

Longs Peak Resources  
Project: Weld County, Co (NAD 83)  
Site: Pismo West Pad  
Well: Pismo West 2623-4CH  
Wellbore: Wellbore #1  
Plan: Plan #1 (Pismo West 2623-4CH/Wellbore #1)



WELL DETAILS: Pismo West 2623-4CH

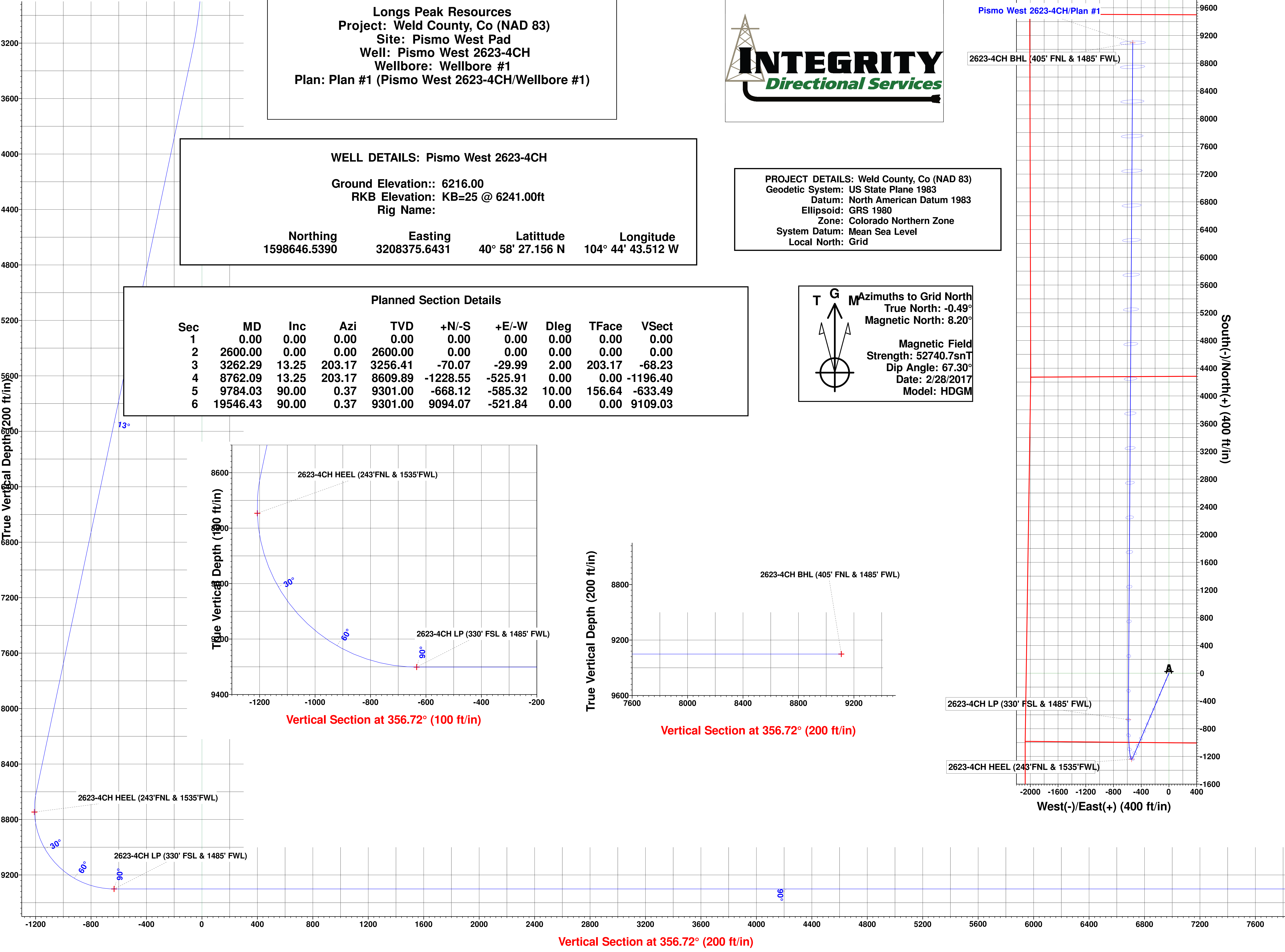
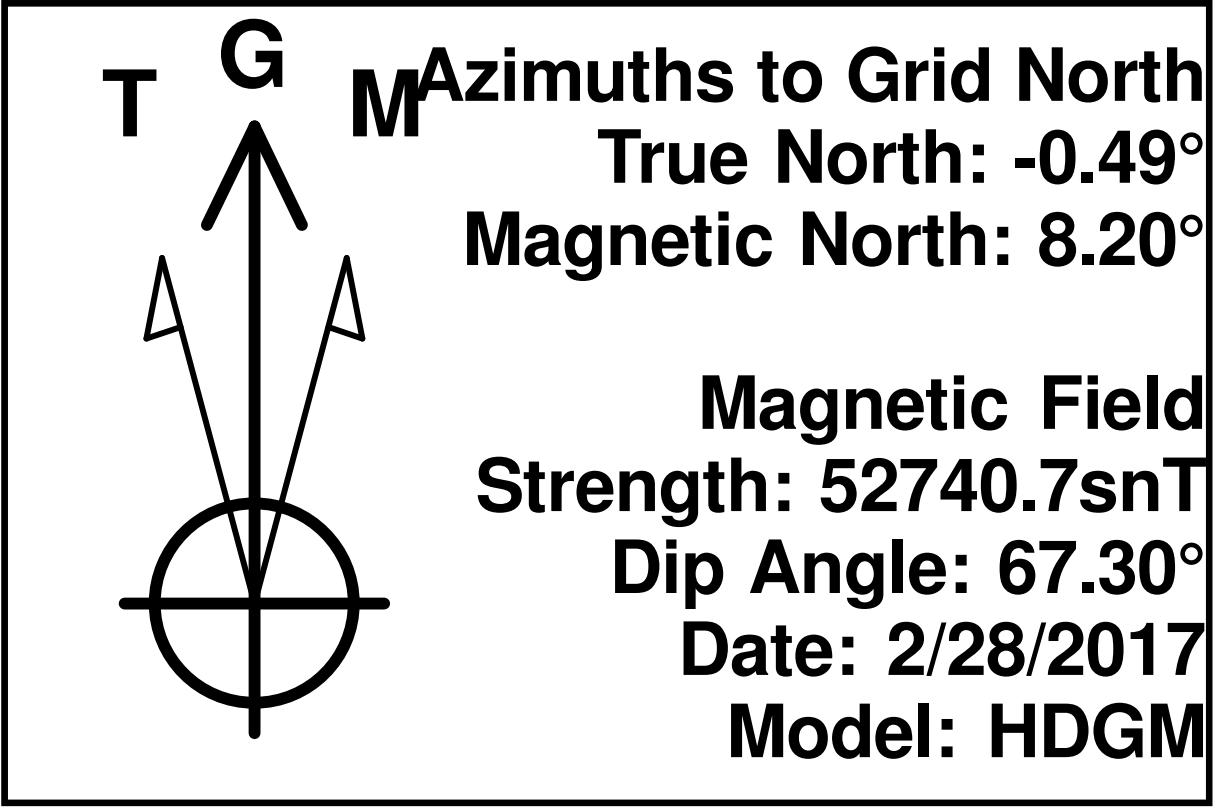
Ground Elevation:: 6216.00  
RKB Elevation: KB=25 @ 6241.00ft  
Rig Name:

