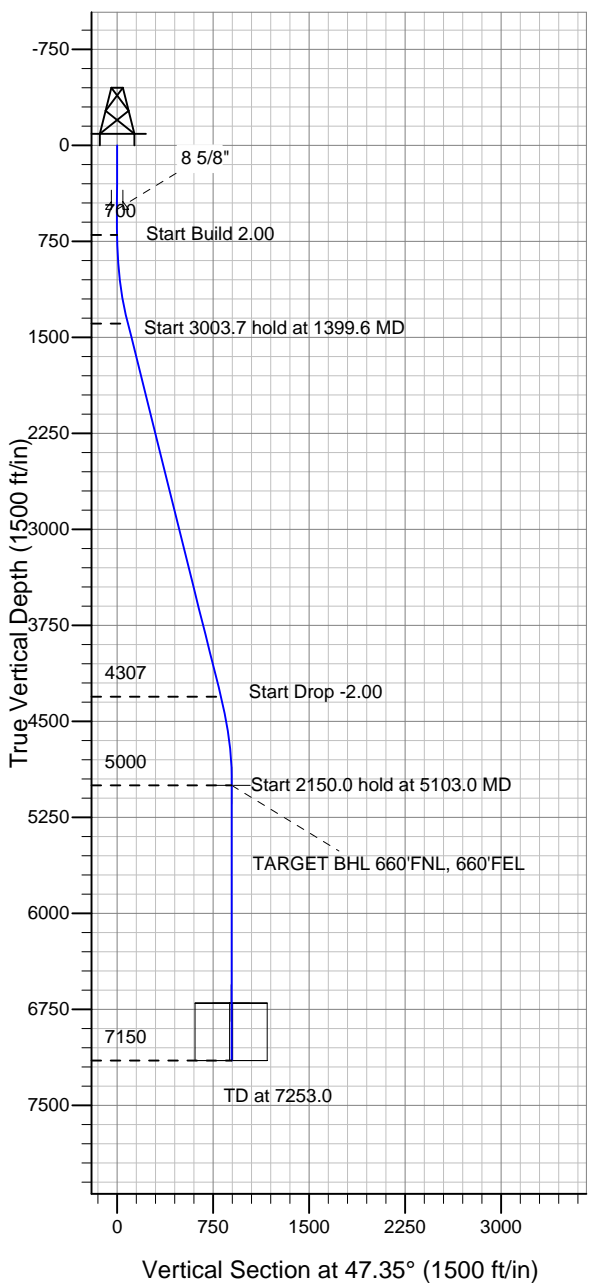


### Well Name: Lamb 41-15

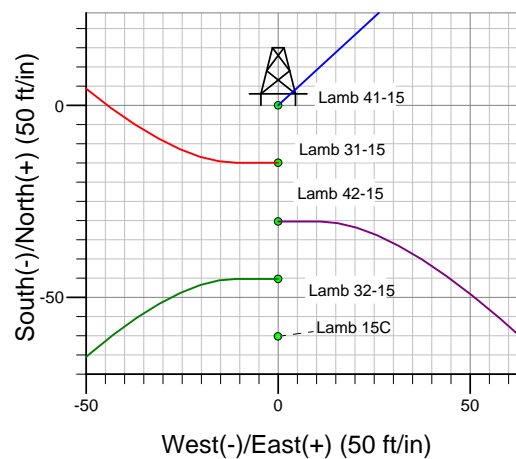
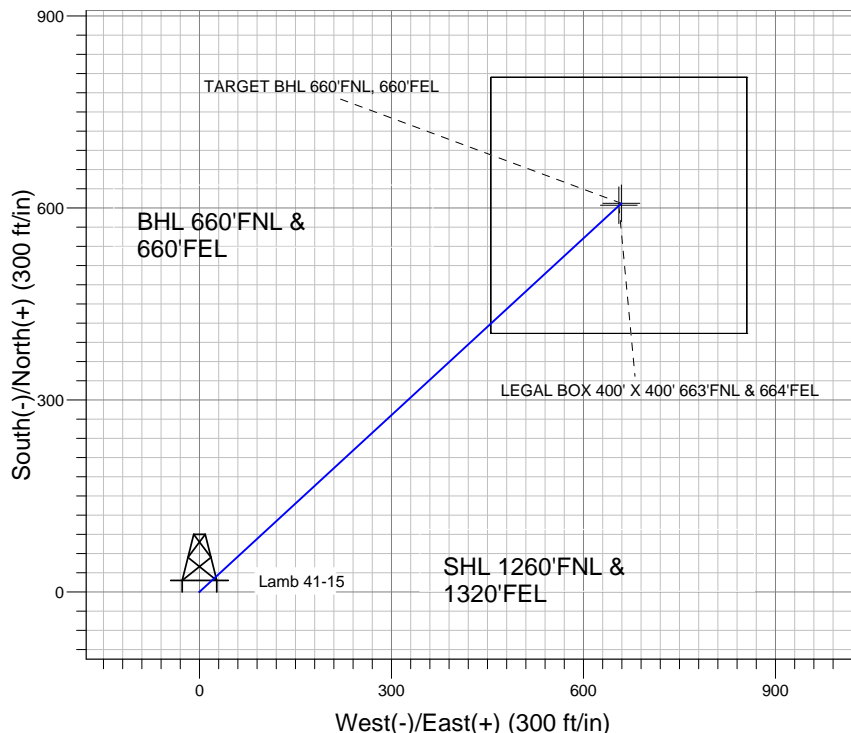
Surface Location: Lamb 5 Pad Sec.15-T4N-R68W  
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
 Ground Elevation: 4941.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1358886.46	3143747.33	40.317397	-104.984496	

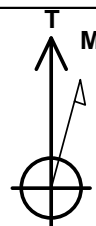
Original Well Elev WELL @ 4954.0ft (Original Well Elev)



### Sundance Energy, Weld County, CO



Lamb 5 Pad Sec.15-T4N-R68W  
 Lamb 41-15  
 Plan #1 (12-07-11)  
 17:52, December 08 2011



Azimuths to True North  
 Magnetic North: 8.91°

Magnetic Field  
 Strength: 53012.7snT  
 Dip Angle: 66.93°  
 Date: 12/7/2011  
 Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 660'FNL, 660'FEL	5000.0	607.3	659.2	40.319064	-104.982132	Point
LEGAL BOX 400' X 400' 663'FNL & 664'FEL	6701.0	604.3	655.2	40.319056	-104.982146	Rectangle (Sides: L400.0 W400.0)

### 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	700.0	0.00	0.00	700.0	0.0	0.0	0.00	0.00	0.0	
3	1399.6	13.99	47.35	1392.7	57.6	62.5	2.00	47.35	85.0	
4	4403.4	13.99	47.35	4307.3	549.7	596.7	0.00	0.00	811.3	
5	5103.0	0.00	0.00	5000.0	607.3	659.2	2.00	180.00	896.3	TARGET BHL 660'FNL, 660'FEL
6	7253.0	0.00	0.00	7150.0	607.3	659.2	0.00	0.00	896.3	



