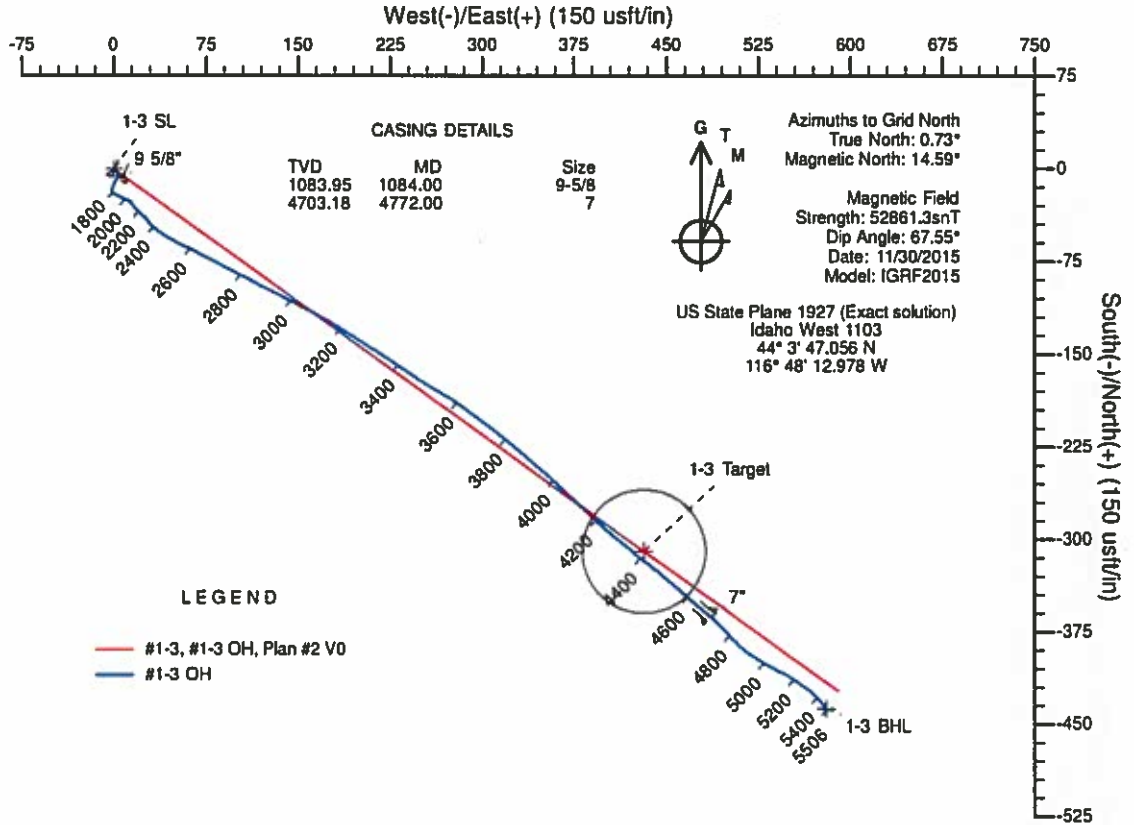


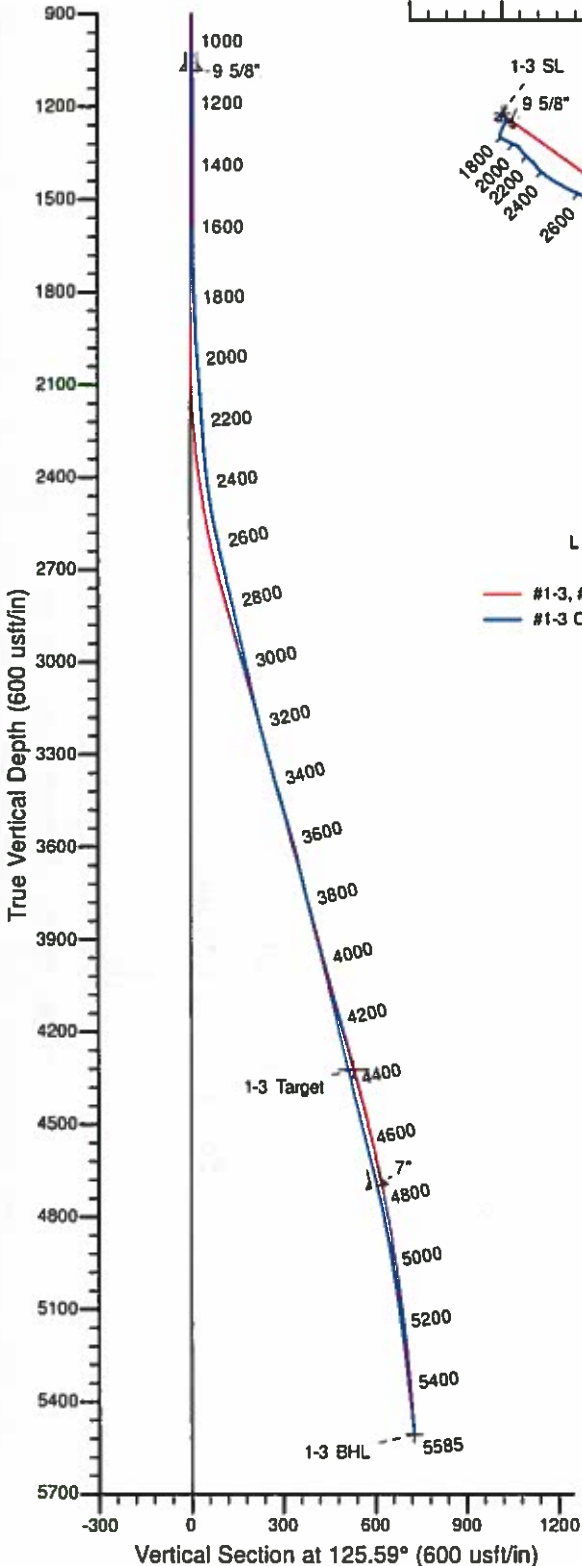


ALTA MESA

Project: Payette County, ID W'27  
 Area: Section 3 T8N-R4W  
 Site: ML Investments 1-3  
 Well: #1-3  
 Wellbore: #1-3 OH  
 Design: #1-3 OH



No Lease Line Issues



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
1-3 SL	0.00	0.00	0.00	875115.24	223054.85	44° 3' 47.056 N	116° 48' 12.978 W	Point
1-3 Target	4322.00	-309.30	432.20	874805.94	223487.05	44° 3' 44.057 N	116° 48' 7.006 W	Circle (Radius: 50.00)
1-3 BHL	5506.48	-437.18	580.74	874678.06	223635.60	44° 3' 42.813 N	116° 48' 4.949 W	Point

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**Titan Directional Drilling, LLC**  
Survey Report

<b>Company:</b>	Alta Mesa	<b>Local Co-ordinate Reference:</b>	Well #1-3
<b>Project:</b>	Payette County, ID W27	<b>TVD Reference:</b>	est.GL+KB @ 2687.00usft (Paul Graham #4)
<b>Site:</b>	ML Investments 1-3	<b>MD Reference:</b>	est.L.GL+KB @ 2687.00usft (Paul Graham #4)
<b>Well:</b>	#1-3	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#1-3 OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	#1-3 OH	<b>Database:</b>	EDM 5000.1 Single User Db

<b>Project</b>	Payette County, ID W27		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Idaho West 1103		Using geodetic scale factor

<b>Site</b>	ML Investments 1-3				
<b>Site Position:</b>		<b>Northing:</b>	875,115.24 usft	<b>Latitude:</b>	44° 3' 47.056 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	223,054.85 usft	<b>Longitude:</b>	116° 48' 12.978 W
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.73 °

<b>Well</b>	#1-3					
<b>Well Position</b>	+N-S	0.00 usft	<b>Northing:</b>	875,115.24 usft	<b>Latitude:</b>	44° 3' 47.056 N
	+E-W	0.00 usft	<b>Easting:</b>	223,054.85 usft	<b>Longitude:</b>	116° 48' 12.978 W
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	2,675.00 usft	<b>Ground Level:</b>	2,675.00 usft

<b>Wellbore</b>	#1-3 OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	11/30/15	13.86	67.55	52,861

