



Job Number: US2018-108-OP
Company: XTO Energy
Lease/Well: Remuda South 25 State 122H
Location: Remuda South 25 State Pad, Center
Rig Name: Orion Perseus (13)
State/Country: New Mexico/ Eddy County
Country: United States
API Number: 30-015-44360

Elev. GL: 3065.00 ft **RKB:** 3084.00 ft
System: US State Plane 1927 (Exact solution)
Group: New Mexico East 3001
Station: CLARKE 1866
Mag. Decl: 6.91° (C:\HawkEye\IGRF2005.mif)
Grid Conv: 0.20789 E
Date: Monday, July 23, 2018



Calculated by HawkEye Software
 Minimum Curvature Method
 Vertical Section Plane 0.00°

Northing (US ft): 464639.75 Easting (US ft): 620308.40
 Latitude: 32°16'36.5214" N Longitude: -103°56'38.6245" W
 Direction Reference: Grid North

RECEIVED

MAY 22 2019

ACTUALS/PLANNED

#	Measured Depth (ft)	Inc. Day	AZM. Day	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS 100 ft	Build Rate 100 ft	Walk Rate 100 ft	LREW From-Plan (ft)	UDNS From-Plan (ft)	Closure (ft)	Closure Dr. Day	Total Foot. Day	Subsea TVD (ft)
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 (E)	0.00 (N)	0.00	0.00	0.00	-6149.00
2	110.00	0.40	297.00	110.00	0.17	-0.34	0.17	0.36	0.36	-57.27	-0.34 (W)	0.17 (N)	0.38	297.00	57.34	-6039.00
3	173.00	0.50	312.00	173.00	0.46	-0.74	0.46	0.24	0.16	23.81	-0.74 (W)	0.46 (N)	0.87	301.68	104.71	-5976.00
4	203.00	0.60	261.00	203.00	0.52	-0.99	0.52	1.61	0.33	-170.00	-0.99 (W)	0.52 (N)	1.12	297.65	38.55	-5946.00
5	232.00	0.90	275.00	231.99	0.52	-1.37	0.52	1.20	1.03	48.28	-1.37 (W)	0.52 (N)	1.47	290.66	138.61	-5917.01
6	263.00	0.60	331.00	262.99	0.68	-1.69	0.68	2.43	-0.97	180.65	-1.69 (W)	0.68 (N)	1.82	291.90	100.45	-5886.01
7	317.00	0.70	288.00	316.99	1.03	-2.14	1.03	0.90	0.19	-79.63	-2.14 (W)	1.03 (N)	2.38	295.66	174.54	-5832.01
8	335.00	0.20	274.00	334.99	1.07	-2.28	1.07	2.82	-2.78	-77.78	-2.28 (W)	1.07 (N)	2.52	295.06	113.10	-5814.01
9	396.00	0.20	227.80	395.99	1.00	-2.46	1.00	0.26	0.00	-75.74	-2.46 (W)	1.00 (N)	2.66	292.12	62.91	-5753.01
10	453.00	0.30	254.30	452.99	0.89	-2.68	0.89	0.26	0.18	46.49	-2.68 (W)	0.89 (N)	2.83	288.44	147.58	-5696.01
11	548.00	0.70	120.00	547.98	0.54	-2.42	0.54	0.98	0.42	-141.37	-2.42 (W)	0.54 (N)	2.48	282.52	26.90	-5601.02
12	644.00	1.30	132.80	643.97	-0.50	-1.11	-0.50	0.66	0.63	13.33	-1.11 (W)	-0.50 (S)	1.22	245.96	137.23	-5505.03
13	701.00	1.10	122.20	700.96	-1.23	-0.17	-1.23	0.52	-0.35	-18.60	-0.17 (W)	-1.23 (S)	1.24	188.10	24.17	-5448.04
14	796.00	1.30	126.10	795.94	-2.35	1.47	-2.35	0.23	0.21	4.11	1.47 (E)	-2.35 (S)	2.77	147.99	171.48	-5353.06
15	891.00	0.30	157.50	890.93	-3.21	2.43	-3.21	1.11	-1.05	33.05	2.43 (E)	-3.21 (S)	4.03	142.85	-43.82	-5258.07
16	986.00	1.70	120.70	985.91	-4.16	3.74	-4.16	1.55	1.47	-38.74	3.74 (E)	-4.16 (S)	5.60	138.05	169.64	-5163.09
17	1081.00	1.50	119.30	1080.87	-5.49	6.04	-5.49	0.21	-0.21	-1.47	6.04 (E)	-5.49 (S)	8.16	132.28	-36.84	-5068.13
18	1177.00	1.70	114.40	1176.84	-6.69	8.43	-6.69	0.25	0.21	-5.10	8.43 (E)	-6.69 (S)	10.76	128.45	-97.30	-4972.16
19	1272.00	1.70	99.80	1271.79	-7.51	11.10	-7.51	0.45	0.00	-15.37	11.10 (E)	-7.51 (S)	13.41	124.10	121.66	-4877.21
20	1367.00	1.60	93.40	1366.75	-7.83	13.81	-7.83	0.22	-0.11	-6.74	13.81 (E)	-7.83 (S)	15.88	119.56	-21.36	-4782.25
21	1462.00	1.90	89.90	1461.71	-7.91	16.71	-7.91	0.34	0.32	-3.68	16.71 (E)	-7.91 (S)	18.49	115.33	-66.97	-4687.29
22	1556.00	2.10	79.30	1555.65	-7.59	19.96	-7.59	0.45	0.21	-11.28	19.96 (E)	-7.59 (S)	21.36	110.81	70.61	-4593.35