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

**SEC.15-T4N-R68W**

**Lamb 5 Pad Sec.15-T4N-R68W**

**Lamb 41-15**

**Wellbore #1**

**Plan: Plan #1 (12-07-11)**

## **Standard Planning Report**

**08 December, 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	
700.0	0.00	0.00	700.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,399.6	13.99	47.35	1,392.7	57.6	62.5	2.00	2.00	0.00	47.35	
4,403.4	13.99	47.35	4,307.3	549.7	596.7	0.00	0.00	0.00	0.00	
5,103.0	0.00	0.00	5,000.0	607.3	659.2	2.00	-2.00	0.00	180.00	TARGET BHL 660°
7,253.0	0.00	0.00	7,150.0	607.3	659.2	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Lamb 41-15
<b>Company:</b>	Sundance Energy, Weld County, CO	<b>TVD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T4N-R68W	<b>MD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Site:</b>	Lamb 5 Pad Sec.15-T4N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	Lamb 41-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-07-11)		

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
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
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
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
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.40	47.35	720.0	0.0	0.1	0.1	2.00	2.00	0.00
760.0	1.20	47.35	760.0	0.4	0.5	0.6	2.00	2.00	0.00
800.0	2.00	47.35	800.0	1.2	1.3	1.7	2.00	2.00	0.00
840.0	2.80	47.35	839.9	2.3	2.5	3.4	2.00	2.00	0.00
880.0	3.60	47.35	879.9	3.8	4.2	5.7	2.00	2.00	0.00
920.0	4.40	47.35	919.8	5.7	6.2	8.4	2.00	2.00	0.00
960.0	5.20	47.35	959.6	8.0	8.7	11.8	2.00	2.00	0.00
1,000.0	6.00	47.35	999.5	10.6	11.5	15.7	2.00	2.00	0.00
1,040.0	6.80	47.35	1,039.2	13.7	14.8	20.2	2.00	2.00	0.00
1,080.0	7.60	47.35	1,078.9	17.1	18.5	25.2	2.00	2.00	0.00
1,120.0	8.40	47.35	1,118.5	20.8	22.6	30.7	2.00	2.00	0.00
1,160.0	9.20	47.35	1,158.0	25.0	27.1	36.9	2.00	2.00	0.00
1,200.0	10.00	47.35	1,197.5	29.5	32.0	43.5	2.00	2.00	0.00
1,240.0	10.80	47.35	1,236.8	34.4	37.3	50.7	2.00	2.00	0.00
1,280.0	11.60	47.35	1,276.0	39.6	43.0	58.5	2.00	2.00	0.00
1,320.0	12.40	47.35	1,315.2	45.3	49.2	66.8	2.00	2.00	0.00
1,360.0	13.20	47.35	1,354.2	51.3	55.7	75.7	2.00	2.00	0.00
1,399.6	13.99	47.35	1,392.7	57.6	62.5	85.0	2.00	2.00	0.00
1,400.0	13.99	47.35	1,393.1	57.7	62.6	85.1	0.00	0.00	0.00
1,440.0	13.99	47.35	1,431.9	64.2	69.7	94.8	0.00	0.00	0.00
1,480.0	13.99	47.35	1,470.7	70.8	76.8	104.4	0.00	0.00	0.00
1,520.0	13.99	47.35	1,509.5	77.3	83.9	114.1	0.00	0.00	0.00
1,560.0	13.99	47.35	1,548.3	83.9	91.0	123.8	0.00	0.00	0.00
1,600.0	13.99	47.35	1,587.1	90.4	98.2	133.5	0.00	0.00	0.00
1,640.0	13.99	47.35	1,625.9	97.0	105.3	143.1	0.00	0.00	0.00
1,680.0	13.99	47.35	1,664.7	103.5	112.4	152.8	0.00	0.00	0.00
1,720.0	13.99	47.35	1,703.6	110.1	119.5	162.5	0.00	0.00	0.00
1,760.0	13.99	47.35	1,742.4	116.6	126.6	172.1	0.00	0.00	0.00
1,800.0	13.99	47.35	1,781.2	123.2	133.7	181.8	0.00	0.00	0.00
1,840.0	13.99	47.35	1,820.0	129.7	140.8	191.5	0.00	0.00	0.00
1,880.0	13.99	47.35	1,858.8	136.3	147.9	201.2	0.00	0.00	0.00
1,920.0	13.99	47.35	1,897.6	142.9	155.1	210.8	0.00	0.00	0.00
1,960.0	13.99	47.35	1,936.4	149.4	162.2	220.5	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Lamb 41-15
<b>Company:</b>	Sundance Energy, Weld County, CO	<b>TVD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T4N-R68W	<b>MD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Site:</b>	Lamb 5 Pad Sec.15-T4N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	Lamb 41-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-07-11)		

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)
2,000.0	13.99	47.35	1,975.3	156.0	169.3	230.2	0.00	0.00	0.00
2,040.0	13.99	47.35	2,014.1	162.5	176.4	239.8	0.00	0.00	0.00
2,080.0	13.99	47.35	2,052.9	169.1	183.5	249.5	0.00	0.00	0.00
2,120.0	13.99	47.35	2,091.7	175.6	190.6	259.2	0.00	0.00	0.00
2,160.0	13.99	47.35	2,130.5	182.2	197.7	268.9	0.00	0.00	0.00
2,200.0	13.99	47.35	2,169.3	188.7	204.9	278.5	0.00	0.00	0.00
2,240.0	13.99	47.35	2,208.1	195.3	212.0	288.2	0.00	0.00	0.00
2,280.0	13.99	47.35	2,246.9	201.8	219.1	297.9	0.00	0.00	0.00
2,320.0	13.99	47.35	2,285.8	208.4	226.2	307.6	0.00	0.00	0.00
2,360.0	13.99	47.35	2,324.6	214.9	233.3	317.2	0.00	0.00	0.00
2,400.0	13.99	47.35	2,363.4	221.5	240.4	326.9	0.00	0.00	0.00
2,440.0	13.99	47.35	2,402.2	228.0	247.5	336.6	0.00	0.00	0.00
2,480.0	13.99	47.35	2,441.0	234.6	254.6	346.2	0.00	0.00	0.00
2,520.0	13.99	47.35	2,479.8	241.2	261.8	355.9	0.00	0.00	0.00
2,560.0	13.99	47.35	2,518.6	247.7	268.9	365.6	0.00	0.00	0.00
2,600.0	13.99	47.35	2,557.4	254.3	276.0	375.3	0.00	0.00	0.00
2,640.0	13.99	47.35	2,596.3	260.8	283.1	384.9	0.00	0.00	0.00
2,680.0	13.99	47.35	2,635.1	267.4	290.2	394.6	0.00	0.00	0.00
2,720.0	13.99	47.35	2,673.9	273.9	297.3	404.3	0.00	0.00	0.00
2,760.0	13.99	47.35	2,712.7	280.5	304.4	413.9	0.00	0.00	0.00
2,800.0	13.99	47.35	2,751.5	287.0	311.6	423.6	0.00	0.00	0.00
2,840.0	13.99	47.35	2,790.3	293.6	318.7	433.3	0.00	0.00	0.00
2,880.0	13.99	47.35	2,829.1	300.1	325.8	443.0	0.00	0.00	0.00
2,920.0	13.99	47.35	2,868.0	306.7	332.9	452.6	0.00	0.00	0.00
2,960.0	13.99	47.35	2,906.8	313.2	340.0	462.3	0.00	0.00	0.00
3,000.0	13.99	47.35	2,945.6	319.8	347.1	472.0	0.00	0.00	0.00
3,040.0	13.99	47.35	2,984.4	326.3	354.2	481.7	0.00	0.00	0.00
3,080.0	13.99	47.35	3,023.2	332.9	361.4	491.3	0.00	0.00	0.00
3,120.0	13.99	47.35	3,062.0	339.5	368.5	501.0	0.00	0.00	0.00
3,160.0	13.99	47.35	3,100.8	346.0	375.6	510.7	0.00	0.00	0.00
3,200.0	13.99	47.35	3,139.6	352.6	382.7	520.3	0.00	0.00	0.00
3,240.0	13.99	47.35	3,178.5	359.1	389.8	530.0	0.00	0.00	0.00
3,280.0	13.99	47.35	3,217.3	365.7	396.9	539.7	0.00	0.00	0.00
3,320.0	13.99	47.35	3,256.1	372.2	404.0	549.4	0.00	0.00	0.00
3,360.0	13.99	47.35	3,294.9	378.8	411.1	559.0	0.00	0.00	0.00
3,400.0	13.99	47.35	3,333.7	385.3	418.3	568.7	0.00	0.00	0.00
3,440.0	13.99	47.35	3,372.5	391.9	425.4	578.4	0.00	0.00	0.00
3,480.0	13.99	47.35	3,411.3	398.4	432.5	588.0	0.00	0.00	0.00
3,520.0	13.99	47.35	3,450.1	405.0	439.6	597.7	0.00	0.00	0.00
3,560.0	13.99	47.35	3,489.0	411.5	446.7	607.4	0.00	0.00	0.00
3,600.0	13.99	47.35	3,527.8	418.1	453.8	617.1	0.00	0.00	0.00
3,640.0	13.99	47.35	3,566.6	424.7	460.9	626.7	0.00	0.00	0.00
3,680.0	13.99	47.35	3,605.4	431.2	468.1	636.4	0.00	0.00	0.00
3,720.0	13.99	47.35	3,644.2	437.8	475.2	646.1	0.00	0.00	0.00
3,760.0	13.99	47.35	3,683.0	444.3	482.3	655.7	0.00	0.00	0.00
3,800.0	13.99	47.35	3,721.8	450.9	489.4	665.4	0.00	0.00	0.00
3,840.0	13.99	47.35	3,760.6	457.4	496.5	675.1	0.00	0.00	0.00
3,880.0	13.99	47.35	3,799.5	464.0	503.6	684.8	0.00	0.00	0.00
3,920.0	13.99	47.35	3,838.3	470.5	510.7	694.4	0.00	0.00	0.00
3,960.0	13.99	47.35	3,877.1	477.1	517.8	704.1	0.00	0.00	0.00
4,000.0	13.99	47.35	3,915.9	483.6	525.0	713.8	0.00	0.00	0.00
4,027.9	13.99	47.35	3,943.0	488.2	529.9	720.5	0.00	0.00	0.00
SUSSEX									