<b>Design</b>	#1-3 OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>		<b>Depth From (TVD) (usft)</b>	<b>+N-S (usft)</b>	<b>+E-W (usft)</b>	<b>Direction (°)</b>
		0.00	0.00	0.00	125.59

<b>Survey Program</b>	<b>Date</b>	12/17/15			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
100.00	940.00	Survey #1 (#1-3 OH)	GYRO-NS	Gyrocompass Gyro	
1,113.00	5,525.00	Survey #2 (#1-3 OH)	MWD	MWD - Standard	
5,585.00	5,585.00	Projection (#1-3 OH)	ZERO-ERROR	Zero Error	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N-S (usft)</b>	<b>+E-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.32	135.53	100.00	-0.20	0.19	0.27	0.32	0.32		0.00
200.00	0.08	132.73	200.00	-0.43	0.42	0.60	0.26	-0.26		-2.80
300.00	0.42	122.14	300.00	-0.66	0.77	1.01	0.36	0.36		-10.59
400.00	0.48	118.89	399.99	-1.05	1.44	1.78	0.07	0.06		-3.25
500.00	0.66	142.99	499.99	-1.71	2.15	2.74	0.30	0.18		24.10
600.00	0.81	147.31	599.98	-2.62	2.78	3.79	0.07	-0.05		4.32
700.00	0.84	188.78	699.98	-3.78	2.96	4.81	0.55	0.23		41.47
800.00	0.42	163.84	799.97	-4.86	2.95	5.23	0.49	-0.41		-24.94

**CONFIDENTIAL**

**Titan Directional Drilling, LLC**  
Survey Report

<b>Company:</b>	Alta Mesa	<b>Local Co-ordinate Reference:</b>	Well #1-3
<b>Project:</b>	Payette County, ID W27	<b>TVD Reference:</b>	est.GL+KB @ 2687.00usft (Paul Graham #4)
<b>Site:</b>	ML Investments 1-3	<b>MD Reference:</b>	est.GL+KB @ 2687.00usft (Paul Graham #4)
<b>Well:</b>	#1-3	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#1-3 OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	#1-3 OH	<b>Database:</b>	EDM 5000.1 Single User Db

