

# Cub Creek Energy, LLC

<b>Location</b>	<b>Weld County, CO</b>	<b>Slot</b>	<b>OLANDER 10</b>
<b>Field</b>	<b>WATTENBERG</b>	<b>Well</b>	<b>OLANDER 10</b>
<b>Installation</b>	<b>Olander Pad Rework 04-09-2019</b>	<b>Wellbore</b>	<b>OLANDER 10 (PWB)</b>

N  
 GRID  
 T  
 M  
 W  
 E  
 Jul-12-2017  
 EMA-2015 Dip: 66.61 deg Field: 52203.1 nT  
 Lat: N40 12 10.3680 Long: W105 1 31.6200 Elev: 5033.00 ft  
 Magnetic North is 8.59 deg East of True North  
 GRID North is 0.31 deg East of True North  
 To correct azimuth from True to GRID subtract 0.31 deg  
 To correct azimuth from Magnetic to GRID add 8.28 deg

Created by sean.dolfinger  
 Date plotted 11-Apr-2019  
 Plot reference is OLANDER 10 (PWB).  
 Ref wellpath is OLANDER 10 (PWP#1).  
 Coordinates are in Feet reference OLANDER 10.  
 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) ->

-1600 -800 0 800

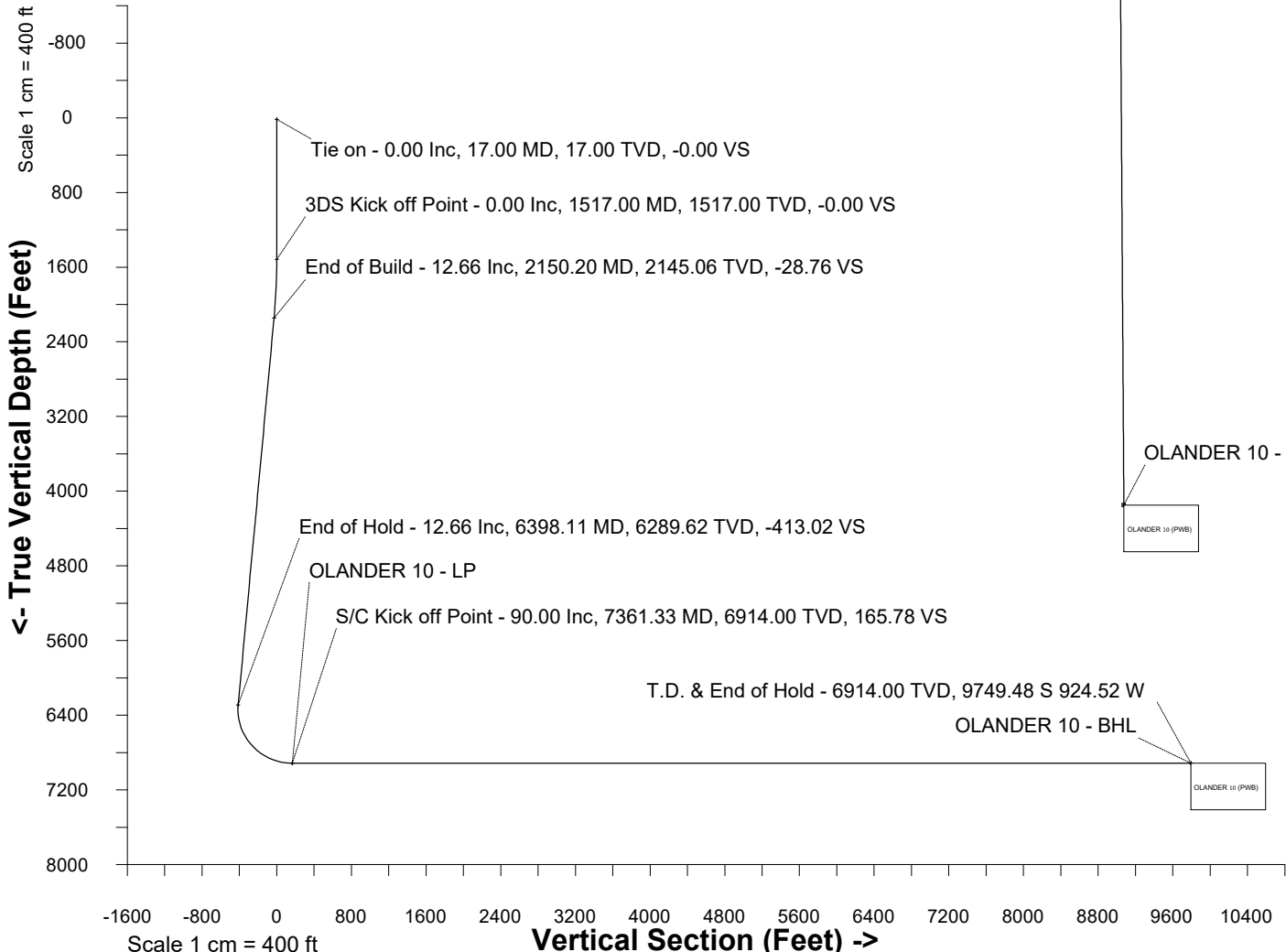
WELL PROFILE DATA								
Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	17.00	0.00	0.00	17.00	S 0.00	W 0.00		-0.00
KOP	1517.00	0.00	299.79	1517.00	S 0.00	W 0.00	0.00	-0.00
End of Build	2150.20	12.66	299.79	2145.06	N 34.62	W 60.49	2.00	-28.76
End of Hold	6398.11	12.66	299.79	6289.62	N 497.25	W 868.73	0.00	-413.02
Target OLANDER 10 - LP	7361.33	90.00	179.63	6914.00	S 72.99	W 986.40	10.00	165.78
T.D. & Target OLA...BHL	17038.02	90.00	179.63	6914.00	S 9749.48	W 924.52	0.00	9793.22

