

Petro Operating Company

Location	Weld County, CO	Slot	FLASCHENRIEM 5
Field	Wattenberg	Well	W FLASCHENRIEM 5
Installation	Flaschenriem Pad	Wellbore	W FLASCHENRIEM 5 (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 5 (PWB). Ref wellpath is W FLASCHENRIEM 5 (PWP#1). Coordinates are in Feet reference FLASCHENRIEM 5. True Vertical Depths are reference Rig Datum. Measured Depths are reference Rig Datum. Rig Datum: Planned Datum #1 Rig Datum to Mean Sea Level: 5067.20 ft. Plot North is aligned to GRID North.	

FLASCHENRIEM 5-LP

FLASCHENRIEM 5-BHL

W FLASCHENRIEM 5 (PWB)

Surface 0.00 N 0.00 E

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

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	347.97	1500.00	S 0.00	W 0.00	0.00	0.00
End of Build	2919.62	34.07	347.97	2837.42	N 400.79	W 85.43	2.40	83.07
End of Hold	7119.43	34.07	347.97	6316.31	N 2701.91	W 575.90	0.00	559.98
Target FLASCH...M 5-LP	8085.64	90.00	89.85	6849.20	N 3056.12	W 7.72	10.00	1222.67
T.D. & Target FLA...BHL	15089.43	90.00	89.85	6849.20	N 3075.03	E 6996.05	0.00	7642.02

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 - 34.07 Inc, 2919.62 MD, 2837.42 TVD, 83.07 VS

End of Hold - 34.07 Inc, 7119.43 MD, 6316.31 TVD, 559.98 VS

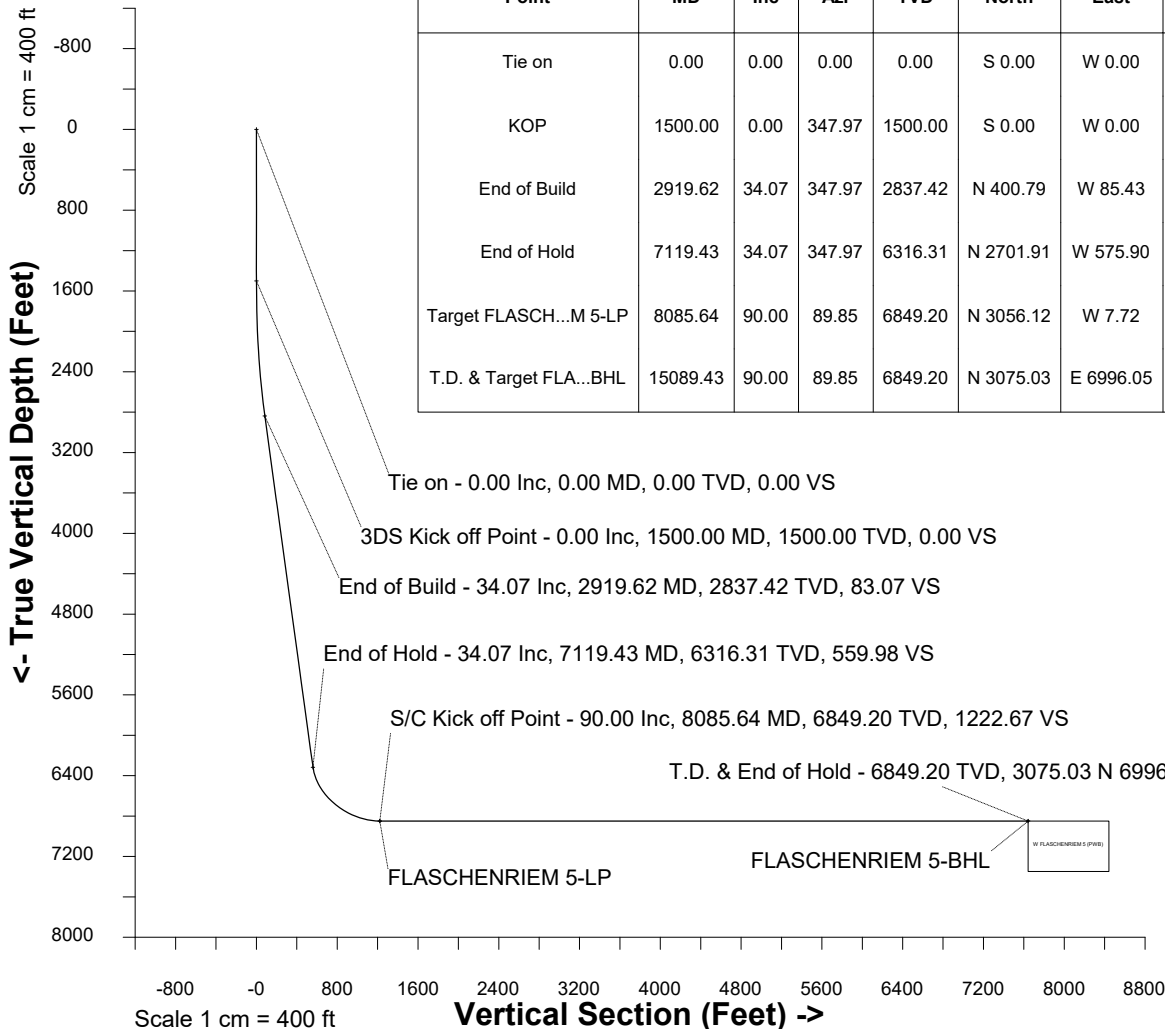
S/C Kick off Point - 90.00 Inc, 8085.64 MD, 6849.20 TVD, 1222.67 VS

