

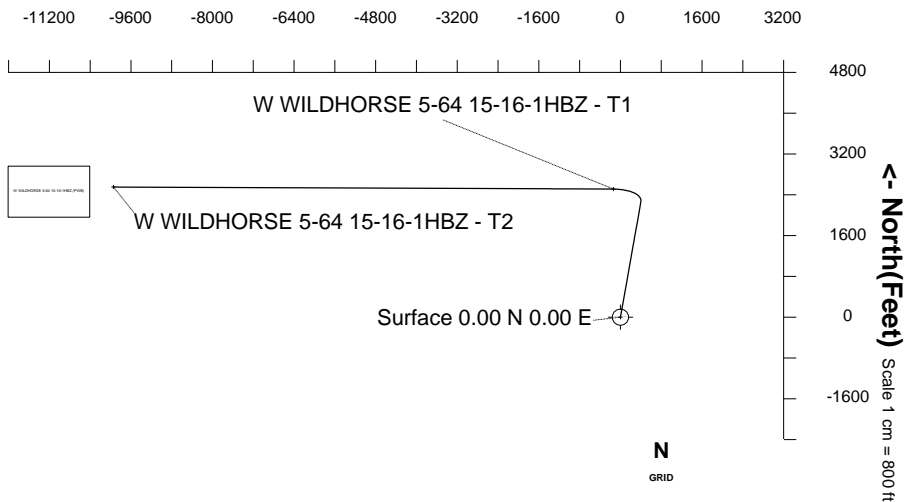


Highlands Natural Resources

Location	DJ Basin Southern Extension	Slot	WILDHORSE 5-64 15-16-1HBZ
Field	DJ Basin Southern Extension	Well	W WILDHORSE 5-64 15-16-1HBZ
Installation	HNR Arapahoe County Pad	Wellbore	W WILDHORSE 5-64 15-16-1HBZ (PWB)

Scale 1 cm = 800 ft

East (Feet) ->



Tie on - 0.00 Inc, 16.00 MD, 16.00 TVD, 0.00 VS

3DS Kick off Point - 0.00 Inc, 1516.00 MD, 1516.00 TVD, 0.00 VS

9 5/8in Surface Casing

End of Build - 24.71 Inc, 2751.67 MD, 2713.71 TVD, 19.88 VS

Jan-30-2017
 EMM-2015 [2000.0-2020.0] Dip: 66.55 deg Field: 52134.2 nT
 Lat: N39 36 54.0900 Long: W104 31 51.5568 Elev: 5936.00 ft
 Magnetic North is 8.61 deg East of True North
 GRID North is 0.61 deg East of True North
 To correct azimuth from True to GRID subtract 0.61 deg
 To correct azimuth from Magnetic to GRID add 8.00 deg

WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	16.00	0.00	0.00	16.00	S 0.00	W 0.00		0.00
KOP	1516.00	0.00	10.05	1516.00	S 0.00	W 0.00	0.00	0.00
End of Build	2751.67	24.71	10.05	2713.71	N 258.36	E 45.78	2.00	19.88
End of Hold	7638.58	24.71	10.05	7153.03	N 2270.15	E 402.24	0.00	174.72
Target W WILD...Z - T1	8531.66	89.66	270.23	7686.00	N 2512.45	W 138.08	10.50	758.31
T.D. & Target W W... T2	18338.36	89.66	270.23	7745.00	N 2552.20	W 9944.52	0.00	10266.80

End of Hold - 24.71 Inc, 7638.58 MD, 7153.03 TVD, 174.72 VS W WILDHORSE 5-64 15-16-1HBZ - T2

S/C Kick off Point - 89.66 Inc, 8531.66 MD, 7686.00 TVD, 758.31 VS

5 1/2in Production Casing

W WILDHORSE 5-64 15-16-1HBZ - T1

T.D. & End of Hold - 7745.00 TVD, 2552.20 N 9944.52 W

Scale 1 cm = 400 ft

True Vertical Depth (Feet)

Scale 1 cm = 400 ft

Vertical Section (Feet) ->

Azimuth 284.39 with reference 0.00 N, 0.00 E from WILDHORSE 5-64 15-16-1

Created by admin
 Date plotted 31-Jan-2017
 Plot reference is W WILDHORSE 5-64 15-16-1HBZ (PWB).
 Ref wellpath is W WILDHORSE 5-64 15-16-1HBZ (PWP#1).
 Coordinates are in Feet reference WILDHORSE 5-64 15-16-1HBZ.
 True Vertical Depths are reference Rig Datum.
 Measured Depths are reference Rig Datum.
 Rig Datum: Planned Datum #1
 Rig Datum to Mean Sea Level: 5952.00 ft.
 Plot North is aligned to GRID North.



