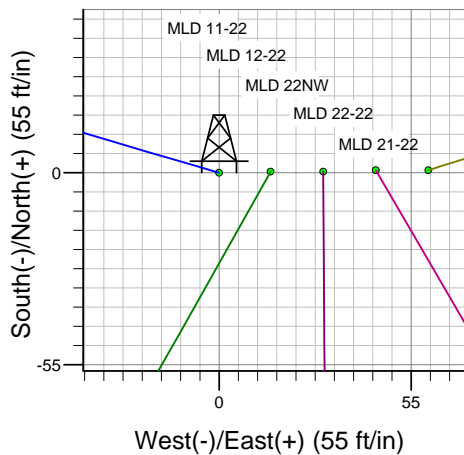
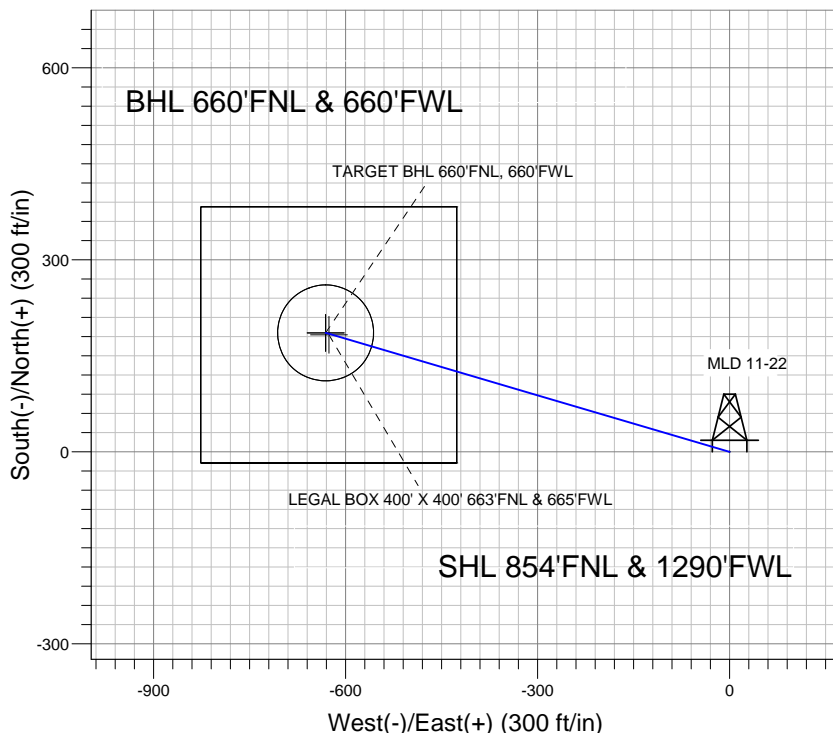
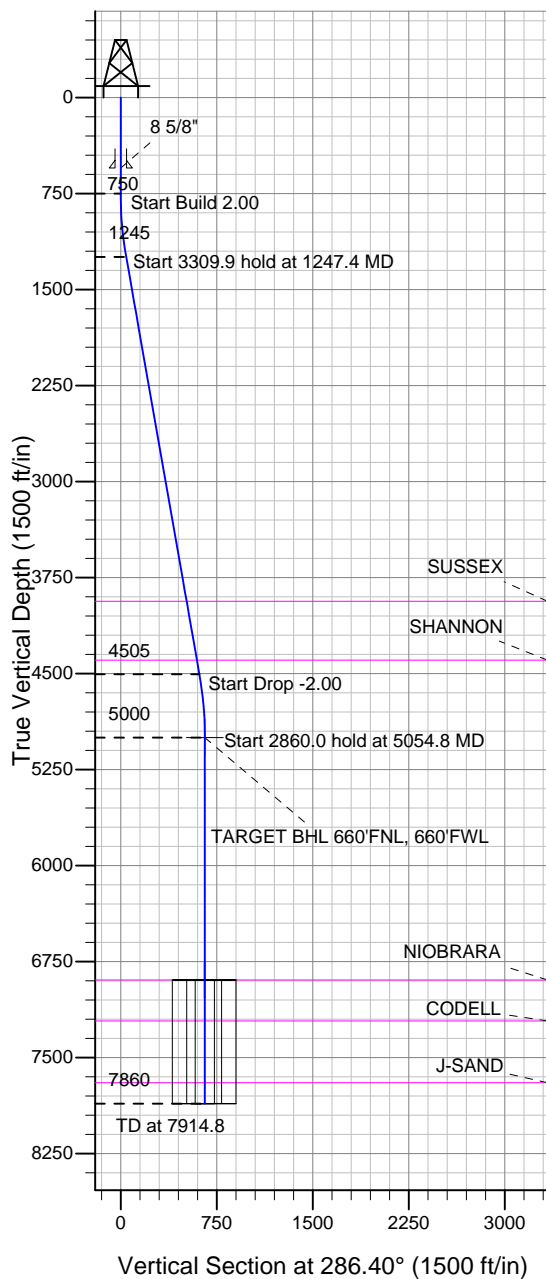


### Well Name: MLD 11-22

Surface Location: MLD 5 Pad Sec.22-T4N-R68W  
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
 Ground Elevation: 4877.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1353937.37	3141067.88	40.303854	-104.994206	
Original Well Elev WELL @ 4890.0ft (Original Well Elev)						

## Sundance Energy, Weld County, CO



MLD 5 Pad Sec.22-T4N-R68W  
 MLD 11-22  
 Plan #2 (8-02-12)  
 12:42, August 02 2012



