1.86	1.86	0.00
3,621.0	24.90	195.00	3,410.0	-1,069.9	-229.0	1,094.1	1.49	-1.18	2.12
3,707.0	24.80	192.00	3,488.0	-1,105.0	-237.4	1,130.2	1.47	-0.12	-3.49
3,792.0	26.20	190.70	3,564.8	-1,140.9	-244.6	1,166.8	1.77	1.65	-1.53
3,878.0	26.40	192.80	3,641.9	-1,178.2	-252.3	1,204.9	1.11	0.23	2.44
3,964.0	25.10	196.50	3,719.3	-1,214.3	-261.8	1,242.2	2.40	-1.51	4.30
4,049.0	25.10	196.20	3,796.3	-1,248.9	-271.9	1,278.2	0.15	0.00	-0.35
4,135.0	24.80	191.30	3,874.3	-1,284.1	-280.5	1,314.4	2.43	-0.35	-5.70
4,220.0	27.10	191.80	3,950.7	-1,320.6	-288.0	1,351.6	2.72	2.71	0.59
4,306.0	29.80	192.80	4,026.3	-1,360.6	-296.7	1,392.6	3.19	3.14	1.16
4,392.0	30.30	190.70	4,100.7	-1,402.8	-305.5	1,435.6	1.35	0.58	-2.44
4,477.0	28.70	188.10	4,174.7	-1,444.0	-312.4	1,477.4	2.41	-1.88	-3.06
4,563.0	26.80	190.70	4,250.8	-1,483.5	-318.9	1,517.4	2.62	-2.21	3.02
4,648.0	27.30	191.10	4,326.5	-1,521.5	-326.2	1,556.1	0.63	0.59	0.47
4,734.0	25.70	193.70	4,403.5	-1,559.0	-334.4	1,594.4	2.30	-1.86	3.02
4,820.0	23.80	191.80	4,481.6	-1,594.1	-342.4	1,630.4	2.39	-2.21	-2.21
4,905.0	22.70	192.30	4,559.7	-1,626.9	-349.4	1,664.0	1.31	-1.29	0.59
4,991.0	22.00	189.70	4,639.2	-1,659.0	-355.6	1,696.7	1.41	-0.81	-3.02
5,076.0	20.10	189.30	4,718.6	-1,689.1	-360.6	1,727.2	2.24	-2.24	-0.47
5,162.0	16.80	186.60	4,800.1	-1,716.0	-364.5	1,754.3	3.96	-3.84	-3.14
5,248.0	13.80	186.50	4,883.1	-1,738.6	-367.1	1,776.9	3.49	-3.49	-0.12
5,333.0	11.50	191.70	4,966.0	-1,756.9	-369.9	1,795.4	3.02	-2.71	6.12
5,419.0	9.80	196.50	5,050.5	-1,772.4	-373.7	1,811.3	2.23	-1.98	5.58
5,504.0	10.40	195.70	5,134.2	-1,786.7	-377.9	1,826.2	0.72	0.71	-0.94
5,590.0	9.30	201.50	5,218.9	-1,800.6	-382.5	1,840.8	1.72	-1.28	6.74
5,676.0	8.50	200.20	5,303.9	-1,813.0	-387.3	1,853.9	0.96	-0.93	-1.51

