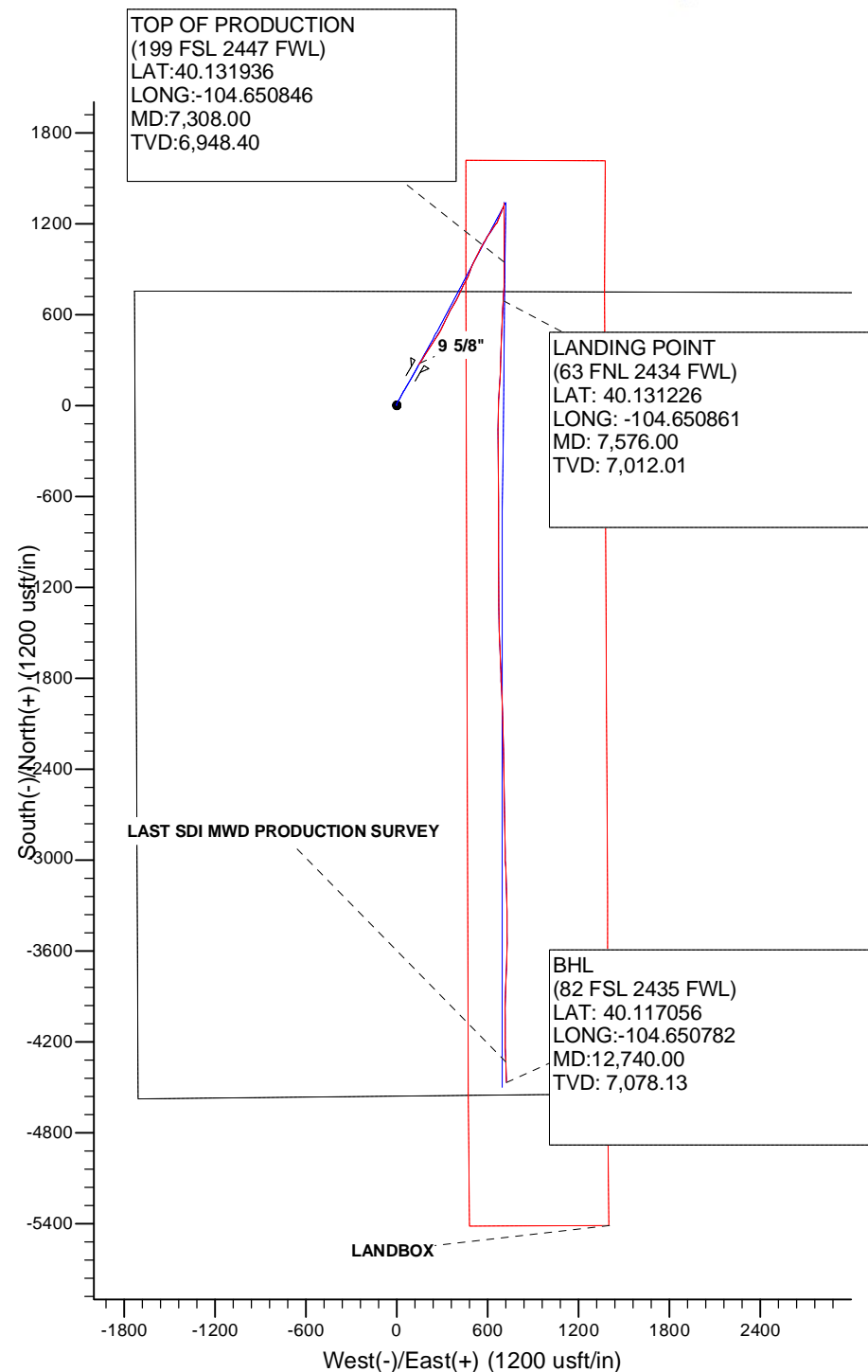
