

BAYSWATER E & P, LLC

Location	Weld County, CO	Slot	Leffler HA-26-28HN
Field	WATTENBERG	Well	W Leffler HA-26-28HN
Installation	Leffler Pad	Wellbore	W Leffler HA-26-28HN (PWB)

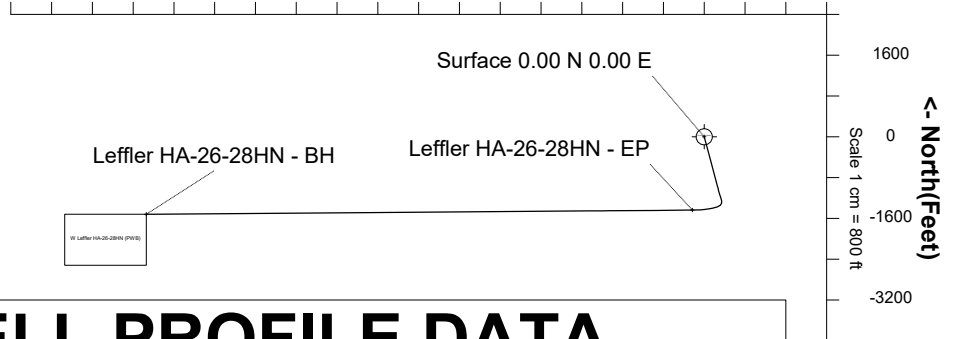
N

TRUE

Scale 1 cm = 800 ft

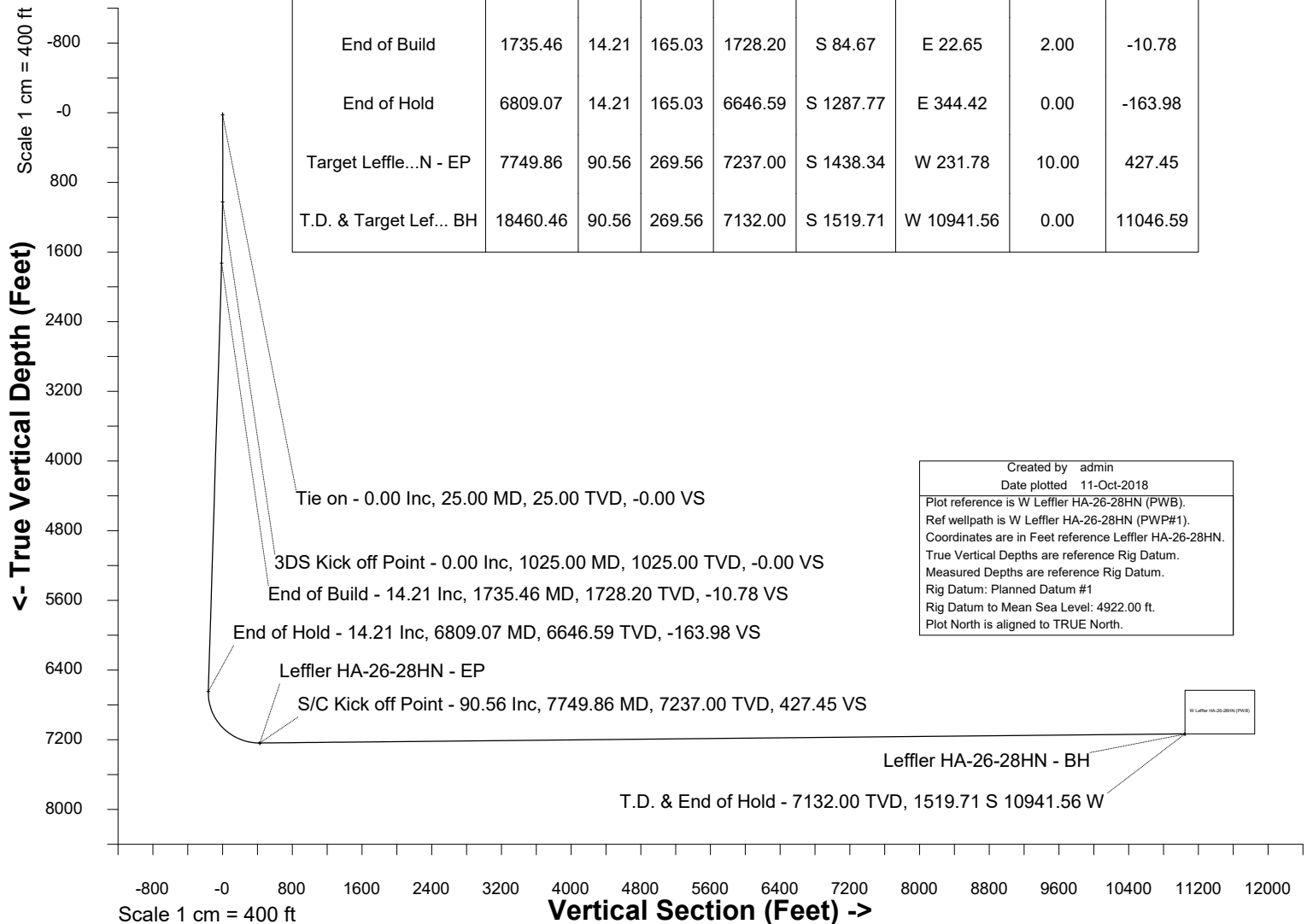
East (Feet) ->

-12800 -11200 -9600 -8000 -6400 -4800 -3200 -1600 0 1600



WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	25.00	0.00	0.00	25.00	S 0.00	W 0.00		-0.00
KOP	1025.00	0.00	165.03	1025.00	S 0.00	W 0.00	0.00	-0.00
End of Build	1735.46	14.21	165.03	1728.20	S 84.67	E 22.65	2.00	-10.78
End of Hold	6809.07	14.21	165.03	6646.59	S 1287.77	E 344.42	0.00	-163.98
Target Leffle...N - EP	7749.86	90.56	269.56	7237.00	S 1438.34	W 231.78	10.00	427.45
T.D. & Target Lef... BH	18460.46	90.56	269.56	7132.00	S 1519.71	W 10941.56	0.00	11046.59



Tie on - 0.00 Inc, 25.00 MD, 25.00 TVD, -0.00 VS

3DS Kick off Point - 0.00 Inc, 1025.00 MD, 1025.00 TVD, -0.00 VS

End of Build - 14.21 Inc, 1735.46 MD, 1728.20 TVD, -10.78 VS

End of Hold - 14.21 Inc, 6809.07 MD, 6646.59 TVD, -163.98 VS

Leffler HA-26-28HN - EP

S/C Kick off Point - 90.56 Inc, 7749.86 MD, 7237.00 TVD, 427.45 VS

Leffler HA-26-28HN - BH

T.D. & End of Hold - 7132.00 TVD, 1519.71 S 10941.56 W

Created by admin
Date plotted 11-Oct-2018
Plot reference is W Leffler HA-26-28HN (PWB).
