

Company: SRC
Lease/Well: Bernhardt J 31-19
County/State: Weld CO

Job Number: 8462-512323226
Date: 10-3-19
Survey Type: Memory
Declination: 9.61

Instrument Number: GP1-1026
North Reference: True North
Survey Engineer: Michael Kester

Summit Oil Field Services

Minimum Curvature Method
Vertical Section Plane: 0.00
Vertical Section Reference:
Rectangular Coordinates Reference:

Measured Depth	Inclin	Azimuth	Course Length	True Vertical Depth	N[+]/S[-]	E[+]/W[-]	Vertical Section	Dogleg Severity	Closure Distance	Closure Direction
0.00 ft	0.00	0.00	0.00 ft	0.00 ft	0.00 ft	0.00 ft	0.00 ft	0.00/100 ft	0.00 ft	0.00
100.00 ft	0.25	166.37	100.00 ft	100.00 ft	-0.21 ft	0.05 ft	-0.21 ft	0.24/100 ft	0.21 ft	166.37
200.00 ft	0.31	131.82	100.00 ft	200.00 ft	-0.60 ft	0.30 ft	-0.60 ft	0.18/100 ft	0.67 ft	153.11
300.00 ft	0.14	133.13	100.00 ft	300.00 ft	-0.86 ft	0.59 ft	-0.86 ft	0.17/100 ft	1.04 ft	145.42
400.00 ft	0.19	116.09	100.00 ft	400.00 ft	-1.02 ft	0.83 ft	-1.02 ft	0.07/100 ft	1.31 ft	140.69
500.00 ft	1.14	91.93	100.00 ft	499.99 ft	-1.12 ft	1.98 ft	-1.12 ft	0.97/100 ft	2.27 ft	119.60
600.00 ft	1.59	90.81	100.00 ft	599.96 ft	-1.18 ft	4.36 ft	-1.18 ft	0.45/100 ft	4.52 ft	105.10
700.00 ft	1.38	93.96	100.00 ft	699.93 ft	-1.28 ft	6.95 ft	-1.28 ft	0.23/100 ft	7.06 ft	100.43
800.00 ft	1.39	94.34	100.00 ft	799.90 ft	-1.45 ft	9.36 ft	-1.45 ft	0.02/100 ft	9.47 ft	98.83
900.00 ft	1.26	104.87	100.00 ft	899.87 ft	-1.83 ft	11.64 ft	-1.83 ft	0.28/100 ft	11.78 ft	98.93
1000.00 ft	1.08	106.46	100.00 ft	999.85 ft	-2.38 ft	13.61 ft	-2.38 ft	0.18/100 ft	13.82 ft	99.92
1100.00 ft	1.04	99.39	100.00 ft	1099.83 ft	-2.80 ft	15.41 ft	-2.80 ft	0.14/100 ft	15.67 ft	100.28
1200.00 ft	0.85	103.52	100.00 ft	1199.82 ft	-3.12 ft	17.03 ft	-3.12 ft	0.20/100 ft	17.31 ft	100.37
1300.00 ft	0.92	116.51	100.00 ft	1299.81 ft	-3.65 ft	18.47 ft	-3.65 ft	0.21/100 ft	18.83 ft	101.18
1400.00 ft	0.83	110.63	100.00 ft	1399.80 ft	-4.27 ft	19.87 ft	-4.27 ft	0.13/100 ft	20.33 ft	102.11

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Instrument Number: GP1-1026
North Reference: True North
Survey Engineer: Michael Kester

