

ENSIGN

Directional

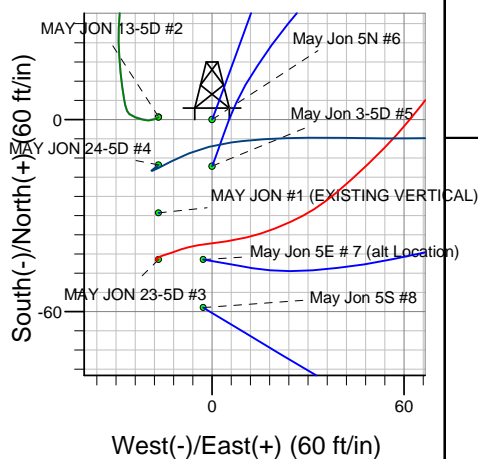
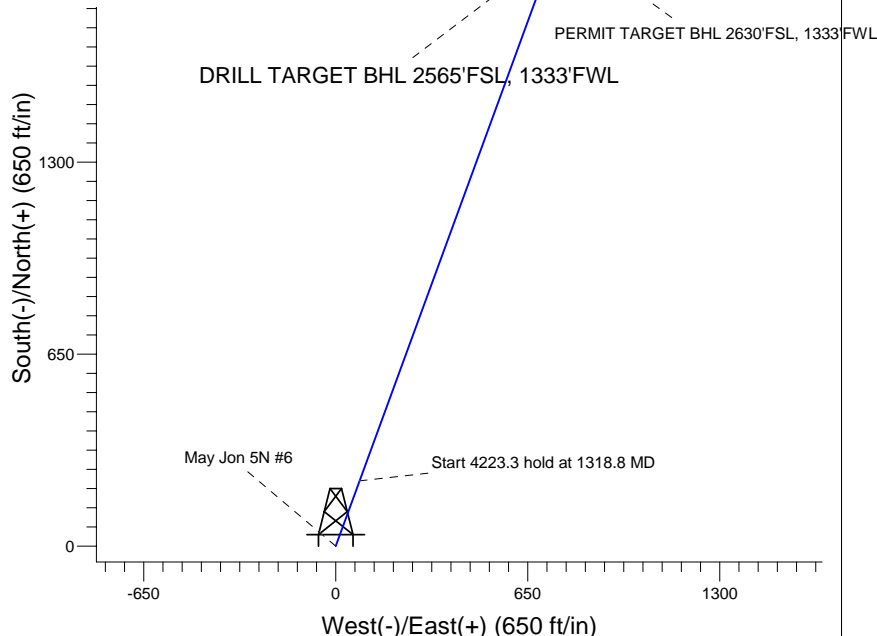
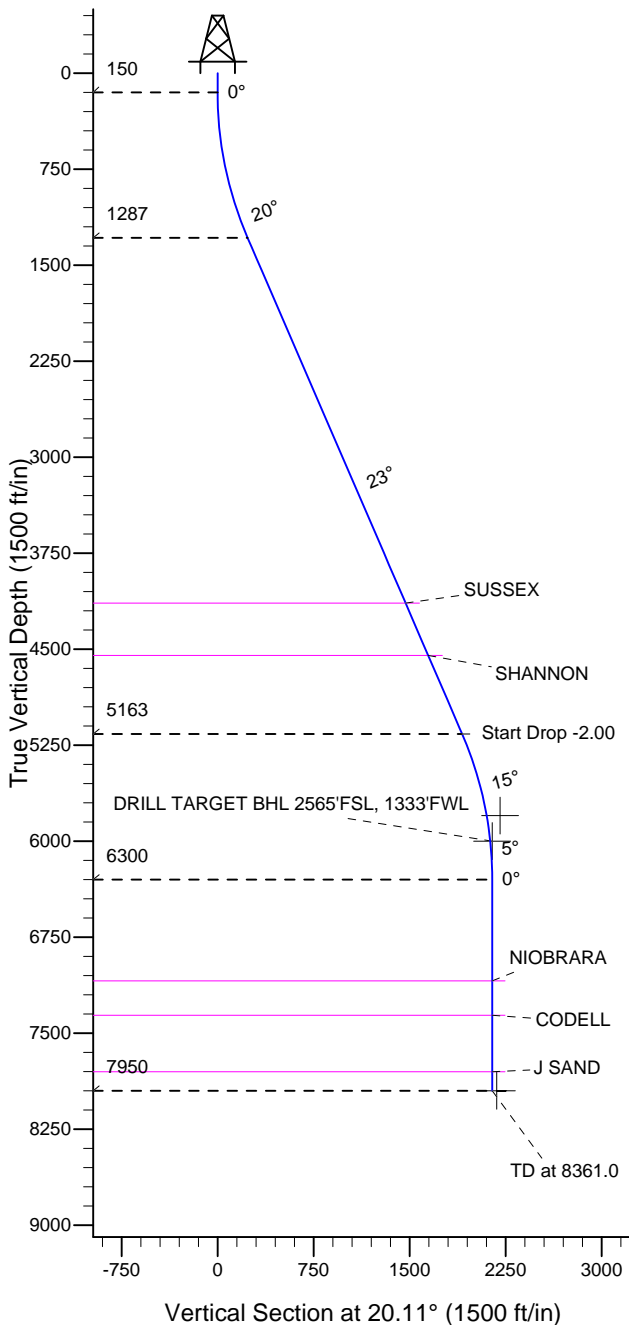
Well Name: **May Jon 5N #6**

Surface Location: May Jon 4 Pad Sec.5-T2N-R68W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4931.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1302248.75	3130134.40	40.162130	-105.034380	
Original Well Elev WELL @ 4944.0ft (Original Well Elev)						

Sundance Energy, Weld County, CO

SHL 535 FSL &
634' FWL



May Jon 5N #6
Plan #1 (6-28-11)
17:40, June 30 2011

Azimuths to True North
Magnetic North: 8.98°

Magnetic Field
Strength: 52972.1snT
Dip Angle: 66.81°
Date: 6/28/2011
Model: IGRF2010

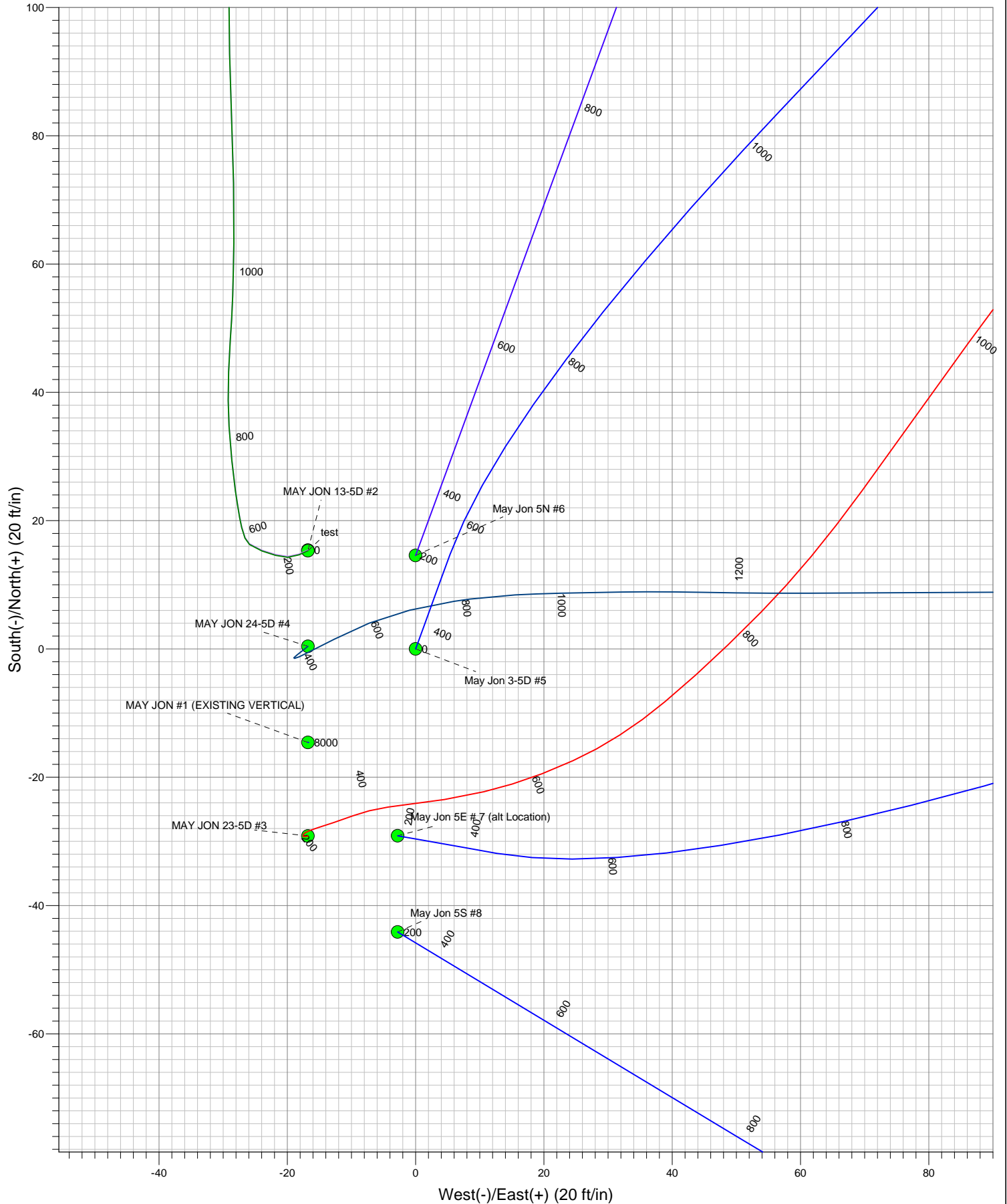
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PERMIT TARGET BHL 2630'FSL, 1333'FWL	5800.0	2080.2	737.8	40.167840	-105.031740	Point
DRILL TARGET BHL 2565'FSL, 1333'FWL	6000.0	2015.2	737.8	40.167662	-105.031740	Point
HARDLINE 75'N OF BHL	7950.0	2090.2	637.8	40.167868	-105.032098	Polygon