23	1650.00	2.20	85.70	1649.59	-7.13	23.45	-7.13	0.28	0.11	6.81	23.45 (E)	-7.13 (S)	24.51	106.91	48.84	-4499.41
24	1744.00	2.40	90.90	1743.51	-7.03	27.22	-7.03	0.31	0.21	5.53	27.22 (E)	-7.03 (S)	28.11	104.48	91.95	-4405.49
25	1841.00	2.40	94.80	1840.43	-7.23	31.28	-7.23	0.17	0.00	4.02	31.28 (E)	-7.23 (S)	32.10	103.01	159.68	-4308.57
26	1937.00	1.90	100.50	1936.36	-7.69	34.84	-7.69	0.57	-0.52	5.94	34.84 (E)	-7.69 (S)	35.68	102.44	4.59	-4212.64
27	2031.00	2.30	101.30	2030.30	-8.34	38.23	-8.34	0.43	0.43	0.85	38.23 (E)	-8.34 (S)	39.13	102.31	-15.40	-4118.70
28	2127.00	3.70	95.40	2126.16	-9.01	43.20	-9.01	1.49	1.46	-6.15	43.20 (E)	-9.01 (S)	44.13	101.78	173.94	-4022.84
29	2222.00	1.90	89.60	2221.04	-9.29	47.83	-9.29	1.92	-1.89	-6.11	47.83 (E)	-9.29 (S)	48.72	100.99	-69.69	-3927.96
30	2316.00	2.00	82.90	2314.99	-9.07	51.01	-9.07	0.26	0.11	-7.13	51.01 (E)	-9.07 (S)	51.81	100.09	-53.98	-3834.01
31	2411.00	2.10	79.30	2409.93	-8.55	54.37	-8.55	0.17	0.11	-3.79	54.37 (E)	-8.55 (S)	55.03	98.93	57.69	-3739.07
32	2506.00	2.70	95.90	2504.85	-8.45	58.30	-8.45	0.96	0.63	17.47	58.24 (E)	-8.43 (S)	58.91	98.25	63.63	-3644.15
33	2601.00	3.30	112.40	2599.72	-9.72	63.06	-9.72	1.10	0.63	17.37	62.16 (E)	-9.40 (S)	63.80	98.77	140.67	-3549.28
34	2695.00	2.80	121.40	2693.58	-11.95	67.52	-11.95	0.73	-0.53	9.57	64.32 (E)	-10.79 (S)	68.57	100.04	110.06	-3455.42
35	2790.00	2.70	128.40	2788.48	-14.55	71.25	-14.55	0.37	-0.11	7.37	64.23 (E)	-11.99 (S)	72.72	101.54	151.58	-3360.52
36	2885.00	2.60	129.60	2883.37	-17.31	74.67	-17.31	0.12	-0.11	1.26	63.05 (E)	-13.09 (S)	76.65	103.06	-68.64	-3265.63
37	2980.00	2.70	124.70	2978.27	-19.96	78.17	-19.96	0.26	0.11	-5.16	61.86 (E)	-14.03 (S)	80.67	104.33	165.56	-3170.73
38	3075.00	1.40	110.40	3073.21	-21.64	81.09	-21.64	1.46	-1.37	-15.05	60.18 (E)	-14.03 (S)	83.93	104.94	159.37	-3075.79
39	3171.00	0.50	31.60	3169.20	-21.69	82.41	-21.69	1.45	-0.94	-82.08	56.84 (E)	-12.38 (S)	85.22	104.75	-75.91	-2979.80
40	3266.00	1.00	344.70	3264.19	-20.54	82.41	-20.54	0.79	0.53	-49.37	52.18 (E)	-9.54 (S)	84.93	103.99	90.60	-2884.81
41	3361.00	1.00	345.90	3359.18	-18.94	81.99	-18.94	0.02	0.00	1.26	47.08 (E)	-6.23 (S)	84.15	103.00	93.20	-2789.82
42	3456.00	1.00	352.30	3454.16	-17.31	81.68	-17.31	0.12	0.00	6.74	42.08 (E)	-2.90 (S)	83.49	101.97	161.73	-2694.84
43	3552.00	0.80	357.10	3550.15	-15.81	81.53	-15.81	0.22	-0.21	5.00	37.20 (E)	0.32 (N)	83.05	100.97	-37.87	-2598.85
44	3647.00	0.90	352.30	3645.14	-14.41	81.40	-14.41	0.13	0.11	-5.05	32.39 (E)	3.43 (N)	82.66	100.04	27.13	-2503.86

#	Measured Depth (ft)	INC Deg	AZI Deg	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS %100 ft	Build Rate %100 ft	Walk Rate %100 ft	LR/WR From-Plan (ft)	UDNS From-Plan (ft)	Closure (ft)	Closure Str Deg	Foot Face Deg	Subsea TVD (ft)
45	3740.00	1.00	355.20	3738.13	-12.88	81.23	-12.88	0.12	0.11	3.12	27.64 (E)	6.63 (N)	82.25	99.01	-94.05	-2410.87
46	3834.00	1.00	347.10	3832.11	-11.26	80.98	-11.26	0.15	0.00	-8.62	22.76 (E)	9.93 (N)	81.76	97.92	177.06	-2316.89
47	3930.00	0.30	354.00	3928.11	-10.19	80.77	-10.19	0.73	-0.73	7.19	17.82 (E)	12.72 (N)	81.41	97.19	138.60	-2220.89
48	4024.00	0.20	312.70	4022.11	-9.84	80.62	-9.84	0.21	-0.11	-43.94	13.05 (E)	14.76 (N)	81.22	96.96	68.26	-2126.89
49	4120.00	0.30	342.70	4118.10	-9.48	80.42	-9.48	0.17	0.10	31.25	8.12 (E)	16.83 (N)	80.98	96.73	-71.55	-2030.90
50	4215.00	0.40	316.50	4213.10	-9.01	80.12	-9.01	0.20	0.11	-27.58	3.14 (E)	19.01 (N)	80.62	96.41	-95.80	-1935.90
