

# Petro Operating Company

Location	Weld County, CO	Slot	FLASCHENRIEM 4
Field	Wattenberg	Well	W FLASCHENRIEM 4
Installation	Flaschenriem Pad	Wellbore	W FLASCHENRIEM 4 (PWB)

N  
GRID

Scale 1 cm = 500 ft

East (Feet) ->

-2000 -1000 0 1000 2000 3000 4000 5000 6000 7000 8000

Apr-20-2018  
EMM-2015 [2000.0-2020.0] Dip: 66.69 deg Field: 52216.1 nT  
Lat: N40 20 39.0325 Long: W104 59 29.5523 Elev: 5068.00 ft  
Magnetic North is 8.49 deg East of True North  
GRID North is 0.33 deg East of True North  
To correct azimuth from True to GRID subtract 0.33 deg  
To correct azimuth from Magnetic to GRID add 8.16 deg

Created by admin  
Date plotted 14-May-2018

Plot reference is W FLASCHENRIEM 4 (PWB).  
Ref wellpath is W FLASCHENRIEM 4 (PWP#1).  
Coordinates are in Feet reference FLASCHENRIEM 4.  
True Vertical Depths are reference Rig Datum.  
Measured Depths are reference Rig Datum.  
Rig Datum: Planned Datum #1  
Rig Datum to Mean Sea Level: 5068.90 ft.  
Plot North is aligned to GRID North.

FLASCHENRIEM 4-LP

FLASCHENRIEM 4-BHL

W FLASCHENRIEM 4 (PWB)

Surface 0.00 N 0.00 E

<- North(Feet)  
Scale 1 cm = 500 ft

5000  
4000  
3000  
2000  
1000  
0  
-1000

## WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	0.00	0.00	0.00	0.00	S 0.00	W 0.00		0.00
KOP	1500.00	0.00	349.83	1500.00	S 0.00	W 0.00	0.00	0.00
End of Build	3022.22	33.49	349.83	2937.01	N 425.55	W 76.31	2.20	113.05
End of Hold	7684.40	33.49	349.83	6825.24	N 2957.63	W 530.34	0.00	785.71
Target FLASCH...M 4-LP	8638.95	90.00	89.76	7350.90	N 3302.63	E 38.56	10.00	1447.51
T.D. & Target FLA...BHL	15642.55	90.00	89.76	7350.90	N 3332.39	E 7042.10	0.00	7790.76

