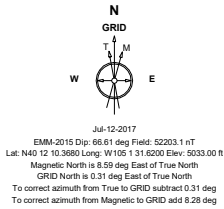


Cub Creek Energy, LLC

Location	Weld County, CO	Slot	OLANDER 3
Field	WATTENBERG	Well	OLANDER 3
Installation	Olander Pad Rework 04-09-2019	Wellbore	OLANDER 3 (PWB)



Created by sean.dolfinger
Date plotted 11-Apr-2019
Plot reference is OLANDER 3 (PWB).
Ref wellpath is OLANDER 3 (PWP#1).
Coordinates are in Feet reference OLANDER 3.
True Vertical Depths are reference Rig Datum.
Measured Depths are reference Rig Datum.
Datum: Planned Datum #1
Rig Datum to Mean Sea Level: 5050.00 ft.
Plot North is aligned to GRID North.

Scale 1 cm = 400 ft

East (Feet) ->

-3200 -2400 -1600 -800 0 800

1600

800

0

-800

-1600

-2400

-3200

-4000

-4800

-5600

-6400

-7200

-8000

-8800

-9600

-10400

<- North(Feet)

Scale 1 cm = 400 ft

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	281.76	1517.00	S 0.00	W 0.00	0.00	-0.00
End of Build	2934.54	28.35	281.76	2877.40	N 70.04	W 336.40	2.00	16.07
End of Hold	7130.04	28.35	281.76	6569.68	N 476.16	W 2286.88	0.00	109.23
Target OLANDER 3 - LP	8087.30	90.00	179.63	7127.00	S 95.81	W 2577.25	10.00	735.54
T.D. & Target OLA...BHL	17759.04	90.00	179.63	7127.00	S 9767.35	W 2515.42	0.00	10086.06

Scale 1 cm = 400 ft

<- True Vertical Depth (Feet)

-800

-0

800

1600

2400

3200

4000

4800

5600

6400

7200

8000

Tie on - 0.00 Inc, 17.00 MD, 17.00 TVD, -0.00 VS

3DS Kick off Point - 0.00 Inc, 1517.00 MD, 1517.00 TVD, -0.00 VS

End of Build - 28.35 Inc, 2934.54 MD, 2877.40 TVD, 16.07 VS

End of Hold - 28.35 Inc, 7130.04 MD, 6569.68 TVD, 109.23 VS

OLANDER 3 - LP

S/C Kick off Point - 90.00 Inc, 8087.30 MD, 7127.00 TVD, 735.54 VS

T.D. & End of Hold - 7127.00 TVD, 9767.35 S 2515.42 W

OLANDER 3 - BHL

OLANDER 3 - BHL

-800 -0 800 1600 2400 3200 4000 4800 5600 6400 7200 8000 8800 9600 10400 11200

Scale 1 cm = 400 ft

Vertical Section (Feet) ->

Azimuth 194.44 with reference 0.00 N, 0.00 E from OLANDER 3

SYSDRILL
Well Design Combined Report
Wellbore: OLANDER 3 (PWB)



Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
OLANDER 3	40.20281000	-105.02540000	1317080.8488	3132564.8494	25.43S	14.10E	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	-5033.00	0.00N	0.00E		0.00
1517.00	0.00	281.76	1517.00	-3533.00	0.00N	0.00E	==>	0.00
2934.54	28.35	281.76	2877.40	-2172.60	70.04N	336.40W	2.00	16.07
7130.04	28.35	281.76	6569.68	1519.68	476.16N	2286.88W	==>	109.23
8087.30	90.00	179.63	7127.00	2077.00	95.81S	2577.25W	10.00	735.54
17759.04	90.00	179.63	7127.00	2077.00	9767.35S	2515.42W	==>	10086.06

