

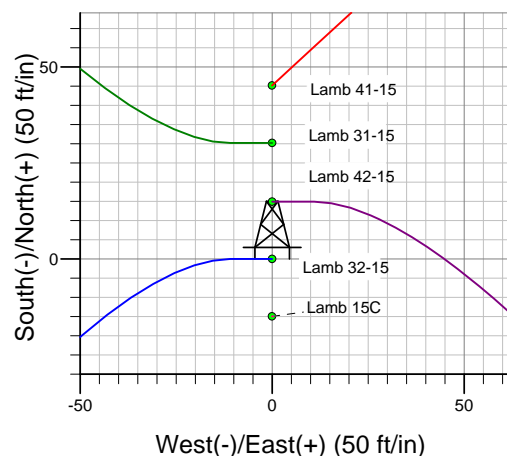
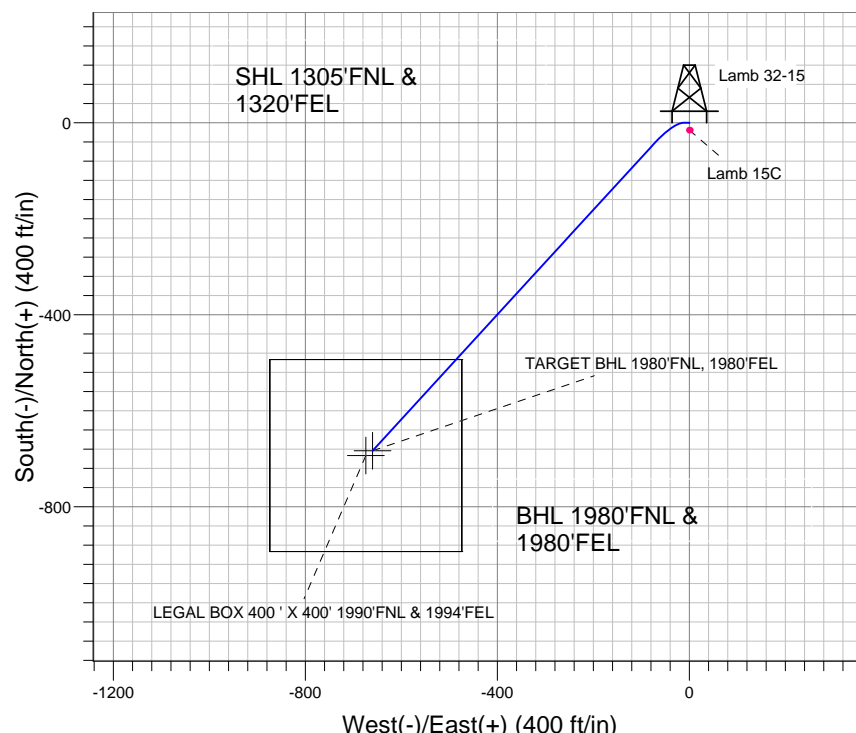
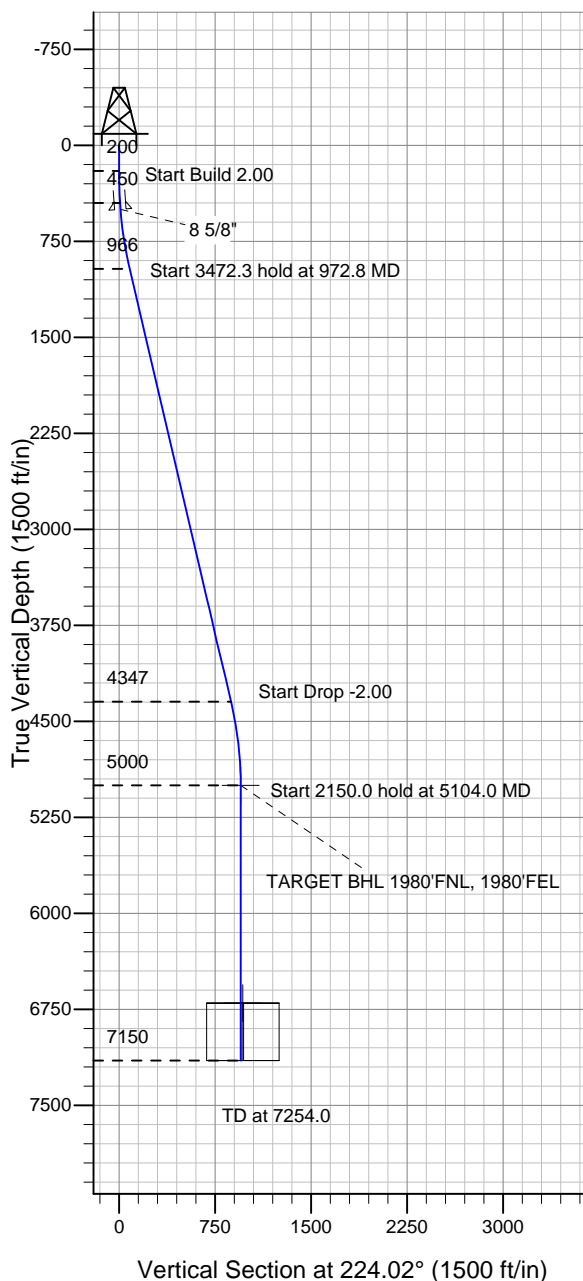
Well Name: Lamb 32-15

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	1358841.29	3143747.59	40.317273	-104.984496	

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

Sundance Energy, Weld County, CO



Lamb 5 Pad Sec.15-T4N-R68W
 Lamb 32-15
 Plan #1 (12-07-11)
 15:48, December 08 2011



Azimuths to True North
 Magnetic North: 8.91°

Magnetic Field
 Strength: 53012.6nT
 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 1980'FNL, 1980'FEL	5000.0	-683.1	-660.1	40.315398	-104.986863	Point
LEGAL BOX 400' X 400' 1990'FNL & 1994'FEL	6701.0	-693.1	-674.1	40.315370	-104.986913	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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	450.0	5.00	270.00	449.7	0.0	-10.9	2.00	270.00	7.6	
4	972.8	13.18	222.52	966.1	-44.0	-74.1	2.00	-67.78	83.2	
5	4445.1	13.18	222.52	4346.9	-627.5	-609.1	0.00	0.00	874.5	
6	5104.0	0.00	0.00	5000.0	-683.1	-660.1	2.00	180.00	949.9	TARGET BHL 1980'FNL, 1980'FEL
7	7254.0	0.00	0.00	7150.0	-683.1	-660.1	0.00	0.00	949.9	



