

Minimum Radius of Curvature

API: **30-015-53278** Well: **Vanadium 32 State 175H** Wellhead Location N+/S- : **32.269429**
 Operator: **Occidental** Area: **New Mexico** E+/W- : **-103.795389**
 Rig: Type: **U-Lateral** Magnetic Declination: **6.77**
 TD: **22,818'** Plane of Proposal: **179.68**

Measured Depth Ft	Drift Angle Deg	Azimuth Direction Deg	Course Length Ft	TVD Ft	Vertical Section Ft	COORDINATES		CLOSURE		Dog Leg Severity Deg/100'	Build / Drop Deg/100'	Left / Right Deg/100'
						N-S Ft	E-W Ft	Distance FT	Direction Deg			
0.00	0.00	0.00		0.0	0.00	0.00	0.00	0.00	0.00			
100	0.00	0.00	100	100.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
200	0.00	0.00	100	200.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
300	0.00	0.00	100	300.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
400	0.00	0.00	100	400.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
500	0.00	0.00	100	500.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
600	0.00	0.00	100	600.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
700	0.00	0.00	100	700.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
800	0.00	0.00	100	800.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
900	0.00	0.00	100	900.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
1000	0.00	0.00	100	1000.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
1100	0.00	0.00	100	1100.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
1200	0.00	0.00	100	1200.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
1300	0.00	0.00	100	1300.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
1400	0.00	0.00	100	1400.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
1500	0.00	0.00	100	1500.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
1600	0.00	0.00	100	1600.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
1700	0.00	0.00	100	1700.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
1800	0.00	0.00	100	1800.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
1900	0.00	0.00	100	1900.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
2000	0.00	0.00	100	2000.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
2100	0.00	0.00	100	2100.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
2200	0.00	0.00	100	2200.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
2300	0.00	0.00	100	2300.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
2400	0.00	0.00	100	2400.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
2500	0.00	0.00	100	2500.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
2600	0.00	0.00	100	2600.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
2700	0.00	0.00	100	2700.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
2800	0.00	0.00	100	2800.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
2900	0.00	0.00	100	2900.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
3000	0.00	0.00	100	3000.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
3100	0.00	0.00	100	3100.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
3200	0.00	0.00	100	3200.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
3300	0.00	0.00	100	3300.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
3400	0.00	0.00	100	3400.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
3500	0.00	0.00	100	3500.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
3600	0.00	0.00	100	3600.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
3700	0.00	0.00	100	3700.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
3800	0.00	0.00	100	3800.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
3900	0.00	0.00	100	3900.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
4000	0.00	0.00	100	4000.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
4100	0.00	0.00	100	4100.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
4200	0.00	0.00	100	4200.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
4300	0.00	0.00	100	4300.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
4400	0.00	0.00	100	4400.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
4500	0.00	0.00	100	4500.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
4600	0.00	0.00	100	4600.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
4700	0.00	0.00	100	4700.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
4800	0.00	0.00	100	4800.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
4900	0.00	0.00	100	4900.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
5000	0.00	0.00	100	5000.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
5100	0.00	0.00	100	5100.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
5200	0.00	0.00	100	5200.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
5300	0.00	0.00	100	5300.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
5400	0.00	0.00	100	5400.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
5500	0.00	0.00	100	5500.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
5600	0.00	0.00	100	5600.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
5700	0.00	0.00	100	5700.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		

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Rig: **Type: U-Lateral** **Magnetic Declination: 6.77**
TD: 22,818' **Plane of Proposal: 179.68**