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Lamb 41-15
<b>Company:</b>	Sundance Energy, Weld County, CO	<b>TVD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T4N-R68W	<b>MD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Site:</b>	Lamb 5 Pad Sec.15-T4N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	Lamb 41-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-07-11)		

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)
4,040.0	13.99	47.35	3,954.7	490.2	532.1	723.5	0.00	0.00	0.00
4,080.0	13.99	47.35	3,993.5	496.7	539.2	733.1	0.00	0.00	0.00
4,120.0	13.99	47.35	4,032.3	503.3	546.3	742.8	0.00	0.00	0.00
4,160.0	13.99	47.35	4,071.2	509.8	553.4	752.5	0.00	0.00	0.00
4,200.0	13.99	47.35	4,110.0	516.4	560.5	762.1	0.00	0.00	0.00
4,240.0	13.99	47.35	4,148.8	523.0	567.6	771.8	0.00	0.00	0.00
4,280.0	13.99	47.35	4,187.6	529.5	574.8	781.5	0.00	0.00	0.00
4,320.0	13.99	47.35	4,226.4	536.1	581.9	791.2	0.00	0.00	0.00
4,360.0	13.99	47.35	4,265.2	542.6	589.0	800.8	0.00	0.00	0.00
4,400.0	13.99	47.35	4,304.0	549.2	596.1	810.5	0.00	0.00	0.00
4,403.4	13.99	47.35	4,307.3	549.7	596.7	811.3	0.00	0.00	0.00
4,440.0	13.26	47.35	4,342.9	555.6	603.0	819.9	2.00	-2.00	0.00
4,442.2	13.22	47.35	4,345.0	555.9	603.4	820.4	2.00	-2.00	0.00
SHANNON									
4,480.0	12.46	47.35	4,381.9	561.6	609.6	828.8	2.00	-2.00	0.00
4,520.0	11.66	47.35	4,421.0	567.3	615.7	837.2	2.00	-2.00	0.00
4,560.0	10.86	47.35	4,460.2	572.6	621.5	845.0	2.00	-2.00	0.00
4,600.0	10.06	47.35	4,499.6	577.5	626.8	852.3	2.00	-2.00	0.00
4,640.0	9.26	47.35	4,539.0	582.0	631.8	859.0	2.00	-2.00	0.00
4,680.0	8.46	47.35	4,578.5	586.2	636.3	865.2	2.00	-2.00	0.00
4,720.0	7.66	47.35	4,618.1	590.0	640.4	870.8	2.00	-2.00	0.00
4,760.0	6.86	47.35	4,657.8	593.4	644.1	875.8	2.00	-2.00	0.00
4,800.0	6.06	47.35	4,697.6	596.5	647.4	880.3	2.00	-2.00	0.00
4,840.0	5.26	47.35	4,737.4	599.1	650.3	884.3	2.00	-2.00	0.00
4,880.0	4.46	47.35	4,777.2	601.4	652.8	887.6	2.00	-2.00	0.00
4,920.0	3.66	47.35	4,817.1	603.4	654.9	890.5	2.00	-2.00	0.00
4,960.0	2.86	47.35	4,857.1	604.9	656.6	892.8	2.00	-2.00	0.00
5,000.0	2.06	47.35	4,897.0	606.1	657.9	894.5	2.00	-2.00	0.00
5,040.0	1.26	47.35	4,937.0	606.8	658.7	895.6	2.00	-2.00	0.00
5,080.0	0.46	47.35	4,977.0	607.3	659.1	896.2	2.00	-2.00	0.00
5,103.0	0.00	0.00	5,000.0	607.3	659.2	896.3	2.00	-2.00	0.00
TARGET BHL 660'FNL, 660'FEL									
5,120.0	0.00	0.00	5,017.0	607.3	659.2	896.3	0.00	0.00	0.00
5,160.0	0.00	0.00	5,057.0	607.3	659.2	896.3	0.00	0.00	0.00
5,200.0	0.00	0.00	5,097.0	607.3	659.2	896.3	0.00	0.00	0.00
5,240.0	0.00	0.00	5,137.0	607.3	659.2	896.3	0.00	0.00	0.00
5,280.0	0.00	0.00	5,177.0	607.3	659.2	896.3	0.00	0.00	0.00
5,320.0	0.00	0.00	5,217.0	607.3	659.2	896.3	0.00	0.00	0.00
5,360.0	0.00	0.00	5,257.0	607.3	659.2	896.3	0.00	0.00	0.00
5,400.0	0.00	0.00	5,297.0	607.3	659.2	896.3	0.00	0.00	0.00
5,440.0	0.00	0.00	5,337.0	607.3	659.2	896.3	0.00	0.00	0.00
5,480.0	0.00	0.00	5,377.0	607.3	659.2	896.3	0.00	0.00	0.00
5,520.0	0.00	0.00	5,417.0	607.3	659.2	896.3	0.00	0.00	0.00
5,560.0	0.00	0.00	5,457.0	607.3	659.2	896.3	0.00	0.00	0.00
5,600.0	0.00	0.00	5,497.0	607.3	659.2	896.3	0.00	0.00	0.00
5,640.0	0.00	0.00	5,537.0	607.3	659.2	896.3	0.00	0.00	0.00
5,680.0	0.00	0.00	5,577.0	607.3	659.2	896.3	0.00	0.00	0.00
5,720.0	0.00	0.00	5,617.0	607.3	659.2	896.3	0.00	0.00	0.00
5,760.0	0.00	0.00	5,657.0	607.3	659.2	896.3	0.00	0.00	0.00
5,800.0	0.00	0.00	5,697.0	607.3	659.2	896.3	0.00	0.00	0.00
5,840.0	0.00	0.00	5,737.0	607.3	659.2	896.3	0.00	0.00	0.00
5,880.0	0.00	0.00	5,777.0	607.3	659.2	896.3	0.00	0.00	0.00
5,920.0	0.00	0.00	5,817.0	607.3	659.2	896.3	0.00	0.00	0.00
5,960.0	0.00	0.00	5,857.0	607.3	659.2	896.3	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Lamb 41-15
<b>Company:</b>	Sundance Energy, Weld County, CO	<b>TVD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T4N-R68W	<b>MD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Site:</b>	Lamb 5 Pad Sec.15-T4N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	Lamb 41-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-07-11)		