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	150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.0	
3	1318.8	23.38	20.11	1286.7	220.8	80.8	2.00	20.11	235.2	
4	5542.1	23.38	20.11	5163.3	1794.4	657.0	0.00	0.00	1910.9	
5	6711.0	0.00	0.00	6300.0	2015.2	737.8	2.00	180.00	2146.0	
6	8361.0	0.00	0.00	7950.0	2015.2	737.8	0.00	0.00	2146.0	

May Jon 3-5D #5
Surface Location: May Jon 4 Pad Sec.5-T2N-R68W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4931.0
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1302234.18 3130134.48 40.162090 -105.034380





Directional

Sundance Energy, Weld County, CO

SEC.5-T2N-R68W

May Jon 4 Pad Sec.5-T2N-R68W

May Jon 5N #6

Wellbore #1

Plan: Plan #1 (6-28-11)

Standard Planning Report

30 June, 2011

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	
150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,318.8	23.38	20.11	1,286.7	220.8	80.8	2.00	2.00	0.00	20.11	
5,542.1	23.38	20.11	5,163.3	1,794.4	657.0	0.00	0.00	0.00	0.00	
6,711.0	0.00	0.00	6,300.0	2,015.2	737.8	2.00	-2.00	0.00	180.00	
8,361.0	0.00	0.00	7,950.0	2,015.2	737.8	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well May Jon 5N #6
Company:	Sundance Energy, Weld County, CO	TVD Reference:	WELL @ 4944.0ft (Original Well Elev)
Project:	SEC.5-T2N-R68W	MD Reference:	WELL @ 4944.0ft (Original Well Elev)
Site:	May Jon 4 Pad Sec.5-T2N-R68W	North Reference:	True
Well:	May Jon 5N #6	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-28-11)		

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
50.0	0.00	0.00	50.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	1.00	20.11	200.0	0.4	0.2	0.4	2.00	2.00	0.00
250.0	2.00	20.11	250.0	1.6	0.6	1.7	2.00	2.00	0.00
300.0	3.00	20.11	299.9	3.7	1.3	3.9	2.00	2.00	0.00
350.0	4.00	20.11	349.8	6.6	2.4	7.0	2.00	2.00	0.00
400.0	5.00	20.11	399.7	10.2	3.7	10.9	2.00	2.00	0.00
450.0	6.00	20.11	449.5	14.7	5.4	15.7	2.00	2.00	0.00
500.0	7.00	20.11	499.1	20.1	7.3	21.4	2.00	2.00	0.00
550.0	8.00	20.11	548.7	26.2	9.6	27.9	2.00	2.00	0.00
600.0	9.00	20.11	598.2	33.1	12.1	35.3	2.00	2.00	0.00
650.0	10.00	20.11	647.5	40.9	15.0	43.5	2.00	2.00	0.00
700.0	11.00	20.11	696.6	49.4	18.1	52.6	2.00	2.00	0.00
750.0	12.00	20.11	745.6	58.8	21.5	62.6	2.00	2.00	0.00
774.9	12.50	20.11	770.0	63.8	23.3	67.9	2.00	2.00	0.00
8 5/8"									
800.0	13.00	20.11	794.4	68.9	25.2	73.4	2.00	2.00	0.00
850.0	14.00	20.11	843.1	79.9	29.3	85.1	2.00	2.00	0.00
900.0	15.00	20.11	891.5	91.7	33.6	97.6	2.00	2.00	0.00
950.0	16.00	20.11	939.6	104.2	38.2	111.0	2.00	2.00	0.00
1,000.0	17.00	20.11	987.6	117.5	43.0	125.2	2.00	2.00	0.00
1,050.0	18.00	20.11	1,035.3	131.7	48.2	140.2	2.00	2.00	0.00
1,100.0	19.00	20.11	1,082.7	146.6	53.7	156.1	2.00	2.00	0.00
1,150.0	20.00	20.11	1,129.8	162.2	59.4	172.8	2.00	2.00	0.00
1,200.0	21.00	20.11	1,176.6	178.7	65.4	190.3	2.00	2.00	0.00
1,250.0	22.00	20.11	1,223.2	195.9	71.7	208.6	2.00	2.00	0.00
1,300.0	23.00	20.11	1,269.4	213.9	78.3	227.7	2.00	2.00	0.00
1,318.8	23.38	20.11	1,286.7	220.8	80.8	235.2	2.00	2.00	0.00
1,350.0	23.38	20.11	1,315.3	232.4	85.1	247.5	0.00	0.00	0.00
1,400.0	23.38	20.11	1,361.2	251.1	91.9	267.4	0.00	0.00	0.00
1,450.0	23.38	20.11	1,407.1	269.7	98.7	287.2	0.00	0.00	0.00
1,500.0	23.38	20.11	1,453.0	288.3	105.6	307.0	0.00	0.00	0.00
1,550.0	23.38	20.11	1,498.9	306.9	112.4	326.9	0.00	0.00	0.00
1,600.0	23.38	20.11	1,544.8	325.6	119.2	346.7	0.00	0.00	0.00
1,650.0	23.38	20.11	1,590.7	344.2	126.0	366.6	0.00	0.00	0.00
1,700.0	23.38	20.11	1,636.6	362.8	132.8	386.4	0.00	0.00	0.00
1,750.0	23.38	20.11	1,682.4	381.5	139.7	406.2	0.00	0.00	0.00
1,800.0	23.38	20.11	1,728.3	400.1	146.5	426.1	0.00	0.00	0.00
1,850.0	23.38	20.11	1,774.2	418.7	153.3	445.9	0.00	0.00	0.00
1,900.0	23.38	20.11	1,820.1	437.4	160.1	465.7	0.00	0.00	0.00
1,950.0	23.38	20.11	1,866.0	456.0	166.9	485.6	0.00	0.00	0.00
2,000.0	23.38	20.11	1,911.9	474.6	173.8	505.4	0.00	0.00	0.00
2,050.0	23.38	20.11	1,957.8	493.2	180.6	525.3	0.00	0.00	0.00
2,100.0	23.38	20.11	2,003.7	511.9	187.4	545.1	0.00	0.00	0.00
2,150.0	23.38	20.11	2,049.6	530.5	194.2	564.9	0.00	0.00	0.00
2,200.0	23.38	20.11	2,095.5	549.1	201.0	584.8	0.00	0.00	0.00
2,250.0	23.38	20.11	2,141.4	567.8	207.9	604.6	0.00	0.00	0.00
2,300.0	23.38	20.11	2,187.3	586.4	214.7	624.5	0.00	0.00	0.00
2,350.0	23.38	20.11	2,233.2	605.0	221.5	644.3	0.00	0.00	0.00
2,400.0	23.38	20.11	2,279.1	623.6	228.3	664.1	0.00	0.00	0.00
2,450.0	23.38	20.11	2,325.0	642.3	235.1	684.0	0.00	0.00	0.00
2,500.0	23.38	20.11	2,370.9	660.9	242.0	703.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well May Jon 5N #6
Company:	Sundance Energy, Weld County, CO	TVD Reference:	WELL @ 4944.0ft (Original Well Elev)
Project:	SEC.5-T2N-R68W	MD Reference:	WELL @ 4944.0ft (Original Well Elev)
Site:	May Jon 4 Pad Sec.5-T2N-R68W	North Reference:	True
Well:	May Jon 5N #6	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-28-11)		