T.D. & End of Hold - 6849.20 TVD, 3075.03 N 6996.05 E

FLASCHENRIEM 5-LP

FLASCHENRIEM 5-BHL

W FLASCHENRIEM 5 (PWB)





SYSDRILL
Well Design Combined Report
Wellbore: W FLASCHENRIEM 5 (PWB)



Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
FLASCHENRIEM 5	40.34417750	-104.99136300	1368631.1630	3141776.5407	0.94N	49.98E	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	-5067.20	0.00N	0.00E		0.00
1500.00	0.00	347.970	1500.00	-3567.20	0.00N	0.00E	==>	0.00
2919.62	34.07	347.970	2837.42	-2229.78	400.79N	85.43W	2.40	83.07
7119.43	34.07	347.970	6316.31	1249.11	2701.91N	575.90W	==>	559.98
8085.64	90.00	89.850	6849.20	1782.00	3056.12N	7.72W	10.00	1222.67
15089.43	90.00	89.850	6849.20	1782.00	3075.03N	6996.05E	==>	7642.02

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	40.34417750	-104.99136300
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
1100.00	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
1300.00	0.00	0.000	1300.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
1400.00	0.00	0.000	1400.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
1500.00	0.00	347.970	1500.00	0.00N	0.00E	==>	0.00	40.34417750	-104.99136300
1600.00	2.40	347.970	1599.97	2.05N	0.44W	2.40	0.42	40.34418313	-104.99136452
1700.00	4.80	347.970	1699.77	8.19N	1.75W	2.40	1.70	40.34420000	-104.99136909
1800.00	7.20	347.970	1799.21	18.41N	3.92W	2.40	3.82	40.34422810	-104.99137670
1900.00	9.60	347.970	1898.13	32.70N	6.97W	2.40	6.78	40.34426736	-104.99138733
2000.00	12.00	347.970	1996.35	51.02N	10.88W	2.40	10.57	40.34431772	-104.99140096
2100.00	14.40	347.970	2093.70	73.35N	15.64W	2.40	15.20	40.34437910	-104.99141758
2200.00	16.80	347.970	2190.01	99.65N	21.24W	2.40	20.65	40.34445137	-104.99143715
2300.00	19.20	347.970	2285.11	129.87N	27.68W	2.40	26.92	40.34453443	-104.99145963
2400.00	21.60	347.970	2378.83	163.96N	34.95W	2.40	33.98	40.34462811	-104.99148500
2500.00	24.00	347.970	2471.01	201.86N	43.03W	2.40	41.84	40.34473226	-104.99151320
2600.00	26.40	347.970	2561.49	243.50N	51.90W	2.40	50.47	40.34484670	-104.99154418
2700.00	28.80	347.970	2650.10	288.81N	61.56W	2.40	59.86	40.34497121	-104.99157789
2800.00	31.20	347.970	2736.70	337.71N	71.98W	2.40	69.99	40.34510560	-104.99161428
2900.00	33.60	347.970	2821.13	390.11N	83.15W	2.40	80.85	40.34524961	-104.99165327
3000.00	34.07	347.970	2904.00	444.83N	94.81W	==>	92.19	40.34540001	-104.99169399
3100.00	34.07	347.970	2986.84	499.62N	106.49W	==>	103.55	40.34555059	-104.99173476

