



US ROCKIES WATTENBERG PLANNING

Project: WELD-NAD83-UTMFT13N

Site: Wilson Ranch 16-26HZ Pad

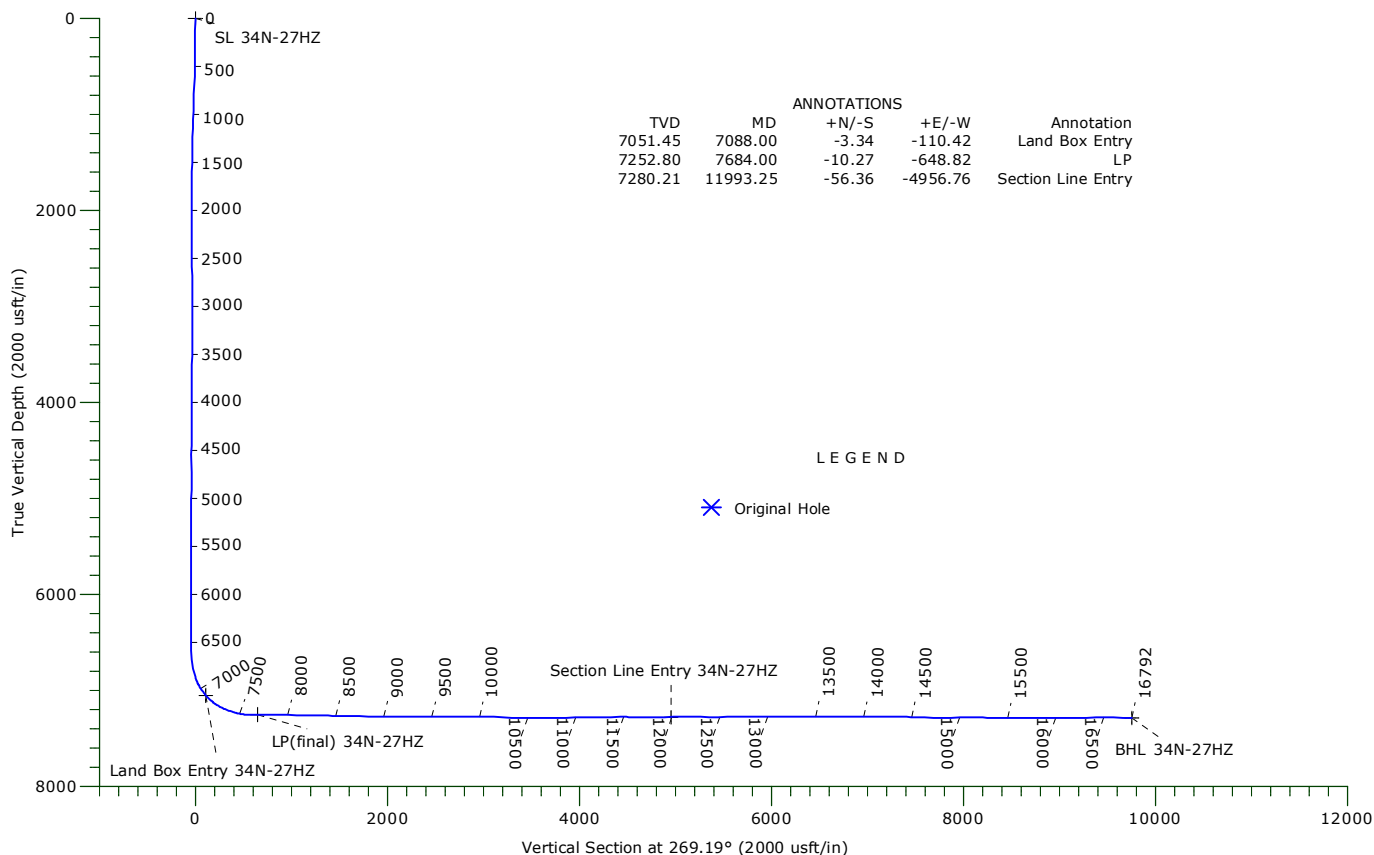
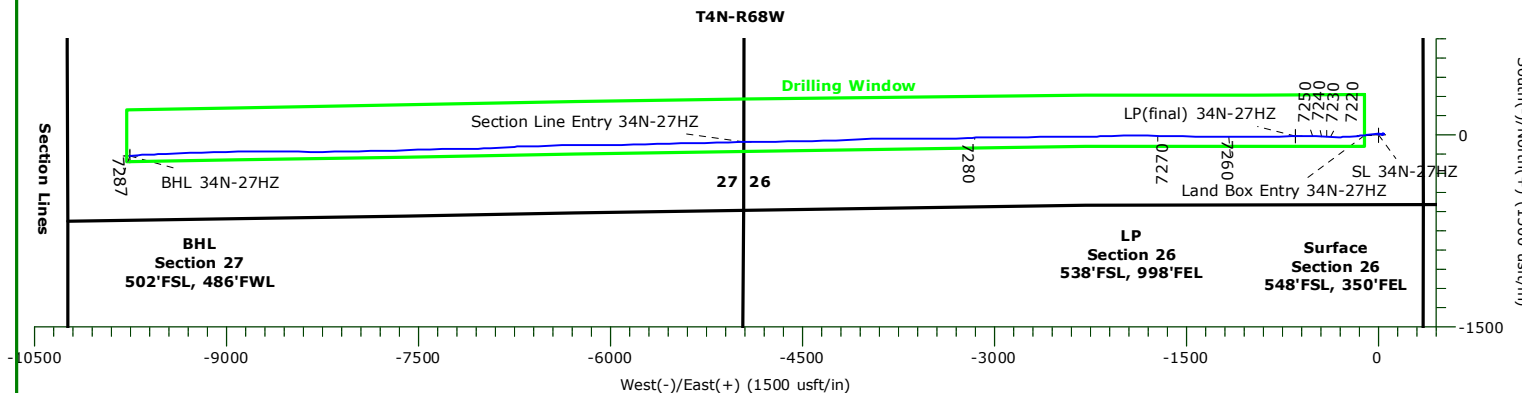
Well: Wilson Ranch #34N-27HZ