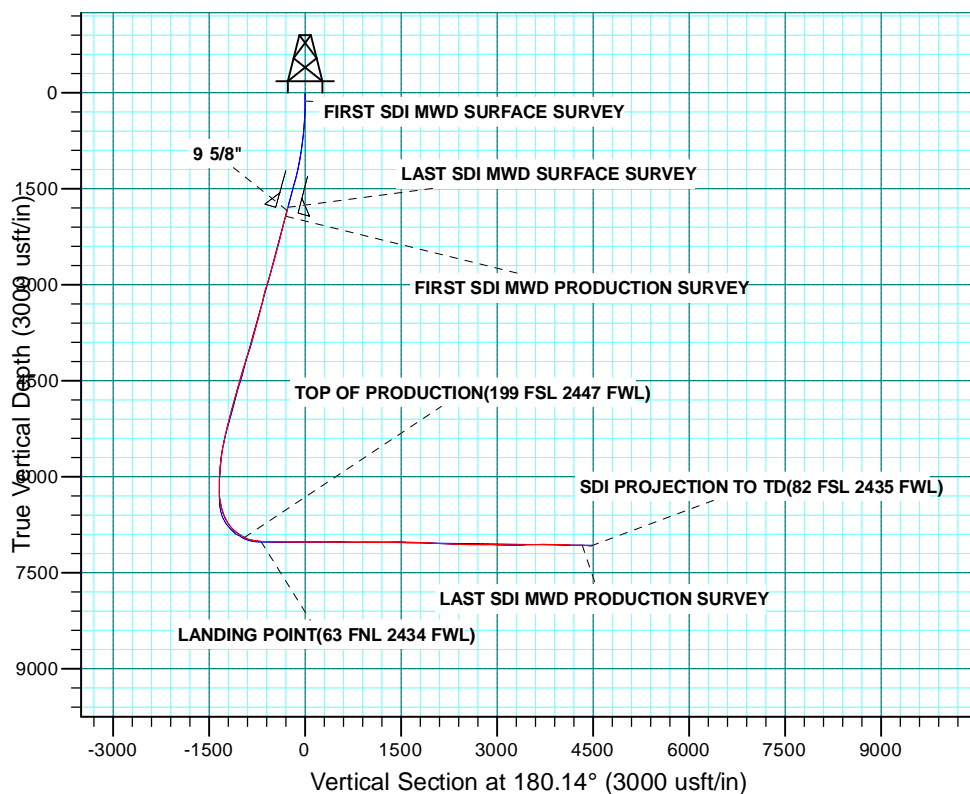