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)
2,550.0	23.38	20.11	2,416.8	679.5	248.8	723.6	0.00	0.00	0.00
2,600.0	23.38	20.11	2,462.7	698.2	255.6	743.5	0.00	0.00	0.00
2,650.0	23.38	20.11	2,508.6	716.8	262.4	763.3	0.00	0.00	0.00
2,700.0	23.38	20.11	2,554.5	735.4	269.3	783.2	0.00	0.00	0.00
2,750.0	23.38	20.11	2,600.4	754.1	276.1	803.0	0.00	0.00	0.00
2,800.0	23.38	20.11	2,646.3	772.7	282.9	822.8	0.00	0.00	0.00
2,850.0	23.38	20.11	2,692.2	791.3	289.7	842.7	0.00	0.00	0.00
2,900.0	23.38	20.11	2,738.1	809.9	296.5	862.5	0.00	0.00	0.00
2,950.0	23.38	20.11	2,783.9	828.6	303.4	882.4	0.00	0.00	0.00
3,000.0	23.38	20.11	2,829.8	847.2	310.2	902.2	0.00	0.00	0.00
3,050.0	23.38	20.11	2,875.7	865.8	317.0	922.0	0.00	0.00	0.00
3,100.0	23.38	20.11	2,921.6	884.5	323.8	941.9	0.00	0.00	0.00
3,150.0	23.38	20.11	2,967.5	903.1	330.6	961.7	0.00	0.00	0.00
3,200.0	23.38	20.11	3,013.4	921.7	337.5	981.6	0.00	0.00	0.00
3,250.0	23.38	20.11	3,059.3	940.4	344.3	1,001.4	0.00	0.00	0.00
3,300.0	23.38	20.11	3,105.2	959.0	351.1	1,021.2	0.00	0.00	0.00
3,350.0	23.38	20.11	3,151.1	977.6	357.9	1,041.1	0.00	0.00	0.00
3,400.0	23.38	20.11	3,197.0	996.2	364.7	1,060.9	0.00	0.00	0.00
3,450.0	23.38	20.11	3,242.9	1,014.9	371.6	1,080.7	0.00	0.00	0.00
3,500.0	23.38	20.11	3,288.8	1,033.5	378.4	1,100.6	0.00	0.00	0.00
3,550.0	23.38	20.11	3,334.7	1,052.1	385.2	1,120.4	0.00	0.00	0.00
3,600.0	23.38	20.11	3,380.6	1,070.8	392.0	1,140.3	0.00	0.00	0.00
3,650.0	23.38	20.11	3,426.5	1,089.4	398.8	1,160.1	0.00	0.00	0.00
3,700.0	23.38	20.11	3,472.4	1,108.0	405.7	1,179.9	0.00	0.00	0.00
3,750.0	23.38	20.11	3,518.3	1,126.6	412.5	1,199.8	0.00	0.00	0.00
3,800.0	23.38	20.11	3,564.2	1,145.3	419.3	1,219.6	0.00	0.00	0.00
3,850.0	23.38	20.11	3,610.1	1,163.9	426.1	1,239.5	0.00	0.00	0.00
3,900.0	23.38	20.11	3,656.0	1,182.5	432.9	1,259.3	0.00	0.00	0.00
3,950.0	23.38	20.11	3,701.9	1,201.2	439.8	1,279.1	0.00	0.00	0.00
4,000.0	23.38	20.11	3,747.8	1,219.8	446.6	1,299.0	0.00	0.00	0.00
4,050.0	23.38	20.11	3,793.7	1,238.4	453.4	1,318.8	0.00	0.00	0.00
4,100.0	23.38	20.11	3,839.6	1,257.1	460.2	1,338.7	0.00	0.00	0.00
4,150.0	23.38	20.11	3,885.4	1,275.7	467.0	1,358.5	0.00	0.00	0.00
4,200.0	23.38	20.11	3,931.3	1,294.3	473.9	1,378.3	0.00	0.00	0.00
4,250.0	23.38	20.11	3,977.2	1,312.9	480.7	1,398.2	0.00	0.00	0.00
4,300.0	23.38	20.11	4,023.1	1,331.6	487.5	1,418.0	0.00	0.00	0.00
4,350.0	23.38	20.11	4,069.0	1,350.2	494.3	1,437.8	0.00	0.00	0.00
4,400.0	23.38	20.11	4,114.9	1,368.8	501.2	1,457.7	0.00	0.00	0.00
4,427.3	23.38	20.11	4,140.0	1,379.0	504.9	1,468.5	0.00	0.00	0.00
SUSSEX									
4,450.0	23.38	20.11	4,160.8	1,387.5	508.0	1,477.5	0.00	0.00	0.00
4,500.0	23.38	20.11	4,206.7	1,406.1	514.8	1,497.4	0.00	0.00	0.00
4,550.0	23.38	20.11	4,252.6	1,424.7	521.6	1,517.2	0.00	0.00	0.00
4,600.0	23.38	20.11	4,298.5	1,443.3	528.4	1,537.0	0.00	0.00	0.00
4,650.0	23.38	20.11	4,344.4	1,462.0	535.3	1,556.9	0.00	0.00	0.00
4,700.0	23.38	20.11	4,390.3	1,480.6	542.1	1,576.7	0.00	0.00	0.00
4,750.0	23.38	20.11	4,436.2	1,499.2	548.9	1,596.6	0.00	0.00	0.00
4,800.0	23.38	20.11	4,482.1	1,517.9	555.7	1,616.4	0.00	0.00	0.00
4,850.0	23.38	20.11	4,528.0	1,536.5	562.5	1,636.2	0.00	0.00	0.00
4,874.0	23.38	20.11	4,550.0	1,545.4	565.8	1,645.7	0.00	0.00	0.00
SHANNON									
4,900.0	23.38	20.11	4,573.9	1,555.1	569.4	1,656.1	0.00	0.00	0.00
4,950.0	23.38	20.11	4,619.8	1,573.8	576.2	1,675.9	0.00	0.00	0.00
5,000.0	23.38	20.11	4,665.7	1,592.4	583.0	1,695.7	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well May Jon 5N #6
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Project:	SEC.5-T2N-R68W	MD Reference:	WELL @ 4944.0ft (Original Well Elev)
Site:	May Jon 4 Pad Sec.5-T2N-R68W	North Reference:	True
Well:	May Jon 5N #6	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-28-11)		