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 5067.2ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 66.270 degrees
Bottom hole distance is 7642.02 Feet on azimuth 66.27 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 5 (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)
3200.00	34.07	347.970	3069.67	554.42N	118.17W	==>	114.91	40.34570116	-104.99177552
3300.00	34.07	347.970	3152.51	609.21N	129.85W	==>	126.26	40.34585174	-104.99181629
3400.00	34.07	347.970	3235.34	664.00N	141.53W	==>	137.62	40.34600232	-104.99185706
3500.00	34.07	347.970	3318.18	718.79N	153.21W	==>	148.97	40.34615290	-104.99189783
3600.00	34.07	347.970	3401.01	773.58N	164.89W	==>	160.33	40.34630348	-104.99193860
3700.00	34.07	347.970	3483.85	828.37N	176.56W	==>	171.68	40.34645405	-104.99197937
3800.00	34.07	347.970	3566.68	883.16N	188.24W	==>	183.04	40.34660463	-104.99202014
3900.00	34.07	347.970	3649.52	937.95N	199.92W	==>	194.40	40.34675521	-104.99206091
4000.00	34.07	347.970	3732.35	992.74N	211.60W	==>	205.75	40.34690579	-104.99210169
4100.00	34.07	347.970	3815.18	1047.53N	223.28W	==>	217.11	40.34705637	-104.99214246
4200.00	34.07	347.970	3898.02	1102.32N	234.96W	==>	228.46	40.34720695	-104.99218323
4300.00	34.07	347.970	3980.85	1157.12N	246.63W	==>	239.82	40.34735752	-104.99222400
4400.00	34.07	347.970	4063.69	1211.91N	258.31W	==>	251.17	40.34750810	-104.99226477
4500.00	34.07	347.970	4146.52	1266.70N	269.99W	==>	262.53	40.34765868	-104.99230554
4600.00	34.07	347.970	4229.36	1321.49N	281.67W	==>	273.89	40.34780926	-104.99234631
4700.00	34.07	347.970	4312.19	1376.28N	293.35W	==>	285.24	40.34795984	-104.99238708
4800.00	34.07	347.970	4395.03	1431.07N	305.03W	==>	296.60	40.34811041	-104.99242786
4900.00	34.07	347.970	4477.86	1485.86N	316.71W	==>	307.95	40.34826099	-104.99246863
5000.00	34.07	347.970	4560.70	1540.65N	328.38W	==>	319.31	40.34841157	-104.99250940
5100.00	34.07	347.970	4643.53	1595.44N	340.06W	==>	330.66	40.34856215	-104.99255017
5200.00	34.07	347.970	4726.37	1650.23N	351.74W	==>	342.02	40.34871273	-104.99259095
5300.00	34.07	347.970	4809.20	1705.03N	363.42W	==>	353.38	40.34886330	-104.99263172
5400.00	34.07	347.970	4892.03	1759.82N	375.10W	==>	364.73	40.34901388	-104.99267249
5500.00	34.07	347.970	4974.87	1814.61N	386.78W	==>	376.09	40.34916446	-104.99271327
5600.00	34.07	347.970	5057.70	1869.40N	398.46W	==>	387.44	40.34931504	-104.99275404
5700.00	34.07	347.970	5140.54	1924.19N	410.13W	==>	398.80	40.34946561	-104.99279481
5800.00	34.07	347.970	5223.37	1978.98N	421.81W	==>	410.15	40.34961619	-104.99283559