SYSDRILL
Well Design Combined Report
Wellbore: W WILDHORSE 5-64 15-16-1HBZ (PWB)



Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
WILDHORSE 5-64 15-16-1HBZ	39.61502500	-104.53098800	1650357.1793	3272988.0267	0.00N	0.00E	0.00

Declination		
Date	Source	Time
Jan-30-2017	EMM-2015 [2000.0-2020.0]	15:10

Installation Details						
Name	Installation Position (Latitude)	Installation Position (Longitude)	Northing	Easting	Coord System Name	North Alignment
HNR Arapahoe County Pad	39.61502500	-104.53098800	1650357.1793	3272988.0267	CO83-CF 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]
16.00	0.00	0.000	16.00	-5936.00	0.00N	0.00E		0.00
1516.00	0.00	10.050	1516.00	-4436.00	0.00N	0.00E	==>	0.00
2751.67	24.71	10.050	2713.71	-3238.29	258.36N	45.78E	2.00	19.88
7638.58	24.71	10.050	7153.03	1201.03	2270.15N	402.24E	==>	174.72
8531.66	89.66	270.230	7686.00	1734.00	2512.45N	138.08W	10.50	758.31
18338.36	89.66	270.230	7745.00	1793.00	2552.20N	9944.52W	==>	10266.80

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	39.61502500	-104.53098800
16.00	0.00	0.000	16.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
1100.00	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
1300.00	0.00	0.000	1300.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
1400.00	0.00	0.000	1400.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
1500.00	0.00	0.000	1500.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
1516.00	0.00	10.050	1516.00	0.00N	0.00E	==>	0.00	39.61502500	-104.53098800
1616.00	2.00	10.050	1615.98	1.72N	0.30E	2.00	0.13	39.61502971	-104.53098685
1716.00	4.00	10.050	1715.84	6.87N	1.22E	2.00	0.53	39.61504383	-104.53098342
1816.00	6.00	10.050	1815.45	15.45N	2.74E	2.00	1.19	39.61506734	-104.53097770
1916.00	8.00	10.050	1914.70	27.45N	4.86E	2.00	2.11	39.61510022	-104.53096970
2016.00	10.00	10.050	2013.47	42.86N	7.59E	2.00	3.30	39.61514242	-104.53095943
2116.00	12.00	10.050	2111.62	61.64N	10.92E	2.00	4.74	39.61519390	-104.53094690
2216.00	14.00	10.050	2209.06	83.79N	14.85E	2.00	6.45	39.61525458	-104.53093213
2316.00	16.00	10.050	2305.64	109.27N	19.36E	2.00	8.41	39.61532441	-104.53091514
2416.00	18.00	10.050	2401.27	138.06N	24.46E	2.00	10.63	39.61540328	-104.53089595
2516.00	20.00	10.050	2495.82	170.12N	30.14E	2.00	13.09	39.61549111	-104.53087457
2616.00	22.00	10.050	2589.17	205.40N	36.39E	2.00	15.81	39.61558779	-104.53085105

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 5952.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 284.390 degrees
Bottom hole distance is 10266.80 Feet on azimuth 284.39 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 31-Jan-2017