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

3DS Kick off Point - 0.00 Inc, 1500.00 MD, 1500.00 TVD, 0.00 VS

End of Build - 33.49 Inc, 3022.22 MD, 2937.01 TVD, 113.05 VS

End of Hold - 33.49 Inc, 7684.40 MD, 6825.24 TVD, 785.71 VS

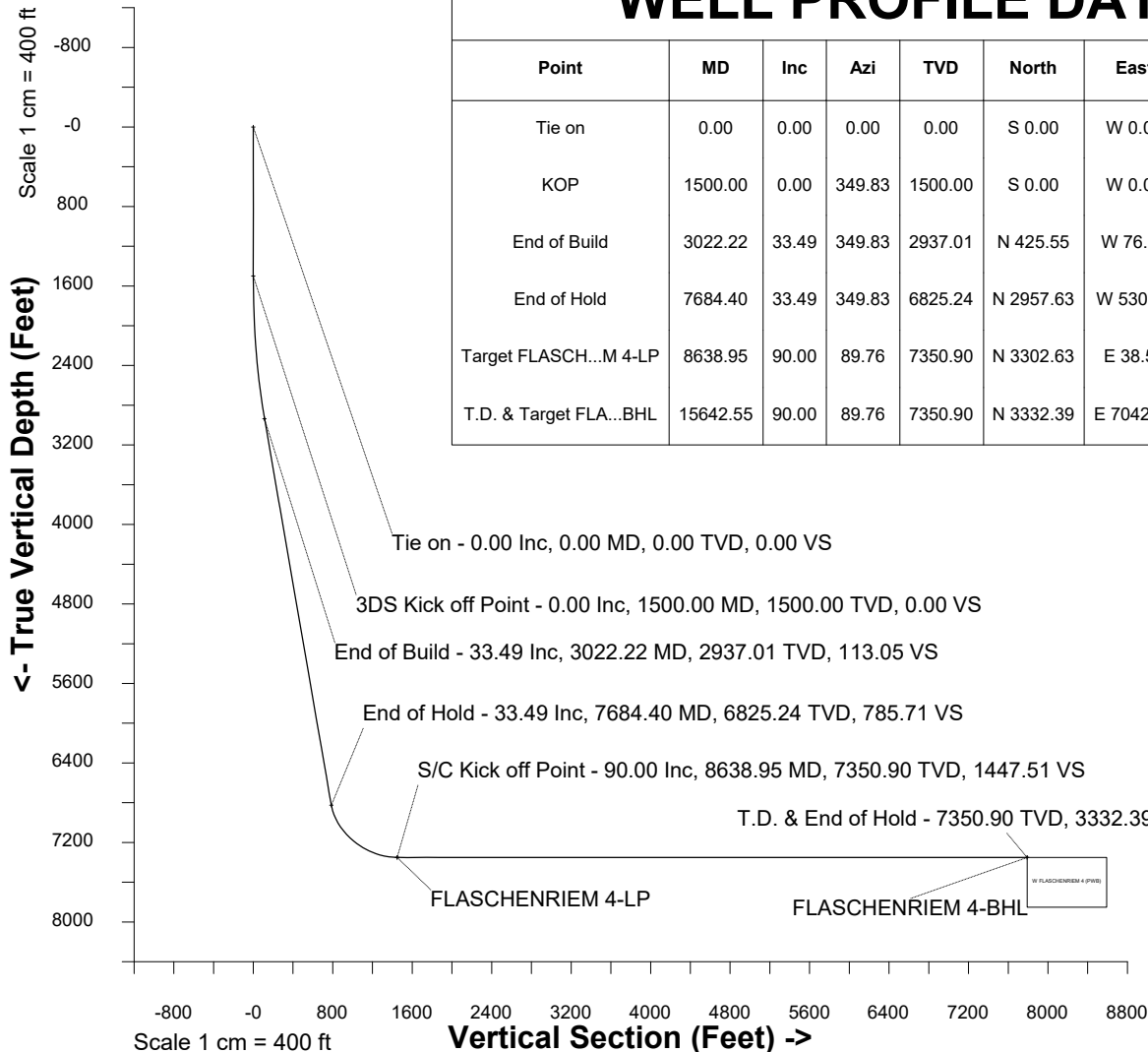
S/C Kick off Point - 90.00 Inc, 8638.95 MD, 7350.90 TVD, 1447.51 VS

T.D. & End of Hold - 7350.90 TVD, 3332.39 N 7042.10 E

FLASCHENRIEM 4-LP

FLASCHENRIEM 4-BHL

W FLASCHENRIEM 4 (PWB)





SYSDRILL  
Well Design Combined Report  
Wellbore: W FLASCHENRIEM 4 (PWB)



Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
FLASCHENRIEM 4	40.34401090	-104.99153940	1368570.1909	3141727.7198	60.03S	1.15E	0.00

Declination		
Date	Source	Time
Apr-20-2018	EMM-2015 [2000.0-2020.0]	11:01

Installation Details						
Name	Installation Position (Latitude)	Installation Position (Longitude)	Northing	Easting	Coord System Name	North Alignment
Flaschenriem Pad	40.34417570	-104.99154230	1368630.2207	3141726.5673	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Summary Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	Vertical Depth SS	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
0.00	0.00	0.000	0.00	-5068.90	0.00N	0.00E		0.00
1500.00	0.00	349.830	1500.00	-3568.90	0.00N	0.00E	==>	0.00
3022.22	33.49	349.830	2937.01	-2131.89	425.55N	76.31W	2.20	113.05
7684.40	33.49	349.830	6825.24	1756.34	2957.63N	530.34W	==>	785.71
8638.95	90.00	89.760	7350.90	2282.00	3302.63N	38.56E	10.00	1447.51
15642.55	90.00	89.760	7350.90	2282.00	3332.39N	7042.10E	==>	7790.76

