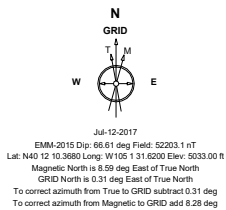


# Cub Creek Energy, LLC

<b>Location</b>	<b>Weld County, CO</b>	<b>Slot</b>	<b>OLANDER 6</b>
<b>Field</b>	<b>WATTENBERG</b>	<b>Well</b>	<b>OLANDER 6</b>
<b>Installation</b>	<b>Olander Pad Rework 04-09-2019</b>	<b>Wellbore</b>	<b>OLANDER 6 (PWB)</b>

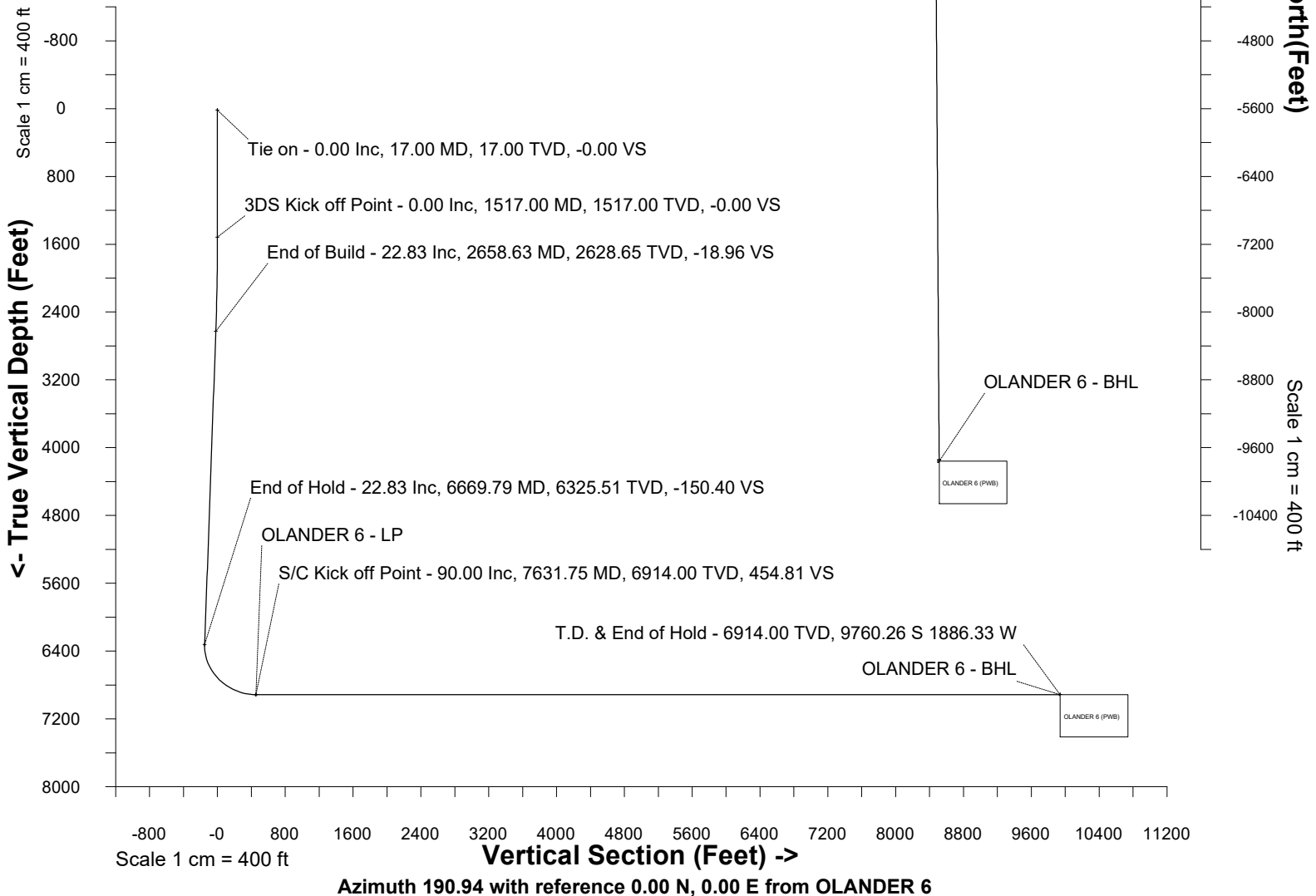
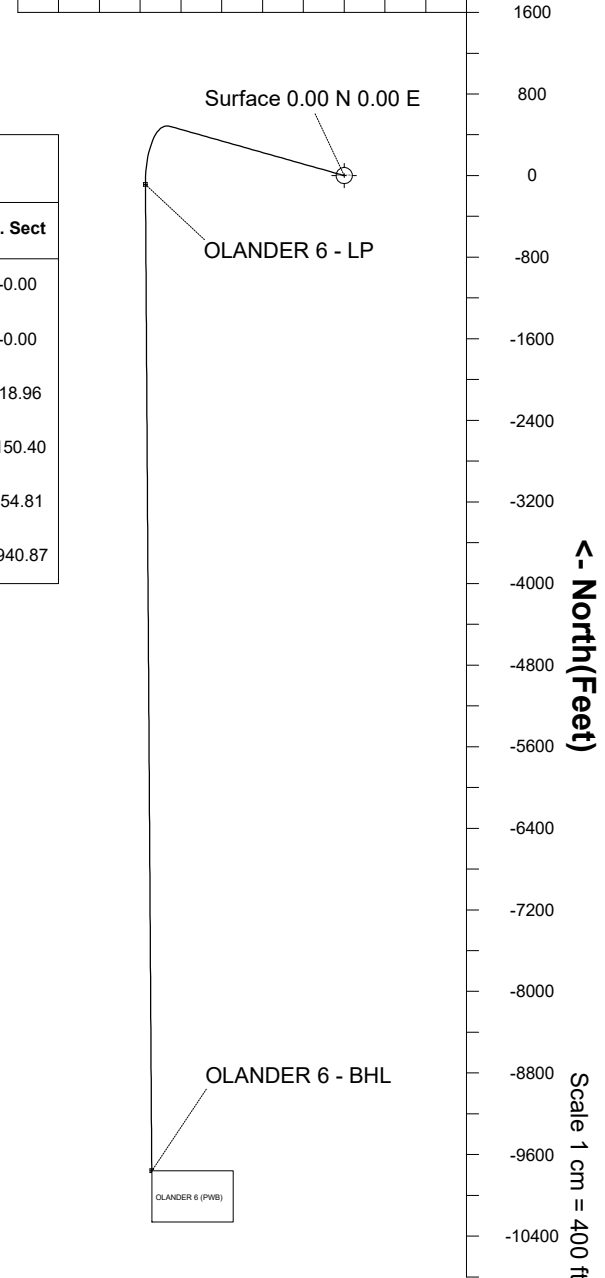


