

Minimum Radius of Curvature

API: 05-123-46649 **Well: Cinnamon Teal 35-4HN** **Wellhead Location** **Lat : 40.613060**
Operator: Bison IV Operating **Area: DJ** **Long : -104.061305**
Rig: Precision 460 **Type: U-Lateral** **Magnetic Declination: 7.32**
TD: 16,757' **Plane of Proposal: 1.15**

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			
1614	10.90	166.80	1614	1603.8	-113.05	-113.39	15.71	114.47	172.11	0.68	0.68	10.33
1661	10.90	166.80	47	1650.0	-121.66	-122.04	17.74	123.33	171.73	0.00	0.00	0.00
1700	10.90	166.80	39	1688.2	-128.81	-129.22	19.42	130.67	171.45	0.00	0.00	0.00
1761	10.90	166.80	61	1748.1	-139.98	-140.45	22.06	142.17	171.07	0.00	0.00	0.00
1800	10.64	162.86	39	1786.5	-146.97	-147.48	23.96	149.42	170.77	2.00	-0.67	-10.10
1900	10.23	152.04	100	1884.8	-163.50	-164.15	30.85	167.02	169.36	2.00	-0.41	-10.82
2000	10.19	140.74	100	1983.2	-177.99	-178.84	40.61	183.40	167.21	2.00	-0.04	-11.30
2100	10.53	129.76	100	2081.6	-190.43	-191.54	53.23	198.80	164.47	2.00	0.34	-10.98
2159	10.90	123.75	59	2139.4	-196.78	-198.07	61.99	207.54	162.62	2.00	0.63	-10.22
2200	10.90	123.75	41	2179.9	-200.98	-202.39	68.46	213.66	161.31	0.00	0.00	0.00
2300	10.90	123.75	100	2278.1	-211.17	-212.90	84.18	228.94	158.43	0.00	0.00	0.00
2400	10.90	123.75	100	2376.2	-221.35	-223.40	99.91	244.73	155.91	0.00	0.00	0.00
2500	10.90	123.75	100	2474.4	-231.54	-233.91	115.63	260.93	153.70	0.00	0.00	0.00
2600	10.90	123.75	100	2572.6	-241.73	-244.41	131.35	277.47	151.75	0.00	0.00	0.00
2700	10.90	123.75	100	2670.8	-251.92	-254.92	147.08	294.31	150.02	0.00	0.00	0.00
2800	10.90	123.75	100	2769.0	-262.11	-265.43	162.80	311.37	148.48	0.00	0.00	0.00
2900	10.90	123.75	100	2867.2	-272.29	-275.93	178.52	328.65	147.10	0.00	0.00	0.00
3000	10.90	123.75	100	2965.4	-282.48	-286.44	194.24	346.09	145.86	0.00	0.00	0.00
3100	10.90	123.75	100	3063.6	-292.67	-296.94	209.97	363.68	144.74	0.00	0.00	0.00
3200	10.90	123.75	100	3161.8	-302.86	-307.45	225.69	381.39	143.72	0.00	0.00	0.00
3300	10.90	123.75	100	3260.0	-313.04	-317.95	241.41	399.22	142.79	0.00	0.00	0.00
3341	10.90	123.75	41	3300.0	-317.19	-322.23	247.81	406.50	142.44	0.00	0.00	0.00
3400	10.90	123.75	59	3358.2	-323.23	-328.46	257.13	417.14	141.94	0.00	0.00	0.00
3457	10.90	123.75	57	3414.0	-329.02	-334.43	266.07	427.36	141.49	0.00	0.00	0.00
3500	10.90	123.75	43	3456.4	-333.42	-338.96	272.86	435.14	141.17	0.00	0.00	0.00
3600	10.90	123.75	100	3554.6	-343.61	-349.47	288.58	453.22	140.45	0.00	0.00	0.00