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	0.000	0.00	0.00N	0.00E		0.00	40.34401090	-104.99153940
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
1100.00	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
1300.00	0.00	0.000	1300.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
1400.00	0.00	0.000	1400.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
1500.00	0.00	349.830	1500.00	0.00N	0.00E	==>	0.00	40.34401090	-104.99153940
1600.00	2.20	349.830	1599.98	1.89N	0.34W	2.20	0.50	40.34401609	-104.99154058
1700.00	4.40	349.830	1699.80	7.56N	1.35W	2.20	2.01	40.34403166	-104.99154410
1800.00	6.60	349.830	1799.34	16.99N	3.05W	2.20	4.51	40.34405758	-104.99154998
1900.00	8.80	349.830	1898.43	30.18N	5.41W	2.20	8.02	40.34409382	-104.99155819
2000.00	11.00	349.830	1996.93	47.10N	8.45W	2.20	12.51	40.34414031	-104.99156873
2100.00	13.20	349.830	2094.71	67.73N	12.14W	2.20	17.99	40.34419700	-104.99158157
2200.00	15.40	349.830	2191.60	92.04N	16.50W	2.20	24.45	40.34426380	-104.99159671
2300.00	17.60	349.830	2287.48	119.99N	21.52W	2.20	31.88	40.34434061	-104.99161412
2400.00	19.80	349.830	2382.19	151.55N	27.17W	2.20	40.26	40.34442732	-104.99163377
2500.00	22.00	349.830	2475.61	186.66N	33.47W	2.20	49.59	40.34452379	-104.99165563
2600.00	24.20	349.830	2567.58	225.28N	40.39W	2.20	59.85	40.34462990	-104.99167968
2700.00	26.40	349.830	2657.99	267.34N	47.94W	2.20	71.02	40.34474547	-104.99170587
2800.00	28.60	349.830	2746.68	312.79N	56.09W	2.20	83.09	40.34487034	-104.99173417
2900.00	30.80	349.830	2833.54	361.55N	64.83W	2.20	96.05	40.34500434	-104.99176454
3000.00	33.00	349.830	2918.43	413.56N	74.16W	2.20	109.87	40.34514725	-104.99179692
3100.00	33.49	349.830	3001.88	467.80N	83.88W	==>	124.27	40.34529626	-104.99183070

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 5068.9ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 64.680 degrees  
Bottom hole distance is 7790.76 Feet on azimuth 64.68 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by IPT  
Date Printed: 14-May-2018

