

Cub Creek Energy, LLC

Location	Weld County, CO	Slot	OLANDER 8
Field	WATTENBERG	Well	OLANDER 8
Installation	Olander Pad Rework 04-09-2019	Wellbore	OLANDER 8 (PWB)

N
 GRID
 T
 M
 W
 E
 Jul-12-2017
 EMM-2015 Dip: 66.61 deg Field: 52203.1 xT
 Lat: N40 12 10.3080 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 8 (PWB).
 Ref wellpath is OLANDER 8 (PWP#1).
 Coordinates are in Feet reference OLANDER 8.
 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) ->

-2400 -1600 -800 0 800

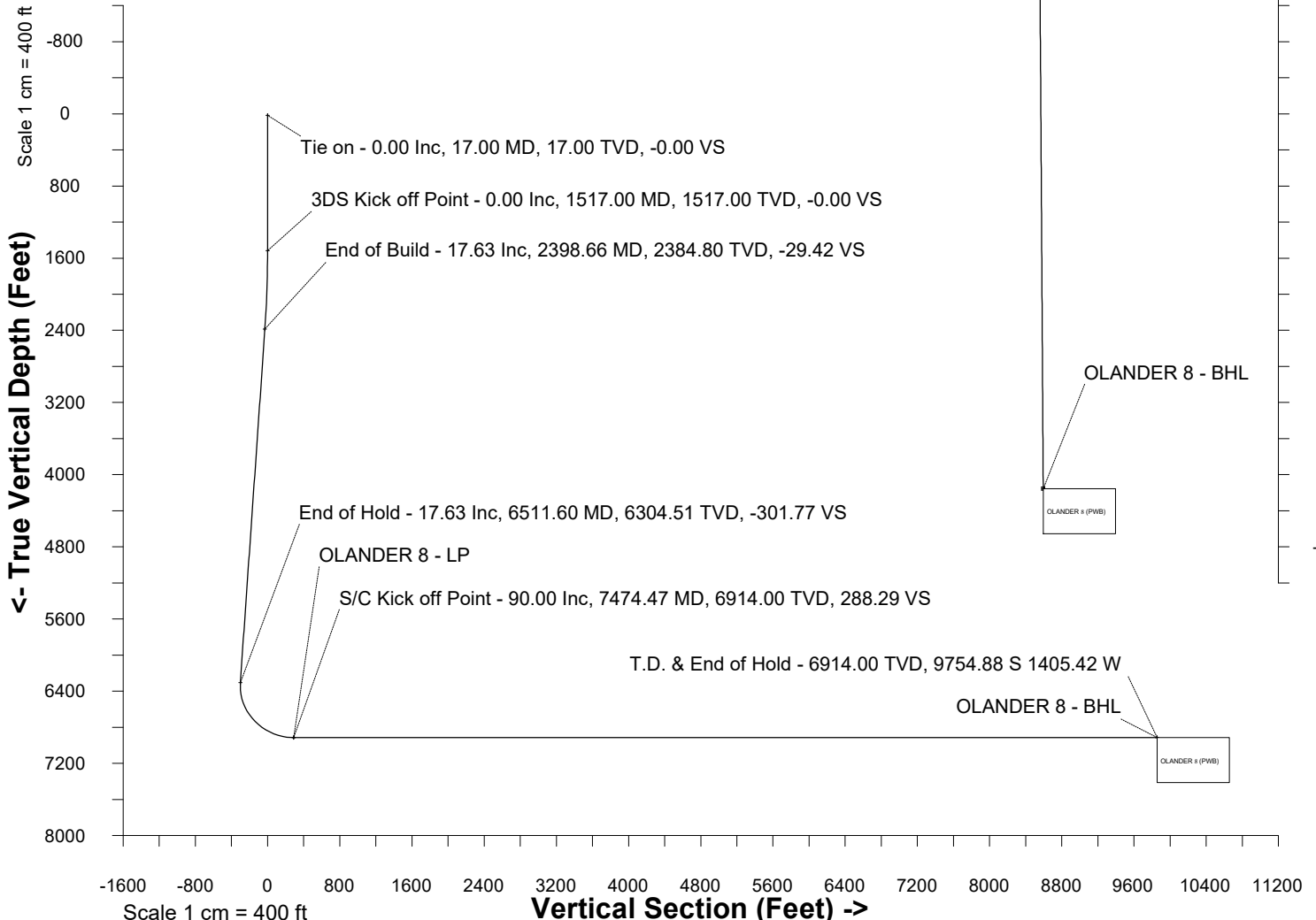
WELL PROFILE DATA								
Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	17.00	0.00	0.00	17.00	S 0.00	W 0.00		-0.00
KOP	1517.00	0.00	290.82	1517.00	S 0.00	W 0.00	0.00	-0.00
End of Build	2398.66	17.63	290.82	2384.80	N 47.85	W 125.81	2.00	-29.42
End of Hold	6511.60	17.63	290.82	6304.51	N 490.78	W 1290.31	0.00	-301.77
Target OLANDER 8 - LP	7474.47	90.00	179.63	6914.00	S 79.87	W 1467.30	10.00	288.29
T.D. & Target OLA...BHL	17149.67	90.00	179.63	6914.00	S 9754.88	W 1405.42	0.00	9855.60