SYSDRILL
Well Design Combined Report
Wellbore: W WILDHORSE 5-64 15-16-1HBZ (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)
2716.00	24.00	10.050	2681.21	243.88N	43.21E	2.00	18.77	39.61569320	-104.53082540
2816.00	24.71	10.050	2772.15	284.84N	50.47E	==>	21.92	39.61580545	-104.53079808
2916.00	24.71	10.050	2862.99	326.01N	57.76E	==>	25.09	39.61591824	-104.53077063
3016.00	24.71	10.050	2953.83	367.18N	65.06E	==>	28.26	39.61603104	-104.53074318
3116.00	24.71	10.050	3044.67	408.34N	72.35E	==>	31.43	39.61614383	-104.53071574
3216.00	24.71	10.050	3135.51	449.51N	79.65E	==>	34.60	39.61625663	-104.53068829
3316.00	24.71	10.050	3226.35	490.68N	86.94E	==>	37.76	39.61636942	-104.53066084
3416.00	24.71	10.050	3317.19	531.84N	94.24E	==>	40.93	39.61648221	-104.53063339
3516.00	24.71	10.050	3408.03	573.01N	101.53E	==>	44.10	39.61659501	-104.53060594
3616.00	24.71	10.050	3498.88	614.18N	108.82E	==>	47.27	39.61670780	-104.53057849
3716.00	24.71	10.050	3589.72	655.34N	116.12E	==>	50.44	39.61682060	-104.53055104
3816.00	24.71	10.050	3680.56	696.51N	123.41E	==>	53.61	39.61693339	-104.53052359
3916.00	24.71	10.050	3771.40	737.68N	130.71E	==>	56.77	39.61704618	-104.53049614
4016.00	24.71	10.050	3862.24	778.85N	138.00E	==>	59.94	39.61715898	-104.53046869
4116.00	24.71	10.050	3953.08	820.01N	145.29E	==>	63.11	39.61727177	-104.53044124
4216.00	24.71	10.050	4043.92	861.18N	152.59E	==>	66.28	39.61738457	-104.53041380
4316.00	24.71	10.050	4134.76	902.35N	159.88E	==>	69.45	39.61749736	-104.53038635
4416.00	24.71	10.050	4225.60	943.51N	167.18E	==>	72.62	39.61761015	-104.53035890
4516.00	24.71	10.050	4316.44	984.68N	174.47E	==>	75.78	39.61772295	-104.53033145
4616.00	24.71	10.050	4407.29	1025.85N	181.77E	==>	78.95	39.61783574	-104.53030400
4716.00	24.71	10.050	4498.13	1067.01N	189.06E	==>	82.12	39.61794853	-104.53027655
4816.00	24.71	10.050	4588.97	1108.18N	196.35E	==>	85.29	39.61806133	-104.53024910
4916.00	24.71	10.050	4679.81	1149.35N	203.65E	==>	88.46	39.61817412	-104.53022165
5016.00	24.71	10.050	4770.65	1190.51N	210.94E	==>	91.63	39.61828692	-104.53019420
5116.00	24.71	10.050	4861.49	1231.68N	218.24E	==>	94.80	39.61839971	-104.53016675
5216.00	24.71	10.050	4952.33	1272.85N	225.53E	==>	97.96	39.61851250	-104.53013930
5316.00	24.71	10.050	5043.17	1314.01N	232.82E	==>	101.13	39.61862530	-104.53011185
5416.00	24.71	10.050	5134.01	1355.18N	240.12E	==>	104.30	39.61873809	-104.53008439
