



US ROCKIES WATTENBERG PLANNING

Project: WELD-NAD83-UTMFT13N

Site: Wilson Ranch 9-26HZ Pad 4N-68W-26

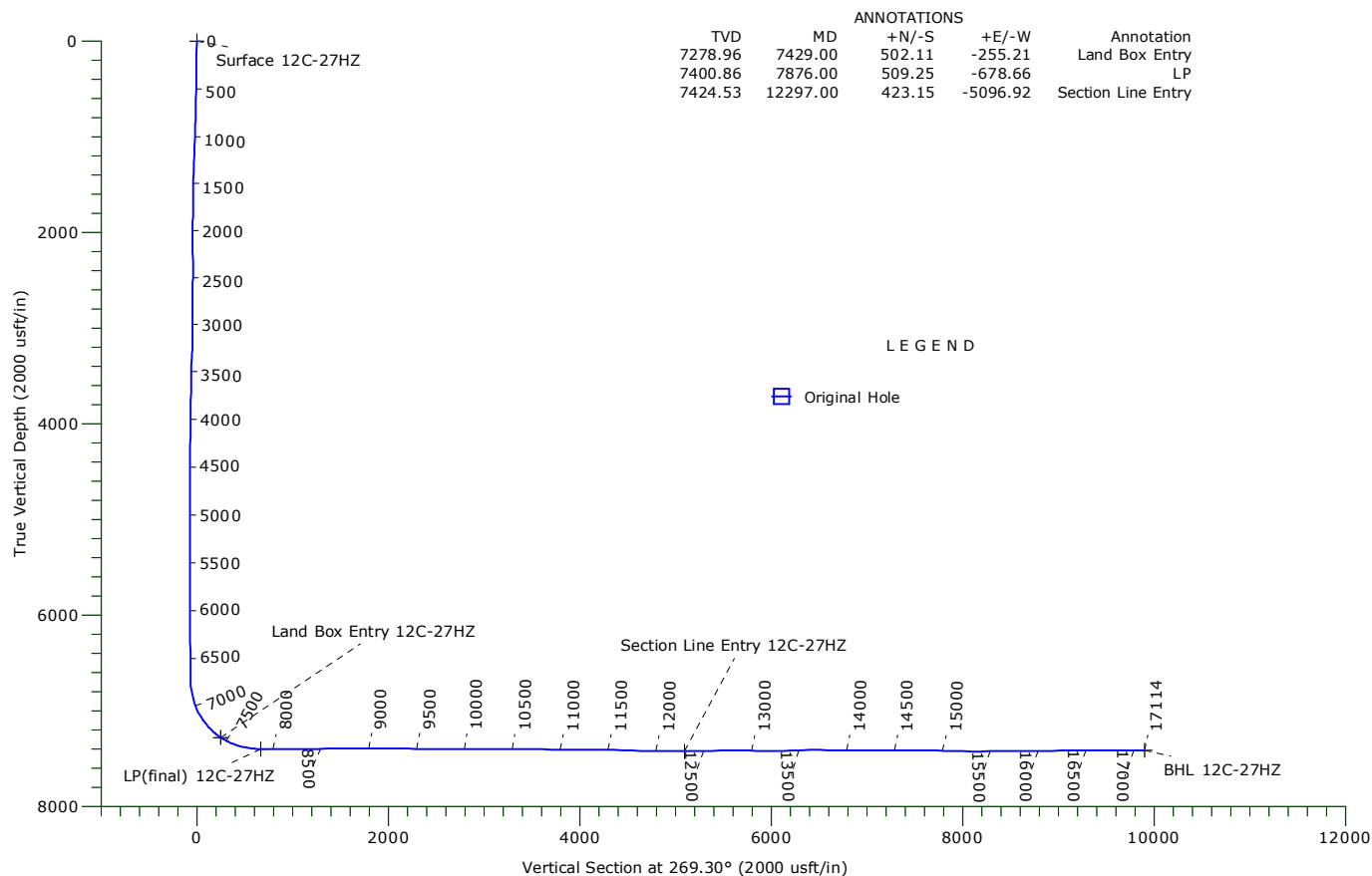
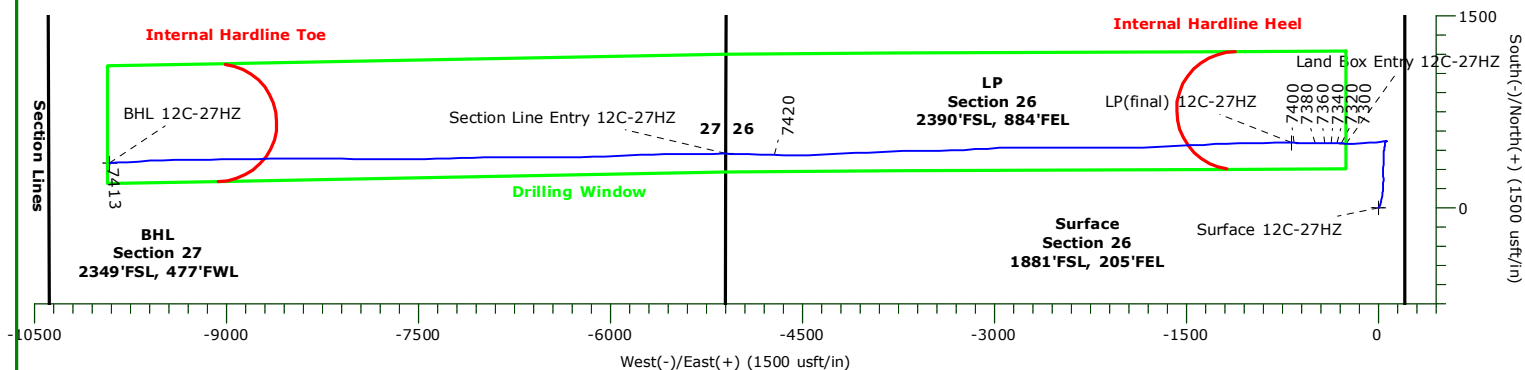
Well: Wilson Ranch 12C-27HZ