Measured Depth	Inclin	Azimuth	Course Length	True Vertical Depth	N[+]/S[-]	E[+]/W[-]	Vertical Section	Dogleg Severity	Closure Distance	Closure Direction
1500.00 ft	0.50	121.92	100.00 ft	1499.79 ft	-4.75 ft	20.92 ft	-4.75 ft	0.35/100 ft	21.46 ft	102.80
1600.00 ft	0.36	162.60	100.00 ft	1599.79 ft	-5.29 ft	21.39 ft	-5.29 ft	0.33/100 ft	22.03 ft	103.88
1700.00 ft	0.34	184.65	100.00 ft	1699.78 ft	-5.88 ft	21.46 ft	-5.88 ft	0.13/100 ft	22.25 ft	105.32
1800.00 ft	0.11	203.36	100.00 ft	1799.78 ft	-6.26 ft	21.40 ft	-6.26 ft	0.23/100 ft	22.30 ft	106.31
1900.00 ft	0.43	245.01	100.00 ft	1899.78 ft	-6.51 ft	21.02 ft	-6.51 ft	0.36/100 ft	22.00 ft	107.21
2000.00 ft	0.34	311.45	100.00 ft	1999.78 ft	-6.47 ft	20.45 ft	-6.47 ft	0.43/100 ft	21.45 ft	107.57
2100.00 ft	0.81	277.17	100.00 ft	2099.78 ft	-6.19 ft	19.53 ft	-6.19 ft	0.56/100 ft	20.49 ft	107.59
2200.00 ft	1.15	248.91	100.00 ft	2199.76 ft	-6.46 ft	17.90 ft	-6.46 ft	0.58/100 ft	19.03 ft	109.85
2300.00 ft	0.85	252.38	100.00 ft	2299.75 ft	-7.05 ft	16.26 ft	-7.05 ft	0.30/100 ft	17.72 ft	113.44
2400.00 ft	0.13	198.21	100.00 ft	2399.74 ft	-7.38 ft	15.51 ft	-7.38 ft	0.78/100 ft	17.18 ft	115.45
2500.00 ft	0.51	120.40	100.00 ft	2499.74 ft	-7.72 ft	15.86 ft	-7.72 ft	0.49/100 ft	17.63 ft	115.96
2600.00 ft	0.10	175.25	100.00 ft	2599.74 ft	-8.03 ft	16.24 ft	-8.03 ft	0.46/100 ft	18.12 ft	116.29
2700.00 ft	0.06	214.12	100.00 ft	2699.74 ft	-8.15 ft	16.22 ft	-8.15 ft	0.06/100 ft	18.15 ft	116.69
2800.00 ft	0.22	268.86	100.00 ft	2799.74 ft	-8.20 ft	16.00 ft	-8.20 ft	0.19/100 ft	17.98 ft	117.14
2900.00 ft	0.24	281.86	100.00 ft	2899.74 ft	-8.16 ft	15.59 ft	-8.16 ft	0.06/100 ft	17.60 ft	117.63
3000.00 ft	0.73	271.03	100.00 ft	2999.73 ft	-8.11 ft	14.75 ft	-8.11 ft	0.50/100 ft	16.83 ft	118.80
3100.00 ft	0.84	283.04	100.00 ft	3099.72 ft	-7.93 ft	13.39 ft	-7.93 ft	0.20/100 ft	15.56 ft	120.63
3200.00 ft	0.91	269.55	100.00 ft	3199.71 ft	-7.77 ft	11.88 ft	-7.77 ft	0.22/100 ft	14.20 ft	123.18
3300.00 ft	0.97	279.65	100.00 ft	3299.70 ft	-7.63 ft	10.26 ft	-7.63 ft	0.17/100 ft	12.79 ft	126.66
3400.00 ft	0.66	271.04	100.00 ft	3399.69 ft	-7.48 ft	8.85 ft	-7.48 ft	0.33/100 ft	11.59 ft	130.22
3500.00 ft	0.66	259.99	100.00 ft	3499.68 ft	-7.57 ft	7.70 ft	-7.57 ft	0.13/100 ft	10.80 ft	134.50
3600.00 ft	0.63	221.18	100.00 ft	3599.68 ft	-8.08 ft	6.78 ft	-8.08 ft	0.43/100 ft	10.55 ft	140.02

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Instrument Number: GP1-1026
North Reference: True North
Survey Engineer: Michael Kester