Sundance Energy, Weld County, CO

SEC.15-T4N-R68W

Lamb 5 Pad Sec.15-T4N-R68W

Lamb 32-15

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
450.0	5.00	270.00	449.7	0.0	-10.9	2.00	2.00	0.00	270.00	
972.8	13.18	222.52	966.1	-44.0	-74.1	2.00	1.56	-9.08	-67.78	
4,445.1	13.18	222.52	4,346.9	-627.5	-609.1	0.00	0.00	0.00	0.00	
5,104.0	0.00	0.00	5,000.0	-683.1	-660.1	2.00	-2.00	0.00	180.00	TARGET BHL 1980
7,254.0	0.00	0.00	7,150.0	-683.1	-660.1	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Lamb 32-15
Company:	Sundance Energy, Weld County, CO	TVD Reference:	WELL @ 4954.0ft (Original Well Elev)
Project:	SEC.15-T4N-R68W	MD Reference:	WELL @ 4954.0ft (Original Well Elev)
Site:	Lamb 5 Pad Sec.15-T4N-R68W	North Reference:	True
Well:	Lamb 32-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	0.80	270.00	240.0	0.0	-0.3	0.2	2.00	2.00	0.00
280.0	1.60	270.00	280.0	0.0	-1.1	0.8	2.00	2.00	0.00
320.0	2.40	270.00	320.0	0.0	-2.5	1.7	2.00	2.00	0.00
360.0	3.20	270.00	359.9	0.0	-4.5	3.1	2.00	2.00	0.00
400.0	4.00	270.00	399.8	0.0	-7.0	4.8	2.00	2.00	0.00
440.0	4.80	270.00	439.7	0.0	-10.0	7.0	2.00	2.00	0.00
450.0	5.00	270.00	449.7	0.0	-10.9	7.6	2.00	2.00	0.00
480.0	5.26	263.93	479.6	-0.1	-13.6	9.5	2.00	0.85	-20.25
500.5	5.46	260.12	500.0	-0.4	-15.5	11.0	2.00	1.01	-18.52
8 5/8"									
520.0	5.68	256.79	519.4	-0.8	-17.3	12.6	2.00	1.11	-17.14
560.0	6.18	250.71	559.2	-2.0	-21.3	16.2	2.00	1.24	-15.19
600.0	6.73	245.59	598.9	-3.6	-25.4	20.3	2.00	1.39	-12.81
640.0	7.33	241.27	638.6	-5.8	-29.8	24.9	2.00	1.50	-10.79
680.0	7.97	237.62	678.3	-8.5	-34.4	30.0	2.00	1.59	-9.13
720.0	8.63	234.52	717.8	-11.8	-39.2	35.7	2.00	1.66	-7.76
760.0	9.32	231.86	757.3	-15.5	-44.2	41.9	2.00	1.71	-6.64
800.0	10.02	229.57	796.8	-19.8	-49.4	48.5	2.00	1.75	-5.73
840.0	10.73	227.57	836.1	-24.5	-54.8	55.7	2.00	1.79	-4.98
880.0	11.46	225.83	875.4	-29.8	-60.4	63.4	2.00	1.82	-4.36
920.0	12.19	224.29	914.5	-35.6	-66.2	71.6	2.00	1.84	-3.85
960.0	12.94	222.93	953.6	-41.9	-72.2	80.3	2.00	1.86	-3.41
972.8	13.18	222.52	966.1	-44.0	-74.1	83.2	2.00	1.87	-3.16
1,000.0	13.18	222.52	992.5	-48.6	-78.3	89.4	0.00	0.00	0.00
1,040.0	13.18	222.52	1,031.5	-55.3	-84.5	98.5	0.00	0.00	0.00
1,080.0	13.18	222.52	1,070.4	-62.1	-90.6	107.6	0.00	0.00	0.00
1,120.0	13.18	222.52	1,109.4	-68.8	-96.8	116.7	0.00	0.00	0.00
1,160.0	13.18	222.52	1,148.3	-75.5	-103.0	125.8	0.00	0.00	0.00
1,200.0	13.18	222.52	1,187.3	-82.2	-109.1	135.0	0.00	0.00	0.00
1,240.0	13.18	222.52	1,226.2	-88.9	-115.3	144.1	0.00	0.00	0.00
1,280.0	13.18	222.52	1,265.2	-95.7	-121.5	153.2	0.00	0.00	0.00
1,320.0	13.18	222.52	1,304.1	-102.4	-127.6	162.3	0.00	0.00	0.00
1,360.0	13.18	222.52	1,343.0	-109.1	-133.8	171.4	0.00	0.00	0.00
1,400.0	13.18	222.52	1,382.0	-115.8	-139.9	180.5	0.00	0.00	0.00
1,440.0	13.18	222.52	1,420.9	-122.5	-146.1	189.7	0.00	0.00	0.00
1,480.0	13.18	222.52	1,459.9	-129.3	-152.3	198.8	0.00	0.00	0.00
1,520.0	13.18	222.52	1,498.8	-136.0	-158.4	207.9	0.00	0.00	0.00
1,560.0	13.18	222.52	1,537.8	-142.7	-164.6	217.0	0.00	0.00	0.00
1,600.0	13.18	222.52	1,576.7	-149.4	-170.8	226.1	0.00	0.00	0.00
1,640.0	13.18	222.52	1,615.7	-156.1	-176.9	235.2	0.00	0.00	0.00
1,680.0	13.18	222.52	1,654.6	-162.9	-183.1	244.3	0.00	0.00	0.00
1,720.0	13.18	222.52	1,693.6	-169.6	-189.3	253.5	0.00	0.00	0.00
1,760.0	13.18	222.52	1,732.5	-176.3	-195.4	262.6	0.00	0.00	0.00
1,800.0	13.18	222.52	1,771.5	-183.0	-201.6	271.7	0.00	0.00	0.00
1,840.0	13.18	222.52	1,810.4	-189.7	-207.7	280.8	0.00	0.00	0.00
1,880.0	13.18	222.52	1,849.4	-196.5	-213.9	289.9	0.00	0.00	0.00
1,920.0	13.18	222.52	1,888.3	-203.2	-220.1	299.0	0.00	0.00	0.00
1,960.0	13.18	222.52	1,927.2	-209.9	-226.2	308.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Lamb 32-15