Northing 1598646.5390      Easting 3208375.6431      Latitude 40° 58' 27.156 N      Longitude 104° 44' 43.512 W

PROJECT DETAILS: Weld County, Co (NAD 83)  
Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone  
System Datum: Mean Sea Level  
Local North: Grid

Planned Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	0.00
3	3262.29	13.25	203.17	3256.41	-70.07	-29.99	2.00	203.17	-68.23
4	8762.09	13.25	203.17	8609.89	-1228.55	-525.91	0.00	0.00	-1196.40
5	9784.03	90.00	0.37	9301.00	-668.12	-585.32	10.00	156.64	-633.49
6	19546.43	90.00	0.37	9301.00	9094.07	-521.84	0.00	0.00	9109.03



# **Longs Peak Resources**

**Weld County, Co (NAD 83)**

**Pismo West Pad**

**Pismo West 2623-4CH**

**Wellbore #1**

**Plan: Plan #1**

## **Standard Survey Report**

**02 March, 2017**



# Integrity Directional Services, LLC

## Survey Report



<b>Company:</b>	Longs Peak Resources	<b>Local Co-ordinate Reference:</b>	Well Pismo West 2623-4CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25 @ 6241.00ft
<b>Site:</b>	Pismo West Pad	<b>MD Reference:</b>	KB=25 @ 6241.00ft
<b>Well:</b>	Pismo West 2623-4CH	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5000.1 Multi User Db