WELL DETAILS: POWERS 36N-22HZ						
GL 4883 & KB 20 @ 4903.00usft (PRECISION 461)						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	14574017.90	1737306.04	40.129332	-104.653375	

PROJECT DETAILS: WELD-NAD83-UTMFT13N	
Geodetic System:	Universal Transverse Mercator (US Survey Feet)
Datum:	North American Datum 1983
Ellipsoid:	GRS 1980
Zone:	Zone 13N (108 W to 102 W)
Location:	
System Datum:	Mean Sea Level



Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well POWERS 36N-22HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	GL 4883 & KB 20 @ 4903.00usft (PRECISION 461)
Site:	2N-65W-22 Powers 3-22 Pad	MD Reference:	GL 4883 & KB 20 @ 4903.00usft (PRECISION 461)
Well:	POWERS 36N-22HZ	North Reference:	True
Wellbore:	Plan A	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales

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		2N-65W-22 Powers 3-22 Pad			
Site Position:		Northing:	14,574,017.80 usft	Latitude:	40.129333
From:	Lat/Long	Easting:	1,737,186.12 usft	Longitude:	-104.653804
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.22 °

Well	POWERS 36N-22HZ					
Well Position	+N-S	0.00 usft	Northing:	14,574,017.90 usft	Latitude:	40.129332
	+E-W	0.00 usft	Easting:	1,737,306.04 usft	Longitude:	-104.653375
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,883.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/17/2015	8.40	66.67	52,502