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)
5,050.0	23.38	20.11	4,711.6	1,611.0	589.8	1,715.6	0.00	0.00	0.00
5,100.0	23.38	20.11	4,757.5	1,629.6	596.6	1,735.4	0.00	0.00	0.00
5,150.0	23.38	20.11	4,803.4	1,648.3	603.5	1,755.3	0.00	0.00	0.00
5,200.0	23.38	20.11	4,849.3	1,666.9	610.3	1,775.1	0.00	0.00	0.00
5,250.0	23.38	20.11	4,895.2	1,685.5	617.1	1,794.9	0.00	0.00	0.00
5,300.0	23.38	20.11	4,941.0	1,704.2	623.9	1,814.8	0.00	0.00	0.00
5,350.0	23.38	20.11	4,986.9	1,722.8	630.7	1,834.6	0.00	0.00	0.00
5,400.0	23.38	20.11	5,032.8	1,741.4	637.6	1,854.5	0.00	0.00	0.00
5,450.0	23.38	20.11	5,078.7	1,760.0	644.4	1,874.3	0.00	0.00	0.00
5,500.0	23.38	20.11	5,124.6	1,778.7	651.2	1,894.1	0.00	0.00	0.00
5,542.1	23.38	20.11	5,163.3	1,794.4	657.0	1,910.9	0.00	0.00	0.00
5,550.0	23.22	20.11	5,170.5	1,797.3	658.0	1,914.0	2.00	-2.00	0.00
5,600.0	22.22	20.11	5,216.7	1,815.4	664.7	1,933.3	2.00	-2.00	0.00
5,650.0	21.22	20.11	5,263.1	1,832.8	671.0	1,951.8	2.00	-2.00	0.00
5,700.0	20.22	20.11	5,309.9	1,849.4	677.1	1,969.5	2.00	-2.00	0.00
5,750.0	19.22	20.11	5,356.9	1,865.3	682.9	1,986.3	2.00	-2.00	0.00
5,800.0	18.22	20.11	5,404.3	1,880.3	688.4	2,002.4	2.00	-2.00	0.00
5,850.0	17.22	20.11	5,451.9	1,894.6	693.7	2,017.6	2.00	-2.00	0.00
5,900.0	16.22	20.11	5,499.8	1,908.1	698.6	2,032.0	2.00	-2.00	0.00
5,950.0	15.22	20.11	5,547.9	1,920.8	703.3	2,045.5	2.00	-2.00	0.00
6,000.0	14.22	20.11	5,596.3	1,932.8	707.6	2,058.2	2.00	-2.00	0.00
6,050.0	13.22	20.11	5,644.9	1,943.9	711.7	2,070.1	2.00	-2.00	0.00
6,100.0	12.22	20.11	5,693.6	1,954.2	715.5	2,081.1	2.00	-2.00	0.00
6,150.0	11.22	20.11	5,742.6	1,963.8	719.0	2,091.3	2.00	-2.00	0.00
6,200.0	10.22	20.11	5,791.7	1,972.5	722.2	2,100.6	2.00	-2.00	0.00
6,250.0	9.22	20.11	5,841.0	1,980.4	725.1	2,109.0	2.00	-2.00	0.00
6,300.0	8.22	20.11	5,890.4	1,987.6	727.7	2,116.6	2.00	-2.00	0.00
6,350.0	7.22	20.11	5,940.0	1,993.9	730.0	2,123.3	2.00	-2.00	0.00
6,400.0	6.22	20.11	5,989.6	1,999.4	732.0	2,129.2	2.00	-2.00	0.00
6,450.0	5.22	20.11	6,039.4	2,004.0	733.7	2,134.1	2.00	-2.00	0.00
6,500.0	4.22	20.11	6,089.2	2,007.9	735.1	2,138.2	2.00	-2.00	0.00
6,550.0	3.22	20.11	6,139.1	2,011.0	736.2	2,141.5	2.00	-2.00	0.00
6,600.0	2.22	20.11	6,189.0	2,013.2	737.1	2,143.9	2.00	-2.00	0.00
6,650.0	1.22	20.11	6,239.0	2,014.6	737.6	2,145.4	2.00	-2.00	0.00
6,700.0	0.22	20.11	6,289.0	2,015.2	737.8	2,146.0	2.00	-2.00	0.00
6,711.0	0.00	0.00	6,300.0	2,015.2	737.8	2,146.0	2.00	-2.00	0.00
6,750.0	0.00	0.00	6,339.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,389.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
6,850.0	0.00	0.00	6,439.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,489.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
6,950.0	0.00	0.00	6,539.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,589.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
7,050.0	0.00	0.00	6,639.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
7,100.0	0.00	0.00	6,689.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
7,150.0	0.00	0.00	6,739.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
7,200.0	0.00	0.00	6,789.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
7,250.0	0.00	0.00	6,839.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
7,300.0	0.00	0.00	6,889.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
7,350.0	0.00	0.00	6,939.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
7,400.0	0.00	0.00	6,989.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
7,450.0	0.00	0.00	7,039.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,089.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00
7,503.0	0.00	0.00	7,092.0	2,015.2	737.8	2,146.0	0.00	0.00	0.00

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")
774.9	770.0	8 5/8"		8-5/8	12-1/4

Database:	Landmark	Local Co-ordinate Reference:	Well May Jon 5N #6
Company:	Sundance Energy, Weld County, CO	TVD Reference:	WELL @ 4944.0ft (Original Well Elev)
Project:	SEC.5-T2N-R68W	MD Reference:	WELL @ 4944.0ft (Original Well Elev)
Site:	May Jon 4 Pad Sec.5-T2N-R68W	North Reference:	True
Well:	May Jon 5N #6	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-28-11)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,427.3	4,140.0	SUSSEX		0.00		
4,874.0	4,550.0	SHANNON		0.00		
7,503.0	7,092.0	NIOBRARA		0.00		
7,771.0	7,360.0	CODELL		0.00		
8,213.0	7,802.0	J SAND		0.00		



Directional

Sundance Energy, Weld County, CO

SEC.5-T2N-R68W

May Jon 4 Pad Sec.5-T2N-R68W

May Jon 5N #6

Wellbore #1

Plan #1 (6-28-11)

Anticollision Report

30 June, 2011

Offset Design													Offset Site Error:	
Survey Program: 0-MWD													Offset Well Error:	
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		
350.0	349.8	350.5	350.5	0.7	0.7	165.16	-12.9	0.6	19.6	18.2	1.37	14.313		
400.0	399.7	400.8	400.8	0.8	0.8	166.37	-10.8	1.4	21.2	19.6	1.59	13.338		
450.0	449.5	451.2	451.0	0.9	0.9	167.40	-7.9	2.4	22.9	21.1	1.82	12.561		
500.0	499.1	501.6	501.2	1.1	1.0	168.29	-4.2	3.8	24.6	22.6	2.05	11.990		
550.0	548.7	552.0	551.4	1.2	1.2	169.07	0.4	5.4	26.3	24.0	2.28	11.504		
600.0	598.2	602.2	601.4	1.4	1.3	169.17	5.5	7.6	28.1	25.6	2.52	11.178		
650.0	647.5	652.5	651.2	1.6	1.4	168.27	11.1	10.6	30.3	27.5	2.76	10.974		
700.0	696.6	702.8	701.0	1.7	1.6	166.59	17.2	14.4	32.8	29.8	3.00	10.909		
750.0	745.6	753.0	750.6	1.9	1.7	164.34	23.6	18.9	35.6	32.4	3.27	10.887 SF		
800.0	794.4	803.2	800.1	2.1	1.9	161.71	30.5	24.1	38.9	35.3	3.55	10.957		
850.0	843.1	853.4	849.4	2.4	2.1	158.86	37.8	30.1	42.6	38.8	3.87	11.028		
900.0	891.5	903.5	898.4	2.6	2.3	155.93	45.5	36.9	46.8	42.7	4.20	11.163		
950.0	939.6	953.5	947.2	2.9	2.5	153.05	53.5	44.4	51.6	47.0	4.57	11.287		
1,000.0	987.6	1,003.2	995.6	3.1	2.7	150.83	61.7	52.0	57.1	52.2	4.96	11.521		
1,050.0	1,035.3	1,052.7	1,043.9	3.4	2.9	149.40	69.8	59.7	63.5	58.1	5.36	11.837		
1,100.0	1,082.7	1,102.2	1,092.1	3.7	3.1	148.57	77.9	67.3	70.6	64.8	5.76	12.264		
1,150.0	1,129.8	1,151.6	1,140.2	4.0	3.4	148.22	86.0	74.9	78.5	72.3	6.16	12.733		
1,200.0	1,176.6	1,200.9	1,188.2	4.3	3.6	148.22	94.1	82.5	87.0	80.5	6.55	13.290		
1,250.0	1,223.2	1,250.0	1,236.0	4.7	3.8	148.47	102.2	90.1	96.4	89.4	6.95	13.867		
1,300.0	1,269.4	1,299.0	1,283.8	5.0	4.0	148.90	110.2	97.6	106.4	99.1	7.33	14.524		
1,350.0	1,315.3	1,347.8	1,331.3	5.4	4.3	149.48	118.2	105.1	117.1	109.4	7.71	15.179		
1,400.0	1,361.2	1,396.6	1,378.9	5.8	4.5	150.01	126.2	112.7	127.8	119.7	8.11	15.759		
1,450.0	1,407.1	1,445.4	1,426.5	6.1	4.7	150.46	134.2	120.2	138.5	130.0	8.51	16.286		
1,500.0	1,453.0	1,494.3	1,474.1	6.5	4.9	150.85	142.2	127.7	149.2	140.3	8.90	16.762		
1,550.0	1,498.9	1,543.1	1,521.6	6.9	5.2	151.18	150.2	135.2	160.0	150.7	9.30	17.194		
1,600.0	1,544.8	1,591.9	1,569.2	7.3	5.4	151.47	158.3	142.7	170.7	161.0	9.71	17.589		
1,650.0	1,590.7	1,640.7	1,616.8	7.7	5.6	151.73	166.3	150.3	181.5	171.4	10.11	17.949		
1,700.0	1,636.6	1,689.6	1,664.4	8.0	5.8	151.96	174.3	157.8	192.2	181.7	10.52	18.281		

