

BAYSWATER E & P, LLC

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

N

TRUE

Scale 1 cm = 800 ft

East (Feet) ->

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

Leffler EA-26-28HN - BH

Surface 0.00 N 0.00 E

Leffler EA-26-28HN - EP

W Leffler EA-26-28HN (PWB)

1600

Scale 1 cm = 800 ft

<- North(Feet)

0

-1600

-3200

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	159.85	1025.00	S 0.00	W 0.00	0.00	-0.00
End of Build	1392.13	7.34	159.85	1391.13	S 22.05	E 8.09	2.00	-6.44
End of Hold	6703.23	7.34	159.85	6658.67	S 659.29	E 241.89	0.00	-192.61
Target Leffle...N - EP	7546.29	90.27	269.56	7198.00	S 729.01	W 280.40	11.00	333.40
T.D. & Target Lef... BH	18225.05	90.27	269.56	7148.00	S 810.36	W 10958.73	0.00	10988.65

Jul-30-2018

EMM-2015 (2000.0-2020.0) Dip: 66.99 deg Field: 52394.0 nT

Lat: N40 33 10.0548 Long: W104 45 12.7260 Elev: 0.00 ft

Magnetic North is 6.06 deg East of TRUE North

To correct azimuth from Magnetic to TRUE add 6.06 deg

Scale 1 cm = 400 ft

<- True Vertical Depth (Feet)

-800

-0

800

1600

2400

3200

4000

4800

5600

6400

7200

8000

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 - 7.34 Inc, 1392.13 MD, 1391.13 TVD, -6.44 VS

End of Hold - 7.34 Inc, 6703.23 MD, 6658.67 TVD, -192.61 VS

Leffler EA-26-28HN - EP

S/C Kick off Point - 90.27 Inc, 7546.29 MD, 7198.00 TVD, 333.40 VS

Created by admin

Date plotted 11-Oct-2018

Plot reference is W Leffler EA-26-28HN (PWB).

Ref wellpath is W Leffler EA-26-28HN (PWP#1).

Coordinates are in Feet reference Leffler EA-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: 4923.00 ft.

Plot North is aligned to TRUE North.

W Leffler EA-26-28HN (PWB)

Leffler EA-26-28HN - BH

T.D. & End of Hold - 7148.00 TVD, 810.36 S 10958.73 W

-800 -0 800 1600 2400 3200 4000 4800 5600 6400 7200 8000 8800 9600 10400 11200 12000

Scale 1 cm = 400 ft

Vertical Section (Feet) ->

Azimuth 265.77 with reference 0.00 N, 0.00 E from Leffler EA-26-28HN



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



Wellhead Details

Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
Leffler EA-26-28HN	40.55279600	-104.75326500	1445098.1922	3207502.2284	1.09N	75.03E	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	1445098.19	3207502.23
1025.00	0.00	159.850	1025.00	0.00N	0.00E	==>	0.00	1445098.19	3207502.23
1392.13	7.34	159.850	1391.13	22.05S	8.09E	2.00	-6.44	1445076.21	3207510.51
6703.23	7.34	159.850	6658.67	659.29S	241.89E	==>	-192.61	1444440.98	3207749.65
7546.29	90.27	269.560	7198.00	729.01S	280.40W	11.00	333.40	1444366.87	3207227.99
18225.05	90.27	269.560	7148.00	810.36S	10958.73W	==>	10988.65	1444195.60	3196551.06