Created by sean.dolfinger  
 Date plotted 11-Apr-2019  
 Plot reference is OLANDER 6 (PWB).  
 Ref wellpath is OLANDER 6 (PWP#1).  
 Coordinates are in Feet reference OLANDER 6.  
 True Vertical Depths are reference Rig Datum.  
 Measured Depths are reference Rig Datum.  
 Rig Datum: Planned Datum #1  
 Rig Datum to Mean Sea Level: 5049.00 ft.  
 Plot North is aligned to GRID North.

Scale 1 cm = 400 ft **East (Feet) ->**

-3200 -2400 -1600 -800 -0 800

WELL PROFILE DATA								
Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	17.00	0.00	0.00	17.00	S 0.00	W 0.00		-0.00
KOP	1517.00	0.00	285.78	1517.00	S 0.00	W 0.00	0.00	-0.00
End of Build	2658.63	22.83	285.78	2628.65	N 61.06	W 216.01	2.00	-18.96
End of Hold	6669.79	22.83	285.78	6325.51	N 484.41	W 1713.82	0.00	-150.40
Target OLANDER 6 - LP	7631.75	90.00	179.63	6914.00	S 86.71	W 1948.17	10.00	454.81
T.D. & Target OLA...BHL	17305.49	90.00	179.63	6914.00	S 9760.26	W 1886.33	0.00	9940.87



SYSDRILL  
Well Design Combined Report  
Wellbore: OLANDER 6 (PWB)



Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
OLANDER 6	40.20281000	-105.02529000	1317081.0133	3132595.5742	25.26S	44.83E	0.00

Declination		
Date	Source	Time
Jul-12-2017	EMM-2015	14:01

Installation Details						
Name	Installation Position (Latitude)	Installation Position (Longitude)	Northing	Easting	Coord System Name	North Alignment
Olander Pad Rework 04-09-2019	40.20288000	-105.02545000	1317106.2735	3132550.7471	NAD83 Based Colorado State Planes, Northern Zone, US Feet	Grid

Summary Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	Vertical Depth SS	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
17.00	0.00	0.00	17.00	-5032.00	0.00N	0.00E		0.00
1517.00	0.00	285.78	1517.00	-3532.00	0.00N	0.00E	==>	0.00
2658.63	22.83	285.78	2628.65	-2420.35	61.06N	216.01W	2.00	-18.96
6669.79	22.83	285.78	6325.51	1276.51	484.41N	1713.82W	==>	-150.40
7631.75	90.00	179.63	6914.00	1865.00	86.71S	1948.17W	10.00	454.81
17305.49	90.00	179.63	6914.00	1865.00	9760.26S	1886.33W	==>	9940.87

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	40.20281000	-105.02529000
17.00	0.00	0.00	17.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
100.00	0.00	0.00	100.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
200.00	0.00	0.00	200.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
300.00	0.00	0.00	300.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
400.00	0.00	0.00	400.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
500.00	0.00	0.00	500.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
600.00	0.00	0.00	600.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
700.00	0.00	0.00	700.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
800.00	0.00	0.00	800.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
900.00	0.00	0.00	900.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
1000.00	0.00	0.00	1000.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
1100.00	0.00	0.00	1100.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
1200.00	0.00	0.00	1200.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
1300.00	0.00	0.00	1300.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
1400.00	0.00	0.00	1400.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
1500.00	0.00	0.00	1500.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
1517.00	0.00	285.78	1517.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02529000
1600.00	1.66	285.78	1599.99	0.33N	1.16W	2.00	-0.10	40.20281091	-105.02529414
1700.00	3.66	285.78	1699.88	1.59N	5.62W	2.00	-0.49	40.20281445	-105.02531010
1800.00	5.66	285.78	1799.54	3.80N	13.44W	2.00	-1.18	40.20282063	-105.02533804
1900.00	7.66	285.78	1898.86	6.95N	24.60W	2.00	-2.16	40.20282945	-105.02537793
2000.00	9.66	285.78	1997.71	11.05N	39.09W	2.00	-3.43	40.20284090	-105.02542972
2100.00	11.66	285.78	2095.98	16.08N	56.89W	2.00	-4.99	40.20285497	-105.02549335
2200.00	13.66	285.78	2193.55	22.04N	77.98W	2.00	-6.84	40.20287165	-105.02556873
2300.00	15.66	285.78	2290.29	28.92N	102.33W	2.00	-8.98	40.20289090	-105.02565578
2400.00	17.66	285.78	2386.09	36.72N	129.92W	2.00	-11.40	40.20291271	-105.02575439
2500.00	19.66	285.78	2480.82	45.42N	160.70W	2.00	-14.10	40.20293704	-105.02586444
2600.00	21.66	285.78	2574.39	55.02N	194.66W	2.00	-17.08	40.20296388	-105.02598579
2658.63	22.83	285.78	2628.65	61.06N	216.01W	2.00	-18.96	40.20298077	-105.02606214
2700.00	22.83	285.78	2666.78	65.42N	231.46W	==>	-20.31	40.20299298	-105.02611736
2800.00	22.83	285.78	2758.95	75.98N	268.80W	==>	-23.59	40.20302250	-105.02625084