5516.00	24.71	10.050	5224.85	1396.35N	247.41E	==>	107.47	39.61885089	-104.53005694
5616.00	24.71	10.050	5315.70	1437.51N	254.71E	==>	110.64	39.61896368	-104.53002949
5716.00	24.71	10.050	5406.54	1478.68N	262.00E	==>	113.81	39.61907647	-104.53000204
5816.00	24.71	10.050	5497.38	1519.85N	269.30E	==>	116.97	39.61918927	-104.52997459
5916.00	24.71	10.050	5588.22	1561.01N	276.59E	==>	120.14	39.61930206	-104.52994714
6016.00	24.71	10.050	5679.06	1602.18N	283.88E	==>	123.31	39.61941485	-104.52991969
6116.00	24.71	10.050	5769.90	1643.35N	291.18E	==>	126.48	39.61952765	-104.52989224
6216.00	24.71	10.050	5860.74	1684.52N	298.47E	==>	129.65	39.61964044	-104.52986479
6316.00	24.71	10.050	5951.58	1725.68N	305.77E	==>	132.82	39.61975324	-104.52983734
6416.00	24.71	10.050	6042.42	1766.85N	313.06E	==>	135.98	39.61986603	-104.52980988
6516.00	24.71	10.050	6133.26	1808.02N	320.35E	==>	139.15	39.61997882	-104.52978243
6616.00	24.71	10.050	6224.11	1849.18N	327.65E	==>	142.32	39.62009162	-104.52975498
6716.00	24.71	10.050	6314.95	1890.35N	334.94E	==>	145.49	39.62020441	-104.52972753
6816.00	24.71	10.050	6405.79	1931.52N	342.24E	==>	148.66	39.62031720	-104.52970008
6916.00	24.71	10.050	6496.63	1972.68N	349.53E	==>	151.83	39.62043000	-104.52967263
7016.00	24.71	10.050	6587.47	2013.85N	356.83E	==>	154.99	39.62054279	-104.52964517
7116.00	24.71	10.050	6678.31	2055.02N	364.12E	==>	158.16	39.62065558	-104.52961772
7216.00	24.71	10.050	6769.15	2096.18N	371.41E	==>	161.33	39.62076838	-104.52959027
7316.00	24.71	10.050	6859.99	2137.35N	378.71E	==>	164.50	39.62088117	-104.52956282
7416.00	24.71	10.050	6950.83	2178.52N	386.00E	==>	167.67	39.62099397	-104.52953536
7516.00	24.71	10.050	7041.67	2219.68N	393.30E	==>	170.84	39.62110676	-104.52950791
7616.00	24.71	10.050	7132.52	2260.85N	400.59E	==>	174.00	39.62121955	-104.52948046
7716.00	24.69	350.520	7223.48	2302.08N	402.40E	10.50	182.50	39.62133268	-104.52947248
7816.00	28.13	328.050	7313.26	2342.80N	386.44E	10.50	208.08	39.62144492	-104.52952758
7916.00	34.35	311.630	7398.87	2381.65N	352.78E	10.50	250.34	39.62155256	-104.52964557
8016.00	42.12	300.160	7477.46	2417.34N	302.56E	10.50	307.86	39.62165200	-104.52982250
8116.00	50.73	291.830	7546.39	2448.67N	237.45E	10.50	378.72	39.62173991	-104.53005244
8216.00	59.80	285.370	7603.34	2474.59N	159.63E	10.50	460.54	39.62181335	-104.53032769