Design	OH				
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	180.14	

Survey Program	Date	10/7/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
13.00	1,827.00	SDI MWD SURFACE (Plan A)	APC_ISCWSA REV 2 MWD	Fixed:v2:standard declination	
1,978.00	12,740.00	SDI MWD PRODUCTION (Plan A)	APC_ISCWSA REV 2 MWD+	Fixed:v2:crustal field declination	

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	
13.00	0.00	0.00	13.00	0.00	0.00	0.00	0.00	0.00	0.00	
128.00	1.22	307.59	127.99	0.75	-0.97	-0.74	1.06	1.06	0.00	
FIRST SDI MWD SURFACE SURVEY										
218.00	1.47	346.15	217.97	2.45	-2.01	-2.45	1.02	0.28	42.84	
309.00	2.35	10.19	308.92	5.42	-1.96	-5.42	1.29	0.97	26.42	
386.00	2.60	25.22	385.85	8.56	-0.93	-8.55	0.90	0.32	19.52	
476.00	3.55	22.20	475.72	12.98	0.99	-12.98	1.07	1.06	-3.36	

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well POWERS 36N-22HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	GL 4883 & KB 20 @ 4903.00usft (PRECISION 461)
Site:	2N-65W-22 Powers 3-22 Pad	MD Reference:	GL 4883 & KB 20 @ 4903.00usft (PRECISION 461)
Well:	POWERS 36N-22HZ	North Reference:	True
Wellbore:	Plan A	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales

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)
611.00	6.02	30.65	610.24	22.94	6.18	-22.96	1.90	1.83	6.26
701.00	7.05	28.74	699.65	31.85	11.24	-31.87	1.17	1.14	-2.12
837.00	9.40	32.05	834.24	48.58	21.15	-48.63	1.76	1.73	2.43
927.00	10.14	28.25	922.94	61.79	28.80	-61.86	1.09	0.82	-4.22
1,017.00	11.06	28.25	1,011.40	76.37	36.64	-76.46	1.02	1.02	0.00
1,107.00	12.49	29.57	1,099.51	92.44	45.53	-92.55	1.62	1.59	1.47
1,197.00	13.52	30.62	1,187.20	109.96	55.69	-110.10	1.17	1.14	1.17
1,287.00	15.05	30.07	1,274.41	129.13	66.90	-129.29	1.71	1.70	-0.61
1,377.00	16.48	28.54	1,361.02	150.46	78.85	-150.65	1.65	1.59	-1.70
1,467.00	17.28	30.13	1,447.15	173.23	91.66	-173.45	1.03	0.89	1.77
1,557.00	17.72	30.00	1,532.98	196.65	105.22	-196.91	0.49	0.49	-0.14
1,647.00	18.08	30.74	1,618.62	220.52	119.21	-220.81	0.47	0.40	0.82
1,737.00	16.60	29.14	1,704.53	243.75	132.61	-244.08	1.73	-1.64	-1.78
1,827.00	16.38	28.67	1,790.83	266.12	144.96	-266.47	0.29	-0.24	-0.52
LAST SDI MWD SURFACE SURVEY									
1,876.00	16.69	29.97	1,837.80	278.27	151.79	-278.64	0.99	0.64	2.65
9 5/8"									
1,978.00	17.37	32.52	1,935.33	303.80	167.29	-304.21	0.99	0.66	2.50
FIRST SDI MWD PRODUCTION SURVEY									
2,074.00	18.85	32.15	2,026.57	329.02	183.25	-329.47	1.55	1.54	-0.39
2,168.00	16.99	33.27	2,116.01	353.36	198.86	-353.85	2.01	-1.98	1.19
2,263.00	17.32	31.79	2,206.78	376.99	213.93	-377.51	0.58	0.35	-1.56
2,358.00	17.43	33.80	2,297.45	400.83	229.29	-401.39	0.64	0.12	2.12
2,452.00	15.66	34.89	2,387.55	422.94	244.38	-423.53	1.91	-1.88	1.16
2,548.00	16.58	32.74	2,479.78	445.09	259.20	-445.72	1.14	0.96	-2.24
2,643.00	16.97	30.25	2,570.74	468.46	273.52	-469.13	0.86	0.41	-2.62
2,738.00	17.63	27.54	2,661.44	493.20	287.15	-493.90	1.10	0.69	-2.85
2,833.00	18.64	26.97	2,751.72	519.48	300.69	-520.22	1.08	1.06	-0.60
2,928.00	17.51	25.40	2,842.03	545.93	313.71	-546.69	1.30	-1.19	-1.65
3,023.00	18.60	26.08	2,932.35	572.44	326.50	-573.24	1.17	1.15	0.72
3,118.00	18.16	26.90	3,022.51	599.25	339.86	-600.08	0.54	-0.46	0.86
3,213.00	16.62	26.41	3,113.16	624.63	352.60	-625.49	1.63	-1.62	-0.52
3,308.00	16.82	29.55	3,204.15	648.75	365.42	-649.64	0.97	0.21	3.31
3,404.00	15.61	31.96	3,296.33	671.79	379.11	-672.72	1.44	-1.26	2.51
3,499.00	15.60	29.27	3,387.83	693.78	392.12	-694.74	0.76	-0.01	-2.83
3,594.00	16.24	25.17	3,479.18	716.95	404.01	-717.93	1.36	0.67	-4.32
3,689.00	16.46	22.14	3,570.34	741.44	414.74	-742.45	0.93	0.23	-3.19
3,784.00	17.80	26.07	3,661.13	766.95	426.19	-767.99	1.86	1.41	4.14
3,880.00	18.14	27.89	3,752.45	793.34	439.63	-794.41	0.68	0.35	1.90
3,975.00	17.45	30.55	3,842.90	818.68	453.79	-819.78	1.12	-0.73	2.80
4,070.00	16.86	22.41	3,933.69	843.68	466.28	-844.82	2.60	-0.62	-8.57
4,165.00	19.80	18.85	4,023.86	871.65	476.74	-872.82	3.31	3.09	-3.75