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)
3200.00	33.49	349.830	3085.28	522.11N	93.62W	==>	138.70	40.34544549	-104.99186452
3300.00	33.49	349.830	3168.68	576.42N	103.36W	==>	153.13	40.34559473	-104.99189834
3400.00	33.49	349.830	3252.08	630.73N	113.10W	==>	167.56	40.34574396	-104.99193216
3500.00	33.49	349.830	3335.48	685.04N	122.84W	==>	181.98	40.34589319	-104.99196598
3600.00	33.49	349.830	3418.88	739.35N	132.57W	==>	196.41	40.34604242	-104.99199980
3700.00	33.49	349.830	3502.28	793.66N	142.31W	==>	210.84	40.34619165	-104.99203362
3800.00	33.49	349.830	3585.68	847.97N	152.05W	==>	225.27	40.34634088	-104.99206744
3900.00	33.49	349.830	3669.08	902.28N	161.79W	==>	239.70	40.34649011	-104.99210126
4000.00	33.49	349.830	3752.48	956.60N	171.53W	==>	254.12	40.34663934	-104.99213508
4100.00	33.49	349.830	3835.88	1010.91N	181.27W	==>	268.55	40.34678857	-104.99216890
4200.00	33.49	349.830	3919.28	1065.22N	191.01W	==>	282.98	40.34693780	-104.99220272
4300.00	33.49	349.830	4002.68	1119.53N	200.75W	==>	297.41	40.34708703	-104.99223655
4400.00	33.49	349.830	4086.08	1173.84N	210.48W	==>	311.84	40.34723626	-104.99227037
4500.00	33.49	349.830	4169.48	1228.15N	220.22W	==>	326.27	40.34738549	-104.99230419
4600.00	33.49	349.830	4252.88	1282.46N	229.96W	==>	340.69	40.34753472	-104.99233801
4700.00	33.49	349.830	4336.27	1336.77N	239.70W	==>	355.12	40.34768395	-104.99237183
4800.00	33.49	349.830	4419.67	1391.08N	249.44W	==>	369.55	40.34783318	-104.99240566
4900.00	33.49	349.830	4503.07	1445.40N	259.18W	==>	383.98	40.34798241	-104.99243948
5000.00	33.49	349.830	4586.47	1499.71N	268.92W	==>	398.41	40.34813164	-104.99247330
5100.00	33.49	349.830	4669.87	1554.02N	278.65W	==>	412.83	40.34828087	-104.99250712
5200.00	33.49	349.830	4753.27	1608.33N	288.39W	==>	427.26	40.34843010	-104.99254095
5300.00	33.49	349.830	4836.67	1662.64N	298.13W	==>	441.69	40.34857933	-104.99257477
5400.00	33.49	349.830	4920.07	1716.95N	307.87W	==>	456.12	40.34872856	-104.99260859
5500.00	33.49	349.830	5003.47	1771.26N	317.61W	==>	470.55	40.34887780	-104.99264242
5600.00	33.49	349.830	5086.87	1825.57N	327.35W	==>	484.97	40.34902703	-104.99267624
5700.00	33.49	349.830	5170.27	1879.88N	337.09W	==>	499.40	40.34917626	-104.99271007
5800.00	33.49	349.830	5253.67	1934.20N	346.82W	==>	513.83	40.34932549	-104.99274389
5900.00	33.49	349.830	5337.07	1988.51N	356.56W	==>	528.26	40.34947472	-104.99277771
6000.00	33.49	349.830	5420.47	2042.82N	366.30W	==>	542.69	40.34962395	-104.99281154
6100.00	33.49	349.830	5503.87	2097.13N	376.04W	==>	557.11	40.34977318	-104.99284536
6200.00	33.49	349.830	5587.27	2151.44N	385.78W	==>	571.54	40.34992241	-104.99287919
6300.00	33.49	349.830	5670.67	2205.75N	395.52W	==>	585.97	40.35007164	-104.99291301
6400.00	33.49	349.830	5754.07	2260.06N	405.26W	==>	600.40	40.35022087	-104.99294684
6500.00	33.49	349.830	5837.46	2314.37N	414.99W	==>	614.83	40.35037010	-104.99298066
6600.00	33.49	349.830	5920.86	2368.68N	424.73W	==>	629.25	40.35051933	-104.99301449
6700.00	33.49	349.830	6004.26	2423.00N	434.47W	==>	643.68	40.35066856	-104.99304831
6800.00	33.49	349.830	6087.66	2477.31N	444.21W	==>	658.11	40.35081779	-104.99308214
6900.00	33.49	349.830	6171.06	2531.62N	453.95W	==>	672.54	40.35096702	-104.99311596
7000.00	33.49	349.830	6254.46	2585.93N	463.69W	==>	686.97	40.35111625	-104.99314979
7100.00	33.49	349.830	6337.86	2640.24N	473.43W	==>	701.39	40.35126548	-104.99318361
7200.00	33.49	349.830	6421.26	2694.55N	483.17W	==>	715.82	40.35141471	-104.99321744
7300.00	33.49	349.830	6504.66	2748.86N	492.90W	==>	730.25	40.35156394	-104.99325127
7400.00	33.49	349.830	6588.06	2803.17N	502.64W	==>	744.68	40.35171317	-104.99328509
7500.00	33.49	349.830	6671.46	2857.48N	512.38W	==>	759.11	40.35186240	-104.99331892
7600.00	33.49	349.830	6754.86	2911.80N	522.12W	==>	773.53	40.35201163	-104.99335275
7700.00	33.30	352.650	6838.27	2966.12N	531.65W	10.00	788.16	40.35216088	-104.99338658
7800.00	33.59	10.840	6921.93	3020.64N	529.95W	10.00	813.01	40.35231053	-104.99337862
7900.00	36.40	27.630	7004.04	3074.24N	510.94W	10.00	853.12	40.35245733	-104.99330932
8000.00	41.21	41.660	7082.10	3125.26N	475.20W	10.00	907.25	40.35259683	-104.99318003
8100.00	47.40	52.940	7153.74	3172.17N	423.80W	10.00	973.77	40.35272478	-104.99299467
8200.00	54.49	62.040	7216.79	3213.54N	358.32W	10.00	1050.66	40.35283730	-104.99275887
8300.00	62.15	69.610	7269.32	3248.11N	280.73W	10.00	1135.58	40.35293097	-104.99247980
8400.00	70.16	76.160	7309.76	3274.83N	193.41W	10.00	1225.94	40.35300294	-104.99216594
8500.00	78.39	82.060	7336.85	3292.89N	98.99W	10.00	1319.01	40.35305103	-104.99182682
8600.00	86.74	87.630	7349.79	3301.74N	0.36W	10.00	1411.95	40.35307378	-104.99147275
8700.00	90.00	89.760	7350.90	3302.89N	99.61E	==>	1502.80	40.35307535	-104.99111407
8800.00	90.00	89.760	7350.90	3303.31N	199.61E	==>	1593.37	40.35307494	-104.99075528
8900.00	90.00	89.760	7350.90	3303.74N	299.61E	==>	1683.94	40.35307453	-104.99039649