Company:	Sundance Energy, Weld County, CO	TVD Reference:	WELL @ 4954.0ft (Original Well Elev)
Project:	SEC.15-T4N-R68W	MD Reference:	WELL @ 4954.0ft (Original Well Elev)
Site:	Lamb 5 Pad Sec.15-T4N-R68W	North Reference:	True
Well:	Lamb 32-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	13.18	222.52	1,966.2	-216.6	-232.4	317.3	0.00	0.00	0.00
2,040.0	13.18	222.52	2,005.1	-223.4	-238.6	326.4	0.00	0.00	0.00
2,080.0	13.18	222.52	2,044.1	-230.1	-244.7	335.5	0.00	0.00	0.00
2,120.0	13.18	222.52	2,083.0	-236.8	-250.9	344.6	0.00	0.00	0.00
2,160.0	13.18	222.52	2,122.0	-243.5	-257.0	353.7	0.00	0.00	0.00
2,200.0	13.18	222.52	2,160.9	-250.2	-263.2	362.8	0.00	0.00	0.00
2,240.0	13.18	222.52	2,199.9	-257.0	-269.4	372.0	0.00	0.00	0.00
2,280.0	13.18	222.52	2,238.8	-263.7	-275.5	381.1	0.00	0.00	0.00
2,320.0	13.18	222.52	2,277.8	-270.4	-281.7	390.2	0.00	0.00	0.00
2,360.0	13.18	222.52	2,316.7	-277.1	-287.9	399.3	0.00	0.00	0.00
2,400.0	13.18	222.52	2,355.7	-283.8	-294.0	408.4	0.00	0.00	0.00
2,440.0	13.18	222.52	2,394.6	-290.6	-300.2	417.5	0.00	0.00	0.00
2,480.0	13.18	222.52	2,433.6	-297.3	-306.3	426.7	0.00	0.00	0.00
2,520.0	13.18	222.52	2,472.5	-304.0	-312.5	435.8	0.00	0.00	0.00
2,560.0	13.18	222.52	2,511.4	-310.7	-318.7	444.9	0.00	0.00	0.00
2,600.0	13.18	222.52	2,550.4	-317.4	-324.8	454.0	0.00	0.00	0.00
2,640.0	13.18	222.52	2,589.3	-324.2	-331.0	463.1	0.00	0.00	0.00
2,680.0	13.18	222.52	2,628.3	-330.9	-337.2	472.2	0.00	0.00	0.00
2,720.0	13.18	222.52	2,667.2	-337.6	-343.3	481.3	0.00	0.00	0.00
2,760.0	13.18	222.52	2,706.2	-344.3	-349.5	490.5	0.00	0.00	0.00
2,800.0	13.18	222.52	2,745.1	-351.0	-355.6	499.6	0.00	0.00	0.00
2,840.0	13.18	222.52	2,784.1	-357.8	-361.8	508.7	0.00	0.00	0.00
2,880.0	13.18	222.52	2,823.0	-364.5	-368.0	517.8	0.00	0.00	0.00
2,920.0	13.18	222.52	2,862.0	-371.2	-374.1	526.9	0.00	0.00	0.00
2,960.0	13.18	222.52	2,900.9	-377.9	-380.3	536.0	0.00	0.00	0.00
3,000.0	13.18	222.52	2,939.9	-384.6	-386.5	545.2	0.00	0.00	0.00
3,040.0	13.18	222.52	2,978.8	-391.4	-392.6	554.3	0.00	0.00	0.00
3,080.0	13.18	222.52	3,017.8	-398.1	-398.8	563.4	0.00	0.00	0.00
3,120.0	13.18	222.52	3,056.7	-404.8	-404.9	572.5	0.00	0.00	0.00
3,160.0	13.18	222.52	3,095.6	-411.5	-411.1	581.6	0.00	0.00	0.00
3,200.0	13.18	222.52	3,134.6	-418.3	-417.3	590.7	0.00	0.00	0.00
3,240.0	13.18	222.52	3,173.5	-425.0	-423.4	599.8	0.00	0.00	0.00
3,280.0	13.18	222.52	3,212.5	-431.7	-429.6	609.0	0.00	0.00	0.00
3,320.0	13.18	222.52	3,251.4	-438.4	-435.8	618.1	0.00	0.00	0.00
3,360.0	13.18	222.52	3,290.4	-445.1	-441.9	627.2	0.00	0.00	0.00
3,400.0	13.18	222.52	3,329.3	-451.9	-448.1	636.3	0.00	0.00	0.00
3,440.0	13.18	222.52	3,368.3	-458.6	-454.2	645.4	0.00	0.00	0.00
3,480.0	13.18	222.52	3,407.2	-465.3	-460.4	654.5	0.00	0.00	0.00
3,520.0	13.18	222.52	3,446.2	-472.0	-466.6	663.7	0.00	0.00	0.00
3,560.0	13.18	222.52	3,485.1	-478.7	-472.7	672.8	0.00	0.00	0.00
3,600.0	13.18	222.52	3,524.1	-485.5	-478.9	681.9	0.00	0.00	0.00
3,640.0	13.18	222.52	3,563.0	-492.2	-485.1	691.0	0.00	0.00	0.00
3,680.0	13.18	222.52	3,602.0	-498.9	-491.2	700.1	0.00	0.00	0.00
3,720.0	13.18	222.52	3,640.9	-505.6	-497.4	709.2	0.00	0.00	0.00
3,760.0	13.18	222.52	3,679.9	-512.3	-503.6	718.3	0.00	0.00	0.00
3,800.0	13.18	222.52	3,718.8	-519.1	-509.7	727.5	0.00	0.00	0.00
3,840.0	13.18	222.52	3,757.7	-525.8	-515.9	736.6	0.00	0.00	0.00
3,880.0	13.18	222.52	3,796.7	-532.5	-522.0	745.7	0.00	0.00	0.00
3,920.0	13.18	222.52	3,835.6	-539.2	-528.2	754.8	0.00	0.00	0.00
3,960.0	13.18	222.52	3,874.6	-545.9	-534.4	763.9	0.00	0.00	0.00
4,000.0	13.18	222.52	3,913.5	-552.7	-540.5	773.0	0.00	0.00	0.00
4,030.3	13.18	222.52	3,943.0	-557.8	-545.2	779.9	0.00	0.00	0.00
SUSSEX									