Wellbore: Original Hole

Design: Original Hole



Precision
Directional Services



WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Surface 12C-27HZ	0.00	0.00	0.00	14629623.29	1651166.89	40.282542°N	104.961454°W	Point
Land Box Entry 12C-27HZ	7278.96	502.11	-255.21	14630125.28	1650911.46	40.283921°N	104.962369°W	Point
LP(final) 12C-27HZ	7400.86	509.25	-678.66	14630132.24	1650488.00	40.283940°N	104.963887°W	Point
BHL 12C-27HZ	7413.02	348.86	-9911.76	14629967.84	1641254.98	40.283495°N	104.996994°W	Point
Section Line Entry 12C-27HZ	7424.53	423.14	-5096.92	14630044.22	1646069.78	40.283703°N	104.979730°W	Point

Precision Drilling Corporation

Survey Report

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well Wilson Ranch 12C-27HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	5041'GL+20'KB @ 5061.00usft (PD460)
Site:	Wilson Ranch 9-26HZ Pad 4N-68W-26	MD Reference:	5041'GL+20'KB @ 5061.00usft (PD460)
Well:	Wilson Ranch 12C-27HZ	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Compass_US

Project	WELD-NAD83-UTMFT13N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	Wilson Ranch 9-26HZ Pad 4N-68W-26				
Site Position:		Northing:	14,629,668.44 usft	Latitude:	40.282666°N
From:	Lat/Long	Easting:	1,651,167.14 usft	Longitude:	104.961453°W
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.02 °

Well	Wilson Ranch 12C-27HZ					
Well Position	+N-S	0.00 usft	Northing:	14,629,623.29 usft	Latitude:	40.282542°N
	+E-W	0.00 usft	Easting:	1,651,166.88 usft	Longitude:	104.961454°W
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,041.00 usft

Wellbore	Original Hole				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/02/15	8.36	66.77	52,577

Design	Original Hole				
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	269.30

Survey Program		Date	01/07/16	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
13.00	1,812.00	Survey #1 (Original Hole)	APC_ISCWSA REV 2 MV Fixed:v2:standard declination	
1,946.00	17,046.00	Survey #2 (Original Hole)	APC_ISCWSA REV 2 MV Fixed:v2:crustal field declination	
17,114.00	17,114.00	Survey #3 (Original Hole)	APC_BLIND	OWSG BLIND