Surface 0.00 N 0.00 E

OLANDER 10 - LP

<- North(Feet)

Scale 1 cm = 400 ft



Azimuth 185.42 with reference 0.00 N, 0.00 E from OLANDER 10



SYSDRILL  
Well Design Combined Report  
Wellbore: OLANDER 10 (PWB)



Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
OLANDER 10	40.20281000	-105.02519000	1317081.1628	3132623.5059	25.11S	72.76E	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	299.79	1517.00	-3532.00	0.00N	0.00E	==>	0.00
2150.20	12.66	299.79	2145.06	-2903.94	34.62N	60.49W	2.00	-28.76
6398.11	12.66	299.79	6289.62	1240.62	497.25N	868.73W	==>	-413.02
7361.33	90.00	179.63	6914.00	1865.00	72.99S	986.40W	10.00	165.78
17038.02	90.00	179.63	6914.00	1865.00	9749.48S	924.52W	==>	9793.22

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	-105.02519000
17.00	0.00	0.00	17.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
100.00	0.00	0.00	100.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
200.00	0.00	0.00	200.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
300.00	0.00	0.00	300.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
400.00	0.00	0.00	400.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
500.00	0.00	0.00	500.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
600.00	0.00	0.00	600.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
700.00	0.00	0.00	700.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
800.00	0.00	0.00	800.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
900.00	0.00	0.00	900.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
1000.00	0.00	0.00	1000.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
1100.00	0.00	0.00	1100.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
1200.00	0.00	0.00	1200.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
1300.00	0.00	0.00	1300.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
1400.00	0.00	0.00	1400.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
1500.00	0.00	0.00	1500.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
1517.00	0.00	299.79	1517.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02519000
1600.00	1.66	299.79	1599.99	0.60N	1.04W	2.00	-0.50	40.20281165	-105.02519372
1700.00	3.66	299.79	1699.88	2.90N	5.07W	2.00	-2.41	40.20281804	-105.02520810
1800.00	5.66	299.79	1799.54	6.94N	12.12W	2.00	-5.76	40.20282922	-105.02523326
1900.00	7.66	299.79	1898.86	12.70N	22.19W	2.00	-10.55	40.20284519	-105.02526918
2000.00	9.66	299.79	1997.71	20.18N	35.25W	2.00	-16.76	40.20286591	-105.02531582
2100.00	11.66	299.79	2095.98	29.37N	51.31W	2.00	-24.39	40.20289137	-105.02537311
2150.20	12.66	299.79	2145.06	34.62N	60.49W	2.00	-28.76	40.20290592	-105.02540587
2200.00	12.66	299.79	2193.65	40.04N	69.96W	==>	-33.26	40.20292095	-105.02543969
2300.00	12.66	299.79	2291.21	50.94N	88.99W	==>	-42.31	40.20295112	-105.02550759
2400.00	12.66	299.79	2388.78	61.83N	108.01W	==>	-51.35	40.20298130	-105.02557550
2500.00	12.66	299.79	2486.35	72.72N	127.04W	==>	-60.40	40.20301147	-105.02564340
2600.00	12.66	299.79	2583.91	83.61N	146.07W	==>	-69.45	40.20304165	-105.02571131
2700.00	12.66	299.79	2681.48	94.50N	165.10W	==>	-78.49	40.20307182	-105.02577922
2800.00	12.66	299.79	2779.05	105.39N	184.12W	==>	-87.54	40.20310199	-105.02584712