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)
6,000.0	0.00	0.00	5,897.0	607.3	659.2	896.3	0.00	0.00	0.00
6,040.0	0.00	0.00	5,937.0	607.3	659.2	896.3	0.00	0.00	0.00
6,080.0	0.00	0.00	5,977.0	607.3	659.2	896.3	0.00	0.00	0.00
6,120.0	0.00	0.00	6,017.0	607.3	659.2	896.3	0.00	0.00	0.00
6,160.0	0.00	0.00	6,057.0	607.3	659.2	896.3	0.00	0.00	0.00
6,200.0	0.00	0.00	6,097.0	607.3	659.2	896.3	0.00	0.00	0.00
6,240.0	0.00	0.00	6,137.0	607.3	659.2	896.3	0.00	0.00	0.00
6,280.0	0.00	0.00	6,177.0	607.3	659.2	896.3	0.00	0.00	0.00
6,320.0	0.00	0.00	6,217.0	607.3	659.2	896.3	0.00	0.00	0.00
6,360.0	0.00	0.00	6,257.0	607.3	659.2	896.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,297.0	607.3	659.2	896.3	0.00	0.00	0.00
6,440.0	0.00	0.00	6,337.0	607.3	659.2	896.3	0.00	0.00	0.00
6,480.0	0.00	0.00	6,377.0	607.3	659.2	896.3	0.00	0.00	0.00
6,520.0	0.00	0.00	6,417.0	607.3	659.2	896.3	0.00	0.00	0.00
6,560.0	0.00	0.00	6,457.0	607.3	659.2	896.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,497.0	607.3	659.2	896.3	0.00	0.00	0.00
6,640.0	0.00	0.00	6,537.0	607.3	659.2	896.3	0.00	0.00	0.00
6,680.0	0.00	0.00	6,577.0	607.3	659.2	896.3	0.00	0.00	0.00
6,720.0	0.00	0.00	6,617.0	607.3	659.2	896.3	0.00	0.00	0.00
6,760.0	0.00	0.00	6,657.0	607.3	659.2	896.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,697.0	607.3	659.2	896.3	0.00	0.00	0.00
6,804.0	0.00	0.00	6,701.0	607.3	659.2	896.3	0.00	0.00	0.00
<b>NIORARA - LEGAL BOX 400' X 400' 663'FNL &amp; 664'FEL</b>									
6,840.0	0.00	0.00	6,737.0	607.3	659.2	896.3	0.00	0.00	0.00
6,880.0	0.00	0.00	6,777.0	607.3	659.2	896.3	0.00	0.00	0.00
6,920.0	0.00	0.00	6,817.0	607.3	659.2	896.3	0.00	0.00	0.00
6,960.0	0.00	0.00	6,857.0	607.3	659.2	896.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,897.0	607.3	659.2	896.3	0.00	0.00	0.00
7,040.0	0.00	0.00	6,937.0	607.3	659.2	896.3	0.00	0.00	0.00
7,080.0	0.00	0.00	6,977.0	607.3	659.2	896.3	0.00	0.00	0.00
7,098.0	0.00	0.00	6,995.0	607.3	659.2	896.3	0.00	0.00	0.00
<b>CODELL</b>									
7,120.0	0.00	0.00	7,017.0	607.3	659.2	896.3	0.00	0.00	0.00
7,160.0	0.00	0.00	7,057.0	607.3	659.2	896.3	0.00	0.00	0.00
7,200.0	0.00	0.00	7,097.0	607.3	659.2	896.3	0.00	0.00	0.00
7,240.0	0.00	0.00	7,137.0	607.3	659.2	896.3	0.00	0.00	0.00
7,253.0	0.00	0.00	7,150.0	607.3	659.2	896.3	0.00	0.00	0.00

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
TARGET BHL 660'FN	0.00	0.00	5,000.0	607.3	659.2	1,359,497.57	3,144,402.97	40.319064	-104.982132
- plan hits target center									
- Point									
LEGAL BOX 400' X 400'	0.00	0.00	6,701.0	604.3	655.2	1,359,494.54	3,144,398.98	40.319056	-104.982146
- plan misses target center by 5.0ft at 6804.0ft MD (6701.0 TVD, 607.3 N, 659.2 E)									
- Rectangle (sides W400.0 H400.0 D449.0)									

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Lamb 41-15
<b>Company:</b>	Sundance Energy, Weld County, CO	<b>TVD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T4N-R68W	<b>MD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Site:</b>	Lamb 5 Pad Sec.15-T4N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	Lamb 41-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-07-11)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
500.0	500.0	8 5/8"	8-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,027.9	3,943.0	SUSSEX		0.00		
4,442.2	4,345.0	SHANNON		0.00		
6,804.0	6,701.0	NIOBRARA		0.00		
7,098.0	6,995.0	CODELL		0.00		





## **Directional**

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

**SEC.15-T4N-R68W**

**Lamb 5 Pad Sec.15-T4N-R68W**

**Lamb 41-15**

**Wellbore #1**

**Plan #1 (12-07-11)**

### **Anticollision Report**

**08 December, 2011**

<b>Company:</b>	Sundance Energy, Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well Lamb 41-15
<b>Project:</b>	SEC.15-T4N-R68W	<b>TVD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Reference Site:</b>	Lamb 5 Pad Sec.15-T4N-R68W	<b>MD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Lamb 41-15	<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 #1 (12-07-11)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (12-07-11)		
<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> 12/8/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	7,253.0	Plan #1 (12-07-11) (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>						
Lamb 5 Pad Sec.15-T4N-R68W						
Lamb 31-15 - Wellbore #1 - Plan #1 (12-07-11)	200.0	200.0	14.9	14.3	22.157	CC
Lamb 31-15 - Wellbore #1 - Plan #1 (12-07-11)	300.0	300.0	15.0	13.9	13.501	ES
Lamb 31-15 - Wellbore #1 - Plan #1 (12-07-11)	500.0	499.3	21.2	19.2	10.422	SF
Lamb 42-15 - Wellbore #1 - Plan #1 (12-07-11)	700.0	700.0	30.2	27.3	10.350	CC, ES
Lamb 42-15 - Wellbore #1 - Plan #1 (12-07-11)	900.0	899.9	35.0	31.2	9.251	SF