Azimuths to True North  
 Magnetic North: 8.83°  
 Magnetic Field  
 Strength: 52938.4snT  
 Dip Angle: 66.90°  
 Date: 7/26/2012  
 Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 660'FNL, 660'FWL	5000.0	185.8	-631.2	40.304364	-104.996469	Point
LEGAL BOX 400' X 400' 663'FNL & 665'FWL	6894.0	182.8	-626.2	40.304356	-104.996451	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 660'FNL & 660'FWL	6894.0	185.8	-631.2	40.304364	-104.996469	Circle (Radius: 75.0)

### 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	750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.0	
3	1247.4	9.95	286.40	1244.9	12.2	-41.3	2.00	286.40	43.1	
4	4557.3	9.95	286.40	4505.1	173.6	-589.9	0.00	0.00	614.9	
5	5054.8	0.00	0.00	5000.0	185.8	-631.2	2.00	180.00	658.0	TARGET BHL 660'FNL, 660'FWL
6	7914.8	0.00	0.00	7860.0	185.8	-631.2	0.00	0.00	658.0	



# **Sundance Energy, Weld County, CO**

**SEC.22-T4N-R68W**

**MLD 5 Pad Sec.22-T4N-R68W**

**MLD 11-22**

**Wellbore #1**

**Plan: Plan #2 (8-02-12)**

## **Standard Planning Report**

**02 August, 2012**

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	
750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,247.4	9.95	286.40	1,244.9	12.2	-41.3	2.00	2.00	0.00	286.40	
4,557.3	9.95	286.40	4,505.1	173.6	-589.9	0.00	0.00	0.00	0.00	
5,054.8	0.00	0.00	5,000.0	185.8	-631.2	2.00	-2.00	0.00	180.00	TARGET BHL 660°
7,914.8	0.00	0.00	7,860.0	185.8	-631.2	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well MLD 11-22
<b>Company:</b>	Sundance Energy, Weld County, CO	<b>TVD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Project:</b>	SEC.22-T4N-R68W	<b>MD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Site:</b>	MLD 5 Pad Sec.22-T4N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	MLD 11-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (8-02-12)		

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
550.0	0.00	0.00	550.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
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
750.0	0.00	0.00	750.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.20	286.40	760.0	0.0	0.0	0.0	2.00	2.00	0.00
800.0	1.00	286.40	800.0	0.1	-0.4	0.4	2.00	2.00	0.00
840.0	1.80	286.40	840.0	0.4	-1.4	1.4	2.00	2.00	0.00
880.0	2.60	286.40	880.0	0.8	-2.8	2.9	2.00	2.00	0.00
920.0	3.40	286.40	919.9	1.4	-4.8	5.0	2.00	2.00	0.00
960.0	4.20	286.40	959.8	2.2	-7.4	7.7	2.00	2.00	0.00
1,000.0	5.00	286.40	999.7	3.1	-10.5	10.9	2.00	2.00	0.00
1,040.0	5.80	286.40	1,039.5	4.1	-14.1	14.7	2.00	2.00	0.00
1,080.0	6.60	286.40	1,079.3	5.4	-18.2	19.0	2.00	2.00	0.00
1,120.0	7.40	286.40	1,119.0	6.7	-22.9	23.9	2.00	2.00	0.00
1,160.0	8.20	286.40	1,158.6	8.3	-28.1	29.3	2.00	2.00	0.00
1,200.0	9.00	286.40	1,198.2	10.0	-33.8	35.3	2.00	2.00	0.00
1,240.0	9.80	286.40	1,237.6	11.8	-40.1	41.8	2.00	2.00	0.00
1,247.4	9.95	286.40	1,244.9	12.2	-41.3	43.1	2.00	2.00	0.00
1,280.0	9.95	286.40	1,277.0	13.8	-46.7	48.7	0.00	0.00	0.00
1,320.0	9.95	286.40	1,316.4	15.7	-53.4	55.6	0.00	0.00	0.00
1,360.0	9.95	286.40	1,355.8	17.7	-60.0	62.5	0.00	0.00	0.00
1,400.0	9.95	286.40	1,395.2	19.6	-66.6	69.4	0.00	0.00	0.00
1,440.0	9.95	286.40	1,434.6	21.6	-73.2	76.3	0.00	0.00	0.00
1,480.0	9.95	286.40	1,474.0	23.5	-79.9	83.3	0.00	0.00	0.00
1,520.0	9.95	286.40	1,513.4	25.5	-86.5	90.2	0.00	0.00	0.00
1,560.0	9.95	286.40	1,552.8	27.4	-93.1	97.1	0.00	0.00	0.00
1,600.0	9.95	286.40	1,592.2	29.4	-99.8	104.0	0.00	0.00	0.00
1,640.0	9.95	286.40	1,631.6	31.3	-106.4	110.9	0.00	0.00	0.00
1,680.0	9.95	286.40	1,671.0	33.3	-113.0	117.8	0.00	0.00	0.00
1,720.0	9.95	286.40	1,710.4	35.2	-119.6	124.7	0.00	0.00	0.00
1,760.0	9.95	286.40	1,749.8	37.2	-126.3	131.6	0.00	0.00	0.00
1,800.0	9.95	286.40	1,789.2	39.1	-132.9	138.5	0.00	0.00	0.00
1,840.0	9.95	286.40	1,828.6	41.1	-139.5	145.4	0.00	0.00	0.00
1,880.0	9.95	286.40	1,868.0	43.0	-146.2	152.4	0.00	0.00	0.00
1,920.0	9.95	286.40	1,907.4	45.0	-152.8	159.3	0.00	0.00	0.00
1,960.0	9.95	286.40	1,946.8	46.9	-159.4	166.2	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well MLD 11-22
<b>Company:</b>	Sundance Energy, Weld County, CO	<b>TVD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Project:</b>	SEC.22-T4N-R68W	<b>MD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Site:</b>	MLD 5 Pad Sec.22-T4N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	MLD 11-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (8-02-12)		