Surface 0.00 N 0.00 E

OLANDER 8 - LP

<- North(Feet)

Scale 1 cm = 400 ft



SYSDRILL
Well Design Combined Report
Wellbore: OLANDER 8 (PWB)



Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
OLANDER 8	40.20281000	-105.02524000	1317081.0881	3132609.5400	25.19S	58.80E	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	290.82	1517.00	-3532.00	0.00N	0.00E	==>	0.00
2398.66	17.63	290.82	2384.80	-2664.20	47.85N	125.81W	2.00	-29.42
6511.60	17.63	290.82	6304.51	1255.51	490.78N	1290.31W	==>	-301.77
7474.47	90.00	179.63	6914.00	1865.00	79.87S	1467.30W	10.00	288.29
17149.67	90.00	179.63	6914.00	1865.00	9754.88S	1405.42W	==>	9855.60

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	-105.02524000
17.00	0.00	0.00	17.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
100.00	0.00	0.00	100.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
200.00	0.00	0.00	200.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
300.00	0.00	0.00	300.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
400.00	0.00	0.00	400.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
500.00	0.00	0.00	500.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
600.00	0.00	0.00	600.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
700.00	0.00	0.00	700.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
800.00	0.00	0.00	800.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
900.00	0.00	0.00	900.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
1000.00	0.00	0.00	1000.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
1100.00	0.00	0.00	1100.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
1200.00	0.00	0.00	1200.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
1300.00	0.00	0.00	1300.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
1400.00	0.00	0.00	1400.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
1500.00	0.00	0.00	1500.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
1517.00	0.00	290.82	1517.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02524000
1600.00	1.66	290.82	1599.99	0.43N	1.12W	2.00	-0.26	40.20281119	-105.02524401
1700.00	3.66	290.82	1699.88	2.08N	5.46W	2.00	-1.28	40.20281578	-105.02525951
1800.00	5.66	290.82	1799.54	4.97N	13.05W	2.00	-3.05	40.20282382	-105.02528664
1900.00	7.66	290.82	1898.86	9.09N	23.89W	2.00	-5.59	40.20283530	-105.02532536
2000.00	9.66	290.82	1997.71	14.44N	37.97W	2.00	-8.88	40.20285020	-105.02537564
2100.00	11.66	290.82	2095.98	21.02N	55.26W	2.00	-12.92	40.20286850	-105.02543741
2200.00	13.66	290.82	2193.55	28.81N	75.74W	2.00	-17.71	40.20289019	-105.02551059
2300.00	15.66	290.82	2290.29	37.81N	99.39W	2.00	-23.25	40.20291523	-105.02559509
2398.66	17.63	290.82	2384.80	47.85N	125.81W	2.00	-29.42	40.20294320	-105.02568946
2400.00	17.63	290.82	2386.09	48.00N	126.19W	==>	-29.51	40.20294360	-105.02569082
2500.00	17.63	290.82	2481.39	58.77N	154.50W	==>	-36.13	40.20297358	-105.02579197
2600.00	17.63	290.82	2576.69	69.54N	182.81W	==>	-42.76	40.20300356	-105.02589312
2700.00	17.63	290.82	2671.99	80.30N	211.13W	==>	-49.38	40.20303353	-105.02599428
2800.00	17.63	290.82	2767.29	91.07N	239.44W	==>	-56.00	40.20306351	-105.02609543