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Vertical Section is from 0.00N 0.00E on azimuth 185.42 degrees  
Bottom hole distance is 9793.22 Feet on azimuth 185.42 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by  
Date Printed: 11-Apr-2019



SYSDRILL  
Well Design Combined Report  
Wellbore: OLANDER 10 (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	12.66	299.79	2876.62	116.28N	203.15W	==>	-96.58	40.20313217	-105.02591503
3000.00	12.66	299.79	2974.18	127.17N	222.18W	==>	-105.63	40.20316234	-105.02598293
3100.00	12.66	299.79	3071.75	138.06N	241.20W	==>	-114.67	40.20319252	-105.02605084
3200.00	12.66	299.79	3169.32	148.95N	260.23W	==>	-123.72	40.20322269	-105.02611875
3300.00	12.66	299.79	3266.89	159.84N	279.26W	==>	-132.77	40.20325286	-105.02618665
3400.00	12.66	299.79	3364.45	170.73N	298.28W	==>	-141.81	40.20328304	-105.02625456
3500.00	12.66	299.79	3462.02	181.62N	317.31W	==>	-150.86	40.20331321	-105.02632247
3600.00	12.66	299.79	3559.59	192.52N	336.34W	==>	-159.90	40.20334338	-105.02639037
3700.00	12.66	299.79	3657.15	203.41N	355.36W	==>	-168.95	40.20337356	-105.02645828
3800.00	12.66	299.79	3754.72	214.30N	374.39W	==>	-178.00	40.20340373	-105.02652619
3900.00	12.66	299.79	3852.29	225.19N	393.42W	==>	-187.04	40.20343390	-105.02659409
4000.00	12.66	299.79	3949.86	236.08N	412.44W	==>	-196.09	40.20346408	-105.02666200
4100.00	12.66	299.79	4047.42	246.97N	431.47W	==>	-205.13	40.20349425	-105.02672991
4200.00	12.66	299.79	4144.99	257.86N	450.50W	==>	-214.18	40.20352442	-105.02679781
4300.00	12.66	299.79	4242.56	268.75N	469.52W	==>	-223.23	40.20355460	-105.02686572
4400.00	12.66	299.79	4340.13	279.64N	488.55W	==>	-232.27	40.20358477	-105.02693363
4500.00	12.66	299.79	4437.69	290.53N	507.58W	==>	-241.32	40.20361494	-105.02700154
4600.00	12.66	299.79	4535.26	301.42N	526.61W	==>	-250.36	40.20364512	-105.02706944
4700.00	12.66	299.79	4632.83	312.31N	545.63W	==>	-259.41	40.20367529	-105.02713735
4800.00	12.66	299.79	4730.39	323.20N	564.66W	==>	-268.46	40.20370546	-105.02720526
4900.00	12.66	299.79	4827.96	334.10N	583.69W	==>	-277.50	40.20373564	-105.02727316
5000.00	12.66	299.79	4925.53	344.99N	602.71W	==>	-286.55	40.20376581	-105.02734107
5100.00	12.66	299.79	5023.10	355.88N	621.74W	==>	-295.59	40.20379598	-105.02740898
5200.00	12.66	299.79	5120.66	366.77N	640.77W	==>	-304.64	40.20382616	-105.02747689
5300.00	12.66	299.79	5218.23	377.66N	659.79W	==>	-313.68	40.20385633	-105.02754479
5400.00	12.66	299.79	5315.80	388.55N	678.82W	==>	-322.73	40.20388650	-105.02761270
5500.00	12.66	299.79	5413.36	399.44N	697.85W	==>	-331.78	40.20391667	-105.02768061
