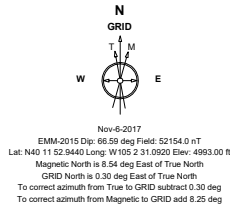


# Cub Creek Energy, LLC

Location **Weld County, CO** Slot **KNIGHT 14**  
 Field **WATTENBERG** Well **W KNIGHT 14**  
 Installation **Knight Pad** Wellbore **W KNIGHT 14 (PWB)**



Created by sean.dolfinger  
 Date plotted 14-Jul-2020  
 Plot reference is W KNIGHT 14 (PWB).  
 Ref wellpath is W KNIGHT 14 (PWP#1).  
 Coordinates are in Feet reference KNIGHT 14.  
 True Vertical Depths are reference Rig Datum.  
 Measured Depths are reference Rig Datum.  
 Rig Datum: Planned Datum #1  
 Rig Datum to Mean Sea Level: 5011.00 ft.  
 Plot North is aligned to GRID North.

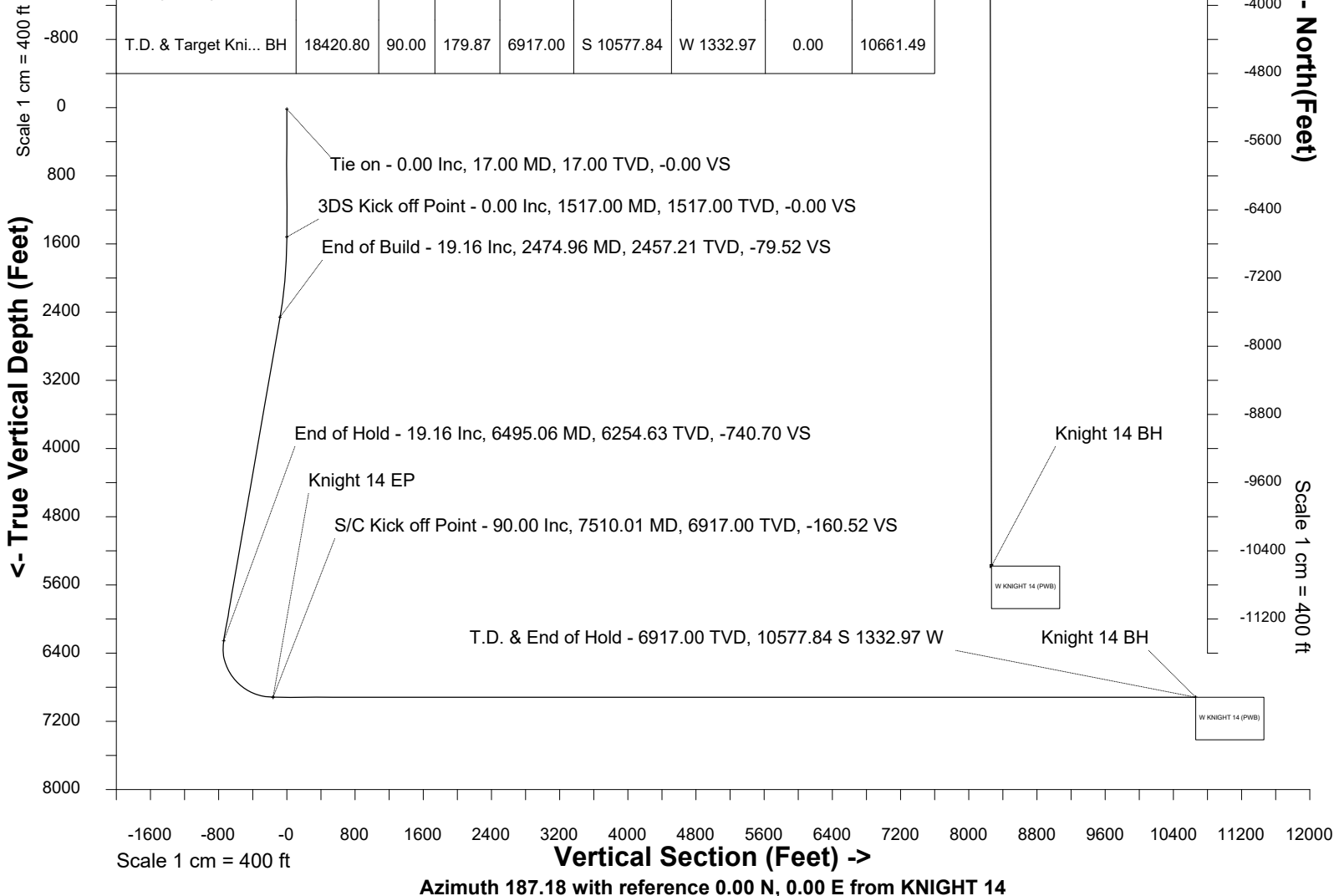
Scale 1 cm = 400 ft **East (Feet) ->**

-2400 -1600 -800 0 800

Knight 14 EP Surface 0.00 N 0.00 E

## WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	17.00	0.00	0.00	17.00	S 0.00	W 0.00		-0.00
KOP	1517.00	0.00	307.26	1517.00	S 0.00	W 0.00	0.00	-0.00
End of Build	2474.96	19.16	307.26	2457.21	N 96.06	W 126.30	2.00	-79.52
End of Hold	6495.06	19.16	307.26	6254.63	N 894.80	W 1176.42	0.00	-740.70
Target Knight 14 EP	7510.01	90.00	179.87	6917.00	N 332.92	W 1357.98	10.00	-160.52