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 5049.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 188.20 degrees
Bottom hole distance is 9855.60 Feet on azimuth 188.20 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by
Date Printed: 11-Apr-2019

SYSDRILL
Well Design Combined Report
Wellbore: OLANDER 8 (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	17.63	290.82	2862.59	101.84N	267.75W	==>	-62.62	40.20309348	-105.02619658
3000.00	17.63	290.82	2957.89	112.61N	296.07W	==>	-69.24	40.20312346	-105.02629774
3100.00	17.63	290.82	3053.20	123.38N	324.38W	==>	-75.86	40.20315344	-105.02639889
3200.00	17.63	290.82	3148.50	134.15N	352.69W	==>	-82.48	40.20318341	-105.02650004
3300.00	17.63	290.82	3243.80	144.92N	381.01W	==>	-89.11	40.20321339	-105.02660120
3400.00	17.63	290.82	3339.10	155.69N	409.32W	==>	-95.73	40.20324337	-105.02670235
3500.00	17.63	290.82	3434.40	166.46N	437.63W	==>	-102.35	40.20327334	-105.02680350
3600.00	17.63	290.82	3529.70	177.23N	465.95W	==>	-108.97	40.20330332	-105.02690466
3700.00	17.63	290.82	3625.01	188.00N	494.26W	==>	-115.59	40.20333329	-105.02700581
3800.00	17.63	290.82	3720.31	198.77N	522.57W	==>	-122.21	40.20336327	-105.02710696
3900.00	17.63	290.82	3815.61	209.53N	550.88W	==>	-128.84	40.20339324	-105.02720812
4000.00	17.63	290.82	3910.91	220.30N	579.20W	==>	-135.46	40.20342322	-105.02730927
4100.00	17.63	290.82	4006.21	231.07N	607.51W	==>	-142.08	40.20345319	-105.02741042
4200.00	17.63	290.82	4101.51	241.84N	635.82W	==>	-148.70	40.20348317	-105.02751158
4300.00	17.63	290.82	4196.81	252.61N	664.14W	==>	-155.32	40.20351314	-105.02761273
4400.00	17.63	290.82	4292.12	263.38N	692.45W	==>	-161.94	40.20354312	-105.02771389
4500.00	17.63	290.82	4387.42	274.15N	720.76W	==>	-168.57	40.20357309	-105.02781504
4600.00	17.63	290.82	4482.72	284.92N	749.08W	==>	-175.19	40.20360307	-105.02791620
4700.00	17.63	290.82	4578.02	295.69N	777.39W	==>	-181.81	40.20363304	-105.02801735
4800.00	17.63	290.82	4673.32	306.46N	805.70W	==>	-188.43	40.20366302	-105.02811850
4900.00	17.63	290.82	4768.62	317.23N	834.02W	==>	-195.05	40.20369299	-105.02821966
5000.00	17.63	290.82	4863.93	328.00N	862.33W	==>	-201.67	40.20372297	-105.02832081
5100.00	17.63	290.82	4959.23	338.77N	890.64W	==>	-208.30	40.20375294	-105.02842197
5200.00	17.63	290.82	5054.53	349.53N	918.96W	==>	-214.92	40.20378292	-105.02852312
5300.00	17.63	290.82	5149.83	360.30N	947.27W	==>	-221.54	40.20381289	-105.02862428
5400.00	17.63	290.82	5245.13	371.07N	975.58W	==>	-228.16	40.20384286	-105.02872543
5500.00	17.63	290.82	5340.43	381.84N	1003.90W	==>	-234.78	40.20387284	-105.02882659