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	159.850	1099.99	0.92S	0.34E	2.00	-0.27	
1200.00	3.50	159.850	1199.89	5.02S	1.84E	2.00	-1.47	
1300.00	5.50	159.850	1299.58	12.38S	4.54E	2.00	-3.62	
1400.00	7.34	159.850	1398.93	23.00S	8.44E	==>	-6.72	
1500.00	7.34	159.850	1498.11	35.00S	12.84E	==>	-10.22	
1600.00	7.34	159.850	1597.29	47.00S	17.24E	==>	-13.73	
1700.00	7.34	159.850	1696.47	58.99S	21.64E	==>	-17.24	
1800.00	7.34	159.850	1795.65	70.99S	26.05E	==>	-20.74	
1900.00	7.34	159.850	1894.83	82.99S	30.45E	==>	-24.25	
2000.00	7.34	159.850	1994.01	94.99S	34.85E	==>	-27.75	
2100.00	7.34	159.850	2093.19	106.99S	39.25E	==>	-31.26	
2200.00	7.34	159.850	2192.37	118.98S	43.65E	==>	-34.76	
2300.00	7.34	159.850	2291.55	130.98S	48.06E	==>	-38.27	
2400.00	7.34	159.850	2390.73	142.98S	52.46E	==>	-41.77	
2500.00	7.34	159.850	2489.91	154.98S	56.86E	==>	-45.28	
2600.00	7.34	159.850	2589.09	166.98S	61.26E	==>	-48.78	
2700.00	7.34	159.850	2688.27	178.98S	65.67E	==>	-52.29	
2800.00	7.34	159.850	2787.45	190.97S	70.07E	==>	-55.79	
2900.00	7.34	159.850	2886.63	202.97S	74.47E	==>	-59.30	
3000.00	7.34	159.850	2985.81	214.97S	78.87E	==>	-62.80	
3100.00	7.34	159.850	3084.99	226.97S	83.27E	==>	-66.31	

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 4923.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 265.770 degrees
Bottom hole distance is 10988.65 Feet on azimuth 265.77 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 EA-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	7.34	159.850	3184.17	238.97S	87.68E	==>	-69.81	
3300.00	7.34	159.850	3283.35	250.96S	92.08E	==>	-73.32	
3400.00	7.34	159.850	3382.53	262.96S	96.48E	==>	-76.82	
3500.00	7.34	159.850	3481.71	274.96S	100.88E	==>	-80.33	
3600.00	7.34	159.850	3580.89	286.96S	105.28E	==>	-83.84	
3700.00	7.34	159.850	3680.07	298.96S	109.69E	==>	-87.34	
3800.00	7.34	159.850	3779.25	310.95S	114.09E	==>	-90.85	
3900.00	7.34	159.850	3878.43	322.95S	118.49E	==>	-94.35	
4000.00	7.34	159.850	3977.61	334.95S	122.89E	==>	-97.86	
4100.00	7.34	159.850	4076.79	346.95S	127.29E	==>	-101.36	
4200.00	7.34	159.850	4175.97	358.95S	131.70E	==>	-104.87	
4300.00	7.34	159.850	4275.15	370.95S	136.10E	==>	-108.37	
4400.00	7.34	159.850	4374.33	382.94S	140.50E	==>	-111.88	
4500.00	7.34	159.850	4473.51	394.94S	144.90E	==>	-115.38	
4600.00	7.34	159.850	4572.69	406.94S	149.30E	==>	-118.89	
4700.00	7.34	159.850	4671.87	418.94S	153.71E	==>	-122.39	
4800.00	7.34	159.850	4771.05	430.94S	158.11E	==>	-125.90	
4900.00	7.34	159.850	4870.23	442.93S	162.51E	==>	-129.40	
5000.00	7.34	159.850	4969.41	454.93S	166.91E	==>	-132.91	
5100.00	7.34	159.850	5068.59	466.93S	171.32E	==>	-136.41	
5200.00	7.34	159.850	5167.77	478.93S	175.72E	==>	-139.92	
5300.00	7.34	159.850	5266.95	490.93S	180.12E	==>	-143.43	
5400.00	7.34	159.850	5366.13	502.93S	184.52E	==>	-146.93	
5500.00	7.34	159.850	5465.31	514.92S	188.92E	==>	-150.44	
5600.00	7.34	159.850	5564.49	526.92S	193.33E	==>	-153.94	
5700.00	7.34	159.850	5663.67	538.92S	197.73E	==>	-157.45	
5800.00	7.34	159.850	5762.85	550.92S	202.13E	==>	-160.95	
5900.00	7.34	159.850	5862.03	562.92S	206.53E	==>	-164.46	
6000.00	7.34	159.850	5961.21	574.91S	210.93E	==>	-167.96	
6100.00	7.34	159.850	6060.39	586.91S	215.34E	==>	-171.47	
6200.00	7.34	159.850	6159.57	598.91S	219.74E	==>	-174.97	
6300.00	7.34	159.850	6258.75	610.91S	224.14E	==>	-178.48	
6400.00	7.34	159.850	6357.93	622.91S	228.54E	==>	-181.98	
6500.00	7.34	159.850	6457.11	634.91S	232.94E	==>	-185.49	
6600.00	7.34	159.850	6556.29	646.90S	237.35E	==>	-188.99	
6700.00	7.34	159.850	6655.47	658.90S	241.75E	==>	-192.50	
6800.00	10.70	229.560	6754.48	670.95S	237.17E	11.00	-187.05	
6900.00	20.34	250.430	6850.79	682.83S	213.66E	11.00	-162.72	
7000.00	30.89	257.830	6940.86	694.10S	172.06E	11.00	-120.41	
7100.00	41.65	261.690	7021.37	704.35S	113.91E	11.00	-61.66	
7200.00	52.50	264.190	7089.38	713.19S	41.34E	11.00	11.37	
7300.00	63.39	266.050	7142.37	720.31S	42.98W	11.00	95.98	
7400.00	74.30	267.580	7178.42	725.45S	135.95W	11.00	189.08	
7500.00	85.21	268.950	7196.18	728.41S	234.16W	11.00	287.24	
7600.00	90.27	269.560	7197.75	729.42S	334.11W	==>	386.99	
7700.00	90.27	269.560	7197.28	730.18S	434.10W	==>	486.77	
7800.00	90.27	269.560	7196.81	730.94S	534.10W	==>	586.55	
7900.00	90.27	269.560	7196.34	731.70S	634.09W	==>	686.33	
8000.00	90.27	269.560	7195.88	732.46S	734.09W	==>	786.11	
8100.00	90.27	269.560	7195.41	733.22S	834.09W	==>	885.89	
8200.00	90.27	269.560	7194.94	733.99S	934.08W	==>	985.67	
8300.00	90.27	269.560	7194.47	734.75S	1034.08W	==>	1085.45	
8400.00	90.27	269.560	7194.00	735.51S	1134.07W	==>	1185.23	
8500.00	90.27	269.560	7193.53	736.27S	1234.07W	==>	1285.01	
8600.00	90.27	269.560	7193.07	737.03S	1334.07W	==>	1384.79	
8700.00	90.27	269.560	7192.60	737.80S	1434.06W	==>	1484.57	
8800.00	90.27	269.560	7192.13	738.56S	1534.06W	==>	1584.35	
8900.00	90.27	269.560	7191.66	739.32S	1634.05W	==>	1684.13	
9000.00	90.27	269.560	7191.19	740.08S	1734.05W	==>	1783.91	