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	9.95	286.40	1,986.2	48.9	-166.0	173.1	0.00	0.00	0.00
2,040.0	9.95	286.40	2,025.6	50.8	-172.7	180.0	0.00	0.00	0.00
2,080.0	9.95	286.40	2,065.0	52.8	-179.3	186.9	0.00	0.00	0.00
2,120.0	9.95	286.40	2,104.4	54.7	-185.9	193.8	0.00	0.00	0.00
2,160.0	9.95	286.40	2,143.8	56.7	-192.6	200.7	0.00	0.00	0.00
2,200.0	9.95	286.40	2,183.2	58.6	-199.2	207.6	0.00	0.00	0.00
2,240.0	9.95	286.40	2,222.6	60.6	-205.8	214.6	0.00	0.00	0.00
2,280.0	9.95	286.40	2,262.0	62.5	-212.4	221.5	0.00	0.00	0.00
2,320.0	9.95	286.40	2,301.4	64.5	-219.1	228.4	0.00	0.00	0.00
2,360.0	9.95	286.40	2,340.8	66.4	-225.7	235.3	0.00	0.00	0.00
2,400.0	9.95	286.40	2,380.2	68.4	-232.3	242.2	0.00	0.00	0.00
2,440.0	9.95	286.40	2,419.6	70.3	-239.0	249.1	0.00	0.00	0.00
2,480.0	9.95	286.40	2,459.0	72.3	-245.6	256.0	0.00	0.00	0.00
2,520.0	9.95	286.40	2,498.4	74.2	-252.2	262.9	0.00	0.00	0.00
2,560.0	9.95	286.40	2,537.8	76.2	-258.9	269.8	0.00	0.00	0.00
2,600.0	9.95	286.40	2,577.2	78.2	-265.5	276.7	0.00	0.00	0.00
2,640.0	9.95	286.40	2,616.6	80.1	-272.1	283.7	0.00	0.00	0.00
2,680.0	9.95	286.40	2,656.0	82.1	-278.7	290.6	0.00	0.00	0.00
2,720.0	9.95	286.40	2,695.4	84.0	-285.4	297.5	0.00	0.00	0.00
2,760.0	9.95	286.40	2,734.8	86.0	-292.0	304.4	0.00	0.00	0.00
2,800.0	9.95	286.40	2,774.2	87.9	-298.6	311.3	0.00	0.00	0.00
2,840.0	9.95	286.40	2,813.6	89.9	-305.3	318.2	0.00	0.00	0.00
2,880.0	9.95	286.40	2,853.0	91.8	-311.9	325.1	0.00	0.00	0.00
2,920.0	9.95	286.40	2,892.4	93.8	-318.5	332.0	0.00	0.00	0.00
2,960.0	9.95	286.40	2,931.8	95.7	-325.1	338.9	0.00	0.00	0.00
3,000.0	9.95	286.40	2,971.2	97.7	-331.8	345.8	0.00	0.00	0.00
3,040.0	9.95	286.40	3,010.6	99.6	-338.4	352.8	0.00	0.00	0.00
3,080.0	9.95	286.40	3,050.0	101.6	-345.0	359.7	0.00	0.00	0.00
3,120.0	9.95	286.40	3,089.3	103.5	-351.7	366.6	0.00	0.00	0.00
3,160.0	9.95	286.40	3,128.7	105.5	-358.3	373.5	0.00	0.00	0.00
3,200.0	9.95	286.40	3,168.1	107.4	-364.9	380.4	0.00	0.00	0.00
3,240.0	9.95	286.40	3,207.5	109.4	-371.5	387.3	0.00	0.00	0.00
3,280.0	9.95	286.40	3,246.9	111.3	-378.2	394.2	0.00	0.00	0.00
3,320.0	9.95	286.40	3,286.3	113.3	-384.8	401.1	0.00	0.00	0.00
3,360.0	9.95	286.40	3,325.7	115.2	-391.4	408.0	0.00	0.00	0.00
3,400.0	9.95	286.40	3,365.1	117.2	-398.1	415.0	0.00	0.00	0.00
3,440.0	9.95	286.40	3,404.5	119.1	-404.7	421.9	0.00	0.00	0.00
3,480.0	9.95	286.40	3,443.9	121.1	-411.3	428.8	0.00	0.00	0.00
3,520.0	9.95	286.40	3,483.3	123.0	-417.9	435.7	0.00	0.00	0.00
3,560.0	9.95	286.40	3,522.7	125.0	-424.6	442.6	0.00	0.00	0.00
3,600.0	9.95	286.40	3,562.1	126.9	-431.2	449.5	0.00	0.00	0.00
3,640.0	9.95	286.40	3,601.5	128.9	-437.8	456.4	0.00	0.00	0.00
3,680.0	9.95	286.40	3,640.9	130.8	-444.5	463.3	0.00	0.00	0.00
3,720.0	9.95	286.40	3,680.3	132.8	-451.1	470.2	0.00	0.00	0.00
3,760.0	9.95	286.40	3,719.7	134.7	-457.7	477.1	0.00	0.00	0.00
3,800.0	9.95	286.40	3,759.1	136.7	-464.4	484.1	0.00	0.00	0.00
3,840.0	9.95	286.40	3,798.5	138.6	-471.0	491.0	0.00	0.00	0.00
3,880.0	9.95	286.40	3,837.9	140.6	-477.6	497.9	0.00	0.00	0.00
3,920.0	9.95	286.40	3,877.3	142.6	-484.2	504.8	0.00	0.00	0.00
3,960.0	9.95	286.40	3,916.7	144.5	-490.9	511.7	0.00	0.00	0.00
3,977.5	9.95	286.40	3,934.0	145.4	-493.8	514.7	0.00	0.00	0.00
<b>SUSSEX</b>									
4,000.0	9.95	286.40	3,956.1	146.5	-497.5	518.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well MLD 11-22
<b>Company:</b>	Sundance Energy, Weld County, CO	<b>TVD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Project:</b>	SEC.22-T4N-R68W	<b>MD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Site:</b>	MLD 5 Pad Sec.22-T4N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	MLD 11-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (8-02-12)		