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Vertical Section is from 0.00N 0.00E on azimuth 64.680 degrees  
Bottom hole distance is 7790.76 Feet on azimuth 64.68 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by IPT  
Date Printed: 14-May-2018

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)
9000.00	90.00	89.760	7350.90	3304.16N	399.61E	==>	1774.51	40.35307412	-104.99003770
9100.00	90.00	89.760	7350.90	3304.59N	499.61E	==>	1865.09	40.35307371	-104.98967891
9200.00	90.00	89.760	7350.90	3305.01N	599.60E	==>	1955.66	40.35307329	-104.98932013
9300.00	90.00	89.760	7350.90	3305.44N	699.60E	==>	2046.23	40.35307288	-104.98896134
9400.00	90.00	89.760	7350.90	3305.86N	799.60E	==>	2136.80	40.35307246	-104.98860255
9500.00	90.00	89.760	7350.90	3306.29N	899.60E	==>	2227.37	40.35307205	-104.98824376
9600.00	90.00	89.760	7350.90	3306.71N	999.60E	==>	2317.94	40.35307163	-104.98788497
9700.00	90.00	89.760	7350.90	3307.14N	1099.60E	==>	2408.51	40.35307121	-104.98752618
9800.00	90.00	89.760	7350.90	3307.56N	1199.60E	==>	2499.09	40.35307079	-104.98716739
9900.00	90.00	89.760	7350.90	3307.99N	1299.60E	==>	2589.66	40.35307037	-104.98680861
10000.00	90.00	89.760	7350.90	3308.41N	1399.60E	==>	2680.23	40.35306994	-104.98644982
10100.00	90.00	89.760	7350.90	3308.84N	1499.60E	==>	2770.80	40.35306952	-104.98609103
10200.00	90.00	89.760	7350.90	3309.26N	1599.60E	==>	2861.37	40.35306910	-104.98573224
10300.00	90.00	89.760	7350.90	3309.69N	1699.59E	==>	2951.94	40.35306867	-104.98537345
10400.00	90.00	89.760	7350.90	3310.11N	1799.59E	==>	3042.51	40.35306824	-104.98501466
10500.00	90.00	89.760	7350.90	3310.54N	1899.59E	==>	3133.08	40.35306781	-104.98465588
10600.00	90.00	89.760	7350.90	3310.96N	1999.59E	==>	3223.66	40.35306738	-104.98429709
10700.00	90.00	89.760	7350.90	3311.39N	2099.59E	==>	3314.23	40.35306695	-104.98393830
10800.00	90.00	89.760	7350.90	3311.81N	2199.59E	==>	3404.80	40.35306652	-104.98357951
10900.00	90.00	89.760	7350.90	3312.24N	2299.59E	==>	3495.37	40.35306609	-104.98322072
11000.00	90.00	89.760	7350.90	3312.66N	2399.59E	==>	3585.94	40.35306566	-104.98286193
11100.00	90.00	89.760	7350.90	3313.09N	2499.59E	==>	3676.51	40.35306522	-104.98250314
11200.00	90.00	89.760	7350.90	3313.51N	2599.59E	==>	3767.08	40.35306479	-104.98214436
11300.00	90.00	89.760	7350.90	3313.94N	2699.59E	==>	3857.66	40.35306435	-104.98178557
11400.00	90.00	89.760	7350.90	3314.36N	2799.58E	==>	3948.23	40.35306391	-104.98142678
11500.00	90.00	89.760	7350.90	3314.79N	2899.58E	==>	4038.80	40.35306347	-104.98106799
11600.00	90.00	89.760	7350.90	3315.21N	2999.58E	==>	4129.37	40.35306303	-104.98070920
11700.00	90.00	89.760	7350.90	3315.64N	3099.58E	==>	4219.94	40.35306259	-104.98035041