5600.00	17.63	290.82	5435.74	392.61N	1032.21W	==>	-241.40	40.20390281	-105.02892774
5700.00	17.63	290.82	5531.04	403.38N	1060.52W	==>	-248.03	40.20393279	-105.02902890
5800.00	17.63	290.82	5626.34	414.15N	1088.84W	==>	-254.65	40.20396276	-105.02913005
5900.00	17.63	290.82	5721.64	424.92N	1117.15W	==>	-261.27	40.20399273	-105.02923121
6000.00	17.63	290.82	5816.94	435.69N	1145.46W	==>	-267.89	40.20402271	-105.02933237
6100.00	17.63	290.82	5912.24	446.46N	1173.77W	==>	-274.51	40.20405268	-105.02943352
6200.00	17.63	290.82	6007.54	457.23N	1202.09W	==>	-281.13	40.20408265	-105.02953468
6300.00	17.63	290.82	6102.85	468.00N	1230.40W	==>	-287.76	40.20411263	-105.02963583
6400.00	17.63	290.82	6198.15	478.77N	1258.71W	==>	-294.38	40.20414260	-105.02973699
6500.00	17.63	290.82	6293.45	489.53N	1287.03W	==>	-301.00	40.20417257	-105.02983815
6511.60	17.63	290.82	6304.51	490.78N	1290.31W	==>	-301.77	40.20417605	-105.02984988
6600.00	16.70	260.71	6389.13	493.50N	1315.41W	10.00	-300.88	40.20418387	-105.02993968
6700.00	20.63	231.55	6484.06	480.19N	1343.46W	10.00	-283.71	40.20414775	-105.03004034
6800.00	27.69	214.01	6575.35	449.90N	1370.32W	10.00	-249.89	40.20406499	-105.03013709
6900.00	36.08	203.63	6660.25	403.54N	1395.19W	10.00	-200.46	40.20393810	-105.03022698
7000.00	45.07	196.83	6736.17	342.52N	1417.29W	10.00	-136.92	40.20377093	-105.03030728
7100.00	54.34	191.91	6800.79	268.71N	1435.97W	10.00	-61.19	40.20356858	-105.03037556
7200.00	63.77	188.03	6852.17	184.33N	1450.66W	10.00	24.42	40.20333718	-105.03042974
7300.00	73.29	184.74	6888.73	91.96N	1460.91W	10.00	117.31	40.20308377	-105.03046816
7400.00	82.86	181.76	6909.37	5.61S	1466.40W	10.00	214.66	40.20281604	-105.03048968
7474.47	90.00	179.63	6914.00	79.87S	1467.30W	10.00	288.29	40.20261220	-105.03049430
7500.00	90.00	179.63	6914.00	105.40S	1467.13W	==>	313.54	40.20254211	-105.03049420
7600.00	90.00	179.63	6914.00	205.40S	1466.49W	==>	412.43	40.20226761	-105.03049381
7700.00	90.00	179.63	6914.00	305.40S	1465.85W	==>	511.31	40.20199311	-105.03049341
7800.00	90.00	179.63	6914.00	405.40S	1465.22W	==>	610.20	40.20171861	-105.03049302
7900.00	90.00	179.63	6914.00	505.40S	1464.58W	==>	709.08	40.20144411	-105.03049262
8000.00	90.00	179.63	6914.00	605.39S	1463.94W	==>	807.97	40.20116962	-105.03049223
8100.00	90.00	179.63	6914.00	705.39S	1463.30W	==>	906.85	40.20089512	-105.03049184
8200.00	90.00	179.63	6914.00	805.39S	1462.66W	==>	1005.74	40.20062062	-105.03049144
8300.00	90.00	179.63	6914.00	905.39S	1462.02W	==>	1104.62	40.20034612	-105.03049105
8400.00	90.00	179.63	6914.00	1005.39S	1461.38W	==>	1203.51	40.20007162	-105.03049065