3700	10.90	123.75	100	3652.8	-353.80	-359.98	304.30	471.36	139.79	0.00	0.00	0.00
3800	10.90	123.75	100	3751.0	-363.98	-370.48	320.03	489.56	139.18	0.00	0.00	0.00
3900	10.90	123.75	100	3849.2	-374.17	-380.99	335.75	507.82	138.61	0.00	0.00	0.00
4000	10.90	123.75	100	3947.4	-384.36	-391.49	351.47	526.12	138.08	0.00	0.00	0.00
4100	10.90	123.75	100	4045.6	-394.55	-402.00	367.19	544.46	137.59	0.00	0.00	0.00
4200	10.90	123.75	100	4143.8	-404.74	-412.50	382.92	562.84	137.13	0.00	0.00	0.00
4203	10.90	123.75	3	4147.0	-405.07	-412.85	383.43	563.44	137.12	0.00	0.00	0.00
4300	10.90	123.75	97	4242.0	-414.92	-423.01	398.64	581.25	136.70	0.00	0.00	0.00
4400	10.90	123.75	100	4340.2	-425.11	-433.52	414.36	599.69	136.29	0.00	0.00	0.00
4500	10.90	123.75	100	4438.4	-435.30	-444.02	430.08	618.16	135.91	0.00	0.00	0.00
4600	10.90	123.75	100	4536.6	-445.49	-454.53	445.81	636.66	135.55	0.00	0.00	0.00
4700	10.90	123.75	100	4634.8	-455.68	-465.03	461.53	655.18	135.22	0.00	0.00	0.00
4762	10.90	123.75	62	4696.0	-462.03	-471.58	471.34	666.75	135.02	0.00	0.00	0.00
4800	10.90	123.75	38	4732.9	-465.86	-475.54	477.25	673.73	134.90	0.00	0.00	0.00
4900	10.90	123.75	100	4831.1	-476.05	-486.04	492.97	692.29	134.59	0.00	0.00	0.00
5000	10.90	123.75	100	4929.3	-486.24	-496.55	508.70	710.87	134.31	0.00	0.00	0.00
5100	10.90	123.75	100	5027.5	-496.43	-507.05	524.42	729.47	134.04	0.00	0.00	0.00
5115	10.90	123.75	15	5042.1	-497.94	-508.61	526.75	732.23	134.00	0.00	0.00	0.00
5200	9.20	123.75	85	5126.0	-505.95	-516.87	539.11	746.86	133.79	2.00	-2.00	0.00
5300	7.20	123.75	100	5224.9	-513.63	-524.79	550.97	760.90	133.61	2.00	-2.00	0.00
5400	5.20	123.75	100	5324.3	-519.45	-530.79	559.95	771.55	133.47	2.00	-2.00	0.00
5500	3.20	123.75	100	5424.1	-523.39	-534.86	566.04	778.76	133.38	2.00	-2.00	0.00
5579	1.62	123.75	79	5503.0	-525.18	-536.71	568.80	782.04	133.34	2.00	-2.00	0.00
5600	1.20	123.75	21	5524.0	-525.46	-536.99	569.23	782.55	133.33	2.00	-2.00	0.00
5660	0.00	0.00	60	5583.8	-525.80	-537.34	569.75	783.17	133.32	2.01		
5700	0.00	0.00	40	5624.0	-525.80	-537.34	569.75	783.17	133.32	0.00		
5800	0.00	0.00	100	5724.0	-525.80	-537.34	569.75	783.17	133.32	0.00		
5900	0.00	0.00	100	5824.0	-525.80	-537.34	569.75	783.17	133.32	0.00		
5919	0.00	0.00	19	5843.3	-525.80	-537.34	569.75	783.17	133.32	0.00		
6000	10.50	1.15	81	5923.5	-518.42	-529.97	569.90	778.23	132.92	13.01	13.01	1.42
6100	23.50	1.15	100	6019.0	-489.25	-500.80	570.48	759.11	131.28	13.00	13.00	0.00