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)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Surface 12C-27HZ										
	13.00	0.00	0.00	13.00	0.00	0.00	0.00	0.00	0.00	0.00
	129.00	0.32	112.79	129.00	-0.13	0.30	-0.30	0.28	0.28	0.00
	218.00	0.47	118.45	218.00	-0.40	0.85	-0.84	0.17	0.17	6.36
	307.00	0.71	119.82	306.99	-0.84	1.65	-1.64	0.27	0.27	1.54
	428.00	1.27	52.85	427.98	-0.41	3.37	-3.36	0.98	0.46	-55.35
	518.00	2.62	26.94	517.92	2.03	5.09	-5.12	1.75	1.50	-28.79
	608.00	3.03	26.75	607.82	5.99	7.10	-7.17	0.46	0.46	-0.21

Precision Drilling Corporation

Survey Report

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Site:	Wilson Ranch 9-26HZ Pad 4N-68W-26	MD Reference:	5041'GL+20'KB @ 5061.00usft (PD460)
Well:	Wilson Ranch 12C-27HZ	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Compass_US

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)	
698.00	2.87	13.28	697.70	10.30	8.69	-8.81	0.79	-0.18	-14.97	
788.00	3.64	17.04	787.55	15.23	10.04	-10.23	0.89	0.86	4.18	
923.00	6.29	18.06	922.03	26.36	13.59	-13.91	1.96	1.96	0.76	
1,013.00	6.96	16.60	1,011.43	36.27	16.68	-17.12	0.77	0.74	-1.62	
1,103.00	7.62	14.83	1,100.70	47.27	19.76	-20.34	0.77	0.73	-1.97	
1,193.00	9.31	11.52	1,189.72	60.17	22.74	-23.48	1.95	1.88	-3.68	
1,283.00	10.03	10.58	1,278.44	75.01	25.63	-26.55	0.82	0.80	-1.04	
1,373.00	10.58	12.41	1,366.99	90.78	28.85	-29.96	0.71	0.61	2.03	
1,463.00	10.10	7.43	1,455.53	106.68	31.65	-32.95	1.13	-0.53	-5.53	
1,553.00	10.38	9.03	1,544.10	122.51	33.94	-35.43	0.44	0.31	1.78	
1,643.00	11.37	4.48	1,632.48	139.36	35.90	-37.60	1.46	1.10	-5.06	
1,733.00	11.51	0.77	1,720.69	157.18	36.72	-38.64	0.83	0.16	-4.12	
1,812.00	10.77	3.12	1,798.20	172.44	37.23	-39.33	1.10	-0.94	2.97	
1,946.00	8.62	1.23	1,930.28	194.98	38.12	-40.50	1.62	-1.60	-1.41	
2,040.00	10.38	4.92	2,022.99	210.46	39.00	-41.57	1.98	1.87	3.93	