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well POWERS 36N-22HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	GL 4883 & KB 20 @ 4903.00usft (PRECISION 461)
Site:	2N-65W-22 Powers 3-22 Pad	MD Reference:	GL 4883 & KB 20 @ 4903.00usft (PRECISION 461)
Well:	POWERS 36N-22HZ	North Reference:	True
Wellbore:	Plan A	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales

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)	
4,260.00	20.85	20.07	4,112.95	902.76	487.74	-903.95	1.19	1.11	1.28	
4,355.00	17.98	25.04	4,202.54	931.93	499.75	-933.15	3.48	-3.02	5.23	
4,450.00	16.41	27.57	4,293.29	957.12	512.17	-958.36	1.83	-1.65	2.66	
4,545.00	18.53	29.14	4,383.91	982.20	525.73	-983.48	2.29	2.23	1.65	
4,640.00	19.03	27.22	4,473.85	1,009.16	540.16	-1,010.47	0.84	0.53	-2.02	
4,735.00	17.19	26.39	4,564.14	1,035.51	553.49	-1,036.86	1.96	-1.94	-0.87	
4,830.00	17.58	29.06	4,654.80	1,060.62	566.70	-1,062.01	0.93	0.41	2.81	
4,925.00	18.88	30.69	4,745.03	1,086.38	581.51	-1,087.80	1.47	1.37	1.72	
5,021.00	18.79	32.73	4,835.89	1,112.75	597.80	-1,114.20	0.69	-0.09	2.13	
5,116.00	17.98	34.58	4,926.04	1,137.69	614.39	-1,139.19	1.05	-0.85	1.95	
5,211.00	16.63	34.08	5,016.74	1,161.02	630.33	-1,162.56	1.43	-1.42	-0.53	
5,305.00	15.85	35.30	5,106.99	1,182.64	645.29	-1,184.21	0.91	-0.83	1.30	
5,401.00	14.76	29.54	5,199.59	1,203.98	658.89	-1,205.59	1.95	-1.14	-6.00	
5,495.00	15.77	21.91	5,290.28	1,226.25	669.57	-1,227.89	2.39	1.07	-8.12	
5,590.00	15.67	22.56	5,381.73	1,250.08	679.31	-1,251.73	0.21	-0.11	0.68	
5,685.00	12.10	23.05	5,473.94	1,271.09	688.13	-1,272.77	3.76	-3.76	0.52	
5,780.00	8.99	21.21	5,567.32	1,287.18	694.71	-1,288.87	3.29	-3.27	-1.94	
5,875.00	7.70	23.99	5,661.32	1,299.92	699.99	-1,301.62	1.42	-1.36	2.93	
5,970.00	6.44	19.75	5,755.59	1,310.74	704.38	-1,312.46	1.43	-1.33	-4.46	
6,065.00	4.55	10.01	5,850.15	1,319.47	706.83	-1,321.19	2.21	-1.99	-10.25	
6,158.00	3.46	1.92	5,942.93	1,325.91	707.57	-1,327.63	1.32	-1.17	-8.70	
6,251.00	2.70	356.22	6,035.79	1,330.90	707.52	-1,332.62	0.88	-0.82	-6.13	
6,347.00	2.18	349.53	6,131.70	1,334.95	707.03	-1,336.67	0.62	-0.54	-6.97	
6,441.00	0.57	198.03	6,225.68	1,336.26	706.57	-1,337.99	2.87	-1.71	-161.17	
6,535.00	4.21	185.32	6,319.59	1,332.38	706.10	-1,334.10	3.89	3.87	-13.52	
6,630.00	10.06	176.47	6,413.81	1,320.62	706.29	-1,322.34	6.25	6.16	-9.32	
6,725.00	15.55	175.51	6,506.41	1,299.63	707.80	-1,301.35	5.78	5.78	-1.01	
6,820.00	22.51	182.19	6,596.18	1,268.72	708.10	-1,270.44	7.67	7.33	7.03	
6,914.00	28.99	178.13	6,680.81	1,227.92	708.16	-1,229.65	7.14	6.89	-4.32	
7,008.00	35.73	177.94	6,760.16	1,177.67	709.89	-1,179.40	7.17	7.17	-0.20	
7,103.00	45.64	182.31	6,832.13	1,115.85	709.51	-1,117.58	10.85	10.43	4.60	
7,198.00	55.00	181.03	6,892.72	1,042.85	707.44	-1,044.58	9.91	9.85	-1.35	
7,293.00	62.83	179.69	6,941.73	961.56	706.97	-963.28	8.33	8.24	-1.41	
7,308.00	64.35	179.70	6,948.40	948.12	707.04	-949.85	10.15	10.15	0.08	
TOP OF PRODUCTION(199 FSL 2447 FWL)										
7,387.00	72.37	179.76	6,977.51	874.75	707.38	-876.48	10.15	10.15	0.07	
7,482.00	79.39	181.27	7,000.67	782.69	706.54	-784.41	7.55	7.39	1.59	
7,576.00	86.74	183.36	7,012.01	689.52	702.76	-691.24	8.12	7.82	2.22	
LANDING POINT(63 FNL 2434 FWL)										
7,671.00	87.38	183.52	7,016.89	594.82	697.07	-596.52	0.69	0.67	0.17	
7,766.00	87.92	182.68	7,020.78	500.04	691.93	-501.73	1.05	0.57	-0.88	
7,860.00	89.56	182.01	7,022.85	406.14	688.09	-407.82	1.88	1.74	-0.71	

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well POWERS 36N-22HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	GL 4883 & KB 20 @ 4903.00usft (PRECISION 461)
Site:	2N-65W-22 Powers 3-22 Pad	MD Reference:	GL 4883 & KB 20 @ 4903.00usft (PRECISION 461)
Well:	POWERS 36N-22HZ	North Reference:	True
Wellbore:	Plan A	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales

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)	
7,954.00	90.03	182.07	7,023.19	312.20	684.74	-313.88	0.50	0.50	0.06	
8,048.00	90.10	182.29	7,023.08	218.27	681.17	-219.94	0.25	0.07	0.23	
8,143.00	89.90	182.99	7,023.08	123.37	676.79	-125.03	0.77	-0.21	0.74	
8,238.00	90.00	183.18	7,023.16	28.51	671.68	-30.15	0.23	0.11	0.20	
8,333.00	89.90	180.20	7,023.24	-66.44	668.88	64.80	3.14	-0.11	-3.14	
8,428.00	89.80	180.14	7,023.49	-161.44	668.59	159.80	0.12	-0.11	-0.06	
8,522.00	90.57	179.97	7,023.19	-255.43	668.50	253.80	0.84	0.82	-0.18	
8,618.00	90.87	179.46	7,021.98	-351.43	668.98	349.79	0.62	0.31	-0.53	
8,712.00	90.07	179.24	7,021.21	-445.42	670.05	443.78	0.88	-0.85	-0.23	
8,807.00	90.57	178.77	7,020.68	-540.40	671.70	538.76	0.72	0.53	-0.49	
8,902.00	88.69	180.38	7,021.30	-635.39	672.40	633.74	2.61	-1.98	1.69	
8,997.00	88.66	180.42	7,023.49	-730.36	671.74	728.72	0.05	-0.03	0.04	
9,092.00	89.70	180.48	7,024.85	-825.35	670.99	823.70	1.10	1.09	0.06	
9,187.00	91.44	180.63	7,023.91	-920.33	670.07	918.69	1.84	1.83	0.16	
9,377.00	88.12	179.37	7,024.64	-1,110.30	670.07	1,108.66	1.87	-1.75	-0.66	
9,472.00	89.23	179.20	7,026.83	-1,205.27	671.26	1,203.62	1.18	1.17	-0.18	
9,566.00	90.84	179.39	7,026.78	-1,299.26	672.41	1,297.61	1.72	1.71	0.20	
9,661.00	89.83	179.14	7,026.22	-1,394.25	673.63	1,392.60	1.10	-1.06	-0.26	
9,757.00	89.93	178.43	7,026.42	-1,490.22	675.67	1,488.57	0.75	0.10	-0.74	
9,850.00	88.56	178.27	7,027.65	-1,583.17	678.35	1,581.51	1.48	-1.47	-0.17	
9,945.00	88.42	177.75	7,030.15	-1,678.08	681.64	1,676.41	0.57	-0.15	-0.55	
10,041.00	89.06	177.40	7,032.26	-1,773.97	685.71	1,772.29	0.76	0.67	-0.36	
10,136.00	89.16	176.08	7,033.74	-1,868.81	691.11	1,867.11	1.39	0.11	-1.39	
10,230.00	87.82	177.97	7,036.21	-1,962.64	695.98	1,960.93	2.46	-1.43	2.01	
10,326.00	86.48	178.97	7,040.99	-2,058.48	698.54	2,056.77	1.74	-1.40	1.04	
10,421.00	86.10	178.09	7,047.13	-2,153.25	700.98	2,151.53	1.01	-0.40	-0.93	
10,516.00	87.41	178.85	7,052.51	-2,248.06	703.51	2,246.34	1.59	1.38	0.80	
10,611.00	87.38	178.05	7,056.83	-2,342.93	706.08	2,341.20	0.84	-0.03	-0.84	
10,705.00	88.19	179.01	7,060.46	-2,436.83	708.48	2,435.09	1.34	0.86	1.02	
10,800.00	90.20	179.66	7,061.80	-2,531.81	709.59	2,530.07	2.22	2.12	0.68	
10,895.00	92.18	180.03	7,059.82	-2,626.78	709.84	2,625.04	2.12	2.08	0.39	
10,989.00	89.13	179.95	7,058.75	-2,720.76	709.86	2,719.02	3.25	-3.24	-0.09	
11,084.00	88.99	178.80	7,060.31	-2,815.74	710.90	2,814.00	1.22	-0.15	-1.21	
11,179.00	89.56	178.94	7,061.51	-2,910.72	712.77	2,908.97	0.62	0.60	0.15	
11,273.00	88.02	176.38	7,063.50	-3,004.61	716.61	3,002.85	3.18	-1.64	-2.72	
11,368.00	88.36	177.54	7,066.50	-3,099.42	721.64	3,097.65	1.27	0.36	1.22	
11,464.00	90.03	179.36	7,067.85	-3,195.37	724.24	3,193.59	2.57	1.74	1.90	
11,558.00	90.74	178.58	7,067.21	-3,289.35	725.93	3,287.57	1.12	0.76	-0.83	
11,653.00	90.37	179.77	7,066.29	-3,384.34	727.29	3,382.55	1.31	-0.39	1.25	
11,748.00	90.54	179.59	7,065.54	-3,479.33	727.83	3,477.54	0.26	0.18	-0.19	
11,843.00	90.67	181.55	7,064.54	-3,574.32	726.88	3,572.53	2.07	0.14	2.06	
11,938.00	91.24	181.73	7,062.95	-3,669.27	724.16	3,667.49	0.63	0.60	0.19	