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						N-S Ft	E-W Ft	Distance FT	Direction Deg			
6181	34.04	1.15	81	6090.0	-450.25	-461.80	571.27	734.58	128.95	12.99	12.99	0.00
6200	36.50	1.15	19	6105.4	-439.36	-450.92	571.48	727.96	128.27	13.05	13.05	0.00
6237	41.27	1.15	37	6134.0	-416.29	-427.86	571.95	714.27	126.80	12.98	12.98	0.00
6300	49.50	1.15	63	6178.4	-371.31	-382.89	572.85	689.03	123.76	13.01	13.01	0.00
6400	62.50	1.15	100	6234.2	-288.59	-300.18	574.51	648.20	117.59	13.00	13.00	0.00
6437	67.35	1.15	37	6250.0	-254.79	-266.38	575.19	633.88	114.85	12.99	12.99	0.00
6500	75.50	1.15	63	6269.9	-195.43	-207.04	576.38	612.44	109.76	13.00	13.00	0.00
6600	88.50	1.15	100	6283.8	-96.62	-108.25	578.36	588.41	100.60	13.00	13.00	0.00
6612	90.00	1.15	12	6284.0	-85.05	-96.68	578.60	586.62	99.49	12.96	12.96	0.00
6700	90.00	1.15	88	6284.0	3.38	-8.27	580.37	580.43	90.82	0.00	0.00	0.00
6800	90.00	1.15	100	6284.0	103.38	91.71	582.38	589.55	81.05	0.00	0.00	0.00
6900	90.00	1.15	100	6284.0	203.38	191.69	584.38	615.02	71.84	0.00	0.00	0.00
7000	90.00	1.15	100	6284.0	303.38	291.67	586.39	654.93	63.55	0.00	0.00	0.00
7100	90.00	1.15	100	6284.0	403.38	391.65	588.40	706.83	56.35	0.00	0.00	0.00
7200	90.00	1.15	100	6284.0	503.38	491.63	590.40	768.30	50.22	0.00	0.00	0.00
7300	90.00	1.15	100	6284.0	603.38	591.61	592.41	837.23	45.04	0.00	0.00	0.00
7400	90.00	1.15	100	6284.0	703.38	691.59	594.42	911.94	40.68	0.00	0.00	0.00
7500	90.00	1.15	100	6284.0	803.38	791.57	596.43	991.12	37.00	0.00	0.00	0.00
7600	90.00	1.15	100	6284.0	903.38	891.55	598.43	1073.77	33.87	0.00	0.00	0.00
7700	90.00	1.15	100	6284.0	1003.38	991.53	600.44	1159.16	31.20	0.00	0.00	0.00
7800	90.00	1.15	100	6284.0	1103.38	1091.51	602.45	1246.73	28.90	0.00	0.00	0.00
7900	90.00	1.15	100	6284.0	1203.38	1191.49	604.45	1336.04	26.90	0.00	0.00	0.00
8000	90.00	1.15	100	6284.0	1303.38	1291.47	606.46	1426.78	25.15	0.00	0.00	0.00
8100	90.00	1.15	100	6284.0	1403.38	1391.45	608.47	1518.67	23.62	0.00	0.00	0.00
8200	90.00	1.15	100	6284.0	1503.38	1491.43	610.47	1611.53	22.26	0.00	0.00	0.00
8300	90.00	1.15	100	6284.0	1603.38	1591.41	612.48	1705.20	21.05	0.00	0.00	0.00
8400	90.00	1.15	100	6284.0	1703.38	1691.39	614.49	1799.55	19.97	0.00	0.00	0.00
8500	90.00	1.15	100	6284.0	1803.38	1791.37	616.50	1894.48	18.99	0.00	0.00	0.00
8600	90.00	1.15	100	6284.0	1903.38	1891.35	618.50	1989.91	18.11	0.00	0.00	0.00
8700	90.00	1.15	100	6284.0	2003.38	1991.33	620.51	2085.77	17.31	0.00	0.00	0.00
8800	90.00	1.15	100	6284.0	2103.38	2091.31	622.52	2182.00	16.58	0.00	0.00	0.00