2,134.00	12.13	1.06	2,115.18	228.77	39.91	-42.70	2.03	1.86	-4.11	
2,227.00	10.46	351.04	2,206.39	246.89	38.78	-41.79	2.76	-1.80	-10.77	
2,320.00	9.23	352.62	2,298.01	262.62	36.50	-39.71	1.35	-1.32	1.70	
2,412.00	9.32	356.66	2,388.81	277.38	35.12	-38.51	0.71	0.10	4.39	
2,505.00	11.87	5.10	2,480.23	294.42	35.53	-39.13	3.20	2.74	9.08	
2,598.00	13.45	8.26	2,570.96	314.66	37.94	-41.78	1.85	1.70	3.40	
2,692.00	13.10	6.51	2,662.45	336.06	40.71	-44.82	0.57	-0.37	-1.86	
2,786.00	10.82	358.24	2,754.41	355.47	41.65	-45.99	3.03	-2.43	-8.80	
2,879.00	11.61	0.53	2,845.63	373.55	41.47	-46.03	0.98	0.85	2.46	
2,973.00	12.13	2.29	2,937.62	392.88	41.95	-46.75	0.67	0.55	1.87	
3,065.00	10.64	358.95	3,027.81	411.03	42.18	-47.20	1.77	-1.62	-3.63	
3,158.00	10.73	2.11	3,119.20	428.26	42.34	-47.57	0.64	0.10	3.40	
3,250.00	10.20	3.87	3,209.67	444.95	43.21	-48.64	0.67	-0.58	1.91	
3,343.00	8.62	13.89	3,301.42	459.93	45.44	-51.05	2.44	-1.70	10.77	
3,435.00	8.97	12.48	3,392.34	473.63	48.64	-54.43	0.45	0.38	-1.53	
3,528.00	7.30	8.09	3,484.40	486.56	51.04	-56.98	1.91	-1.80	-4.72	
3,622.00	5.98	2.99	3,577.77	497.36	52.14	-58.21	1.54	-1.40	-5.43	
3,715.00	4.92	3.87	3,670.35	506.18	52.66	-58.84	1.14	-1.14	0.95	
3,809.00	4.31	13.36	3,764.05	513.64	53.75	-60.02	1.04	-0.65	10.10	
3,901.00	2.64	2.64	3,855.87	519.12	54.64	-60.98	1.94	-1.82	-11.65	
3,996.00	1.23	45.00	3,950.82	522.02	55.47	-61.84	2.02	-1.48	44.59	
4,088.00	0.70	98.44	4,042.81	522.64	56.72	-63.10	1.07	-0.58	58.09	
4,181.00	1.06	112.68	4,135.80	522.22	58.08	-64.45	0.45	0.39	15.31	
4,275.00	0.97	103.54	4,229.78	521.70	59.65	-66.02	0.20	-0.10	-9.72	
4,368.00	0.62	138.34	4,322.78	521.14	60.75	-67.11	0.62	-0.38	37.42	
4,461.00	0.35	169.46	4,415.77	520.49	61.14	-67.49	0.40	-0.29	33.46	
4,554.00	0.26	67.85	4,508.77	520.29	61.39	-67.74	0.51	-0.10	-109.26	
4,647.00	0.18	56.43	4,601.77	520.45	61.70	-68.06	0.10	-0.09	-12.28	