Wellbore: Original Hole

Design: Original Hole



Precision
Directional Services



WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 34N-27HZ	0.00	0.00	0.00	14628290.77	1651023.27	40.278883°N	104.961971°W	Point
Land Box Entry 34N-27HZ	7051.45	-3.34	-110.42	14628287.38	1650912.85	40.278874°N	104.962367°W	Point
LP (final) 34N-27HZ	7252.80	-10.27	-648.82	14628280.23	1650374.45	40.278855°N	104.964297°W	Point
Section Line Entry 34N-27HZ	7280.21	-56.36	-4956.76	14628232.29	1646066.54	40.278727°N	104.979743°W	Point
BHL 34N-27HZ	7286.81	-164.80	-9752.92	14628121.79	1641270.42	40.278425°N	104.996939°W	Point

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
Wilson Ranch 16-26HZ Pad
Wilson Ranch #34N-27HZ**

Original Hole

Design: Original Hole

Standard Survey Report

01 December, 2015

Precision Drilling Corporation

Survey Report

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well Wilson Ranch #34N-27HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	5072'GL+20'KB @ 5092.00usft (PD460)
Site:	Wilson Ranch 16-26HZ Pad	MD Reference:	5072'GL+20'KB @ 5092.00usft (PD460)
Well:	Wilson Ranch #34N-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 Fee	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	Wilson Ranch 16-26HZ Pad				
Site Position:		Northing:	14,628,290.77 usft	Latitude:	40.278883°N
From:	Lat/Long	Easting:	1,651,023.27 usft	Longitude:	104.961971°W
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.02 °

Well	Wilson Ranch #34N-27HZ					
Well Position	+N-S	0.00 usft	Northing:	14,628,290.77 usft	Latitude:	40.278883°N
	+E-W	0.00 usft	Easting:	1,651,023.27 usft	Longitude:	104.961971°W
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,072.00 usft

Wellbore	Original Hole				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/04/15	8.38	66.77	52,592