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 5049.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 190.94 degrees  
Bottom hole distance is 9940.87 Feet on azimuth 190.94 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by  
Date Printed: 11-Apr-2019

SYSDRILL  
Well Design Combined Report  
Wellbore: OLANDER 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)
2900.00	22.83	285.78	2851.11	86.53N	306.14W	==>	-26.87	40.20305202	-105.02638431
3000.00	22.83	285.78	2943.27	97.09N	343.49W	==>	-30.14	40.20308154	-105.02651779
3100.00	22.83	285.78	3035.44	107.64N	380.83W	==>	-33.42	40.20311106	-105.02665127
3200.00	22.83	285.78	3127.60	118.19N	418.17W	==>	-36.70	40.20314057	-105.02678474
3300.00	22.83	285.78	3219.77	128.75N	455.51W	==>	-39.98	40.20317009	-105.02691822
3400.00	22.83	285.78	3311.93	139.30N	492.85W	==>	-43.25	40.20319961	-105.02705169
3500.00	22.83	285.78	3404.10	149.86N	530.19W	==>	-46.53	40.20322913	-105.02718517
3600.00	22.83	285.78	3496.26	160.41N	567.53W	==>	-49.81	40.20325865	-105.02731865
3700.00	22.83	285.78	3588.42	170.97N	604.87W	==>	-53.08	40.20328816	-105.02745212
3800.00	22.83	285.78	3680.59	181.52N	642.21W	==>	-56.36	40.20331768	-105.02758560
3900.00	22.83	285.78	3772.75	192.08N	679.55W	==>	-59.64	40.20334720	-105.02771908
4000.00	22.83	285.78	3864.92	202.63N	716.89W	==>	-62.91	40.20337672	-105.02785255
4100.00	22.83	285.78	3957.08	213.18N	754.24W	==>	-66.19	40.20340623	-105.02798603
4200.00	22.83	285.78	4049.25	223.74N	791.58W	==>	-69.47	40.20343575	-105.02811951
4300.00	22.83	285.78	4141.41	234.29N	828.92W	==>	-72.75	40.20346527	-105.02825299
4400.00	22.83	285.78	4233.57	244.85N	866.26W	==>	-76.02	40.20349478	-105.02838646
4500.00	22.83	285.78	4325.74	255.40N	903.60W	==>	-79.30	40.20352430	-105.02851994
4600.00	22.83	285.78	4417.90	265.96N	940.94W	==>	-82.58	40.20355382	-105.02865342
4700.00	22.83	285.78	4510.07	276.51N	978.28W	==>	-85.85	40.20358333	-105.02878690
4800.00	22.83	285.78	4602.23	287.07N	1015.62W	==>	-89.13	40.20361285	-105.02892037
4900.00	22.83	285.78	4694.40	297.62N	1052.96W	==>	-92.41	40.20364236	-105.02905385
5000.00	22.83	285.78	4786.56	308.17N	1090.30W	==>	-95.68	40.20367188	-105.02918733
5100.00	22.83	285.78	4878.72	318.73N	1127.65W	==>	-98.96	40.20370139	-105.02932081
5200.00	22.83	285.78	4970.89	329.28N	1164.99W	==>	-102.24	40.20373091	-105.02945429
5300.00	22.83	285.78	5063.05	339.84N	1202.33W	==>	-105.52	40.20376043	-105.02958777
5400.00	22.83	285.78	5155.22	350.39N	1239.67W	==>	-108.79	40.20378994	-105.02972124
5500.00	22.83	285.78	5247.38	360.95N	1277.01W	==>	-112.07	40.20381945	-105.02985472