T.D. & Target Kni... BH	18420.80	90.00	179.87	6917.00	S 10577.84	W 1332.97	0.00	10661.49



SYSDRILL  
Well Design Combined Report  
Wellbore: W KNIGHT 14 (PWB)



Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
KNIGHT 14	40.19787700	-105.04205500	1315259.4022	3127922.1120	59.50S	23.44W	0.00

Declination		
Date	Source	Time
Nov-6-2017	EMM-2015	14:52

Installation Details						
Name	Installation Position (Latitude)	Installation Position (Longitude)	Northing	Easting	Coord System Name	North Alignment
Knight Pad	40.19804000	-105.04197000	1315318.9022	3127945.5490	NAD83 Based Colorado State Planes, Northern Zone, US Feet	Grid

Summary Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	Vertical Depth SS	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
17.00	0.00	0.00	17.00	-4994.00	0.00N	0.00E		0.00
1517.00	0.00	307.26	1517.00	-3494.00	0.00N	0.00E	==>	0.00
2474.96	19.16	307.26	2457.21	-2553.79	96.06N	126.30W	2.00	-79.52
6495.06	19.16	307.26	6254.63	1243.63	894.80N	1176.42W	==>	-740.70
7510.01	90.00	179.87	6917.00	1906.00	332.92N	1357.98W	10.00	-160.52
18420.80	90.00	179.87	6917.00	1906.00	10577.84S	1332.97W	==>	10661.49