51	4311.00	0.40	304.90	4309.10	-8.57	79.61	-8.57	0.08	0.00	-12.08	-2.09 (W)	21.17 (N)	80.07	96.14	139.30	-1839.90
52	4405.00	0.30	324.60	4403.10	-8.18	79.20	-8.18	0.16	-0.11	20.96	-7.14 (W)	23.24 (N)	79.62	95.90	-73.04	-1745.90
53	4500.00	0.40	297.40	4498.10	-7.83	78.76	-7.83	0.20	0.11	-28.63	12.26 (W)	25.30 (N)	79.15	95.67	160.42	-1650.90
54	4596.00	0.20	274.90	4594.10	-7.66	78.30	-7.66	0.24	-0.21	-23.44	17.32 (W)	27.15 (N)	78.67	95.59	96.50	-1554.90
55	4691.00	0.20	287.90	4689.10	-7.59	77.98	-7.59	0.05	0.00	13.68	20.96 (W)	28.42 (N)	78.35	95.56	45.33	-1459.90
56	4787.00	0.40	312.40	4785.09	-7.32	77.57	-7.32	0.24	0.21	25.52	23.23 (W)	29.37 (N)	77.91	95.39	165.72	-1363.91
57	4882.00	0.10	227.30	4880.09	-7.15	77.26	-7.15	0.43	-0.32	-89.58	24.05 (W)	29.73 (N)	77.59	95.29	119.30	-1268.91
58	4978.00	0.30	124.90	4976.09	-7.35	77.41	-7.35	0.35	0.21	-106.67	23.90 (W)	29.53 (N)	77.76	95.42	165.26	-1172.91
59	5073.00	0.10	159.90	5071.09	-7.57	77.64	-7.57	0.24	-0.21	36.84	23.67 (W)	29.31 (N)	78.01	95.57	114.40	-1077.91
60	5167.00	0.10	111.10	5165.09	-7.68	77.75	-7.68	0.09	0.00	-51.91	23.57 (W)	29.20 (N)	78.12	95.64	-49.21	-983.91
61	5262.00	0.50	70.60	5260.09	-7.57	78.21	-7.57	0.45	0.42	-42.63	23.10 (W)	29.31 (N)	78.58	95.53	134.58	-888.91
62	5358.00	0.40	88.10	5356.09	-7.42	78.94	-7.42	0.18	-0.10	18.23	22.37 (W)	29.46 (N)	79.29	95.37	131.79	-792.91
63	5452.00	0.30	123.70	5450.09	-7.54	79.48	-7.54	0.25	-0.11	37.87	21.84 (W)	29.33 (N)	79.83	95.42	114.50	-698.91
64	5548.00	0.30	172.70	5546.08	-7.93	79.72	-7.93	0.26	0.00	51.04	21.60 (W)	28.94 (N)	80.11	95.68	152.31	-602.92
65	5643.00	0.20	189.20	5641.08	-8.34	79.72	-8.34	0.13	-0.11	17.37	21.59 (W)	28.53 (N)	80.16	95.97	89.58	-507.92
66	5738.00	0.50	255.20	5736.08	-8.61	79.30	-8.61	0.48	0.32	69.47	22.02 (W)	28.26 (N)	79.76	96.20	-18.85	-412.92
67	5834.00	0.80	248.00	5832.08	-8.97	78.27	-8.97	0.32	0.31	-7.50	23.04 (W)	27.91 (N)	78.78	96.54	133.74	-316.92
68	5929.00	0.70	257.40	5927.07	-9.34	77.09	-9.34	0.17	-0.11	9.89	24.23 (W)	27.53 (N)	77.65	96.91	-9.94	-221.93
69	6025.00	1.00	254.40	6023.06	-9.70	75.71	-9.70	0.32	0.31	-3.12	25.60 (W)	27.18 (N)	76.33	97.30	146.12	-125.94
70	6116.00	0.70	235.50	6114.05	-10.23	74.49	-10.23	0.45	-0.33	-20.77	26.83 (W)	26.65 (N)	75.18	97.82	-95.45	-34.95
71	6211.00	0.70	224.60	6209.04	-10.97	73.60	-10.97	0.14	0.00	-11.47	27.71 (W)	25.91 (N)	74.41	98.48	27.30	60.04
72	6306.00	0.90	231.00	6304.03	-11.85	72.61	-11.85	0.23	0.21	6.74	28.70 (W)	25.02 (N)	73.57	99.27	176.67	155.03
73	6401.00	0.30	237.70	6399.03	-12.45	71.82	-12.45	0.63	-0.63	7.05	29.49 (W)	24.42 (N)	72.89	99.84	99.15	250.03
74	6522.00	0.30	256.00	6520.02	-12.70	71.25	-12.70	0.08	0.00	15.12	30.07 (W)	24.18 (N)	72.37	100.11	73.18	371.02
75	6617.00	0.40	283.30	6615.02	-12.68	70.68	-12.68	0.20	0.11	28.74	30.63 (W)	24.19 (N)	71.81	100.17	-54.34	466.02
76	6712.00	0.50	269.50	6710.02	-12.61	69.95	-12.61	0.15	0.11	-14.53	31.37 (W)	24.26 (N)	71.07	100.22	141.85	561.02
77	6807.00	0.40	257.10	6805.02	-12.69	69.21	-12.69	0.15	-0.11	-13.05	32.10 (W)	24.19 (N)	70.36	100.39	-47.53	656.02
78	6903.00	0.70	234.50	6901.01	-13.10	68.40	-13.10	0.38	0.31	-23.54	32.91 (W)	23.77 (N)	69.65	100.84	-41.17	752.01
79	6999.00	0.80	228.50	6997.00	-13.89	67.43	-13.89	0.13	0.10	-6.25	33.89 (W)	22.99 (N)	68.84	101.64	155.65	848.00
80	7095.00	0.60	219.50	7093.00	-14.72	66.60	-14.72	0.24	-0.21	-9.38	34.71 (W)	22.15 (N)	68.21	102.46	-30.98	944.00