5600.00	22.83	285.78	5339.55	371.50N	1314.35W	==>	-115.35	40.20384897	-105.02998820
5700.00	22.83	285.78	5431.71	382.05N	1351.69W	==>	-118.62	40.20387848	-105.03012168
5800.00	22.83	285.78	5523.87	392.61N	1389.03W	==>	-121.90	40.20390800	-105.03025516
5900.00	22.83	285.78	5616.04	403.16N	1426.37W	==>	-125.18	40.20393751	-105.03038864
6000.00	22.83	285.78	5708.20	413.72N	1463.71W	==>	-128.45	40.20396703	-105.03052212
6100.00	22.83	285.78	5800.37	424.27N	1501.05W	==>	-131.73	40.20399654	-105.03065560
6200.00	22.83	285.78	5892.53	434.83N	1538.40W	==>	-135.01	40.20402605	-105.03078908
6300.00	22.83	285.78	5984.70	445.38N	1575.74W	==>	-138.29	40.20405557	-105.03092256
6400.00	22.83	285.78	6076.86	455.94N	1613.08W	==>	-141.56	40.20408508	-105.03105604
6500.00	22.83	285.78	6169.02	466.49N	1650.42W	==>	-144.84	40.20411460	-105.03118952
6600.00	22.83	285.78	6261.19	477.04N	1687.76W	==>	-148.12	40.20414411	-105.03132300
6669.79	22.83	285.78	6325.51	484.41N	1713.82W	==>	-150.40	40.20416470	-105.03141615
6700.00	22.24	278.05	6353.42	486.81N	1725.12W	10.00	-150.61	40.20417144	-105.03145657
6800.00	23.00	251.93	6445.96	483.38N	1762.53W	10.00	-140.15	40.20416260	-105.03159054
6900.00	27.46	230.74	6536.58	462.68N	1799.04W	10.00	-112.90	40.20410630	-105.03172167
7000.00	34.18	216.19	6622.54	425.33N	1833.57W	10.00	-69.68	40.20400427	-105.03184596
7100.00	42.09	206.23	6701.20	372.46N	1865.04W	10.00	-11.79	40.20385961	-105.03195965
7200.00	50.63	199.01	6770.20	305.68N	1892.52W	10.00	58.99	40.20367670	-105.03205927
7300.00	59.52	193.41	6827.42	227.02N	1915.16W	10.00	140.51	40.20346111	-105.03214181
7400.00	68.60	188.75	6871.14	138.87N	1932.28W	10.00	230.31	40.20321939	-105.03220475
7500.00	77.80	184.65	6900.02	43.91N	1943.35W	10.00	325.65	40.20295888	-105.03224618
7600.00	87.06	180.82	6913.18	54.98S	1948.04W	10.00	423.63	40.20268750	-105.03226485
7631.75	90.00	179.63	6914.00	86.71S	1948.17W	10.00	454.81	40.20260040	-105.03226590
7700.00	90.00	179.63	6914.00	154.96S	1947.73W	==>	521.74	40.20241304	-105.03226563
7800.00	90.00	179.63	6914.00	254.96S	1947.09W	==>	619.80	40.20213854	-105.03226523
7900.00	90.00	179.63	6914.00	354.96S	1946.45W	==>	717.86	40.20186404	-105.03226483
8000.00	90.00	179.63	6914.00	454.96S	1945.81W	==>	815.92	40.20158954	-105.03226443
8100.00	90.00	179.63	6914.00	554.96S	1945.18W	==>	913.98	40.20131505	-105.03226403
8200.00	90.00	179.63	6914.00	654.95S	1944.54W	==>	1012.04	40.20104055	-105.03226363
8300.00	90.00	179.63	6914.00	754.95S	1943.90W	==>	1110.10	40.20076605	-105.03226323
8400.00	90.00	179.63	6914.00	854.95S	1943.26W	==>	1208.16	40.20049155	-105.03226283