Company:	Sundance Energy, Weld County, CO	Local Co-ordinate Reference:	Well May Jon 5N #6
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4944.0ft (Original Well Elev)
Reference Site:	May Jon 4 Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4944.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	May Jon 5N #6	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 (6-28-11)	Offset TVD Reference:	Offset Datum

Offset Design May Jon 4 Pad Sec.5-T2N-R68W - May Jon 5E # 7 (alt Location) - Wellbore #1 - Plan 2 (June 30, 2011)												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
0.0	0.0	0.0	0.0	0.0	0.0	-176.34	-43.7	-2.8	43.8				
50.0	50.0	50.0	50.0	0.1	0.1	-176.34	-43.7	-2.8	43.8	43.7	0.11	389.362	
100.0	100.0	100.0	100.0	0.1	0.1	-176.34	-43.7	-2.8	43.8	43.6	0.22	194.854	
150.0	150.0	150.0	150.0	0.2	0.2	-176.34	-43.7	-2.8	43.8	43.3	0.45	97.427 CC, ES	
200.0	200.0	199.9	199.9	0.3	0.3	163.15	-43.8	-2.4	44.3	43.6	0.67	66.036	
250.0	250.0	249.8	249.8	0.5	0.4	161.99	-44.0	-1.1	45.7	44.8	0.90	50.863	
300.0	299.9	299.6	299.5	0.6	0.5	160.22	-44.4	1.0	48.1	47.0	1.12	42.747	
350.0	349.8	349.3	349.1	0.7	0.7	158.01	-44.9	4.0	51.5	50.1	1.37	37.663	
400.0	399.7	398.8	398.5	0.8	0.8	155.57	-45.6	7.8	56.0	54.4	1.61	34.812	
450.0	449.5	448.2	447.6	0.9	0.9	153.08	-46.4	12.5	61.6	59.7	1.86	33.017	
500.0	499.1	498.1	497.3	1.1	1.1	150.63	-47.1	18.0	68.0	65.9	2.12	32.006	
550.0	548.7	548.0	546.8	1.2	1.2	148.32	-47.3	24.2	75.0	72.6	2.40	31.246	
600.0	598.2	597.8	596.1	1.4	1.4	146.14	-47.1	31.1	82.5	79.8	2.68	30.794	
650.0	647.5	647.5	645.2	1.6	1.5	144.10	-46.4	38.7	90.5	87.5	2.99	30.309	
700.0	696.6	697.1	694.1	1.7	1.7	142.19	-45.3	47.1	99.1	95.8	3.29	30.082	
750.0	745.6	746.6	742.7	1.9	1.9	140.42	-43.7	56.1	108.2	104.6	3.64	29.726	
800.0	794.4	796.0	791.1	2.1	2.1	138.76	-41.7	65.8	117.9	113.9	3.99	29.554	
850.0	843.1	845.3	839.2	2.4	2.3	137.22	-39.2	76.2	128.1	123.7	4.38	29.240	
900.0	891.5	894.4	887.0	2.6	2.5	135.77	-36.3	87.3	138.9	134.1	4.77	29.089	
950.0	939.6	943.4	934.4	2.9	2.8	134.43	-33.0	99.0	150.2	145.0	5.21	28.810	
1,000.0	987.6	992.2	981.5	3.1	3.0	133.16	-29.2	111.4	162.0	156.3	5.66	28.630	
1,050.0	1,035.3	1,040.9	1,028.3	3.4	3.3	131.98	-25.0	124.4	174.4	168.2	6.15	28.358	
1,100.0	1,082.7	1,089.5	1,074.6	3.7	3.6	130.86	-20.4	138.0	187.2	180.6	6.65	28.175 SF	

Company:	Sundance Energy, Weld County, CO	Local Co-ordinate Reference:	Well May Jon 5N #6
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4944.0ft (Original Well Elev)
Reference Site:	May Jon 4 Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4944.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	May Jon 5N #6	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 (6-28-11)	Offset TVD Reference:	Offset Datum

Offset Design May Jon 4 Pad Sec.5-T2N-R68W - May Jon 5S #8 - Wellbore #1 - Plan #1 (6-28-11)												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
0.0	0.0	0.0	0.0	0.0	0.0	-177.27	-58.7	-2.8	58.8				
50.0	50.0	50.0	50.0	0.1	0.1	-177.27	-58.7	-2.8	58.8	58.7	0.11	522.513	
100.0	100.0	100.0	100.0	0.1	0.1	-177.27	-58.7	-2.8	58.8	58.5	0.22	261.489	
150.0	150.0	150.0	150.0	0.2	0.2	-177.27	-58.7	-2.8	58.8	58.3	0.45	130.744 CC, ES	
200.0	200.0	200.0	200.0	0.3	0.3	162.74	-58.7	-2.8	59.2	58.5	0.68	87.415	
250.0	250.0	249.5	249.5	0.5	0.4	162.74	-58.9	-2.4	60.6	59.7	0.90	67.334	
300.0	299.9	298.9	298.9	0.6	0.5	162.28	-59.6	-1.3	63.3	62.2	1.12	56.324	
350.0	349.8	348.2	348.1	0.7	0.7	161.45	-60.7	0.5	67.3	65.9	1.36	49.615	
400.0	399.7	397.3	397.1	0.8	0.8	160.34	-62.2	3.0	72.5	70.9	1.59	45.680	
450.0	449.5	446.2	445.9	0.9	0.9	159.06	-64.2	6.3	79.0	77.2	1.83	43.095	
500.0	499.1	494.8	494.3	1.1	1.0	157.71	-66.5	10.2	86.8	84.7	2.08	41.761	
550.0	548.7	543.1	542.2	1.2	1.1	156.36	-69.3	14.8	95.8	93.5	2.34	40.979	
600.0	598.2	590.9	589.7	1.4	1.3	155.05	-72.5	20.0	106.2	103.6	2.60	40.866 SF	
650.0	647.5	638.4	636.7	1.6	1.4	153.81	-76.0	25.9	117.9	115.0	2.88	40.967	
700.0	696.6	685.4	683.1	1.7	1.6	152.65	-79.9	32.3	130.8	127.7	3.16	41.458	
750.0	745.6	731.9	728.9	1.9	1.8	151.58	-84.1	39.4	145.0	141.6	3.45	41.991	
800.0	794.4	779.4	775.5	2.1	1.9	150.67	-88.7	46.9	160.2	156.5	3.75	42.737	
850.0	843.1	826.8	822.1	2.4	2.1	150.03	-93.2	54.5	176.2	172.2	4.06	43.449	
900.0	891.5	873.9	868.4	2.6	2.3	149.59	-97.8	62.0	192.9	188.6	4.36	44.250	

Company:	Sundance Energy, Weld County, CO	Local Co-ordinate Reference:	Well May Jon 5N #6
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4944.0ft (Original Well Elev)
Reference Site:	May Jon 4 Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4944.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	May Jon 5N #6	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 (6-28-11)	Offset TVD Reference:	Offset Datum

