

Great Western Operating Company, LLC

Location	Colorado	Slot	Slot 16 - Schneider HD 11-382HNX
Field	Wattenburg	Well	Schneider HD 11-382HNX
Installation	Schneider - South	Wellbore	Schneider HD 11-382HNX (AWB)

Created by: admin

Date plotted: 25-Apr-2018

Plot reference is Schneider HD 11-382HNX (AWB).

Ref wellpath is Schneider HD 11-382HNX (AWP#1).

Coordinates are in Feet reference Slot 16 - Schneider HD 11-382HNX.

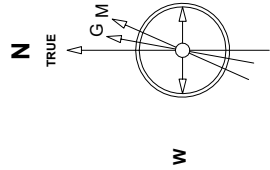
True Vertical Depths are reference Rig Datum.

Measured Depths are reference Rig Datum.

Rig Datum: Actual Datum #1

Rig Datum to Mean Sea Level: 4755.10 ft.

Plot North is aligned to TRUE North.

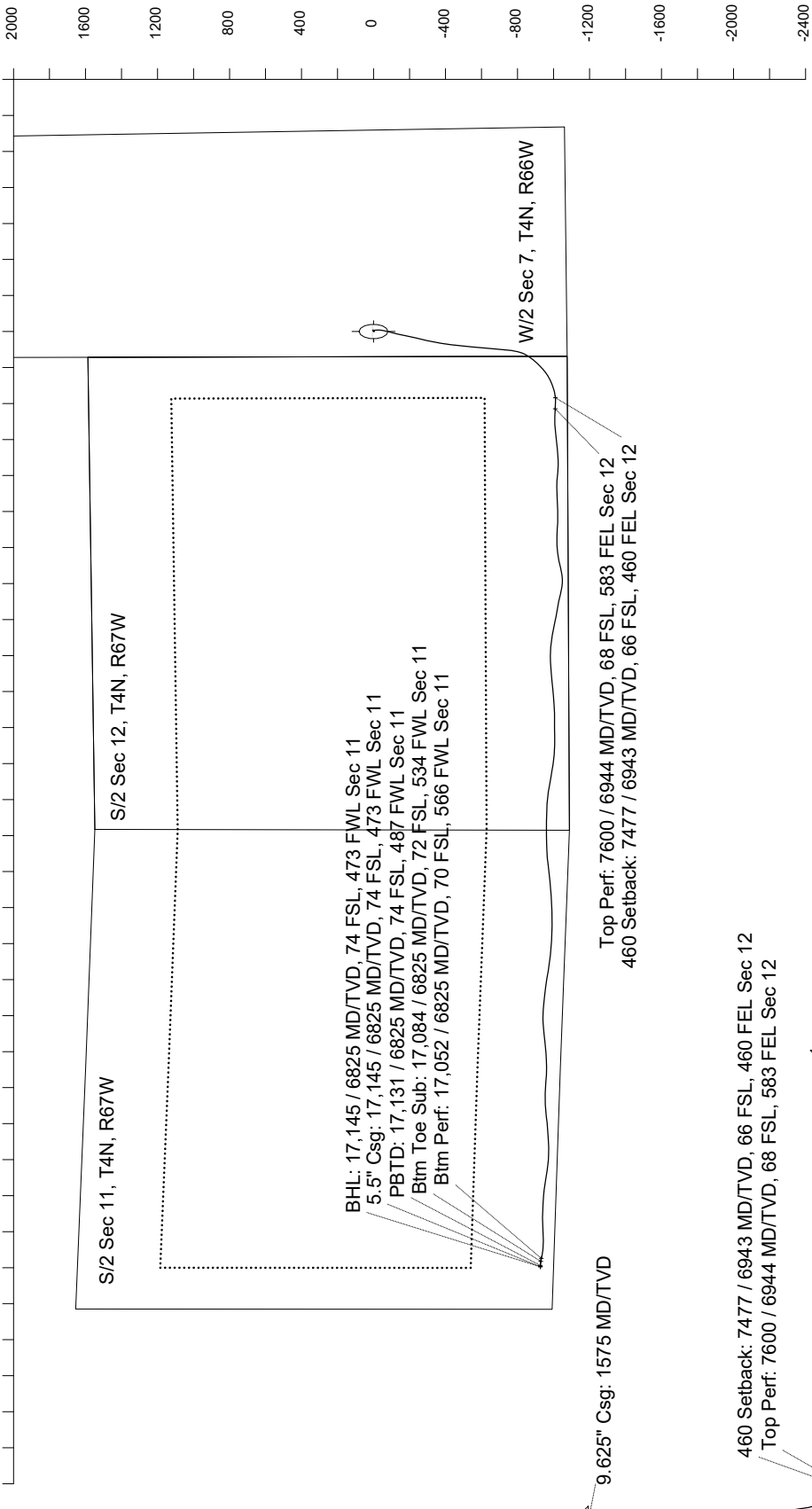


IGRF Model [1900.0-2020.0] Dip: 66.86 deg Field: 52652.2 nT
Lat: N40 19 21.9792 Long: W104 49 43.4100 Elev: 4735.10 ft
Magnetic North is 6.55 deg East of TRUE North
To convert from Magnetic to TRUE add 6.55 deg

Scale 1 cm = 800 ft

Scale 1 cm = 400 ft

East (Feet) ->



Scale 1 cm = 800 ft

Azimuth 264.90 with reference 0.00 N, 0.00 E from Slot 16 - Schneider HD 11-382HNX

Vertical Section (Feet) ->

Scale 1 cm = 200 ft

Great Western Operating Co, LLC
Wellbore Survey Report
Wellpath: Schneider HD 11-382HNX (AWP#1)
MDs and TVDs are from Rig (Actual Datum #1 4755.1ft above Mean Sea Level)

Wellbore Information

Date Created	Date Revised	API #	Name
Jun-21-2017	Apr-25-2018	05-123-44685	Schneider HD 11-382HNX (AWB)