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Vertical Section is from 0.00N 0.00E on azimuth 190.94 degrees  
Bottom hole distance is 9940.87 Feet on azimuth 190.94 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by  
Date Printed: 11-Apr-2019

SYSDRILL  
Well Design Combined Report  
Wellbore: OLANDER 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)
8500.00	90.00	179.63	6914.00	954.95S	1942.62W	==>	1306.22	40.20021705	-105.03226243
8600.00	90.00	179.63	6914.00	1054.95S	1941.98W	==>	1404.28	40.19994255	-105.03226203
8700.00	90.00	179.63	6914.00	1154.94S	1941.34W	==>	1502.34	40.19966805	-105.03226162
8800.00	90.00	179.63	6914.00	1254.94S	1940.70W	==>	1600.40	40.19939355	-105.03226122
8900.00	90.00	179.63	6914.00	1354.94S	1940.06W	==>	1698.46	40.19911905	-105.03226082
9000.00	90.00	179.63	6914.00	1454.94S	1939.42W	==>	1796.52	40.19884455	-105.03226042
9100.00	90.00	179.63	6914.00	1554.94S	1938.78W	==>	1894.58	40.19857005	-105.03226002
9200.00	90.00	179.63	6914.00	1654.93S	1938.14W	==>	1992.64	40.19829555	-105.03225962
9300.00	90.00	179.63	6914.00	1754.93S	1937.50W	==>	2090.70	40.19802105	-105.03225922
9400.00	90.00	179.63	6914.00	1854.93S	1936.86W	==>	2188.76	40.19774655	-105.03225882
9500.00	90.00	179.63	6914.00	1954.93S	1936.23W	==>	2286.82	40.19747206	-105.03225842
9600.00	90.00	179.63	6914.00	2054.93S	1935.59W	==>	2384.88	40.19719756	-105.03225802
9700.00	90.00	179.63	6914.00	2154.92S	1934.95W	==>	2482.94	40.19692306	-105.03225762
9800.00	90.00	179.63	6914.00	2254.92S	1934.31W	==>	2581.00	40.19664856	-105.03225722
9900.00	90.00	179.63	6914.00	2354.92S	1933.67W	==>	2679.06	40.19637406	-105.03225682
10000.00	90.00	179.63	6914.00	2454.92S	1933.03W	==>	2777.12	40.19609956	-105.03225642
10100.00	90.00	179.63	6914.00	2554.92S	1932.39W	==>	2875.18	40.19582506	-105.03225602
10200.00	90.00	179.63	6914.00	2654.91S	1931.75W	==>	2973.24	40.19555056	-105.03225562
10300.00	90.00	179.63	6914.00	2754.91S	1931.11W	==>	3071.30	40.19527606	-105.03225522
10400.00	90.00	179.63	6914.00	2854.91S	1930.47W	==>	3169.36	40.19500156	-105.03225482
10500.00	90.00	179.63	6914.00	2954.91S	1929.83W	==>	3267.42	40.19472706	-105.03225442
10600.00	90.00	179.63	6914.00	3054.90S	1929.19W	==>	3365.48	40.19445256	-105.03225402
10700.00	90.00	179.63	6914.00	3154.90S	1928.55W	==>	3463.54	40.19417806	-105.03225362
10800.00	90.00	179.63	6914.00	3254.90S	1927.92W	==>	3561.60	40.19390356	-105.03225322
10900.00	90.00	179.63	6914.00	3354.90S	1927.28W	==>	3659.66	40.19362906	-105.03225282
11000.00	90.00	179.63	6914.00	3454.90S	1926.64W	==>	3757.72	40.19335456	-105.03225242
11100.00	90.00	179.63	6914.00	3554.89S	1926.00W	==>	3855.78	40.19308006	-105.03225202
