

Minimum Radius of Curvature

API: 05-123-46641 **Well: Cinnamon Teal 35-3HN** **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: 16,832' **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			
1552	13.80	207.50	1552	1535.1	-152.71	-151.41	-66.20	165.25	203.62	0.89	0.89	13.37
1600	13.80	207.50	48	1581.7	-162.97	-161.57	-71.49	176.67	203.87	0.00	0.00	0.00
1629	13.80	207.50	29	1609.9	-169.17	-167.70	-74.68	183.58	204.00	0.00	0.00	0.00
1700	13.80	207.50	71	1678.8	-184.34	-182.72	-82.50	200.49	204.30	0.00	0.00	0.00
1729	13.80	207.50	29	1707.0	-190.54	-188.86	-85.70	207.39	204.41	0.00	0.00	0.00
1800	13.48	201.63	71	1776.0	-205.88	-204.06	-92.66	224.11	204.42	2.00	-0.45	-8.27
1900	13.26	193.03	100	1873.3	-228.03	-226.07	-99.54	247.02	203.76	2.00	-0.22	-8.60
2000	13.34	184.33	100	1970.6	-250.77	-248.75	-103.00	269.23	202.49	2.00	0.08	-8.70
2100	13.71	175.92	100	2067.9	-274.09	-272.08	-103.02	290.93	200.74	2.00	0.37	-8.41
2118	13.80	174.48	18	2085.0	-278.27	-276.26	-102.67	294.72	200.39	2.01	0.51	-8.16
2200	13.80	174.48	82	2165.0	-297.78	-295.81	-100.78	312.51	198.81	0.00	0.00	0.00
2300	13.80	174.48	100	2262.1	-321.47	-319.56	-98.49	334.39	197.13	0.00	0.00	0.00
2400	13.80	174.48	100	2359.2	-345.16	-343.30	-96.19	356.52	195.65	0.00	0.00	0.00
2500	13.80	174.48	100	2456.3	-368.85	-367.04	-93.90	378.86	194.35	0.00	0.00	0.00
2600	13.80	174.48	100	2553.4	-392.54	-390.78	-91.60	401.38	193.19	0.00	0.00	0.00
2700	13.80	174.48	100	2650.5	-416.24	-414.53	-89.31	424.04	192.16	0.00	0.00	0.00
2800	13.80	174.48	100	2747.7	-439.93	-438.27	-87.02	446.82	191.23	0.00	0.00	0.00
2883	13.80	174.48	83	2828.3	-459.59	-457.98	-85.11	465.82	190.53	0.00	0.00	0.00
2900	13.46	174.48	17	2844.8	-463.57	-461.96	-84.73	469.67	190.39	2.00	-2.00	0.00
3000	11.46	174.48	100	2942.4	-485.00	-483.44	-82.65	490.45	189.70	2.00	-2.00	0.00
3100	9.46	174.48	100	3040.8	-503.03	-501.51	-80.90	507.99	189.16	2.00	-2.00	0.00
3200	7.46	174.48	100	3139.7	-517.64	-516.15	-79.49	522.24	188.75	2.00	-2.00	0.00
3300	5.46	174.48	100	3239.0	-528.82	-527.35	-78.41	533.15	188.46	2.00	-2.00	0.00
3361	4.24	174.48	61	3300.0	-533.96	-532.50	-77.91	538.17	188.32	1.99	-1.99	0.00
3400	3.46	174.48	39	3338.7	-536.54	-535.09	-77.66	540.70	188.26	2.01	-2.01	0.00
3475	1.95	174.48	75	3414.0	-540.08	-538.63	-77.32	544.15	188.17	2.00	-2.00	0.00
3500	1.46	174.48	25	3438.6	-540.80	-539.36	-77.25	544.87	188.15	1.99	-1.99	0.00
3573	0.00	0.00	73	3511.6	-541.73	-540.29	-77.16	545.77	188.13	2.00		
3600	0.00	0.00	27	3538.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
3700	0.00	0.00	100	3638.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
3800	0.00	0.00	100	3738.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
3900	0.00	0.00	100	3838.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
4000	0.00	0.00	100	3938.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
4100	0.00	0.00	100	4038.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
4200	0.00	0.00	100	4138.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
4208	0.00	0.00	8	4147.0	-541.73	-540.29	-77.16	545.77	188.13	0.00		