Offset Design MAY JON PAD SEC.5-T2N-R68W - MAY JON #1 (EXISTING VERTICAL) - Wellbore #1 - Design #1													Offset Site Error: 0.0 ft
Survey Program: 0-Reference													Offset Well Error: 0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-150.08	-29.1	-16.8	33.6				
50.0	50.0	50.0	50.0	0.1	0.1	-150.08	-29.1	-16.8	33.6	33.5	0.11	298.928	
100.0	100.0	100.0	100.0	0.1	0.1	-150.08	-29.1	-16.8	33.6	33.4	0.22	149.597	
150.0	150.0	150.0	150.0	0.2	0.2	-150.08	-29.1	-16.8	33.6	33.2	0.45	74.798 CC, ES	
200.0	200.0	200.0	200.0	0.3	0.3	-170.32	-29.1	-16.8	34.1	33.4	0.68	50.281	
250.0	250.0	250.0	250.0	0.5	0.4	-170.67	-29.1	-16.8	35.3	34.4	0.91	38.878	
300.0	299.9	299.9	299.9	0.6	0.6	-171.20	-29.1	-16.8	37.5	36.4	1.14	32.917	
350.0	349.8	349.8	349.8	0.7	0.7	-171.85	-29.1	-16.8	40.5	39.1	1.37	29.530	
400.0	399.7	399.7	399.7	0.8	0.8	-172.56	-29.1	-16.8	44.4	42.8	1.60	27.709	
450.0	449.5	449.5	449.5	0.9	0.9	-173.27	-29.1	-16.8	49.2	47.3	1.84	26.755	
500.0	499.1	499.1	499.1	1.1	1.0	-173.95	-29.1	-16.8	54.8	52.7	2.07	26.514 SF	
550.0	548.7	548.7	548.7	1.2	1.1	-174.58	-29.1	-16.8	61.3	59.0	2.30	26.636	
600.0	598.2	598.2	598.2	1.4	1.2	-175.15	-29.1	-16.8	68.6	66.1	2.53	27.121	
650.0	647.5	647.5	647.5	1.6	1.3	-175.66	-29.1	-16.8	76.9	74.1	2.77	27.789	
700.0	696.6	696.6	696.6	1.7	1.5	-176.11	-29.1	-16.8	86.0	83.0	3.00	28.680	
750.0	745.6	745.6	745.6	1.9	1.6	-176.50	-29.1	-16.8	95.9	92.7	3.23	29.662	
800.0	794.4	794.4	794.4	2.1	1.7	-176.84	-29.1	-16.8	106.7	103.2	3.47	30.796	
850.0	843.1	843.1	843.1	2.4	1.8	-177.14	-29.1	-16.8	118.4	114.7	3.70	31.969	
900.0	891.5	891.5	891.5	2.6	1.9	-177.40	-29.1	-16.8	130.9	126.9	3.94	33.256	
950.0	939.6	939.6	939.6	2.9	2.0	-177.63	-29.1	-16.8	144.2	140.0	4.17	34.550	
1,000.0	987.6	987.6	987.6	3.1	2.1	-177.83	-29.1	-16.8	158.4	154.0	4.41	35.938	
1,050.0	1,035.3	1,035.3	1,035.3	3.4	2.2	-178.01	-29.1	-16.8	173.4	168.8	4.65	37.308	
1,100.0	1,082.7	1,082.7	1,082.7	3.7	2.3	-178.17	-29.1	-16.8	189.3	184.4	4.88	38.764	

Company:	Sundance Energy, Weld County, CO	Local Co-ordinate Reference:	Well May Jon 5N #6
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4944.0ft (Original Well Elev)
Reference Site:	May Jon 4 Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4944.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	May Jon 5N #6	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 (6-28-11)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-												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
0.0	0.0	-1.0	-1.0	0.0	0.0	-87.15	0.8	-16.8	16.8	16.8	0.00	N/A CC	
50.0	50.0	48.9	48.9	0.1	0.1	-87.41	0.8	-16.9	16.9	16.8	0.16	104.191 ES	
100.0	100.0	98.8	98.8	0.1	0.2	-88.20	0.5	-17.4	17.4	17.1	0.33	53.386	
150.0	150.0	148.7	148.7	0.2	0.3	-89.42	0.2	-18.2	18.2	17.7	0.55	33.361	
200.0	200.0	198.6	198.6	0.3	0.4	-111.63	-0.1	-19.2	19.3	18.6	0.77	25.189	
250.0	250.0	248.6	248.6	0.5	0.5	-115.02	-0.2	-20.1	20.8	19.8	0.99	20.995	
300.0	299.9	298.5	298.5	0.6	0.6	-119.41	0.0	-21.1	22.8	21.6	1.22	18.754	
350.0	349.8	348.4	348.3	0.7	0.8	-124.34	0.2	-22.2	25.4	24.0	1.45	17.564	
400.0	399.7	398.2	398.1	0.8	0.9	-129.47	0.6	-23.4	28.8	27.1	1.68	17.142 SF	
450.0	449.5	448.0	447.9	0.9	1.0	-134.44	1.0	-24.6	32.9	31.0	1.92	17.181	
500.0	499.1	497.9	497.8	1.1	1.1	-139.13	1.6	-25.6	37.7	35.6	2.15	17.583	
550.0	548.7	547.9	547.7	1.2	1.2	-143.33	2.4	-26.4	43.1	40.7	2.38	18.087	
600.0	598.2	598.0	597.9	1.4	1.3	-146.58	3.9	-27.0	48.8	46.2	2.61	18.677	
650.0	647.5	648.2	648.0	1.6	1.4	-149.01	6.3	-27.5	54.8	51.9	2.86	19.163	
700.0	696.6	698.5	698.2	1.7	1.5	-150.63	9.7	-28.0	60.9	57.8	3.10	19.671	
750.0	745.6	748.6	748.1	1.9	1.7	-151.79	13.8	-28.5	67.4	64.0	3.35	20.089	
800.0	794.4	798.7	798.0	2.1	1.8	-152.82	18.5	-29.0	74.2	70.6	3.61	20.577	
850.0	843.1	849.1	848.2	2.4	1.9	-153.77	23.7	-29.2	81.3	77.5	3.87	21.005	
900.0	891.5	899.8	898.5	2.6	2.0	-154.64	29.6	-29.1	88.6	84.4	4.13	21.427	
950.0	939.6	950.9	949.1	2.9	2.2	-155.42	36.3	-28.7	95.8	91.4	4.41	21.738	
1,000.0	987.6	1,002.5	1,000.0	3.1	2.3	-155.65	44.7	-28.4	102.9	98.2	4.69	21.932	
1,050.0	1,035.3	1,053.3	1,049.9	3.4	2.5	-155.39	54.4	-28.3	109.9	104.9	5.01	21.947	
1,100.0	1,082.7	1,103.2	1,098.8	3.7	2.7	-154.99	64.6	-28.5	117.3	112.0	5.33	22.025	
1,150.0	1,129.8	1,154.0	1,148.3	4.0	2.9	-154.52	75.7	-28.9	125.2	119.5	5.68	22.047	
1,200.0	1,176.6	1,205.3	1,198.2	4.3	3.1	-154.08	87.7	-29.1	133.1	127.1	6.03	22.068	
1,250.0	1,223.2	1,256.1	1,247.4	4.7	3.3	-153.56	100.4	-29.3	141.2	134.8	6.43	21.963	
1,300.0	1,269.4	1,306.7	1,296.1	5.0	3.5	-152.82	114.3	-29.9	149.6	142.8	6.83	21.906	
1,350.0	1,315.3	1,355.8	1,343.1	5.4	3.7	-152.13	128.2	-30.7	158.4	151.1	7.27	21.796	
1,400.0	1,361.2	1,404.8	1,390.1	5.8	4.0	-151.51	142.2	-31.6	167.3	159.6	7.72	21.675	
1,450.0	1,407.1	1,454.3	1,437.5	6.1	4.2	-150.98	156.2	-32.4	176.3	168.1	8.17	21.571	
1,500.0	1,453.0	1,504.0	1,485.2	6.5	4.4	-150.55	170.3	-33.1	185.1	176.5	8.62	21.469	
1,550.0	1,498.9	1,554.4	1,533.5	6.9	4.7	-150.11	184.8	-33.7	193.7	184.6	9.09	21.314	