Ref wellpath is W Leffler HA-26-28HN (PWP#1).
Coordinates are in Feet reference Leffler HA-26-28HN.
True Vertical Depths are reference Rig Datum.
Measured Depths are reference Rig Datum.
Rig Datum: Planned Datum #1
Rig Datum to Mean Sea Level: 4922.00 ft.
Plot North is aligned to TRUE North.



SYSDRILL
Well Design Combined Report
Wellbore: W Leffler HA-26-28HN (PWB)



Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
Leffler HA-26-28HN	40.55265700	-104.75342500	1445047.1805	3207458.1951	49.55S	30.57E	0.00

Declination		
Date	Source	Time
Jul-30-2018	EMM-2015 [2000.0-2020.0]	11:39

Installation Details						
Name	Installation Position (Latitude)	Installation Position (Longitude)	Northing	Easting	Coord System Name	North Alignment
Leffler Pad	40.55279300	-104.75353500	1445096.4676	3207427.2119	CO83-NF on NORTH AMERICAN DATUM 1983 datum	True

Summary Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
25.00	0.00	0.000	25.00	0.00N	0.00E		0.00	1445047.18	3207458.20
1025.00	0.00	165.030	1025.00	0.00N	0.00E	==>	0.00	1445047.18	3207458.20
1735.46	14.21	165.030	1728.20	84.67S	22.65E	2.00	-10.78	1444962.71	3207481.55
6809.07	14.21	165.030	6646.59	1287.77S	344.42E	==>	-163.98	1443762.40	3207813.43
7749.86	90.56	269.560	7237.00	1438.34S	231.78W	10.00	427.45	1443606.98	3207238.54
18460.46	90.56	269.560	7132.00	1519.71S	10941.56W	==>	11046.59	1443435.46	3196530.16

Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
0.00	0.00	0.000	0.00	0.00N	0.00E		0.00	Rig Datum
25.00	0.00	0.000	25.00	0.00N	0.00E	==>	0.00	Slot Datum
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	
1100.00	1.50	165.030	1099.99	0.95S	0.25E	2.00	-0.12	
1200.00	3.50	165.030	1199.89	5.16S	1.38E	2.00	-0.66	
1300.00	5.50	165.030	1299.58	12.74S	3.41E	2.00	-1.62	
1400.00	7.50	165.030	1398.93	23.68S	6.33E	2.00	-3.01	
1500.00	9.50	165.030	1497.83	37.95S	10.15E	2.00	-4.83	
1600.00	11.50	165.030	1596.15	55.56S	14.86E	2.00	-7.07	
1700.00	13.50	165.030	1693.77	76.47S	20.45E	2.00	-9.74	
1800.00	14.21	165.030	1790.77	99.97S	26.74E	==>	-12.73	
1900.00	14.21	165.030	1887.71	123.69S	33.08E	==>	-15.75	
2000.00	14.21	165.030	1984.65	147.40S	39.42E	==>	-18.77	
2100.00	14.21	165.030	2081.59	171.11S	45.76E	==>	-21.79	
2200.00	14.21	165.030	2178.53	194.83S	52.11E	==>	-24.81	
2300.00	14.21	165.030	2275.47	218.54S	58.45E	==>	-27.83	
2400.00	14.21	165.030	2372.41	242.25S	64.79E	==>	-30.85	
2500.00	14.21	165.030	2469.35	265.96S	71.13E	==>	-33.87	
2600.00	14.21	165.030	2566.29	289.68S	77.48E	==>	-36.89	
2700.00	14.21	165.030	2663.23	313.39S	83.82E	==>	-39.91	
2800.00	14.21	165.030	2760.17	337.10S	90.16E	==>	-42.93	
2900.00	14.21	165.030	2857.11	360.82S	96.50E	==>	-45.95	
3000.00	14.21	165.030	2954.05	384.53S	102.84E	==>	-48.97	
3100.00	14.21	165.030	3050.99	408.24S	109.19E	==>	-51.99	

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 4922.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 262.090 degrees
Bottom hole distance is 11046.59 Feet on azimuth 262.09 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Microsoft
Date Printed: 11-Oct-2018