<b>Project</b>	Weld County, Co (NAD 83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

<b>Site</b>	Pismo West Pad		
<b>Site Position:</b>		<b>Northing:</b>	1,598,646.5584 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,208,375.6429 usft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	40° 58' 27.156 N
		<b>Longitude:</b>	104° 44' 43.512 W
		<b>Grid Convergence:</b>	0.49 °

<b>Well</b>	Pismo West 2623-4CH		
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	0.00 ft
		<b>Latitude:</b>	40° 58' 27.156 N
		<b>Longitude:</b>	104° 44' 43.512 W
		<b>Ground Level:</b>	6,216.00 ft

<b>Wellbore</b>	Wellbore #1		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>
	HDGM	2/28/2017	8.68
			<b>Dip Angle (°)</b>
			67.30
			<b>Field Strength (nT)</b>
			52,741

<b>Design</b>	Plan #1		
<b>Audit Notes:</b>			
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>
			0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>
	0.00	0.00	0.00
			<b>Direction (°)</b>
			356.72

<b>Survey Tool Program</b>	<b>Date</b> 3/2/2017		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>
0.00	19,546.43	Plan #1 (Wellbore #1)	MWD
			<b>Description</b>
			MWD - Standard

<b>Planned Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00

# Integrity Directional Services, LLC

## Survey Report



<b>Company:</b>	Longs Peak Resources	<b>Local Co-ordinate Reference:</b>	Well Pismo West 2623-4CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25 @ 6241.00ft
<b>Site:</b>	Pismo West Pad	<b>MD Reference:</b>	KB=25 @ 6241.00ft
<b>Well:</b>	Pismo West 2623-4CH	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5000.1 Multi User Db

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
2,700.00	2.00	203.17	2,699.98	-1.60	-0.69	-1.56	2.00	2.00	0.00
2,800.00	4.00	203.17	2,799.84	-6.42	-2.75	-6.25	2.00	2.00	0.00
2,900.00	6.00	203.17	2,899.45	-14.43	-6.18	-14.05	2.00	2.00	0.00
3,000.00	8.00	203.17	2,998.70	-25.63	-10.97	-24.96	2.00	2.00	0.00
3,100.00	10.00	203.17	3,097.47	-40.01	-17.13	-38.96	2.00	2.00	0.00
3,200.00	12.00	203.17	3,195.62	-57.55	-24.64	-56.05	2.00	2.00	0.00
3,262.29	13.25	203.17	3,256.41	-70.07	-29.99	-68.23	2.00	2.00	0.00
<b>Start 5499.80 hold at 3262.29 MD</b>									
3,300.00	13.25	203.17	3,293.11	-78.01	-33.39	-75.97	0.00	0.00	0.00
3,400.00	13.25	203.17	3,390.45	-99.07	-42.41	-96.48	0.00	0.00	0.00
3,500.00	13.25	203.17	3,487.79	-120.14	-51.43	-116.99	0.00	0.00	0.00
3,600.00	13.25	203.17	3,585.13	-141.20	-60.44	-137.51	0.00	0.00	0.00
3,700.00	13.25	203.17	3,682.47	-162.26	-69.46	-158.02	0.00	0.00	0.00
3,800.00	13.25	203.17	3,779.81	-183.33	-78.48	-178.53	0.00	0.00	0.00
3,900.00	13.25	203.17	3,877.15	-204.39	-87.50	-199.04	0.00	0.00	0.00
4,000.00	13.25	203.17	3,974.49	-225.46	-96.51	-219.56	0.00	0.00	0.00
4,100.00	13.25	203.17	4,071.83	-246.52	-105.53	-240.07	0.00	0.00	0.00
4,200.00	13.25	203.17	4,169.17	-267.58	-114.55	-260.58	0.00	0.00	0.00
4,300.00	13.25	203.17	4,266.51	-288.65	-123.56	-281.10	0.00	0.00	0.00
4,400.00	13.25	203.17	4,363.85	-309.71	-132.58	-301.61	0.00	0.00	0.00
4,500.00	13.25	203.17	4,461.19	-330.78	-141.60	-322.12	0.00	0.00	0.00
4,600.00	13.25	203.17	4,558.53	-351.84	-150.61	-342.63	0.00	0.00	0.00
4,700.00	13.25	203.17	4,655.87	-372.91	-159.63	-363.15	0.00	0.00	0.00
4,800.00	13.25	203.17	4,753.21	-393.97	-168.65	-383.66	0.00	0.00	0.00
4,900.00	13.25	203.17	4,850.55	-415.03	-177.67	-404.17	0.00	0.00	0.00
5,000.00	13.25	203.17	4,947.89	-436.10	-186.68	-424.69	0.00	0.00	0.00