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5952.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 284.390 degrees
Bottom hole distance is 10266.80 Feet on azimuth 284.39 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 31-Jan-2017



SYSDRILL
Well Design Combined Report
Wellbore: W WILDHORSE 5-64 15-16-1HBZ (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)
8316.00	69.13	280.030	7646.42	2494.23N	71.70E	10.50	550.58	39.62186985	-104.53063903
8416.00	78.61	275.320	7674.19	2506.94N	23.37W	10.50	645.83	39.62190753	-104.53097604
8516.00	88.16	270.910	7685.70	2512.29N	122.42W	10.50	743.11	39.62192511	-104.53132743
8616.00	89.66	270.230	7686.51	2512.79N	222.42W	==>	840.08	39.62192941	-104.53168235
8716.00	89.66	270.230	7687.11	2513.20N	322.41W	==>	937.04	39.62193344	-104.53203729
8816.00	89.66	270.230	7687.71	2513.60N	422.41W	==>	1034.00	39.62193748	-104.53239223
8916.00	89.66	270.230	7688.31	2514.01N	522.41W	==>	1130.96	39.62194152	-104.53274717
9016.00	89.66	270.230	7688.91	2514.41N	622.41W	==>	1227.92	39.62194555	-104.53102111
9116.00	89.66	270.230	7689.52	2514.82N	722.40W	==>	1324.88	39.62194959	-104.53345705
9216.00	89.66	270.230	7690.12	2515.22N	822.40W	==>	1421.84	39.62195362	-104.53381199
9316.00	89.66	270.230	7690.72	2515.63N	922.40W	==>	1518.80	39.62195765	-104.53416693
9416.00	89.66	270.230	7691.32	2516.03N	1022.40W	==>	1615.76	39.62196168	-104.53452187
9516.00	89.66	270.230	7691.92	2516.44N	1122.39W	==>	1712.72	39.62196571	-104.53487681
9616.00	89.66	270.230	7692.52	2516.84N	1222.39W	==>	1809.68	39.62196974	-104.53523175
9716.00	89.66	270.230	7693.13	2517.25N	1322.39W	==>	1906.63	39.62197377	-104.53558669
9816.00	89.66	270.230	7693.73	2517.66N	1422.38W	==>	2003.59	39.62197779	-104.53594163
9916.00	89.66	270.230	7694.33	2518.06N	1522.38W	==>	2100.55	39.62198182	-104.53629657
10016.00	89.66	270.230	7694.93	2518.47N	1622.38W	==>	2197.51	39.62198584	-104.53665151
10116.00	89.66	270.230	7695.53	2518.87N	1722.38W	==>	2294.47	39.62198987	-104.53700645
10216.00	89.66	270.230	7696.13	2519.28N	1822.37W	==>	2391.43	39.62199389	-104.53736139
10316.00	89.66	270.230	7696.74	2519.68N	1922.37W	==>	2488.39	39.62199791	-104.53771633
10416.00	89.66	270.230	7697.34	2520.09N	2022.37W	==>	2585.35	39.62200193	-104.53807127
10516.00	89.66	270.230	7697.94	2520.49N	2122.37W	==>	2682.31	39.62200595	-104.53842621
10616.00	89.66	270.230	7698.54	2520.90N	2222.36W	==>	2779.27	39.62200997	-104.53878114
10716.00	89.66	270.230	7699.14	2521.30N	2322.36W	==>	2876.23	39.62201398	-104.53913608