81	7191.00	0.70	214.70	7188.99	-15.59	65.95	-15.59	0.12	0.10	-5.00	35.36 (W)	21.28 (N)	67.77	103.30	157.62	1039.99
82	7283.00	0.30	255.00	7280.99	-16.11	65.40	-16.11	0.55	-0.43	43.80	35.92 (W)	20.76 (N)	67.35	103.84	121.97	1131.99
83	7379.00	1.40	143.50	7376.98	-17.12	65.85	-17.12	1.60	1.15	-116.15	35.46 (W)	19.75 (N)	68.04	104.57	-39.23	1227.98
84	7474.00	2.20	128.00	7471.93	-19.18	67.98	-19.18	0.98	0.84	-16.32	33.33 (W)	17.70 (N)	70.63	105.75	133.11	1322.93
85	7569.00	2.10	125.00	7566.86	-21.30	70.84	-21.30	0.16	-0.11	-3.16	30.47 (W)	15.58 (N)	73.97	106.73	143.41	1417.86
86	7662.00	1.40	98.20	7659.82	-22.44	73.36	-22.44	1.14	-0.75	-28.82	27.95 (W)	14.44 (N)	76.72	107.01	-90.55	1510.82
87	7757.00	1.50	76.60	7754.79	-22.32	75.72	-22.32	0.58	0.11	-22.74	25.59 (W)	14.56 (N)	78.94	106.42	-75.12	1605.79
88	7852.00	1.90	51.20	7849.75	-21.04	78.16	-21.04	0.89	0.42	-26.74	23.16 (W)	15.83 (N)	80.94	105.07	-29.41	1700.75
89	7948.00	2.50	43.70	7945.68	-18.53	80.84	-18.53	0.69	0.63	-7.81	20.47 (W)	18.35 (N)	82.94	102.91	170.14	1796.68
90	8042.00	1.80	39.80	8039.61	-15.91	83.21	-15.91	0.76	-0.74	-4.15	18.11 (W)	20.96 (N)	84.71	100.83	164.77	1890.61
91	8138.00	1.30	33.70	8135.58	-13.85	84.78	-13.85	0.55	-0.52	-6.35	16.54 (W)	23.03 (N)	85.90	99.28	38.62	1986.58
92	8234.00	1.40	36.90	8231.55	-12.01	86.08	-12.01	0.13	0.10	3.33	15.23 (W)	24.87 (N)	86.92	97.94	6.21	2082.55
93	8330.00	1.70	38.00	8327.52	-9.95	87.66	-9.95	0.31	0.31	1.15	13.65 (W)	26.93 (N)	88.23	96.47	115.73	2178.52
94	8426.00	1.60	29.10	8423.48	-7.65	89.19	-7.65	0.29	-0.10	-9.27	12.12 (W)	29.22 (N)	89.52	94.90	103.07	2274.48
95	8521.00	1.80	346.00	8518.44	-5.05	89.48	-5.05	1.33	0.21	-45.37	11.84 (W)	31.83 (N)	89.62	93.23	77.69	2369.44
96	8617.00	2.80	24.80	8614.36	-1.45	90.10	-1.45	1.87	1.04	40.42	11.22 (W)	35.42 (N)	90.11	90.92	137.74	2465.36
97	8714.00	2.20	41.40	8711.27	2.09	92.32	2.09	0.96	-0.62	17.11	-8.99 (W)	38.97 (N)	92.34	88.70	-38.38	2562.27
98	8808.00	3.00	30.10	8805.18	5.58	94.75	5.58	1.01	0.85	-12.02	-6.57 (W)	42.45 (N)	94.91	86.63	155.38	2656.18
99	8903.00	2.20	40.10	8900.08	9.12	97.17	9.12	0.96	-0.84	10.53	-4.14 (W)	46.00 (N)	97.60	84.64	168.78	2751.08
100	8999.00	1.60	35.80	8996.02	11.62	99.14	11.62	0.64	-0.63	-4.48	-2.17 (W)	48.49 (N)	99.82	83.32	163.84	2847.02

#	Measured Depth (ft)	NC Log	ASW Log	TVD (ft)	VS (ft)	EW (ft)	VS (ft)	OLS YARD FT	Bulk Rate YARD FT	Walk Rate YARD FT	LRW From-Plan (ft)	JDNS From-Plan (ft)	Closure (ft)	Closure Dir	Tool Face Deg	Subsea TVD (ft)
101	9094.00	0.90	22.30	9091.00	13.38	100.20	13.38	0.79	-0.74	-14.21	-1.11 (W)	50.26 (N)	101.09	82.39	-66.05	2942.00
102	9189.00	1.30	355.50	9185.98	15.15	100.40	15.15	0.68	0.42	-28.21	-0.92 (W)	52.02 (N)	101.53	81.42	-18.92	3036.98
103	9230.00	1.50	352.90	9226.97	16.14	100.29	16.14	0.51	0.49	-6.34	-1.02 (W)	53.02 (N)	101.59	80.86	91.65	3077.97
104	9336.00	1.50	356.20	9332.94	18.91	100.03	18.91	0.08	0.00	3.11	-1.28 (W)	55.78 (N)	101.80	79.30	-49.34	3183.94
105	9430.00	2.20	338.00	9426.89	21.81	99.27	21.81	0.06	0.74	-19.36	-2.04 (W)	58.68 (N)	101.64	77.61	-83.14	3277.89
106	9526.00	2.30	326.60	9522.81	25.12	97.52	25.12	0.48	0.10	-11.88	-3.79 (W)	62.00 (N)	100.71	75.55	-117.40	3373.81
107	9621.00	2.10	312.70	9617.74	27.89	95.19	27.89	0.60	-0.21	-14.63	-6.12 (W)	64.77 (N)	99.20	73.67	179.68	3468.74
108	9716.00	1.60	312.80	9712.69	29.98	92.94	29.98	0.53	-0.53	0.11	-8.37 (W)	66.85 (N)	97.66	72.12	167.88	3563.69