Offset Design		MAY JON PAD SEC.5-T2N-R68W - MAY JON 23-5D #3 - Wellbore #1 - Wellbore #1											Offset Site Error: 0.0 ft	
Survey Program: 93-Reference													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	-159.01	-43.7	-16.8	46.8					
50.0	50.0	49.9	49.9	0.1	0.1	-158.87	-43.7	-16.9	46.9	46.8	0.11	416.678		
100.0	100.0	99.8	99.8	0.1	0.1	-158.46	-43.8	-17.3	47.1	46.9	0.23	203.769		
150.0	150.0	150.2	150.2	0.2	0.2	-158.13	-43.7	-17.6	47.1	46.7	0.45	105.346		
177.1	177.1	177.6	177.6	0.3	0.3	-178.19	-43.6	-17.5	47.1	46.5	0.57	83.187		
200.0	200.0	200.7	200.7	0.3	0.3	-178.29	-43.3	-17.4	47.1	46.5	0.67	70.696 ES		
250.0	250.0	251.2	251.2	0.5	0.4	-179.46	-42.7	-16.1	47.4	46.5	0.89	53.323		
300.0	299.9	301.7	301.6	0.6	0.6	178.18	-42.0	-13.7	48.1	47.0	1.11	43.176		
350.0	349.8	352.2	352.0	0.7	0.7	175.06	-40.8	-10.4	49.1	47.8	1.35	36.496		
400.0	399.7	402.0	401.6	0.8	0.8	171.27	-39.6	-6.3	50.9	49.3	1.59	32.053		
450.0	449.5	451.5	450.8	0.9	0.9	166.82	-38.8	-1.1	54.0	52.1	1.84	29.370		
500.0	499.1	501.8	500.7	1.1	1.1	162.17	-38.0	5.0	58.1	56.0	2.11	27.562		
550.0	548.7	552.2	550.6	1.2	1.2	157.75	-36.5	11.8	62.8	60.4	2.39	26.277		
600.0	598.2	603.2	601.0	1.4	1.4	153.62	-34.1	19.4	67.7	65.0	2.69	25.202		
650.0	647.5	654.5	651.5	1.6	1.6	149.83	-30.5	27.5	72.6	69.6	3.00	24.200		
700.0	696.6	706.4	702.6	1.7	1.8	146.70	-25.4	35.6	77.1	73.7	3.32	23.178		
750.0	745.6	758.1	753.3	1.9	1.9	144.15	-18.8	43.5	81.0	77.3	3.68	22.027		
800.0	794.4	809.7	803.5	2.1	2.2	141.66	-10.9	51.8	84.6	80.6	4.05	20.921		
850.0	843.1	862.1	854.3	2.4	2.4	139.14	-1.4	60.6	87.9	83.4	4.46	19.682		
900.0	891.5	914.9	905.1	2.6	2.6	136.70	10.0	69.5	90.3	85.4	4.91	18.396		
950.0	939.6	965.4	953.3	2.9	2.9	134.43	22.1	78.3	92.4	87.0	5.39	17.136		
1,000.0	987.6	1,015.8	1,001.2	3.1	3.2	132.30	34.8	87.4	94.9	89.0	5.89	16.111		
1,050.0	1,035.3	1,064.8	1,047.7	3.4	3.5	130.49	47.1	96.5	98.2	91.8	6.41	15.317		
1,100.0	1,082.7	1,114.4	1,094.9	3.7	3.7	129.23	59.3	105.8	102.4	95.5	6.91	14.812		
1,150.0	1,129.8	1,163.9	1,142.2	4.0	4.0	128.70	71.2	114.7	107.2	99.8	7.43	14.443		
1,200.0	1,176.6	1,213.0	1,189.0	4.3	4.2	128.64	82.7	123.5	112.8	104.9	7.92	14.242		
1,250.0	1,223.2	1,261.8	1,235.7	4.7	4.5	128.88	93.9	132.3	119.3	110.8	8.44	14.139		
1,300.0	1,269.4	1,310.0	1,281.7	5.0	4.7	129.13	104.9	141.7	126.7	117.7	8.96	14.137 SF		
1,350.0	1,315.3	1,358.6	1,328.0	5.4	5.0	129.35	115.9	152.0	135.0	125.5	9.51	14.188		
1,400.0	1,361.2	1,408.8	1,375.7	5.8	5.3	129.60	127.3	162.6	143.2	133.1	10.08	14.205		
1,450.0	1,407.1	1,458.3	1,422.7	6.1	5.6	129.89	138.8	172.8	151.2	140.6	10.64	14.210		
1,500.0	1,453.0	1,506.6	1,468.7	6.5	5.8	130.17	149.7	182.7	159.4	148.2	11.19	14.252		
1,550.0	1,498.9	1,555.2	1,515.1	6.9	6.1	130.46	160.4	192.8	167.9	156.2	11.73	14.313		
1,600.0	1,544.8	1,604.4	1,561.9	7.3	6.4	130.75	171.2	202.9	176.5	164.2	12.28	14.376		
1,650.0	1,590.7	1,653.5	1,608.8	7.7	6.7	130.99	181.9	213.2	185.1	172.3	12.84	14.421		
1,700.0	1,636.6	1,702.7	1,655.5	8.0	7.0	130.98	193.0	224.1	193.7	180.3	13.42	14.436		

Company:	Sundance Energy, Weld County, CO	Local Co-ordinate Reference:	Well May Jon 5N #6
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4944.0ft (Original Well Elev)
Reference Site:	May Jon 4 Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4944.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	May Jon 5N #6	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 (6-28-11)	Offset TVD Reference:	Offset Datum

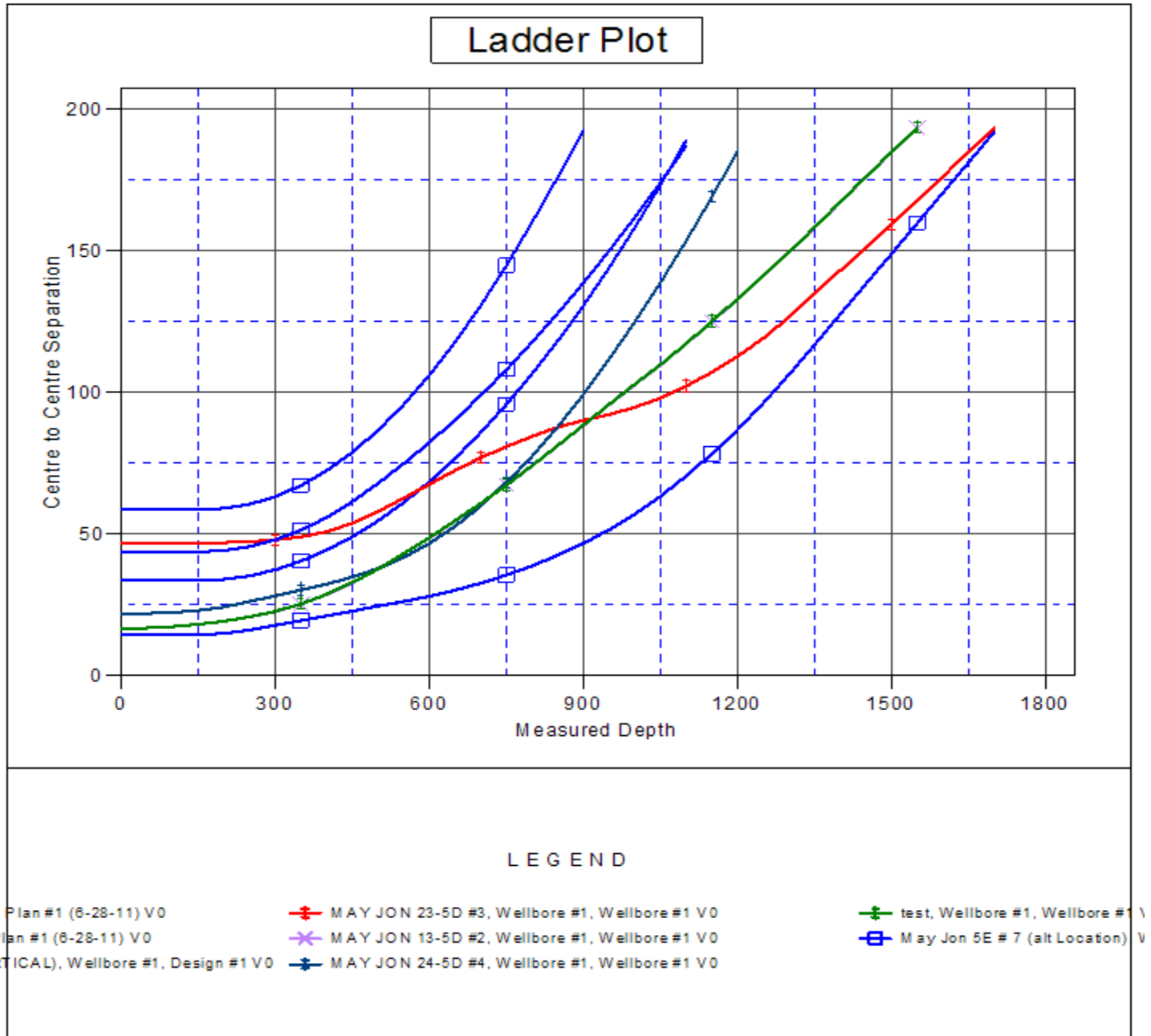
Offset Design MAY JON PAD SEC.5-T2N-R68W - MAY JON 24-5D #4 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 210-Reference													Offset Well Error:	0.0 ft
Offset		Offset		Semi Major Axis				Distance				Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (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	-130.19	-14.2	-16.8	22.0					
50.0	50.0	49.9	49.9	0.1	0.1	-130.17	-14.2	-16.9	22.1	22.0	0.11	195.648		
100.0	100.0	99.8	99.8	0.1	0.1	-130.13	-14.5	-17.2	22.4	22.2	0.23	99.566		
150.0	150.0	149.7	149.7	0.2	0.2	-130.07	-14.9	-17.7	23.1	22.7	0.39	58.512		
200.0	200.0	199.5	199.5	0.3	0.2	-150.60	-15.4	-18.3	24.3	23.8	0.57	42.740		
250.0	250.0	249.8	249.8	0.5	0.3	-152.00	-15.9	-18.9	26.3	25.5	0.78	33.614		
300.0	299.9	300.1	300.1	0.6	0.4	-154.37	-16.0	-18.9	28.3	27.3	1.00	28.252		
350.0	349.8	350.6	350.5	0.7	0.5	-157.53	-15.8	-18.1	30.3	29.1	1.22	24.818		
400.0	399.7	401.0	400.9	0.8	0.6	-161.28	-15.0	-16.6	32.4	31.0	1.43	22.653		
450.0	449.5	451.2	451.1	0.9	0.7	-165.42	-13.9	-14.5	34.9	33.3	1.66	21.037		
500.0	499.1	501.3	501.1	1.1	0.8	-169.68	-12.6	-11.8	37.9	36.1	1.88	20.170		
550.0	548.7	551.1	550.8	1.2	1.0	-173.76	-11.3	-9.0	41.9	39.7	2.11	19.789 SF		
600.0	598.2	600.8	600.4	1.4	1.1	-177.48	-10.0	-5.8	46.8	44.4	2.35	19.914		
650.0	647.5	650.2	649.7	1.6	1.2	179.20	-8.9	-2.5	52.8	50.2	2.59	20.372		
700.0	696.6	699.5	698.8	1.7	1.3	176.34	-8.0	1.1	60.0	57.1	2.83	21.159		
750.0	745.6	748.6	747.7	1.9	1.4	174.04	-7.3	4.7	68.3	65.2	3.09	22.118		
800.0	794.4	797.5	796.5	2.1	1.6	172.22	-6.8	8.5	77.6	74.3	3.34	23.248		
850.0	843.1	846.0	844.9	2.4	1.7	170.91	-6.4	12.1	88.0	84.4	3.59	24.509		
900.0	891.5	894.2	893.0	2.6	1.8	170.09	-6.1	15.4	99.5	95.7	3.84	25.922		
950.0	939.6	942.8	941.4	2.9	1.9	169.44	-6.0	18.9	111.9	107.8	4.10	27.323		
1,000.0	987.6	991.2	989.6	3.1	2.0	168.73	-5.9	22.9	125.1	120.7	4.35	28.736		
1,050.0	1,035.3	1,039.4	1,037.7	3.4	2.1	167.94	-5.8	27.5	139.0	134.4	4.63	30.016		
1,100.0	1,082.7	1,087.4	1,085.4	3.7	2.3	167.07	-5.7	32.8	153.7	148.8	4.91	31.304		
1,150.0	1,129.8	1,134.9	1,132.5	4.0	2.4	166.10	-5.7	39.0	169.2	164.0	5.21	32.441		
1,200.0	1,176.6	1,182.2	1,179.2	4.3	2.6	165.05	-5.8	45.9	185.5	180.0	5.52	33.602		