Slot Coordinates

Latitude	Longitude
40.32215300	-104.82871900

Pad Information

Name	Ground Elev
Schneider - South	4735.10

Field

Name
Wattenburg

Wellpath Report

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
0.00	0.00	0.000	0.00	0.00	0.00		0.00
14.90	0.00	232.550	14.90	0.00	0.00	==>	0.00
125.90	0.97	232.550	125.89	-0.57	-0.75	0.87	0.79
253.90	0.88	205.920	253.88	-2.11	-2.04	0.34	2.22
348.90	0.75	153.090	348.87	-3.32	-2.07	0.77	2.36
411.90	0.97	128.220	411.86	-4.02	-1.47	0.68	1.82
474.90	1.31	103.780	474.85	-4.52	-0.35	0.93	0.75
506.90	1.32	90.950	506.84	-4.62	0.37	0.92	0.04
600.90	1.49	82.780	600.81	-4.48	2.67	0.28	-2.26
695.90	1.74	54.040	695.78	-3.48	5.06	0.88	-4.73
790.90	1.53	4.120	790.74	-1.37	6.32	1.47	-6.17
885.90	1.14	344.690	885.72	0.81	6.16	0.62	-6.21
980.90	0.57	27.500	980.71	2.14	6.13	0.86	-6.30
1075.90	1.14	80.760	1075.70	2.71	7.28	0.97	-7.49
1202.90	2.02	82.430	1202.65	3.21	10.75	0.69	-10.99
1297.90	1.54	77.950	1297.60	3.70	13.66	0.53	-13.93
1392.90	0.79	38.130	1392.58	4.48	15.31	1.12	-15.65
1488.90	0.44	261.300	1488.58	4.94	15.35	1.20	-15.73
1519.90	0.70	234.310	1519.58	4.81	15.08	1.18	-15.45
1575.00	0.89	221.610	1574.67	4.30	14.52	0.47	-14.85
1608.00	1.02	216.420	1607.67	3.87	14.18	0.47	-14.47
1697.00	0.03	210.550	1696.67	3.21	13.70	1.11	-13.93
1787.00	0.07	33.470	1786.67	3.24	13.72	0.11	-13.95
1876.00	0.10	171.520	1875.67	3.21	13.76	0.18	-13.99
1965.00	0.07	356.380	1964.67	3.18	13.76	0.19	-13.99
2055.00	0.22	43.260	2054.66	3.36	13.88	0.20	-14.12
2144.00	0.18	182.210	2143.66	3.35	13.99	0.42	-14.23
2234.00	0.39	262.440	2233.66	3.17	13.68	0.45	-13.91
2323.00	0.46	178.800	2322.66	2.77	13.39	0.64	-13.58
2412.00	0.40	201.560	2411.66	2.12	13.28	0.20	-13.42
2501.00	1.61	209.450	2500.64	0.75	12.55	1.37	-12.57
2591.00	0.30	189.480	2590.63	-0.59	11.89	1.48	-11.79
2680.00	0.09	263.640	2679.63	-0.83	11.79	0.32	-11.67
2769.00	0.15	70.850	2768.63	-0.79	11.83	0.27	-11.71