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	269.19

Survey Program		Date	12/01/15	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
10.00	1,796.00	Survey #1 (Original Hole)	APC_ISCWSA REV 2 MW Fixed:v2:standard declination	
1,931.00	16,728.00	Survey #2 (Original Hole)	APC_ISCWSA REV 2 MW Fixed:v2:Rockies, crustal dec + 3-axis correction	
16,792.00	16,792.00	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
SL 34N-27HZ										
	10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00
	126.00	0.33	105.98	126.00	-0.09	0.32	-0.32	0.28	0.28	0.00
	216.00	0.38	356.15	216.00	0.13	0.55	-0.55	0.65	0.06	-122.03
	306.00	0.59	345.41	306.00	0.88	0.41	-0.43	0.25	0.23	-11.93
	427.00	0.98	43.39	426.99	2.24	0.97	-1.00	0.69	0.32	47.92
	517.00	1.84	73.20	516.96	3.21	2.88	-2.92	1.23	0.96	33.12
	607.00	1.72	66.99	606.91	4.16	5.51	-5.56	0.25	-0.13	-6.90

Precision Drilling Corporation

Survey Report

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Site:	Wilson Ranch 16-26HZ Pad	MD Reference:	5072'GL+20'KB @ 5092.00usft (PD460)
Well:	Wilson Ranch #34N-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)
697.00	2.38	99.42	696.86	4.38	8.59	-8.65	1.45	0.73	36.03
787.00	2.28	94.60	786.79	3.93	12.22	-12.28	0.24	-0.11	-5.36
877.00	1.56	88.84	876.73	3.81	15.23	-15.28	0.83	-0.80	-6.40
967.00	2.01	90.95	966.69	3.81	18.03	-18.09	0.51	0.50	2.34
1,057.00	2.27	114.10	1,056.63	3.06	21.24	-21.28	1.00	0.29	25.72
1,147.00	2.18	110.78	1,146.56	1.72	24.47	-24.49	0.17	-0.10	-3.69
1,237.00	1.77	106.87	1,236.51	0.71	27.40	-27.40	0.48	-0.46	-4.34
1,327.00	0.83	103.34	1,326.48	0.16	29.36	-29.36	1.05	-1.04	-3.92
1,418.00	0.80	46.73	1,417.48	0.44	30.46	-30.47	0.85	-0.03	-62.21
1,508.00	1.26	27.56	1,507.46	1.75	31.38	-31.40	0.63	0.51	-21.30
1,598.00	1.48	30.16	1,597.44	3.63	32.42	-32.47	0.25	0.24	2.89
1,688.00	1.51	62.86	1,687.41	5.18	34.06	-34.13	0.94	0.03	36.33
1,778.00	1.74	81.53	1,777.37	5.92	36.47	-36.55	0.64	0.26	20.74