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	-105.02540000
17.00	0.00	0.00	17.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
100.00	0.00	0.00	100.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
200.00	0.00	0.00	200.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
300.00	0.00	0.00	300.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
400.00	0.00	0.00	400.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
500.00	0.00	0.00	500.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
600.00	0.00	0.00	600.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
700.00	0.00	0.00	700.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
800.00	0.00	0.00	800.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
900.00	0.00	0.00	900.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
1000.00	0.00	0.00	1000.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
1100.00	0.00	0.00	1100.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
1200.00	0.00	0.00	1200.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
1300.00	0.00	0.00	1300.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
1400.00	0.00	0.00	1400.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
1500.00	0.00	0.00	1500.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
1517.00	0.00	281.76	1517.00	0.00N	0.00E	==>	0.00	40.20281000	-105.02540000
1600.00	1.66	281.76	1599.99	0.25N	1.18W	2.00	0.06	40.20281069	-105.02540421
1700.00	3.66	281.76	1699.88	1.19N	5.72W	2.00	0.27	40.20281335	-105.02542046
1800.00	5.66	281.76	1799.54	2.85N	13.67W	2.00	0.65	40.20281802	-105.02544890
1900.00	7.66	281.76	1898.86	5.21N	25.03W	2.00	1.20	40.20282467	-105.02548950
2000.00	9.66	281.76	1997.71	8.28N	39.77W	2.00	1.90	40.20283331	-105.02554220
2100.00	11.66	281.76	2095.98	12.05N	57.88W	2.00	2.76	40.20284393	-105.02560696
2200.00	13.66	281.76	2193.55	16.52N	79.33W	2.00	3.79	40.20285651	-105.02568368
2300.00	15.66	281.76	2290.29	21.68N	104.11W	2.00	4.97	40.20287103	-105.02577228
2400.00	17.66	281.76	2386.09	27.52N	132.17W	2.00	6.31	40.20288748	-105.02587264
2500.00	19.66	281.76	2480.82	34.04N	163.49W	2.00	7.81	40.20290584	-105.02598464
2600.00	21.66	281.76	2574.39	41.23N	198.03W	2.00	9.46	40.20292609	-105.02610816
2700.00	23.66	281.76	2666.66	49.09N	235.75W	2.00	11.26	40.20294820	-105.02624302
2800.00	25.66	281.76	2757.54	57.59N	276.59W	2.00	13.21	40.20297214	-105.02638908
2900.00	27.66	281.76	2846.90	66.74N	320.52W	2.00	15.31	40.20299789	-105.02654616

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 5050.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 194.44 degrees
Bottom hole distance is 10086.06 Feet on azimuth 194.44 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by
Date Printed: 11-Apr-2019