2859.00	0.18	68.130	2858.63	-0.70	12.07	0.03	-11.96
2948.00	0.22	54.890	2947.63	-0.55	12.34	0.07	-12.24
3037.00	0.16	60.460	3036.63	-0.39	12.59	0.07	-12.50
3127.00	0.34	100.900	3126.63	-0.38	12.96	0.27	-12.87
3216.00	0.17	87.190	3215.63	-0.43	13.35	0.20	-13.26
3305.00	0.34	156.230	3304.63	-0.66	13.59	0.36	-13.47
3395.00	0.40	219.080	3394.62	-1.15	13.50	0.43	-13.34
3484.00	0.26	44.490	3483.62	-1.25	13.44	0.74	-13.28
3573.00	0.07	42.450	3572.62	-1.06	13.62	0.21	-13.47
3663.00	0.11	311.820	3662.62	-0.96	13.59	0.15	-13.45
3752.00	0.10	312.180	3751.62	-0.85	13.47	==>	-13.34
3842.00	0.09	187.680	3841.62	-0.87	13.40	0.19	-13.27
3931.00	0.03	226.150	3930.62	-0.96	13.38	0.08	-13.24
4020.00	0.18	167.250	4019.62	-1.11	13.39	0.19	-13.24
4110.00	0.09	204.380	4109.62	-1.31	13.39	0.13	-13.22
4199.00	0.33	340.160	4198.62	-1.13	13.28	0.45	-13.13
4289.00	0.37	301.710	4288.62	-0.74	12.94	0.26	-12.83
4378.00	0.25	251.960	4377.62	-0.65	12.51	0.32	-12.41
4467.00	0.28	136.580	4466.62	-0.87	12.48	0.50	-12.35
4557.00	0.57	227.230	4556.62	-1.33	12.30	0.71	-12.13
4646.00	0.48	42.320	4645.62	-1.35	12.23	1.18	-12.06
4735.00	1.72	143.340	4734.60	-2.15	13.28	2.10	-13.03
4825.00	7.27	169.560	4824.30	-8.84	15.12	6.42	-14.27
4914.00	8.73	176.690	4912.43	-21.12	16.53	1.98	-14.58
5003.00	11.35	190.810	5000.07	-36.47	15.27	4.02	-11.97
5093.00	13.61	201.320	5087.95	-55.04	9.76	3.55	-4.83
5182.00	18.79	206.870	5173.39	-77.60	-0.53	6.07	7.42
5272.00	20.82	206.550	5258.07	-104.84	-14.23	2.26	23.49
5361.00	22.49	204.550	5340.78	-134.47	-28.38	2.05	40.21
5450.00	24.59	202.300	5422.37	-167.09	-42.48	2.57	57.15
5539.00	28.73	203.610	5501.89	-203.84	-58.08	4.70	75.96
5628.00	29.42	203.350	5579.68	-243.51	-75.31	0.79	96.65
5718.00	30.58	205.040	5657.62	-284.55	-93.76	1.59	118.67
5807.00	30.80	204.460	5734.16	-325.80	-112.78	0.41	141.28
5897.00	30.83	197.740	5811.47	-368.75	-129.35	3.82	161.60