Precision Drilling Corporation

Survey Report

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Well:	Wilson Ranch 12C-27HZ	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Compass_US

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)
4,739.00	0.62	13.54	4,693.77	521.01	61.94	-68.30	0.55	0.48	-46.62
4,832.00	0.70	3.87	4,786.76	522.07	62.10	-68.47	0.15	0.09	-10.40
4,926.00	0.70	10.55	4,880.76	523.20	62.24	-68.63	0.09	0.00	7.11
5,018.00	0.70	121.47	4,972.75	523.46	62.82	-69.21	1.25	0.00	120.57
5,111.00	0.79	149.42	5,065.74	522.62	63.63	-70.01	0.40	0.10	30.05
5,205.00	0.44	122.87	5,159.74	521.86	64.27	-70.64	0.47	-0.37	-28.24
5,298.00	0.35	128.32	5,252.74	521.49	64.79	-71.15	0.10	-0.10	5.86
5,391.00	0.18	280.20	5,345.74	521.34	64.87	-71.23	0.55	-0.18	163.31
5,485.00	0.44	286.00	5,439.73	521.47	64.37	-70.74	0.28	0.28	6.17
5,578.00	0.62	274.40	5,532.73	521.60	63.53	-69.90	0.22	0.19	-12.47
5,671.00	0.70	232.56	5,625.72	521.30	62.58	-68.94	0.51	0.09	-44.99
5,766.00	0.53	261.39	5,720.72	520.88	61.68	-68.04	0.37	-0.18	30.35
5,860.00	0.70	287.40	5,814.71	520.99	60.70	-67.06	0.34	0.18	27.67
5,954.00	0.44	68.03	5,908.71	521.29	60.49	-66.86	1.15	-0.28	149.61
6,048.00	0.09	236.43	6,002.71	521.39	60.76	-67.13	0.56	-0.37	179.15
6,141.00	0.18	219.73	6,095.71	521.23	60.61	-66.97	0.10	0.10	-17.96
6,234.00	0.35	203.38	6,188.71	520.86	60.40	-66.76	0.20	0.18	-17.58
6,327.00	0.44	247.15	6,281.71	520.46	59.96	-66.32	0.33	0.10	47.06
6,420.00	0.35	240.47	6,374.71	520.18	59.39	-65.74	0.11	-0.10	-7.18
6,512.00	0.18	300.06	6,466.70	520.12	59.02	-65.37	0.33	-0.18	64.77
6,605.00	0.53	334.69	6,559.70	520.58	58.71	-65.06	0.43	0.38	37.24
6,698.00	0.70	301.99	6,652.70	521.27	58.04	-64.40	0.41	0.18	-35.16
6,790.00	3.08	254.71	6,744.64	520.91	55.18	-61.54	2.89	2.59	-51.39
6,883.00	13.19	259.46	6,836.59	518.31	42.30	-48.63	10.89	10.87	5.11
6,976.00	19.87	264.90	6,925.70	514.96	16.10	-22.39	7.37	7.18	5.85
7,068.00	26.64	266.31	7,010.18	512.24	-20.10	13.84	7.38	7.36	1.53
7,161.00	34.38	266.31	7,090.24	509.20	-67.18	60.95	8.32	8.32	0.00
7,253.00	42.03	266.14	7,162.48	505.45	-123.91	117.73	8.32	8.32	-0.18
7,345.00	48.36	268.07	7,227.28	502.22	-189.07	182.92	7.04	6.88	2.10
7,429.00	55.66	271.57	7,278.96	502.11	-255.21	249.06	9.29	8.70	4.16
Land Box Entry - Land Box Entry 12C-27HZ									
7,439.00	56.54	271.94	7,284.54	502.36	-263.51	257.35	9.29	8.76	3.74
7,531.00	65.07	270.18	7,329.37	503.79	-343.73	337.55	9.42	9.27	-1.91
7,625.00	72.72	270.00	7,363.20	503.93	-431.36	425.17	8.14	8.14	-0.19
7,718.00	79.84	271.23	7,385.24	504.91	-521.64	515.43	7.76	7.66	1.32
7,811.00	85.47	271.94	7,397.13	507.47	-613.80	607.56	6.10	6.05	0.76
7,876.00	87.94	271.21	7,400.86	509.25	-678.66	672.39	3.96	3.80	-1.12
LP - LP(final) 12C-27HZ									
7,906.00	89.08	270.88	7,401.64	509.80	-708.65	702.37	3.96	3.80	-1.11
8,001.00	89.43	268.77	7,402.88	509.51	-803.63	797.35	2.25	0.37	-2.22
8,096.00	90.66	269.48	7,402.80	508.06	-898.62	892.35	1.49	1.29	0.75
8,190.00	90.57	268.42	7,401.79	506.34	-992.60	986.34	1.13	-0.10	-1.13
8,284.00	91.71	268.95	7,399.92	504.18	-1,086.55	1,080.31	1.34	1.21	0.56
8,378.00	89.87	268.42	7,398.63	502.02	-1,180.52	1,174.29	2.04	-1.96	-0.56

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Survey Report

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Well:	Wilson Ranch 12C-27HZ	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Compass_US