4300	0.00	0.00	92	4238.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
4400	0.00	0.00	100	4338.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
4500	0.00	0.00	100	4438.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
4600	0.00	0.00	100	4538.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
4700	0.00	0.00	100	4638.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
4757	0.00	0.00	57	4696.0	-541.73	-540.29	-77.16	545.77	188.13	0.00		
4800	0.00	0.00	43	4738.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
4900	0.00	0.00	100	4838.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
5000	0.00	0.00	100	4938.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
5100	0.00	0.00	100	5038.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
5200	0.00	0.00	100	5138.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
5300	0.00	0.00	100	5238.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
5400	0.00	0.00	100	5338.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
5500	0.00	0.00	100	5438.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
5564	0.00	0.00	64	5503.0	-541.73	-540.29	-77.16	545.77	188.13	0.00		
5600	0.00	0.00	36	5538.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
5700	0.00	0.00	100	5638.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
5800	0.00	0.00	100	5738.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
5900	0.00	0.00	100	5838.6	-541.73	-540.29	-77.16	545.77	188.13	0.00		
5997	0.00	0.00	97	5935.3	-541.73	-540.29	-77.16	545.77	188.13	0.00		
6000	0.44	1.15	3	5938.6	-541.71	-540.28	-77.16	545.76	188.13	13.13	13.13	34.33

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Rig: Precision 460 **Type:** U-Lateral **Magnetic Declination:** 7.32
TD: 16,832' **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			
6100	13.44	1.15	100	6037.7	-529.66	-528.22	-76.91	533.79	188.28	13.00	13.00	0.00
6155	20.55	1.15	55	6090.0	-513.66	-512.23	-76.59	517.92	188.50	12.98	12.98	0.00
6200	26.44	1.15	45	6131.5	-495.63	-494.20	-76.23	500.05	188.77	13.02	13.02	0.00
6203	26.80	1.15	3	6134.0	-494.37	-492.94	-76.21	498.80	188.79	12.77	12.77	0.00
6300	39.44	1.15	97	6215.2	-441.38	-439.96	-75.14	446.33	189.69	13.01	13.01	0.00
6347	45.57	1.15	47	6250.0	-409.51	-408.10	-74.50	414.84	190.35	12.99	12.99	0.00
6400	52.44	1.15	53	6284.6	-369.68	-368.27	-73.70	375.57	191.32	13.01	13.01	0.00
6497	65.09	1.15	97	6335.0	-286.61	-285.22	-72.04	294.17	194.17	12.99	12.99	0.00
6500	65.44	1.15	3	6336.1	-284.20	-282.81	-71.99	291.83	194.28	13.21	13.21	0.00
6600	78.44	1.15	100	6367.0	-189.33	-187.96	-70.08	200.60	200.45	13.00	13.00	0.00
6689	90.00	1.15	89	6376.0	-100.97	-99.62	-68.31	120.79	214.44	12.99	12.99	0.00
6700	90.00	1.15	11	6376.0	-89.93	-88.58	-68.09	111.73	217.55	0.00	0.00	0.00
6800	90.00	1.15	100	6376.0	10.07	11.40	-66.08	67.06	279.79	0.00	0.00	0.00
6900	90.00	1.15	100	6376.0	110.07	111.38	-64.07	128.49	330.09	0.00	0.00	0.00
7000	90.00	1.15	100	6376.0	210.07	211.36	-62.07	220.28	343.63	0.00	0.00	0.00
7100	90.00	1.15	100	6376.0	310.07	311.34	-60.06	317.08	349.08	0.00	0.00	0.00