10816.00	89.66	270.230	7699.74	2521.71N	2422.36W	==>	2973.19	39.62201800	-104.53949102
10916.00	89.66	270.230	7700.34	2522.11N	2522.36W	==>	3070.14	39.62202201	-104.53984596
11016.00	89.66	270.230	7700.95	2522.52N	2622.35W	==>	3167.10	39.62202603	-104.54020091
11116.00	89.66	270.230	7701.55	2522.93N	2722.35W	==>	3264.06	39.62203004	-104.54055585
11216.00	89.66	270.230	7702.15	2523.33N	2822.35W	==>	3361.02	39.62203405	-104.54091079
11316.00	89.66	270.230	7702.75	2523.74N	2922.35W	==>	3457.98	39.62203806	-104.54126573
11416.00	89.66	270.230	7703.35	2524.14N	3022.34W	==>	3554.94	39.62204207	-104.54162067
11516.00	89.66	270.230	7703.95	2524.55N	3122.34W	==>	3651.90	39.62204608	-104.54197561
11616.00	89.66	270.230	7704.56	2524.95N	3222.34W	==>	3748.86	39.62205009	-104.54233055
11716.00	89.66	270.230	7705.16	2525.36N	3322.33W	==>	3845.82	39.62205409	-104.54268549
11816.00	89.66	270.230	7705.76	2525.76N	3422.33W	==>	3942.78	39.62205810	-104.54304043
11916.00	89.66	270.230	7706.36	2526.17N	3522.33W	==>	4039.74	39.62206210	-104.54339537
12016.00	89.66	270.230	7706.96	2526.57N	3622.33W	==>	4136.70	39.62206610	-104.54375031
12116.00	89.66	270.230	7707.56	2526.98N	3722.32W	==>	4233.65	39.62207011	-104.54410525
12216.00	89.66	270.230	7708.17	2527.38N	3822.32W	==>	4330.61	39.62207411	-104.54446019
12316.00	89.66	270.230	7708.77	2527.79N	3922.32W	==>	4427.57	39.62207811	-104.54481513
12416.00	89.66	270.230	7709.37	2528.19N	4022.32W	==>	4524.53	39.62208210	-104.54517007
12516.00	89.66	270.230	7709.97	2528.60N	4122.31W	==>	4621.49	39.62208610	-104.54552501
12616.00	89.66	270.230	7710.57	2529.01N	4222.31W	==>	4718.45	39.62209010	-104.54587995
12716.00	89.66	270.230	7711.17	2529.41N	4322.31W	==>	4815.41	39.62209409	-104.54623489
12816.00	89.66	270.230	7711.78	2529.82N	4422.31W	==>	4912.37	39.62209809	-104.54658983
12916.00	89.66	270.230	7712.38	2530.22N	4522.30W	==>	5009.33	39.62210208	-104.54694477
13016.00	89.66	270.230	7712.98	2530.63N	4622.30W	==>	5106.29	39.62210607	-104.54729972
13116.00	89.66	270.230	7713.58	2531.03N	4722.30W	==>	5203.25	39.62211006	-104.54765466
13216.00	89.66	270.230	7714.18	2531.44N	4822.30W	==>	5300.21	39.62211405	-104.54800960
13316.00	89.66	270.230	7714.78	2531.84N	4922.29W	==>	5397.16	39.62211804	-104.54836454
13416.00	89.66	270.230	7715.39	2532.25N	5022.29W	==>	5494.12	39.62212203	-104.54871948
13516.00	89.66	270.230	7715.99	2532.65N	5122.29W	==>	5591.08	39.62212602	-104.54907442
13616.00	89.66	270.230	7716.59	2533.06N	5222.28W	==>	5688.04	39.62213000	-104.54942936
13716.00	89.66	270.230	7717.19	2533.46N	5322.28W	==>	5785.00	39.62213399	-104.54978430