SYSDRILL
Well Design Combined Report
Wellbore: OLANDER 3 (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)
2934.54	28.35	281.76	2877.40	70.04N	336.40W	2.00	16.07	40.20300720	-105.02660294
3000.00	28.35	281.76	2935.01	76.38N	366.83W	==>	17.52	40.20302504	-105.02671176
3100.00	28.35	281.76	3023.01	86.06N	413.32W	==>	19.74	40.20305229	-105.02687800
3200.00	28.35	281.76	3111.02	95.74N	459.81W	==>	21.96	40.20307954	-105.02704425
3300.00	28.35	281.76	3199.02	105.42N	506.30W	==>	24.18	40.20310679	-105.02721049
3400.00	28.35	281.76	3287.03	115.10N	552.79W	==>	26.40	40.20313404	-105.02737674
3500.00	28.35	281.76	3375.04	124.78N	599.28W	==>	28.62	40.20316129	-105.02754298
3600.00	28.35	281.76	3463.04	134.46N	645.77W	==>	30.84	40.20318854	-105.02770923
3700.00	28.35	281.76	3551.05	144.14N	692.26W	==>	33.06	40.20321579	-105.02787548
3800.00	28.35	281.76	3639.05	153.82N	738.75W	==>	35.28	40.20324304	-105.02804172
3900.00	28.35	281.76	3727.06	163.50N	785.24W	==>	37.51	40.20327029	-105.02820797
4000.00	28.35	281.76	3815.06	173.18N	831.73W	==>	39.73	40.20329754	-105.02837421
4100.00	28.35	281.76	3903.07	182.86N	878.22W	==>	41.95	40.20332479	-105.02854046
4200.00	28.35	281.76	3991.07	192.54N	924.71W	==>	44.17	40.20335204	-105.02870671
4300.00	28.35	281.76	4079.08	202.22N	971.20W	==>	46.39	40.20337929	-105.02887295
4400.00	28.35	281.76	4167.09	211.89N	1017.69W	==>	48.61	40.20340654	-105.02903920
4500.00	28.35	281.76	4255.09	221.57N	1064.18W	==>	50.83	40.20343378	-105.02920545
4600.00	28.35	281.76	4343.10	231.25N	1110.67W	==>	53.05	40.20346103	-105.02937169
4700.00	28.35	281.76	4431.10	240.93N	1157.16W	==>	55.27	40.20348828	-105.02953794
4800.00	28.35	281.76	4519.11	250.61N	1203.65W	==>	57.49	40.20351553	-105.02970419
4900.00	28.35	281.76	4607.11	260.29N	1250.14W	==>	59.71	40.20354277	-105.02987044
5000.00	28.35	281.76	4695.12	269.97N	1296.63W	==>	61.93	40.20357002	-105.03003668
5100.00	28.35	281.76	4783.13	279.65N	1343.12W	==>	64.15	40.20359727	-105.03020293
5200.00	28.35	281.76	4871.13	289.33N	1389.61W	==>	66.37	40.20362451	-105.03036918
5300.00	28.35	281.76	4959.14	299.01N	1436.10W	==>	68.59	40.20365176	-105.03053543
5400.00	28.35	281.76	5047.14	308.69N	1482.59W	==>	70.81	40.20367901	-105.03070168
5500.00	28.35	281.76	5135.15	318.37N	1529.08W	==>	73.03	40.20370625	-105.03086792
5600.00	28.35	281.76	5223.15	328.05N	1575.57W	==>	75.25	40.20373350	-105.03103417
5700.00	28.35	281.76	5311.16	337.73N	1622.06W	==>	77.47	40.20376074	-105.03120042
5800.00	28.35	281.76	5399.17	347.41N	1668.55W	==>	79.69	40.20378799	-105.03136667
5900.00	28.35	281.76	5487.17	357.09N	1715.04W	==>	81.92	40.20381523	-105.03153292
6000.00	28.35	281.76	5575.18	366.77N	1761.53W	==>	84.14	40.20384248	-105.03169917
6100.00	28.35	281.76	5663.18	376.45N	1808.02W	==>	86.36	40.20386972	-105.03186542
6200.00	28.35	281.76	5751.19	386.13N	1854.51W	==>	88.58	40.20389697	-105.03203167
6300.00	28.35	281.76	5839.19	395.81N	1901.00W	==>	90.80	40.20392421	-105.03219791
6400.00	28.35	281.76	5927.20	405.49N	1947.49W	==>	93.02	40.20395145	-105.03236416
6500.00	28.35	281.76	6015.20	415.17N	1993.98W	==>	95.24	40.20397870	-105.03253041
6600.00	28.35	281.76	6103.21	424.85N	2040.47W	==>	97.46	40.20400594	-105.03269666
6700.00	28.35	281.76	6191.22	434.53N	2086.96W	==>	99.68	40.20403318	-105.03286291
6800.00	28.35	281.76	6279.22	444.21N	2133.45W	==>	101.90	40.20406043	-105.03302916
6900.00	28.35	281.76	6367.23	453.89N	2179.94W	==>	104.12	40.20408767	-105.03319541
7000.00	28.35	281.76	6455.23	463.57N	2226.43W	==>	106.34	40.20411491	-105.03336166
7100.00	28.35	281.76	6543.24	473.25N	2272.92W	==>	108.56	40.20414215	-105.03352791
7130.04	28.35	281.76	6569.68	476.16N	2286.88W	==>	109.23	40.20415034	-105.03357786
7200.00	27.84	266.91	6631.47	478.67N	2319.50W	10.00	114.93	40.20415769	-105.03369457
7300.00	29.84	246.51	6719.27	467.46N	2365.75W	10.00	137.32	40.20412761	-105.03386036
7400.00	34.49	229.80	6804.07	439.20N	2410.30W	10.00	175.80	40.20405066	-105.03402039
7500.00	40.89	217.17	6883.28	394.73N	2451.81W	10.00	229.22	40.20392919	-105.03416982
7600.00	48.33	207.63	6954.50	335.40N	2489.00W	10.00	295.94	40.20376689	-105.03430408
7700.00	56.40	200.15	7015.56	263.03N	2520.75W	10.00	373.95	40.20356869	-105.03441911
7800.00	64.84	193.98	7064.61	179.81N	2546.09W	10.00	460.86	40.20334061	-105.03451141
7900.00	73.50	188.62	7100.16	88.26N	2564.26W	10.00	554.05	40.20308957	-105.03457817
8000.00	82.29	183.73	7121.13	8.83S	2574.70W	10.00	650.67	40.20282322	-105.03461737
8087.30	90.00	179.63	7127.00	95.81S	2577.25W	10.00	735.54	40.20258450	-105.03462810
8100.00	90.00	179.63	7127.00	108.51S	2577.16W	==>	747.82	40.20254964	-105.03462805
8200.00	90.00	179.63	7127.00	208.51S	2576.52W	==>	844.49	40.20227514	-105.03462764
8300.00	90.00	179.63	7127.00	308.51S	2575.89W	==>	941.17	40.20200064	-105.03462723
8400.00	90.00	179.63	7127.00	408.50S	2575.25W	==>	1037.85	40.20172614	-105.03462682