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)
0.00	0.00	0.00	0.00	0.00N	0.00E		0.00	40.19787700	-105.04205500
17.00	0.00	0.00	17.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
100.00	0.00	0.00	100.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
200.00	0.00	0.00	200.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
300.00	0.00	0.00	300.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
400.00	0.00	0.00	400.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
500.00	0.00	0.00	500.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
600.00	0.00	0.00	600.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
700.00	0.00	0.00	700.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
800.00	0.00	0.00	800.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
900.00	0.00	0.00	900.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
1000.00	0.00	0.00	1000.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
1100.00	0.00	0.00	1100.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
1200.00	0.00	0.00	1200.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
1300.00	0.00	0.00	1300.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
1400.00	0.00	0.00	1400.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
1500.00	0.00	0.00	1500.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
1517.00	0.00	307.26	1517.00	0.00N	0.00E	==>	0.00	40.19787700	-105.04205500
1617.00	2.00	307.26	1616.98	1.06N	1.39W	2.00	-0.87	40.19787992	-105.04205995
1717.00	4.00	307.26	1716.84	4.22N	5.55W	2.00	-3.50	40.19788868	-105.04207480
1817.00	6.00	307.26	1816.45	9.50N	12.49W	2.00	-7.86	40.19790326	-105.04209954
1917.00	8.00	307.26	1915.70	16.88N	22.19W	2.00	-13.97	40.19792364	-105.04213412
2017.00	10.00	307.26	2014.47	26.35N	34.64W	2.00	-21.81	40.19794982	-105.04217851
2117.00	12.00	307.26	2112.62	37.90N	49.83W	2.00	-31.37	40.19798174	-105.04223266
2217.00	14.00	307.26	2210.06	51.52N	67.73W	2.00	-42.64	40.19801937	-105.04229650
2317.00	16.00	307.26	2306.64	67.18N	88.33W	2.00	-55.61	40.19806267	-105.04236995
2417.00	18.00	307.26	2402.27	84.88N	111.60W	2.00	-70.27	40.19811158	-105.04245292
2474.96	19.16	307.26	2457.21	96.06N	126.30W	2.00	-79.52	40.19814248	-105.04250532
2517.00	19.16	307.26	2496.92	104.42N	137.28W	==>	-86.43	40.19816556	-105.04254448
2617.00	19.16	307.26	2591.38	124.29N	163.40W	==>	-102.88	40.19822047	-105.04263762
2717.00	19.16	307.26	2685.84	144.15N	189.52W	==>	-119.33	40.19827538	-105.04273076
2817.00	19.16	307.26	2780.30	164.02N	215.64W	==>	-135.77	40.19833029	-105.04282390

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 5011.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 187.18 degrees  
Bottom hole distance is 10661.49 Feet on azimuth 187.18 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by  
Date Printed: 14-Jul-2020

SYSDRILL  
Well Design Combined Report  
Wellbore: W KNIGHT 14 (PWB)