Database:	Landmark	Local Co-ordinate Reference:	Well Lamb 32-15
Company:	Sundance Energy, Weld County, CO	TVD Reference:	WELL @ 4954.0ft (Original Well Elev)
Project:	SEC.15-T4N-R68W	MD Reference:	WELL @ 4954.0ft (Original Well Elev)
Site:	Lamb 5 Pad Sec.15-T4N-R68W	North Reference:	True
Well:	Lamb 32-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	13.18	222.52	3,952.5	-559.4	-546.7	782.2	0.00	0.00	0.00
4,080.0	13.18	222.52	3,991.4	-566.1	-552.9	791.3	0.00	0.00	0.00
4,120.0	13.18	222.52	4,030.4	-572.8	-559.0	800.4	0.00	0.00	0.00
4,160.0	13.18	222.52	4,069.3	-579.6	-565.2	809.5	0.00	0.00	0.00
4,200.0	13.18	222.52	4,108.3	-586.3	-571.3	818.6	0.00	0.00	0.00
4,240.0	13.18	222.52	4,147.2	-593.0	-577.5	827.7	0.00	0.00	0.00
4,280.0	13.18	222.52	4,186.2	-599.7	-583.7	836.8	0.00	0.00	0.00
4,320.0	13.18	222.52	4,225.1	-606.4	-589.8	846.0	0.00	0.00	0.00
4,360.0	13.18	222.52	4,264.1	-613.2	-596.0	855.1	0.00	0.00	0.00
4,400.0	13.18	222.52	4,303.0	-619.9	-602.2	864.2	0.00	0.00	0.00
4,440.0	13.18	222.52	4,341.9	-626.6	-608.3	873.3	0.00	0.00	0.00
4,443.1	13.18	222.52	4,345.0	-627.1	-608.8	874.0	0.00	0.00	0.00
SHANNON									
4,445.1	13.18	222.52	4,346.9	-627.5	-609.1	874.5	0.00	0.00	0.00
4,480.0	12.48	222.52	4,380.9	-633.2	-614.3	882.2	2.00	-2.00	0.00
4,520.0	11.68	222.52	4,420.1	-639.3	-620.0	890.6	2.00	-2.00	0.00
4,560.0	10.88	222.52	4,459.3	-645.1	-625.3	898.4	2.00	-2.00	0.00
4,600.0	10.08	222.52	4,498.6	-650.5	-630.2	905.7	2.00	-2.00	0.00
4,640.0	9.28	222.52	4,538.0	-655.4	-634.7	912.4	2.00	-2.00	0.00
4,680.0	8.48	222.52	4,577.6	-660.0	-638.9	918.6	2.00	-2.00	0.00
4,720.0	7.68	222.52	4,617.2	-664.1	-642.7	924.2	2.00	-2.00	0.00
4,760.0	6.88	222.52	4,656.8	-667.9	-646.1	929.3	2.00	-2.00	0.00
4,800.0	6.08	222.52	4,696.6	-671.2	-649.2	933.8	2.00	-2.00	0.00
4,840.0	5.28	222.52	4,736.4	-674.1	-651.9	937.7	2.00	-2.00	0.00
4,880.0	4.48	222.52	4,776.2	-676.6	-654.2	941.1	2.00	-2.00	0.00
4,920.0	3.68	222.52	4,816.1	-678.7	-656.1	944.0	2.00	-2.00	0.00
4,960.0	2.88	222.52	4,856.1	-680.4	-657.6	946.3	2.00	-2.00	0.00
5,000.0	2.08	222.52	4,896.0	-681.7	-658.8	948.0	2.00	-2.00	0.00
5,040.0	1.28	222.52	4,936.0	-682.5	-659.6	949.2	2.00	-2.00	0.00
5,080.0	0.48	222.52	4,976.0	-683.0	-660.0	949.8	2.00	-2.00	0.00
5,104.0	0.00	0.00	5,000.0	-683.1	-660.1	949.9	2.00	-2.00	0.00
TARGET BHL 1980'FNL, 1980'FEL									
5,120.0	0.00	0.00	5,016.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,160.0	0.00	0.00	5,056.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,200.0	0.00	0.00	5,096.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,240.0	0.00	0.00	5,136.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,280.0	0.00	0.00	5,176.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,320.0	0.00	0.00	5,216.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,360.0	0.00	0.00	5,256.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,400.0	0.00	0.00	5,296.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,440.0	0.00	0.00	5,336.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,480.0	0.00	0.00	5,376.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,520.0	0.00	0.00	5,416.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,560.0	0.00	0.00	5,456.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,600.0	0.00	0.00	5,496.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,640.0	0.00	0.00	5,536.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,680.0	0.00	0.00	5,576.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,720.0	0.00	0.00	5,616.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,760.0	0.00	0.00	5,656.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,800.0	0.00	0.00	5,696.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,840.0	0.00	0.00	5,736.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,880.0	0.00	0.00	5,776.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,920.0	0.00	0.00	5,816.0	-683.1	-660.1	949.9	0.00	0.00	0.00
5,960.0	0.00	0.00	5,856.0	-683.1	-660.1	949.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Lamb 32-15
Company:	Sundance Energy, Weld County, CO	TVD Reference:	WELL @ 4954.0ft (Original Well Elev)
Project:	SEC.15-T4N-R68W	MD Reference:	WELL @ 4954.0ft (Original Well Elev)
Site:	Lamb 5 Pad Sec.15-T4N-R68W	North Reference:	True
Well:	Lamb 32-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	5,896.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,040.0	0.00	0.00	5,936.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,080.0	0.00	0.00	5,976.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,120.0	0.00	0.00	6,016.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,160.0	0.00	0.00	6,056.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,200.0	0.00	0.00	6,096.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,240.0	0.00	0.00	6,136.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,280.0	0.00	0.00	6,176.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,320.0	0.00	0.00	6,216.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,360.0	0.00	0.00	6,256.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,400.0	0.00	0.00	6,296.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,440.0	0.00	0.00	6,336.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,480.0	0.00	0.00	6,376.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,520.0	0.00	0.00	6,416.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,560.0	0.00	0.00	6,456.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,600.0	0.00	0.00	6,496.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,640.0	0.00	0.00	6,536.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,680.0	0.00	0.00	6,576.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,720.0	0.00	0.00	6,616.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,760.0	0.00	0.00	6,656.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,800.0	0.00	0.00	6,696.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,805.0	0.00	0.00	6,701.0	-683.1	-660.1	949.9	0.00	0.00	0.00
NIOBRARA - LEGAL BOX 400' X 400' 1990'FNL & 1994'FEL									
6,840.0	0.00	0.00	6,736.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,880.0	0.00	0.00	6,776.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,920.0	0.00	0.00	6,816.0	-683.1	-660.1	949.9	0.00	0.00	0.00
6,960.0	0.00	0.00	6,856.0	-683.1	-660.1	949.9	0.00	0.00	0.00
7,000.0	0.00	0.00	6,896.0	-683.1	-660.1	949.9	0.00	0.00	0.00
7,040.0	0.00	0.00	6,936.0	-683.1	-660.1	949.9	0.00	0.00	0.00
7,080.0	0.00	0.00	6,976.0	-683.1	-660.1	949.9	0.00	0.00	0.00
7,099.0	0.00	0.00	6,995.0	-683.1	-660.1	949.9	0.00	0.00	0.00
CODELL									
7,120.0	0.00	0.00	7,016.0	-683.1	-660.1	949.9	0.00	0.00	0.00
7,160.0	0.00	0.00	7,056.0	-683.1	-660.1	949.9	0.00	0.00	0.00
7,200.0	0.00	0.00	7,096.0	-683.1	-660.1	949.9	0.00	0.00	0.00
7,240.0	0.00	0.00	7,136.0	-683.1	-660.1	949.9	0.00	0.00	0.00
7,254.0	0.00	0.00	7,150.0	-683.1	-660.1	949.9	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									
LEGAL BOX 400' X 4	0.00	0.00	6,701.0	-693.1	-674.1	1,358,144.31	3,143,077.56	40.315370	-104.986913
- plan misses target center by 17.2ft at 6805.0ft MD (6701.0 TVD, -683.1 N, -660.1 E)									
- Rectangle (sides W400.0 H400.0 D449.0)									
TARGET BHL 1980'F	0.00	0.00	5,000.0	-683.1	-660.1	1,358,154.44	3,143,091.52	40.315398	-104.986863
- plan hits target center									
- Point									