# Integrity Directional Services, LLC

## Survey Report



<b>Company:</b>	Longs Peak Resources	<b>Local Co-ordinate Reference:</b>	Well Pismo West 2623-4CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25 @ 6241.00ft
<b>Site:</b>	Pismo West Pad	<b>MD Reference:</b>	KB=25 @ 6241.00ft
<b>Well:</b>	Pismo West 2623-4CH	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5000.1 Multi User Db

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,100.00	13.25	203.17	5,045.23	-457.16	-195.70	-445.20	0.00	0.00	0.00
5,200.00	13.25	203.17	5,142.57	-478.23	-204.72	-465.71	0.00	0.00	0.00
5,300.00	13.25	203.17	5,239.91	-499.29	-213.73	-486.22	0.00	0.00	0.00
5,400.00	13.25	203.17	5,337.24	-520.35	-222.75	-506.74	0.00	0.00	0.00
5,500.00	13.25	203.17	5,434.58	-541.42	-231.77	-527.25	0.00	0.00	0.00
5,600.00	13.25	203.17	5,531.92	-562.48	-240.79	-547.76	0.00	0.00	0.00
5,700.00	13.25	203.17	5,629.26	-583.55	-249.80	-568.28	0.00	0.00	0.00
5,800.00	13.25	203.17	5,726.60	-604.61	-258.82	-588.79	0.00	0.00	0.00
5,900.00	13.25	203.17	5,823.94	-625.67	-267.84	-609.30	0.00	0.00	0.00
6,000.00	13.25	203.17	5,921.28	-646.74	-276.85	-629.82	0.00	0.00	0.00
6,100.00	13.25	203.17	6,018.62	-667.80	-285.87	-650.33	0.00	0.00	0.00
6,200.00	13.25	203.17	6,115.96	-688.87	-294.89	-670.84	0.00	0.00	0.00
6,300.00	13.25	203.17	6,213.30	-709.93	-303.90	-691.35	0.00	0.00	0.00
6,400.00	13.25	203.17	6,310.64	-730.99	-312.92	-711.87	0.00	0.00	0.00
6,500.00	13.25	203.17	6,407.98	-752.06	-321.94	-732.38	0.00	0.00	0.00
6,600.00	13.25	203.17	6,505.32	-773.12	-330.96	-752.89	0.00	0.00	0.00
6,700.00	13.25	203.17	6,602.66	-794.19	-339.97	-773.41	0.00	0.00	0.00
6,800.00	13.25	203.17	6,700.00	-815.25	-348.99	-793.92	0.00	0.00	0.00
6,900.00	13.25	203.17	6,797.34	-836.31	-358.01	-814.43	0.00	0.00	0.00
7,000.00	13.25	203.17	6,894.68	-857.38	-367.02	-834.94	0.00	0.00	0.00
7,100.00	13.25	203.17	6,992.02	-878.44	-376.04	-855.46	0.00	0.00	0.00
7,200.00	13.25	203.17	7,089.36	-899.51	-385.06	-875.97	0.00	0.00	0.00
7,300.00	13.25	203.17	7,186.70	-920.57	-394.07	-896.48	0.00	0.00	0.00
7,400.00	13.25	203.17	7,284.04	-941.63	-403.09	-917.00	0.00	0.00	0.00
7,500.00	13.25	203.17	7,381.38	-962.70	-412.11	-937.51	0.00	0.00	0.00
7,600.00	13.25	203.17	7,478.72	-983.76	-421.13	-958.02	0.00	0.00	0.00
7,700.00	13.25	203.17	7,576.06	-1,004.83	-430.14	-978.53	0.00	0.00	0.00
7,800.00	13.25	203.17	7,673.40	-1,025.89	-439.16	-999.05	0.00	0.00	0.00
7,900.00	13.25	203.17	7,770.73	-1,046.96	-448.18	-1,019.56	0.00	0.00	0.00
8,000.00	13.25	203.17	7,868.07	-1,068.02	-457.19	-1,040.07	0.00	0.00	0.00
8,100.00	13.25	203.17	7,965.41	-1,089.08	-466.21	-1,060.59	0.00	0.00	0.00
8,200.00	13.25	203.17	8,062.75	-1,110.15	-475.23	-1,081.10	0.00	0.00	0.00
8,300.00	13.25	203.17	8,160.09	-1,131.21	-484.25	-1,101.61	0.00	0.00	0.00
8,400.00	13.25	203.17	8,257.43	-1,152.28	-493.26	-1,122.12	0.00	0.00	0.00
8,500.00	13.25	203.17	8,354.77	-1,173.34	-502.28	-1,142.64	0.00	0.00	0.00
8,600.00	13.25	203.17	8,452.11	-1,194.40	-511.30	-1,163.15	0.00	0.00	0.00
8,700.00	13.25	203.17	8,549.45	-1,215.47	-520.31	-1,183.66	0.00	0.00	0.00
8,762.09	13.25	203.17	8,609.89	-1,228.55	-525.91	-1,196.40	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 156.64</b>									
8,800.00	9.88	211.96	8,647.03	-1,235.30	-529.34	-1,202.95	10.00	-8.88	23.19
8,900.00	5.45	287.43	8,746.31	-1,241.17	-538.44	-1,208.28	10.00	-4.43	75.47
9,000.00	12.70	336.49	8,845.11	-1,229.64	-547.38	-1,196.26	10.00	7.25	49.06
9,100.00	22.19	347.45	8,940.43	-1,201.05	-555.89	-1,167.24	10.00	9.49	10.95
9,200.00	31.98	351.97	9,029.37	-1,156.29	-563.71	-1,122.09	10.00	9.79	4.52