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)
2917.00	19.16	307.26	2874.76	183.89N	241.77W	==>	-152.22	40.19838520	-105.04291704
3017.00	19.16	307.26	2969.22	203.76N	267.89W	==>	-168.67	40.19844011	-105.04301019
3117.00	19.16	307.26	3063.68	223.63N	294.01W	==>	-185.11	40.19849501	-105.04310333
3217.00	19.16	307.26	3158.15	243.50N	320.13W	==>	-201.56	40.19854992	-105.04319647
3317.00	19.16	307.26	3252.61	263.37N	346.25W	==>	-218.01	40.19860483	-105.04328961
3417.00	19.16	307.26	3347.07	283.23N	372.37W	==>	-234.46	40.19865974	-105.04338275
3517.00	19.16	307.26	3441.53	303.10N	398.50W	==>	-250.90	40.19871465	-105.04347589
3617.00	19.16	307.26	3535.99	322.97N	424.62W	==>	-267.35	40.19876955	-105.04356903
3717.00	19.16	307.26	3630.45	342.84N	450.74W	==>	-283.80	40.19882446	-105.04366218
3817.00	19.16	307.26	3724.91	362.71N	476.86W	==>	-300.24	40.19887937	-105.04375532
3917.00	19.16	307.26	3819.37	382.58N	502.98W	==>	-316.69	40.19893428	-105.04384846
4017.00	19.16	307.26	3913.83	402.45N	529.11W	==>	-333.14	40.19898918	-105.04394160
4117.00	19.16	307.26	4008.30	422.31N	555.23W	==>	-349.58	40.19904409	-105.04403475
4217.00	19.16	307.26	4102.76	442.18N	581.35W	==>	-366.03	40.19909900	-105.04412789
4317.00	19.16	307.26	4197.22	462.05N	607.47W	==>	-382.48	40.19915390	-105.04422103
4417.00	19.16	307.26	4291.68	481.92N	633.59W	==>	-398.92	40.19920881	-105.04431418
4517.00	19.16	307.26	4386.14	501.79N	659.71W	==>	-415.37	40.19926372	-105.04440732
4617.00	19.16	307.26	4480.60	521.66N	685.84W	==>	-431.82	40.19931863	-105.04450046
4717.00	19.16	307.26	4575.06	541.53N	711.96W	==>	-448.26	40.19937353	-105.04459361
4817.00	19.16	307.26	4669.52	561.40N	738.08W	==>	-464.71	40.19942844	-105.04468675
4917.00	19.16	307.26	4763.98	581.26N	764.20W	==>	-481.16	40.19948335	-105.04477989
5017.00	19.16	307.26	4858.44	601.13N	790.32W	==>	-497.60	40.19953825	-105.04487304
5117.00	19.16	307.26	4952.91	621.00N	816.45W	==>	-514.05	40.19959316	-105.04496618
5217.00	19.16	307.26	5047.37	640.87N	842.57W	==>	-530.50	40.19964807	-105.04505933
5317.00	19.16	307.26	5141.83	660.74N	868.69W	==>	-546.94	40.19970297	-105.04515247
5417.00	19.16	307.26	5236.29	680.61N	894.81W	==>	-563.39	40.19975788	-105.04524561
5517.00	19.16	307.26	5330.75	700.48N	920.93W	==>	-579.84	40.19981278	-105.04533876
5617.00	19.16	307.26	5425.21	720.34N	947.05W	==>	-596.28	40.19986769	-105.04543190
5717.00	19.16	307.26	5519.67	740.21N	973.18W	==>	-612.73	40.19992260	-105.04552505