<b>Offset Design</b> Lamb 5 Pad Sec.15-T4N-R68W - Lamb 31-15 - Wellbore #1 - Plan #1 (12-07-11)													<b>Offset Site Error:</b>	0.0 ft
<b>Survey Program:</b> 0-MWD													<b>Offset Well Error:</b>	0.0 ft
<b>Reference Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Offset Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Semi Major Axis Reference (ft)</b>	<b>Offset (ft)</b>	<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre +N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Minimum Separation (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>	
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-14.9	0.0	14.9	14.9	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-14.9	0.0	14.9	14.7	0.22	66.472		
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-14.9	0.0	14.9	14.3	0.67	22.157	CC	
227.5	227.5	227.5	227.5	0.4	0.4	-179.49	-14.9	-0.1	14.9	14.1	0.80	18.783		
300.0	300.0	300.0	299.9	0.6	0.6	-173.34	-14.9	-1.7	15.0	13.9	1.11	13.501	ES	
400.0	400.0	399.7	399.5	0.8	0.8	-155.03	-14.9	-7.0	16.5	14.9	1.56	10.557		
500.0	500.0	499.3	498.8	1.0	1.0	-133.43	-14.6	-15.4	21.2	19.2	2.03	10.422	SF	
600.0	600.0	598.8	597.8	1.2	1.3	-114.16	-11.4	-25.5	28.0	25.5	2.52	11.092		
700.0	700.0	697.8	695.8	1.5	1.6	-98.02	-5.2	-36.9	37.5	34.5	3.03	12.388		
800.0	800.0	795.8	792.6	1.7	1.9	-133.93	4.0	-49.6	51.5	48.1	3.41	15.109		
900.0	899.8	892.7	887.7	1.9	2.3	-127.32	16.1	-63.5	70.6	66.7	3.88	18.194		
1,000.0	999.5	989.6	982.4	2.1	2.7	-123.91	30.3	-78.3	93.6	89.2	4.37	21.425		
1,100.0	1,098.7	1,086.4	1,076.9	2.4	3.1	-123.06	44.7	-93.2	118.6	113.7	4.87	24.354		
1,200.0	1,197.5	1,182.7	1,171.0	2.7	3.5	-123.52	58.9	-107.9	145.4	140.0	5.40	26.928		
1,300.0	1,295.6	1,278.3	1,264.5	3.0	3.9	-124.65	73.1	-122.6	174.2	168.3	5.97	29.181		
1,399.6	1,392.7	1,372.9	1,356.9	3.4	4.4	-126.10	87.0	-137.1	205.0	198.4	6.57	31.175		
1,500.0	1,490.1	1,467.7	1,449.5	3.8	4.8	-127.93	101.1	-151.7	237.1	229.9	7.23	32.785		
1,600.0	1,587.1	1,562.2	1,541.9	4.2	5.2	-129.31	115.1	-166.2	269.3	261.4	7.91	34.069		
1,700.0	1,684.2	1,656.7	1,634.2	4.7	5.6	-130.40	129.0	-180.7	301.6	293.0	8.59	35.116		
1,800.0	1,781.2	1,751.2	1,726.5	5.2	6.1	-131.28	143.0	-195.2	334.0	324.7	9.28	35.983		
1,900.0	1,878.2	1,845.7	1,818.8	5.6	6.5	-132.00	157.0	-209.7	366.5	356.5	9.98	36.710		
2,000.0	1,975.3	1,940.2	1,911.2	6.1	6.9	-132.61	171.0	-224.2	399.0	388.3	10.69	37.328		