1,796.00	1.58	78.12	1,795.36	6.01	36.98	-37.06	1.04	-0.89	-18.94
1,931.00	0.17	305.30	1,930.35	6.51	38.64	-38.73	1.26	-1.04	-98.39
2,025.00	0.46	305.09	2,024.35	6.81	38.22	-38.31	0.31	0.31	-0.22
2,118.00	0.54	302.38	2,117.34	7.26	37.54	-37.64	0.09	0.09	-2.91
2,213.00	0.56	297.79	2,212.34	7.71	36.75	-36.86	0.05	0.02	-4.83
2,399.00	0.74	263.44	2,398.33	8.00	34.75	-34.86	0.23	0.10	-18.47
2,493.00	0.80	267.46	2,492.32	7.90	33.50	-33.60	0.09	0.06	4.28
2,587.00	0.92	283.28	2,586.31	8.04	32.11	-32.22	0.28	0.13	16.83
2,681.00	0.92	283.27	2,680.30	8.39	30.64	-30.75	0.00	0.00	-0.01
2,775.00	0.88	291.12	2,774.28	8.82	29.23	-29.35	0.14	-0.04	8.35
2,868.00	0.63	136.98	2,867.28	8.71	28.91	-29.03	1.58	-0.27	-165.74
2,960.00	0.35	115.69	2,959.28	8.22	29.51	-29.62	0.36	-0.30	-23.14
3,053.00	0.18	132.93	3,052.28	7.99	29.87	-29.98	0.20	-0.18	18.54
3,146.00	0.17	73.17	3,145.28	7.93	30.11	-30.22	0.19	-0.01	-64.26
3,238.00	0.27	79.98	3,237.28	8.01	30.46	-30.57	0.11	0.11	7.40
3,331.00	0.34	151.70	3,330.27	7.81	30.80	-30.91	0.39	0.08	77.12
3,423.00	0.40	165.86	3,422.27	7.25	31.01	-31.11	0.12	0.07	15.39
3,515.00	0.30	182.23	3,514.27	6.70	31.08	-31.17	0.15	-0.11	17.79
3,609.00	1.17	91.60	3,608.26	6.43	32.03	-32.12	1.29	0.93	-96.41
3,702.00	0.73	85.21	3,701.25	6.45	33.57	-33.66	0.49	-0.47	-6.87
3,796.00	0.71	76.19	3,795.24	6.64	34.73	-34.82	0.12	-0.02	-9.60
3,889.00	0.61	69.37	3,888.24	6.95	35.75	-35.85	0.14	-0.11	-7.33
3,983.00	0.48	62.46	3,982.23	7.31	36.57	-36.67	0.15	-0.14	-7.35
4,078.00	0.32	53.71	4,077.23	7.65	37.14	-37.24	0.18	-0.17	-9.21
4,171.00	0.20	77.84	4,170.23	7.84	37.51	-37.61	0.17	-0.13	25.95
4,265.00	0.41	69.08	4,264.23	8.00	37.98	-38.09	0.23	0.22	-9.32
4,358.00	0.63	100.63	4,357.22	8.02	38.79	-38.90	0.38	0.24	33.92
4,451.00	0.56	110.74	4,450.22	7.76	39.72	-39.83	0.14	-0.08	10.87
4,543.00	0.20	180.17	4,542.22	7.45	40.14	-40.24	0.57	-0.39	75.47
4,728.00	0.60	254.28	4,727.21	6.86	39.21	-39.30	0.31	0.22	40.06