5817.00	19.16	307.26	5614.13	760.08N	999.30W	==>	-629.18	40.19997750	-105.04561819
5917.00	19.16	307.26	5708.59	779.95N	1025.42W	==>	-645.63	40.20003241	-105.04571134
6017.00	19.16	307.26	5803.05	799.82N	1051.54W	==>	-662.07	40.20008732	-105.04580448
6117.00	19.16	307.26	5897.52	819.69N	1077.66W	==>	-678.52	40.20014222	-105.04589763
6217.00	19.16	307.26	5991.98	839.56N	1103.78W	==>	-694.97	40.20019713	-105.04599078
6317.00	19.16	307.26	6086.44	859.42N	1129.91W	==>	-711.41	40.20025203	-105.04608392
6417.00	19.16	307.26	6180.90	879.29N	1156.03W	==>	-727.86	40.20030694	-105.04617707
6495.06	19.16	307.26	6254.63	894.80N	1176.42W	==>	-740.70	40.20034980	-105.04624978
6517.00	17.96	301.48	6275.44	898.75N	1182.17W	10.00	-743.89	40.20036071	-105.04627029
6617.00	15.45	267.24	6371.44	906.18N	1208.69W	10.00	-747.95	40.20038148	-105.04636509
6717.00	18.70	234.49	6467.23	896.20N	1235.11W	10.00	-734.75	40.20035446	-105.04645986
6817.00	25.61	215.02	6559.91	869.12N	1260.63W	10.00	-704.69	40.20028048	-105.04655172
6917.00	34.02	204.01	6646.66	825.75N	1284.48W	10.00	-658.68	40.20016178	-105.04663788
7017.00	43.05	197.06	6724.85	767.43N	1305.93W	10.00	-598.13	40.20000197	-105.04671573
7117.00	52.37	192.16	6792.09	695.91N	1324.33W	10.00	-524.87	40.19980591	-105.04678290
7217.00	61.85	188.36	6846.34	613.37N	1339.12W	10.00	-441.13	40.19957956	-105.04683734
7317.00	71.42	185.19	6885.96	522.32N	1349.84W	10.00	-349.45	40.19932978	-105.04687741
7417.00	81.04	182.36	6909.74	425.53N	1356.19W	10.00	-252.63	40.19906418	-105.04690189
7510.01	90.00	179.87	6917.00	332.92N	1357.98W	10.00	-160.52	40.19881000	-105.04691000
7517.00	90.00	179.87	6917.00	325.93N	1357.96W	==>	-153.59	40.19879081	-105.04691007
7617.00	90.00	179.87	6917.00	225.93N	1357.73W	==>	-54.41	40.19851632	-105.04691108
7717.00	90.00	179.87	6917.00	125.93N	1357.50W	==>	44.78	40.19824182	-105.04691209
7817.00	90.00	179.87	6917.00	25.93N	1357.27W	==>	143.97	40.19796732	-105.04691310
7917.00	90.00	179.87	6917.00	74.07S	1357.05W	==>	243.15	40.19769282	-105.04691410
8017.00	90.00	179.87	6917.00	174.07S	1356.82W	==>	342.34	40.19741832	-105.04691511
8117.00	90.00	179.87	6917.00	274.07S	1356.59W	==>	441.53	40.19714382	-105.04691612
8217.00	90.00	179.87	6917.00	374.07S	1356.36W	==>	540.71	40.19686933	-105.04691713
8317.00	90.00	179.87	6917.00	474.07S	1356.13W	==>	639.90	40.19659483	-105.04691814
8417.00	90.00	179.87	6917.00	574.07S	1355.90W	==>	739.09	40.19632033	-105.04691915