**Survey**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
900.00	0.89	200.42	899.96	-5.94	2.78	5.72	0.81	0.47	36.59
940.00	0.83	199.18	939.96	-6.44	2.60	5.86	0.67	-0.67	-3.12
1,084.00	0.77	203.43	1,083.95	-8.07	1.98	6.29	0.11	0.10	2.95
<b>9 5/8"</b>									
1,113.00	0.80	204.10	1,112.95	-8.44	1.80	6.37	0.11	0.10	2.31
1,272.00	0.80	210.10	1,271.93	-10.41	0.79	6.70	0.05	0.00	3.77
1,460.00	0.90	194.80	1,459.91	-12.97	-0.25	7.35	0.13	0.05	-8.14
1,849.00	1.30	205.90	1,648.88	-16.34	-1.56	8.23	0.24	0.21	5.87
1,900.00	2.90	112.10	1,899.75	-21.29	3.08	14.89	1.30	0.64	-37.37
1,963.00	3.90	121.00	1,862.64	-22.99	6.39	18.58	1.78	1.59	14.13
2,026.00	4.50	107.40	2,025.47	-24.83	10.58	23.06	1.84	0.95	-21.59
2,090.00	4.60	144.20	2,089.28	-27.67	14.48	27.88	4.49	0.18	57.50
2,153.00	4.30	135.30	2,152.09	-31.39	17.62	32.60	1.19	-0.48	-14.13
2,217.00	4.30	135.40	2,215.91	-34.81	20.99	37.33	0.01	0.00	0.16
2,278.00	4.40	134.60	2,276.74	-38.08	24.27	41.89	0.19	0.16	-1.31
2,341.00	5.10	141.10	2,339.52	-41.95	27.74	46.98	1.40	1.11	10.32
2,404.00	6.90	133.90	2,402.17	-46.76	32.23	53.42	3.09	2.66	-11.43
2,467.00	8.90	123.70	2,464.58	-52.09	39.01	62.04	3.87	3.17	-16.19
2,530.00	10.80	118.30	2,526.65	-57.59	48.28	72.77	3.35	3.02	-8.57
2,593.00	12.20	115.70	2,588.38	-63.28	59.46	85.18	2.37	2.22	-4.13
2,656.00	12.80	117.10	2,649.89	-69.34	71.67	98.64	1.07	0.95	2.22
2,720.00	13.00	117.90	2,712.27	-75.94	84.34	112.78	0.42	0.31	1.25
2,783.00	13.30	117.20	2,773.62	-82.57	97.05	126.98	0.54	0.48	-1.11
2,846.00	13.10	117.80	2,834.96	-89.21	109.81	141.22	0.38	-0.32	0.95
2,909.00	12.90	116.80	2,896.34	-95.71	122.41	155.24	0.48	-0.32	-1.59
2,971.00	12.90	116.60	2,956.78	-101.93	134.77	168.92	0.07	0.00	-0.32
3,034.00	12.90	117.40	3,018.19	-108.31	147.30	182.82	0.28	0.00	1.27
3,097.00	12.70	116.70	3,079.62	-114.66	159.73	196.83	0.40	-0.32	-1.11
3,160.00	13.10	119.70	3,141.03	-121.31	172.12	210.57	1.24	0.63	4.78
3,224.00	14.50	122.50	3,203.18	-129.21	185.18	225.79	2.42	2.19	4.38
3,286.00	15.20	122.80	3,263.11	-137.78	198.56	241.66	1.14	1.13	0.48
3,350.00	15.80	121.90	3,324.78	-146.93	213.01	258.73	1.01	0.94	-1.41
3,413.00	15.90	123.60	3,385.39	-156.24	227.48	275.91	0.75	0.18	2.70
3,476.00	15.60	124.10	3,446.02	-165.77	241.66	293.01	0.52	-0.48	0.79
3,539.00	16.20	120.50	3,506.61	-174.98	256.27	310.23	1.83	0.95	-5.71
3,602.00	16.10	121.70	3,567.13	-184.03	271.27	327.70	0.55	-0.18	1.90
3,665.00	14.10	126.40	3,627.95	-193.17	284.88	344.09	3.72	-3.17	7.46
3,728.00	13.70	126.70	3,689.11	-202.18	297.04	359.22	0.65	-0.63	0.48
3,791.00	13.60	126.10	3,750.33	-211.01	309.01	374.09	0.28	-0.16	-0.95
3,854.00	14.20	128.80	3,811.48	-220.21	321.01	389.21	1.40	0.95	4.29
3,918.00	14.80	130.90	3,873.45	-230.48	333.31	405.19	1.25	0.94	3.28
3,981.00	14.90	129.50	3,934.34	-240.90	345.64	421.28	0.59	0.16	-2.22
4,045.00	13.70	132.30	3,996.36	-251.24	357.60	437.02	2.16	-1.88	4.38