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	9.95	286.40	3,995.5	148.4	-504.1	525.5	0.00	0.00	0.00
4,080.0	9.95	286.40	4,034.9	150.4	-510.8	532.4	0.00	0.00	0.00
4,120.0	9.95	286.40	4,074.3	152.3	-517.4	539.3	0.00	0.00	0.00
4,160.0	9.95	286.40	4,113.7	154.3	-524.0	546.2	0.00	0.00	0.00
4,200.0	9.95	286.40	4,153.1	156.2	-530.6	553.2	0.00	0.00	0.00
4,240.0	9.95	286.40	4,192.5	158.2	-537.3	560.1	0.00	0.00	0.00
4,280.0	9.95	286.40	4,231.9	160.1	-543.9	567.0	0.00	0.00	0.00
4,320.0	9.95	286.40	4,271.3	162.1	-550.5	573.9	0.00	0.00	0.00
4,360.0	9.95	286.40	4,310.7	164.0	-557.2	580.8	0.00	0.00	0.00
4,400.0	9.95	286.40	4,350.1	166.0	-563.8	587.7	0.00	0.00	0.00
4,440.0	9.95	286.40	4,389.5	167.9	-570.4	594.6	0.00	0.00	0.00
4,445.6	9.95	286.40	4,395.0	168.2	-571.3	595.6	0.00	0.00	0.00
<b>SHANNON</b>									
4,480.0	9.95	286.40	4,428.9	169.9	-577.0	601.5	0.00	0.00	0.00
4,520.0	9.95	286.40	4,468.3	171.8	-583.7	608.4	0.00	0.00	0.00
4,557.3	9.95	286.40	4,505.1	173.6	-589.9	614.9	0.00	0.00	0.00
4,560.0	9.90	286.40	4,507.7	173.8	-590.3	615.4	2.00	-2.00	0.00
4,600.0	9.10	286.40	4,547.1	175.6	-596.6	621.9	2.00	-2.00	0.00
4,640.0	8.30	286.40	4,586.7	177.3	-602.4	628.0	2.00	-2.00	0.00
4,680.0	7.50	286.40	4,626.3	178.9	-607.7	633.5	2.00	-2.00	0.00
4,720.0	6.70	286.40	4,666.0	180.3	-612.4	638.4	2.00	-2.00	0.00
4,760.0	5.90	286.40	4,705.8	181.5	-616.7	642.8	2.00	-2.00	0.00
4,800.0	5.10	286.40	4,745.6	182.6	-620.3	646.6	2.00	-2.00	0.00
4,840.0	4.30	286.40	4,785.4	183.5	-623.5	649.9	2.00	-2.00	0.00
4,880.0	3.50	286.40	4,825.4	184.3	-626.1	652.6	2.00	-2.00	0.00
4,920.0	2.70	286.40	4,865.3	184.9	-628.1	654.8	2.00	-2.00	0.00
4,960.0	1.90	286.40	4,905.3	185.4	-629.7	656.4	2.00	-2.00	0.00
5,000.0	1.10	286.40	4,945.2	185.7	-630.7	657.4	2.00	-2.00	0.00
5,040.0	0.30	286.40	4,985.2	185.8	-631.1	657.9	2.00	-2.00	0.00
5,054.8	0.00	0.00	5,000.0	185.8	-631.2	658.0	2.00	-2.00	0.00
<b>TARGET BHL 660°FNL, 660°FWL</b>									
5,080.0	0.00	0.00	5,025.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,120.0	0.00	0.00	5,065.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,160.0	0.00	0.00	5,105.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,145.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,240.0	0.00	0.00	5,185.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,280.0	0.00	0.00	5,225.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,320.0	0.00	0.00	5,265.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,360.0	0.00	0.00	5,305.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,345.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,440.0	0.00	0.00	5,385.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,480.0	0.00	0.00	5,425.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,520.0	0.00	0.00	5,465.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,560.0	0.00	0.00	5,505.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,545.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,640.0	0.00	0.00	5,585.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,680.0	0.00	0.00	5,625.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,720.0	0.00	0.00	5,665.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,760.0	0.00	0.00	5,705.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,745.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,840.0	0.00	0.00	5,785.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,880.0	0.00	0.00	5,825.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,920.0	0.00	0.00	5,865.2	185.8	-631.2	658.0	0.00	0.00	0.00
5,960.0	0.00	0.00	5,905.2	185.8	-631.2	658.0	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well MLD 11-22
<b>Company:</b>	Sundance Energy, Weld County, CO	<b>TVD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Project:</b>	SEC.22-T4N-R68W	<b>MD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Site:</b>	MLD 5 Pad Sec.22-T4N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	MLD 11-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (8-02-12)		