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Vertical Section is from 0.00N 0.00E on azimuth 187.18 degrees  
Bottom hole distance is 10661.49 Feet on azimuth 187.18 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by  
Date Printed: 14-Jul-2020

SYSDRILL  
Well Design Combined Report  
Wellbore: W KNIGHT 14 (PWB)



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)
8517.00	90.00	179.87	6917.00	674.07S	1355.67W	==>	838.27	40.19604583	-105.04692016
8617.00	90.00	179.87	6917.00	774.07S	1355.44W	==>	937.46	40.19577133	-105.04692116
8717.00	90.00	179.87	6917.00	874.07S	1355.21W	==>	1036.65	40.19549683	-105.04692217
8817.00	90.00	179.87	6917.00	974.07S	1354.98W	==>	1135.83	40.19522233	-105.04692318
8917.00	90.00	179.87	6917.00	1074.07S	1354.75W	==>	1235.02	40.19494784	-105.04692419
9017.00	90.00	179.87	6917.00	1174.07S	1354.52W	==>	1334.20	40.19467334	-105.04692520
9117.00	90.00	179.87	6917.00	1274.07S	1354.30W	==>	1433.39	40.19439884	-105.04692621
9217.00	90.00	179.87	6917.00	1374.06S	1354.07W	==>	1532.58	40.19412434	-105.04692722
9317.00	90.00	179.87	6917.00	1474.06S	1353.84W	==>	1631.76	40.19384984	-105.04692822
9417.00	90.00	179.87	6917.00	1574.06S	1353.61W	==>	1730.95	40.19357534	-105.04692923
9517.00	90.00	179.87	6917.00	1674.06S	1353.38W	==>	1830.14	40.19330084	-105.04693024
9617.00	90.00	179.87	6917.00	1774.06S	1353.15W	==>	1929.32	40.19302635	-105.04693125
9717.00	90.00	179.87	6917.00	1874.06S	1352.92W	==>	2028.51	40.19275185	-105.04693226
9817.00	90.00	179.87	6917.00	1974.06S	1352.69W	==>	2127.70	40.19247735	-105.04693327
9917.00	90.00	179.87	6917.00	2074.06S	1352.46W	==>	2226.88	40.19220285	-105.04693428
10017.00	90.00	179.87	6917.00	2174.06S	1352.23W	==>	2326.07	40.19192835	-105.04693528
10117.00	90.00	179.87	6917.00	2274.06S	1352.00W	==>	2425.26	40.19165385	-105.04693629
10217.00	90.00	179.87	6917.00	2374.06S	1351.77W	==>	2524.44	40.19137935	-105.04693730
10317.00	90.00	179.87	6917.00	2474.06S	1351.55W	==>	2623.63	40.19110485	-105.04693831
10417.00	90.00	179.87	6917.00	2574.06S	1351.32W	==>	2722.81	40.19083036	-105.04693932
10517.00	90.00	179.87	6917.00	2674.06S	1351.09W	==>	2822.00	40.19055586	-105.04694033
10617.00	90.00	179.87	6917.00	2774.06S	1350.86W	==>	2921.19	40.19028136	-105.04694133
10717.00	90.00	179.87	6917.00	2874.06S	1350.63W	==>	3020.37	40.19000686	-105.04694234
10817.00	90.00	179.87	6917.00	2974.06S	1350.40W	==>	3119.56	40.18973236	-105.04694335
10917.00	90.00	179.87	6917.00	3074.06S	1350.17W	==>	3218.75	40.18945786	-105.04694436
11017.00	90.00	179.87	6917.00	3174.06S	1349.94W	==>	3317.93	40.18918336	-105.04694537
11117.00	90.00	179.87	6917.00	3274.06S	1349.71W	==>	3417.12	40.18890886	-105.04694638