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Vertical Section is from 0.00N 0.00E on azimuth 284.390 degrees
Bottom hole distance is 10266.80 Feet on azimuth 284.39 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 31-Jan-2017



SYSDRILL
Well Design Combined Report
Wellbore: W WILDHORSE 5-64 15-16-1HBZ (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)
13816.00	89.66	270.230	7717.79	2533.87N	5422.28W	==>	5881.96	39.62213797	-104.55013924
13916.00	89.66	270.230	7718.39	2534.28N	5522.28W	==>	5978.92	39.62214195	-104.55049419
14016.00	89.66	270.230	7719.00	2534.68N	5622.27W	==>	6075.88	39.62214594	-104.55084913
14116.00	89.66	270.230	7719.60	2535.09N	5722.27W	==>	6172.84	39.62214992	-104.55120407
14216.00	89.66	270.230	7720.20	2535.49N	5822.27W	==>	6269.80	39.62215390	-104.55155901
14316.00	89.66	270.230	7720.80	2535.90N	5922.27W	==>	6366.76	39.62215787	-104.55191395
14416.00	89.66	270.230	7721.40	2536.30N	6022.26W	==>	6463.71	39.62216185	-104.55226889
14516.00	89.66	270.230	7722.00	2536.71N	6122.26W	==>	6560.67	39.62216583	-104.55262383
14616.00	89.66	270.230	7722.61	2537.11N	6222.26W	==>	6657.63	39.62216980	-104.55297878
14716.00	89.66	270.230	7723.21	2537.52N	6322.26W	==>	6754.59	39.62217378	-104.55333372
14816.00	89.66	270.230	7723.81	2537.92N	6422.25W	==>	6851.55	39.62217775	-104.55368866
14916.00	89.66	270.230	7724.41	2538.33N	6522.25W	==>	6948.51	39.62218172	-104.55404360
15016.00	89.66	270.230	7725.01	2538.73N	6622.25W	==>	7045.47	39.62218569	-104.55439854
15116.00	89.66	270.230	7725.61	2539.14N	6722.25W	==>	7142.43	39.62218966	-104.55475348
15216.00	89.66	270.230	7726.21	2539.54N	6822.24W	==>	7239.39	39.62219363	-104.55510843
15316.00	89.66	270.230	7726.82	2539.95N	6922.24W	==>	7336.35	39.62219760	-104.55546337
15416.00	89.66	270.230	7727.42	2540.36N	7022.24W	==>	7433.31	39.62220156	-104.55581831
15516.00	89.66	270.230	7728.02	2540.76N	7122.23W	==>	7530.27	39.62220553	-104.55617325
15616.00	89.66	270.230	7728.62	2541.17N	7222.23W	==>	7627.22	39.62220949	-104.55652819
15716.00	89.66	270.230	7729.22	2541.57N	7322.23W	==>	7724.18	39.62221345	-104.55688313
15816.00	89.66	270.230	7729.82	2541.98N	7422.23W	==>	7821.14	39.62221742	-104.55723808
15916.00	89.66	270.230	7730.43	2542.38N	7522.22W	==>	7918.10	39.62222138	-104.55759302
16016.00	89.66	270.230	7731.03	2542.79N	7622.22W	==>	8015.06	39.62222534	-104.55794796
16116.00	89.66	270.230	7731.63	2543.19N	7722.22W	==>	8112.02	39.62222930	-104.55830290
16216.00	89.66	270.230	7732.23	2543.60N	7822.22W	==>	8208.98	39.62223325	-104.55865785
16316.00	89.66	270.230	7732.83	2544.00N	7922.21W	==>	8305.94	39.62223721	-104.55901279
16416.00	89.66	270.230	7733.43	2544.41N	8022.21W	==>	8402.90	39.62224117	-104.55936773
16516.00	89.66	270.230	7734.04	2544.81N	8122.21W	==>	8499.86	39.62224512	-104.55972267
16616.00	89.66	270.230	7734.64	2545.22N	8222.21W	==>	8596.82	39.62224908	-104.56007761
16716.00	89.66	270.230	7735.24	2545.63N	8322.20W	==>	8693.78	39.62225303	-104.56043256
16816.00	89.66	270.230	7735.84	2546.03N	8422.20W	==>	8790.73	39.62225698	-104.56078750
16916.00	89.66	270.230	7736.44	2546.44N	8522.20W	==>	8887.69	39.62226093	-104.56114244
17016.00	89.66	270.230	7737.04	2546.84N	8622.20W	==>	8984.65	39.62226488	-104.56149738
17116.00	89.66	270.230	7737.65	2547.25N	8722.19W	==>	9081.61	39.62226883	-104.56185233
17216.00	89.66	270.230	7738.25	2547.65N	8822.19W	==>	9178.57	39.62227277	-104.56220727
17316.00	89.66	270.230	7738.85	2548.06N	8922.19W	==>	9275.53	39.62227672	-104.56256221
17416.00	89.66	270.230	7739.45	2548.46N	9022.18W	==>	9372.49	39.62228066	-104.56291715
17516.00	89.66	270.230	7740.05	2548.87N	9122.18W	==>	9469.45	39.62228461	-104.56327210
17616.00	89.66	270.230	7740.65	2549.27N	9222.18W	==>	9566.41	39.62228855	-104.56362704
17716.00	89.66	270.230	7741.26	2549.68N	9322.18W	==>	9663.37	39.62229249	-104.56398198
17816.00	89.66	270.230	7741.86	2550.08N	9422.17W	==>	9760.33	39.62229643	-104.56433693
17916.00	89.66	270.230	7742.46	2550.49N	9522.17W	==>	9857.29	39.62230037	-104.56469187
18016.00	89.66	270.230	7743.06	2550.89N	9622.17W	==>	9954.24	39.62230431	-104.56504681
18116.00	89.66	270.230	7743.66	2551.30N	9722.17W	==>	10051.20	39.62230825	-104.56540175
18216.00	89.66	270.230	7744.26	2551.71N	9822.16W	==>	10148.16	39.62231219	-104.56575670
18316.00	89.66	270.230	7744.87	2552.11N	9922.16W	==>	10245.12	39.62231612	-104.56611164
18338.36	89.66	270.230	7745.00	2552.20N	9944.52W	==>	10266.80	39.62231700	-104.56619100

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Targets							
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
W WILDHORSE 5-64 15-16-1HBZ - T1	2512.45N	138.08W	7686.00	39.62192600	-104.53138300	1652869.56	3272849.95
W WILDHORSE 5-64 15-16-1HBZ - T2	2552.20N	9944.52W	7745.00	39.62231700	-104.56619100	1652909.31	3263043.77

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
530357	Planned	1516.00	1516.00	WdW Rate Gyro	Standard
530356	Planned	18338.36	7745.00	ISCWSA MWD	Rev 4 + SAG + FLT

Notes