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig (Planned Datum #1 4923.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 265.770 degrees
Bottom hole distance is 10988.65 Feet on azimuth 265.77 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 EA-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	90.27	269.560	7190.73	740.84S	1834.05W	==>	1883.69	
9200.00	90.27	269.560	7190.26	741.61S	1934.04W	==>	1983.47	
9300.00	90.27	269.560	7189.79	742.37S	2034.04W	==>	2083.25	
9400.00	90.27	269.560	7189.32	743.13S	2134.03W	==>	2183.03	
9500.00	90.27	269.560	7188.85	743.89S	2234.03W	==>	2282.81	
9600.00	90.27	269.560	7188.38	744.65S	2334.03W	==>	2382.59	
9700.00	90.27	269.560	7187.92	745.41S	2434.02W	==>	2482.37	
9800.00	90.27	269.560	7187.45	746.18S	2534.02W	==>	2582.14	
9900.00	90.27	269.560	7186.98	746.94S	2634.01W	==>	2681.92	
10000.00	90.27	269.560	7186.51	747.70S	2734.01W	==>	2781.70	
10100.00	90.27	269.560	7186.04	748.46S	2834.01W	==>	2881.48	
10200.00	90.27	269.560	7185.57	749.22S	2934.00W	==>	2981.26	
10300.00	90.27	269.560	7185.11	749.99S	3034.00W	==>	3081.04	
10400.00	90.27	269.560	7184.64	750.75S	3133.99W	==>	3180.82	
10500.00	90.27	269.560	7184.17	751.51S	3233.99W	==>	3280.60	
10600.00	90.27	269.560	7183.70	752.27S	3333.99W	==>	3380.38	
10700.00	90.27	269.560	7183.23	753.03S	3433.98W	==>	3480.16	
10800.00	90.27	269.560	7182.77	753.80S	3533.98W	==>	3579.94	
10900.00	90.27	269.560	7182.30	754.56S	3633.97W	==>	3679.72	
11000.00	90.27	269.560	7181.83	755.32S	3733.97W	==>	3779.50	
11100.00	90.27	269.560	7181.36	756.08S	3833.97W	==>	3879.28	
11200.00	90.27	269.560	7180.89	756.84S	3933.96W	==>	3979.06	
11300.00	90.27	269.560	7180.42	757.60S	4033.96W	==>	4078.84	
11400.00	90.27	269.560	7179.96	758.37S	4133.95W	==>	4178.62	
11500.00	90.27	269.560	7179.49	759.13S	4233.95W	==>	4278.40	
11600.00	90.27	269.560	7179.02	759.89S	4333.95W	==>	4378.18	
11700.00	90.27	269.560	7178.55	760.65S	4433.94W	==>	4477.96	
11800.00	90.27	269.560	7178.08	761.41S	4533.94W	==>	4577.74	
11900.00	90.27	269.560	7177.62	762.18S	4633.93W	==>	4677.52	
12000.00	90.27	269.560	7177.15	762.94S	4733.93W	==>	4777.30	
12100.00	90.27	269.560	7176.68	763.70S	4833.93W	==>	4877.08	
12200.00	90.27	269.560	7176.21	764.46S	4933.92W	==>	4976.86	
12300.00	90.27	269.560	7175.74	765.22S	5033.92W	==>	5076.64	
12400.00	90.27	269.560	7175.27	765.99S	5133.91W	==>	5176.42	
12500.00	90.27	269.560	7174.81	766.75S	5233.91W	==>	5276.20	
12600.00	90.27	269.560	7174.34	767.51S	5333.91W	==>	5375.98	
12700.00	90.27	269.560	7173.87	768.27S	5433.90W	==>	5475.76	
12800.00	90.27	269.560	7173.40	769.03S	5533.90W	==>	5575.54	
12900.00	90.27	269.560	7172.93	769.79S	5633.89W	==>	5675.32	
13000.00	90.27	269.560	7172.46	770.56S	5733.89W	==>	5775.10	
13100.00	90.27	269.560	7172.00	771.32S	5833.89W	==>	5874.88	
13200.00	90.27	269.560	7171.53	772.08S	5933.88W	==>	5974.66	
13300.00	90.27	269.560	7171.06	772.84S	6033.88W	==>	6074.44	
13400.00	90.27	269.560	7170.59	773.60S	6133.87W	==>	6174.22	
13500.00	90.27	269.560	7170.12	774.37S	6233.87W	==>	6274.00	
13600.00	90.27	269.560	7169.66	775.13S	6333.87W	==>	6373.78	
13700.00	90.27	269.560	7169.19	775.89S	6433.86W	==>	6473.56	
13800.00	90.27	269.560	7168.72	776.65S	6533.86W	==>	6573.34	
13900.00	90.27	269.560	7168.25	777.41S	6633.85W	==>	6673.12	
14000.00	90.27	269.560	7167.78	778.18S	6733.85W	==>	6772.90	
14100.00	90.27	269.560	7167.31	778.94S	6833.85W	==>	6872.68	
14200.00	90.27	269.560	7166.85	779.70S	6933.84W	==>	6972.46	
14300.00	90.27	269.560	7166.38	780.46S	7033.84W	==>	7072.24	
14400.00	90.27	269.560	7165.91	781.22S	7133.83W	==>	7172.02	
14500.00	90.27	269.560	7165.44	781.98S	7233.83W	==>	7271.80	
14600.00	90.27	269.560	7164.97	782.75S	7333.83W	==>	7371.58	
14700.00	90.27	269.560	7164.50	783.51S	7433.82W	==>	7471.36	
14800.00	90.27	269.560	7164.04	784.27S	7533.82W	==>	7571.14	
14900.00	90.27	269.560	7163.57	785.03S	7633.81W	==>	7670.92	

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 4923.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 265.770 degrees
Bottom hole distance is 10988.65 Feet on azimuth 265.77 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 EA-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	90.27	269.560	7163.10	785.79S	7733.81W	==>	7770.70	
15100.00	90.27	269.560	7162.63	786.56S	7833.81W	==>	7870.48	
15200.00	90.27	269.560	7162.16	787.32S	7933.80W	==>	7970.26	
15300.00	90.27	269.560	7161.70	788.08S	8033.80W	==>	8070.04	
15400.00	90.27	269.560	7161.23	788.84S	8133.79W	==>	8169.82	
15500.00	90.27	269.560	7160.76	789.60S	8233.79W	==>	8269.60	
15600.00	90.27	269.560	7160.29	790.37S	8333.79W	==>	8369.38	
15700.00	90.27	269.560	7159.82	791.13S	8433.78W	==>	8469.16	
15800.00	90.27	269.560	7159.35	791.89S	8533.78W	==>	8568.94	
15900.00	90.27	269.560	7158.89	792.65S	8633.77W	==>	8668.72	
16000.00	90.27	269.560	7158.42	793.41S	8733.77W	==>	8768.50	
16100.00	90.27	269.560	7157.95	794.17S	8833.77W	==>	8868.28	
16200.00	90.27	269.560	7157.48	794.94S	8933.76W	==>	8968.06	
16300.00	90.27	269.560	7157.01	795.70S	9033.76W	==>	9067.84	
16400.00	90.27	269.560	7156.55	796.46S	9133.75W	==>	9167.62	
16500.00	90.27	269.560	7156.08	797.22S	9233.75W	==>	9267.40	
16600.00	90.27	269.560	7155.61	797.98S	9333.75W	==>	9367.18	
16700.00	90.27	269.560	7155.14	798.75S	9433.74W	==>	9466.96	
16800.00	90.27	269.560	7154.67	799.51S	9533.74W	==>	9566.74	
16900.00	90.27	269.560	7154.20	800.27S	9633.73W	==>	9666.52	
17000.00	90.27	269.560	7153.74	801.03S	9733.73W	==>	9766.30	
17100.00	90.27	269.560	7153.27	801.79S	9833.73W	==>	9866.08	
17200.00	90.27	269.560	7152.80	802.56S	9933.72W	==>	9965.86	
17300.00	90.27	269.560	7152.33	803.32S	10033.72W	==>	10065.64	
17400.00	90.27	269.560	7151.86	804.08S	10133.71W	==>	10165.42	
17500.00	90.27	269.560	7151.39	804.84S	10233.71W	==>	10265.20	
17600.00	90.27	269.560	7150.93	805.60S	10333.71W	==>	10364.98	
17700.00	90.27	269.560	7150.46	806.36S	10433.70W	==>	10464.76	
17800.00	90.27	269.560	7149.99	807.13S	10533.70W	==>	10564.54	
17900.00	90.27	269.560	7149.52	807.89S	10633.69W	==>	10664.32	
18000.00	90.27	269.560	7149.05	808.65S	10733.69W	==>	10764.10	
18100.00	90.27	269.560	7148.59	809.41S	10833.69W	==>	10863.88	
18200.00	90.27	269.560	7148.12	810.17S	10933.68W	==>	10963.66	
18225.05	90.27	269.560	7148.00	810.36S	10958.73W	==>	10988.65	