7200	90.00	1.15	100	6376.0	410.07	411.32	-58.05	415.39	351.97	0.00	0.00	0.00
7300	90.00	1.15	100	6376.0	510.07	511.30	-56.05	514.36	353.74	0.00	0.00	0.00
7400	90.00	1.15	100	6376.0	610.07	611.28	-54.04	613.66	354.95	0.00	0.00	0.00
7500	90.00	1.15	100	6376.0	710.07	711.26	-52.03	713.16	355.82	0.00	0.00	0.00
7600	90.00	1.15	100	6376.0	810.07	811.24	-50.03	812.78	356.47	0.00	0.00	0.00
7700	90.00	1.15	100	6376.0	910.07	911.22	-48.02	912.48	356.98	0.00	0.00	0.00
7800	90.00	1.15	100	6376.0	1010.07	1011.20	-46.01	1012.24	357.39	0.00	0.00	0.00
7900	90.00	1.15	100	6376.0	1110.07	1111.18	-44.00	1112.05	357.73	0.00	0.00	0.00
8000	90.00	1.15	100	6376.0	1210.07	1211.16	-42.00	1211.88	358.01	0.00	0.00	0.00
8100	90.00	1.15	100	6376.0	1310.07	1311.13	-39.99	1311.74	358.25	0.00	0.00	0.00
8200	90.00	1.15	100	6376.0	1410.07	1411.11	-37.98	1411.63	358.46	0.00	0.00	0.00
8300	90.00	1.15	100	6376.0	1510.07	1511.09	-35.98	1511.52	358.64	0.00	0.00	0.00
8400	90.00	1.15	100	6376.0	1610.07	1611.07	-33.97	1611.43	358.79	0.00	0.00	0.00
8500	90.00	1.15	100	6376.0	1710.07	1711.05	-31.96	1711.35	358.93	0.00	0.00	0.00
8600	90.00	1.14	100	6376.0	1810.07	1811.03	-29.96	1811.28	359.05	0.01	0.00	-0.01
8700	90.00	1.14	100	6376.0	1910.07	1911.01	-27.98	1911.22	359.16	0.00	0.00	0.00
8800	90.00	1.14	100	6376.0	2010.07	2010.99	-25.99	2011.16	359.26	0.00	0.00	0.00
8900	90.00	1.14	100	6376.0	2110.07	2110.97	-24.00	2111.11	359.35	0.00	0.00	0.00
9000	90.00	1.14	100	6376.0	2210.07	2210.96	-22.01	2211.06	359.43	0.00	0.00	0.00
9100	90.00	1.14	100	6376.0	2310.07	2310.94	-20.02	2311.02	359.50	0.00	0.00	0.00
9200	90.00	1.14	100	6376.0	2410.07	2410.92	-18.03	2410.98	359.57	0.00	0.00	0.00
9300	90.00	1.14	100	6376.0	2510.07	2510.90	-16.04	2510.95	359.63	0.00	0.00	0.00
9400	90.00	1.14	100	6376.0	2610.07	2610.88	-14.05	2610.91	359.69	0.00	0.00	0.00
9500	90.00	1.14	100	6376.0	2710.07	2710.86	-12.06	2710.88	359.75	0.00	0.00	0.00
9600	90.00	1.14	100	6376.0	2810.07	2810.84	-10.07	2810.85	359.79	0.00	0.00	0.00
9700	90.00	1.14	100	6376.0	2910.07	2910.82	-8.08	2910.83	359.84	0.00	0.00	0.00
9800	90.00	1.14	100	6376.0	3010.07	3010.80	-6.09	3010.80	359.88	0.00	0.00	0.00
9900	90.00	1.14	100	6376.0	3110.07	3110.78	-4.10	3110.78	359.92	0.00	0.00	0.00
10000	90.00	1.14	100	6376.0	3210.07	3210.76	-2.11	3210.76	359.96	0.00	0.00	0.00
10100	90.00	1.14	100	6376.0	3310.07	3310.74	-0.12	3310.74	360.00	0.00	0.00	0.00
10200	90.00	1.14	100	6376.0	3410.07	3410.72	1.87	3410.72	0.03	0.00	0.00	0.00
10300	90.00	1.14	100	6376.0	3510.07	3510.70	3.86	3510.70	0.06	0.00	0.00	0.00
10400	90.00	1.14	100	6376.0	3610.07	3610.68	5.85	3610.68	0.09	0.00	0.00	0.00
10427	90.00	1.14	27	6376.0	3637.48	3638.08	6.39	3638.09	0.10	0.00	0.00	0.00
10500	90.00	355.57	73	6376.0	3709.95	3710.61	4.31	3710.62	0.07	7.67	0.00	488.26
10600	90.00	347.89	100	6376.0	3808.53	3809.50	-10.06	3809.51	359.85	7.68	0.00	-7.68
10700	90.00	340.21	100	6376.0	3904.04	3905.58	-37.52	3905.76	359.45	7.68	0.00	-7.68
10800	90.00	332.54	100	6376.0	3994.77	3997.13	-77.57	3997.88	358.89	7.67	0.00	-7.67
10900	90.00	324.86	100	6376.0	4079.09	4082.51	-129.48	4084.56	358.18	7.68	0.00	-7.68