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
5986.00	30.37	193.010	5888.09	-412.40	-141.37	2.75	177.45
6076.00	31.35	193.970	5965.35	-457.29	-152.14	1.22	192.17
6165.00	31.16	192.160	6041.43	-502.27	-162.58	1.08	206.56
6254.00	31.13	190.740	6117.61	-547.38	-171.72	0.83	219.67
6344.00	31.15	190.340	6194.64	-593.13	-180.23	0.23	232.21
6433.00	31.24	188.910	6270.77	-638.58	-187.94	0.84	243.93
6522.00	30.90	188.590	6347.00	-683.98	-194.92	0.42	254.92
6611.00	31.30	192.230	6423.22	-729.17	-203.24	2.16	267.21
6701.00	30.81	194.290	6500.32	-774.36	-213.88	1.30	281.83
6790.00	32.74	213.520	6576.17	-816.62	-232.84	11.54	304.47
6879.00	38.12	230.740	6648.85	-854.19	-267.52	12.69	342.35
6968.00	42.94	239.190	6716.52	-887.15	-314.89	8.20	392.46
7058.00	49.34	243.560	6778.87	-918.09	-371.86	7.92	451.95
7147.00	56.96	246.590	6832.21	-947.99	-436.42	8.98	518.92
7236.00	62.49	254.390	6877.12	-973.48	-508.81	9.79	593.28
7325.00	71.68	259.730	6911.75	-991.68	-588.61	11.71	674.38
7415.00	78.82	262.340	6934.66	-1005.20	-674.52	8.41	761.16
7477.38	85.95	267.640	6942.92	-1010.57	-736.05	14.19	822.92
7504.00	89.01	269.860	6944.09	-1011.15	-762.63	14.19	849.45
7594.00	90.52	272.130	6944.46	-1009.59	-852.61	3.03	938.94
7600.00	90.51	272.040	6944.41	-1009.37	-858.61	1.49	944.89
7683.00	90.34	270.820	6943.79	-1007.30	-941.58	1.49	1027.35
7773.00	90.80	268.930	6942.90	-1007.50	-1031.57	2.16	1117.00
7862.00	90.28	266.080	6942.06	-1011.37	-1120.47	3.25	1205.89
7952.00	90.40	267.370	6941.52	-1016.51	-1210.32	1.44	1295.84
8041.00	89.82	267.470	6941.35	-1020.52	-1299.23	0.66	1384.76
8130.00	90.25	267.210	6941.30	-1024.65	-1388.13	0.56	1473.68
8220.00	90.34	270.530	6940.84	-1026.42	-1478.10	3.69	1563.45
8309.00	90.34	273.490	6940.31	-1023.30	-1567.04	3.33	1651.75
8399.00	90.31	271.570	6939.80	-1019.33	-1656.94	2.13	1740.95
8488.00	90.28	269.550	6939.34	-1018.46	-1745.93	2.27	1829.51
8577.00	90.25	268.530	6938.93	-1019.95	-1834.92	1.15	1918.28
8667.00	90.28	268.690	6938.51	-1022.13	-1924.89	0.18	2008.09
8756.00	90.43	269.540	6937.96	-1023.51	-2013.88	0.97	2096.85
8845.00	90.52	271.530	6937.22	-1022.68	-2102.87	2.24	2185.41
8935.00	90.18	271.380	6936.67	-1020.39	-2192.84	0.41	2274.82
9024.00	90.22	270.740	6936.36	-1018.75	-2281.82	0.72	2363.30
9113.00	90.22	268.890	6936.02	-1019.03	-2370.81	2.08	2451.97
9202.00	90.09	266.340	6935.78	-1022.74	-2459.73	2.87	2540.87
9292.00	90.18	264.180	6935.57	-1030.17	-2549.42	2.40	2630.86
9381.00	90.31	263.090	6935.19	-1040.04	-2637.87	1.23	2719.83
9470.00	90.00	266.360	6934.95	-1048.22	-2726.48	3.69	2808.82
9560.00	90.12	273.930	6934.85	-1047.99	-2816.41	8.41	2898.38
9649.00	90.22	277.160	6934.59	-1039.40	-2904.98	3.63	2985.84
9739.00	90.15	275.510	6934.30	-1029.47	-2994.43	1.83	3074.05
9828.00	90.74	274.580	6933.60	-1021.64	-3083.08	1.24	3161.65