11217.00	90.00	179.87	6917.00	3374.06S	1349.48W	==>	3516.31	40.18863437	-105.04694738
11317.00	90.00	179.87	6917.00	3474.06S	1349.25W	==>	3615.49	40.18835987	-105.04694839
11417.00	90.00	179.87	6917.00	3574.06S	1349.02W	==>	3714.68	40.18808537	-105.04694940
11517.00	90.00	179.87	6917.00	3674.06S	1348.79W	==>	3813.87	40.18781087	-105.04695041
11617.00	90.00	179.87	6917.00	3774.06S	1348.57W	==>	3913.05	40.18753637	-105.04695142
11717.00	90.00	179.87	6917.00	3874.06S	1348.34W	==>	4012.24	40.18726187	-105.04695243
11817.00	90.00	179.87	6917.00	3974.06S	1348.11W	==>	4111.42	40.18698737	-105.04695343
11917.00	90.00	179.87	6917.00	4074.06S	1347.88W	==>	4210.61	40.18671287	-105.04695444
12017.00	90.00	179.87	6917.00	4174.06S	1347.65W	==>	4309.80	40.18643837	-105.04695545
12117.00	90.00	179.87	6917.00	4274.06S	1347.42W	==>	4408.98	40.18616388	-105.04695646
12217.00	90.00	179.87	6917.00	4374.06S	1347.19W	==>	4508.17	40.18588938	-105.04695747
12317.00	90.00	179.87	6917.00	4474.06S	1346.96W	==>	4607.36	40.18561488	-105.04695847
12417.00	90.00	179.87	6917.00	4574.06S	1346.73W	==>	4706.54	40.18534038	-105.04695948
12517.00	90.00	179.87	6917.00	4674.06S	1346.50W	==>	4805.73	40.18506588	-105.04696049
12617.00	90.00	179.87	6917.00	4774.06S	1346.27W	==>	4904.92	40.18479138	-105.04696150
12717.00	90.00	179.87	6917.00	4874.06S	1346.04W	==>	5004.10	40.18451688	-105.04696251
12817.00	90.00	179.87	6917.00	4974.06S	1345.82W	==>	5103.29	40.18424238	-105.04696352
12917.00	90.00	179.87	6917.00	5074.06S	1345.59W	==>	5202.48	40.18396788	-105.04696452
13017.00	90.00	179.87	6917.00	5174.05S	1345.36W	==>	5301.66	40.18369338	-105.04696553
13117.00	90.00	179.87	6917.00	5274.05S	1345.13W	==>	5400.85	40.18341888	-105.04696654
13217.00	90.00	179.87	6917.00	5374.05S	1344.90W	==>	5500.03	40.18314439	-105.04696755
13317.00	90.00	179.87	6917.00	5474.05S	1344.67W	==>	5599.22	40.18286989	-105.04696856
13417.00	90.00	179.87	6917.00	5574.05S	1344.44W	==>	5698.41	40.18259539	-105.04696956
13517.00	90.00	179.87	6917.00	5674.05S	1344.21W	==>	5797.59	40.18232089	-105.04697057
13617.00	90.00	179.87	6917.00	5774.05S	1343.98W	==>	5896.78	40.18204639	-105.04697158
13717.00	90.00	179.87	6917.00	5874.05S	1343.75W	==>	5995.97	40.18177189	-105.04697259
13817.00	90.00	179.87	6917.00	5974.05S	1343.52W	==>	6095.15	40.18149739	-105.04697360
13917.00	90.00	179.87	6917.00	6074.05S	1343.29W	==>	6194.34	40.18122289	-105.04697461
14017.00	90.00	179.87	6917.00	6174.05S	1343.06W	==>	6293.53	40.18094839	-105.04697561
14117.00	90.00	179.87	6917.00	6274.05S	1342.84W	==>	6392.71	40.18067389	-105.04697662
14217.00	90.00	179.87	6917.00	6374.05S	1342.61W	==>	6491.90	40.18039939	-105.04697763
14317.00	90.00	179.87	6917.00	6474.05S	1342.38W	==>	6591.09	40.18012490	-105.04697864