# Integrity Directional Services, LLC

## Survey Report



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<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25 @ 6241.00ft
<b>Site:</b>	Pismo West Pad	<b>MD Reference:</b>	KB=25 @ 6241.00ft
<b>Well:</b>	Pismo West 2623-4CH	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5000.1 Multi User Db

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,300.00	41.86	354.53	9,109.22	-1,096.70	-570.61	-1,062.21	10.00	9.88	2.56
9,400.00	51.78	356.25	9,177.56	-1,024.10	-576.37	-989.40	10.00	9.92	1.72
9,500.00	61.72	357.56	9,232.31	-940.69	-580.82	-905.87	10.00	9.94	1.31
9,600.00	71.68	358.64	9,271.82	-849.01	-583.83	-814.17	10.00	9.95	1.08
9,700.00	81.63	359.60	9,294.87	-751.85	-585.30	-717.08	10.00	9.96	0.96
9,784.03	90.00	0.37	9,301.00	-668.12	-585.32	-633.49	10.00	9.96	0.92
<b>Start 9762.39 hold at 9784.03 MD</b>									
9,800.00	90.00	0.37	9,301.00	-652.15	-585.21	-617.55	0.00	0.00	0.00
9,900.00	90.00	0.37	9,301.00	-552.15	-584.56	-517.75	0.00	0.00	0.00
10,000.00	90.00	0.37	9,301.00	-452.15	-583.91	-417.96	0.00	0.00	0.00
10,100.00	90.00	0.37	9,301.00	-352.15	-583.26	-318.16	0.00	0.00	0.00
10,200.00	90.00	0.37	9,301.00	-252.16	-582.61	-218.37	0.00	0.00	0.00
10,300.00	90.00	0.37	9,301.00	-152.16	-581.96	-118.57	0.00	0.00	0.00
10,400.00	90.00	0.37	9,301.00	-52.16	-581.31	-18.77	0.00	0.00	0.00
10,500.00	90.00	0.37	9,301.00	47.84	-580.66	81.02	0.00	0.00	0.00
10,600.00	90.00	0.37	9,301.00	147.83	-580.01	180.82	0.00	0.00	0.00
10,700.00	90.00	0.37	9,301.00	247.83	-579.36	280.62	0.00	0.00	0.00
10,800.00	90.00	0.37	9,301.00	347.83	-578.71	380.41	0.00	0.00	0.00
10,900.00	90.00	0.37	9,301.00	447.83	-578.06	480.21	0.00	0.00	0.00
11,000.00	90.00	0.37	9,301.00	547.83	-577.41	580.01	0.00	0.00	0.00
11,100.00	90.00	0.37	9,301.00	647.82	-576.76	679.80	0.00	0.00	0.00
11,200.00	90.00	0.37	9,301.00	747.82	-576.11	779.60	0.00	0.00	0.00
11,300.00	90.00	0.37	9,301.00	847.82	-575.46	879.39	0.00	0.00	0.00
11,400.00	90.00	0.37	9,301.00	947.82	-574.81	979.19	0.00	0.00	0.00
11,500.00	90.00	0.37	9,301.00	1,047.82	-574.16	1,078.99	0.00	0.00	0.00
11,600.00	90.00	0.37	9,301.00	1,147.81	-573.51	1,178.78	0.00	0.00	0.00
11,700.00	90.00	0.37	9,301.00	1,247.81	-572.86	1,278.58	0.00	0.00	0.00
11,800.00	90.00	0.37	9,301.00	1,347.81	-572.21	1,378.38	0.00	0.00	0.00
11,900.00	90.00	0.37	9,301.00	1,447.81	-571.56	1,478.17	0.00	0.00	0.00
12,000.00	90.00	0.37	9,301.00	1,547.81	-570.91	1,577.97	0.00	0.00	0.00
12,100.00	90.00	0.37	9,301.00	1,647.80	-570.26	1,677.77	0.00	0.00	0.00
12,200.00	90.00	0.37	9,301.00	1,747.80	-569.61	1,777.56	0.00	0.00	0.00
12,300.00	90.00	0.37	9,301.00	1,847.80	-568.96	1,877.36	0.00	0.00	0.00
12,400.00	90.00	0.37	9,301.00	1,947.80	-568.31	1,977.16	0.00	0.00	0.00
12,500.00	90.00	0.37	9,301.00	2,047.79	-567.66	2,076.95	0.00	0.00	0.00
12,600.00	90.00	0.37	9,301.00	2,147.79	-567.01	2,176.75	0.00	0.00	0.00
12,700.00	90.00	0.37	9,301.00	2,247.79	-566.36	2,276.54	0.00	0.00	0.00
12,800.00	90.00	0.37	9,301.00	2,347.79	-565.71	2,376.34	0.00	0.00	0.00
12,900.00	90.00	0.37	9,301.00	2,447.79	-565.06	2,476.14	0.00	0.00	0.00
13,000.00	90.00	0.37	9,301.00	2,547.78	-564.41	2,575.93	0.00	0.00	0.00
13,100.00	90.00	0.37	9,301.00	2,647.78	-563.76	2,675.73	0.00	0.00	0.00
13,200.00	90.00	0.37	9,301.00	2,747.78	-563.11	2,775.53	0.00	0.00	0.00
13,300.00	90.00	0.37	9,301.00	2,847.78	-562.46	2,875.32	0.00	0.00	0.00

# Integrity Directional Services, LLC

## Survey Report



<b>Company:</b>	Longs Peak Resources	<b>Local Co-ordinate Reference:</b>	Well Pismo West 2623-4CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25 @ 6241.00ft
<b>Site:</b>	Pismo West Pad	<b>MD Reference:</b>	KB=25 @ 6241.00ft
<b>Well:</b>	Pismo West 2623-4CH	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5000.1 Multi User Db