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Survey Report

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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)
4,820.00	0.40	249.46	4,819.21	6.62	38.44	-38.53	0.22	-0.22	-5.24
4,912.00	0.96	111.35	4,911.21	6.22	38.86	-38.94	1.40	0.61	-150.12
5,005.00	0.78	113.33	5,004.20	5.69	40.17	-40.24	0.20	-0.19	2.13
5,097.00	0.63	94.34	5,096.19	5.40	41.25	-41.32	0.30	-0.16	-20.64
5,189.00	0.61	81.60	5,188.18	5.44	42.24	-42.31	0.15	-0.02	-13.85
5,374.00	0.06	79.88	5,373.18	5.60	43.31	-43.38	0.30	-0.30	-0.93
5,466.00	0.16	277.87	5,465.18	5.62	43.23	-43.30	0.24	0.11	-176.10
5,559.00	0.55	309.20	5,558.18	5.92	42.75	-42.83	0.45	0.42	33.69
5,745.00	0.22	299.51	5,744.17	6.66	41.75	-41.84	0.18	-0.18	-5.21
5,838.00	0.07	309.59	5,837.17	6.79	41.55	-41.64	0.16	-0.16	10.84
5,931.00	0.19	150.41	5,930.17	6.69	41.58	-41.67	0.28	0.13	-171.16
6,026.00	0.11	156.89	6,025.17	6.47	41.70	-41.78	0.09	-0.08	6.82
6,119.00	0.29	159.64	6,118.17	6.17	41.81	-41.89	0.19	0.19	2.96
6,213.00	0.34	157.78	6,212.17	5.68	42.00	-42.08	0.05	0.05	-1.98
6,307.00	0.19	182.60	6,306.17	5.27	42.10	-42.17	0.20	-0.16	26.40
6,402.00	0.10	274.07	6,401.17	5.12	42.01	-42.08	0.23	-0.09	96.28
6,495.00	0.35	313.43	6,494.17	5.32	41.72	-41.79	0.30	0.27	42.32
6,588.00	0.54	310.24	6,587.17	5.80	41.18	-41.26	0.21	0.20	-3.43
6,680.00	4.45	271.22	6,679.06	6.15	37.28	-37.36	4.40	4.25	-42.41
6,773.00	11.81	273.00	6,771.07	6.73	24.15	-24.24	7.92	7.91	1.91
6,867.00	18.95	274.04	6,861.64	8.31	-0.71	0.60	7.60	7.60	1.11
6,960.00	28.66	261.90	6,946.68	6.23	-37.97	37.87	11.64	10.44	-13.05
7,053.00	37.75	262.51	7,024.41	-0.64	-88.38	88.38	9.78	9.77	0.66
7,087.99	41.04	263.48	7,051.44	-3.34	-110.41	110.45	9.57	9.40	2.77
Land Box Entry 34N-27HZ									
7,148.00	46.70	264.88	7,094.69	-7.53	-151.77	151.86	9.57	9.43	2.33
7,241.00	58.09	265.53	7,151.35	-13.65	-225.07	225.24	12.26	12.25	0.70
7,335.00	67.05	270.11	7,194.62	-16.68	-308.33	308.54	10.46	9.53	4.87
7,430.00	72.54	272.08	7,227.43	-14.95	-397.43	397.60	6.10	5.78	2.07
7,525.00	82.86	271.81	7,247.64	-11.81	-490.07	490.19	10.87	10.86	-0.28
7,620.00	90.69	270.54	7,252.98	-9.87	-584.83	584.91	8.35	8.24	-1.34
7,684.00	89.62	268.75	7,252.80	-10.27	-648.82	648.90	3.26	-1.67	-2.80
LP(final) 34N-27HZ									
7,714.00	89.12	267.91	7,253.13	-11.14	-678.81	678.90	3.26	-1.67	-2.80
7,807.00	88.84	268.77	7,254.79	-13.84	-771.75	771.87	0.97	-0.30	0.92
7,901.00	89.25	270.49	7,256.36	-14.44	-865.73	865.85	1.88	0.44	1.83
7,996.00	88.96	270.16	7,257.84	-13.90	-960.72	960.82	0.46	-0.31	-0.35
8,090.00	89.81	270.18	7,258.85	-13.62	-1,054.71	1,054.80	0.90	0.90	0.02
8,186.00	89.18	269.11	7,259.69	-14.22	-1,150.71	1,150.79	1.29	-0.66	-1.11
8,280.00	88.32	270.53	7,261.75	-14.52	-1,244.68	1,244.76	1.77	-0.91	1.51
8,374.00	89.60	270.89	7,263.45	-13.35	-1,338.65	1,338.71	1.41	1.36	0.38
8,466.00	88.50	270.30	7,264.98	-12.40	-1,430.64	1,430.67	1.36	-1.20	-0.64
8,561.00	89.84	270.86	7,266.35	-11.43	-1,525.62	1,525.63	1.53	1.41	0.59
8,654.00	89.16	270.75	7,267.16	-10.13	-1,618.60	1,618.59	0.74	-0.73	-0.12