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)
6,000.0	0.00	0.00	5,945.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,040.0	0.00	0.00	5,985.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,080.0	0.00	0.00	6,025.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,120.0	0.00	0.00	6,065.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,160.0	0.00	0.00	6,105.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,145.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,240.0	0.00	0.00	6,185.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,280.0	0.00	0.00	6,225.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,320.0	0.00	0.00	6,265.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,360.0	0.00	0.00	6,305.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,345.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,440.0	0.00	0.00	6,385.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,480.0	0.00	0.00	6,425.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,520.0	0.00	0.00	6,465.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,560.0	0.00	0.00	6,505.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,545.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,640.0	0.00	0.00	6,585.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,680.0	0.00	0.00	6,625.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,720.0	0.00	0.00	6,665.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,760.0	0.00	0.00	6,705.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,745.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,840.0	0.00	0.00	6,785.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,880.0	0.00	0.00	6,825.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,920.0	0.00	0.00	6,865.2	185.8	-631.2	658.0	0.00	0.00	0.00
6,948.8	0.00	0.00	6,894.0	185.8	-631.2	658.0	0.00	0.00	0.00
<b>NIOBRARA - TARGET CIRCLE 660'FNL &amp; 660'FWL - LEGAL BOX 400' X 400' 663'FNL &amp; 665'FWL</b>									
6,960.0	0.00	0.00	6,905.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,945.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,040.0	0.00	0.00	6,985.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,080.0	0.00	0.00	7,025.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,120.0	0.00	0.00	7,065.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,160.0	0.00	0.00	7,105.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,145.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,240.0	0.00	0.00	7,185.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,268.8	0.00	0.00	7,214.0	185.8	-631.2	658.0	0.00	0.00	0.00
<b>CODELL</b>									
7,280.0	0.00	0.00	7,225.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,320.0	0.00	0.00	7,265.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,360.0	0.00	0.00	7,305.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,345.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,440.0	0.00	0.00	7,385.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,480.0	0.00	0.00	7,425.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,520.0	0.00	0.00	7,465.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,560.0	0.00	0.00	7,505.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,545.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,640.0	0.00	0.00	7,585.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,680.0	0.00	0.00	7,625.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,720.0	0.00	0.00	7,665.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,751.8	0.00	0.00	7,697.0	185.8	-631.2	658.0	0.00	0.00	0.00
<b>J-SAND</b>									
7,760.0	0.00	0.00	7,705.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,745.2	185.8	-631.2	658.0	0.00	0.00	0.00
7,840.0	0.00	0.00	7,785.2	185.8	-631.2	658.0	0.00	0.00	0.00

Formations						
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	3,977.5	3,934.0	SUSSEX		0.00	
	4,445.6	4,395.0	SHANNON		0.00	
	6,948.8	6,894.0	NIOBRARA		0.00	
	7,268.8	7,214.0	CODELL		0.00	
	7,751.8	7,697.0	J-SAND		0.00	





# **Sundance Energy, Weld County, CO**

**SEC.22-T4N-R68W**

**MLD 5 Pad Sec.22-T4N-R68W**

**MLD 11-22**

**Wellbore #1**

**Plan #2 (8-02-12)**

## **Anticollision Report**

**02 August, 2012**

<b>Company:</b>	Sundance Energy, Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well MLD 11-22
<b>Project:</b>	SEC.22-T4N-R68W	<b>TVD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Reference Site:</b>	MLD 5 Pad Sec.22-T4N-R68W	<b>MD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	MLD 11-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #2 (8-02-12)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #2 (8-02-12)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 8/2/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	7,914.8	Plan #2 (8-02-12) (Wellbore #1)	MWD	MWD - Standard

<b>Summary</b>						
<b>Site Name</b>	<b>Reference Measured Depth (ft)</b>	<b>Offset Measured Depth (ft)</b>	<b>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Offset Well - Wellbore - Design</b>						
MLD 5 Pad Sec.22-T4N-R68W						
MLD 12-22 - Wellbore #1 - Plan #2 (8-02-12)	750.0	750.0	14.8	11.6	4.699 CC, ES	
MLD 12-22 - Wellbore #1 - Plan #2 (8-02-12)	800.0	800.0	15.2	11.8	4.516 SF	

Offset Design MLD 5 Pad Sec.22-T4N-R68W - MLD 12-22 - Wellbore #1 - Plan #2 (8-02-12)													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)			
0.0	0.0	0.0	0.0	0.0	0.0	88.60	0.4	14.8	14.8	14.8	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	88.60	0.4	14.8	14.8	14.6	0.22	65.789		
200.0	200.0	200.0	200.0	0.3	0.3	88.60	0.4	14.8	14.8	14.1	0.67	21.930		
300.0	300.0	300.0	300.0	0.6	0.6	88.60	0.4	14.8	14.8	13.7	1.12	13.158		
400.0	400.0	400.0	400.0	0.8	0.8	88.60	0.4	14.8	14.8	13.2	1.57	9.398		
500.0	500.0	500.0	500.0	1.0	1.0	88.60	0.4	14.8	14.8	12.8	2.02	7.310		
600.0	600.0	600.0	600.0	1.2	1.2	88.60	0.4	14.8	14.8	12.3	2.47	5.981		
700.0	700.0	700.0	700.0	1.5	1.5	88.60	0.4	14.8	14.8	11.9	2.92	5.061		
750.0	750.0	750.0	750.0	1.6	1.6	88.60	0.4	14.8	14.8	11.6	3.15	4.699 CC, ES		
800.0	800.0	800.0	800.0	1.7	1.7	162.70	0.4	14.8	15.2	11.8	3.37	4.516 SF		
900.0	899.9	899.9	899.9	1.9	1.9	165.89	0.4	14.8	18.6	14.8	3.80	4.887		
1,000.0	999.7	999.9	999.8	2.1	2.1	170.62	0.0	14.6	25.2	21.0	4.22	5.979		
1,100.0	1,099.1	1,099.6	1,099.6	2.4	2.3	178.81	-3.0	12.9	34.6	30.0	4.60	7.511		
1,200.0	1,198.2	1,198.9	1,198.6	2.6	2.5	-172.62	-9.1	9.5	47.3	42.3	5.00	9.454		
1,247.4	1,244.9	1,245.6	1,245.1	2.8	2.6	-168.96	-12.9	7.3	54.7	49.5	5.21	10.507		
1,300.0	1,296.7	1,297.3	1,296.5	2.9	2.7	-165.22	-18.0	4.5	63.6	58.1	5.45	11.670		
1,400.0	1,395.2	1,395.2	1,393.4	3.3	2.9	-158.60	-29.7	-2.1	81.2	75.3	5.94	13.658		
1,500.0	1,493.7	1,492.3	1,489.1	3.6	3.2	-152.51	-44.2	-10.3	100.3	93.8	6.50	15.430		
1,600.0	1,592.2	1,588.4	1,583.1	4.0	3.5	-146.93	-61.4	-20.0	121.2	114.1	7.11	17.047		
1,700.0	1,690.7	1,683.3	1,675.4	4.3	3.9	-141.84	-81.0	-31.0	144.2	136.4	7.77	18.565		
1,800.0	1,789.2	1,776.9	1,765.5	4.7	4.3	-137.25	-102.9	-43.3	169.6	161.1	8.47	20.029		
1,900.0	1,887.7	1,869.0	1,853.3	5.1	4.7	-133.12	-127.0	-56.9	197.5	188.3	9.19	21.481		
2,000.0	1,986.2	1,963.7	1,943.2	5.4	5.2	-129.59	-153.0	-71.5	227.0	217.1	9.95	22.823		
2,100.0	2,084.7	2,058.4	2,033.1	5.8	5.8	-126.87	-179.0	-86.1	257.2	246.5	10.70	24.040		
2,200.0	2,183.2	2,153.1	2,123.0	6.2	6.3	-124.71	-205.0	-100.7	287.8	276.3	11.45	25.131		