5900.00	34.07	347.970	5306.21	2033.77N	433.49W	==>	421.51	40.34976677	-104.99287636
6000.00	34.07	347.970	5389.04	2088.56N	445.17W	==>	432.87	40.34991735	-104.99291714
6100.00	34.07	347.970	5471.88	2143.35N	456.85W	==>	444.22	40.35006793	-104.99295791
6200.00	34.07	347.970	5554.71	2198.14N	468.53W	==>	455.58	40.35021850	-104.99299869
6300.00	34.07	347.970	5637.55	2252.93N	480.20W	==>	466.93	40.35036908	-104.99303946
6400.00	34.07	347.970	5720.38	2307.73N	491.88W	==>	478.29	40.35051966	-104.99308024
6500.00	34.07	347.970	5803.21	2362.52N	503.56W	==>	489.64	40.35067024	-104.99312101
6600.00	34.07	347.970	5886.05	2417.31N	515.24W	==>	501.00	40.35082081	-104.99316179
6700.00	34.07	347.970	5968.88	2472.10N	526.92W	==>	512.36	40.35097139	-104.99320256
6800.00	34.07	347.970	6051.72	2526.89N	538.60W	==>	523.71	40.35112197	-104.99324334
6900.00	34.07	347.970	6134.55	2581.68N	550.28W	==>	535.07	40.35127255	-104.99328411
7000.00	34.07	347.970	6217.39	2636.47N	561.95W	==>	546.42	40.35142312	-104.99332489
7100.00	34.07	347.970	6300.22	2691.26N	573.63W	==>	557.78	40.35157370	-104.99336567
7200.00	33.52	2.450	6383.38	2746.28N	579.66W	10.00	574.40	40.35172482	-104.99338617
7300.00	35.18	19.970	6466.14	2801.09N	568.62W	10.00	606.56	40.35187508	-104.99334541
7400.00	39.08	35.270	6546.02	2854.03N	540.50W	10.00	653.61	40.35201996	-104.99324345
7500.00	44.64	47.770	6620.60	2903.51N	496.17W	10.00	714.10	40.35215507	-104.99308339
7600.00	51.30	57.830	6687.60	2948.01N	436.97W	10.00	786.20	40.35227630	-104.99287009
7700.00	58.68	66.100	6745.00	2986.19N	364.71W	10.00	867.72	40.35237997	-104.99261003
7800.00	66.50	73.120	6791.05	3016.89N	281.57W	10.00	956.18	40.35246293	-104.99231112
7900.00	74.60	79.340	6824.34	3039.17N	190.08W	10.00	1048.90	40.35252266	-104.99198243
8000.00	82.87	85.090	6843.87	3052.36N	93.03W	10.00	1143.06	40.35255733	-104.99163395
8100.00	90.00	89.850	6849.20	3056.16N	6.64E	==>	1235.83	40.35256618	-104.99127627
8200.00	90.00	89.850	6849.20	3056.43N	106.64E	==>	1327.49	40.35256535	-104.99091749
8300.00	90.00	89.850	6849.20	3056.70N	206.64E	==>	1419.14	40.35256451	-104.99055871
8400.00	90.00	89.850	6849.20	3056.97N	306.64E	==>	1510.80	40.35256367	-104.99019992
8500.00	90.00	89.850	6849.20	3057.24N	406.64E	==>	1602.45	40.35256284	-104.98984114
8600.00	90.00	89.850	6849.20	3057.51N	506.64E	==>	1694.11	40.35256200	-104.98948235
8700.00	90.00	89.850	6849.20	3057.78N	606.64E	==>	1785.76	40.35256116	-104.98912357
8800.00	90.00	89.850	6849.20	3058.05N	706.64E	==>	1877.42	40.35256032	-104.98876478
8900.00	90.00	89.850	6849.20	3058.32N	806.64E	==>	1969.07	40.35255948	-104.98840600