Database:	Landmark	Local Co-ordinate Reference:	Well Lamb 32-15
Company:	Sundance Energy, Weld County, CO	TVD Reference:	WELL @ 4954.0ft (Original Well Elev)
Project:	SEC.15-T4N-R68W	MD Reference:	WELL @ 4954.0ft (Original Well Elev)
Site:	Lamb 5 Pad Sec.15-T4N-R68W	North Reference:	True
Well:	Lamb 32-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (12-07-11)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
500.5	500.0	8 5/8"	8-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,030.3	3,943.0	SUSSEX		0.00		
4,443.1	4,345.0	SHANNON		0.00		
6,805.0	6,701.0	NIOBRARA		0.00		
7,099.0	6,995.0	CODELL		0.00		



Directional

Sundance Energy, Weld County, CO

SEC.15-T4N-R68W

Lamb 5 Pad Sec.15-T4N-R68W

Lamb 32-15

Wellbore #1

Plan #1 (12-07-11)

Anticollision Report

08 December, 2011

Company:	Sundance Energy, Weld County, CO	Local Co-ordinate Reference:	Well Lamb 32-15
Project:	SEC.15-T4N-R68W	TVD Reference:	WELL @ 4954.0ft (Original Well Elev)
Reference Site:	Lamb 5 Pad Sec.15-T4N-R68W	MD Reference:	WELL @ 4954.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Lamb 32-15	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 (12-07-11)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (12-07-11)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 12/8/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	7,253.1	Plan #1 (12-07-11) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Lamb 5 Pad Sec.15-T4N-R68W						
Lamb 15C - Wellbore #1 - Design #1	200.0	200.0	14.9	14.3	22.145	CC
Lamb 15C - Wellbore #1 - Design #1	300.0	300.0	15.0	13.9	13.497	ES
Lamb 15C - Wellbore #1 - Design #1	450.0	449.7	18.5	16.7	10.291	SF
Lamb 42-15 - Wellbore #1 - Plan #1 (12-07-11)	200.0	200.0	14.9	14.3	22.151	CC
Lamb 42-15 - Wellbore #1 - Plan #1 (12-07-11)	300.0	300.0	15.0	13.9	13.501	ES
Lamb 42-15 - Wellbore #1 - Plan #1 (12-07-11)	450.0	449.7	18.5	16.7	10.311	SF

Offset Design													Lamb 5 Pad Sec.15-T4N-R68W - Lamb 15C - Wellbore #1 - Design #1		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	-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	66.436					
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-14.9	0.0	14.9	14.3	0.67	22.145	CC				
227.5	227.5	227.5	227.5	0.4	0.4	-90.51	-14.9	0.0	14.9	14.1	0.80	18.775					
300.0	300.0	300.0	300.0	0.6	0.6	-96.66	-14.9	0.0	15.0	13.9	1.11	13.497	ES				
400.0	399.8	399.8	399.8	0.8	0.8	-114.99	-14.9	0.0	16.5	14.9	1.56	10.544					
450.0	449.7	449.7	449.7	0.9	0.9	-126.03	-14.9	0.0	18.5	16.7	1.80	10.291	SF				
500.0	499.5	499.5	499.5	1.0	1.0	-126.80	-14.9	0.0	21.2	19.2	2.02	10.490					
600.0	598.9	598.9	598.9	1.3	1.2	-131.45	-14.9	0.0	27.8	25.4	2.46	11.317					
700.0	698.1	698.1	698.1	1.6	1.5	-138.21	-14.9	0.0	37.1	34.2	2.91	12.758					
800.0	796.8	796.8	796.8	1.9	1.7	-144.75	-14.9	0.0	49.6	46.3	3.36	14.775					
900.0	895.0	895.0	895.0	2.3	1.9	-150.16	-14.9	0.0	65.7	61.9	3.81	17.231					
972.8	966.1	966.1	966.1	2.6	2.1	-153.35	-14.9	0.0	79.6	75.5	4.14	19.218					
1,000.0	992.5	992.5	992.5	2.7	2.1	-155.21	-14.9	0.0	85.3	81.0	4.27	19.970					
1,100.0	1,089.9	1,089.9	1,089.9	3.1	2.3	-160.35	-14.9	0.0	106.5	101.7	4.73	22.492					
1,200.0	1,187.3	1,187.3	1,187.3	3.6	2.6	-163.77	-14.9	0.0	128.2	123.0	5.20	24.645					
1,300.0	1,284.6	1,284.6	1,284.6	4.1	2.8	-166.19	-14.9	0.0	150.3	144.6	5.67	26.480					
1,400.0	1,382.0	1,382.0	1,382.0	4.6	3.0	-168.00	-14.9	0.0	172.5	166.4	6.15	28.050					
1,500.0	1,479.4	1,479.4	1,479.4	5.0	3.2	-169.39	-14.9	0.0	194.9	188.3	6.63	29.404					
1,600.0	1,576.7	1,576.7	1,576.7	5.5	3.4	-170.50	-14.9	0.0	217.4	210.3	7.11	30.579					
1,700.0	1,674.1	1,674.1	1,674.1	6.0	3.7	-171.40	-14.9	0.0	239.9	232.3	7.59	31.609					

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

Company:	Sundance Energy, Weld County, CO	Local Co-ordinate Reference:	Well Lamb 32-15
Project:	SEC.15-T4N-R68W	TVD Reference:	WELL @ 4954.0ft (Original Well Elev)
Reference Site:	Lamb 5 Pad Sec.15-T4N-R68W	MD Reference:	WELL @ 4954.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Lamb 32-15	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 (12-07-11)	Offset TVD Reference:	Offset Datum