109	9810.00	0.90	303.00	9806.67	31.27	91.36	31.27	0.78	-0.74	-10.43	-9.95 (W)	68.14 (N)	96.56	71.11	139.38	3657.67
110	9835.00	1.60	185.10	9831.67	31.03	91.16	31.03	8.69	2.80	-471.60	10.15 (W)	67.90 (N)	96.30	71.20	-15.50	3682.67
111	9883.00	5.10	174.40	9879.58	28.24	91.31	28.24	7.38	7.29	-22.29	3.60 (R)	-66.04 (D)	95.58	72.82	-31.48	3730.58
112	9929.00	10.60	157.40	9925.14	22.29	93.14	22.29	12.85	11.96	-36.96	-15.19 (L)	-58.77 (D)	95.77	76.54	-2.73	3776.14
113	9977.00	14.20	156.70	9972.01	12.80	97.17	12.80	7.51	7.50	-1.46	-15.84 (L)	-48.76 (D)	98.01	82.49	18.80	3823.01
114	10024.00	19.20	161.80	10017.01	0.16	101.86	0.16	11.08	10.64	10.85	-12.14 (L)	-38.05 (D)	101.86	89.91	-1.02	3868.01
115	10072.00	23.70	161.60	10061.68	-16.50	107.38	-16.50	9.38	9.38	-0.42	-12.48 (L)	-24.57 (D)	108.64	98.74	11.54	3912.68
116	10120.00	28.10	163.50	10104.85	-36.50	113.64	-36.50	9.33	9.17	3.96	-12.26 (L)	-11.57 (D)	119.35	107.81	14.91	3955.85
117	10168.00	30.80	164.90	10146.64	-59.21	120.05	-59.21	5.80	5.63	2.92	-12.29 (L)	0.65 (U)	133.86	116.25	30.99	3997.64
118	10216.00	33.00	167.30	10187.39	-83.83	126.13	-83.83	5.29	4.58	5.00	-12.14 (L)	10.61 (U)	151.44	123.61	37.10	4038.39
119	10264.00	35.50	170.50	10227.07	-110.33	131.30	-110.33	6.42	5.21	6.67	-11.38 (L)	18.34 (U)	171.50	130.04	7.00	4078.07
120	10311.00	39.10	171.20	10264.45	-138.45	135.82	-138.45	7.71	7.66	1.49	-9.11 (L)	24.94 (U)	193.95	135.55	-17.59	4115.45
121	10359.00	41.40	170.10	10301.08	-169.05	140.87	-169.05	5.02	4.79	-2.29	-5.93 (L)	30.17 (U)	220.05	140.20	-38.65	4152.08
122	10406.00	43.40	167.80	10335.79	-200.14	146.95	-200.14	5.38	4.26	-4.89	-2.87 (L)	32.88 (U)	248.30	143.71	-15.18	4186.79
123	10454.00	49.30	165.70	10368.91	-233.92	154.94	-233.92	12.69	12.29	-4.38	-0.92 (L)	34.83 (U)	280.58	146.48	-11.10	4219.91
124	10502.00	53.40	164.70	10398.88	-270.16	164.52	-270.16	8.70	8.54	-2.08	-0.37 (L)	36.56 (U)	316.31	148.66	22.52	4249.88
125	10550.00	55.80	165.90	10426.69	-308.00	174.44	-308.00	5.40	5.00	2.50	-0.56 (L)	36.67 (U)	353.97	150.47	8.39	4277.69
126	10597.00	58.70	166.40	10452.11	-346.38	183.90	-346.38	6.23	6.17	1.06	0.15 (R)	34.83 (U)	392.17	152.03	-18.88	4303.11
127	10645.00	61.80	165.20	10475.93	-386.77	194.13	-386.77	6.81	6.46	-2.50	1.16 (R)	31.30 (U)	432.75	153.35	-21.01	4326.93
128	10692.00	66.10	163.40	10496.56	-427.40	205.56	-427.40	9.77	9.15	-3.83	1.02 (R)	26.69 (U)	474.27	154.31	-7.36	4347.56
129	10740.00	72.00	162.60	10513.72	-470.25	218.67	-470.25	12.39	12.29	-1.67	-0.52 (L)	22.11 (U)	518.61	155.06	9.20	4364.72
130	10787.00	76.20	163.30	10526.59	-513.46	231.92	-513.46	9.05	8.94	1.49	-2.25 (L)	17.71 (U)	563.40	155.69	41.22	4377.59
131	10835.00	78.90	165.70	10536.94	-558.62	244.44	-558.62	7.45	5.63	5.00	-2.77 (L)	12.05 (U)	609.76	156.37	10.22	4387.94
132	10883.00	82.20	166.30	10544.82	-604.55	255.89	-604.55	6.98	6.87	1.25	-1.94 (L)	5.14 (U)	656.48	157.06	16.47	4395.82
133	10931.00	88.30	168.10	10548.79	-651.18	266.48	-651.18	13.25	12.71	3.75	-1.59 (L)	0.90 (U)	703.59	157.74	15.84	4399.79
134	10958.00	90.31	168.67	10549.12	-677.62	271.91	-677.62	7.74	7.44	2.11	-0.93 (L)	0.44 (U)	730.14	158.14	16.09	4400.12
135	10978.00	91.80	169.10	10548.75	-697.24	275.77	-697.24	7.75	7.45	2.15	-0.26 (L)	0.72 (U)	749.79	158.42	107.72	4399.75
136	11074.00	91.00	171.60	10546.41	-791.85	291.85	-791.85	2.73	-0.83	2.60	0.89 (R)	2.61 (U)	843.92	159.77	63.42	4397.41
137	11122.00	91.30	172.20	10545.44	-839.36	298.62	-839.36	1.40	0.62	1.25	0.73 (R)	3.35 (U)	890.89	160.42	102.52	4396.44