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Vertical Section is from 0.00N 0.00E on azimuth 66.270 degrees
Bottom hole distance is 7642.02 Feet on azimuth 66.27 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by IPT
Date Printed: 14-May-2018



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Well Design Combined Report
Wellbore: W FLASCHENRIEM 5 (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)
9000.00	90.00	89.850	6849.20	3058.59N	906.64E	==>	2060.73	40.35255863	-104.98804721
9100.00	90.00	89.850	6849.20	3058.86N	1006.64E	==>	2152.39	40.35255779	-104.98768843
9200.00	90.00	89.850	6849.20	3059.13N	1106.64E	==>	2244.04	40.35255694	-104.98732964
9300.00	90.00	89.850	6849.20	3059.40N	1206.64E	==>	2335.70	40.35255610	-104.98697086
9400.00	90.00	89.850	6849.20	3059.67N	1306.64E	==>	2427.35	40.35255525	-104.98661207
9500.00	90.00	89.850	6849.20	3059.94N	1406.64E	==>	2519.01	40.35255440	-104.98625329
9600.00	90.00	89.850	6849.20	3060.21N	1506.64E	==>	2610.66	40.35255355	-104.98589451
9700.00	90.00	89.850	6849.20	3060.48N	1606.64E	==>	2702.32	40.35255270	-104.98553572
9800.00	90.00	89.850	6849.20	3060.75N	1706.64E	==>	2793.97	40.35255185	-104.98517694
9900.00	90.00	89.850	6849.20	3061.02N	1806.64E	==>	2885.63	40.35255099	-104.98481815
10000.00	90.00	89.850	6849.20	3061.29N	1906.64E	==>	2977.28	40.35255014	-104.98445937
10100.00	90.00	89.850	6849.20	3061.56N	2006.63E	==>	3068.94	40.35254929	-104.98410058
10200.00	90.00	89.850	6849.20	3061.83N	2106.63E	==>	3160.59	40.35254843	-104.98374180
10300.00	90.00	89.850	6849.20	3062.10N	2206.63E	==>	3252.25	40.35254757	-104.98338301
10400.00	90.00	89.850	6849.20	3062.37N	2306.63E	==>	3343.91	40.35254671	-104.98302423
10500.00	90.00	89.850	6849.20	3062.64N	2406.63E	==>	3435.56	40.35254585	-104.98266545
10600.00	90.00	89.850	6849.20	3062.91N	2506.63E	==>	3527.22	40.35254499	-104.98230666
10700.00	90.00	89.850	6849.20	3063.18N	2606.63E	==>	3618.87	40.35254413	-104.98194788
10800.00	90.00	89.850	6849.20	3063.45N	2706.63E	==>	3710.53	40.35254327	-104.98158909
10900.00	90.00	89.850	6849.20	3063.72N	2806.63E	==>	3802.18	40.35254240	-104.98123031
11000.00	90.00	89.850	6849.20	3063.99N	2906.63E	==>	3893.84	40.35254154	-104.98087152
11100.00	90.00	89.850	6849.20	3064.26N	3006.63E	==>	3985.49	40.35254067	-104.98051274
11200.00	90.00	89.850	6849.20	3064.53N	3106.63E	==>	4077.15	40.35253980	-104.98015395
11300.00	90.00	89.850	6849.20	3064.80N	3206.63E	==>	4168.80	40.35253893	-104.97979517
11400.00	90.00	89.850	6849.20	3065.07N	3306.63E	==>	4260.46	40.35253807	-104.97943639
11500.00	90.00	89.850	6849.20	3065.34N	3406.63E	==>	4352.11	40.35253719	-104.97907760
11600.00	90.00	89.850	6849.20	3065.61N	3506.63E	==>	4443.77	40.35253632	-104.97871882
11700.00	90.00	89.850	6849.20	3065.88N	3606.63E	==>	4535.43	40.35253545	-104.97836003
11800.00	90.00	89.850	6849.20	3066.15N	3706.63E	==>	4627.08	40.35253457	-104.97800125
11900.00	90.00	89.850	6849.20	3066.42N	3806.63E	==>	4718.74	40.35253370	-104.97764246
12000.00	90.00	89.850	6849.20	3066.69N	3906.63E	==>	4810.39	40.35253282	-104.97728368
12100.00	90.00	89.850	6849.20	3066.96N	4006.63E	==>	4902.05	40.35253195	-104.97692490
12200.00	90.00	89.850	6849.20	3067.23N	4106.63E	==>	4993.70	40.35253107	-104.97656611
12300.00	90.00	89.850	6849.20	3067.50N	4206.63E	==>	5085.36	40.35253019	-104.97620733