Offset Design												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	
1,800.0	1,771.5	1,771.5	1,771.5	6.5	3.9	-172.14	-14.9	0.0	262.5	254.4	8.07	32.516	
1,900.0	1,868.8	1,868.8	1,868.8	7.0	4.1	-172.77	-14.9	0.0	285.1	276.5	8.56	33.321	
2,000.0	1,966.2	1,966.2	1,966.2	7.5	4.3	-173.30	-14.9	0.0	307.7	298.7	9.04	34.040	
2,100.0	2,063.6	2,063.6	2,063.6	8.0	4.5	-173.76	-14.9	0.0	330.4	320.8	9.52	34.686	
2,200.0	2,160.9	2,160.9	2,160.9	8.5	4.7	-174.16	-14.9	0.0	353.0	343.0	10.01	35.268	
2,300.0	2,258.3	2,258.3	2,258.3	9.0	5.0	-174.52	-14.9	0.0	375.7	365.2	10.50	35.797	
2,400.0	2,355.7	2,355.7	2,355.7	9.4	5.2	-174.83	-14.9	0.0	398.4	387.5	10.98	36.278	
2,500.0	2,453.0	2,453.0	2,453.0	9.9	5.4	-175.11	-14.9	0.0	421.2	409.7	11.47	36.718	
2,600.0	2,550.4	2,550.4	2,550.4	10.4	5.6	-175.36	-14.9	0.0	443.9	431.9	11.96	37.121	
2,700.0	2,647.8	2,647.8	2,647.8	10.9	5.8	-175.59	-14.9	0.0	466.6	454.2	12.45	37.493	
2,800.0	2,745.1	2,745.1	2,745.1	11.4	6.1	-175.79	-14.9	0.0	489.3	476.4	12.93	37.836	
2,900.0	2,842.5	2,842.5	2,842.5	11.9	6.3	-175.98	-14.9	0.0	512.1	498.7	13.42	38.154	
3,000.0	2,939.9	2,939.9	2,939.9	12.4	6.5	-176.15	-14.9	0.0	534.8	520.9	13.91	38.450	
3,100.0	3,037.2	3,037.2	3,037.2	12.9	6.7	-176.31	-14.9	0.0	557.6	543.2	14.40	38.725	
3,200.0	3,134.6	3,134.6	3,134.6	13.4	6.9	-176.45	-14.9	0.0	580.3	565.4	14.89	38.981	
3,300.0	3,232.0	3,232.0	3,232.0	13.9	7.2	-176.59	-14.9	0.0	603.1	587.7	15.38	39.221	
3,400.0	3,329.3	3,329.3	3,329.3	14.4	7.4	-176.71	-14.9	0.0	625.8	610.0	15.87	39.446	
3,500.0	3,426.7	3,426.7	3,426.7	14.9	7.6	-176.83	-14.9	0.0	648.6	632.3	16.36	39.658	
3,600.0	3,524.1	3,524.1	3,524.1	15.4	7.8	-176.93	-14.9	0.0	671.4	654.5	16.84	39.857	
3,700.0	3,621.4	3,621.4	3,621.4	15.9	8.0	-177.03	-14.9	0.0	694.1	676.8	17.33	40.044	
3,800.0	3,718.8	3,718.8	3,718.8	16.4	8.2	-177.13	-14.9	0.0	716.9	699.1	17.82	40.221	
3,900.0	3,816.2	3,816.2	3,816.2	16.9	8.5	-177.22	-14.9	0.0	739.7	721.4	18.31	40.388	
4,000.0	3,913.5	3,913.5	3,913.5	17.4	8.7	-177.30	-14.9	0.0	762.5	743.6	18.80	40.547	
4,100.0	4,010.9	4,010.9	4,010.9	17.9	8.9	-177.38	-14.9	0.0	785.2	765.9	19.29	40.697	
4,200.0	4,108.3	4,108.3	4,108.3	18.4	9.1	-177.45	-14.9	0.0	808.0	788.2	19.78	40.839	
4,300.0	4,205.6	4,205.6	4,205.6	18.9	9.3	-177.52	-14.9	0.0	830.8	810.5	20.28	40.975	
4,400.0	4,303.0	4,303.0	4,303.0	19.4	9.6	-177.59	-14.9	0.0	853.6	832.8	20.77	41.104	
4,445.1	4,346.9	4,346.9	4,346.9	19.6	9.7	-177.62	-14.9	0.0	863.8	842.8	20.99	41.160	
4,500.0	4,400.5	4,400.5	4,400.5	19.8	9.8	-177.66	-14.9	0.0	875.8	854.5	21.28	41.160	
4,600.0	4,498.6	4,498.6	4,498.6	20.1	10.0	-177.73	-14.9	0.0	895.0	873.3	21.76	41.123	
4,700.0	4,597.4	4,597.4	4,597.4	20.4	10.2	-177.78	-14.9	0.0	910.8	888.6	22.22	40.991	
4,800.0	4,696.6	4,696.6	4,696.6	20.6	10.4	-177.82	-14.9	0.0	923.1	900.5	22.64	40.771	
4,900.0	4,796.2	4,796.2	4,796.2	20.8	10.7	-177.84	-14.9	0.0	932.0	908.9	23.03	40.468	
5,000.0	4,896.0	4,896.0	4,896.0	21.0	10.9	-177.86	-14.9	0.0	937.3	913.9	23.38	40.086	
5,104.0	5,000.0	5,000.0	5,000.0	21.1	11.1	44.65	-14.9	0.0	939.2	915.5	23.73	39.583	
5,200.0	5,096.0	5,096.0	5,096.0	21.2	11.3	44.65	-14.9	0.0	939.2	915.1	24.11	38.962	
5,300.0	5,196.0	5,196.0	5,196.0	21.3	11.6	44.65	-14.9	0.0	939.2	914.7	24.49	38.352	
5,400.0	5,296.0	5,296.0	5,296.0	21.4	11.8	44.65	-14.9	0.0	939.2	914.3	24.87	37.758	
5,500.0	5,396.0	5,396.0	5,396.0	21.5	12.0	44.65	-14.9	0.0	939.2	913.9	25.26	37.179	
5,600.0	5,496.0	5,496.0	5,496.0	21.6	12.2	44.65	-14.9	0.0	939.2	913.6	25.65	36.615	
5,700.0	5,596.0	5,596.0	5,596.0	21.7	12.5	44.65	-14.9	0.0	939.2	913.2	26.04	36.066	
5,800.0	5,696.0	5,696.0	5,696.0	21.8	12.7	44.65	-14.9	0.0	939.2	912.8	26.43	35.530	
5,900.0	5,796.0	5,796.0	5,796.0	21.9	12.9	44.65	-14.9	0.0	939.2	912.4	26.83	35.008	
6,000.0	5,896.0	5,896.0	5,896.0	22.0	13.1	44.65	-14.9	0.0	939.2	912.0	27.22	34.500	
6,100.0	5,996.0	5,996.0	5,996.0	22.1	13.4	44.65	-14.9	0.0	939.2	911.6	27.62	34.004	
6,200.0	6,096.0	6,096.0	6,096.0	22.2	13.6	44.65	-14.9	0.0	939.2	911.2	28.02	33.520	
6,300.0	6,196.0	6,196.0	6,196.0	22.4	13.8	44.65	-14.9	0.0	939.2	910.8	28.42	33.048	
6,400.0	6,296.0	6,296.0	6,296.0	22.5	14.0	44.65	-14.9	0.0	939.2	910.4	28.82	32.588	
6,500.0	6,396.0	6,396.0	6,396.0	22.6	14.3	44.65	-14.9	0.0	939.2	910.0	29.22	32.139	
6,600.0	6,496.0	6,496.0	6,496.0	22.7	14.5	44.65	-14.9	0.0	939.2	909.6	29.63	31.701	
6,700.0	6,596.0	6,596.0	6,596.0	22.8	14.7	44.65	-14.9	0.0	939.2	909.2	30.03	31.273	
6,800.0	6,696.0	6,696.0	6,696.0	23.0	14.9	44.65	-14.9	0.0	939.2	908.8	30.44	30.856	