SYSDRILL
Well Design Combined Report
Wellbore: W Leffler HA-26-28HN (PWB)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
3200.00	14.21	165.030	3147.93	431.95S	115.53E	==>	-55.00	
3300.00	14.21	165.030	3244.87	455.67S	121.87E	==>	-58.02	
3400.00	14.21	165.030	3341.81	479.38S	128.21E	==>	-61.04	
3500.00	14.21	165.030	3438.76	503.09S	134.55E	==>	-64.06	
3600.00	14.21	165.030	3535.70	526.81S	140.90E	==>	-67.08	
3700.00	14.21	165.030	3632.64	550.52S	147.24E	==>	-70.10	
3800.00	14.21	165.030	3729.58	574.23S	153.58E	==>	-73.12	
3900.00	14.21	165.030	3826.52	597.94S	159.92E	==>	-76.14	
4000.00	14.21	165.030	3923.46	621.66S	166.27E	==>	-79.16	
4100.00	14.21	165.030	4020.40	645.37S	172.61E	==>	-82.18	
4200.00	14.21	165.030	4117.34	669.08S	178.95E	==>	-85.20	
4300.00	14.21	165.030	4214.28	692.80S	185.29E	==>	-88.22	
4400.00	14.21	165.030	4311.22	716.51S	191.63E	==>	-91.24	
4500.00	14.21	165.030	4408.16	740.22S	197.98E	==>	-94.26	
4600.00	14.21	165.030	4505.10	763.93S	204.32E	==>	-97.28	
4700.00	14.21	165.030	4602.04	787.65S	210.66E	==>	-100.30	
4800.00	14.21	165.030	4698.98	811.36S	217.00E	==>	-103.32	
4900.00	14.21	165.030	4795.92	835.07S	223.34E	==>	-106.34	
5000.00	14.21	165.030	4892.86	858.79S	229.69E	==>	-109.36	
5100.00	14.21	165.030	4989.80	882.50S	236.03E	==>	-112.38	
5200.00	14.21	165.030	5086.75	906.21S	242.37E	==>	-115.40	
5300.00	14.21	165.030	5183.69	929.92S	248.71E	==>	-118.42	
5400.00	14.21	165.030	5280.63	953.64S	255.05E	==>	-121.44	
5500.00	14.21	165.030	5377.57	977.35S	261.40E	==>	-124.46	
5600.00	14.21	165.030	5474.51	1001.06S	267.74E	==>	-127.47	
5700.00	14.21	165.030	5571.45	1024.78S	274.08E	==>	-130.49	
5800.00	14.21	165.030	5668.39	1048.49S	280.42E	==>	-133.51	
5900.00	14.21	165.030	5765.33	1072.20S	286.77E	==>	-136.53	
6000.00	14.21	165.030	5862.27	1095.91S	293.11E	==>	-139.55	
6100.00	14.21	165.030	5959.21	1119.63S	299.45E	==>	-142.57	
6200.00	14.21	165.030	6056.15	1143.34S	305.79E	==>	-145.59	
6300.00	14.21	165.030	6153.09	1167.05S	312.13E	==>	-148.61	
6400.00	14.21	165.030	6250.03	1190.77S	318.48E	==>	-151.63	
6500.00	14.21	165.030	6346.97	1214.48S	324.82E	==>	-154.65	
6600.00	14.21	165.030	6443.91	1238.19S	331.16E	==>	-157.67	
6700.00	14.21	165.030	6540.85	1261.90S	337.50E	==>	-160.69	
6800.00	14.21	165.030	6637.79	1285.62S	343.84E	==>	-163.71	
6900.00	14.85	201.770	6734.79	1309.42S	342.98E	10.00	-159.58	
7000.00	20.70	228.940	6830.14	1332.98S	324.85E	10.00	-138.38	
7100.00	28.84	242.990	6920.94	1355.60S	289.95E	10.00	-100.70	
7200.00	37.84	251.020	7004.44	1376.59S	239.33E	10.00	-47.67	
7300.00	47.19	256.290	7078.09	1395.30S	174.53E	10.00	19.09	
7400.00	56.71	260.160	7139.67	1411.17S	97.52E	10.00	97.55	
7500.00	66.34	263.260	7187.30	1423.73S	10.63E	10.00	185.33	
7600.00	76.02	265.930	7219.53	1432.57S	83.48W	10.00	279.77	
7700.00	85.72	268.380	7235.38	1437.45S	181.97W	10.00	377.99	
7800.00	90.56	269.560	7236.51	1438.72S	281.91W	==>	477.16	
7900.00	90.56	269.560	7235.53	1439.48S	381.91W	==>	576.31	
8000.00	90.56	269.560	7234.55	1440.24S	481.90W	==>	675.45	
8100.00	90.56	269.560	7233.57	1441.00S	581.89W	==>	774.60	
8200.00	90.56	269.560	7232.59	1441.76S	681.88W	==>	873.75	
8300.00	90.56	269.560	7231.61	1442.52S	781.88W	==>	972.89	
8400.00	90.56	269.560	7230.63	1443.28S	881.87W	==>	1072.04	
8500.00	90.56	269.560	7229.65	1444.04S	981.86W	==>	1171.18	
8600.00	90.56	269.560	7228.67	1444.80S	1081.85W	==>	1270.33	
8700.00	90.56	269.560	7227.69	1445.56S	1181.85W	==>	1369.48	
8800.00	90.56	269.560	7226.71	1446.32S	1281.84W	==>	1468.62	
8900.00	90.56	269.560	7225.72	1447.08S	1381.83W	==>	1567.77	
9000.00	90.56	269.560	7224.74	1447.84S	1481.82W	==>	1666.92	