Company:	Sundance Energy, Weld County, CO	Local Co-ordinate Reference:	Well May Jon 5N #6
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4944.0ft (Original Well Elev)
Reference Site:	May Jon 4 Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4944.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	May Jon 5N #6	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 (6-28-11)	Offset TVD Reference:	Offset Datum

Offset Design MAY JON PAD SEC.5-T2N-R68W - test - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 0-												Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	-1.0	-1.0	0.0	0.0	-87.51	0.7	-16.8	16.8	16.8	0.00	N/A CC	
50.0	50.0	48.9	48.9	0.1	0.1	-87.77	0.7	-16.9	16.9	16.8	0.16	104.163 ES	
100.0	100.0	98.8	98.8	0.1	0.2	-88.55	0.4	-17.4	17.4	17.1	0.33	53.377	
150.0	150.0	148.7	148.7	0.2	0.3	-89.76	0.1	-18.2	18.2	17.7	0.55	33.360	
200.0	200.0	198.6	198.6	0.3	0.4	-111.95	-0.2	-19.2	19.3	18.6	0.77	25.192	
250.0	250.0	248.6	248.6	0.5	0.5	-115.32	-0.3	-20.1	20.8	19.8	0.99	21.003	
300.0	299.9	298.5	298.5	0.6	0.6	-119.67	-0.1	-21.1	22.8	21.6	1.22	18.767	
350.0	349.8	348.4	348.3	0.7	0.8	-124.58	0.1	-22.2	25.4	24.0	1.45	17.581	
400.0	399.7	398.2	398.1	0.8	0.9	-129.67	0.5	-23.4	28.8	27.1	1.68	17.162 SF	
450.0	449.5	448.0	447.9	0.9	1.0	-134.61	0.9	-24.6	33.0	31.1	1.92	17.204	
500.0	499.1	497.9	497.8	1.1	1.1	-139.28	1.5	-25.6	37.8	35.6	2.15	17.608	
550.0	548.7	547.9	547.7	1.2	1.2	-143.45	2.3	-26.4	43.2	40.8	2.38	18.112	
600.0	598.2	598.0	597.9	1.4	1.3	-146.68	3.8	-27.0	48.9	46.3	2.61	18.702	
650.0	647.5	648.2	648.0	1.6	1.4	-149.09	6.2	-27.5	54.8	52.0	2.86	19.188	
700.0	696.6	698.5	698.2	1.7	1.5	-150.70	9.6	-28.0	61.0	57.9	3.10	19.695	
750.0	745.6	748.6	748.1	1.9	1.7	-151.85	13.7	-28.5	67.4	64.1	3.35	20.112	
800.0	794.4	798.7	798.0	2.1	1.8	-152.88	18.4	-29.0	74.3	70.7	3.61	20.599	
850.0	843.1	849.2	848.2	2.4	1.9	-153.82	23.6	-29.2	81.4	77.5	3.87	21.026	
900.0	891.5	899.9	898.5	2.6	2.0	-154.69	29.5	-29.1	88.6	84.5	4.13	21.447	
950.0	939.6	950.9	949.1	2.9	2.2	-155.46	36.2	-28.7	95.9	91.5	4.41	21.757	
1,000.0	987.6	1,002.5	1,000.1	3.1	2.3	-155.69	44.6	-28.4	103.0	98.3	4.69	21.951	
1,050.0	1,035.3	1,053.3	1,049.9	3.4	2.5	-155.43	54.3	-28.3	110.0	104.9	5.01	21.965	
1,100.0	1,082.7	1,103.2	1,098.8	3.7	2.7	-155.02	64.5	-28.5	117.4	112.1	5.33	22.042	
1,150.0	1,129.8	1,154.0	1,148.4	4.0	2.9	-154.55	75.6	-28.9	125.3	119.6	5.68	22.063	
1,200.0	1,176.6	1,205.3	1,198.2	4.3	3.1	-154.11	87.6	-29.1	133.2	127.2	6.03	22.083	
1,250.0	1,223.2	1,256.1	1,247.4	4.7	3.3	-153.59	100.3	-29.3	141.3	134.9	6.43	21.978	
1,300.0	1,269.4	1,306.8	1,296.1	5.0	3.5	-152.85	114.2	-29.9	149.7	142.8	6.83	21.920	
1,350.0	1,315.3	1,355.8	1,343.1	5.4	3.7	-152.16	128.1	-30.7	158.5	151.2	7.27	21.810	
1,400.0	1,361.2	1,404.9	1,390.1	5.8	4.0	-151.54	142.1	-31.6	167.4	159.7	7.72	21.688	
1,450.0	1,407.1	1,454.3	1,437.5	6.1	4.2	-151.00	156.1	-32.4	176.3	168.2	8.17	21.584	
1,500.0	1,453.0	1,504.0	1,485.2	6.5	4.4	-150.57	170.2	-33.1	185.2	176.5	8.62	21.480	
1,550.0	1,498.9	1,554.5	1,533.5	6.9	4.7	-150.13	184.7	-33.7	193.8	184.7	9.09	21.325	

Company:	Sundance Energy, Weld County, CO	Local Co-ordinate Reference:	Well May Jon 5N #6
Project:	SEC.5-T2N-R68W	TVD Reference:	WELL @ 4944.0ft (Original Well Elev)
Reference Site:	May Jon 4 Pad Sec.5-T2N-R68W	MD Reference:	WELL @ 4944.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	May Jon 5N #6	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 (6-28-11)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4944.0ft (Original Well Elev) Coordinates are relative to: May Jon 5N #6
 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: 0.30°



Company:	Sundance Energy, Weld County, CO	Local Co-ordinate Reference:	Well May Jon 5N #6
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