11200.00	90.00	179.63	6914.00	3654.89S	1925.36W	==>	3953.83	40.19280556	-105.03225162
11300.00	90.00	179.63	6914.00	3754.89S	1924.72W	==>	4051.89	40.19253106	-105.03225122
11400.00	90.00	179.63	6914.00	3854.89S	1924.08W	==>	4149.95	40.19225657	-105.03225082
11500.00	90.00	179.63	6914.00	3954.89S	1923.44W	==>	4248.01	40.19198207	-105.03225042
11600.00	90.00	179.63	6914.00	4054.88S	1922.80W	==>	4346.07	40.19170757	-105.03225002
11700.00	90.00	179.63	6914.00	4154.88S	1922.16W	==>	4444.13	40.19143307	-105.03224962
11800.00	90.00	179.63	6914.00	4254.88S	1921.52W	==>	4542.19	40.19115857	-105.03224922
11900.00	90.00	179.63	6914.00	4354.88S	1920.88W	==>	4640.25	40.19088407	-105.03224882
12000.00	90.00	179.63	6914.00	4454.88S	1920.24W	==>	4738.31	40.19060957	-105.03224842
12100.00	90.00	179.63	6914.00	4554.87S	1919.60W	==>	4836.37	40.19033507	-105.03224802
12200.00	90.00	179.63	6914.00	4654.87S	1918.97W	==>	4934.43	40.19006057	-105.03224762
12300.00	90.00	179.63	6914.00	4754.87S	1918.33W	==>	5032.49	40.18978607	-105.03224722
12400.00	90.00	179.63	6914.00	4854.87S	1917.69W	==>	5130.55	40.18951157	-105.03224682
12500.00	90.00	179.63	6914.00	4954.87S	1917.05W	==>	5228.61	40.18923707	-105.03224642
12600.00	90.00	179.63	6914.00	5054.86S	1916.41W	==>	5326.67	40.18896257	-105.03224602
12700.00	90.00	179.63	6914.00	5154.86S	1915.77W	==>	5424.73	40.18868807	-105.03224562
12800.00	90.00	179.63	6914.00	5254.86S	1915.13W	==>	5522.79	40.18841357	-105.03224522
12900.00	90.00	179.63	6914.00	5354.86S	1914.49W	==>	5620.85	40.18813907	-105.03224482
13000.00	90.00	179.63	6914.00	5454.86S	1913.85W	==>	5718.91	40.18786457	-105.03224442
13100.00	90.00	179.63	6914.00	5554.85S	1913.21W	==>	5816.97	40.18759007	-105.03224402
13200.00	90.00	179.63	6914.00	5654.85S	1912.57W	==>	5915.03	40.18731557	-105.03224362
13300.00	90.00	179.63	6914.00	5754.85S	1911.93W	==>	6013.09	40.18704107	-105.03224322
13400.00	90.00	179.63	6914.00	5854.85S	1911.29W	==>	6111.15	40.18676657	-105.03224282
13500.00	90.00	179.63	6914.00	5954.85S	1910.66W	==>	6209.21	40.18649207	-105.03224242
13600.00	90.00	179.63	6914.00	6054.84S	1910.02W	==>	6307.27	40.18621757	-105.03224202
13700.00	90.00	179.63	6914.00	6154.84S	1909.38W	==>	6405.33	40.18594307	-105.03224162
13800.00	90.00	179.63	6914.00	6254.84S	1908.74W	==>	6503.39	40.18566857	-105.03224122
13900.00	90.00	179.63	6914.00	6354.84S	1908.10W	==>	6601.45	40.18539407	-105.03224082
14000.00	90.00	179.63	6914.00	6454.84S	1907.46W	==>	6699.51	40.18511957	-105.03224042
14100.00	90.00	179.63	6914.00	6554.83S	1906.82W	==>	6797.57	40.18484507	-105.03224002
14200.00	90.00	179.63	6914.00	6654.83S	1906.18W	==>	6895.63	40.18457057	-105.03223962
14300.00	90.00	179.63	6914.00	6754.83S	1905.54W	==>	6993.69	40.18429607	-105.03223922