9918.00	90.62	275.400	6932.54	-1013.81	-3172.73	0.92	3250.25
10007.00	91.17	276.840	6931.15	-1004.32	-3261.21	1.73	3337.54
10096.00	90.71	275.210	6929.69	-994.98	-3349.70	1.90	3424.85
10186.00	90.28	273.420	6928.91	-988.21	-3439.44	2.05	3513.64
10275.00	90.49	272.170	6928.31	-983.87	-3528.33	1.42	3601.79
10365.00	90.25	269.610	6927.73	-982.48	-3618.31	2.86	3691.29
10454.00	90.55	268.400	6927.11	-984.02	-3707.29	1.40	3780.06
10543.00	90.31	267.580	6926.44	-987.14	-3796.24	0.96	3868.92
10632.00	89.97	266.770	6926.22	-991.53	-3885.13	0.99	3957.85
10722.00	90.06	267.180	6926.20	-996.28	-3975.00	0.47	4047.79
10811.00	90.06	267.750	6926.11	-1000.22	-4063.91	0.64	4136.71
10901.00	90.12	268.290	6925.96	-1003.32	-4153.86	0.60	4226.57
10990.00	90.12	268.960	6925.78	-1005.46	-4242.83	0.75	4315.38
11079.00	90.18	270.430	6925.54	-1005.93	-4331.83	1.65	4404.07
11169.00	90.03	269.750	6925.38	-1005.79	-4421.83	0.77	4493.70
11258.00	90.31	269.250	6925.12	-1006.57	-4510.82	0.64	4582.41
11348.00	90.92	270.630	6924.15	-1006.66	-4600.82	1.68	4672.06
11437.00	91.45	272.490	6922.31	-1004.24	-4689.76	2.17	4760.43
11527.00	91.42	274.150	6920.06	-999.03	-4779.58	1.84	4849.43
11616.00	91.39	274.240	6917.87	-992.52	-4868.31	0.11	4937.24
11705.00	91.32	275.050	6915.77	-985.32	-4956.99	0.91	5024.93
11795.00	91.17	275.250	6913.81	-977.24	-5046.61	0.28	5113.47
11884.00	91.35	274.340	6911.86	-969.80	-5135.28	1.04	5201.13
11974.00	91.35	272.340	6909.74	-964.56	-5225.09	2.22	5290.13
12063.00	91.29	270.680	6907.68	-962.22	-5314.04	1.87	5378.51
12152.00	91.94	270.530	6905.18	-961.28	-5403.00	0.75	5467.03
12242.00	91.29	270.210	6902.64	-960.70	-5492.96	0.80	5556.59
12331.00	92.03	269.520	6900.06	-960.91	-5581.92	1.14	5645.22
12420.00	92.06	269.410	6896.89	-961.74	-5670.86	0.13	5733.88
12510.00	92.31	268.750	6893.45	-963.18	-5760.78	0.78	5823.57
12599.00	92.40	267.930	6889.80	-965.76	-5849.67	0.93	5912.34
12688.00	90.95	266.090	6887.20	-970.40	-5938.50	2.63	6001.23
12778.00	91.42	266.920	6885.33	-975.88	-6028.31	1.06	6091.18
12867.00	91.08	266.870	6883.39	-980.70	-6117.16	0.39	6180.10
12956.00	91.48	267.890	6881.40	-984.77	-6206.05	1.23	6268.99
13046.00	91.02	268.640	6879.44	-987.49	-6295.98	0.98	6358.82
13135.00	90.92	268.740	6877.93	-989.53	-6384.95	0.16	6447.61
13224.00	91.02	269.160	6876.43	-991.16	-6473.92	0.49	6536.38
13313.00	90.98	269.790	6874.87	-991.97	-6562.90	0.71	6625.08
13403.00	90.86	270.470	6873.43	-991.77	-6652.89	0.77	6714.69
13492.00	91.97	271.810	6871.23	-990.00	-6741.84	1.95	6803.13
13582.00	91.82	272.230	6868.26	-986.83	-6831.73	0.50	6892.39
13671.00	92.19	272.940	6865.14	-982.82	-6920.59	0.90	6980.54
13760.00	91.91	274.130	6861.96	-977.33	-7009.36	1.37	7068.47
13850.00	91.97	274.980	6858.91	-970.19	-7099.02	0.95	7157.15
13939.00	92.25	274.510	6855.63	-962.83	-7187.66	0.61	7244.78