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

<b>Company:</b>	Sundance Energy, Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well Lamb 41-15
<b>Project:</b>	SEC.15-T4N-R68W	<b>TVD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Reference Site:</b>	Lamb 5 Pad Sec.15-T4N-R68W	<b>MD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Lamb 41-15	<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 #1 (12-07-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Lamb 5 Pad Sec.15-T4N-R68W - Lamb 31-15 - Wellbore #1 - Plan #1 (12-07-11)												Offset Site Error:	0.0ft
Survey Program: 0-MWD												Offset Well Error:	0.0ft
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	
2,100.0	2,072.3	2,034.7	2,003.5	6.6	7.4	-133.13	185.0	-238.7	431.5	420.1	11.40	37.858	
2,200.0	2,169.3	2,129.2	2,095.8	7.1	7.8	-133.57	199.0	-253.2	464.0	451.9	12.11	38.318	
2,300.0	2,266.3	2,223.7	2,188.1	7.6	8.2	-133.95	212.9	-267.7	496.6	483.8	12.83	38.720	
2,400.0	2,363.4	2,318.2	2,280.5	8.1	8.7	-134.29	226.9	-282.2	529.2	515.7	13.54	39.075	
2,500.0	2,460.4	2,412.7	2,372.8	8.5	9.1	-134.59	240.9	-296.7	561.8	547.5	14.26	39.389	
2,600.0	2,557.4	2,507.2	2,465.1	9.0	9.5	-134.85	254.9	-311.2	594.4	579.4	14.98	39.669	
2,700.0	2,654.5	2,601.7	2,557.4	9.5	10.0	-135.09	268.9	-325.7	627.1	611.3	15.71	39.921	
2,800.0	2,751.5	2,696.2	2,649.8	10.0	10.4	-135.31	282.9	-340.2	659.7	643.3	16.43	40.148	
2,900.0	2,848.5	2,790.7	2,742.1	10.5	10.8	-135.50	296.8	-354.7	692.3	675.2	17.16	40.354	
3,000.0	2,945.6	2,885.2	2,834.4	11.0	11.3	-135.68	310.8	-369.2	725.0	707.1	17.88	40.542	
3,100.0	3,042.6	2,979.7	2,926.7	11.5	11.7	-135.84	324.8	-383.7	757.6	739.0	18.61	40.713	
3,200.0	3,139.6	3,074.2	3,019.1	12.0	12.1	-135.99	338.8	-398.2	790.3	771.0	19.34	40.870	
3,300.0	3,236.7	3,168.7	3,111.4	12.5	12.6	-136.12	352.8	-412.7	823.0	802.9	20.07	41.015	
3,400.0	3,333.7	3,263.2	3,203.7	13.0	13.0	-136.25	366.7	-427.2	855.6	834.8	20.79	41.148	
3,500.0	3,430.7	3,357.7	3,296.0	13.5	13.5	-136.37	380.7	-441.7	888.3	866.8	21.52	41.272	
3,600.0	3,527.8	3,452.2	3,388.4	14.0	13.9	-136.48	394.7	-456.2	921.0	898.7	22.25	41.387	
3,700.0	3,624.8	3,546.7	3,480.7	14.6	14.3	-136.58	408.7	-470.8	953.7	930.7	22.98	41.493	
3,800.0	3,721.8	3,641.2	3,573.0	15.1	14.8	-136.67	422.7	-485.3	986.3	962.6	23.71	41.593	
3,900.0	3,818.9	3,735.7	3,665.3	15.6	15.2	-136.76	436.7	-499.8	1,019.0	994.6	24.45	41.686	
4,000.0	3,915.9	3,830.2	3,757.7	16.1	15.6	-136.84	450.6	-514.3	1,051.7	1,026.5	25.18	41.773	
4,100.0	4,012.9	3,924.6	3,850.0	16.6	16.1	-136.92	464.6	-528.8	1,084.4	1,058.5	25.91	41.855	
4,200.0	4,110.0	4,019.1	3,942.3	17.1	16.5	-136.99	478.6	-543.3	1,117.1	1,090.5	26.64	41.932	
4,300.0	4,207.0	4,113.6	4,034.6	17.6	17.0	-137.06	492.6	-557.8	1,149.8	1,122.4	27.37	42.004	
4,403.4	4,307.3	4,211.3	4,130.1	18.1	17.4	-137.13	507.0	-572.8	1,183.6	1,155.4	28.13	42.075	
4,500.0	4,401.4	4,303.0	4,219.7	18.5	17.8	-137.57	520.6	-586.8	1,214.0	1,185.1	28.90	42.011	
4,600.0	4,499.6	4,398.7	4,313.1	18.9	18.3	-137.87	534.8	-601.5	1,243.1	1,213.5	29.62	41.964	
4,700.0	4,598.3	4,503.3	4,415.3	19.2	18.7	-138.01	550.2	-617.5	1,269.7	1,239.4	30.33	41.863	
4,800.0	4,697.6	4,645.9	4,555.6	19.4	19.2	-138.01	567.9	-635.9	1,291.5	1,260.5	31.01	41.652	
4,900.0	4,797.2	4,791.4	4,699.9	19.6	19.6	-138.01	581.1	-649.5	1,307.3	1,275.7	31.59	41.382	
5,000.0	4,897.0	4,839.0	4,847.0	19.8	19.9	-138.01	589.2	-657.9	1,316.9	1,284.8	32.06	41.073	
5,103.0	5,000.0	5,092.1	5,000.0	19.9	20.1	-90.66	592.0	-660.9	1,320.2	1,287.8	32.44	40.697	
5,200.0	5,097.0	5,189.1	5,097.0	20.0	20.2	-90.66	592.0	-660.9	1,320.2	1,287.5	32.70	40.367	
5,300.0	5,197.0	5,289.1	5,197.0	20.1	20.3	-90.66	592.0	-660.9	1,320.2	1,287.2	32.99	40.018	
5,400.0	5,297.0	5,389.1	5,297.0	20.3	20.4	-90.66	592.0	-660.9	1,320.2	1,286.9	33.28	39.671	
5,500.0	5,397.0	5,489.1	5,397.0	20.4	20.5	-90.66	592.0	-660.9	1,320.2	1,286.6	33.57	39.326	
5,600.0	5,497.0	5,589.1	5,497.0	20.5	20.7	-90.66	592.0	-660.9	1,320.2	1,286.3	33.87	38.982	
5,700.0	5,597.0	5,689.1	5,597.0	20.6	20.8	-90.66	592.0	-660.9	1,320.2	1,286.0	34.17	38.641	
5,800.0	5,697.0	5,789.1	5,697.0	20.8	20.9	-90.66	592.0	-660.9	1,320.2	1,285.7	34.47	38.302	
5,900.0	5,797.0	5,889.1	5,797.0	20.9	21.1	-90.66	592.0	-660.9	1,320.2	1,285.4	34.77	37.966	
6,000.0	5,897.0	5,989.1	5,897.0	21.0	21.2	-90.66	592.0	-660.9	1,320.2	1,285.1	35.08	37.632	
6,100.0	5,997.0	6,089.1	5,997.0	21.2	21.3	-90.66	592.0	-660.9	1,320.2	1,284.8	35.39	37.301	
6,200.0	6,097.0	6,189.1	6,097.0	21.3	21.5	-90.66	592.0	-660.9	1,320.2	1,284.5	35.71	36.972	
6,300.0	6,197.0	6,289.1	6,197.0	21.4	21.6	-90.66	592.0	-660.9	1,320.2	1,284.2	36.03	36.646	
6,400.0	6,297.0	6,389.1	6,297.0	21.6	21.7	-90.66	592.0	-660.9	1,320.2	1,283.8	36.35	36.324	
6,500.0	6,397.0	6,489.1	6,397.0	21.7	21.9	-90.66	592.0	-660.9	1,320.2	1,283.5	36.67	36.004	
6,600.0	6,497.0	6,589.1	6,497.0	21.8	22.0	-90.66	592.0	-660.9	1,320.2	1,283.2	36.99	35.687	
6,700.0	6,597.0	6,689.1	6,597.0	22.0	22.2	-90.66	592.0	-660.9	1,320.2	1,282.9	37.32	35.373	
6,800.0	6,697.0	6,789.1	6,697.0	22.1	22.3	-90.66	592.0	-660.9	1,320.2	1,282.5	37.65	35.063	
6,900.0	6,797.0	6,889.1	6,797.0	22.3	22.4	-90.66	592.0	-660.9	1,320.2	1,282.2	37.99	34.755	
7,000.0	6,897.0	6,989.1	6,897.0	22.4	22.6	-90.66	592.0	-660.9	1,320.2	1,281.9	38.32	34.451	
7,100.0	6,997.0	7,089.1	6,997.0	22.6	22.7	-90.66	592.0	-660.9	1,320.2	1,281.5	38.66	34.150	
7,200.0	7,097.0	7,189.1	7,097.0	22.7	22.9	-90.66	592.0	-660.9	1,320.2	1,281.2	39.00	33.852	

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

<b>Company:</b>	Sundance Energy, Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well Lamb 41-15
<b>Project:</b>	SEC.15-T4N-R68W	<b>TVD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Reference Site:</b>	Lamb 5 Pad Sec.15-T4N-R68W	<b>MD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Lamb 41-15	<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 #1 (12-07-11)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Lamb 5 Pad Sec.15-T4N-R68W - Lamb 31-15 - Wellbore #1 - Plan #1 (12-07-11)													<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									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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
7,253.0	7,150.0	7,242.1	7,150.0	22.8	23.0	-90.66	592.0	-660.9	1,320.2	1,281.0	39.18	33.696		

<b>Company:</b>	Sundance Energy, Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well Lamb 41-15
<b>Project:</b>	SEC.15-T4N-R68W	<b>TVD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Reference Site:</b>	Lamb 5 Pad Sec.15-T4N-R68W	<b>MD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Lamb 41-15	<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 #1 (12-07-11)	<b>Offset TVD Reference:</b>	Offset Datum