Measured Depth Ft	Drift Angle Deg	Azimuth Direction Deg	Course Length Ft	TVD Ft	Vertical Section Ft	COORDINATES		CLOSURE		Dog Leg Severity Deg/100'	Build / Drop Deg/100'	Left / Right Deg/100'
						N-S Ft	E-W Ft	Distance FT	Direction Deg			
5800	0.00	0.00	100	5800.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
5900	0.00	0.00	100	5900.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
6000	0.00	0.00	100	6000.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
6100	0.00	0.00	100	6100.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
6200	0.00	0.00	100	6200.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
6300	0.00	0.00	100	6300.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
6400	0.00	0.00	100	6400.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
6500	0.00	0.00	100	6500.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
6600	0.00	0.00	100	6600.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
6700	0.00	0.00	100	6700.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
6800	0.00	0.00	100	6800.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
6900	0.00	0.00	100	6900.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
7000	0.00	0.00	100	7000.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
7100	0.00	0.00	100	7100.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
7200	0.00	0.00	100	7200.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
7300	0.00	0.00	100	7300.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
7400	0.00	0.00	100	7400.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
7500	0.00	0.00	100	7500.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
7600	0.00	0.00	100	7600.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
7700	0.00	0.00	100	7700.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
7800	0.00	0.00	100	7800.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
7900	0.00	0.00	100	7900.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
8000	0.00	0.00	100	8000.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
8100	0.00	0.00	100	8100.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
8200	0.00	0.00	100	8200.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
8300	0.00	0.00	100	8300.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
8400	0.00	0.00	100	8400.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
8500	0.00	0.00	100	8500.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
8600	0.00	0.00	100	8600.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
8700	0.00	0.00	100	8700.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
8800	0.00	0.00	100	8800.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
8900	0.00	0.00	100	8900.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
9000	0.00	0.00	100	9000.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
9100	0.00	0.00	100	9100.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
9200	0.00	0.00	100	9200.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
9300	0.00	0.00	100	9300.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
9400	0.00	0.00	100	9400.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
9500	0.00	0.00	100	9500.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
9600	0.00	0.00	100	9600.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
9700	0.00	0.00	100	9700.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
9800	0.00	0.00	100	9800.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
9900	0.00	0.00	100	9900.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
10000	0.00	0.00	100	10000.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
10100	0.00	0.00	100	10100.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
10200	0.00	0.00	100	10200.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
10300	0.00	0.00	100	10300.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
10400	0.00	0.00	100	10400.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
10500	0.00	0.00	100	10500.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
10600	0.00	0.00	100	10600.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
10700	0.00	0.00	100	10700.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
10786	0.00	0.00	86	10786.0	32.85	0.00	0.00	0.00	#DIV/0!	0.00		
10800	1.40	203.57	14	10800.0	33.01	-0.16	-0.07	0.17	203.57	10.00	10.00	1454.07
10900	11.40	203.57	100	10899.2	43.18	-10.36	-4.52	11.30	203.57	10.00	10.00	0.00
11000	21.40	203.57	100	10995.1	68.97	-36.21	-15.80	39.50	203.57	10.00	10.00	0.00
11100	31.40	203.57	100	11084.5	109.57	-76.91	-33.55	83.91	203.57	10.00	10.00	0.00
11200	41.40	203.57	100	11164.9	163.76	-131.23	-57.25	143.18	203.57	10.00	10.00	0.00
11236	44.99	203.57	36	11191.1	186.22	-153.75	-67.08	167.74	203.57	10.00	10.00	0.00
11300	50.49	199.12	64	11234.2	230.30	-197.93	-84.25	215.11	203.06	10.00	8.58	-6.94