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
14028.00	91.88	273.880	6852.43	-956.33	-7276.36	0.82	7332.55
14118.00	91.79	273.030	6849.55	-950.91	-7366.15	0.95	7421.50
14207.00	92.03	272.820	6846.58	-946.37	-7454.99	0.36	7509.58
14296.00	90.37	271.960	6844.72	-942.66	-7543.89	2.10	7597.80
14385.00	90.03	270.050	6844.40	-941.10	-7632.87	2.18	7686.29
14475.00	89.85	267.300	6844.50	-943.18	-7722.83	3.06	7776.09
14565.00	89.91	266.860	6844.69	-947.76	-7812.72	0.49	7866.02
14654.00	90.03	267.070	6844.73	-952.47	-7901.59	0.27	7954.97
14743.00	89.97	267.440	6844.73	-956.74	-7990.49	0.42	8043.89
14833.00	91.02	268.320	6843.96	-960.06	-8080.42	1.52	8133.76
14922.00	91.05	269.990	6842.35	-961.38	-8169.39	1.88	8222.50
15011.00	91.08	271.400	6840.69	-960.30	-8258.37	1.58	8311.03
15101.00	90.31	272.080	6839.60	-957.57	-8348.32	1.14	8400.38
15190.00	90.49	272.350	6838.98	-954.13	-8437.25	0.36	8488.66
15279.00	90.49	269.720	6838.22	-952.52	-8526.23	2.95	8577.14
15369.00	92.00	267.100	6836.26	-955.01	-8616.16	3.36	8666.94
15458.00	92.06	266.420	6833.11	-960.04	-8704.96	0.77	8755.83
15547.00	90.89	267.650	6830.82	-964.64	-8793.81	1.91	8844.74
15637.00	90.55	268.030	6829.69	-968.03	-8883.74	0.57	8934.61
15726.00	90.22	268.190	6829.09	-970.97	-8972.69	0.41	9023.47
15816.00	90.40	269.350	6828.60	-972.90	-9062.66	1.30	9113.26
15905.00	90.18	271.480	6828.15	-972.26	-9151.66	2.41	9201.85
15994.00	90.09	272.760	6827.94	-968.96	-9240.59	1.44	9290.14
16084.00	89.82	274.180	6828.02	-963.52	-9330.43	1.61	9379.13
16173.00	89.88	274.730	6828.25	-956.60	-9419.16	0.62	9466.90
16262.00	90.03	273.810	6828.32	-949.98	-9507.91	1.05	9554.71
16351.00	90.03	272.700	6828.27	-944.92	-9596.76	1.25	9642.76
16441.00	90.15	271.560	6828.13	-941.58	-9686.70	1.27	9732.05
16530.00	90.12	270.680	6827.92	-939.84	-9775.68	0.99	9820.52
16619.00	90.06	270.150	6827.78	-939.20	-9864.68	0.60	9909.11
16709.00	90.03	268.240	6827.71	-940.46	-9954.67	2.12	9998.85
16798.00	90.03	268.820	6827.66	-942.74	-10043.64	0.65	10087.68
16887.00	90.46	270.130	6827.28	-943.56	-10132.63	1.55	10176.39
16977.00	90.98	275.700	6826.15	-938.98	-10222.47	6.22	10265.47
17052.00	90.08	275.140	6825.46	-931.90	-10297.13	1.41	10339.20
17066.00	89.91	275.040	6825.46	-930.65	-10311.07	1.41	10352.98
17083.92	89.95	273.940	6825.48	-929.25	-10328.94	6.13	10370.65
17121.00	90.03	271.670	6825.49	-927.44	-10365.97	6.13	10407.38
17131.19	90.03	271.670	6825.48	-927.14	-10376.16	==>	10417.50
17145.00	90.03	271.670	6825.48	-926.74	-10389.96	==>	10431.21