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

Company:	Sundance Energy, Weld County, CO	Local Co-ordinate Reference:	Well Lamb 32-15
Project:	SEC.15-T4N-R68W	TVD Reference:	WELL @ 4954.0ft (Original Well Elev)
Reference Site:	Lamb 5 Pad Sec.15-T4N-R68W	MD Reference:	WELL @ 4954.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Lamb 32-15	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 (12-07-11)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:		0.0 ft	
Survey Program: 0-MWD												Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance								
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)				
6,900.0	6,796.0	6,796.0	6,796.0	23.1	15.2	44.65	-14.9	0.0	939.2	908.4	30.85	30.449			
7,000.0	6,896.0	6,896.0	6,896.0	23.2	15.4	44.65	-14.9	0.0	939.2	908.0	31.25	30.051			
7,100.0	6,996.0	6,996.0	6,996.0	23.3	15.6	44.65	-14.9	0.0	939.2	907.5	31.66	29.662			
7,200.0	7,096.0	7,096.0	7,096.0	23.5	15.8	44.65	-14.9	0.0	939.2	907.1	32.07	29.283			
7,254.0	7,150.0	7,150.0	7,150.0	23.5	16.0	44.65	-14.9	0.0	939.2	907.0	32.25	29.127			

Company:	Sundance Energy, Weld County, CO	Local Co-ordinate Reference:	Well Lamb 32-15
Project:	SEC.15-T4N-R68W	TVD Reference:	WELL @ 4954.0ft (Original Well Elev)
Reference Site:	Lamb 5 Pad Sec.15-T4N-R68W	MD Reference:	WELL @ 4954.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Lamb 32-15	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 (12-07-11)	Offset TVD Reference:	Offset Datum

Offset Design Lamb 5 Pad Sec.15-T4N-R68W - Lamb 42-15 - Wellbore #1 - Plan #1 (12-07-11)												Offset Site Error: 0.0 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)	Offset Wellbore Centre +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	0.00	14.9	0.0	14.9	14.9	0.00	N/A	
100.0	100.0	100.0	100.0	0.1	0.1	0.00	14.9	0.0	14.9	14.7	0.22	66.454	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	14.9	0.0	14.9	14.3	0.67	22.151 CC	
227.5	227.5	227.5	227.5	0.4	0.4	90.51	14.9	0.0	14.9	14.1	0.80	18.780	
300.0	300.0	300.0	300.0	0.6	0.6	96.66	14.9	0.0	15.0	13.9	1.11	13.501 ES	
400.0	399.8	399.8	399.8	0.8	0.8	114.99	14.9	0.0	16.5	14.9	1.56	10.555	
450.0	449.7	449.7	449.7	0.9	0.9	126.02	14.9	0.0	18.5	16.7	1.79	10.311 SF	
500.0	499.5	499.5	499.5	1.0	1.0	144.81	14.9	0.0	21.8	19.7	2.02	10.765	
600.0	598.9	598.9	598.9	1.3	1.2	168.21	14.9	0.0	31.5	29.0	2.46	12.801	
700.0	698.1	698.1	698.1	1.6	1.5	179.75	14.9	0.0	44.5	41.6	2.90	15.325	
800.0	796.8	795.1	795.1	1.9	1.7	-173.70	14.9	1.6	61.7	58.3	3.34	18.479	
900.0	895.0	890.5	890.3	2.3	1.9	-169.06	14.9	6.3	84.4	80.6	3.78	22.357	
972.8	966.1	959.0	958.6	2.6	2.0	-166.45	14.9	11.7	104.4	100.3	4.11	25.425	
1,000.0	992.5	985.1	984.7	2.7	2.1	-166.40	14.7	14.1	112.3	108.1	4.23	26.575	
1,100.0	1,089.9	1,081.5	1,080.5	3.1	2.3	-165.41	12.2	23.7	141.0	136.4	4.67	30.224	
1,200.0	1,187.3	1,177.9	1,176.1	3.6	2.5	-163.62	6.8	34.6	169.5	164.3	5.14	32.959	
1,300.0	1,284.6	1,274.1	1,271.2	4.1	2.8	-161.38	-1.6	47.0	197.7	192.1	5.66	34.908	
1,400.0	1,382.0	1,369.9	1,365.3	4.6	3.1	-158.86	-12.8	60.6	226.1	219.9	6.24	36.216	
1,500.0	1,479.4	1,465.1	1,458.3	5.0	3.4	-156.17	-26.7	75.5	254.8	247.9	6.88	37.020	
1,600.0	1,576.7	1,559.5	1,549.8	5.5	3.8	-153.39	-43.3	91.4	284.2	276.6	7.58	37.463	
1,700.0	1,674.1	1,653.7	1,640.7	6.0	4.3	-150.72	-61.8	108.3	314.2	305.9	8.34	37.655	
1,800.0	1,771.5	1,748.1	1,731.7	6.5	4.7	-148.49	-80.3	125.2	344.8	335.7	9.13	37.764	
1,900.0	1,868.8	1,842.5	1,822.7	7.0	5.2	-146.63	-98.9	142.1	375.8	365.9	9.93	37.848	
2,000.0	1,966.2	1,937.0	1,913.7	7.5	5.7	-145.05	-117.4	159.0	407.2	396.4	10.74	37.913	
2,100.0	2,063.6	2,031.4	2,004.8	8.0	6.2	-143.69	-136.0	175.9	438.7	427.2	11.56	37.964	
2,200.0	2,160.9	2,125.8	2,095.8	8.5	6.7	-142.51	-154.6	192.8	470.5	458.1	12.38	38.009	
2,300.0	2,258.3	2,220.2	2,186.8	9.0	7.2	-141.48	-173.1	209.7	502.4	489.2	13.20	38.049	
2,400.0	2,355.7	2,314.6	2,277.8	9.4	7.7	-140.57	-191.7	226.6	534.4	520.4	14.03	38.085	
2,500.0	2,453.0	2,409.0	2,368.8	9.9	8.2	-139.77	-210.2	243.5	566.6	551.7	14.86	38.120	
2,600.0	2,550.4	2,503.4	2,459.8	10.4	8.7	-139.05	-228.8	260.4	598.8	583.1	15.69	38.152	
2,700.0	2,647.8	2,597.8	2,550.8	10.9	9.3	-138.41	-247.4	277.3	631.1	614.6	16.53	38.183	
2,800.0	2,745.1	2,692.2	2,641.8	11.4	9.8	-137.82	-265.9	294.2	663.5	646.1	17.36	38.212	
2,900.0	2,842.5	2,786.6	2,732.8	11.9	10.3	-137.29	-284.5	311.1	695.9	677.7	18.20	38.240	
3,000.0	2,939.9	2,881.0	2,823.8	12.4	10.8	-136.81	-303.0	328.0	728.4	709.4	19.04	38.266	
3,100.0	3,037.2	2,975.4	2,914.8	12.9	11.4	-136.37	-321.6	344.9	760.9	741.1	19.87	38.292	
3,200.0	3,134.6	3,069.8	3,005.8	13.4	11.9	-135.97	-340.2	361.8	793.5	772.8	20.71	38.316	
3,300.0	3,232.0	3,164.2	3,096.9	13.9	12.4	-135.59	-358.7	378.7	826.1	804.5	21.55	38.340	
3,400.0	3,329.3	3,258.7	3,187.9	14.4	13.0	-135.25	-377.3	395.6	858.7	836.3	22.38	38.362	
3,500.0	3,426.7	3,353.1	3,278.9	14.9	13.5	-134.93	-395.8	412.5	891.4	868.1	23.22	38.384	
3,600.0	3,524.1	3,447.5	3,369.9	15.4	14.0	-134.63	-414.4	429.4	924.0	900.0	24.06	38.404	
3,700.0	3,621.4	3,541.9	3,460.9	15.9	14.6	-134.36	-433.0	446.3	956.7	931.8	24.90	38.424	
3,800.0	3,718.8	3,636.3	3,551.9	16.4	15.1	-134.10	-451.5	463.2	989.4	963.7	25.74	38.443	
3,900.0	3,816.2	3,730.7	3,642.9	16.9	15.6	-133.86	-470.1	480.1	1,022.2	995.6	26.58	38.461	
4,000.0	3,913.5	3,825.1	3,733.9	17.4	16.2	-133.63	-488.7	497.0	1,054.9	1,027.5	27.42	38.478	
4,100.0	4,010.9	3,919.5	3,824.9	17.9	16.7	-133.42	-507.2	513.9	1,087.7	1,059.4	28.25	38.495	
4,200.0	4,108.3	4,013.9	3,915.9	18.4	17.2	-133.22	-525.8	530.8	1,120.4	1,091.3	29.09	38.511	
4,300.0	4,205.6	4,108.3	4,006.9	18.9	17.8	-133.03	-544.3	547.7	1,153.2	1,123.3	29.93	38.526	
4,400.0	4,303.0	4,202.7	4,098.0	19.4	18.3	-132.85	-562.9	564.6	1,186.0	1,155.2	30.77	38.541	
4,445.1	4,346.9	4,245.3	4,139.0	19.6	18.5	-132.77	-571.3	572.2	1,200.8	1,169.6	31.15	38.547	
4,500.0	4,400.5	4,297.2	4,189.1	19.8	18.8	-132.93	-581.5	581.5	1,218.5	1,186.8	31.63	38.521	
4,600.0	4,498.6	4,409.9	4,297.9	20.1	19.4	-133.07	-603.2	601.3	1,248.6	1,216.2	32.46	38.472	
4,700.0	4,597.4	4,545.9	4,430.4	20.4	19.9	-133.12	-625.5	621.6	1,274.0	1,240.8	33.18	38.390	