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Date Printed: 11-Apr-2019

SYSDRILL  
Well Design Combined Report  
Wellbore: OLANDER 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)
14400.00	90.00	179.63	6914.00	6854.83S	1904.90W	==>	7091.75	40.18402157	-105.03223882
14500.00	90.00	179.63	6914.00	6954.83S	1904.26W	==>	7189.81	40.18374707	-105.03223842
14600.00	90.00	179.63	6914.00	7054.82S	1903.62W	==>	7287.87	40.18347257	-105.03223802
14700.00	90.00	179.63	6914.00	7154.82S	1902.98W	==>	7385.93	40.18319807	-105.03223762
14800.00	90.00	179.63	6914.00	7254.82S	1902.34W	==>	7483.99	40.18292357	-105.03223722
14900.00	90.00	179.63	6914.00	7354.82S	1901.71W	==>	7582.05	40.18264907	-105.03223682
15000.00	90.00	179.63	6914.00	7454.82S	1901.07W	==>	7680.11	40.18237457	-105.03223642
15100.00	90.00	179.63	6914.00	7554.81S	1900.43W	==>	7778.17	40.18210007	-105.03223602
15200.00	90.00	179.63	6914.00	7654.81S	1899.79W	==>	7876.23	40.18182557	-105.03223562
15300.00	90.00	179.63	6914.00	7754.81S	1899.15W	==>	7974.29	40.18155107	-105.03223522
15400.00	90.00	179.63	6914.00	7854.81S	1898.51W	==>	8072.35	40.18127657	-105.03223482
15500.00	90.00	179.63	6914.00	7954.80S	1897.87W	==>	8170.41	40.18100207	-105.03223442
15600.00	90.00	179.63	6914.00	8054.80S	1897.23W	==>	8268.47	40.18072757	-105.03223402
15700.00	90.00	179.63	6914.00	8154.80S	1896.59W	==>	8366.53	40.18045307	-105.03223362
15800.00	90.00	179.63	6914.00	8254.80S	1895.95W	==>	8464.59	40.18017857	-105.03223322
15900.00	90.00	179.63	6914.00	8354.80S	1895.31W	==>	8562.65	40.17990407	-105.03223282
16000.00	90.00	179.63	6914.00	8454.79S	1894.67W	==>	8660.71	40.17962957	-105.03223242
16100.00	90.00	179.63	6914.00	8554.79S	1894.03W	==>	8758.77	40.17935507	-105.03223202
16200.00	90.00	179.63	6914.00	8654.79S	1893.40W	==>	8856.83	40.17908057	-105.03223162
16300.00	90.00	179.63	6914.00	8754.79S	1892.76W	==>	8954.89	40.17880607	-105.03223122
16400.00	90.00	179.63	6914.00	8854.79S	1892.12W	==>	9052.95	40.17853157	-105.03223082
16500.00	90.00	179.63	6914.00	8954.78S	1891.48W	==>	9151.01	40.17825707	-105.03223042
16600.00	90.00	179.63	6914.00	9054.78S	1890.84W	==>	9249.07	40.17798257	-105.03223002
16700.00	90.00	179.63	6914.00	9154.78S	1890.20W	==>	9347.13	40.17770807	-105.03222962
16800.00	90.00	179.63	6914.00	9254.78S	1889.56W	==>	9445.19	40.17743357	-105.03222922
16900.00	90.00	179.63	6914.00	9354.78S	1888.92W	==>	9543.25	40.17715907	-105.03222882
17000.00	90.00	179.63	6914.00	9454.77S	1888.28W	==>	9641.31	40.17688457	-105.03222842
17100.00	90.00	179.63	6914.00	9554.77S	1887.64W	==>	9739.37	40.17661007	-105.03222802
17200.00	90.00	179.63	6914.00	9654.77S	1887.00W	==>	9837.43	40.17633557	-105.03222762
17300.00	90.00	179.63	6914.00	9754.77S	1886.36W	==>	9935.49	40.17606107	-105.03222722
17305.49	90.00	179.63	6914.00	9760.26S	1886.33W	==>	9940.87	40.17604600	-105.03222720

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Wellbore: OLANDER 6 (PWB)



#### Targets

Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
OLANDER 6 - LP	86.71S	1948.17W	6914.00	40.20260040	-105.03226590	1316994.31	3130647.49
OLANDER 6 - BHL	9760.26S	1886.33W	6914.00	40.17604600	-105.03222720	1307321.19	3130709.33

#### Survey Tool Program

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
791173	Planned	1500.00	1500.00	WdW Rate Gyro	Standard
791172	Planned	17305.49	6914.00	ISCWSA MWD	Rev 4 + SAG + FLT

#### Notes

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