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Date Printed: 14-Jul-2020

SYSDRILL  
Well Design Combined Report  
Wellbore: W KNIGHT 14 (PWB)



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)
14417.00	90.00	179.87	6917.00	6574.05S	1342.15W	==>	6690.27	40.17985040	-105.04697965
14517.00	90.00	179.87	6917.00	6674.05S	1341.92W	==>	6789.46	40.17957590	-105.04698065
14617.00	90.00	179.87	6917.00	6774.05S	1341.69W	==>	6888.64	40.17930140	-105.04698166
14717.00	90.00	179.87	6917.00	6874.05S	1341.46W	==>	6987.83	40.17902690	-105.04698267
14817.00	90.00	179.87	6917.00	6974.05S	1341.23W	==>	7087.02	40.17875240	-105.04698368
14917.00	90.00	179.87	6917.00	7074.05S	1341.00W	==>	7186.20	40.17847790	-105.04698469
15017.00	90.00	179.87	6917.00	7174.05S	1340.77W	==>	7285.39	40.17820340	-105.04698569
15117.00	90.00	179.87	6917.00	7274.05S	1340.54W	==>	7384.58	40.17792890	-105.04698670
15217.00	90.00	179.87	6917.00	7374.05S	1340.31W	==>	7483.76	40.17765440	-105.04698771
15317.00	90.00	179.87	6917.00	7474.05S	1340.09W	==>	7582.95	40.17737990	-105.04698872
15417.00	90.00	179.87	6917.00	7574.05S	1339.86W	==>	7682.14	40.17710540	-105.04698973
15517.00	90.00	179.87	6917.00	7674.05S	1339.63W	==>	7781.32	40.17683090	-105.04699073
15617.00	90.00	179.87	6917.00	7774.05S	1339.40W	==>	7880.51	40.17655640	-105.04699174
15717.00	90.00	179.87	6917.00	7874.05S	1339.17W	==>	7979.70	40.17628191	-105.04699275
15817.00	90.00	179.87	6917.00	7974.05S	1338.94W	==>	8078.88	40.17600741	-105.04699376
15917.00	90.00	179.87	6917.00	8074.05S	1338.71W	==>	8178.07	40.17573291	-105.04699477
16017.00	90.00	179.87	6917.00	8174.05S	1338.48W	==>	8277.25	40.17545841	-105.04699577
16117.00	90.00	179.87	6917.00	8274.05S	1338.25W	==>	8376.44	40.17518391	-105.04699678
16217.00	90.00	179.87	6917.00	8374.05S	1338.02W	==>	8475.63	40.17490941	-105.04699779
16317.00	90.00	179.87	6917.00	8474.05S	1337.79W	==>	8574.81	40.17463491	-105.04699880
16417.00	90.00	179.87	6917.00	8574.05S	1337.56W	==>	8674.00	40.17436041	-105.04699981
16517.00	90.00	179.87	6917.00	8674.05S	1337.33W	==>	8773.19	40.17408591	-105.04700081
16617.00	90.00	179.87	6917.00	8774.05S	1337.11W	==>	8872.37	40.17381141	-105.04700182
16717.00	90.00	179.87	6917.00	8874.05S	1336.88W	==>	8971.56	40.17353691	-105.04700283
16817.00	90.00	179.87	6917.00	8974.05S	1336.65W	==>	9070.75	40.17326241	-105.04700384
16917.00	90.00	179.87	6917.00	9074.04S	1336.42W	==>	9169.93	40.17298791	-105.04700484
17017.00	90.00	179.87	6917.00	9174.04S	1336.19W	==>	9269.12	40.17271341	-105.04700585
17117.00	90.00	179.87	6917.00	9274.04S	1335.96W	==>	9368.30	40.17243891	-105.04700686
17217.00	90.00	179.87	6917.00	9374.04S	1335.73W	==>	9467.49	40.17216441	-105.04700787
17317.00	90.00	179.87	6917.00	9474.04S	1335.50W	==>	9566.68	40.17188991	-105.04700888
17417.00	90.00	179.87	6917.00	9574.04S	1335.27W	==>	9665.86	40.17161541	-105.04700988
17517.00	90.00	179.87	6917.00	9674.04S	1335.04W	==>	9765.05	40.17134092	-105.04701089
17617.00	90.00	179.87	6917.00	9774.04S	1334.81W	==>	9864.24	40.17106642	-105.04701190
17717.00	90.00	179.87	6917.00	9874.04S	1334.58W	==>	9963.42	40.17079192	-105.04701291
17817.00	90.00	179.87	6917.00	9974.04S	1334.36W	==>	10062.61	40.17051742	-105.04701392
17917.00	90.00	179.87	6917.00	10074.04S	1334.13W	==>	10161.80	40.17024292	-105.04701492
18017.00	90.00	179.87	6917.00	10174.04S	1333.90W	==>	10260.98	40.16996842	-105.04701593
18117.00	90.00	179.87	6917.00	10274.04S	1333.67W	==>	10360.17	40.16969392	-105.04701694
18217.00	90.00	179.87	6917.00	10374.04S	1333.44W	==>	10459.36	40.16941942	-105.04701795
18317.00	90.00	179.87	6917.00	10474.04S	1333.21W	==>	10558.54	40.16914492	-105.04701895
18417.00	90.00	179.87	6917.00	10574.04S	1332.98W	==>	10657.73	40.16887042	-105.04701996
18420.80	90.00	179.87	6917.00	10577.84S	1332.97W	==>	10661.49	40.16886000	-105.04702000

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Well Design Combined Report  
Wellbore: W KNIGHT 14 (PWB)



Targets							
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
Knight 14 BH	10577.84S	1332.97W	6917.00	40.16886000	-105.04702000	1304682.04	3126589.20
Knight 14 EP	332.92N	1357.98W	6917.00	40.19881000	-105.04691000	1315592.31	3126564.19

Survey Tool Program						
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model	
590272	Planned	1517.00	1517.00	WdW Rate Gyro	Standard	
590271	Planned	18420.80	6917.00	ISCWSA MWD	Rev 4 + SAG + FLT	

Notes

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