11800.00	90.00	89.760	7350.90	3316.06N	3199.58E	==>	4310.51	40.35306215	-104.97999162
11900.00	90.00	89.760	7350.90	3316.49N	3299.58E	==>	4401.08	40.35306170	-104.97963284
12000.00	90.00	89.760	7350.90	3316.91N	3399.58E	==>	4491.65	40.35306126	-104.97927405
12100.00	90.00	89.760	7350.90	3317.34N	3499.58E	==>	4582.23	40.35306081	-104.97891526
12200.00	90.00	89.760	7350.90	3317.76N	3599.58E	==>	4672.80	40.35306037	-104.97855647
12300.00	90.00	89.760	7350.90	3318.19N	3699.58E	==>	4763.37	40.35305992	-104.97819768
12400.00	90.00	89.760	7350.90	3318.61N	3799.58E	==>	4853.94	40.35305947	-104.97783889
12500.00	90.00	89.760	7350.90	3319.04N	3899.57E	==>	4944.51	40.35305902	-104.97748011
12600.00	90.00	89.760	7350.90	3319.46N	3999.57E	==>	5035.08	40.35305857	-104.97712132
12700.00	90.00	89.760	7350.90	3319.89N	4099.57E	==>	5125.65	40.35305811	-104.97676253
12800.00	90.00	89.760	7350.90	3320.31N	4199.57E	==>	5216.23	40.35305766	-104.97640374
12900.00	90.00	89.760	7350.90	3320.74N	4299.57E	==>	5306.80	40.35305721	-104.97604495
13000.00	90.00	89.760	7350.90	3321.16N	4399.57E	==>	5397.37	40.35305675	-104.97568616
13100.00	90.00	89.760	7350.90	3321.59N	4499.57E	==>	5487.94	40.35305629	-104.97532738
13200.00	90.00	89.760	7350.90	3322.01N	4599.57E	==>	5578.51	40.35305583	-104.97496859
13300.00	90.00	89.760	7350.90	3322.44N	4699.57E	==>	5669.08	40.35305538	-104.97460980
13400.00	90.00	89.760	7350.90	3322.86N	4799.57E	==>	5759.65	40.35305492	-104.97425101
13500.00	90.00	89.760	7350.90	3323.29N	4899.57E	==>	5850.22	40.35305445	-104.97389222
13600.00	90.00	89.760	7350.90	3323.71N	4999.57E	==>	5940.80	40.35305399	-104.97353343
13700.00	90.00	89.760	7350.90	3324.14N	5099.56E	==>	6031.37	40.35305353	-104.97317464
13800.00	90.00	89.760	7350.90	3324.56N	5199.56E	==>	6121.94	40.35305306	-104.97281586
13900.00	90.00	89.760	7350.90	3324.98N	5299.56E	==>	6212.51	40.35305260	-104.97245707
14000.00	90.00	89.760	7350.90	3325.41N	5399.56E	==>	6303.08	40.35305213	-104.97209828
14100.00	90.00	89.760	7350.90	3325.83N	5499.56E	==>	6393.65	40.35305166	-104.97173949
14200.00	90.00	89.760	7350.90	3326.26N	5599.56E	==>	6484.22	40.35305119	-104.97138070
14300.00	90.00	89.760	7350.90	3326.68N	5699.56E	==>	6574.80	40.35305072	-104.97102191
14400.00	90.00	89.760	7350.90	3327.11N	5799.56E	==>	6665.37	40.35305025	-104.97066313
14500.00	90.00	89.760	7350.90	3327.53N	5899.56E	==>	6755.94	40.35304978	-104.97030434
14600.00	90.00	89.760	7350.90	3327.96N	5999.56E	==>	6846.51	40.35304930	-104.96994555
14700.00	90.00	89.760	7350.90	3328.38N	6099.56E	==>	6937.08	40.35304883	-104.96958676
14800.00	90.00	89.760	7350.90	3328.81N	6199.55E	==>	7027.65	40.35304835	-104.96922797