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

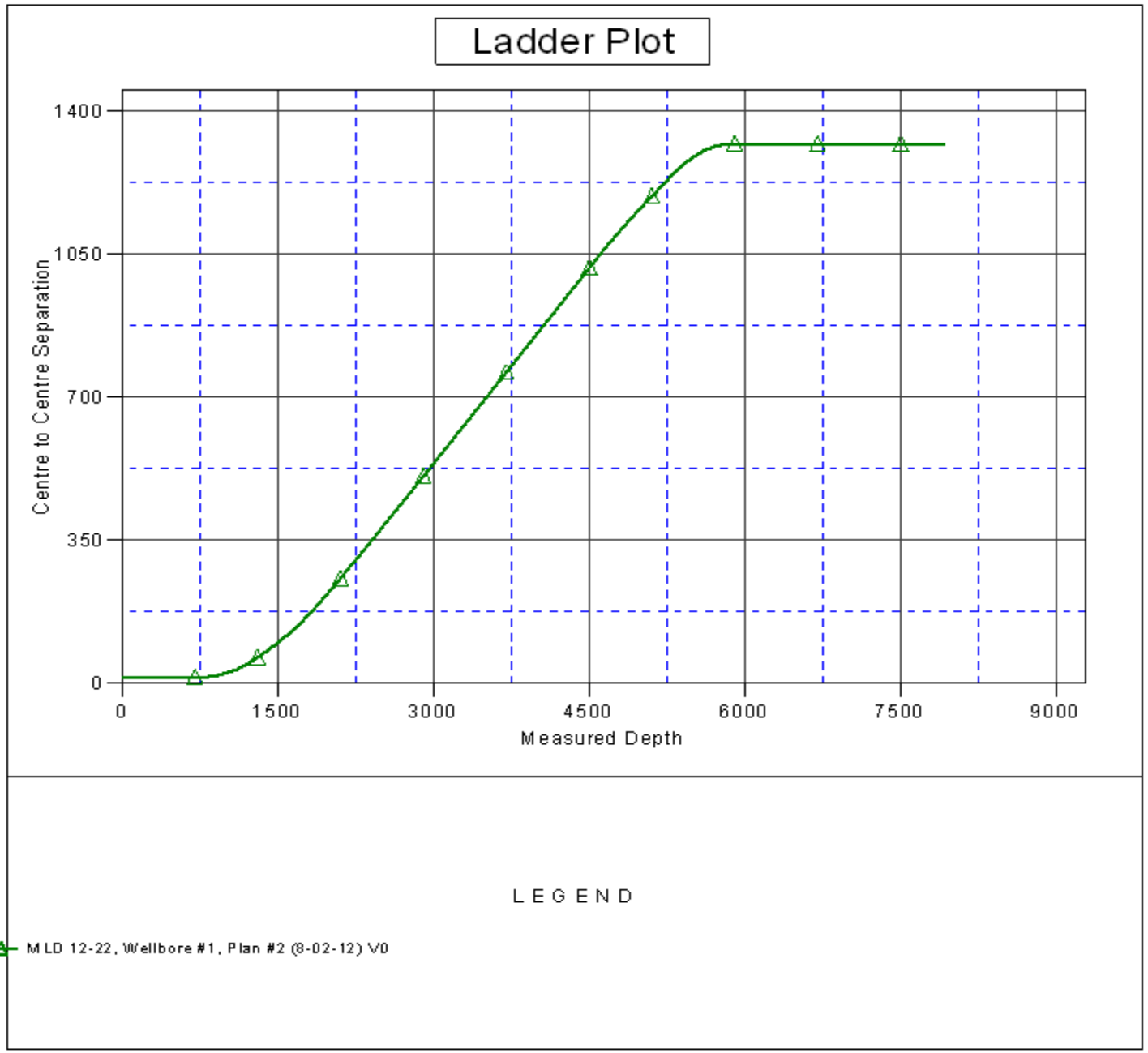
Offset Design													MLD 5 Pad Sec.22-T4N-R68W - MLD 12-22 - Wellbore #1 - Plan #2 (8-02-12)		Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (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				
2,300.0	2,281.7	2,247.8	2,212.9	6.6	6.9	-122.97	-231.0	-115.4	318.7	306.4	12.20	26.109				
2,400.0	2,380.2	2,342.5	2,302.7	7.0	7.4	-121.54	-257.0	-130.0	349.8	336.8	12.96	26.987				
2,500.0	2,478.7	2,437.2	2,392.6	7.4	8.0	-120.34	-283.0	-144.6	381.0	367.3	13.72	27.777				
2,600.0	2,577.2	2,531.9	2,482.5	7.7	8.6	-119.32	-309.0	-159.2	412.4	398.0	14.48	28.490				
2,700.0	2,675.7	2,626.6	2,572.4	8.1	9.2	-118.44	-334.9	-173.9	443.9	428.7	15.24	29.136				
2,800.0	2,774.2	2,721.3	2,662.3	8.5	9.7	-117.68	-360.9	-188.5	475.5	459.5	16.00	29.724				
2,900.0	2,872.7	2,816.0	2,752.2	8.9	10.3	-117.02	-386.9	-203.1	507.2	490.4	16.76	30.259				
3,000.0	2,971.2	2,910.7	2,842.1	9.3	10.9	-116.43	-412.9	-217.7	538.9	521.3	17.52	30.749				
3,100.0	3,069.6	3,005.4	2,931.9	9.7	11.5	-115.91	-438.9	-232.4	570.6	552.3	18.29	31.198				
3,200.0	3,168.1	3,100.2	3,021.8	10.1	12.1	-115.44	-464.9	-247.0	602.4	583.3	19.06	31.612				
3,300.0	3,266.6	3,194.9	3,111.7	10.5	12.7	-115.02	-490.9	-261.6	634.2	614.4	19.82	31.994				
3,400.0	3,365.1	3,289.6	3,201.6	10.9	13.3	-114.64	-516.9	-276.2	666.1	645.5	20.59	32.347				
3,500.0	3,463.6	3,384.3	3,291.5	11.3	13.9	-114.29	-542.9	-290.9	697.9	676.6	21.36	32.675				
3,600.0	3,562.1	3,479.0	3,381.4	11.7	14.5	-113.98	-568.9	-305.5	729.8	707.7	22.13	32.980				
3,700.0	3,660.6	3,573.7	3,471.3	12.1	15.1	-113.69	-594.9	-320.1	761.7	738.8	22.90	33.265				
3,800.0	3,759.1	3,668.4	3,561.1	12.5	15.7	-113.42	-620.9	-334.7	793.7	770.0	23.67	33.530				
3,900.0	3,857.6	3,763.1	3,651.0	12.9	16.3	-113.18	-646.9	-349.4	825.6	801.2	24.44	33.779				
4,000.0	3,956.1	3,857.8	3,740.9	13.3	16.9	-112.95	-672.9	-364.0	857.6	832.3	25.21	34.012				
4,100.0	4,054.6	3,952.5	3,830.8	13.7	17.5	-112.74	-698.8	-378.6	889.5	863.5	25.99	34.232				
4,200.0	4,153.1	4,047.2	3,920.7	14.0	18.1	-112.54	-724.8	-393.2	921.5	894.7	26.76	34.438				
4,300.0	4,251.6	4,141.9	4,010.6	14.4	18.7	-112.36	-750.8	-407.9	953.5	925.9	27.53	34.633				
4,400.0	4,350.1	4,236.6	4,100.5	14.8	19.3	-112.19	-776.8	-422.5	985.5	957.2	28.30	34.816				
4,500.0	4,448.6	4,331.3	4,190.3	15.2	20.0	-112.03	-802.8	-437.1	1,017.5	988.4	29.08	34.990				
4,557.3	4,505.1	4,385.6	4,241.9	15.5	20.3	-111.94	-817.7	-445.5	1,035.8	1,006.3	29.52	35.086				
4,600.0	4,547.1	4,426.0	4,280.3	15.6	20.6	-112.13	-828.8	-451.7	1,049.4	1,019.5	29.88	35.122				