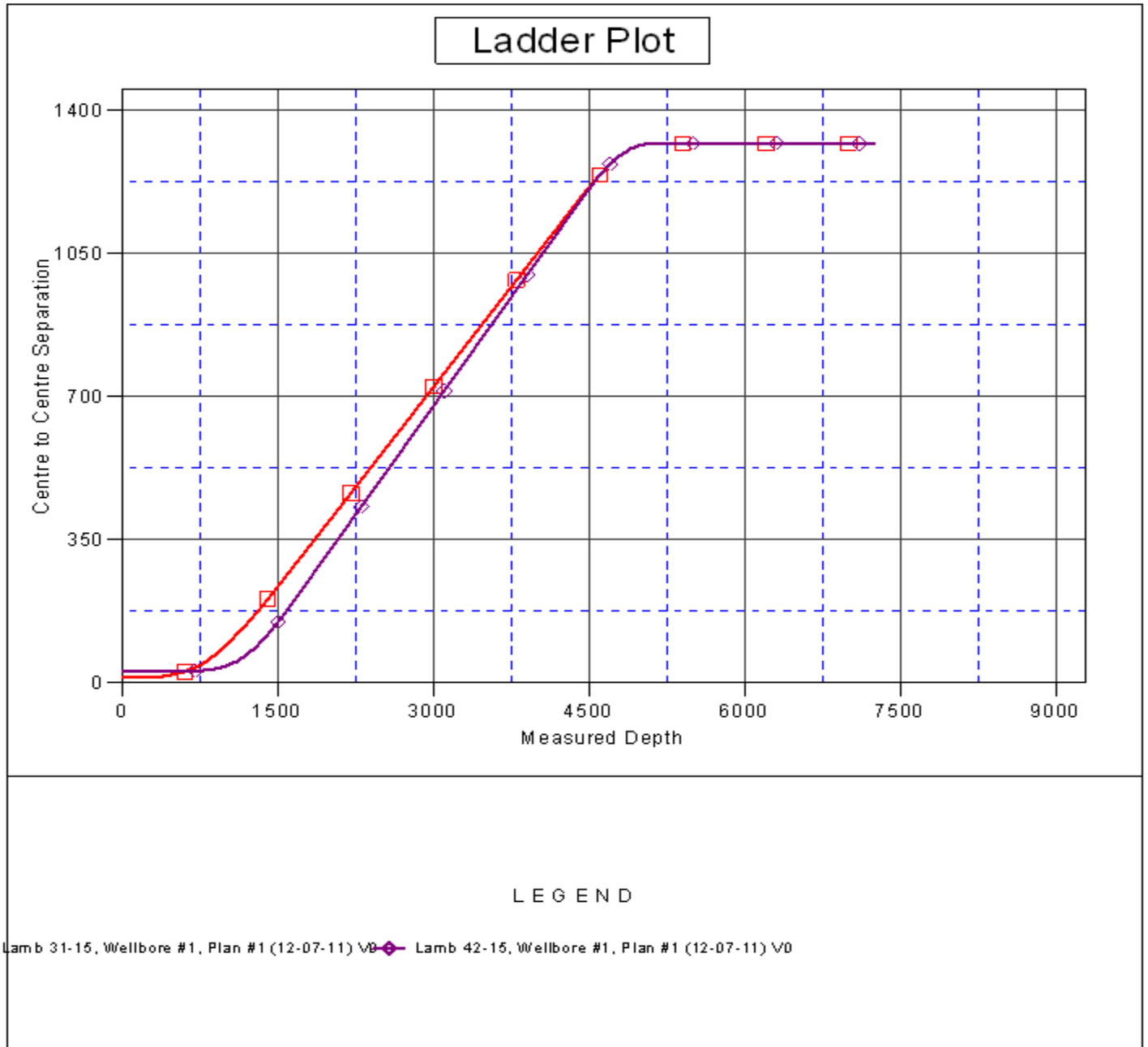
Offset Design Lamb 5 Pad Sec.15-T4N-R68W - Lamb 42-15 - Wellbore #1 - Plan #1 (12-07-11)													Offset Site Error:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	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	-30.2	0.0	30.2					
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-30.2	0.0	30.2	30.0	0.22	134.547		
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-30.2	0.0	30.2	29.6	0.67	44.849		
300.0	300.0	300.0	300.0	0.6	0.6	180.00	-30.2	0.0	30.2	29.1	1.12	26.909		
400.0	400.0	400.0	400.0	0.8	0.8	180.00	-30.2	0.0	30.2	28.7	1.57	19.221		
500.0	500.0	500.0	500.0	1.0	1.0	180.00	-30.2	0.0	30.2	28.2	2.02	14.950		
600.0	600.0	600.0	600.0	1.2	1.2	180.00	-30.2	0.0	30.2	27.8	2.47	12.232		
700.0	700.0	700.0	700.0	1.5	1.5	180.00	-30.2	0.0	30.2	27.3	2.92	10.350 CC, ES		
800.0	800.0	800.0	800.0	1.7	1.7	131.79	-30.2	1.7	31.4	28.1	3.36	9.366		
900.0	899.8	899.9	899.7	1.9	1.9	129.57	-30.2	7.0	35.0	31.2	3.79	9.251 SF		
1,000.0	999.5	999.0	998.5	2.1	2.1	127.11	-30.6	15.3	41.4	37.2	4.23	9.788		
1,100.0	1,098.7	1,096.8	1,095.7	2.4	2.3	126.79	-33.6	25.3	52.8	48.1	4.70	11.245		
1,200.0	1,197.5	1,193.5	1,191.6	2.7	2.6	127.79	-39.6	36.6	69.5	64.3	5.20	13.351		
1,300.0	1,295.6	1,288.6	1,285.4	3.0	2.8	129.14	-48.3	49.0	91.3	85.5	5.75	15.883		
1,399.6	1,392.7	1,381.4	1,376.6	3.4	3.1	130.42	-59.5	62.3	118.2	111.8	6.33	18.656		
1,500.0	1,490.1	1,472.9	1,465.9	3.8	3.5	131.48	-73.2	76.7	149.2	142.2	6.97	21.402		
1,600.0	1,587.1	1,562.4	1,552.7	4.2	3.8	131.75	-89.0	92.0	182.8	175.2	7.64	23.940		
1,700.0	1,684.2	1,655.0	1,641.9	4.7	4.3	131.71	-107.2	108.5	218.3	209.9	8.34	26.167		
1,800.0	1,781.2	1,748.5	1,732.0	5.2	4.7	131.67	-125.6	125.3	253.7	244.7	9.06	28.008		
1,900.0	1,878.2	1,842.0	1,822.2	5.6	5.2	131.64	-143.9	142.0	289.2	279.4	9.79	29.533		
2,000.0	1,975.3	1,935.5	1,912.3	6.1	5.7	131.61	-162.3	158.7	324.6	314.1	10.54	30.806		
2,100.0	2,072.3	2,029.0	2,002.4	6.6	6.2	131.59	-180.7	175.5	360.1	348.8	11.29	31.888		
2,200.0	2,169.3	2,122.5	2,092.6	7.1	6.7	131.58	-199.1	192.2	395.5	383.5	12.05	32.812		
2,300.0	2,266.3	2,216.0	2,182.7	7.6	7.2	131.57	-217.5	208.9	431.0	418.2	12.82	33.609		
2,400.0	2,363.4	2,309.5	2,272.8	8.1	7.7	131.56	-235.9	225.7	466.5	452.9	13.60	34.302		
2,500.0	2,460.4	2,403.0	2,363.0	8.5	8.2	131.55	-254.2	242.4	501.9	487.5	14.38	34.910		
2,600.0	2,557.4	2,496.5	2,453.1	9.0	8.7	131.54	-272.6	259.2	537.4	522.2	15.16	35.445		
2,700.0	2,654.5	2,590.0	2,543.3	9.5	9.2	131.53	-291.0	275.9	572.8	556.9	15.95	35.921		
2,800.0	2,751.5	2,683.5	2,633.4	10.0	9.7	131.52	-309.4	292.6	608.3	591.6	16.74	36.346		
2,900.0	2,848.5	2,777.0	2,723.5	10.5	10.3	131.52	-327.8	309.4	643.8	626.2	17.53	36.727		
3,000.0	2,945.6	2,870.5	2,813.7	11.0	10.8	131.51	-346.2	326.1	679.2	660.9	18.32	37.072		
3,100.0	3,042.6	2,964.0	2,903.8	11.5	11.3	131.51	-364.5	342.8	714.7	695.6	19.12	37.384		
3,200.0	3,139.6	3,057.5	2,993.9	12.0	11.8	131.51	-382.9	359.6	750.1	730.2	19.91	37.668		
3,300.0	3,236.7	3,151.0	3,084.1	12.5	12.3	131.50	-401.3	376.3	785.6	764.9	20.71	37.927		
3,400.0	3,333.7	3,244.5	3,174.2	13.0	12.9	131.50	-419.7	393.1	821.0	799.5	21.51	38.165		
3,500.0	3,430.7	3,338.0	3,264.3	13.5	13.4	131.50	-438.1	409.8	856.5	834.2	22.31	38.384		
3,600.0	3,527.8	3,431.5	3,354.5	14.0	13.9	131.49	-456.4	426.5	892.0	868.8	23.12	38.586		
3,700.0	3,624.8	3,525.0	3,444.6	14.6	14.5	131.49	-474.8	443.3	927.4	903.5	23.92	38.772		
3,800.0	3,721.8	3,618.5	3,534.8	15.1	15.0	131.49	-493.2	460.0	962.9	938.2	24.72	38.945		
3,900.0	3,818.9	3,712.0	3,624.9	15.6	15.5	131.48	-511.6	476.8	998.3	972.8	25.53	39.107		
4,000.0	3,915.9	3,805.5	3,715.0	16.1	16.0	131.48	-530.0	493.5	1,033.8	1,007.5	26.33	39.257		
4,100.0	4,012.9	3,899.0	3,805.2	16.6	16.6	131.48	-548.4	510.2	1,069.3	1,042.1	27.14	39.397		
4,200.0	4,110.0	3,992.5	3,895.3	17.1	17.1	131.48	-566.7	527.0	1,104.7	1,076.8	27.95	39.528		
4,300.0	4,207.0	4,086.0	3,985.4	17.6	17.6	131.48	-585.1	543.7	1,140.2	1,111.4	28.75	39.651		
4,403.4	4,307.3	4,182.7	4,078.6	18.1	18.2	131.48	-604.1	561.0	1,176.8	1,147.2	29.59	39.771		
4,500.0	4,401.4	4,273.4	4,166.1	18.5	18.7	131.94	-622.0	577.2	1,210.1	1,179.7	30.42	39.778		
4,600.0	4,499.6	4,377.1	4,266.1	18.9	19.3	132.24	-642.3	595.7	1,242.3	1,211.0	31.22	39.792		
4,700.0	4,598.3	4,518.8	4,403.9	19.2	19.8	132.38	-666.6	617.9	1,269.9	1,237.9	32.00	39.689		
4,800.0	4,697.6	4,664.3	4,546.9	19.4	20.3	132.49	-686.3	635.8	1,291.6	1,258.9	32.67	39.532		
4,900.0	4,797.2	4,812.7	4,694.0	19.6	20.7	132.56	-700.8	649.1	1,307.3	1,274.1	33.25	39.317		
5,000.0	4,897.0	4,963.2	4,844.0	19.8	20.9	132.60	-709.8	657.2	1,316.9	1,283.2	33.72	39.057		
5,103.0	5,000.0	5,119.3	5,000.0	19.9	21.1	179.96	-712.9	660.1	1,320.2	1,286.2	34.09	38.734		