138	11170.00	91.10	173.10	10544.44	-886.95	304.75	-886.95	1.92	-0.42	1.88	0.45 (R)	4.13 (U)	937.85	161.04	108.42	4395.44
139	11265.00	90.20	175.80	10543.36	-981.49	313.94	-981.49	3.00	-0.95	2.84	-1.13 (L)	4.76 (U)	1030.48	162.26	87.39	4394.36
140	11360.00	90.30	178.00	10542.95	-1076.34	319.08	-1076.34	2.32	0.11	2.32	-2.92 (L)	4.73 (U)	1122.64	163.49	170.54	4393.95
141	11456.00	89.70	178.10	10542.95	-1172.29	322.34	-1172.29	0.63	-0.62	0.10	-5.71 (L)	4.30 (U)	1215.80	164.63	90.00	4393.95
142	11551.00	89.70	179.80	10543.44	-1267.27	324.08	-1267.27	1.79	0.00	1.79	-7.07 (L)	3.37 (U)	1308.05	165.65	20.56	4394.44
143	11647.00	90.50	180.10	10543.28	-1363.27	324.17	-1363.27	0.89	0.83	0.31	-6.77 (L)	3.10 (U)	1401.28	166.62	137.73	4394.28
144	11742.00	89.40	181.10	10543.36	-1458.26	323.17	-1458.26	1.56	-1.16	1.05	-5.39 (L)	2.59 (U)	1493.64	167.50	148.00	4394.36
145	11838.00	88.60	181.60	10545.03	-1554.22	320.91	-1554.22	0.98	-0.83	0.52	-2.75 (L)	0.48 (U)	1587.00	168.33	123.71	4396.03
146	11929.00	88.00	180.70	10547.73	-1645.16	319.09	-1645.16	1.19	-0.66	-0.99	-0.55 (L)	-2.64 (D)	1675.82	169.02	116.58	4398.73
147	11971.00	87.90	180.90	10549.24	-1687.13	318.50	-1687.13	0.53	-0.24	0.48	0.20 (R)	-4.33 (D)	1716.93	169.31	-72.91	4400.24
148	12067.00	88.30	179.60	10552.42	-1783.07	318.08	-1783.07	1.42	0.42	-1.35	1.00 (R)	-7.95 (D)	1811.22	169.89	-21.81	4403.42
149	12159.00	91.30	178.40	10552.74	-1875.04	319.69	-1875.04	3.51	3.26	-1.30	-0.23 (L)	-8.69 (D)	1902.10	170.32	-38.64	4403.74
150	12255.00	91.80	178.00	10550.14	-1970.96	322.70	-1970.96	0.67	0.52	-0.42	-2.86 (L)	-6.53 (D)	1997.20	170.70	158.20	4401.14
151	12351.00	90.30	178.60	10548.38	-2066.90	325.55	-2066.90	1.68	-1.56	0.63	-5.33 (L)	-5.20 (D)	2092.38	171.05	19.98	4399.38
152	12446.00	91.40	179.00	10546.97	-2161.87	327.54	-2161.87	1.23	1.16	0.42	-6.93 (L)	-4.22 (D)	2186.54	171.38	51.31	4397.97
153	12542.00	92.20	180.00	10543.96	-2257.81	328.38	-2257.81	1.33	0.83	1.04	-7.39 (L)	-1.64 (D)	2281.57	171.72	123.69	4394.96
154	12636.00	91.60	180.90	10540.84	-2351.76	327.64	-2351.76	1.15	-0.64	0.96	-6.27 (L)	1.05 (U)	2374.47	172.07	-44.99	4391.84
155	12732.00	91.70	180.80	10538.08	-2447.71	326.21	-2447.71	0.15	0.10	-0.10	-4.46 (L)	3.38 (U)	2469.35	172.41	164.05	4389.08
156	12828.00	90.30	181.20	10536.40	-2543.67	324.54	-2543.67	1.52	-1.46	0.42	-2.40 (L)	4.62 (U)	2564.29	172.73	-18.43	4387.40

#	Measured Depth (ft)	NG Deg	AZM Deg	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	OLS %100 ft	Built Rate %100 ft	Walk Rate %100 ft	LRNEW From-Plan (ft)	WDNS From-Plan (ft)	Closure (ft)	Closure Dir Deg	Tool Face Deg	Subsea TVD (ft)
157	12923.00	90.60	181.10	10535.66	-2638.65	322.63	-2638.65	0.33	0.32	-0.11	-0.11 (L)	4.93 (U)	2658.30	173.03	-41.97	4386.66
158	13020.00	91.60	180.20	10533.79	-2735.63	321.53	-2735.63	1.39	1.03	-0.93	1.38 (R)	6.36 (U)	2754.46	173.30	-33.66	4384.79
159	13115.00	92.50	179.60	10530.40	-2830.56	321.70	-2830.56	1.14	0.95	-0.63	1.59 (R)	9.33 (U)	2848.79	173.52	180.00	4381.40
160	13210.00	91.10	179.60	10527.41	-2925.51	322.36	-2925.51	1.47	-1.47	0.00	1.31 (R)	11.88 (U)	2943.22	173.71	119.74	4378.41
161	13305.00	90.70	180.30	10525.92	-3020.50	322.44	-3020.50	0.85	-0.42	0.74	1.61 (R)	12.94 (U)	3037.66	173.91	177.21	4376.92
162	13400.00	86.60	180.50	10528.16	-3115.45	321.78	-3115.45	4.32	-4.32	0.21	2.65 (R)	10.29 (U)	3132.02	174.10	-19.65	4379.16