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						N-S Ft	E-W Ft	Distance FT	Direction Deg			
11400	59.35	193.43	100	11291.6	308.66	-276.41	-106.94	296.38	201.15	10.00	8.86	-5.69
11500	68.41	188.71	100	11335.6	396.58	-364.43	-124.01	384.95	198.79	10.00	9.06	-4.72
11600	77.59	184.55	100	11364.8	491.39	-459.31	-134.95	478.72	196.37	10.00	9.18	-4.16
11700	86.82	180.68	100	11378.4	590.22	-558.15	-139.43	575.31	194.03	9.99	9.23	-3.87
11726	89.26	179.68	26	11379.3	616.53	-584.47	-139.51	600.89	193.43	10.01	9.27	-3.80
11800	89.26	179.68	74	11380.2	690.19	-658.13	-139.10	672.67	191.93	#NUM!	0.00	0.00
11900	89.26	179.68	100	11381.5	790.18	-758.12	-138.54	770.67	190.36	#NUM!	0.00	0.00
12000	89.26	179.68	100	11382.8	890.17	-858.11	-137.99	869.13	189.14	#NUM!	0.00	0.00
12100	89.26	179.68	100	11384.1	990.17	-958.10	-137.43	967.91	188.16	#NUM!	0.00	0.00
12200	89.26	179.68	100	11385.4	1090.16	-1058.09	-136.87	1066.90	187.37	#NUM!	0.00	0.00
12300	89.26	179.68	100	11386.7	1190.15	-1158.08	-136.31	1166.07	186.71	#NUM!	0.00	0.00
12400	89.26	179.68	100	11388.0	1290.14	-1258.07	-135.75	1265.37	186.16	#NUM!	0.00	0.00
12500	89.26	179.68	100	11389.3	1390.13	-1358.06	-135.19	1364.77	185.68	#NUM!	0.00	0.00
12600	89.26	179.68	100	11390.6	1490.12	-1458.05	-134.63	1464.25	185.28	#NUM!	0.00	0.00
12700	89.26	179.68	100	11391.9	1590.12	-1558.04	-134.08	1563.80	184.92	#NUM!	0.00	0.00
12800	89.26	179.68	100	11393.2	1690.11	-1658.03	-133.52	1663.40	184.60	#NUM!	0.00	0.00
12900	89.26	179.68	100	11394.4	1790.10	-1758.02	-132.96	1763.04	184.33	#NUM!	0.00	0.00
13000	89.26	179.68	100	11395.7	1890.09	-1858.01	-132.40	1862.72	184.08	#NUM!	0.00	0.00
13100	89.26	179.68	100	11397.0	1990.08	-1958.00	-131.84	1962.43	183.85	#NUM!	0.00	0.00
13200	89.26	179.68	100	11398.3	2090.07	-2057.99	-131.28	2062.17	183.65	#NUM!	0.00	0.00
13300	89.26	179.68	100	11399.6	2190.07	-2157.98	-130.73	2161.94	183.47	#NUM!	0.00	0.00
13400	89.26	179.68	100	11400.9	2290.06	-2257.97	-130.17	2261.72	183.30	#NUM!	0.00	0.00
13500	89.26	179.68	100	11402.2	2390.05	-2357.96	-129.61	2361.52	183.15	#NUM!	0.00	0.00
13600	89.26	179.68	100	11403.5	2490.04	-2457.95	-129.05	2461.34	183.01	#NUM!	0.00	0.00
13700	89.26	179.68	100	11404.8	2590.03	-2557.94	-128.49	2561.17	182.88	#NUM!	0.00	0.00
13800	89.26	179.68	100	11406.1	2690.02	-2657.93	-127.93	2661.01	182.76	#NUM!	0.00	0.00
13900	89.26	179.68	100	11407.4	2790.02	-2757.92	-127.37	2760.86	182.64	#NUM!	0.00	0.00
14000	89.26	179.68	100	11408.7	2890.01	-2857.91	-126.82	2860.72	182.54	#NUM!	0.00	0.00
14100	89.26	179.68	100	11409.9	2990.00	-2957.90	-126.26	2960.59	182.44	#NUM!	0.00	0.00
14200	89.26	179.68	100	11411.2	3089.99	-3057.89	-125.70	3060.47	182.35	#NUM!	0.00	0.00
14300	89.26	179.68	100	11412.5	3189.98	-3157.88	-125.14	3160.36	182.27	#NUM!	0.00	0.00
14400	89.26	179.68	100	11413.8	3289.97	-3257.87	-124.58	3260.25	182.19	#NUM!	0.00	0.00
14500	89.26	179.68	100	11415.1	3389.97	-3357.86	-124.02	3360.15	182.12	#NUM!	0.00	0.00
14600	89.26	179.68	100	11416.4	3489.96	-3457.85	-123.47	3460.06	182.04	#NUM!	0.00	0.00
14700	89.26	179.68	100	11417.7	3589.95	-3557.84	-122.91	3559.96	181.98	#NUM!	0.00	0.00
14800	89.26	179.68	100	11419.0	3689.94	-3657.83	-122.35	3659.88	181.92	#NUM!	0.00	0.00
14900	89.26	179.68	100	11420.3	3789.93	-3757.82	-121.79	3759.80	181.86	#NUM!	0.00	0.00
15000	89.26	179.68	100	11421.6	3889.92	-3857.81	-121.23	3859.72	181.80	#NUM!	0.00	0.00
15100	89.26	179.68	100	11422.9	3989.92	-3957.80	-120.67	3959.64	181.75	#NUM!	0.00	0.00
15200	89.26	179.68	100	11424.2	4089.91	-4057.79	-120.11	4059.57	181.70	#NUM!	0.00	0.00
15300	89.26	179.68	100	11425.4	4189.90	-4157.78	-119.56	4159.50	181.65	#NUM!	0.00	0.00
15400	89.26	179.68	100	11426.7	4289.89	-4257.77	-119.00	4259.44	181.60	#NUM!	0.00	0.00
15500	89.26	179.68	100	11428.0	4389.88	-4357.76	-118.44	4359.37	181.56	#NUM!	0.00	0.00
15600	89.26	179.68	100	11429.3	4489.87	-4457.75	-117.88	4459.31	181.51	#NUM!	0.00	0.00
15700	89.26	179.68	100	11430.6	4589.87	-4557.74	-117.32	4559.25	181.47	#NUM!	0.00	0.00
15712	89.26	179.68	12	11430.8	4602.19	-4570.07	-117.25	4571.58	181.47	#NUM!	0.00	0.00
15800	89.47	185.38	88	11431.7	4689.71	-4657.61	-121.12	4659.19	181.49	6.51	0.24	6.50
15900	89.72	191.87	100	11432.5	4788.44	-4756.43	-136.11	4758.38	181.64	6.49	0.25	6.49
16000	89.97	198.37	100	11432.7	4884.78	-4852.91	-162.18	4855.62	181.91	6.50	0.25	6.50
16100	90.22	204.86	100	11432.6	4977.49	-4945.83	-199.00	4949.83	182.30	6.49	0.25	6.49
16200	90.47	211.36	100	11432.0	5065.38	-5033.99	-246.09	5040.00	182.80	6.50	0.25	6.50
16300	90.72	217.85	100	11430.9	5147.33	-5116.25	-302.85	5125.20	183.39	6.49	0.25	6.49
16400	90.95	224.35	100	11429.5	5222.27	-5191.56	-368.54	5204.62	184.06	6.50	0.23	6.50
16500	91.17	230.85	100	11427.6	5289.24	-5258.94	-442.33	5277.51	184.81	6.50	0.22	6.50
16600	91.38	237.34	100	11425.4	5347.38	-5317.54	-523.27	5343.22	185.62	6.49	0.21	6.49
16700	91.57	243.84	100	11422.8	5395.96	-5366.60	-610.31	5401.19	186.49	6.50	0.19	6.50
16800	91.74	250.34	100	11419.9	5434.33	-5405.49	-702.33	5450.93	187.40	6.50	0.17	6.50
16900	91.88	256.85	100	11416.7	5462.01	-5433.71	-798.16	5492.01	188.36	6.51	0.14	6.51