5600.00	12.66	299.79	5510.93	410.33N	716.87W	==>	-340.82	40.20394685	-105.02774852
5700.00	12.66	299.79	5608.50	421.22N	735.90W	==>	-349.87	40.20397702	-105.02781643
5800.00	12.66	299.79	5706.07	432.11N	754.93W	==>	-358.91	40.20400719	-105.02788433
5900.00	12.66	299.79	5803.63	443.00N	773.95W	==>	-367.96	40.20403737	-105.02795224
6000.00	12.66	299.79	5901.20	453.89N	792.98W	==>	-377.01	40.20406754	-105.02802015
6100.00	12.66	299.79	5998.77	464.78N	812.01W	==>	-386.05	40.20409771	-105.02808806
6200.00	12.66	299.79	6096.34	475.68N	831.03W	==>	-395.10	40.20412788	-105.02815597
6300.00	12.66	299.79	6193.90	486.57N	850.06W	==>	-404.14	40.20415806	-105.02822387
6398.11	12.66	299.79	6289.62	497.25N	868.73W	==>	-413.02	40.20418766	-105.02829050
6400.00	12.57	299.03	6291.47	497.45N	869.09W	10.00	-413.19	40.20418822	-105.02829178
6500.00	11.65	250.12	6389.49	499.31N	888.15W	10.00	-413.23	40.20419358	-105.02835997
6600.00	17.63	217.32	6486.36	483.79N	906.87W	10.00	-396.02	40.20415127	-105.02842729
6700.00	26.14	202.95	6579.13	451.38N	924.69W	10.00	-362.07	40.20406257	-105.02849170
6800.00	35.40	195.50	6664.99	403.06N	941.06W	10.00	-312.42	40.20393016	-105.02855123
6900.00	44.95	190.86	6741.32	340.29N	955.49W	10.00	-248.57	40.20375808	-105.02860409
7000.00	54.63	187.56	6805.81	264.99N	967.54W	10.00	-172.47	40.20355156	-105.02864866
7100.00	64.38	184.98	6856.50	179.44N	976.84W	10.00	-86.42	40.20331687	-105.02868358
7200.00	74.17	182.79	6891.85	86.24N	983.11W	10.00	6.95	40.20306113	-105.02870781
7300.00	83.98	180.81	6910.78	11.77S	986.16W	10.00	104.82	40.20279213	-105.02872060
7361.33	90.00	179.63	6914.00	72.99S	986.40W	10.00	165.78	40.20262410	-105.02872260
7400.00	90.00	179.63	6914.00	111.66S	986.15W	==>	204.25	40.20251795	-105.02872245
7500.00	90.00	179.63	6914.00	211.65S	985.51W	==>	303.74	40.20224345	-105.02872206
7600.00	90.00	179.63	6914.00	311.65S	984.87W	==>	403.24	40.20196895	-105.02872168
7700.00	90.00	179.63	6914.00	411.65S	984.23W	==>	502.73	40.20169445	-105.02872129
7800.00	90.00	179.63	6914.00	511.65S	983.59W	==>	602.22	40.20141995	-105.02872090
7900.00	90.00	179.63	6914.00	611.65S	982.95W	==>	701.71	40.20114546	-105.02872052
8000.00	90.00	179.63	6914.00	711.64S	982.31W	==>	801.20	40.20087096	-105.02872013
8100.00	90.00	179.63	6914.00	811.64S	981.67W	==>	900.69	40.20059646	-105.02871974
8200.00	90.00	179.63	6914.00	911.64S	981.03W	==>	1000.18	40.20032196	-105.02871936
8300.00	90.00	179.63	6914.00	1011.64S	980.40W	==>	1099.67	40.20004746	-105.02871897
8400.00	90.00	179.63	6914.00	1111.63S	979.76W	==>	1199.16	40.19977296	-105.02871858