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Survey Report

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Project:	WELD-NAD83-UTMFT13N	TVD Reference:	5072'GL+20'KB @ 5092.00usft (PD460)
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Well:	Wilson Ranch #34N-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)
8,746.00	87.94	271.41	7,269.49	-8.39	-1,710.56	1,710.50	1.51	-1.33	0.72
8,839.00	88.89	271.64	7,272.06	-5.92	-1,803.49	1,803.39	1.05	1.02	0.25
8,931.00	88.57	270.15	7,274.10	-4.48	-1,895.45	1,895.32	1.66	-0.35	-1.62
9,024.00	89.41	268.16	7,275.74	-5.85	-1,988.42	1,988.30	2.32	0.90	-2.14
9,117.00	90.07	268.95	7,276.17	-8.20	-2,081.39	2,081.30	1.11	0.71	0.85
9,209.00	89.55	267.12	7,276.47	-11.35	-2,173.33	2,173.27	2.07	-0.57	-1.99
9,302.00	91.63	269.48	7,275.51	-14.11	-2,266.27	2,266.25	3.38	2.24	2.54
9,395.00	89.94	269.77	7,274.24	-14.72	-2,359.26	2,359.23	1.84	-1.82	0.31
9,488.00	89.36	270.05	7,274.81	-14.87	-2,452.26	2,452.22	0.69	-0.62	0.30
9,583.00	90.34	270.18	7,275.06	-14.68	-2,547.25	2,547.21	1.04	1.03	0.14
9,678.00	89.82	268.98	7,274.92	-15.37	-2,642.25	2,642.20	1.38	-0.55	-1.26
9,772.00	89.45	269.25	7,275.52	-16.82	-2,736.24	2,736.20	0.49	-0.39	0.29
9,866.00	89.35	268.13	7,276.51	-18.97	-2,830.20	2,830.19	1.20	-0.11	-1.19
9,960.00	89.66	269.15	7,277.32	-21.20	-2,924.17	2,924.18	1.13	0.33	1.09
10,054.00	89.87	269.84	7,277.70	-22.03	-3,018.17	3,018.18	0.77	0.22	0.73
10,148.00	88.67	269.94	7,278.90	-22.21	-3,112.16	3,112.16	1.28	-1.28	0.11
10,242.00	87.97	267.68	7,281.66	-24.16	-3,206.09	3,206.11	2.52	-0.74	-2.40
10,335.00	88.95	268.54	7,284.16	-27.23	-3,299.01	3,299.06	1.40	1.05	0.92
10,429.00	88.63	268.65	7,286.14	-29.53	-3,392.96	3,393.03	0.36	-0.34	0.12
10,523.00	91.01	270.24	7,286.44	-30.44	-3,486.94	3,487.02	3.04	2.53	1.69
10,617.00	89.94	270.71	7,285.66	-29.67	-3,580.93	3,580.99	1.24	-1.14	0.50
10,711.00	89.74	269.47	7,285.92	-29.52	-3,674.93	3,674.98	1.34	-0.21	-1.32
10,805.00	90.14	270.16	7,286.02	-29.82	-3,768.93	3,768.97	0.85	0.43	0.73
10,898.00	91.67	268.39	7,284.55	-31.00	-3,861.90	3,861.96	2.52	1.65	-1.90
10,992.00	90.58	267.97	7,282.70	-33.98	-3,955.84	3,955.92	1.24	-1.16	-0.45
11,086.00	89.67	268.06	7,282.50	-37.24	-4,049.78	4,049.90	0.97	-0.97	0.10
11,180.00	90.85	268.65	7,282.07	-39.94	-4,143.74	4,143.89	1.40	1.26	0.63
11,274.00	89.67	268.74	7,281.65	-42.08	-4,237.71	4,237.88	1.26	-1.26	0.10
11,368.00	90.69	268.48	7,281.35	-44.36	-4,331.68	4,331.88	1.12	1.09	-0.28
11,462.00	91.05	268.88	7,279.92	-46.52	-4,425.65	4,425.86	0.57	0.38	0.43
11,556.00	88.56	268.24	7,280.24	-48.88	-4,519.61	4,519.85	2.74	-2.65	-0.68
11,651.00	89.68	268.69	7,281.70	-51.43	-4,614.56	4,614.83	1.27	1.18	0.47
11,743.00	90.01	268.86	7,281.95	-53.40	-4,706.54	4,706.82	0.40	0.36	0.18
11,836.00	90.26	269.32	7,281.73	-54.87	-4,799.53	4,799.82	0.56	0.27	0.49
11,928.00	90.48	269.45	7,281.14	-55.86	-4,891.52	4,891.82	0.28	0.24	0.14
11,993.25	91.15	269.68	7,280.21	-56.36	-4,956.76	4,957.06	1.08	1.02	0.35
Section Line Entry 34N-27HZ									
12,021.00	91.43	269.78	7,279.59	-56.49	-4,984.50	4,984.80	1.08	1.02	0.35
12,113.00	91.61	269.26	7,277.15	-57.26	-5,076.47	5,076.77	0.60	0.20	-0.57
12,206.00	88.53	268.40	7,277.03	-59.15	-5,169.44	5,169.75	3.44	-3.31	-0.92
12,300.00	89.01	268.64	7,279.05	-61.58	-5,263.38	5,263.73	0.57	0.51	0.26
12,393.00	89.58	268.47	7,280.20	-63.93	-5,356.34	5,356.71	0.64	0.61	-0.18
12,486.00	90.31	268.77	7,280.29	-66.17	-5,449.32	5,449.71	0.85	0.78	0.32