Minimum Radius of Curvature

API: 30-015-53278 **Well: Vanadium 32 State 175H** **Wellhead Location N+/S- : 32.269429**
Operator: Occidental **Area: New Mexico** **E+/W- : -103.795389**
Rig: **Type: U-Lateral** **Magnetic Declination: 6.77**
TD: 22,818' **Plane of Proposal: 179.68**

Measured Depth Ft	Drift Angle Deg	Azimuth Direction Deg	Course Length Ft	TVD Ft	Vertical Section Ft	COORDINATES		CLOSURE		Dog Leg Severity Deg/100'	Build / Drop Deg/100'	Left / Right Deg/100'
						N-S Ft	E-W Ft	Distance FT	Direction Deg			
17000	92.01	263.35	100	11413.3	5478.64	-5450.88	-896.56	5524.12	189.34	6.50	0.13	6.50
17098	92.10	269.71	98	11409.8	5484.00	-5456.79	-994.09	5546.60	190.32	6.50	0.09	6.50
17100	92.10	269.71	2	11409.8	5484.00	-5456.80	-996.27	5547.00	190.35	0.00	0.00	0.00
17200	92.10	269.71	100	11406.1	5483.95	-5457.31	-1096.20	5566.32	191.36	0.00	0.00	0.00
17300	92.10	269.71	100	11402.4	5483.90	-5457.82	-1196.13	5587.35	192.36	0.00	0.00	0.00
17373	92.10	269.71	73	11399.8	5483.86	-5458.18	-1268.90	5603.74	193.09	0.00	0.00	0.00
17400	92.11	271.48	27	11398.8	5483.43	-5457.90	-1296.06	5609.68	193.36	6.51	0.04	6.51
17500	92.15	277.98	100	11395.0	5474.64	-5449.67	-1395.60	5625.53	194.36	6.50	0.04	6.50
17600	92.16	284.49	100	11391.3	5454.63	-5430.21	-1493.56	5631.86	195.38	6.51	0.01	6.51
17700	92.14	290.99	100	11387.5	5423.67	-5399.78	-1588.68	5628.63	196.39	6.50	-0.02	6.50
17800	92.09	297.50	100	11383.8	5382.15	-5358.76	-1679.75	5615.86	197.40	6.51	-0.05	6.51
17900	92.01	304.00	100	11380.2	5330.60	-5307.69	-1765.59	5593.65	198.40	6.50	-0.08	6.50
18000	91.91	310.50	100	11376.8	5269.69	-5247.23	-1845.10	5562.18	199.37	6.50	-0.10	6.50
18100	91.79	317.00	100	11373.6	5200.21	-5178.15	-1917.26	5521.70	200.32	6.50	-0.12	6.50
18200	91.64	323.51	100	11370.6	5123.04	-5101.34	-1981.14	5472.53	201.22	6.51	-0.15	6.51
18300	91.47	330.01	100	11367.9	5039.18	-5017.78	-2035.90	5415.07	202.08	6.50	-0.17	6.50
18400	91.28	336.51	100	11365.5	4949.69	-4928.54	-2080.86	5349.81	202.89	6.50	-0.19	6.50
18500	91.08	343.00	100	11363.4	4855.75	-4834.79	-2115.44	5277.34	203.63	6.49	-0.20	6.49
18600	90.86	349.50	100	11361.7	4758.55	-4737.72	-2139.19	5198.28	204.30	6.50	-0.22	6.50
18700	90.63	356.00	100	11360.4	4659.34	-4638.58	-2151.80	5113.39	204.89	6.50	-0.23	6.50
18757	90.50	359.69	57	11359.9	4602.47	-4581.73	-2153.94	5062.77	205.18	6.49	-0.23	6.48
18800	90.50	359.69	43	11359.5	4559.39	-4538.64	-2154.17	5023.91	205.39	0.00	0.00	0.00
18900	90.50	359.69	100	11358.6	4459.39	-4438.64	-2154.71	4934.00	205.89	0.00	0.00	0.00
19000	90.50	359.69	100	11357.7	4359.39	-4338.65	-2155.25	4844.48	206.42	0.00	0.00	0.00
19100	90.50	359.69	100	11356.9	4259.40	-4238.66	-2155.80	4755.38	206.96	0.00	0.00	0.00
19200	90.50	359.69	100	11356.0	4159.40	-4138.66	-2156.34	4666.72	207.52	0.00	0.00	0.00