11000	90.00	317.18	100	6376.0	4155.49	4160.19	-192.34	4164.63	357.35	7.68	0.00	-7.68
11100	90.00	309.51	100	6376.0	4222.61	4228.78	-265.01	4237.07	356.41	7.67	0.00	-7.67
11200	90.00	301.83	100	6376.0	4279.23	4287.04	-346.19	4301.00	355.38	7.68	0.00	-7.68

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11300	90.00	294.15	100	6376.0	4324.35	4333.94	-434.42	4355.66	354.28	7.68	0.00	-7.68
11400	90.00	286.47	100	6376.0	4357.15	4368.63	-528.14	4400.43	353.11	7.68	0.00	-7.68
11500	90.00	278.80	100	6376.0	4377.04	4390.48	-625.64	4434.84	351.89	7.67	0.00	-7.67
11600	90.00	271.15	100	6376.0	4383.68	4399.12	-724.81	4458.43	350.64	7.68	0.00	-7.68
11600	90.00	271.15	0	6376.0	4383.68	4399.12	-725.19	4458.50	350.64	0.00	0.00	0.00
11620	90.00	271.15	20	6376.0	4383.68	4399.52	-745.03	4462.16	350.39	0.00	0.00	0.00
11700	90.00	265.15	80	6376.0	4379.49	4396.93	-825.11	4473.68	349.37	7.49	0.00	-7.49
11800	90.00	257.67	100	6376.0	4362.58	4382.01	-923.92	4478.35	348.09	7.48	0.00	-7.48
11900	90.00	250.19	100	6376.0	4333.00	4354.35	-1019.94	4472.21	346.82	7.48	0.00	-7.48
12000	90.00	242.71	100	6376.0	4291.24	4314.42	-1111.55	4455.31	345.55	7.48	0.00	-7.48
12100	90.00	235.23	100	6376.0	4238.02	4262.91	-1197.18	4427.82	344.31	7.48	0.00	-7.48
12200	90.00	227.75	100	6376.0	4174.25	4200.69	-1275.37	4390.03	343.11	7.48	0.00	-7.48
12300	90.00	220.26	100	6376.0	4100.99	4128.81	-1344.79	4342.30	341.96	7.49	0.00	-7.49
12400	90.00	212.78	100	6376.0	4019.50	4048.50	-1404.26	4285.13	340.87	7.48	0.00	-7.48
12500	90.00	205.30	100	6376.0	3931.18	3961.14	-1452.77	4219.14	339.86	7.48	0.00	-7.48
12600	90.00	197.82	100	6376.0	3837.53	3868.20	-1489.49	4145.06	338.94	7.48	0.00	-7.48
12700	90.00	190.34	100	6376.0	3740.13	3771.27	-1513.80	4063.75	338.13	7.48	0.00	-7.48
12800	90.00	182.86	100	6376.0	3640.65	3672.01	-1525.29	3976.20	337.44	7.48	0.00	-7.48
12823	90.00	181.15	23	6376.0	3617.86	3649.22	-1526.08	3955.47	337.31	7.50	0.00	-7.50
12843	90.00	181.15	20	6376.0	3598.03	3629.40	-1526.48	3937.34	337.19	0.00	0.00	0.00
12900	91.15	181.15	57	6375.4	3540.66	3572.04	-1527.63	3884.99	336.85	2.00	2.00	0.00
12943	92.00	181.15	43	6374.2	3498.05	3529.44	-1528.49	3846.19	336.58	1.99	1.99	0.00
13000	92.00	181.15	57	6372.2	3440.71	3472.11	-1529.64	3794.12	336.22	0.00	0.00	0.00
13100	92.00	181.15	100	6368.7	3340.77	3372.19	-1531.65	3703.73	335.57	0.00	0.00	0.00
13200	92.00	181.15	100	6365.3	3240.84	3272.27	-1533.65	3613.84	334.89	0.00	0.00	0.00
13300	92.00	181.15	100	6361.8	3140.90	3172.36	-1535.66	3524.50	334.17	0.00	0.00	0.00
13400	92.00	181.15	100	6358.3	3040.96	3072.44	-1537.66	3435.73	333.41	0.00	0.00	0.00
13500	92.00	181.15	100	6354.8	2941.02	2972.52	-1539.67	3347.60	332.62	0.00	0.00	0.00
13600	92.00	181.15	100	6351.3	2841.08	2872.60	-1541.67	3260.15	331.78	0.00	0.00	0.00
13700	92.00	181.15	100	6347.8	2741.14	2772.68	-1543.68	3173.44	330.89	0.00	0.00	0.00
13800	92.00	181.15	100	6344.3	2641.20	2672.76	-1545.69	3087.52	329.96	0.00	0.00	0.00
13900	92.00	181.15	100	6340.8	2541.26	2572.84	-1547.69	3002.48	328.97	0.00	0.00	0.00