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well POWERS 36N-22HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	GL 4883 & KB 20 @ 4903.00usft (PRECISION 461)
Site:	2N-65W-22 Powers 3-22 Pad	MD Reference:	GL 4883 & KB 20 @ 4903.00usft (PRECISION 461)
Well:	POWERS 36N-22HZ	North Reference:	True
Wellbore:	Plan A	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales

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)	
12,032.00	90.57	182.46	7,061.47	-3,763.19	720.73	3,761.42	1.05	-0.71	0.78	
12,127.00	90.17	182.31	7,060.85	-3,858.11	716.77	3,856.34	0.45	-0.42	-0.16	
12,222.00	87.65	180.98	7,062.66	-3,953.04	714.05	3,951.28	3.00	-2.65	-1.40	
12,318.00	86.47	179.67	7,067.59	-4,048.91	713.50	4,047.15	1.84	-1.23	-1.36	
12,413.00	87.31	179.23	7,072.74	-4,143.76	714.41	4,142.00	1.00	0.88	-0.46	
12,508.00	88.62	178.37	7,076.11	-4,238.68	716.40	4,236.92	1.65	1.38	-0.91	
12,603.00	89.73	177.74	7,077.48	-4,333.61	719.62	4,331.84	1.34	1.17	-0.66	
LAST SDI MWD PRODUCTION SURVEY										
12,740.00	89.73	177.74	7,078.13	-4,470.50	725.03	4,468.72	0.00	0.00	0.00	
SDI PROJECTION TO TD(82 FSL 2435 FWL)										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,876.00	1,837.80	9 5/8"	9.625	13.500	

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
128.00	127.99	0.75	-0.97	FIRST SDI MWD SURFACE SURVEY	
1,827.00	1,790.83	266.12	144.96	LAST SDI MWD SURFACE SURVEY	
1,978.00	1,935.33	303.80	167.29	FIRST SDI MWD PRODUCTION SURVEY	
7,308.00	6,948.40	948.12	707.04	TOP OF PRODUCTION(199 FSL 2447 FWL)	
7,576.00	7,012.01	689.52	702.76	LANDING POINT(63 FNL 2434 FWL)	
12,603.00	7,077.48	-4,333.61	719.62	LAST SDI MWD PRODUCTION SURVEY	
12,740.00	7,078.13	-4,470.50	725.03	SDI PROJECTION TO TD(82 FSL 2435 FWL)	

Checked By: _____	Approved By: _____	Date: _____
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