163	13494.00	88.00	180.00	10532.59	-3209.34	321.37	-3209.34	1.58	1.49	-0.53	3.44 (R)	5.42 (U)	3225.39	174.28	-53.13	4383.59
164	13590.00	88.60	179.20	10535.43	-3305.30	322.04	-3305.30	1.04	0.62	-0.83	3.15 (R)	2.13 (U)	3320.95	174.44	-45.00	4386.43
165	13685.00	88.90	178.90	10537.51	-3400.26	323.62	-3400.26	0.45	0.32	-0.32	1.96 (R)	-0.37 (D)	3415.63	174.56	-26.57	4388.51
166	13781.00	89.50	178.60	10538.85	-3496.23	325.71	-3496.23	0.70	0.62	-0.31	0.25 (R)	-2.15 (D)	3511.37	174.68	8.13	4389.85
167	13877.00	90.20	178.70	10539.10	-3592.20	327.97	-3592.20	0.74	0.73	0.10	-1.62 (L)	-2.84 (D)	3607.14	174.78	-39.80	4390.10
168	13973.00	90.80	178.20	10538.26	-3688.16	330.57	-3688.16	0.81	0.62	-0.52	-3.84 (L)	-2.43 (D)	3702.95	174.88	-44.99	4389.26
169	14068.00	91.20	177.80	10536.60	-3783.09	333.88	-3783.09	0.60	0.42	-0.42	-6.77 (L)	-1.21 (D)	3797.79	174.96	116.57	4387.60
170	14164.00	91.10	178.00	10534.68	-3879.00	337.40	-3879.00	0.23	-0.10	0.21	-9.91 (L)	0.28 (U)	3893.65	175.03	-18.42	4385.68
171	14258.00	92.00	177.70	10532.13	-3972.90	340.93	-3972.90	1.01	0.96	-0.32	-13.06 (L)	2.40 (U)	3987.50	175.10	161.56	4383.13
172	14355.00	89.30	178.60	10531.03	-4069.84	344.06	-4069.84	2.93	-2.78	0.93	-15.79 (L)	3.06 (U)	4084.35	175.17	49.09	4382.03
173	14448.00	90.60	180.10	10531.11	-4162.83	345.11	-4162.83	2.13	1.40	1.61	-16.47 (L)	2.56 (U)	4177.11	175.26	123.69	4382.11
174	14543.00	90.40	180.40	10530.28	-4257.82	344.70	-4257.82	0.38	-0.21	0.32	-15.68 (L)	2.96 (U)	4271.75	175.37	150.25	4381.28
175	14638.00	89.70	180.80	10530.20	-4352.81	343.70	-4352.81	0.85	-0.74	0.42	-14.30 (L)	2.61 (U)	4366.36	175.49	90.00	4381.20
176	14733.00	89.70	180.90	10530.70	-4447.80	342.29	-4447.80	0.11	0.00	0.11	-12.51 (L)	1.68 (U)	4460.95	175.60	0.00	4381.70
177	14828.00	90.10	180.90	10530.86	-4542.79	340.80	-4542.79	0.42	0.42	0.00	-10.64 (L)	1.08 (U)	4555.56	175.71	5.19	4381.86
178	14923.00	91.20	181.00	10529.79	-4637.77	339.23	-4637.77	1.16	1.16	0.11	-8.68 (L)	1.73 (U)	4650.16	175.82	173.66	4380.79
179	15017.00	90.30	180.90	10528.56	-4731.75	337.67	-4731.75	0.96	-0.96	-0.11	-6.75 (L)	2.53 (U)	4743.78	175.92	18.43	4379.56
180	15113.00	90.90	181.10	10527.55	-4827.73	335.99	-4827.73	0.66	0.63	0.21	-4.68 (L)	3.10 (U)	4839.41	176.02	142.69	4378.55
181	15208.00	88.80	179.50	10527.80	-4922.72	335.49	-4922.72	2.78	-2.21	-1.68	-3.81 (L)	2.42 (U)	4934.14	176.10	125.55	4378.80
182	15304.00	88.30	178.80	10530.23	-5018.68	336.92	-5018.68	0.90	-0.52	-0.73	-4.85 (L)	-0.44 (D)	5029.97	176.16	36.87	4381.23
183	15401.00	89.10	179.40	10532.43	-5115.64	338.44	-5115.64	1.03	0.82	0.62	-5.98 (L)	-3.08 (D)	5126.82	176.21	120.97	4383.43
184	15497.00	88.80	178.90	10534.19	-5211.61	339.87	-5211.61	0.61	-0.31	-0.52	-7.02 (L)	-5.28 (D)	5222.68	176.27	22.62	4385.19
185	15593.00	90.00	179.40	10535.19	-5307.59	341.29	-5307.59	1.35	1.25	0.52	-8.06 (L)	-6.72 (D)	5318.55	176.32	33.69	4386.19
186	15688.00	90.30	179.60	10534.95	-5402.59	342.12	-5402.59	0.38	0.32	0.21	-8.50 (L)	-6.90 (D)	5413.41	176.38	-77.47	4385.95
187	15784.00	90.50	178.70	10534.28	-5498.57	343.54	-5498.57	0.96	0.21	-0.94	-9.54 (L)	-6.67 (D)	5509.30	176.42	47.71	4385.28
188	15879.00	91.50	179.80	10532.62	-5593.55	344.79	-5593.55	1.56	1.05	1.16	-10.40 (L)	-5.44 (D)	5604.17	176.47	89.99	4383.62
189	15974.00	91.50	180.60	10530.13	-5688.52	344.45	-5688.52	0.84	0.00	0.84	-9.69 (L)	-3.38 (D)	5698.93	176.53	-18.42	4381.13