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)
8,472.00	90.66	267.01	7,398.19	498.27	-1,274.44	1,268.25	1.72	0.84	-1.50
8,567.00	91.89	266.49	7,396.08	492.89	-1,369.26	1,363.13	1.41	1.29	-0.55
8,661.00	91.63	267.89	7,393.19	488.28	-1,463.10	1,457.02	1.51	-0.28	1.49
8,755.00	89.69	267.37	7,392.11	484.40	-1,557.01	1,550.97	2.14	-2.06	-0.55
8,849.00	88.55	267.72	7,393.55	480.37	-1,650.91	1,644.92	1.27	-1.21	0.37
8,944.00	89.60	267.01	7,395.09	476.00	-1,745.79	1,739.85	1.33	1.11	-0.75
9,038.00	90.22	267.54	7,395.23	471.53	-1,839.69	1,833.79	0.87	0.66	0.56
9,131.00	90.84	268.60	7,394.37	468.40	-1,932.63	1,926.76	1.32	0.67	1.14
9,225.00	89.25	269.48	7,394.30	466.83	-2,026.61	2,020.76	1.93	-1.69	0.94
9,319.00	88.90	270.53	7,395.82	466.84	-2,120.60	2,114.73	1.18	-0.37	1.12
9,412.00	89.52	270.00	7,397.10	467.27	-2,213.59	2,207.71	0.88	0.67	-0.57
9,504.00	89.25	270.18	7,398.09	467.41	-2,305.58	2,299.70	0.35	-0.29	0.20
9,597.00	89.96	269.48	7,398.73	467.13	-2,398.58	2,392.69	1.07	0.76	-0.75
9,689.00	89.60	270.35	7,399.08	467.00	-2,490.57	2,484.68	1.02	-0.39	0.95
9,784.00	90.13	270.71	7,399.30	467.88	-2,585.57	2,579.66	0.67	0.56	0.38
9,877.00	89.25	270.35	7,399.81	468.74	-2,678.56	2,672.64	1.02	-0.95	-0.39
9,971.00	89.52	269.65	7,400.82	468.74	-2,772.56	2,766.62	0.80	0.29	-0.74
10,065.00	90.22	269.30	7,401.03	467.88	-2,866.55	2,860.62	0.83	0.74	-0.37
10,159.00	88.72	267.89	7,401.90	465.57	-2,960.52	2,954.61	2.19	-1.60	-1.50
10,253.00	88.99	267.37	7,403.78	461.69	-3,054.42	3,048.55	0.62	0.29	-0.55
10,346.00	89.60	267.54	7,404.92	457.56	-3,147.32	3,141.49	0.68	0.66	0.18
10,440.00	89.96	266.84	7,405.28	452.95	-3,241.20	3,235.43	0.84	0.38	-0.74
10,534.00	89.52	268.07	7,405.71	448.77	-3,335.11	3,329.37	1.39	-0.47	1.31
10,628.00	89.25	269.65	7,406.72	446.90	-3,429.08	3,423.36	1.71	-0.29	1.68
10,722.00	89.96	269.65	7,407.37	446.33	-3,523.07	3,517.36	0.76	0.76	0.00
10,816.00	90.04	269.48	7,407.37	445.62	-3,617.07	3,611.36	0.20	0.09	-0.18
10,910.00	89.16	268.07	7,408.02	443.61	-3,711.04	3,705.35	1.77	-0.94	-1.50
11,004.00	88.72	267.19	7,409.76	439.72	-3,804.95	3,799.29	1.05	-0.47	-0.94
11,097.00	88.81	267.37	7,411.77	435.31	-3,897.82	3,892.21	0.22	0.10	0.19
11,190.00	91.45	268.77	7,411.56	432.18	-3,990.76	3,985.18	3.21	2.84	1.51
11,285.00	90.40	267.72	7,410.02	429.27	-4,085.70	4,080.15	1.56	-1.11	-1.11
11,378.00	90.48	267.37	7,409.31	425.28	-4,178.61	4,173.10	0.39	0.09	-0.38
11,472.00	89.43	266.31	7,409.38	420.10	-4,272.46	4,267.01	1.59	-1.12	-1.13
11,564.00	88.11	268.07	7,411.36	415.59	-4,364.33	4,358.92	2.39	-1.43	1.91
11,657.00	88.11	268.07	7,414.42	412.46	-4,457.22	4,451.85	0.00	0.00	0.00
11,750.00	88.72	269.65	7,417.00	410.61	-4,550.17	4,544.81	1.82	0.66	1.70
11,844.00	89.08	271.23	7,418.80	411.33	-4,644.14	4,638.77	1.72	0.38	1.68
11,937.00	88.99	271.41	7,420.37	413.48	-4,737.10	4,731.70	0.22	-0.10	0.19
12,029.00	88.72	271.76	7,422.21	416.02	-4,829.05	4,823.61	0.48	-0.29	0.38
12,122.00	89.16	272.11	7,423.93	419.16	-4,921.98	4,916.49	0.60	0.47	0.38
12,215.00	89.96	271.41	7,424.64	422.02	-5,014.93	5,009.40	1.14	0.86	-0.75
12,297.00	90.19	270.17	7,424.53	423.15	-5,096.92	5,091.37	1.54	0.28	-1.52
Section Line Entry - Section Line Entry 12C-27HZ									

Precision Drilling Corporation

Survey Report

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well Wilson Ranch 12C-27HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	5041'GL+20'KB @ 5061.00usft (PD460)
Site:	Wilson Ranch 9-26HZ Pad 4N-68W-26	MD Reference:	5041'GL+20'KB @ 5061.00usft (PD460)
Well:	Wilson Ranch 12C-27HZ	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Compass_US