# CONFIDENTIAL Titan Directional Drilling, LLC

## Survey Report

<b>Company:</b>	Alta Mesa	<b>Local Co-ordinate Reference:</b>	Well #1-3
<b>Project:</b>	Payette County, ID W27	<b>TVD Reference:</b>	est.GL+KB @ 2887.00usft (Paul Graham #4)
<b>Site:</b>	ML Investments 1-3	<b>MD Reference:</b>	est.GL+KB @ 2887.00usft (Paul Graham #4)
<b>Well:</b>	#1-3	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#1-3 OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	#1-3 OH	<b>Database:</b>	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,108.00	13.40	132.90	4,057.60	-281.23	388.46	451.87	0.53	-0.48	0.95	
4,171.00	13.20	133.40	4,118.91	-271.14	379.04	488.03	0.37	-0.32	0.79	
4,234.00	13.10	133.60	4,180.26	-281.01	389.43	480.23	0.17	-0.16	0.32	
4,297.00	13.40	130.50	4,241.59	-290.67	400.15	494.57	1.22	0.48	-4.92	
4,358.00	13.40	129.50	4,300.93	-299.76	410.98	508.87	0.38	0.00	-1.84	
4,421.00	13.30	130.50	4,362.22	-308.11	422.13	523.17	0.40	-0.16	1.59	
4,484.00	14.00	128.70	4,423.44	-318.37	433.75	538.01	1.81	1.11	-8.03	
4,547.00	13.80	130.80	4,484.60	-327.83	445.55	553.11	1.59	-0.32	6.51	
4,611.00	13.80	131.00	4,546.75	-337.83	457.08	568.31	0.07	0.00	0.31	
4,674.00	13.70	130.50	4,607.95	-347.60	468.43	583.22	0.25	-0.16	-0.79	
4,738.00	13.70	129.40	4,668.18	-357.03	479.88	597.87	0.42	0.00	-1.77	
4,772.00	13.47	131.73	4,703.18	-362.53	486.11	606.29	1.65	-0.65	6.48	
<b>7"</b>										
4,800.00	13.30	133.60	4,730.42	-366.92	490.87	612.72	1.65	-0.59	6.67	
4,883.00	11.70	137.30	4,791.92	-376.61	500.45	626.15	2.84	-2.54	5.87	
4,928.00	10.20	132.50	4,853.78	-385.08	508.90	637.94	2.78	-2.38	-7.62	
4,989.00	10.20	128.00	4,915.78	-392.12	517.52	649.06	1.83	0.00	-10.32	
5,051.00	9.30	121.70	4,978.89	-397.98	526.23	659.55	1.87	-1.45	-8.94	
5,114.00	8.90	117.30	5,039.09	-402.89	534.89	669.45	1.27	-0.63	-8.98	
5,177.00	8.10	118.20	5,101.40	-407.09	543.20	678.65	1.30	-1.27	-1.75	
5,240.00	7.30	120.00	5,163.83	-411.05	550.65	687.01	1.50	-1.27	6.03	
5,304.00	7.00	125.60	5,227.34	-415.35	557.34	694.96	1.19	-0.47	8.75	
5,367.00	6.90	124.10	5,289.87	-419.71	563.60	702.58	0.33	-0.16	-2.38	
5,430.00	6.70	132.00	5,352.43	-424.29	569.46	710.02	1.52	-0.32	12.54	
5,493.00	6.40	136.90	5,415.02	-429.31	574.59	717.11	1.01	-0.48	7.78	
5,525.00	6.20	143.10	5,446.83	-432.00	576.85	720.51	2.21	-0.63	19.38	
5,585.00	6.20	143.10	5,506.48	-437.18	580.74	728.89	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
1-3 SL - hit/miss target - Shape	0.00	360.00	0.00	0.00	0.00	875,115.24	223,054.85	44° 3' 47.056 N	116° 48' 12.978 W	
- actual wellpath hits target center										
- Point										
1-3 Target - actual wellpath misses target center by 18.04usft at 4383.67usft MD (4325.90 TVD, -303.55 N, 415.55 E) - Circle (radius 50.00)	0.00	360.00	4,322.00	-309.30	432.20	874,805.94	223,487.06	44° 3' 44.057 N	116° 48' 7.006 W	
1-3 BHL - actual wellpath hits target center - Point	0.00	360.00	5,506.48	-437.18	580.74	874,678.06	223,635.60	44° 3' 42.813 N	116° 48' 4.949 W	

**CONFIDENTIAL**

**Titan Directional Drilling, LLC**  
Survey Report

<b>Company:</b> Alta Mesa	<b>Local Co-ordinate Reference:</b>	<b>Well #1-3</b>
<b>Project:</b> Payette County, ID W27	<b>TVD Reference:</b>	est.GL+KB @ 2687.00usft (Paul Graham #4)
<b>Site:</b> ML Investments 1-3	<b>MD Reference:</b>	est.GL+KB @ 2687.00usft (Paul Graham #4)
<b>Well:</b> #1-3	<b>North Reference:</b>	Grid
<b>Wellbore:</b> #1-3 OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b> #1-3 OH	<b>Database:</b>	EDM 5000.1 Single User Db

<b>Casing Points</b>					
Measured Depth (usft)	Vertical Depth (usft)		Name	Casing Diameter (")	Hole Diameter (")
1,084.00	1,083.95	9 5/8"		9-5/8	12-1/4
4,772.00	4,703.18	7"		7	8-3/4