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig (Planned Datum #1 4922.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 262.090 degrees
Bottom hole distance is 11046.59 Feet on azimuth 262.09 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Microsoft
Date Printed: 11-Oct-2018



SYSDRILL
Well Design Combined Report
Wellbore: W Leffler HA-26-28HN (PWB)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
9100.00	90.56	269.560	7223.76	1448.60S	1581.81W	==>	1766.06	
9200.00	90.56	269.560	7222.78	1449.36S	1681.81W	==>	1865.21	
9300.00	90.56	269.560	7221.80	1450.12S	1781.80W	==>	1964.35	
9400.00	90.56	269.560	7220.82	1450.88S	1881.79W	==>	2063.50	
9500.00	90.56	269.560	7219.84	1451.64S	1981.78W	==>	2162.65	
9600.00	90.56	269.560	7218.86	1452.40S	2081.78W	==>	2261.79	
9700.00	90.56	269.560	7217.88	1453.16S	2181.77W	==>	2360.94	
9800.00	90.56	269.560	7216.90	1453.91S	2281.76W	==>	2460.08	
9900.00	90.56	269.560	7215.92	1454.67S	2381.75W	==>	2559.23	
10000.00	90.56	269.560	7214.94	1455.43S	2481.75W	==>	2658.38	
10100.00	90.56	269.560	7213.96	1456.19S	2581.74W	==>	2757.52	
10200.00	90.56	269.560	7212.98	1456.95S	2681.73W	==>	2856.67	
10300.00	90.56	269.560	7212.00	1457.71S	2781.72W	==>	2955.81	
10400.00	90.56	269.560	7211.02	1458.47S	2881.71W	==>	3054.96	
10500.00	90.56	269.560	7210.04	1459.23S	2981.71W	==>	3154.11	
10600.00	90.56	269.560	7209.06	1459.99S	3081.70W	==>	3253.25	
10700.00	90.56	269.560	7208.08	1460.75S	3181.69W	==>	3352.40	
10800.00	90.56	269.560	7207.10	1461.51S	3281.68W	==>	3451.54	
10900.00	90.56	269.560	7206.12	1462.27S	3381.68W	==>	3550.69	
11000.00	90.56	269.560	7205.14	1463.03S	3481.67W	==>	3649.84	
11100.00	90.56	269.560	7204.16	1463.79S	3581.66W	==>	3748.98	
11200.00	90.56	269.560	7203.18	1464.55S	3681.65W	==>	3848.13	
11300.00	90.56	269.560	7202.20	1465.31S	3781.65W	==>	3947.27	
11400.00	90.56	269.560	7201.22	1466.07S	3881.64W	==>	4046.42	
11500.00	90.56	269.560	7200.24	1466.83S	3981.63W	==>	4145.57	
11600.00	90.56	269.560	7199.26	1467.59S	4081.62W	==>	4244.71	
11700.00	90.56	269.560	7198.28	1468.35S	4181.61W	==>	4343.86	
11800.00	90.56	269.560	7197.29	1469.11S	4281.61W	==>	4443.00	
11900.00	90.56	269.560	7196.31	1469.87S	4381.60W	==>	4542.15	
12000.00	90.56	269.560	7195.33	1470.63S	4481.59W	==>	4641.30	
12100.00	90.56	269.560	7194.35	1471.39S	4581.58W	==>	4740.44	
12200.00	90.56	269.560	7193.37	1472.15S	4681.58W	==>	4839.59	
12300.00	90.56	269.560	7192.39	1472.91S	4781.57W	==>	4938.74	
12400.00	90.56	269.560	7191.41	1473.67S	4881.56W	==>	5037.88	
12500.00	90.56	269.560	7190.43	1474.43S	4981.55W	==>	5137.03	
12600.00	90.56	269.560	7189.45	1475.19S	5081.55W	==>	5236.17	
12700.00	90.56	269.560	7188.47	1475.95S	5181.54W	==>	5335.32	
12800.00	90.56	269.560	7187.49	1476.71S	5281.53W	==>	5434.47	
12900.00	90.56	269.560	7186.51	1477.46S	5381.52W	==>	5533.61	
13000.00	90.56	269.560	7185.53	1478.22S	5481.51W	==>	5632.76	
13100.00	90.56	269.560	7184.55	1478.98S	5581.51W	==>	5731.90	
13200.00	90.56	269.560	7183.57	1479.74S	5681.50W	==>	5831.05	
13300.00	90.56	269.560	7182.59	1480.50S	5781.49W	==>	5930.20	
13400.00	90.56	269.560	7181.61	1481.26S	5881.48W	==>	6029.34	
13500.00	90.56	269.560	7180.63	1482.02S	5981.48W	==>	6128.49	
13600.00	90.56	269.560	7179.65	1482.78S	6081.47W	==>	6227.63	
13700.00	90.56	269.560	7178.67	1483.54S	6181.46W	==>	6326.78	
13800.00	90.56	269.560	7177.69	1484.30S	6281.45W	==>	6425.93	
13900.00	90.56	269.560	7176.71	1485.06S	6381.45W	==>	6525.07	
14000.00	90.56	269.560	7175.73	1485.82S	6481.44W	==>	6624.22	
14100.00	90.56	269.560	7174.75	1486.58S	6581.43W	==>	6723.36	
14200.00	90.56	269.560	7173.77	1487.34S	6681.42W	==>	6822.51	
14300.00	90.56	269.560	7172.79	1488.10S	6781.41W	==>	6921.66	
14400.00	90.56	269.560	7171.81	1488.86S	6881.41W	==>	7020.80	
14500.00	90.56	269.560	7170.83	1489.62S	6981.40W	==>	7119.95	
14600.00	90.56	269.560	7169.85	1490.38S	7081.39W	==>	7219.09	
14700.00	90.56	269.560	7168.87	1491.14S	7181.38W	==>	7318.24	
14800.00	90.56	269.560	7167.88	1491.90S	7281.38W	==>	7417.39	
14900.00	90.56	269.560	7166.90	1492.66S	7381.37W	==>	7516.53	