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5050.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 194.44 degrees
Bottom hole distance is 10086.06 Feet on azimuth 194.44 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by
Date Printed: 11-Apr-2019

SYSDRILL
Well Design Combined Report
Wellbore: OLANDER 3 (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	7127.00	508.50S	2574.61W	==>	1134.53	40.20145164	-105.03462641
8600.00	90.00	179.63	7127.00	608.50S	2573.97W	==>	1231.21	40.20117714	-105.03462600
8700.00	90.00	179.63	7127.00	708.50S	2573.33W	==>	1327.89	40.20090265	-105.03462559
8800.00	90.00	179.63	7127.00	808.50S	2572.69W	==>	1424.57	40.20062815	-105.03462518
8900.00	90.00	179.63	7127.00	908.49S	2572.05W	==>	1521.25	40.20035365	-105.03462477
9000.00	90.00	179.63	7127.00	1008.49S	2571.41W	==>	1617.92	40.20007915	-105.03462436
9100.00	90.00	179.63	7127.00	1108.49S	2570.77W	==>	1714.60	40.19980465	-105.03462395
9200.00	90.00	179.63	7127.00	1208.49S	2570.13W	==>	1811.28	40.19953015	-105.03462354
9300.00	90.00	179.63	7127.00	1308.49S	2569.49W	==>	1907.96	40.19925565	-105.03462313
9400.00	90.00	179.63	7127.00	1408.48S	2568.85W	==>	2004.64	40.19898115	-105.03462272
9500.00	90.00	179.63	7127.00	1508.48S	2568.21W	==>	2101.32	40.19870665	-105.03462231
9600.00	90.00	179.63	7127.00	1608.48S	2567.58W	==>	2198.00	40.19843215	-105.03462190
9700.00	90.00	179.63	7127.00	1708.48S	2566.94W	==>	2294.68	40.19815765	-105.03462149
9800.00	90.00	179.63	7127.00	1808.47S	2566.30W	==>	2391.35	40.19788315	-105.03462109
9900.00	90.00	179.63	7127.00	1908.47S	2565.66W	==>	2488.03	40.19760865	-105.03462068
10000.00	90.00	179.63	7127.00	2008.47S	2565.02W	==>	2584.71	40.19733415	-105.03462027
10100.00	90.00	179.63	7127.00	2108.47S	2564.38W	==>	2681.39	40.19705966	-105.03461986
10200.00	90.00	179.63	7127.00	2208.47S	2563.74W	==>	2778.07	40.19678516	-105.03461945
10300.00	90.00	179.63	7127.00	2308.46S	2563.10W	==>	2874.75	40.19651066	-105.03461904
10400.00	90.00	179.63	7127.00	2408.46S	2562.46W	==>	2971.43	40.19623616	-105.03461863
10500.00	90.00	179.63	7127.00	2508.46S	2561.82W	==>	3068.11	40.19596166	-105.03461822
10600.00	90.00	179.63	7127.00	2608.46S	2561.18W	==>	3164.78	40.19568716	-105.03461781
10700.00	90.00	179.63	7127.00	2708.46S	2560.54W	==>	3261.46	40.19541266	-105.03461740
10800.00	90.00	179.63	7127.00	2808.45S	2559.91W	==>	3358.14	40.19513816	-105.03461699
10900.00	90.00	179.63	7127.00	2908.45S	2559.27W	==>	3454.82	40.19486366	-105.03461658
11000.00	90.00	179.63	7127.00	3008.45S	2558.63W	==>	3551.50	40.19458916	-105.03461617
11100.00	90.00	179.63	7127.00	3108.45S	2557.99W	==>	3648.18	40.19431466	-105.03461576
11200.00	90.00	179.63	7127.00	3208.45S	2557.35W	==>	3744.86	40.19404016	-105.03461535