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

Offset Design													Offset Site Error:	
Survey Program: 0-MWD													Offset Well Error:	
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)			
5,200.0	5,097.0	5,216.3	5,097.0	20.0	21.2	179.96	-712.9	660.1	1,320.2	1,285.9	34.33	38.456		
5,300.0	5,197.0	5,316.3	5,197.0	20.1	21.3	179.96	-712.9	660.1	1,320.2	1,285.6	34.60	38.157		
5,400.0	5,297.0	5,416.3	5,297.0	20.3	21.5	179.96	-712.9	660.1	1,320.2	1,285.4	34.87	37.859		
5,500.0	5,397.0	5,516.3	5,397.0	20.4	21.6	179.96	-712.9	660.1	1,320.2	1,285.1	35.15	37.561		
5,600.0	5,497.0	5,616.3	5,497.0	20.5	21.7	179.96	-712.9	660.1	1,320.2	1,284.8	35.43	37.264		
5,700.0	5,597.0	5,716.3	5,597.0	20.6	21.8	179.96	-712.9	660.1	1,320.2	1,284.5	35.71	36.968		
5,800.0	5,697.0	5,816.3	5,697.0	20.8	21.9	179.96	-712.9	660.1	1,320.2	1,284.2	36.00	36.674		
5,900.0	5,797.0	5,916.3	5,797.0	20.9	22.0	179.96	-712.9	660.1	1,320.2	1,284.0	36.29	36.381		
6,000.0	5,897.0	6,016.3	5,897.0	21.0	22.1	179.96	-712.9	660.1	1,320.2	1,283.7	36.58	36.089		
6,100.0	5,997.0	6,116.3	5,997.0	21.2	22.2	179.96	-712.9	660.1	1,320.2	1,283.4	36.88	35.799		
6,200.0	6,097.0	6,216.3	6,097.0	21.3	22.3	179.96	-712.9	660.1	1,320.2	1,283.1	37.18	35.510		
6,300.0	6,197.0	6,316.3	6,197.0	21.4	22.5	179.96	-712.9	660.1	1,320.2	1,282.8	37.48	35.224		
6,400.0	6,297.0	6,416.3	6,297.0	21.6	22.6	179.96	-712.9	660.1	1,320.2	1,282.5	37.79	34.939		
6,500.0	6,397.0	6,516.3	6,397.0	21.7	22.7	179.96	-712.9	660.1	1,320.2	1,282.2	38.10	34.656		
6,600.0	6,497.0	6,616.3	6,497.0	21.8	22.8	179.96	-712.9	660.1	1,320.2	1,281.8	38.41	34.376		
6,700.0	6,597.0	6,716.3	6,597.0	22.0	23.0	179.96	-712.9	660.1	1,320.2	1,281.5	38.72	34.097		
6,800.0	6,697.0	6,816.3	6,697.0	22.1	23.1	179.96	-712.9	660.1	1,320.2	1,281.2	39.04	33.821		
6,900.0	6,797.0	6,916.3	6,797.0	22.3	23.2	179.96	-712.9	660.1	1,320.2	1,280.9	39.36	33.546		
7,000.0	6,897.0	7,016.3	6,897.0	22.4	23.3	179.96	-712.9	660.1	1,320.2	1,280.6	39.68	33.275		
7,100.0	6,997.0	7,116.3	6,997.0	22.6	23.5	179.96	-712.9	660.1	1,320.2	1,280.2	40.00	33.005		
7,200.0	7,097.0	7,216.3	7,097.0	22.7	23.6	179.96	-712.9	660.1	1,320.2	1,279.9	40.33	32.738		
7,253.0	7,150.0	7,269.3	7,150.0	22.8	23.7	179.96	-712.9	660.1	1,320.2	1,279.7	40.50	32.597		

<b>Company:</b>	Sundance Energy, Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well Lamb 41-15
<b>Project:</b>	SEC.15-T4N-R68W	<b>TVD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Reference Site:</b>	Lamb 5 Pad Sec.15-T4N-R68W	<b>MD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Lamb 41-15	<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 #1 (12-07-11)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4954.0ft (Original Well Elev) Coordinates are relative to: Lamb 41-15  
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 Lamb 41-15
<b>Project:</b>	SEC.15-T4N-R68W	<b>TVD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Reference Site:</b>	Lamb 5 Pad Sec.15-T4N-R68W	<b>MD Reference:</b>	WELL @ 4954.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Lamb 41-15	<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 #1 (12-07-11)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4954.0ft (Original Well Elev) Coordinates are relative to: Lamb 41-15  
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°