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)
12,308.00	90.22	270.00	7,424.49	423.16	-5,107.92	5,102.37	1.54	0.28	-1.52
12,401.00	92.42	269.65	7,422.35	422.88	-5,200.89	5,195.34	2.40	2.37	-0.38
12,496.00	91.19	270.35	7,419.36	422.88	-5,295.84	5,290.28	1.49	-1.29	0.74
12,589.00	90.13	269.12	7,418.29	422.45	-5,388.83	5,383.27	1.75	-1.14	-1.32
12,684.00	90.57	269.48	7,417.71	421.29	-5,483.82	5,478.27	0.60	0.46	0.38
12,777.00	90.48	268.77	7,416.86	419.87	-5,576.81	5,571.26	0.77	-0.10	-0.76
12,871.00	89.87	267.89	7,416.57	417.13	-5,670.77	5,665.25	1.14	-0.65	-0.94
12,964.00	88.72	267.01	7,417.71	412.99	-5,763.67	5,758.19	1.56	-1.24	-0.95
13,056.00	89.60	267.19	7,419.06	408.34	-5,855.54	5,850.11	0.98	0.96	0.20
13,149.00	89.08	267.01	7,420.13	403.63	-5,948.41	5,943.04	0.59	-0.56	-0.19
13,242.00	89.60	268.42	7,421.20	399.92	-6,041.33	6,035.99	1.62	0.56	1.52
13,335.00	91.45	269.65	7,420.35	398.36	-6,134.31	6,128.98	2.39	1.99	1.32
13,432.00	92.51	269.12	7,417.00	397.32	-6,231.24	6,225.92	1.22	1.09	-0.55
13,524.00	91.63	269.30	7,413.68	396.05	-6,323.17	6,317.86	0.98	-0.96	0.20
13,618.00	91.19	269.83	7,411.36	395.34	-6,417.14	6,411.83	0.73	-0.47	0.56
13,711.00	89.08	270.00	7,411.15	395.20	-6,510.13	6,504.82	2.28	-2.27	0.18
13,805.00	89.78	270.18	7,412.08	395.35	-6,604.13	6,598.80	0.77	0.74	0.19
13,901.00	90.04	270.00	7,412.23	395.50	-6,700.13	6,694.80	0.33	0.27	-0.19
13,996.00	89.25	269.30	7,412.82	394.92	-6,795.12	6,789.79	1.11	-0.83	-0.74
14,089.00	90.40	269.65	7,413.10	394.06	-6,888.12	6,882.79	1.29	1.24	0.38
14,183.00	89.16	269.48	7,413.46	393.35	-6,982.11	6,976.78	1.33	-1.32	-0.18
14,277.00	89.78	269.30	7,414.33	392.35	-7,076.10	7,070.78	0.69	0.66	-0.19
14,370.00	90.84	268.60	7,413.83	390.65	-7,169.08	7,163.77	1.37	1.14	-0.75
14,462.00	89.69	268.42	7,413.41	388.25	-7,261.05	7,255.76	1.27	-1.25	-0.20
14,555.00	90.40	267.54	7,413.33	384.98	-7,353.99	7,348.74	1.22	0.76	-0.95
14,648.00	90.04	268.42	7,412.98	381.70	-7,446.93	7,441.71	1.02	-0.39	0.95
14,742.00	89.25	270.18	7,413.56	380.55	-7,540.92	7,535.70	2.05	-0.84	1.87
14,836.00	88.81	269.83	7,415.15	380.56	-7,634.90	7,629.68	0.60	-0.47	-0.37
14,929.00	89.08	270.00	7,416.86	380.42	-7,727.89	7,722.66	0.34	0.29	0.18
15,021.00	88.11	270.35	7,419.12	380.70	-7,819.86	7,814.62	1.12	-1.05	0.38
15,116.00	87.93	270.35	7,422.40	381.28	-7,914.80	7,909.55	0.19	-0.19	0.00
15,209.00	88.90	271.06	7,424.97	382.42	-8,007.75	8,002.48	1.29	1.04	0.76
15,302.00	89.08	271.41	7,426.61	384.43	-8,100.72	8,095.42	0.42	0.19	0.38
15,394.00	91.01	270.71	7,426.54	386.13	-8,192.70	8,187.37	2.23	2.10	-0.76
15,488.00	91.80	269.83	7,424.23	386.57	-8,286.67	8,281.33	1.26	0.84	-0.94
15,582.00	91.89	270.00	7,421.21	386.43	-8,380.62	8,375.27	0.20	0.10	0.18
15,674.00	90.75	269.30	7,419.09	385.87	-8,472.59	8,467.24	1.45	-1.24	-0.76
15,767.00	88.46	268.60	7,419.73	384.17	-8,565.56	8,560.23	2.57	-2.46	-0.75
15,860.00	90.13	269.65	7,420.87	382.75	-8,658.54	8,653.22	2.12	1.80	1.13
15,954.00	90.13	269.83	7,420.66	382.32	-8,752.54	8,747.22	0.19	0.00	0.19
16,048.00	90.75	269.48	7,419.94	381.76	-8,846.54	8,841.21	0.76	0.66	-0.37
16,141.00	91.28	268.95	7,418.29	380.48	-8,939.51	8,934.20	0.81	0.57	-0.57
16,236.00	90.31	269.12	7,416.97	378.88	-9,034.49	9,029.19	1.04	-1.02	0.18
16,329.00	90.66	269.30	7,416.19	377.60	-9,127.48	9,122.18	0.42	0.38	0.19