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 5049.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 188.20 degrees
Bottom hole distance is 9855.60 Feet on azimuth 188.20 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by
Date Printed: 11-Apr-2019

SYSDRILL
Well Design Combined Report
Wellbore: OLANDER 8 (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	1105.38S	1460.74W	==>	1302.39	40.19979712	-105.03049026
8600.00	90.00	179.63	6914.00	1205.38S	1460.10W	==>	1401.28	40.19952262	-105.03048987
8700.00	90.00	179.63	6914.00	1305.38S	1459.46W	==>	1500.16	40.19924812	-105.03048947
8800.00	90.00	179.63	6914.00	1405.38S	1458.82W	==>	1599.05	40.19897362	-105.03048908
8900.00	90.00	179.63	6914.00	1505.38S	1458.18W	==>	1697.93	40.19869912	-105.03048868
9000.00	90.00	179.63	6914.00	1605.37S	1457.54W	==>	1796.81	40.19842462	-105.03048829
9100.00	90.00	179.63	6914.00	1705.37S	1456.90W	==>	1895.70	40.19815012	-105.03048790
9200.00	90.00	179.63	6914.00	1805.37S	1456.26W	==>	1994.58	40.19787562	-105.03048750
9300.00	90.00	179.63	6914.00	1905.37S	1455.62W	==>	2093.47	40.19760112	-105.03048711
9400.00	90.00	179.63	6914.00	2005.37S	1454.98W	==>	2192.35	40.19732663	-105.03048672
9500.00	90.00	179.63	6914.00	2105.36S	1454.34W	==>	2291.24	40.19705213	-105.03048632
9600.00	90.00	179.63	6914.00	2205.36S	1453.70W	==>	2390.12	40.19677763	-105.03048593
9700.00	90.00	179.63	6914.00	2305.36S	1453.06W	==>	2489.01	40.19650313	-105.03048553
9800.00	90.00	179.63	6914.00	2405.36S	1452.42W	==>	2587.89	40.19622863	-105.03048514
9900.00	90.00	179.63	6914.00	2505.36S	1451.79W	==>	2686.78	40.19595413	-105.03048475
10000.00	90.00	179.63	6914.00	2605.35S	1451.15W	==>	2785.66	40.19567963	-105.03048435
10100.00	90.00	179.63	6914.00	2705.35S	1450.51W	==>	2884.55	40.19540513	-105.03048396
10200.00	90.00	179.63	6914.00	2805.35S	1449.87W	==>	2983.43	40.19513063	-105.03048356
10300.00	90.00	179.63	6914.00	2905.35S	1449.23W	==>	3082.32	40.19485613	-105.03048317
10400.00	90.00	179.63	6914.00	3005.35S	1448.59W	==>	3181.20	40.19458163	-105.03048278
10500.00	90.00	179.63	6914.00	3105.34S	1447.95W	==>	3280.09	40.19430713	-105.03048238
10600.00	90.00	179.63	6914.00	3205.34S	1447.31W	==>	3378.97	40.19403263	-105.03048199
10700.00	90.00	179.63	6914.00	3305.34S	1446.67W	==>	3477.86	40.19375813	-105.03048159
10800.00	90.00	179.63	6914.00	3405.34S	1446.03W	==>	3576.74	40.19348363	-105.03048120
10900.00	90.00	179.63	6914.00	3505.34S	1445.39W	==>	3675.63	40.19320913	-105.03048081
11000.00	90.00	179.63	6914.00	3605.33S	1444.75W	==>	3774.51	40.19293463	-105.03048041
11100.00	90.00	179.63	6914.00	3705.33S	1444.11W	==>	3873.40	40.19266013	-105.03048002
11200.00	90.00	179.63	6914.00	3805.33S	1443.47W	==>	3972.28	40.19238563	-105.03047963
11300.00	90.00	179.63	6914.00	3905.33S	1442.83W	==>	4071.17	40.19211114	-105.03047923