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,400.00	90.00	0.37	9,301.00	2,947.78	-561.81	2,975.12	0.00	0.00	0.00
13,500.00	90.00	0.37	9,301.00	3,047.77	-561.16	3,074.92	0.00	0.00	0.00
13,600.00	90.00	0.37	9,301.00	3,147.77	-560.51	3,174.71	0.00	0.00	0.00
13,700.00	90.00	0.37	9,301.00	3,247.77	-559.86	3,274.51	0.00	0.00	0.00
13,800.00	90.00	0.37	9,301.00	3,347.77	-559.21	3,374.31	0.00	0.00	0.00
13,900.00	90.00	0.37	9,301.00	3,447.77	-558.56	3,474.10	0.00	0.00	0.00
14,000.00	90.00	0.37	9,301.00	3,547.76	-557.91	3,573.90	0.00	0.00	0.00
14,100.00	90.00	0.37	9,301.00	3,647.76	-557.25	3,673.69	0.00	0.00	0.00
14,200.00	90.00	0.37	9,301.00	3,747.76	-556.60	3,773.49	0.00	0.00	0.00
14,300.00	90.00	0.37	9,301.00	3,847.76	-555.95	3,873.29	0.00	0.00	0.00
14,400.00	90.00	0.37	9,301.00	3,947.75	-555.30	3,973.08	0.00	0.00	0.00
14,500.00	90.00	0.37	9,301.00	4,047.75	-554.65	4,072.88	0.00	0.00	0.00
14,600.00	90.00	0.37	9,301.00	4,147.75	-554.00	4,172.68	0.00	0.00	0.00
14,700.00	90.00	0.37	9,301.00	4,247.75	-553.35	4,272.47	0.00	0.00	0.00
14,800.00	90.00	0.37	9,301.00	4,347.75	-552.70	4,372.27	0.00	0.00	0.00
14,900.00	90.00	0.37	9,301.00	4,447.74	-552.05	4,472.07	0.00	0.00	0.00
15,000.00	90.00	0.37	9,301.00	4,547.74	-551.40	4,571.86	0.00	0.00	0.00
15,100.00	90.00	0.37	9,301.00	4,647.74	-550.75	4,671.66	0.00	0.00	0.00
15,200.00	90.00	0.37	9,301.00	4,747.74	-550.10	4,771.45	0.00	0.00	0.00
15,300.00	90.00	0.37	9,301.00	4,847.74	-549.45	4,871.25	0.00	0.00	0.00
15,400.00	90.00	0.37	9,301.00	4,947.73	-548.80	4,971.05	0.00	0.00	0.00
15,500.00	90.00	0.37	9,301.00	5,047.73	-548.15	5,070.84	0.00	0.00	0.00
15,600.00	90.00	0.37	9,301.00	5,147.73	-547.50	5,170.64	0.00	0.00	0.00
15,700.00	90.00	0.37	9,301.00	5,247.73	-546.85	5,270.44	0.00	0.00	0.00
15,800.00	90.00	0.37	9,301.00	5,347.73	-546.20	5,370.23	0.00	0.00	0.00
15,900.00	90.00	0.37	9,301.00	5,447.72	-545.55	5,470.03	0.00	0.00	0.00
16,000.00	90.00	0.37	9,301.00	5,547.72	-544.90	5,569.83	0.00	0.00	0.00
16,100.00	90.00	0.37	9,301.00	5,647.72	-544.25	5,669.62	0.00	0.00	0.00
16,200.00	90.00	0.37	9,301.00	5,747.72	-543.60	5,769.42	0.00	0.00	0.00
16,300.00	90.00	0.37	9,301.00	5,847.71	-542.95	5,869.22	0.00	0.00	0.00
16,400.00	90.00	0.37	9,301.00	5,947.71	-542.30	5,969.01	0.00	0.00	0.00
16,500.00	90.00	0.37	9,301.00	6,047.71	-541.65	6,068.81	0.00	0.00	0.00
16,600.00	90.00	0.37	9,301.00	6,147.71	-541.00	6,168.60	0.00	0.00	0.00
16,700.00	90.00	0.37	9,301.00	6,247.71	-540.35	6,268.40	0.00	0.00	0.00
16,800.00	90.00	0.37	9,301.00	6,347.70	-539.70	6,368.20	0.00	0.00	0.00
16,900.00	90.00	0.37	9,301.00	6,447.70	-539.05	6,467.99	0.00	0.00	0.00
17,000.00	90.00	0.37	9,301.00	6,547.70	-538.40	6,567.79	0.00	0.00	0.00
17,100.00	90.00	0.37	9,301.00	6,647.70	-537.75	6,667.59	0.00	0.00	0.00
17,200.00	90.00	0.37	9,301.00	6,747.70	-537.10	6,767.38	0.00	0.00	0.00
17,300.00	90.00	0.37	9,301.00	6,847.69	-536.45	6,867.18	0.00	0.00	0.00
17,400.00	90.00	0.37	9,301.00	6,947.69	-535.80	6,966.98	0.00	0.00	0.00
17,500.00	90.00	0.37	9,301.00	7,047.69	-535.15	7,066.77	0.00	0.00	0.00
17,600.00	90.00	0.37	9,301.00	7,147.69	-534.50	7,166.57	0.00	0.00	0.00