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Vertical Section is from 0.00N 0.00E on azimuth 185.42 degrees  
Bottom hole distance is 9793.22 Feet on azimuth 185.42 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by  
Date Printed: 11-Apr-2019



SYSDRILL  
Well Design Combined Report  
Wellbore: OLANDER 10 (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	1211.63S	979.12W	==>	1298.65	40.19949846	-105.02871820
8600.00	90.00	179.63	6914.00	1311.63S	978.48W	==>	1398.15	40.19922396	-105.02871781
8700.00	90.00	179.63	6914.00	1411.63S	977.84W	==>	1497.64	40.19894946	-105.02871742
8800.00	90.00	179.63	6914.00	1511.63S	977.20W	==>	1597.13	40.19867496	-105.02871704
8900.00	90.00	179.63	6914.00	1611.62S	976.56W	==>	1696.62	40.19840046	-105.02871665
9000.00	90.00	179.63	6914.00	1711.62S	975.92W	==>	1796.11	40.19812596	-105.02871626
9100.00	90.00	179.63	6914.00	1811.62S	975.28W	==>	1895.60	40.19785146	-105.02871588
9200.00	90.00	179.63	6914.00	1911.62S	974.64W	==>	1995.09	40.19757696	-105.02871549
9300.00	90.00	179.63	6914.00	2011.62S	974.00W	==>	2094.58	40.19730247	-105.02871510
9400.00	90.00	179.63	6914.00	2111.61S	973.36W	==>	2194.07	40.19702797	-105.02871472
9500.00	90.00	179.63	6914.00	2211.61S	972.72W	==>	2293.56	40.19675347	-105.02871433
9600.00	90.00	179.63	6914.00	2311.61S	972.08W	==>	2393.06	40.19647897	-105.02871395
9700.00	90.00	179.63	6914.00	2411.61S	971.44W	==>	2492.55	40.19620447	-105.02871356
9800.00	90.00	179.63	6914.00	2511.61S	970.80W	==>	2592.04	40.19592997	-105.02871317
9900.00	90.00	179.63	6914.00	2611.60S	970.16W	==>	2691.53	40.19565547	-105.02871279
10000.00	90.00	179.63	6914.00	2711.60S	969.52W	==>	2791.02	40.19538097	-105.02871240
10100.00	90.00	179.63	6914.00	2811.60S	968.88W	==>	2890.51	40.19510647	-105.02871201
10200.00	90.00	179.63	6914.00	2911.60S	968.25W	==>	2990.00	40.19483197	-105.02871163
10300.00	90.00	179.63	6914.00	3011.60S	967.61W	==>	3089.49	40.19455747	-105.02871124
10400.00	90.00	179.63	6914.00	3111.59S	966.97W	==>	3188.98	40.19428297	-105.02871085
10500.00	90.00	179.63	6914.00	3211.59S	966.33W	==>	3288.47	40.19400847	-105.02871047
10600.00	90.00	179.63	6914.00	3311.59S	965.69W	==>	3387.97	40.19373397	-105.02871008
10700.00	90.00	179.63	6914.00	3411.59S	965.05W	==>	3487.46	40.19345947	-105.02870969
10800.00	90.00	179.63	6914.00	3511.59S	964.41W	==>	3586.95	40.19318497	-105.02870931
10900.00	90.00	179.63	6914.00	3611.58S	963.77W	==>	3686.44	40.19291047	-105.02870892
11000.00	90.00	179.63	6914.00	3711.58S	963.13W	==>	3785.93	40.19263597	-105.02870853
11100.00	90.00	179.63	6914.00	3811.58S	962.49W	==>	3885.42	40.19236147	-105.02870815
11200.00	90.00	179.63	6914.00	3911.58S	961.85W	==>	3984.91	40.19208698	-105.02870776