4,700.0	4,646.1	4,521.0	4,370.4	15.9	21.2	-112.42	-854.9	-466.4	1,080.2	1,049.6	30.62	35.277				
4,800.0	4,745.6	4,616.1	4,460.7	16.1	21.8	-112.53	-881.0	-481.1	1,109.9	1,078.6	31.31	35.449				
4,900.0	4,845.3	4,711.3	4,551.0	16.3	22.4	-112.47	-907.1	-495.8	1,138.3	1,106.4	31.94	35.642				
5,000.0	4,945.2	4,806.4	4,641.3	16.5	23.0	-112.26	-933.2	-510.5	1,165.6	1,133.1	32.51	35.860				
5,054.8	5,000.0	4,858.4	4,690.6	16.5	23.3	174.32	-947.5	-518.5	1,180.2	1,147.4	32.79	35.990				
5,100.0	5,045.2	4,901.3	4,731.4	16.6	23.6	174.71	-959.3	-525.1	1,192.0	1,159.1	32.99	36.138				
5,200.0	5,145.2	4,996.3	4,821.5	16.7	24.2	175.54	-985.3	-539.8	1,218.5	1,185.1	33.42	36.456				
5,300.0	5,245.2	5,099.6	4,919.6	16.9	24.9	176.40	-1,013.6	-555.7	1,245.1	1,211.3	33.87	36.760				
5,400.0	5,345.2	5,253.1	5,066.9	17.0	25.5	177.49	-1,051.3	-576.9	1,269.2	1,234.9	34.33	36.971				
5,500.0	5,445.2	5,411.1	5,220.6	17.2	26.1	178.35	-1,082.8	-594.7	1,288.9	1,254.1	34.78	37.057				
5,600.0	5,545.2	5,572.7	5,379.7	17.3	26.6	178.99	-1,107.4	-608.5	1,304.0	1,268.8	35.22	37.027				
5,700.0	5,645.2	5,737.1	5,543.0	17.5	27.0	179.42	-1,124.4	-618.0	1,314.2	1,278.6	35.63	36.882				
5,800.0	5,745.2	5,903.2	5,708.7	17.6	27.2	179.64	-1,133.2	-623.0	1,319.5	1,283.5	36.03	36.624				
5,900.0	5,845.2	6,039.8	5,845.2	17.8	27.4	179.67	-1,134.4	-623.7	1,320.3	1,283.9	36.37	36.303				
6,000.0	5,945.2	6,139.8	5,945.2	17.9	27.4	179.67	-1,134.4	-623.7	1,320.3	1,283.6	36.66	36.018				
6,100.0	6,045.2	6,239.8	6,045.2	18.1	27.5	179.67	-1,134.4	-623.7	1,320.3	1,283.3	36.95	35.735				
6,200.0	6,145.2	6,339.8	6,145.2	18.3	27.6	179.67	-1,134.4	-623.7	1,320.3	1,283.0	37.24	35.452				
6,300.0	6,245.2	6,439.8	6,245.2	18.4	27.7	179.67	-1,134.4	-623.7	1,320.3	1,282.7	37.54	35.172				
6,400.0	6,345.2	6,539.8	6,345.2	18.6	27.8	179.67	-1,134.4	-623.7	1,320.3	1,282.4	37.84	34.893				
6,500.0	6,445.2	6,639.8	6,445.2	18.7	27.9	179.67	-1,134.4	-623.7	1,320.3	1,282.1	38.14	34.616				
6,600.0	6,545.2	6,739.8	6,545.2	18.9	28.0	179.67	-1,134.4	-623.7	1,320.3	1,281.8	38.45	34.340				
6,700.0	6,645.2	6,839.8	6,645.2	19.1	28.1	179.67	-1,134.4	-623.7	1,320.3	1,281.5	38.76	34.067				
6,800.0	6,745.2	6,939.8	6,745.2	19.2	28.2	179.67	-1,134.4	-623.7	1,320.3	1,281.2	39.07	33.795				
6,900.0	6,845.2	7,039.8	6,845.2	19.4	28.3	179.67	-1,134.4	-623.7	1,320.3	1,280.9	39.38	33.526				
7,000.0	6,945.2	7,139.8	6,945.2	19.6	28.4	179.67	-1,134.4	-623.7	1,320.3	1,280.6	39.70	33.259				
7,100.0	7,045.2	7,239.8	7,045.2	19.8	28.5	179.67	-1,134.4	-623.7	1,320.3	1,280.3	40.02	32.993				
7,200.0	7,145.2	7,339.8	7,145.2	19.9	28.6	179.67	-1,134.4	-623.7	1,320.3	1,279.9	40.34	32.730				