19300	90.50	359.69	100	11355.1	4059.41	-4038.67	-2156.88	4578.53	208.10	0.00	0.00	0.00
19400	90.50	359.69	100	11354.2	3959.41	-3938.67	-2157.42	4490.83	208.71	0.00	0.00	0.00
19500	90.50	359.69	100	11353.4	3859.41	-3838.68	-2157.96	4403.66	209.34	0.00	0.00	0.00
19600	90.50	359.69	100	11352.5	3759.42	-3738.68	-2158.50	4317.04	210.00	0.00	0.00	0.00
19700	90.50	359.69	100	11351.6	3659.42	-3638.69	-2159.04	4231.02	210.68	0.00	0.00	0.00
19800	90.50	359.69	100	11350.8	3559.42	-3538.69	-2159.58	4145.62	211.39	0.00	0.00	0.00
19900	90.50	359.69	100	11349.9	3459.43	-3438.70	-2160.12	4060.88	212.14	0.00	0.00	0.00
20000	90.50	359.69	100	11349.0	3359.43	-3338.70	-2160.67	3976.86	212.91	0.00	0.00	0.00
20100	90.50	359.69	100	11348.1	3259.44	-3238.71	-2161.21	3893.59	213.72	0.00	0.00	0.00
20200	90.50	359.69	100	11347.3	3159.44	-3138.71	-2161.75	3811.12	214.56	0.00	0.00	0.00
20300	90.50	359.69	100	11346.4	3059.44	-3038.72	-2162.29	3729.52	215.43	0.00	0.00	0.00
20400	90.50	359.69	100	11345.5	2959.45	-2938.72	-2162.83	3648.83	216.35	0.00	0.00	0.00
20500	90.50	359.69	100	11344.6	2859.45	-2838.73	-2163.37	3569.11	217.31	0.00	0.00	0.00
20600	90.50	359.69	100	11343.8	2759.45	-2738.73	-2163.91	3490.44	218.31	0.00	0.00	0.00
20700	90.50	359.69	100	11342.9	2659.46	-2638.74	-2164.45	3412.89	219.36	0.00	0.00	0.00
20800	90.50	359.69	100	11342.0	2559.46	-2538.75	-2164.99	3336.53	220.46	0.00	0.00	0.00
20900	90.50	359.69	100	11341.2	2459.47	-2438.75	-2165.53	3261.45	221.60	0.00	0.00	0.00
21000	90.50	359.69	100	11340.3	2359.47	-2338.76	-2166.08	3187.74	222.80	0.00	0.00	0.00
21100	90.50	359.69	100	11339.4	2259.47	-2238.76	-2166.62	3115.49	224.06	0.00	0.00	0.00
21200	90.50	359.69	100	11338.5	2159.48	-2138.77	-2167.16	3044.81	225.38	0.00	0.00	0.00
21300	90.50	359.69	100	11337.7	2059.48	-2038.77	-2167.70	2975.82	226.76	0.00	0.00	0.00
21400	90.50	359.69	100	11336.8	1959.49	-1938.78	-2168.24	2908.63	228.20	0.00	0.00	0.00
21500	90.50	359.69	100	11335.9	1859.49	-1838.78	-2168.78	2843.37	229.71	0.00	0.00	0.00
21600	90.50	359.69	100	11335.0	1759.49	-1738.79	-2169.32	2780.17	231.29	0.00	0.00	0.00
21700	90.50	359.69	100	11334.2	1659.50	-1638.79	-2169.86	2719.18	232.94	0.00	0.00	0.00
21800	90.50	359.69	100	11333.3	1559.50	-1538.80	-2170.40	2660.55	234.66	0.00	0.00	0.00
21900	90.50	359.69	100	11332.4	1459.50	-1438.80	-2170.94	2604.45	236.47	0.00	0.00	0.00
22000	90.50	359.69	100	11331.6	1359.51	-1338.81	-2171.49	2551.03	238.34	0.00	0.00	0.00
22100	90.50	359.69	100	11330.7	1259.51	-1238.81	-2172.03	2500.47	240.30	0.00	0.00	0.00
22200	90.50	359.69	100	11329.8	1159.52	-1138.82	-2172.57	2452.95	242.34	0.00	0.00	0.00
22300	90.50	359.69	100	11328.9	1059.52	-1038.82	-2173.11	2408.64	244.45	0.00	0.00	0.00
22400	90.50	359.69	100	11328.1	959.52	-938.83	-2173.65	2367.73	246.64	0.00	0.00	0.00