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 5068.9ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 64.680 degrees  
Bottom hole distance is 7790.76 Feet on azimuth 64.68 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by IPT  
Date Printed: 14-May-2018



SYSDRILL  
Well Design Combined Report  
Wellbore: W FLASCHENRIEM 4 (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)
14900.00	90.00	89.760	7350.90	3329.23N	6299.55E	==>	7118.22	40.35304788	-104.96886918
15000.00	90.00	89.760	7350.90	3329.66N	6399.55E	==>	7208.79	40.35304740	-104.96851040
15100.00	90.00	89.760	7350.90	3330.08N	6499.55E	==>	7299.37	40.35304692	-104.96815161
15200.00	90.00	89.760	7350.90	3330.51N	6599.55E	==>	7389.94	40.35304644	-104.96779282
15300.00	90.00	89.760	7350.90	3330.93N	6699.55E	==>	7480.51	40.35304596	-104.96743403
15400.00	90.00	89.760	7350.90	3331.36N	6799.55E	==>	7571.08	40.35304548	-104.96707524
15500.00	90.00	89.760	7350.90	3331.78N	6899.55E	==>	7661.65	40.35304499	-104.96671646
15600.00	90.00	89.760	7350.90	3332.21N	6999.55E	==>	7752.22	40.35304451	-104.96635767
15642.55	90.00	89.760	7350.90	3332.39N	7042.10E	==>	7790.76	40.35304430	-104.96620500

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SYSDRILL  
Well Design Combined Report  
Wellbore: W FLASCHENRIEM 4 (PWB)



Targets							
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
FLASCHENRIEM 4-BHL	3332.39N	7042.10E	7350.90	40.35304430	-104.96620500	1371902.44	3148769.51
FLASCHENRIEM 4-LP	3302.63N	38.56E	7350.90	40.35307560	-104.99133310	1371872.67	3141766.28

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
645423	Planned	1500.00	1500.00	WdW Rate Gyro	Standard
645424	Planned	15642.55	7350.90	ISCWSA MWD	Rev 4 + SAG + FLT

Notes