12400.00	90.00	89.850	6849.20	3067.77N	4306.63E	==>	5177.01	40.35252931	-104.97584854
12500.00	90.00	89.850	6849.20	3068.04N	4406.63E	==>	5268.67	40.35252842	-104.97548976
12600.00	90.00	89.850	6849.20	3068.31N	4506.63E	==>	5360.32	40.35252754	-104.97513097
12700.00	90.00	89.850	6849.20	3068.58N	4606.63E	==>	5451.98	40.35252666	-104.97477219
12800.00	90.00	89.850	6849.20	3068.85N	4706.62E	==>	5543.63	40.35252577	-104.97441341
12900.00	90.00	89.850	6849.20	3069.12N	4806.62E	==>	5635.29	40.35252489	-104.97405462
13000.00	90.00	89.850	6849.20	3069.39N	4906.62E	==>	5726.95	40.35252400	-104.97369584
13100.00	90.00	89.850	6849.20	3069.66N	5006.62E	==>	5818.60	40.35252311	-104.97333705
13200.00	90.00	89.850	6849.20	3069.93N	5106.62E	==>	5910.26	40.35252222	-104.97297827
13300.00	90.00	89.850	6849.20	3070.20N	5206.62E	==>	6001.91	40.35252133	-104.97261948
13400.00	90.00	89.850	6849.20	3070.47N	5306.62E	==>	6093.57	40.35252044	-104.97226070
13500.00	90.00	89.850	6849.20	3070.74N	5406.62E	==>	6185.22	40.35251954	-104.97190192
13600.00	90.00	89.850	6849.20	3071.01N	5506.62E	==>	6276.88	40.35251865	-104.97154313
13700.00	90.00	89.850	6849.20	3071.28N	5606.62E	==>	6368.53	40.35251775	-104.97118435
13800.00	90.00	89.850	6849.20	3071.55N	5706.62E	==>	6460.19	40.35251686	-104.97082556
13900.00	90.00	89.850	6849.20	3071.82N	5806.62E	==>	6551.84	40.35251596	-104.97046678
14000.00	90.00	89.850	6849.20	3072.09N	5906.62E	==>	6643.50	40.35251506	-104.97010800
14100.00	90.00	89.850	6849.20	3072.36N	6006.62E	==>	6735.15	40.35251416	-104.96974921
14200.00	90.00	89.850	6849.20	3072.63N	6106.62E	==>	6826.81	40.35251326	-104.96939043
14300.00	90.00	89.850	6849.20	3072.90N	6206.62E	==>	6918.47	40.35251236	-104.96903164
14400.00	90.00	89.850	6849.20	3073.17N	6306.62E	==>	7010.12	40.35251146	-104.96867286
14500.00	90.00	89.850	6849.20	3073.44N	6406.62E	==>	7101.78	40.35251055	-104.96831408
14600.00	90.00	89.850	6849.20	3073.71N	6506.62E	==>	7193.43	40.35250965	-104.96795529
14700.00	90.00	89.850	6849.20	3073.98N	6606.62E	==>	7285.09	40.35250874	-104.96759651
14800.00	90.00	89.850	6849.20	3074.25N	6706.62E	==>	7376.74	40.35250783	-104.96723772

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 5067.2ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 66.270 degrees
Bottom hole distance is 7642.02 Feet on azimuth 66.27 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 5 (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	89.850	6849.20	3074.52N	6806.62E	==>	7468.40	40.35250692	-104.96687894
15000.00	90.00	89.850	6849.20	3074.79N	6906.62E	==>	7560.05	40.35250601	-104.96652016
15089.43	90.00	89.850	6849.20	3075.03N	6996.05E	==>	7642.02	40.35250520	-104.96619930

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 5067.2ft above Mean Sea Level)
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Targets							
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
FLASCHENRIEM 5-BHL	3075.03N	6996.05E	6849.20	40.35250520	-104.96619930	1371706.06	3148772.28
FLASCHENRIEM 5-LP	3056.12N	7.72W	6849.20	40.35256630	-104.99132780	1371687.15	3141768.82

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
645441	Planned	1500.00	1500.00	WdW Rate Gyro	Standard
645442	Planned	15089.43	6849.20	ISCWSA MWD	Rev 4 + SAG + FLT

Notes