Minimum Radius of Curvature

API: 30-015-53278 **Well: Vanadium 32 State 175H** **Wellhead Location N+/S- : 32.269429**
Operator: Occidental **Area: New Mexico** **E+/W- : -103.795389**
Rig: **Type: U-Lateral** **Magnetic Declination: 6.77**
TD: 22,818' **Plane of Proposal: 179.68**

Measured Depth Ft	Drift Angle Deg	Azimuth Direction Deg	Course Length Ft	TVD Ft	Vertical Section Ft	COORDINATES		CLOSURE		Dog Leg Severity Deg/100'	Build / Drop Deg/100'	Left / Right Deg/100'
						N-S Ft	E-W Ft	Distance FT	Direction Deg			
22500	90.50	359.69	100	11327.2	859.53	-838.83	-2174.19	2330.40	248.90	0.00	0.00	0.00
22600	90.50	359.69	100	11326.3	759.53	-738.84	-2174.73	2296.81	251.24	0.00	0.00	0.00
22700	90.50	359.69	100	11325.4	659.53	-638.85	-2175.27	2267.14	253.63	0.00	0.00	0.00
22800	90.50	359.69	100	11324.6	559.54	-538.85	-2175.81	2241.55	256.09	0.00	0.00	0.00
22818	90.50	359.69	18	11324.4	541.71	-521.02	-2175.91	2237.42	256.53	0.00	0.00	0.00