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Vertical Section is from 0.00N 0.00E on azimuth 262.090 degrees
Bottom hole distance is 11046.59 Feet on azimuth 262.09 degrees from Wellhead
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SYS DRILL
Well Design Combined Report
Wellbore: W Leffler HA-26-28HN (PWB)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
15000.00	90.56	269.560	7165.92	1493.42S	7481.36W	==>	7615.68	
15100.00	90.56	269.560	7164.94	1494.18S	7581.35W	==>	7714.83	
15200.00	90.56	269.560	7163.96	1494.94S	7681.35W	==>	7813.97	
15300.00	90.56	269.560	7162.98	1495.70S	7781.34W	==>	7913.12	
15400.00	90.56	269.560	7162.00	1496.46S	7881.33W	==>	8012.26	
15500.00	90.56	269.560	7161.02	1497.22S	7981.32W	==>	8111.41	
15600.00	90.56	269.560	7160.04	1497.98S	8081.31W	==>	8210.56	
15700.00	90.56	269.560	7159.06	1498.74S	8181.31W	==>	8309.70	
15800.00	90.56	269.560	7158.08	1499.50S	8281.30W	==>	8408.85	
15900.00	90.56	269.560	7157.10	1500.26S	8381.29W	==>	8507.99	
16000.00	90.56	269.560	7156.12	1501.01S	8481.28W	==>	8607.14	
16100.00	90.56	269.560	7155.14	1501.77S	8581.28W	==>	8706.29	
16200.00	90.56	269.560	7154.16	1502.53S	8681.27W	==>	8805.43	
16300.00	90.56	269.560	7153.18	1503.29S	8781.26W	==>	8904.58	
16400.00	90.56	269.560	7152.20	1504.05S	8881.25W	==>	9003.72	
16500.00	90.56	269.560	7151.22	1504.81S	8981.25W	==>	9102.87	
16600.00	90.56	269.560	7150.24	1505.57S	9081.24W	==>	9202.02	
16700.00	90.56	269.560	7149.26	1506.33S	9181.23W	==>	9301.16	
16800.00	90.56	269.560	7148.28	1507.09S	9281.22W	==>	9400.31	
16900.00	90.56	269.560	7147.30	1507.85S	9381.21W	==>	9499.45	
17000.00	90.56	269.560	7146.32	1508.61S	9481.21W	==>	9598.60	
17100.00	90.56	269.560	7145.34	1509.37S	9581.20W	==>	9697.75	
17200.00	90.56	269.560	7144.36	1510.13S	9681.19W	==>	9796.89	
17300.00	90.56	269.560	7143.38	1510.89S	9781.18W	==>	9896.04	
17400.00	90.56	269.560	7142.40	1511.65S	9881.18W	==>	9995.18	
17500.00	90.56	269.560	7141.42	1512.41S	9981.17W	==>	10094.33	
17600.00	90.56	269.560	7140.44	1513.17S	10081.16W	==>	10193.48	
17700.00	90.56	269.560	7139.46	1513.93S	10181.15W	==>	10292.62	
17800.00	90.56	269.560	7138.47	1514.69S	10281.15W	==>	10391.77	
17900.00	90.56	269.560	7137.49	1515.45S	10381.14W	==>	10490.91	
18000.00	90.56	269.560	7136.51	1516.21S	10481.13W	==>	10590.06	
18100.00	90.56	269.560	7135.53	1516.97S	10581.12W	==>	10689.21	
18200.00	90.56	269.560	7134.55	1517.73S	10681.11W	==>	10788.35	
18300.00	90.56	269.560	7133.57	1518.49S	10781.11W	==>	10887.50	
18400.00	90.56	269.560	7132.59	1519.25S	10881.10W	==>	10986.65	
18460.46	90.56	269.560	7132.00	1519.71S	10941.56W	==>	11046.59	