8900	90.00	1.15	100	6284.0	2203.38	2191.29	624.52	2278.55	15.91	0.00	0.00	0.00
9000	90.00	1.15	100	6284.0	2303.38	2291.27	626.53	2375.39	15.29	0.00	0.00	0.00
9100	90.00	1.15	100	6284.0	2403.38	2391.25	628.54	2472.47	14.73	0.00	0.00	0.00
9200	90.00	1.15	100	6284.0	2503.38	2491.23	630.54	2569.79	14.20	0.00	0.00	0.00
9300	90.00	1.15	100	6284.0	2603.38	2591.21	632.55	2667.30	13.72	0.00	0.00	0.00
9400	90.00	1.15	100	6284.0	2703.38	2691.19	634.56	2764.99	13.27	0.00	0.00	0.00
9500	90.00	1.15	100	6284.0	2803.38	2791.17	636.57	2862.84	12.85	0.00	0.00	0.00
9600	90.00	1.15	100	6284.0	2903.38	2891.15	638.57	2960.83	12.46	0.00	0.00	0.00
9700	90.00	1.15	100	6284.0	3003.38	2991.13	640.58	3058.95	12.09	0.00	0.00	0.00
9800	90.00	1.15	100	6284.0	3103.38	3091.11	642.59	3157.19	11.74	0.00	0.00	0.00
9900	90.00	1.15	100	6284.0	3203.38	3191.09	644.59	3255.54	11.42	0.00	0.00	0.00
10000	90.00	1.15	100	6284.0	3303.38	3291.07	646.60	3353.99	11.12	0.00	0.00	0.00
10100	90.00	1.15	100	6284.0	3403.38	3391.05	648.61	3452.52	10.83	0.00	0.00	0.00
10200	90.00	1.15	100	6284.0	3503.38	3491.03	650.61	3551.14	10.56	0.00	0.00	0.00
10300	90.00	1.15	100	6284.0	3603.38	3591.01	652.62	3649.83	10.30	0.00	0.00	0.00
10351	90.00	1.15	51	6284.0	3654.14	3641.76	653.64	3699.95	10.18	0.00	0.00	0.00
10400	90.00	357.37	49	6284.0	3703.35	3690.98	653.00	3748.30	10.03	7.68	0.00	723.44
10500	90.00	349.70	100	6284.0	3802.39	3790.27	641.75	3844.22	9.61	7.67	0.00	-7.67
10600	90.00	342.02	100	6284.0	3898.78	3887.17	617.34	3935.89	9.02	7.68	0.00	-7.68
10700	90.00	334.35	100	6284.0	3990.78	3979.94	580.21	4022.01	8.29	7.67	0.00	-7.67
10800	90.00	326.67	100	6284.0	4076.76	4066.92	531.02	4101.44	7.44	7.68	0.00	-7.68
10900	90.00	319.00	100	6284.0	4155.16	4146.55	470.65	4173.18	6.48	7.67	0.00	-7.67
11000	90.00	311.32	100	6284.0	4224.59	4217.41	400.19	4236.35	5.42	7.68	0.00	-7.68
11100	90.00	303.65	100	6284.0	4283.79	4278.22	320.90	4290.23	4.29	7.67	0.00	-7.67
11200	90.00	295.97	100	6284.0	4331.72	4327.89	234.20	4334.22	3.10	7.68	0.00	-7.68
11300	90.00	288.30	100	6284.0	4367.50	4365.54	141.64	4367.84	1.86	7.67	0.00	-7.67
11400	90.00	280.62	100	6284.0	4390.51	4390.49	44.88	4390.72	0.59	7.68	0.00	-7.68

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11500	90.00	272.95	100	6284.0	4400.32	4402.30	-54.35	4402.63	359.29	7.67	0.00	-7.67
11523	90.00	271.15	23	6284.0	4400.69	4403.14	-77.78	4403.82	358.99	7.68	0.00	-7.68
11543	90.00	271.15	19	6284.0	4400.69	4403.52	-96.97	4404.59	358.74	0.00	0.00	0.00