Comments

MD[ft]	TVD[ft]	North[ft]	East[ft]	Comment			
1575.00	1574.67	4.30	14.52	9.625" Csg: 1575 MD/TVD			
7477.38	6942.92	-1010.57	-736.05	460 Setback: 7477 / 6943 MD/TVD, 66 FSL, 460 FEL Sec 12			
7600.00	6944.41	-1009.37	-858.61	Top Perf: 7600 / 6944 MD/TVD, 68 FSL, 583 FEL Sec 12			
17052.00	6825.46	-931.90	-10297.13	Btm Perf: 17,052 / 6825 MD/TVD, 70 FSL, 566 FWL Sec 11			
17083.92	6825.48	-929.25	-10328.94	Btm Toe Sub: 17,084 / 6825 MD/TVD, 72 FSL, 534 FWL Sec 11			
17131.19	6825.48	-927.14	-10376.16	PBTD: 17,131 / 6825 MD/TVD, 74 FSL, 487 FWL Sec 11			
17145.00	6825.48	-926.74	-10389.96	5.5" Csg: 17,145 / 6825 MD/TVD, 74 FSL, 473 FWL Sec 11			
17145.00	6825.48	-926.74	-10389.96	BHL: 17,145 / 6825 MD/TVD, 74 FSL, 473 FWL Sec 11			

Hole Sections

Diameter [in]	Start MD[ft]	Start TVD[ft]	Start North[ft]	Start East[ft]	End MD[ft]	End TVD[ft]	End North[ft]	End East[ft]
13.500	0.00	0.00	0.00	0.00	1575.00	1574.67	4.30	14.52
8.500	1575.00	1574.67	4.30	14.52	17145.00	6825.48	-926.74	-10389.96

Casings

Name	Top MD[ft]	Top TVD[ft]	Top North[ft]	Top East[ft]	Shoe MD[ft]	Shoe TVD[ft]	Shoe North[ft]	Shoe East[ft]
9 5/8in Casing	0.00	0.00	0.00	0.00	1575.00	1574.67	4.30	14.52
5 1/2in Casing	0.00	0.00	0.00	0.00	17145.00	6825.48	-926.74	-10389.96

Survey Tool Program

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
278348	As Drilled 20170621	17145.00	6825.48	MWD	

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Actual Datum #1 4755.1ft above Mean Sea Level)
Vertical Section is from 0.00 0.00 on azimuth 264.900 degrees
Bottom hole distance is 10431.21 Feet on azimuth 264.90 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Great Western Operating Co.
Date Printed: