

# Petro Operating Company

Location Weld County, CO Slot BEF West 6  
Field Wattenberg Well BEF West 6  
Installation Brighton East Farm Pad Wellbore BEF West 6 (PWB)

Created by sean.dolfinger  
Date plotted 21-Jul-2020  
Plot reference is BEF West 6 (PWB).  
Ref wellpath is BEF West 6 (PWP#1).  
Coordinates are in Feet reference BEF West 6.  
True Vertical Depths are reference Rig Datum.  
Measured Depths are reference Rig Datum.  
Rig Datum: Planned Datum #1  
Rig Datum to Mean Sea Level: 5075.00 ft.  
Plot North is aligned to GRID North.

Scale 1 cm = 400 ft

East (Feet) ->

-5600 -4800 -4000 -3200 -2400 -1600 -800 -0 800 1600

<- North(Feet)

Scale 1 cm = 400 ft

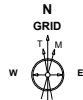
Tie on - 0.00 Inc, 27.00 MD, 27.00 TVD, -0.00 VS

Surface 0.00 N 0.00 E

BEF West 6 - BHL

BEF Section 2

BEF West 6 - LP



Oct-6-2017

ELM-2015 Dip: 66.39 deg Field: 52108.9 nT  
Lat: N39 59 33.9000 Long: W104 44 4.8840 Elev: 5049.00 ft  
Magnetic North is 8.22 deg East of True North  
GRID North is 0.49 deg East of True North  
To correct azimuth from True to GRID subtract 0.49 deg  
To correct azimuth from Magnetic to GRID add 7.72 deg

3DS Kick off Point - 0.00 Inc, 1527.00 MD, 1527.00 TVD, -0.00 VS

End of Build - 15.74 Inc, 2314.03 MD, 2304.17 TVD, 8.68 VS

## WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	27.00	0.00	0.00	27.00	S 0.00	W 0.00		-0.00
KOP	1527.00	0.00	165.78	1527.00	S 0.00	W 0.00	0.00	-0.00
End of Build	2314.03	15.74	165.78	2304.17	S 104.14	E 26.39	2.00	8.68
End of Hold	7064.94	15.74	165.78	6876.92	S 1353.49	E 343.01	0.00	112.81
Target BEF West 6 - LP	7845.62	90.00	269.47	7367.00	S 1492.08	W 132.21	12.00	607.32
T.D. & Target BEF...BHL	12200.29	90.00	269.47	7367.00	S 1532.21	W 4486.69	0.00	4741.11

End of Hold - 15.74 Inc, 7064.94 MD, 6876.92 TVD, 112.81 VS

BEF West 6 - LP

S/C Kick off Point - 90.00 Inc, 7845.62 MD, 7367.00 TVD, 607.32 VS

T.D. & End of Hold - 7367.00 TVD, 1532.21 S 4486.69 W

BEF West 6 - BHL

BEF West 6 (PWB)

-400 -0 400 800 1200 1600 2000 2400 2800 3200 3600 4000 4400 4800 5200

Scale 1 cm = 200 ft

Vertical Section (Feet) ->

Azimuth 251.14 with reference 0.00 N, 0.00 E from BEF West 6

SYSDRILL  
Well Design Combined Report  
Wellbore: BEF West 6 (PWB)



### Wellhead Details

Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
BEF West 6	39.99471850	-104.73461070	1241848.3858	3214440.5042	717.26N	16.03E	0.00

### Declination

Date	Source	Time
Jan-28-2019	EMM-2017	08:45
Jan-28-2019	EMM-2017	09:44
May-20-2019	EMM-2017	09:01
May-20-2019	EMM-2017	09:28
May-20-2019	EMM-2017	09:30
May-20-2019	EMM-2017	09:33
May-20-2019	EMM-2017	09:35
Oct-6-2017	EMM-2015	14:35
May-20-2019	EMM-2017	09:36
May-20-2019	EMM-2017	09:36
May-20-2019	EMM-2017	09:38
May-20-2019	EMM-2017	09:38

### Installation Details

Name	Installation Position (Latitude)	Installation Position (Longitude)	Northing	Easting	Coord System Name	North Alignment
Brighton East Farm Pad	39.99275000	-104.73469000	1241131.1481	3214424.4758	NAD83 Colorado State Planes, North Zone, US Foot	Grid

### Summary Wellpath

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	Vertical Depth SS	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
27.00	0.00	0.00	27.00	-5048.00	0.00N	0.00E		0.00
1527.00	0.00	165.78	1527.00	-3548.00	0.00N	0.00E	==>	0.00
2314.03	15.74	165.78	2304.17	-2770.83	104.14S	26.39E	2.00	8.68
7064.94	15.74	165.78	6876.92	1801.92	1353.49S	343.01E	==>	112.81
7845.62	90.00	269.47	7367.00	2292.00	1492.08S	132.21W	12.00	607.32
12200.29	90.00	269.47	7367.00	2292.00	1532.21S	4486.69W	==>	4741.11

### 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	39.99471850	-104.73461070
27.00	0.00	0.00	27.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
100.00	0.00	0.00	100.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
200.00	0.00	0.00	200.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
300.00	0.00	0.00	300.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
400.00	0.00	0.00	400.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
500.00	0.00	0.00	500.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
600.00	0.00	0.00	600.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
700.00	0.00	0.00	700.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
800.00	0.00	0.00	800.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
900.00	0.00	0.00	900.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
1000.00	0.00	0.00	1000.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
1100.00	0.00	0.00	1100.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
1200.00	0.00	0.00	1200.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
1300.00	0.00	0.00	1300.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
1400.00	0.00	0.00	1400.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
1500.00	0.00	0.00	1500.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
1527.00	0.00	165.78	1527.00	0.00N	0.00E	==>	0.00	39.99471850	-104.73461070
1627.00	2.00	165.78	1626.98	1.69S	0.43E	2.00	0.14	39.99471385	-104.73460922
1727.00	4.00	165.78	1726.84	6.76S	1.71E	2.00	0.56	39.99469989	-104.73460479
1827.00	6.00	165.78	1826.45	15.21S	3.86E	2.00	1.27	39.99467665	-104.73459741
1927.00	8.00	165.78	1925.70	27.03S	6.85E	2.00	2.25	39.99464415	-104.73458709
2027.00	10.00	165.78	2024.47	42.19S	10.69E	2.00	3.52	39.99460244	-104.73457384

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Rig ( Planned Datum #1 5075.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 251.14 degrees  
Bottom hole distance is 4741.11 Feet on azimuth 251.14 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by  
Date Printed: 21-Jul-2020

SYSDRILL  
Well Design Combined Report  
Wellbore: BEF West 6 (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)
2127.00	12.00	165.78	2122.62	60.68S	15.38E	2.00	5.06	39.99455156	-104.73455768
2227.00	14.00	165.78	2220.06	82.49S	20.90E	2.00	6.88	39.99449157	-104.73453863
2314.03	15.74	165.78	2304.17	104.14S	26.39E	2.00	8.68	39.99443201	-104.73451972
2327.00	15.74	165.78	2316.65	107.55S	27.26E	==>	8.96	39.99442263	-104.73451674
2427.00	15.74	165.78	2412.90	133.85S	33.92E	==>	11.16	39.99435029	-104.73449377
2527.00	15.74	165.78	2509.15	160.14S	40.58E	==>	13.35	39.99427795	-104.73447079
2627.00	15.74	165.78	2605.40	186.44S	47.25E	==>	15.54	39.99420560	-104.73444782
2727.00	15.74	165.78	2701.65	212.74S	53.91E	==>	17.73	39.99413326	-104.73442484
2827.00	15.74	165.78	2797.90	239.03S	60.58E	==>	19.92	39.99406092	-104.73440187
2927.00	15.74	165.78	2894.15	265.33S	67.24E	==>	22.12	39.99398858	-104.73437889
3027.00	15.74	165.78	2990.40	291.63S	73.91E	==>	24.31	39.99391623	-104.73435592
3127.00	15.74	165.78	3086.65	317.93S	80.57E	==>	26.50	39.99384389	-104.73433295
3227.00	15.74	165.78	3182.90	344.22S	87.23E	==>	28.69	39.99377155	-104.73430997
3327.00	15.74	165.78	3279.15	370.52S	93.90E	==>	30.88	39.99369920	-104.73428700
3427.00	15.74	165.78	3375.40	396.82S	100.56E	==>	33.07	39.99362686	-104.73426403
3527.00	15.74	165.78	3471.65	423.11S	107.23E	==>	35.27	39.99355452	-104.73424105
3627.00	15.74	165.78	3567.90	449.41S	113.89E	==>	37.46	39.99348217	-104.73421808
3727.00	15.74	165.78	3664.15	475.71S	120.56E	==>	39.65	39.99340983	-104.73419510
3827.00	15.74	165.78	3760.40	502.00S	127.22E	==>	41.84	39.99333749	-104.73417213
3927.00	15.74	165.78	3856.65	528.30S	133.89E	==>	44.03	39.99326514	-104.73414916
4027.00	15.74	165.78	3952.90	554.60S	140.55E	==>	46.23	39.99319280	-104.73412618
4127.00	15.74	165.78	4049.15	580.90S	147.21E	==>	48.42	39.99312046	-104.73410321
4227.00	15.74	165.78	4145.40	607.19S	153.88E	==>	50.61	39.99304811	-104.73408024
4327.00	15.74	165.78	4241.65	633.49S	160.54E	==>	52.80	39.99297577	-104.73405726
4427.00	15.74	165.78	4337.90	659.79S	167.21E	==>	54.99	39.99290343	-104.73403429
4527.00	15.74	165.78	4434.15	686.08S	173.87E	==>	57.18	39.99283108	-104.73401132
4627.00	15.74	165.78	4530.40	712.38S	180.54E	==>	59.38	39.99275874	-104.73398834
4727.00	15.74	165.78	4626.65	738.68S	187.20E	==>	61.57	39.99268640	-104.73396537
4827.00	15.74	165.78	4722.90	764.98S	193.86E	==>	63.76	39.99261406	-104.73394240
4927.00	15.74	165.78	4819.15	791.27S	200.53E	==>	65.95	39.99254171	-104.73391942
5027.00	15.74	165.78	4915.40	817.57S	207.19E	==>	68.14	39.99246937	-104.73389645
5127.00	15.74	165.78	5011.65	843.87S	213.86E	==>	70.34	39.99239703	-104.73387348
5227.00	15.74	165.78	5107.90	870.16S	220.52E	==>	72.53	39.99232468	-104.73385051
5327.00	15.74	165.78	5204.15	896.46S	227.19E	==>	74.72	39.99225234	-104.73382753
5427.00	15.74	165.78	5300.40	922.76S	233.85E	==>	76.91	39.99218000	-104.73380456
5527.00	15.74	165.78	5396.65	949.05S	240.51E	==>	79.10	39.99210765	-104.73378159
5627.00	15.74	165.78	5492.90	975.35S	247.18E	==>	81.29	39.99203531	-104.73375861
5727.00	15.74	165.78	5589.15	1001.65S	253.84E	==>	83.49	39.99196297	-104.73373564
5827.00	15.74	165.78	5685.40	1027.95S	260.51E	==>	85.68	39.99189062	-104.73371267
5927.00	15.74	165.78	5781.65	1054.24S	267.17E	==>	87.87	39.99181828	-104.73368970
6027.00	15.74	165.78	5877.90	1080.54S	273.84E	==>	90.06	39.99174594	-104.73366672
6127.00	15.74	165.78	5974.15	1106.84S	280.50E	==>	92.25	39.99167359	-104.73364375
6227.00	15.74	165.78	6070.40	1133.13S	287.16E	==>	94.45	39.99160125	-104.73362078
6327.00	15.74	165.78	6166.65	1159.43S	293.83E	==>	96.64	39.99152891	-104.73359781
6427.00	15.74	165.78	6262.90	1185.73S	300.49E	==>	98.83	39.99145656	-104.73357483
6527.00	15.74	165.78	6359.15	1212.03S	307.16E	==>	101.02	39.99138422	-104.73355186
6627.00	15.74	165.78	6455.40	1238.32S	313.82E	==>	103.21	39.99131188	-104.73352889
6727.00	15.74	165.78	6551.65	1264.62S	320.49E	==>	105.40	39.99123953	-104.73350592
6827.00	15.74	165.78	6647.90	1290.92S	327.15E	==>	107.60	39.99116719	-104.73348295
6927.00	15.74	165.78	6744.15	1317.21S	333.82E	==>	109.79	39.99109485	-104.73345997
7027.00	15.74	165.78	6840.40	1343.51S	340.48E	==>	111.98	39.99102250	-104.73343700
7064.94	15.74	165.78	6876.92	1353.49S	343.01E	==>	112.81	39.99099506	-104.73342829
7127.00	15.76	193.46	6936.73	1369.87S	343.11E	12.00	118.00	39.99095009	-104.73342841
7227.00	21.84	226.38	7031.61	1396.00S	326.42E	12.00	142.25	39.99087874	-104.73348878
7327.00	31.41	242.83	7121.02	1420.83S	289.64E	12.00	185.08	39.99081147	-104.73362082
7427.00	42.15	251.86	7201.05	1443.25S	234.37E	12.00	244.63	39.99075122	-104.73381877
7527.00	53.35	257.72	7268.21	1462.30S	163.02E	12.00	318.31	39.99070063	-104.73407397
7627.00	64.76	262.06	7319.56	1477.14S	78.72E	12.00	402.88	39.99066189	-104.73437527

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 5075.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 251.14 degrees  
Bottom hole distance is 4741.11 Feet on azimuth 251.14 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by  
Date Printed: 21-Jul-2020

SYSDRILL  
Well Design Combined Report  
Wellbore: BEF West 6 (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)
7727.00	76.28	265.64	7352.86	1487.13S	14.85W	12.00	494.65	39.99063671	-104.73470949
7827.00	87.84	268.88	7366.65	1491.81S	113.60W	12.00	589.62	39.99062618	-104.73506205
7845.62	90.00	269.47	7367.00	1492.08S	132.21W	12.00	607.32	39.99062589	-104.73512850
7927.00	90.00	269.47	7367.00	1492.83S	213.59W	==>	684.57	39.99062576	-104.73541891
8027.00	90.00	269.47	7367.00	1493.75S	313.58W	==>	779.50	39.99062559	-104.73577580
8127.00	90.00	269.47	7367.00	1494.67S	413.58W	==>	874.43	39.99062543	-104.73613269
8227.00	90.00	269.47	7367.00	1495.59S	513.57W	==>	969.35	39.99062526	-104.73648957
8327.00	90.00	269.47	7367.00	1496.51S	613.57W	==>	1064.28	39.99062510	-104.73684646
8427.00	90.00	269.47	7367.00	1497.44S	713.56W	==>	1159.21	39.99062493	-104.73720334
8527.00	90.00	269.47	7367.00	1498.36S	813.56W	==>	1254.14	39.99062476	-104.73756023
8627.00	90.00	269.47	7367.00	1499.28S	913.56W	==>	1349.06	39.99062459	-104.73791711
8727.00	90.00	269.47	7367.00	1500.20S	1013.55W	==>	1443.99	39.99062442	-104.73827400
8827.00	90.00	269.47	7367.00	1501.12S	1113.55W	==>	1538.92	39.99062425	-104.73863088
8927.00	90.00	269.47	7367.00	1502.04S	1213.54W	==>	1633.85	39.99062407	-104.73898777
9027.00	90.00	269.47	7367.00	1502.97S	1313.54W	==>	1728.78	39.99062390	-104.73934465
9127.00	90.00	269.47	7367.00	1503.89S	1413.54W	==>	1823.70	39.99062372	-104.73970154
9227.00	90.00	269.47	7367.00	1504.81S	1513.53W	==>	1918.63	39.99062355	-104.74005842
9327.00	90.00	269.47	7367.00	1505.73S	1613.53W	==>	2013.56	39.99062337	-104.74041531
9427.00	90.00	269.47	7367.00	1506.65S	1713.52W	==>	2108.49	39.99062319	-104.74077219
9527.00	90.00	269.47	7367.00	1507.57S	1813.52W	==>	2203.41	39.99062301	-104.74112908
9627.00	90.00	269.47	7367.00	1508.49S	1913.51W	==>	2298.34	39.99062283	-104.74148597
9727.00	90.00	269.47	7367.00	1509.42S	2013.51W	==>	2393.27	39.99062265	-104.74184285
9827.00	90.00	269.47	7367.00	1510.34S	2113.51W	==>	2488.20	39.99062246	-104.74219974
9927.00	90.00	269.47	7367.00	1511.26S	2213.50W	==>	2583.12	39.99062228	-104.74255662
10027.00	90.00	269.47	7367.00	1512.18S	2313.50W	==>	2678.05	39.99062209	-104.74291351
10127.00	90.00	269.47	7367.00	1513.10S	2413.49W	==>	2772.98	39.99062191	-104.74327039
10227.00	90.00	269.47	7367.00	1514.02S	2513.49W	==>	2867.91	39.99062172	-104.74362728
10327.00	90.00	269.47	7367.00	1514.95S	2613.48W	==>	2962.84	39.99062153	-104.74398416
10427.00	90.00	269.47	7367.00	1515.87S	2713.48W	==>	3057.76	39.99062134	-104.74434105
10527.00	90.00	269.47	7367.00	1516.79S	2813.48W	==>	3152.69	39.99062115	-104.74469793
10627.00	90.00	269.47	7367.00	1517.71S	2913.47W	==>	3247.62	39.99062096	-104.74505482
10727.00	90.00	269.47	7367.00	1518.63S	3013.47W	==>	3342.55	39.99062076	-104.74541170
10827.00	90.00	269.47	7367.00	1519.55S	3113.46W	==>	3437.47	39.99062057	-104.74576859
10927.00	90.00	269.47	7367.00	1520.48S	3213.46W	==>	3532.40	39.99062037	-104.74612547
11027.00	90.00	269.47	7367.00	1521.40S	3313.45W	==>	3627.33	39.99062018	-104.74648236
11127.00	90.00	269.47	7367.00	1522.32S	3413.45W	==>	3722.26	39.99061998	-104.74683925
11227.00	90.00	269.47	7367.00	1523.24S	3513.45W	==>	3817.18	39.99061978	-104.74719613
11327.00	90.00	269.47	7367.00	1524.16S	3613.44W	==>	3912.11	39.99061958	-104.74755302
11427.00	90.00	269.47	7367.00	1525.08S	3713.44W	==>	4007.04	39.99061938	-104.74790990
11527.00	90.00	269.47	7367.00	1526.00S	3813.43W	==>	4101.97	39.99061918	-104.74826679
11627.00	90.00	269.47	7367.00	1526.93S	3913.43W	==>	4196.90	39.99061898	-104.74862367
11727.00	90.00	269.47	7367.00	1527.85S	4013.42W	==>	4291.82	39.99061877	-104.74898056
11827.00	90.00	269.47	7367.00	1528.77S	4113.42W	==>	4386.75	39.99061857	-104.74933744
11927.00	90.00	269.47	7367.00	1529.69S	4213.42W	==>	4481.68	39.99061836	-104.74969433
12027.00	90.00	269.47	7367.00	1530.61S	4313.41W	==>	4576.61	39.99061815	-104.75005121
12127.00	90.00	269.47	7367.00	1531.53S	4413.41W	==>	4671.53	39.99061794	-104.75040810
12200.29	90.00	269.47	7367.00	1532.21S	4486.69W	==>	4741.11	39.99061779	-104.75066966

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 5075.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 251.14 degrees  
Bottom hole distance is 4741.11 Feet on azimuth 251.14 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by  
Date Printed: 21-Jul-2020

SYS DRILL  
Well Design Combined Report  
Wellbore: BEF West 6 (PWB)



**Targets**

Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
BEF West 6 - BHL	1532.21S	4486.69W	7367.00	39.99061779	-104.75066966	1240316.23	3209953.97
BEF West 6 - LP	1492.08S	132.21W	7367.00	39.99062589	-104.73512850	1240356.36	3214308.29

**Survey Tool Program**

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
992529	Planned	1527.00	1527.00	WdW Rate Gyro	Standard
992528	Planned	12200.29	7367.00	ISCWSA MWD	Rev 4 + SAG + FLT

**Notes**

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Bottom hole distance is 4741.11 Feet on azimuth 251.14 degrees from Wellhead  
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