11400.00	90.00	179.63	6914.00	4005.32S	1442.19W	==>	4170.05	40.19183664	-105.03047884
11500.00	90.00	179.63	6914.00	4105.32S	1441.55W	==>	4268.93	40.19156214	-105.03047844
11600.00	90.00	179.63	6914.00	4205.32S	1440.91W	==>	4367.82	40.19128764	-105.03047805
11700.00	90.00	179.63	6914.00	4305.32S	1440.27W	==>	4466.70	40.19101314	-105.03047766
11800.00	90.00	179.63	6914.00	4405.32S	1439.63W	==>	4565.59	40.19073864	-105.03047726
11900.00	90.00	179.63	6914.00	4505.31S	1439.00W	==>	4664.47	40.19046414	-105.03047687
12000.00	90.00	179.63	6914.00	4605.31S	1438.36W	==>	4763.36	40.19018964	-105.03047648
12100.00	90.00	179.63	6914.00	4705.31S	1437.72W	==>	4862.24	40.18991514	-105.03047608
12200.00	90.00	179.63	6914.00	4805.31S	1437.08W	==>	4961.13	40.18964064	-105.03047569
12300.00	90.00	179.63	6914.00	4905.31S	1436.44W	==>	5060.01	40.18936614	-105.03047529
12400.00	90.00	179.63	6914.00	5005.30S	1435.80W	==>	5158.90	40.18909164	-105.03047490
12500.00	90.00	179.63	6914.00	5105.30S	1435.16W	==>	5257.78	40.18881714	-105.03047451
12600.00	90.00	179.63	6914.00	5205.30S	1434.52W	==>	5356.67	40.18854264	-105.03047411
12700.00	90.00	179.63	6914.00	5305.30S	1433.88W	==>	5455.55	40.18826814	-105.03047372
12800.00	90.00	179.63	6914.00	5405.30S	1433.24W	==>	5554.44	40.18799364	-105.03047332
12900.00	90.00	179.63	6914.00	5505.29S	1432.60W	==>	5653.32	40.18771914	-105.03047293
13000.00	90.00	179.63	6914.00	5605.29S	1431.96W	==>	5752.21	40.18744464	-105.03047254
13100.00	90.00	179.63	6914.00	5705.29S	1431.32W	==>	5851.09	40.18717014	-105.03047214
13200.00	90.00	179.63	6914.00	5805.29S	1430.68W	==>	5949.98	40.18689564	-105.03047175
13300.00	90.00	179.63	6914.00	5905.29S	1430.04W	==>	6048.86	40.18662114	-105.03047136
13400.00	90.00	179.63	6914.00	6005.28S	1429.40W	==>	6147.75	40.18634664	-105.03047096
13500.00	90.00	179.63	6914.00	6105.28S	1428.76W	==>	6246.63	40.18607214	-105.03047057
13600.00	90.00	179.63	6914.00	6205.28S	1428.12W	==>	6345.52	40.18579764	-105.03047017
13700.00	90.00	179.63	6914.00	6305.28S	1427.48W	==>	6444.40	40.18552314	-105.03046978
13800.00	90.00	179.63	6914.00	6405.28S	1426.84W	==>	6543.29	40.18524864	-105.03046939
13900.00	90.00	179.63	6914.00	6505.27S	1426.21W	==>	6642.17	40.18497414	-105.03046899
14000.00	90.00	179.63	6914.00	6605.27S	1425.57W	==>	6741.05	40.18469964	-105.03046860
14100.00	90.00	179.63	6914.00	6705.27S	1424.93W	==>	6839.94	40.18442514	-105.03046821
14200.00	90.00	179.63	6914.00	6805.27S	1424.29W	==>	6938.82	40.18415064	-105.03046781
14300.00	90.00	179.63	6914.00	6905.27S	1423.65W	==>	7037.71	40.18387614	-105.03046742

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 5049.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 188.20 degrees
Bottom hole distance is 9855.60 Feet on azimuth 188.20 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by
Date Printed: 11-Apr-2019