11300.00	90.00	179.63	7127.00	3308.44S	2556.71W	==>	3841.54	40.19376566	-105.03461494
11400.00	90.00	179.63	7127.00	3408.44S	2556.07W	==>	3938.21	40.19349116	-105.03461453
11500.00	90.00	179.63	7127.00	3508.44S	2555.43W	==>	4034.89	40.19321666	-105.03461412
11600.00	90.00	179.63	7127.00	3608.44S	2554.79W	==>	4131.57	40.19294216	-105.03461371
11700.00	90.00	179.63	7127.00	3708.44S	2554.15W	==>	4228.25	40.19266766	-105.03461330
11800.00	90.00	179.63	7127.00	3808.43S	2553.51W	==>	4324.93	40.19239316	-105.03461290
11900.00	90.00	179.63	7127.00	3908.43S	2552.87W	==>	4421.61	40.19211866	-105.03461249
12000.00	90.00	179.63	7127.00	4008.43S	2552.23W	==>	4518.29	40.19184417	-105.03461208
12100.00	90.00	179.63	7127.00	4108.43S	2551.60W	==>	4614.97	40.19156967	-105.03461167
12200.00	90.00	179.63	7127.00	4208.43S	2550.96W	==>	4711.64	40.19129517	-105.03461126
12300.00	90.00	179.63	7127.00	4308.42S	2550.32W	==>	4808.32	40.19102067	-105.03461085
12400.00	90.00	179.63	7127.00	4408.42S	2549.68W	==>	4905.00	40.19074617	-105.03461044
12500.00	90.00	179.63	7127.00	4508.42S	2549.04W	==>	5001.68	40.19047167	-105.03461003
12600.00	90.00	179.63	7127.00	4608.42S	2548.40W	==>	5098.36	40.19019717	-105.03460962
12700.00	90.00	179.63	7127.00	4708.42S	2547.76W	==>	5195.04	40.18992267	-105.03460921
12800.00	90.00	179.63	7127.00	4808.41S	2547.12W	==>	5291.72	40.18964817	-105.03460880
12900.00	90.00	179.63	7127.00	4908.41S	2546.48W	==>	5388.40	40.18937367	-105.03460839
13000.00	90.00	179.63	7127.00	5008.41S	2545.84W	==>	5485.07	40.18909917	-105.03460798
13100.00	90.00	179.63	7127.00	5108.41S	2545.20W	==>	5581.75	40.18882467	-105.03460757
13200.00	90.00	179.63	7127.00	5208.41S	2544.56W	==>	5678.43	40.18855017	-105.03460716
13300.00	90.00	179.63	7127.00	5308.40S	2543.92W	==>	5775.11	40.18827567	-105.03460675
13400.00	90.00	179.63	7127.00	5408.40S	2543.29W	==>	5871.79	40.18800117	-105.03460634
13500.00	90.00	179.63	7127.00	5508.40S	2542.65W	==>	5968.47	40.18772667	-105.03460593
13600.00	90.00	179.63	7127.00	5608.40S	2542.01W	==>	6065.15	40.18745217	-105.03460553
13700.00	90.00	179.63	7127.00	5708.40S	2541.37W	==>	6161.83	40.18717767	-105.03460512
13800.00	90.00	179.63	7127.00	5808.39S	2540.73W	==>	6258.50	40.18690317	-105.03460471
13900.00	90.00	179.63	7127.00	5908.39S	2540.09W	==>	6355.18	40.18662867	-105.03460430
14000.00	90.00	179.63	7127.00	6008.39S	2539.45W	==>	6451.86	40.18635417	-105.03460389
14100.00	90.00	179.63	7127.00	6108.39S	2538.81W	==>	6548.54	40.18607967	-105.03460348
14200.00	90.00	179.63	7127.00	6208.38S	2538.17W	==>	6645.22	40.18580517	-105.03460307
14300.00	90.00	179.63	7127.00	6308.38S	2537.53W	==>	6741.90	40.18553067	-105.03460266