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Site:	Dowdy 8-4-10 Pad Sec.10-T2N-R65W	MD Reference:	WELL @ 4874.0ft (Original Well Elev)
Well:	Dowdy 44-10	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)	
5,761.0	7.00	196.20	5,388.1	-1,823.9	-390.9	1,865.3	1.87	-1.76	-4.71	
5,847.0	5.30	188.20	5,473.6	-1,832.9	-392.9	1,874.5	2.21	-1.98	-9.30	
5,932.0	4.00	180.40	5,558.4	-1,839.7	-393.5	1,881.3	1.70	-1.53	-9.18	
6,018.0	2.50	174.40	5,644.2	-1,844.6	-393.3	1,886.1	1.79	-1.74	-6.98	
6,104.0	0.70	156.30	5,730.2	-1,846.9	-392.9	1,888.3	2.15	-2.09	-21.05	
6,189.0	0.50	180.50	5,815.2	-1,847.8	-392.7	1,889.1	0.37	-0.24	28.47	
6,360.0	0.50	190.70	5,986.2	-1,849.3	-392.9	1,890.5	0.05	0.00	5.96	
6,374.0	0.48	189.54	6,000.2	-1,849.4	-392.9	1,890.7	0.15	-0.13	-8.27	
DRILL TARGET 563'FSL, 600'FEL										
6,374.3	0.48	189.54	6,000.5	-1,849.4	-392.9	1,890.7	0.00	0.00	0.00	
TARGET BHL 513'FSL, 600'FEL										
6,532.0	0.30	167.20	6,158.2	-1,850.5	-392.9	1,891.7	0.15	-0.12	-14.17	
6,703.0	0.10	156.80	6,329.2	-1,851.0	-392.7	1,892.2	0.12	-0.12	-6.08	
6,874.0	0.20	228.90	6,500.2	-1,851.4	-392.9	1,892.6	0.11	0.06	42.16	
7,045.0	0.40	212.20	6,671.2	-1,852.1	-393.5	1,893.4	0.13	0.12	-9.77	
7,216.0	0.40	245.10	6,842.2	-1,852.8	-394.3	1,894.3	0.13	0.00	19.24	
7,240.0	0.40	242.90	6,866.1	-1,852.9	-394.5	1,894.4	0.06	-0.01	-9.17	
LEGAL BOX 400' X 400' 663'FSL & 668'FEL - TARGET CIRCLE 563'FSL & 600'FEL										
7,388.0	0.40	229.20	7,014.1	-1,853.5	-395.3	1,895.1	0.06	0.00	-9.26	
7,559.0	0.10	171.20	7,185.1	-1,854.0	-395.7	1,895.8	0.21	-0.18	-33.92	
7,730.0	0.40	94.60	7,356.1	-1,854.2	-395.1	1,895.8	0.23	0.18	-44.80	
7,902.0	0.40	69.80	7,528.1	-1,854.0	-394.0	1,895.4	0.10	0.00	-14.42	
8,078.0	0.10	357.60	7,704.1	-1,853.7	-393.4	1,894.9	0.22	-0.17	-41.02	
8,120.0	0.10	357.60	7,746.1	-1,853.6	-393.4	1,894.9	0.00	0.00	0.00	

Wellbore Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
DRILL TARGET 563'F - hit/miss target - Shape	0.00	0.00	6,000.0	-1,873.5	-405.4	1,297,731.56	3,239,660.87	40.147487	-104.642670	
- survey misses target center by 27.2ft at 6374.1ft MD (6000.2 TVD, -1849.4 N, -392.9 E)										
- Point										
TARGET BHL 513'FS - hit/miss target - Shape	0.00	0.00	6,000.0	-1,923.5	-405.4	1,297,681.59	3,239,661.39	40.147350	-104.642670	
- survey misses target center by 75.1ft at 6374.3ft MD (6000.5 TVD, -1849.4 N, -392.9 E)										
- Point										
LEGAL BOX 400' X 400' - hit/miss target - Shape	0.00	0.00	6,866.0	-1,773.5	-473.4	1,297,830.89	3,239,591.91	40.147762	-104.642913	
- survey misses target center by 112.0ft at 7240.0ft MD (6866.1 TVD, -1852.9 N, -394.5 E)										
- Rectangle (sides W400.0 H400.0 D862.0)										
TARGET CIRCLE 563'FSL - hit/miss target - Shape	0.00	0.00	6,866.0	-1,873.5	-405.4	1,297,731.56	3,239,660.87	40.147487	-104.642670	
- survey misses target center by 23.3ft at 7240.0ft MD (6866.1 TVD, -1852.9 N, -394.5 E)										
- Circle (radius 100.0)										

Checked By: _____	Approved By: _____	Date: _____
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