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						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		
4,800.0	4,696.6	4,684.9	4,567.3	20.6	20.3	-133.15	-643.5	638.0	1,293.9	1,260.1	33.83	38.251		
4,900.0	4,796.2	4,826.4	4,707.6	20.8	20.7	-133.17	-656.7	650.0	1,308.4	1,274.0	34.37	38.071		
5,000.0	4,896.0	4,969.5	4,850.3	21.0	21.0	-133.18	-664.9	657.5	1,317.2	1,282.4	34.80	37.850		
5,104.0	5,000.0	5,119.3	5,000.0	21.1	21.1	89.34	-667.8	660.1	1,320.3	1,285.1	35.15	37.556		
5,200.0	5,096.0	5,215.3	5,096.0	21.2	21.2	89.34	-667.8	660.1	1,320.3	1,284.9	35.39	37.307		
5,300.0	5,196.0	5,315.3	5,196.0	21.3	21.3	89.34	-667.8	660.1	1,320.3	1,284.6	35.62	37.067		
5,400.0	5,296.0	5,415.3	5,296.0	21.4	21.5	89.34	-667.8	660.1	1,320.3	1,284.4	35.85	36.827		
5,500.0	5,396.0	5,515.3	5,396.0	21.5	21.6	89.34	-667.8	660.1	1,320.3	1,284.2	36.09	36.585		
5,600.0	5,496.0	5,615.3	5,496.0	21.6	21.7	89.34	-667.8	660.1	1,320.3	1,283.9	36.33	36.343		
5,700.0	5,596.0	5,715.3	5,596.0	21.7	21.8	89.34	-667.8	660.1	1,320.3	1,283.7	36.57	36.099		
5,800.0	5,696.0	5,815.3	5,696.0	21.8	21.9	89.34	-667.8	660.1	1,320.3	1,283.4	36.82	35.856		
5,900.0	5,796.0	5,915.3	5,796.0	21.9	22.0	89.34	-667.8	660.1	1,320.3	1,283.2	37.07	35.611		
6,000.0	5,896.0	6,015.3	5,896.0	22.0	22.1	89.34	-667.8	660.1	1,320.3	1,282.9	37.33	35.367		
6,100.0	5,996.0	6,115.3	5,996.0	22.1	22.2	89.34	-667.8	660.1	1,320.3	1,282.7	37.59	35.123		
6,200.0	6,096.0	6,215.3	6,096.0	22.2	22.3	89.34	-667.8	660.1	1,320.3	1,282.4	37.85	34.878		
6,300.0	6,196.0	6,315.3	6,196.0	22.4	22.5	89.34	-667.8	660.1	1,320.3	1,282.1	38.12	34.634		
6,400.0	6,296.0	6,415.3	6,296.0	22.5	22.6	89.34	-667.8	660.1	1,320.3	1,281.9	38.39	34.391		
6,500.0	6,396.0	6,515.3	6,396.0	22.6	22.7	89.34	-667.8	660.1	1,320.3	1,281.6	38.66	34.147		
6,600.0	6,496.0	6,615.3	6,496.0	22.7	22.8	89.34	-667.8	660.1	1,320.3	1,281.3	38.94	33.905		
6,700.0	6,596.0	6,715.3	6,596.0	22.8	23.0	89.34	-667.8	660.1	1,320.3	1,281.0	39.22	33.663		
6,800.0	6,696.0	6,815.3	6,696.0	23.0	23.1	89.34	-667.8	660.1	1,320.3	1,280.8	39.50	33.421		
6,900.0	6,796.0	6,915.3	6,796.0	23.1	23.2	89.34	-667.8	660.1	1,320.3	1,280.5	39.79	33.181		
7,000.0	6,896.0	7,015.3	6,896.0	23.2	23.3	89.34	-667.8	660.1	1,320.3	1,280.2	40.08	32.941		
7,100.0	6,996.0	7,115.3	6,996.0	23.3	23.5	89.34	-667.8	660.1	1,320.3	1,279.9	40.37	32.703		
7,200.0	7,096.0	7,215.3	7,096.0	23.5	23.6	89.34	-667.8	660.1	1,320.3	1,279.6	40.67	32.466		
7,254.0	7,150.0	7,269.3	7,150.0	23.5	23.7	89.34	-667.8	660.1	1,320.3	1,279.5	40.79	32.370		

Company:	Sundance Energy, Weld County, CO	Local Co-ordinate Reference:	Well Lamb 32-15
Project:	SEC.15-T4N-R68W	TVD Reference:	WELL @ 4954.0ft (Original Well Elev)
Reference Site:	Lamb 5 Pad Sec.15-T4N-R68W	MD Reference:	WELL @ 4954.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Lamb 32-15	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 (12-07-11)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4954.0ft (Original Well Elev) Coordinates are relative to: Lamb 32-15
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°



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