11300.00	90.00	179.63	6914.00	4011.58S	961.21W	==>	4084.40	40.19181248	-105.02870737
11400.00	90.00	179.63	6914.00	4111.57S	960.57W	==>	4183.89	40.19153798	-105.02870699
11500.00	90.00	179.63	6914.00	4211.57S	959.93W	==>	4283.38	40.19126348	-105.02870660
11600.00	90.00	179.63	6914.00	4311.57S	959.29W	==>	4382.87	40.19098898	-105.02870621
11700.00	90.00	179.63	6914.00	4411.57S	958.65W	==>	4482.37	40.19071448	-105.02870583
11800.00	90.00	179.63	6914.00	4511.57S	958.01W	==>	4581.86	40.19043998	-105.02870544
11900.00	90.00	179.63	6914.00	4611.56S	957.37W	==>	4681.35	40.19016548	-105.02870505
12000.00	90.00	179.63	6914.00	4711.56S	956.73W	==>	4780.84	40.18989098	-105.02870467
12100.00	90.00	179.63	6914.00	4811.56S	956.10W	==>	4880.33	40.18961648	-105.02870428
12200.00	90.00	179.63	6914.00	4911.56S	955.46W	==>	4979.82	40.18934198	-105.02870390
12300.00	90.00	179.63	6914.00	5011.56S	954.82W	==>	5079.31	40.18906748	-105.02870351
12400.00	90.00	179.63	6914.00	5111.55S	954.18W	==>	5178.80	40.18879298	-105.02870312
12500.00	90.00	179.63	6914.00	5211.55S	953.54W	==>	5278.29	40.18851848	-105.02870274
12600.00	90.00	179.63	6914.00	5311.55S	952.90W	==>	5377.78	40.18824398	-105.02870235
12700.00	90.00	179.63	6914.00	5411.55S	952.26W	==>	5477.28	40.18796948	-105.02870196
12800.00	90.00	179.63	6914.00	5511.54S	951.62W	==>	5576.77	40.18769498	-105.02870158
12900.00	90.00	179.63	6914.00	5611.54S	950.98W	==>	5676.26	40.18742048	-105.02870119
13000.00	90.00	179.63	6914.00	5711.54S	950.34W	==>	5775.75	40.18714598	-105.02870080
13100.00	90.00	179.63	6914.00	5811.54S	949.70W	==>	5875.24	40.18687148	-105.02870042
13200.00	90.00	179.63	6914.00	5911.54S	949.06W	==>	5974.73	40.18659698	-105.02870003
13300.00	90.00	179.63	6914.00	6011.53S	948.42W	==>	6074.22	40.18632248	-105.02869964
13400.00	90.00	179.63	6914.00	6111.53S	947.78W	==>	6173.71	40.18604798	-105.02869926
13500.00	90.00	179.63	6914.00	6211.53S	947.14W	==>	6273.20	40.18577348	-105.02869887
13600.00	90.00	179.63	6914.00	6311.53S	946.50W	==>	6372.69	40.18549898	-105.02869848
13700.00	90.00	179.63	6914.00	6411.53S	945.86W	==>	6472.19	40.18522448	-105.02869810
13800.00	90.00	179.63	6914.00	6511.52S	945.22W	==>	6571.68	40.18494998	-105.02869771
13900.00	90.00	179.63	6914.00	6611.52S	944.59W	==>	6671.17	40.18467548	-105.02869733
14000.00	90.00	179.63	6914.00	6711.52S	943.95W	==>	6770.66	40.18440098	-105.02869694
14100.00	90.00	179.63	6914.00	6811.52S	943.31W	==>	6870.15	40.18412648	-105.02869655
14200.00	90.00	179.63	6914.00	6911.52S	942.67W	==>	6969.64	40.18385198	-105.02869617
14300.00	90.00	179.63	6914.00	7011.51S	942.03W	==>	7069.13	40.18357748	-105.02869578