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Bottom hole distance is 10086.06 Feet on azimuth 194.44 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by
Date Printed: 11-Apr-2019

SYSDRILL
Well Design Combined Report
Wellbore: OLANDER 3 (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	7127.00	6408.38S	2536.89W	==>	6838.58	40.18525617	-105.03460225
14500.00	90.00	179.63	7127.00	6508.38S	2536.25W	==>	6935.26	40.18498167	-105.03460184
14600.00	90.00	179.63	7127.00	6608.38S	2535.61W	==>	7031.93	40.18470717	-105.03460143
14700.00	90.00	179.63	7127.00	6708.37S	2534.98W	==>	7128.61	40.18443267	-105.03460102
14800.00	90.00	179.63	7127.00	6808.37S	2534.34W	==>	7225.29	40.18415817	-105.03460061
14900.00	90.00	179.63	7127.00	6908.37S	2533.70W	==>	7321.97	40.18388367	-105.03460020
15000.00	90.00	179.63	7127.00	7008.37S	2533.06W	==>	7418.65	40.18360917	-105.03459979
15100.00	90.00	179.63	7127.00	7108.37S	2532.42W	==>	7515.33	40.18333467	-105.03459938
15200.00	90.00	179.63	7127.00	7208.36S	2531.78W	==>	7612.01	40.18306017	-105.03459897
15300.00	90.00	179.63	7127.00	7308.36S	2531.14W	==>	7708.69	40.18278567	-105.03459857
15400.00	90.00	179.63	7127.00	7408.36S	2530.50W	==>	7805.36	40.18251117	-105.03459816
15500.00	90.00	179.63	7127.00	7508.36S	2529.86W	==>	7902.04	40.18223667	-105.03459775
15600.00	90.00	179.63	7127.00	7608.36S	2529.22W	==>	7998.72	40.18196217	-105.03459734
15700.00	90.00	179.63	7127.00	7708.35S	2528.58W	==>	8095.40	40.18168767	-105.03459693
15800.00	90.00	179.63	7127.00	7808.35S	2527.94W	==>	8192.08	40.18141317	-105.03459652
15900.00	90.00	179.63	7127.00	7908.35S	2527.30W	==>	8288.76	40.18113867	-105.03459611
16000.00	90.00	179.63	7127.00	8008.35S	2526.67W	==>	8385.44	40.18086417	-105.03459570
16100.00	90.00	179.63	7127.00	8108.35S	2526.03W	==>	8482.12	40.18058967	-105.03459529
16200.00	90.00	179.63	7127.00	8208.34S	2525.39W	==>	8578.79	40.18031517	-105.03459488
16300.00	90.00	179.63	7127.00	8308.34S	2524.75W	==>	8675.47	40.18004067	-105.03459447
16400.00	90.00	179.63	7127.00	8408.34S	2524.11W	==>	8772.15	40.17976617	-105.03459406
16500.00	90.00	179.63	7127.00	8508.34S	2523.47W	==>	8868.83	40.17949167	-105.03459365
16600.00	90.00	179.63	7127.00	8608.34S	2522.83W	==>	8965.51	40.17921717	-105.03459324
16700.00	90.00	179.63	7127.00	8708.33S	2522.19W	==>	9062.19	40.17894267	-105.03459283
16800.00	90.00	179.63	7127.00	8808.33S	2521.55W	==>	9158.87	40.17866817	-105.03459243
16900.00	90.00	179.63	7127.00	8908.33S	2520.91W	==>	9255.55	40.17839367	-105.03459202
17000.00	90.00	179.63	7127.00	9008.33S	2520.27W	==>	9352.23	40.17811917	-105.03459161
17100.00	90.00	179.63	7127.00	9108.33S	2519.63W	==>	9448.90	40.17784467	-105.03459120
17200.00	90.00	179.63	7127.00	9208.32S	2519.00W	==>	9545.58	40.17757017	-105.03459079
17300.00	90.00	179.63	7127.00	9308.32S	2518.36W	==>	9642.26	40.17729567	-105.03459038
17400.00	90.00	179.63	7127.00	9408.32S	2517.72W	==>	9738.94	40.17702117	-105.03458997
17500.00	90.00	179.63	7127.00	9508.32S	2517.08W	==>	9835.62	40.17674667	-105.03458956
17600.00	90.00	179.63	7127.00	9608.32S	2516.44W	==>	9932.30	40.17647217	-105.03458915
17700.00	90.00	179.63	7127.00	9708.31S	2515.80W	==>	10028.98	40.17619767	-105.03458874
17759.04	90.00	179.63	7127.00	9767.35S	2515.42W	==>	10086.06	40.17603560	-105.03458850

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SYSDRILL
Well Design Combined Report
Wellbore: OLANDER 3 (PWB)



Targets

Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
OLANDER 3 - LP	95.81S	2577.25W	7127.00	40.20258450	-105.03462810	1316985.04	3129987.72
OLANDER 3 - BHL	9767.35S	2515.42W	7127.00	40.17603560	-105.03458850	1307313.93	3130049.54

Survey Tool Program

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
791131	Planned	1500.00	1500.00	WdW Rate Gyro	Standard
791130	Planned	17759.04	7127.00	ISCWSA MWD	Rev 4 + SAG + FLT

Notes

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