Precision Drilling Corporation

Survey Report

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well Wilson Ranch #34N-27HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	5072'GL+20'KB @ 5092.00usft (PD460)
Site:	Wilson Ranch 16-26HZ Pad	MD Reference:	5072'GL+20'KB @ 5092.00usft (PD460)
Well:	Wilson Ranch #34N-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)
12,579.00	91.41	268.81	7,278.89	-68.13	-5,542.28	5,542.69	1.18	1.18	0.04
12,672.00	90.72	267.71	7,277.16	-70.95	-5,635.22	5,635.66	1.40	-0.74	-1.18
12,764.00	89.70	268.06	7,276.82	-74.35	-5,727.16	5,727.64	1.17	-1.11	0.38
12,857.00	89.55	269.36	7,277.43	-76.44	-5,820.13	5,820.63	1.41	-0.16	1.40
12,949.00	89.72	269.18	7,278.02	-77.61	-5,912.12	5,912.63	0.27	0.18	-0.20
13,042.00	91.92	270.31	7,276.69	-78.03	-6,005.10	6,005.61	2.66	2.37	1.22
13,135.00	91.93	269.48	7,273.56	-78.20	-6,098.05	6,098.55	0.89	0.01	-0.89
13,227.00	90.11	269.76	7,271.93	-78.81	-6,190.03	6,190.53	2.00	-1.98	0.30
13,320.00	89.16	268.88	7,272.52	-79.91	-6,283.02	6,283.52	1.39	-1.02	-0.95
13,414.00	91.00	268.70	7,272.39	-81.90	-6,376.99	6,377.52	1.97	1.96	-0.19
13,507.00	88.91	267.97	7,272.46	-84.60	-6,469.95	6,470.50	2.38	-2.25	-0.78
13,600.00	90.05	268.27	7,273.30	-87.65	-6,562.89	6,563.48	1.27	1.23	0.32
13,695.00	90.15	269.45	7,273.14	-89.54	-6,657.87	6,658.47	1.25	0.11	1.24
13,788.00	88.58	266.71	7,274.17	-92.66	-6,750.80	6,751.44	3.40	-1.69	-2.95
13,883.00	89.91	267.22	7,275.42	-97.68	-6,845.66	6,846.36	1.50	1.40	0.54
13,977.00	88.21	266.57	7,276.96	-102.78	-6,939.51	6,940.26	1.94	-1.81	-0.69
14,072.00	88.65	267.77	7,279.57	-107.46	-7,034.35	7,035.17	1.34	0.46	1.26
14,166.00	91.31	269.04	7,279.60	-110.08	-7,128.30	7,129.15	3.14	2.83	1.35
14,259.00	89.00	269.22	7,279.35	-111.49	-7,221.29	7,222.14	2.49	-2.48	0.19
14,352.00	90.80	270.02	7,279.51	-112.11	-7,314.28	7,315.13	2.12	1.94	0.86
14,445.00	89.33	269.38	7,279.40	-112.60	-7,407.28	7,408.13	1.72	-1.58	-0.69
14,541.00	88.03	267.89	7,281.62	-114.88	-7,503.22	7,504.09	2.06	-1.35	-1.55
14,633.00	89.13	267.86	7,283.90	-118.29	-7,595.13	7,596.04	1.20	1.20	-0.03
14,726.00	89.66	267.71	7,284.88	-121.89	-7,688.05	7,689.01	0.59	0.57	-0.16
14,818.00	90.08	268.16	7,285.09	-125.20	-7,779.99	7,780.98	0.67	0.46	0.49
14,911.00	90.68	269.30	7,284.47	-127.26	-7,872.96	7,873.98	1.39	0.65	1.23
15,006.00	90.76	269.09	7,283.28	-128.60	-7,967.95	7,968.97	0.24	0.08	-0.22
15,100.00	89.14	268.83	7,283.36	-130.30	-8,061.93	8,062.96	1.75	-1.72	-0.28
15,192.00	90.53	269.36	7,283.62	-131.76	-8,153.91	8,154.96	1.62	1.51	0.58
15,287.00	88.60	269.71	7,284.34	-132.53	-8,248.90	8,249.95	2.06	-2.03	0.37
15,383.00	89.35	270.52	7,286.06	-132.33	-8,344.89	8,345.92	1.15	0.78	0.84
15,476.00	89.66	271.16	7,286.86	-130.97	-8,437.87	8,438.88	0.76	0.33	0.69
15,570.00	89.76	270.67	7,287.34	-129.47	-8,531.86	8,532.84	0.53	0.11	-0.52
15,665.00	89.63	269.94	7,287.85	-128.96	-8,626.86	8,627.82	0.78	-0.14	-0.77
15,758.00	89.92	270.44	7,288.21	-128.66	-8,719.85	8,720.80	0.62	0.31	0.54
15,853.00	90.62	268.76	7,287.76	-129.32	-8,814.85	8,815.79	1.92	0.74	-1.77
15,947.00	91.13	268.98	7,286.33	-131.17	-8,908.82	8,909.78	0.59	0.54	0.23
16,041.00	89.71	268.51	7,285.64	-133.23	-9,002.79	9,003.77	1.59	-1.51	-0.50
16,135.00	89.88	269.06	7,285.98	-135.22	-9,096.77	9,097.77	0.61	0.18	0.59
16,229.00	90.30	269.17	7,285.83	-136.68	-9,190.76	9,191.77	0.46	0.45	0.12
16,324.00	90.89	267.57	7,284.84	-139.38	-9,285.71	9,286.75	1.79	0.62	-1.68
16,418.00	90.14	267.37	7,284.00	-143.53	-9,379.61	9,380.70	0.83	-0.80	-0.21
16,510.00	91.36	267.61	7,282.79	-147.56	-9,471.51	9,472.65	1.35	1.33	0.26
16,604.00	88.72	266.48	7,282.73	-152.40	-9,565.38	9,566.58	3.05	-2.81	-1.20