<b>Company:</b>	Sundance Energy, Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well MLD 11-22
<b>Project:</b>	SEC.22-T4N-R68W	<b>TVD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Reference Site:</b>	MLD 5 Pad Sec.22-T4N-R68W	<b>MD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	MLD 11-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #2 (8-02-12)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> MLD 5 Pad Sec.22-T4N-R68W - MLD 12-22 - Wellbore #1 - Plan #2 (8-02-12)												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	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
7,300.0	7,245.2	7,439.8	7,245.2	20.1	28.7	179.67	-1,134.4	-623.7	1,320.3	1,279.6	40.66	32.470	
7,400.0	7,345.2	7,539.8	7,345.2	20.3	28.8	179.67	-1,134.4	-623.7	1,320.3	1,279.3	40.99	32.211	
7,500.0	7,445.2	7,639.8	7,445.2	20.5	28.9	179.67	-1,134.4	-623.7	1,320.3	1,278.9	41.32	31.955	
7,600.0	7,545.2	7,739.8	7,545.2	20.6	29.0	179.67	-1,134.4	-623.7	1,320.3	1,278.6	41.65	31.701	
7,700.0	7,645.2	7,839.8	7,645.2	20.8	29.1	179.67	-1,134.4	-623.7	1,320.3	1,278.3	41.98	31.450	
7,800.0	7,745.2	7,939.8	7,745.2	21.0	29.2	179.67	-1,134.4	-623.7	1,320.3	1,278.0	42.32	31.201	
7,900.0	7,845.2	8,039.8	7,845.2	21.2	29.4	179.67	-1,134.4	-623.7	1,320.3	1,277.6	42.65	30.954	
7,914.8	7,860.0	8,054.5	7,860.0	21.2	29.4	179.67	-1,134.4	-623.7	1,320.3	1,277.6	42.70	30.918	

<b>Company:</b>	Sundance Energy, Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well MLD 11-22
<b>Project:</b>	SEC.22-T4N-R68W	<b>TVD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Reference Site:</b>	MLD 5 Pad Sec.22-T4N-R68W	<b>MD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	MLD 11-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #2 (8-02-12)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4890.0ft (Original Well Elev) Coordinates are relative to: MLD 11-22  
 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: 0.33°



<b>Company:</b>	Sundance Energy, Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well MLD 11-22
<b>Project:</b>	SEC.22-T4N-R68W	<b>TVD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Reference Site:</b>	MLD 5 Pad Sec.22-T4N-R68W	<b>MD Reference:</b>	WELL @ 4890.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	MLD 11-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #2 (8-02-12)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4890.0ft (Original Well Elev) Coordinates are relative to: MLD 11-22  
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: 0.33°