190	16068.00	92.40	180.30	10526.93	-5782.46	343.72	-5782.46	1.01	0.96	-0.32	-8.58 (L)	-0.61 (D)	5792.66	176.60	158.20	4377.93
191	16163.00	90.90	180.90	10524.20	-5877.41	342.72	-5877.41	1.70	-1.58	0.63	-7.20 (L)	1.70 (U)	5887.39	176.66	45.00	4375.20
192	16258.00	91.00	181.00	10522.62	-5972.38	341.15	-5972.38	0.15	0.11	0.11	-5.24 (L)	2.84 (U)	5982.12	176.73	130.60	4373.62
193	16353.00	90.40	181.70	10521.46	-6067.35	338.91	-6067.35	0.97	-0.63	0.74	-2.63 (L)	3.57 (U)	6076.81	176.80	116.56	4372.46
194	16448.00	89.40	179.70	10521.63	-6162.33	337.75	-6162.33	2.35	-1.05	-2.11	-1.08 (L)	2.97 (U)	6171.58	176.86	-5.19	4372.63
195	16544.00	90.50	179.60	10521.71	-6258.33	338.33	-6258.33	1.15	1.15	-0.10	-1.28 (L)	2.45 (U)	6267.47	176.91	146.31	4372.71
196	16640.00	89.60	180.20	10521.63	-6354.33	338.50	-6354.33	1.13	-0.94	0.62	-1.07 (L)	2.10 (U)	6363.34	176.95	165.97	4372.63
197	16734.00	88.80	180.00	10522.94	-6448.32	338.34	-6448.32	0.88	-0.85	-0.21	-0.53 (L)	0.36 (U)	6457.19	177.00	50.20	4373.94
198	16829.00	89.30	180.60	10524.51	-6543.30	337.84	-6543.30	0.82	0.53	0.63	0.35 (R)	-1.64 (D)	6552.02	177.04	-82.88	4375.51
199	16926.00	89.40	179.80	10525.62	-6640.30	337.50	-6640.30	0.83	0.10	-0.82	1.08 (R)	-3.19 (D)	6648.87	177.09	-12.99	4376.62
200	17021.00	90.70	179.50	10525.53	-6735.29	338.08	-6735.29	1.40	1.37	-0.32	0.88 (R)	-3.53 (D)	6743.77	177.13	168.69	4376.53
201	17115.00	90.20	179.40	10524.79	-6829.29	338.98	-6829.29	0.54	-0.53	-0.11	0.36 (R)	-3.22 (D)	6837.69	177.16	11.31	4375.79
202	17211.00	91.20	179.60	10523.62	-6925.27	339.82	-6925.27	1.06	1.04	0.21	-0.10 (L)	-2.48 (D)	6933.61	177.19	60.24	4374.62
203	17306.00	91.60	180.30	10521.30	-7020.24	339.91	-7020.24	0.85	0.42	0.74	0.20 (R)	-0.59 (D)	7028.47	177.23	172.87	4372.30
204	17401.00	90.00	180.50	10519.97	-7115.23	339.24	-7115.23	1.70	-1.68	0.21	1.25 (R)	0.30 (U)	7123.31	177.27	164.06	4370.97
205	17496.00	89.30	180.30	10520.55	-7210.23	338.58	-7210.23	0.77	-0.74	-0.21	2.29 (R)	-0.71 (D)	7218.17	177.31	122.02	4371.55
206	17591.00	88.80	179.50	10522.13	-7305.21	338.74	-7305.21	0.99	-0.53	-0.84	2.51 (R)	-2.72 (D)	7313.06	177.35	45.00	4373.13
207	17686.00	89.30	180.00	10523.70	-7400.20	339.16	-7400.20	0.74	0.53	0.53	2.47 (R)	-4.72 (D)	7407.96	177.38	141.35	4374.70
208	17781.00	88.80	179.60	10525.28	-7495.18	339.49	-7495.18	0.67	-0.53	-0.42	2.52 (R)	-6.73 (D)	7502.87	177.41	23.63	4376.28
209	17877.00	90.40	180.30	10525.95	-7591.18	339.57	-7591.18	1.82	1.67	0.73	2.83 (R)	-7.83 (D)	7598.77	177.44	0.00	4376.95
210	17972.00	92.30	180.30	10523.71	-7686.14	339.08	-7686.14	2.00	2.00	0.00	3.70 (R)	-6.03 (D)	7693.62	177.47	135.00	4374.71
211	18068.00	91.20	181.40	10520.78	-7782.09	337.65	-7782.09	1.62	-1.15	1.15	5.51 (R)	-3.53 (D)	7789.41	177.52	123.69	4371.78
212	18164.00	91.00	181.10	10518.94	-7878.04	335.56	-7878.04	0.38	-0.21	-0.31	7.99 (R)	-2.12 (D)	7885.19	177.56	165.96	4369.94

#	Measured Depth (ft)	INC Deg	AZM Deg	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS /100 ft	Build Rate /100 ft	Walk Rate /100 ft	LRFW From-Plan (ft)	UD/NS From-Plan (ft)	Closure (ft)	Closure Dir Deg	Tool Face Deg	Subsea TVD (ft)
213	18259.00	90.20	180.90	10517.94	-7973.02	333.90	-7973.02	0.87	-0.84	-0.21	10.03 (R)	-1.56 (D)	7980.01	177.60	0.00	4368.94
214	18357.00	92.20	180.90	10515.89	-8070.99	332.36	-8070.99	2.04	2.04	0.00	11.97 (R)	0.05 (U)	8077.83	177.64	0.00	4366.89
215	18411.00	92.20	180.90	10513.82	-8124.94	331.52	-8124.94	0.00	0.00	0.00	13.03 (R)	1.88 (U)	8131.70	177.66	0.00	4364.82