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Date Printed: 11-Apr-2019



SYSDRILL  
Well Design Combined Report  
Wellbore: OLANDER 10 (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	7111.51S	941.39W	==>	7168.62	40.18330298	-105.02869539
14500.00	90.00	179.63	6914.00	7211.51S	940.75W	==>	7268.11	40.18302848	-105.02869501
14600.00	90.00	179.63	6914.00	7311.51S	940.11W	==>	7367.60	40.18275398	-105.02869462
14700.00	90.00	179.63	6914.00	7411.51S	939.47W	==>	7467.10	40.18247948	-105.02869423
14800.00	90.00	179.63	6914.00	7511.50S	938.83W	==>	7566.59	40.18220498	-105.02869385
14900.00	90.00	179.63	6914.00	7611.50S	938.19W	==>	7666.08	40.18193048	-105.02869346
15000.00	90.00	179.63	6914.00	7711.50S	937.55W	==>	7765.57	40.18165598	-105.02869307
15100.00	90.00	179.63	6914.00	7811.50S	936.91W	==>	7865.06	40.18138148	-105.02869269
15200.00	90.00	179.63	6914.00	7911.50S	936.27W	==>	7964.55	40.18110698	-105.02869230
15300.00	90.00	179.63	6914.00	8011.49S	935.63W	==>	8064.04	40.18083248	-105.02869192
15400.00	90.00	179.63	6914.00	8111.49S	934.99W	==>	8163.53	40.18055798	-105.02869153
15500.00	90.00	179.63	6914.00	8211.49S	934.35W	==>	8263.02	40.18028348	-105.02869114
15600.00	90.00	179.63	6914.00	8311.49S	933.71W	==>	8362.51	40.18000898	-105.02869076
15700.00	90.00	179.63	6914.00	8411.49S	933.07W	==>	8462.01	40.17973448	-105.02869037
15800.00	90.00	179.63	6914.00	8511.48S	932.44W	==>	8561.50	40.17945998	-105.02868998
15900.00	90.00	179.63	6914.00	8611.48S	931.80W	==>	8660.99	40.17918548	-105.02868960
16000.00	90.00	179.63	6914.00	8711.48S	931.16W	==>	8760.48	40.17891098	-105.02868921
16100.00	90.00	179.63	6914.00	8811.48S	930.52W	==>	8859.97	40.17863648	-105.02868882
16200.00	90.00	179.63	6914.00	8911.48S	929.88W	==>	8959.46	40.17836198	-105.02868844
16300.00	90.00	179.63	6914.00	9011.47S	929.24W	==>	9058.95	40.17808748	-105.02868805
16400.00	90.00	179.63	6914.00	9111.47S	928.60W	==>	9158.44	40.17781298	-105.02868767
16500.00	90.00	179.63	6914.00	9211.47S	927.96W	==>	9257.93	40.17753848	-105.02868728
16600.00	90.00	179.63	6914.00	9311.47S	927.32W	==>	9357.42	40.17726398	-105.02868689
16700.00	90.00	179.63	6914.00	9411.47S	926.68W	==>	9456.92	40.17698948	-105.02868651
16800.00	90.00	179.63	6914.00	9511.46S	926.04W	==>	9556.41	40.17671498	-105.02868612
16900.00	90.00	179.63	6914.00	9611.46S	925.40W	==>	9655.90	40.17644048	-105.02868573
17000.00	90.00	179.63	6914.00	9711.46S	924.76W	==>	9755.39	40.17616598	-105.02868535
17038.02	90.00	179.63	6914.00	9749.48S	924.52W	==>	9793.22	40.17606160	-105.02868520

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### Targets

Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
OLANDER 10 - LP	72.99S	986.40W	6914.00	40.20262410	-105.02872260	1317008.18	3131637.15
OLANDER 10 - BHL	9749.48S	924.52W	6914.00	40.17606160	-105.02868520	1307332.12	3131699.03

### Survey Tool Program

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
791215	Planned	1500.00	1500.00	WdW Rate Gyro	Standard
791214	Planned	17038.02	6914.00	ISCWSA MWD	Rev 4 + SAG + FLT

### Notes

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