# Integrity Directional Services, LLC

## Survey Report



<b>Company:</b>	Longs Peak Resources	<b>Local Co-ordinate Reference:</b>	Well Pismo West 2623-4CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25 @ 6241.00ft
<b>Site:</b>	Pismo West Pad	<b>MD Reference:</b>	KB=25 @ 6241.00ft
<b>Well:</b>	Pismo West 2623-4CH	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5000.1 Multi User Db

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,700.00	90.00	0.37	9,301.00	7,247.68	-533.85	7,266.37	0.00	0.00	0.00
17,800.00	90.00	0.37	9,301.00	7,347.68	-533.20	7,366.16	0.00	0.00	0.00
17,900.00	90.00	0.37	9,301.00	7,447.68	-532.55	7,465.96	0.00	0.00	0.00
18,000.00	90.00	0.37	9,301.00	7,547.68	-531.90	7,565.75	0.00	0.00	0.00
18,100.00	90.00	0.37	9,301.00	7,647.68	-531.25	7,665.55	0.00	0.00	0.00
18,200.00	90.00	0.37	9,301.00	7,747.67	-530.60	7,765.35	0.00	0.00	0.00
18,300.00	90.00	0.37	9,301.00	7,847.67	-529.95	7,865.14	0.00	0.00	0.00
18,400.00	90.00	0.37	9,301.00	7,947.67	-529.30	7,964.94	0.00	0.00	0.00
18,500.00	90.00	0.37	9,301.00	8,047.67	-528.65	8,064.74	0.00	0.00	0.00
18,600.00	90.00	0.37	9,301.00	8,147.67	-528.00	8,164.53	0.00	0.00	0.00
18,700.00	90.00	0.37	9,301.00	8,247.66	-527.35	8,264.33	0.00	0.00	0.00
18,800.00	90.00	0.37	9,301.00	8,347.66	-526.70	8,364.13	0.00	0.00	0.00
18,900.00	90.00	0.37	9,301.00	8,447.66	-526.05	8,463.92	0.00	0.00	0.00
19,000.00	90.00	0.37	9,301.00	8,547.66	-525.40	8,563.72	0.00	0.00	0.00
19,100.00	90.00	0.37	9,301.00	8,647.66	-524.75	8,663.51	0.00	0.00	0.00
19,200.00	90.00	0.37	9,301.00	8,747.65	-524.10	8,763.31	0.00	0.00	0.00
19,300.00	90.00	0.37	9,301.00	8,847.65	-523.45	8,863.11	0.00	0.00	0.00
19,400.00	90.00	0.37	9,301.00	8,947.65	-522.80	8,962.90	0.00	0.00	0.00
19,500.00	90.00	0.37	9,301.00	9,047.65	-522.15	9,062.70	0.00	0.00	0.00
19,546.43	90.00	0.37	9,301.00	9,094.07	-521.84	9,109.03	0.00	0.00	0.00
TD at 19546.43									

### Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
2623-4CH HEEL (243	0.00	0.00	8,746.30	-1,241.17	-538.44	1,597,405.371	3,207,837.205	40° 58' 14.938 N	104° 44' 50.668 W
- hit/miss target						4	3		
- Shape									
- plan hits target center									
- Point									
2623-4CH LP (330' F	0.00	0.00	9,301.00	-668.12	-585.32	1,597,978.423	3,207,790.327	40° 58' 20.604 N	104° 44' 51.216 W
- hit/miss target						8	7		
- Shape									
- plan hits target center									
- Point									
2623-4CH BHL (405' I	0.00	0.00	9,301.00	9,094.07	-521.84	1,607,740.591	3,207,853.801	40° 59' 57.048 N	104° 44' 49.308 W
- hit/miss target						6	0		
- Shape									
- plan hits target center									
- Point									



# Integrity Directional Services, LLC

## Survey Report



<b>Company:</b>	Longs Peak Resources	<b>Local Co-ordinate Reference:</b>	Well Pismo West 2623-4CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25 @ 6241.00ft
<b>Site:</b>	Pismo West Pad	<b>MD Reference:</b>	KB=25 @ 6241.00ft
<b>Well:</b>	Pismo West 2623-4CH	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5000.1 Multi User Db

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2600	2600	0	0	Start Build 2.00
3262	3256	-70	-30	Start 5499.80 hold at 3262.29 MD
8762	8610	-1229	-526	Start DLS 10.00 TFO 156.64
9784	9301	-668	-585	Start 9762.39 hold at 9784.03 MD
19,546	9301	9094	-522	TD at 19546.43

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_