SYSDRILL
Well Design Combined Report
Wellbore: OLANDER 8 (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	7005.26S	1423.01W	==>	7136.59	40.18360164	-105.03046702
14500.00	90.00	179.63	6914.00	7105.26S	1422.37W	==>	7235.48	40.18332714	-105.03046663
14600.00	90.00	179.63	6914.00	7205.26S	1421.73W	==>	7334.36	40.18305264	-105.03046624
14700.00	90.00	179.63	6914.00	7305.26S	1421.09W	==>	7433.25	40.18277814	-105.03046584
14800.00	90.00	179.63	6914.00	7405.26S	1420.45W	==>	7532.13	40.18250364	-105.03046545
14900.00	90.00	179.63	6914.00	7505.25S	1419.81W	==>	7631.02	40.18222914	-105.03046506
15000.00	90.00	179.63	6914.00	7605.25S	1419.17W	==>	7729.90	40.18195464	-105.03046466
15100.00	90.00	179.63	6914.00	7705.25S	1418.53W	==>	7828.79	40.18168014	-105.03046427
15200.00	90.00	179.63	6914.00	7805.25S	1417.89W	==>	7927.67	40.18140564	-105.03046388
15300.00	90.00	179.63	6914.00	7905.25S	1417.25W	==>	8026.56	40.18113114	-105.03046348
15400.00	90.00	179.63	6914.00	8005.24S	1416.61W	==>	8125.44	40.18085664	-105.03046309
15500.00	90.00	179.63	6914.00	8105.24S	1415.97W	==>	8224.33	40.18058214	-105.03046269
15600.00	90.00	179.63	6914.00	8205.24S	1415.33W	==>	8323.21	40.18030764	-105.03046230
15700.00	90.00	179.63	6914.00	8305.24S	1414.69W	==>	8422.10	40.18003314	-105.03046191
15800.00	90.00	179.63	6914.00	8405.23S	1414.05W	==>	8520.98	40.17975864	-105.03046151
15900.00	90.00	179.63	6914.00	8505.23S	1413.42W	==>	8619.87	40.17948414	-105.03046112
16000.00	90.00	179.63	6914.00	8605.23S	1412.78W	==>	8718.75	40.17920964	-105.03046073
16100.00	90.00	179.63	6914.00	8705.23S	1412.14W	==>	8817.64	40.17893514	-105.03046033
16200.00	90.00	179.63	6914.00	8805.23S	1411.50W	==>	8916.52	40.17866064	-105.03045994
16300.00	90.00	179.63	6914.00	8905.22S	1410.86W	==>	9015.41	40.17838614	-105.03045954
16400.00	90.00	179.63	6914.00	9005.22S	1410.22W	==>	9114.29	40.17811164	-105.03045915
16500.00	90.00	179.63	6914.00	9105.22S	1409.58W	==>	9213.17	40.17783714	-105.03045876
16600.00	90.00	179.63	6914.00	9205.22S	1408.94W	==>	9312.06	40.17756264	-105.03045836
16700.00	90.00	179.63	6914.00	9305.22S	1408.30W	==>	9410.94	40.17728814	-105.03045797
16800.00	90.00	179.63	6914.00	9405.21S	1407.66W	==>	9509.83	40.17701364	-105.03045758
16900.00	90.00	179.63	6914.00	9505.21S	1407.02W	==>	9608.71	40.17673914	-105.03045718
17000.00	90.00	179.63	6914.00	9605.21S	1406.38W	==>	9707.60	40.17646464	-105.03045679
17100.00	90.00	179.63	6914.00	9705.21S	1405.74W	==>	9806.48	40.17619014	-105.03045640
17149.67	90.00	179.63	6914.00	9754.88S	1405.42W	==>	9855.60	40.17605380	-105.03045620

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 5049.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 188.20 degrees
Bottom hole distance is 9855.60 Feet on azimuth 188.20 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by
Date Printed: 11-Apr-2019