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 4923.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 265.770 degrees
Bottom hole distance is 10988.65 Feet on azimuth 265.77 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 EA-26-28HN (PWB)



Targets							
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
Leffler EA-26-28HN - BH	810.36S	10958.73W	7148.00	40.55056500	-104.79269900	1444195.60	3196551.06
Leffler EA-26-28HN - EP	729.01S	280.40W	7198.00	40.55079500	-104.75427400	1444366.87	3207227.99

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
676445	Planned	1500.00	1498.11	WdW Rate Gyro	Standard
676444	Planned	18225.05	7148.00	ISCWSA MWD	Rev 4 + SAG + FLT

Notes



SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: W Leffler EA-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 EA-26-28HN (PWB)	Jul-30-2018	Oct-10-2018

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

Slot						
Name	Latitude	Longitude	Grid Northing	Grid Easting	North	East
Leffler EA-26-28HN	40.55279600	-104.75326500	1445098.1922	3207502.2284	1.09N	75.03E

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	250.19	17204.67	17204.67	151.63	17167.39	2.38	17085.37
W Leffler 1-27	272.89	9494.85	9494.85	173.45	9494.85	2.74	9500.00
W Leffler 41-27	379.02	8106.64	8106.64	327.20	8112.27	7.29	8145.08
W Leffler 31-27	382.27	9776.11	9776.11	272.91	9785.50	3.49	9785.50
W Leffler 27C	392.74	8832.15	8832.15	316.58	8850.46	5.08	8899.67
W Leffler 32-27	1268.46	9771.70	9771.70	1158.11	9818.31	10.91	10097.18
W Leffler 42-27	1321.79	8121.37	8121.37	1268.79	8161.48	20.52	8768.44