Precision Drilling Corporation

Survey Report

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well Wilson Ranch #34N-27HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	5072'GL+20'KB @ 5092.00usft (PD460)
Site:	Wilson Ranch 16-26HZ Pad	MD Reference:	5072'GL+20'KB @ 5092.00usft (PD460)
Well:	Wilson Ranch #34N-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)
16,698.00	88.67	266.35	7,284.87	-158.28	-9,659.17	9,660.44	0.15	-0.05	-0.14
16,728.00	88.84	265.96	7,285.52	-160.29	-9,689.10	9,690.39	1.42	0.57	-1.30
16,792.00	88.84	265.96	7,286.81	-164.80	-9,752.92	9,754.28	0.00	0.00	0.00
BHL 34N-27HZ									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SL 34N-27HZ - hit/miss target - Shape - actual wellpath hits target center - Point	0.00	0.00	0.00	0.00	0.00	14,628,290.77	1,651,023.27	40.278883°N	104.961971°W
Land Box Entry 34N-2 - actual wellpath hits target center - Point	0.00	0.00	7,051.45	-3.34	-110.42	14,628,287.38	1,650,912.85	40.278874°N	104.962367°W
LP(final) 34N-27HZ - actual wellpath hits target center - Point	0.00	0.00	7,252.80	-10.27	-648.82	14,628,280.22	1,650,374.45	40.278855°N	104.964298°W
Section Line Entry 34I - actual wellpath hits target center - Point	0.00	0.00	7,280.21	-56.36	-4,956.76	14,628,232.29	1,646,066.53	40.278727°N	104.979743°W
BHL 34N-27HZ - actual wellpath hits target center - Point	0.00	0.00	7,286.81	-164.80	-9,752.92	14,628,121.79	1,641,270.42	40.278425°N	104.996939°W

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,088.00	7,051.45	-3.34	-110.42	Land Box Entry
7,684.00	7,252.80	-10.27	-648.82	LP
11,993.25	7,280.21	-56.36	-4,956.76	Section Line Entry