11600	90.00	266.87	57	6284.0	4398.55	4402.53	-154.31	4405.24	357.99	7.46	0.00	-7.46
11700	90.00	259.41	100	6284.0	4384.62	4390.60	-253.52	4397.91	356.70	7.46	0.00	-7.46
11800	90.00	251.94	100	6284.0	4357.96	4365.87	-350.34	4379.91	355.41	7.47	0.00	-7.47
11900	90.00	244.48	100	6284.0	4319.01	4328.78	-443.13	4351.40	354.16	7.46	0.00	-7.46
12000	90.00	237.02	100	6284.0	4268.44	4279.95	-530.32	4312.68	352.94	7.46	0.00	-7.46
12100	90.00	229.56	100	6284.0	4207.11	4220.22	-610.43	4264.13	351.77	7.46	0.00	-7.46
12200	90.00	222.09	100	6284.0	4136.05	4150.58	-682.10	4206.25	350.67	7.47	0.00	-7.47
12300	90.00	214.63	100	6284.0	4056.47	4072.22	-744.12	4139.65	349.64	7.46	0.00	-7.46
12400	90.00	207.17	100	6284.0	3969.71	3986.48	-795.44	4065.06	348.72	7.46	0.00	-7.46
12500	90.00	199.70	100	6284.0	3877.24	3894.79	-835.18	3983.33	347.90	7.47	0.00	-7.47
12600	90.00	192.24	100	6284.0	3780.64	3798.72	-862.67	3895.44	347.21	7.46	0.00	-7.46
12700	90.00	184.78	100	6284.0	3681.53	3699.89	-877.46	3802.51	346.66	7.46	0.00	-7.46
12749	90.00	181.15	49	6284.0	3632.89	3651.29	-879.98	3755.83	346.45	7.46	0.00	-7.46
12767	90.00	181.15	18	6284.0	3614.61	3633.01	-880.34	3738.15	346.38	0.00	0.00	0.00
12800	89.34	181.15	33	6284.2	3581.57	3599.97	-881.01	3706.21	346.25	2.00	-2.00	0.00
12867	88.00	181.15	67	6285.7	3514.63	3533.06	-882.35	3641.57	345.98	2.00	-2.00	0.00
12900	88.00	181.15	33	6286.9	3481.61	3500.03	-883.01	3609.70	345.84	0.00	0.00	0.00
13000	88.00	181.15	100	6290.4	3381.67	3400.11	-885.02	3513.41	345.41	0.00	0.00	0.00
13100	88.00	181.15	100	6293.8	3281.73	3300.19	-887.02	3417.32	344.96	0.00	0.00	0.00
13200	88.00	181.15	100	6297.3	3181.79	3200.28	-889.03	3321.47	344.47	0.00	0.00	0.00
13300	88.00	181.15	100	6300.8	3081.85	3100.36	-891.04	3225.86	343.97	0.00	0.00	0.00
13400	88.00	181.15	100	6304.3	2981.91	3000.44	-893.04	3130.52	343.43	0.00	0.00	0.00
13500	88.00	181.15	100	6307.8	2881.97	2900.52	-895.05	3035.48	342.85	0.00	0.00	0.00
13600	88.00	181.15	100	6311.3	2782.03	2800.60	-897.05	2940.76	342.24	0.00	0.00	0.00
13700	88.00	181.15	100	6314.8	2682.09	2700.68	-899.06	2846.40	341.59	0.00	0.00	0.00
13800	88.00	181.15	100	6318.3	2582.15	2600.76	-901.07	2752.43	340.89	0.00	0.00	0.00
13900	88.00	181.15	100	6321.8	2482.21	2500.84	-903.07	2658.90	340.15	0.00	0.00	0.00
14000	88.00	181.15	100	6325.3	2382.28	2400.92	-905.08	2565.85	339.35	0.00	0.00	0.00
14100	88.00	181.15	100	6328.7	2282.34	2301.00	-907.08	2473.34	338.49	0.00	0.00	0.00