Precision Drilling Corporation

Survey Report

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well Wilson Ranch 12C-27HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	5041'GL+20'KB @ 5061.00usft (PD460)
Site:	Wilson Ranch 9-26HZ Pad 4N-68W-26	MD Reference:	5041'GL+20'KB @ 5061.00usft (PD460)
Well:	Wilson Ranch 12C-27HZ	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Compass_US

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)
16,421.00	90.56	269.12	7,415.21	376.33	-9,219.46	9,214.18	0.22	-0.11	-0.20
16,514.00	90.48	269.30	7,414.36	375.05	-9,312.45	9,307.17	0.21	-0.09	0.19
16,608.00	90.04	269.30	7,413.94	373.90	-9,406.44	9,401.17	0.47	-0.47	0.00
16,702.00	90.48	268.24	7,413.51	371.88	-9,500.42	9,495.16	1.22	0.47	-1.13
16,794.00	90.13	266.84	7,413.02	367.93	-9,592.33	9,587.12	1.57	-0.38	-1.52
16,889.00	89.96	266.31	7,412.95	362.26	-9,687.16	9,682.01	0.59	-0.18	-0.56
16,983.00	90.13	266.66	7,412.87	356.50	-9,780.98	9,775.90	0.41	0.18	0.37
17,046.00	89.87	266.66	7,412.87	352.83	-9,843.87	9,838.83	0.41	-0.41	0.00
17,114.00	89.87	266.66	7,413.03	348.86	-9,911.76	9,906.76	0.00	0.00	0.00
BHL 12C-27HZ									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Surface 12C-27HZ - hit/miss target - Shape - actual wellpath hits target center - Point	0.00	0.00	0.00	0.00	0.00	14,629,623.29	1,651,166.88	40.282542°N	104.961454°W
Land Box Entry 12C-2 - actual wellpath hits target center - Point	0.00	0.00	7,278.96	502.11	-255.21	14,630,125.28	1,650,911.46	40.283921°N	104.962369°W
LP(final) 12C-27HZ - actual wellpath hits target center - Point	0.00	0.00	7,400.86	509.25	-678.66	14,630,132.24	1,650,488.00	40.283941°N	104.963888°W
BHL 12C-27HZ - actual wellpath hits target center - Point	0.00	0.00	7,413.03	348.86	-9,911.76	14,629,967.84	1,641,254.98	40.283495°N	104.996994°W
Section Line Entry 12C-27HZ - actual wellpath hits target center - Point	0.00	0.00	7,424.53	423.15	-5,096.92	14,630,044.21	1,646,069.78	40.283703°N	104.979730°W

Design Annotations

	Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
			+N/-S (usft)	+E/-W (usft)	
	7,429.00	7,278.96	502.11	-255.21	Land Box Entry
	7,876.00	7,400.86	509.25	-678.66	LP
	12,297.00	7,424.53	423.15	-5,096.92	Section Line Entry