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 4922.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 262.090 degrees
Bottom hole distance is 11046.59 Feet on azimuth 262.09 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Microsoft
Date Printed: 11-Oct-2018



SYS DRILL
Well Design Combined Report
Wellbore: W Leffler HA-26-28HN (PWB)



Targets							
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
Leffler HA-26-28HN - BH	1519.71S	10941.56W	7132.00	40.54847900	-104.79279600	1443435.46	3196530.16
Leffler HA-26-28HN - EP	1438.34S	231.78W	7237.00	40.54870900	-104.75425900	1443606.98	3207238.54

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
676423	Planned	1500.00	1497.83	WdW Rate Gyro	Standard
676422	Planned	18460.46	7132.00	ISCWSA MWD	Rev 4 + SAG + FLT

Notes



SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: W Leffler HA-26-28HN (PWB)



Ellipse separations are reported ONLY if BOTH wells have uncertainty data
Only Depth and Magnetic Reference Field error terms are correlated across tie points
Scan limit is calculated on CENTRE to CENTRE distance
Summary data uses Closest Approach clearance calculation for all minima
Hole size/Casings ARE included
Hole size/Casings are NOT subtracted from Centre-Centre distance
Confidence limit of 95.00% / 2.80 SD.

Wellbore		
Name	Created	Last Revised
W Leffler HA-26-28HN (PWB)	Jul-30-2018	Oct-11-2018

Well		
Name	Government ID	Last Revised
W Leffler HA-26-28HN		Jul-30-2018

Slot						
Name	Latitude	Longitude	Grid Northing	Grid Easting	North	East
Leffler HA-26-28HN	40.55265700	-104.75342500	1445047.1805	3207458.1951	49.55S	30.57E

Installation						
Name	Installation Position (Latitude)	Installation Position (Longitude)	Easting	Northing	Coord System Name	North Alignment
Leffler Pad	40.55279300	-104.75353500	3207427.2119	1445096.4676	CO83-NF on NORTH AMERICAN DATUM 1983 datum	True

Clearance Summary							
Offset WellName	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
W Thornton 21K-443	259.40	17424.11	17424.11	153.59	17380.64	2.28	17298.62
W Leffler 27C	367.21	9034.14	9034.14	290.44	9034.14	4.78	9034.14
W Leffler 32-27	508.37	9974.05	9974.05	397.19	10000.00	4.50	10064.37
W Leffler 42-27	562.93	8325.52	8325.52	508.81	8358.33	9.56	8538.78
W Leffler 41-27	727.67	1700.00	8308.68	724.39	1780.25	19.90	8670.01
W Leffler 1-27	1032.83	9696.88	9696.88	932.10	9719.88	10.12	9834.71
W Leffler 31-27	1142.71	9978.39	9978.39	1032.10	10000.00	10.18	10129.99