Measured Depth	Inclin	Azimuth	Course Length	True Vertical Depth	N[+]/S[-]	E[+]/W[-]	Vertical Section	Dogleg Severity	Closure Distance	Closure Direction
3700.00 ft	0.64	174.34	100.00 ft	3699.67 ft	-9.05 ft	6.47 ft	-9.05 ft	0.50/100 ft	11.13 ft	144.44
3800.00 ft	0.87	170.82	100.00 ft	3799.66 ft	-10.36 ft	6.65 ft	-10.36 ft	0.23/100 ft	12.31 ft	147.30
3900.00 ft	1.06	167.87	100.00 ft	3899.65 ft	-12.01 ft	6.96 ft	-12.01 ft	0.20/100 ft	13.88 ft	149.89
4000.00 ft	1.04	165.01	100.00 ft	3999.63 ft	-13.78 ft	7.39 ft	-13.78 ft	0.06/100 ft	15.64 ft	151.79
4100.00 ft	0.95	161.15	100.00 ft	4099.62 ft	-15.44 ft	7.89 ft	-15.44 ft	0.11/100 ft	17.34 ft	152.92
4200.00 ft	0.78	177.99	100.00 ft	4199.61 ft	-16.90 ft	8.18 ft	-16.90 ft	0.30/100 ft	18.78 ft	154.17
4300.00 ft	0.99	184.54	100.00 ft	4299.59 ft	-18.45 ft	8.14 ft	-18.45 ft	0.23/100 ft	20.17 ft	156.20
4400.00 ft	1.01	224.95	100.00 ft	4399.58 ft	-19.94 ft	7.45 ft	-19.94 ft	0.69/100 ft	21.29 ft	159.52
4500.00 ft	1.44	250.67	100.00 ft	4499.56 ft	-20.98 ft	5.64 ft	-20.98 ft	0.69/100 ft	21.72 ft	164.96
4600.00 ft	1.35	263.81	100.00 ft	4599.53 ft	-21.52 ft	3.28 ft	-21.52 ft	0.33/100 ft	21.77 ft	171.33
4700.00 ft	1.51	299.40	100.00 ft	4699.50 ft	-21.00 ft	0.96 ft	-21.00 ft	0.89/100 ft	21.03 ft	177.38
4800.00 ft	1.76	313.66	100.00 ft	4799.46 ft	-19.29 ft	-1.30 ft	-19.29 ft	0.48/100 ft	19.34 ft	183.85
4900.00 ft	1.54	311.92	100.00 ft	4899.42 ft	-17.33 ft	-3.41 ft	-17.33 ft	0.22/100 ft	17.67 ft	191.14
5000.00 ft	1.47	305.98	100.00 ft	4999.38 ft	-15.68 ft	-5.45 ft	-15.68 ft	0.17/100 ft	16.60 ft	199.18
5100.00 ft	1.41	298.74	100.00 ft	5099.35 ft	-14.33 ft	-7.57 ft	-14.33 ft	0.19/100 ft	16.21 ft	207.84
5200.00 ft	1.13	291.64	100.00 ft	5199.33 ft	-13.38 ft	-9.56 ft	-13.38 ft	0.32/100 ft	16.45 ft	215.54
5300.00 ft	1.17	290.33	100.00 ft	5299.31 ft	-12.67 ft	-11.43 ft	-12.67 ft	0.05/100 ft	17.06 ft	222.05
5400.00 ft	1.07	292.33	100.00 ft	5399.29 ft	-11.96 ft	-13.25 ft	-11.96 ft	0.10/100 ft	17.85 ft	227.93
5500.00 ft	0.90	289.35	100.00 ft	5499.27 ft	-11.34 ft	-14.85 ft	-11.34 ft	0.19/100 ft	18.69 ft	232.63
5600.00 ft	0.68	298.11	100.00 ft	5599.26 ft	-10.80 ft	-16.11 ft	-10.80 ft	0.24/100 ft	19.40 ft	236.16
5700.00 ft	0.70	296.56	100.00 ft	5699.26 ft	-10.25 ft	-17.19 ft	-10.25 ft	0.03/100 ft	20.01 ft	239.20
5800.00 ft	0.47	264.82	100.00 ft	5799.25 ft	-10.01 ft	-18.15 ft	-10.01 ft	0.39/100 ft	20.72 ft	241.12

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Instrument Number: GP1-1026
 North Reference: True North
 Survey Engineer: Michael Kester

Measured Depth	Inclin	Azimuth	Course Length	True Vertical Depth	N[+]/S[-]	E[+]/W[-]	Vertical Section	Dogleg Severity	Closure Distance	Closure Direction
5900.00 ft	0.48	249.64	100.00 ft	5899.25 ft	-10.19 ft	-18.95 ft	-10.19 ft	0.13/100 ft	21.51 ft	241.72
6000.00 ft	0.54	260.08	100.00 ft	5999.24 ft	-10.42 ft	-19.80 ft	-10.42 ft	0.11/100 ft	22.38 ft	242.25
6100.00 ft	0.50	247.37	100.00 ft	6099.24 ft	-10.67 ft	-20.67 ft	-10.67 ft	0.12/100 ft	23.26 ft	242.71
6200.00 ft	0.40	265.78	100.00 ft	6199.24 ft	-10.86 ft	-21.43 ft	-10.86 ft	0.18/100 ft	24.02 ft	243.12
6300.00 ft	0.59	248.47	100.00 ft	6299.23 ft	-11.08 ft	-22.25 ft	-11.08 ft	0.24/100 ft	24.86 ft	243.54
6400.00 ft	0.44	254.26	100.00 ft	6399.23 ft	-11.37 ft	-23.10 ft	-11.37 ft	0.15/100 ft	25.75 ft	243.80
6500.00 ft	0.44	233.66	100.00 ft	6499.23 ft	-11.70 ft	-23.78 ft	-11.70 ft	0.16/100 ft	26.50 ft	243.81
6600.00 ft	0.59	224.49	100.00 ft	6599.22 ft	-12.29 ft	-24.45 ft	-12.29 ft	0.17/100 ft	27.37 ft	243.31
6700.00 ft	0.66	214.24	100.00 ft	6699.22 ft	-13.14 ft	-25.14 ft	-13.14 ft	0.13/100 ft	28.36 ft	242.40
6800.00 ft	0.81	214.15	100.00 ft	6799.21 ft	-14.21 ft	-25.86 ft	-14.21 ft	0.15/100 ft	29.51 ft	241.22
6900.00 ft	0.83	199.24	100.00 ft	6899.20 ft	-15.47 ft	-26.50 ft	-15.47 ft	0.21/100 ft	30.68 ft	239.71