



MWD SURVEY CERTIFICATION
Legacy Directional Drilling, LLC.

30-015-44426

State Of New Mexico

County Of Eddy

I, Mark L. Miller certify that; I am employed by Legacy Directional Drilling, LLC.;

that I did on the day(s) of June 6, 2018 through June 24, 2018 conduct

or supervise the taking of a MWD survey from a depth of 1,058 feet to a depth of

19,055 feet; that the data is true, correct, complete and within the limitations of the

tool set forth by Legacy Directional Drilling, LLC.; that I am authorized and qualified to make this report;

that this survey was conducted at the request of Devon Energy Production Company for the

Lusitano 27-34 FED COM 528H Well, A.P.I. No. 30-015-44424 in 30-015-44426

Jennings West/Bone Spring Field and that I have reviewed this report and find that

it conforms to the principles and procedures set forth by Legacy Directional Drilling, LLC.

Surveyor's Signature

MLWD Technical Director

Title

RECEIVED

NOV 08 2018

DISTRICT II-ARTESIA O.C.D.



Directional Survey Report

Company Name: DEVON ENERGY PRODUCTION COMPANY IState/Prov: NM

Survey Company: Legacy Directional

Proposed Azimuth: 179.85°

Well Name: LUSITANO 27-34 FED COM 528H

County: Eddy

Job Number: LF181008

Declination: 6.68°

Field: JENNINGS WEST / BONE SPRING

Location: Sec 27 T25S R31E

Latitude: 32° 6' 26.507" N

North Reference: GRID

Rig ID: ICD 217

API/UWI: 30-015-44424

Longitude: 103° 45' 30.593" W

KB: 3362 FT

Svy	Depth	Inc	Azm	TVD	NS	EW	VS	DLS	CL	CD	CA	Temp
Tie-In	975.5	0.50	236.71	975.47	-1.38	-7.23	1.36	0.00	0.00	7.36	259.19	0
1	1058	0.76	262.02	1057.97	-1.65	-8.07	1.63	0.45	82.50	8.24	258.42	92.0
2	1151	0.98	239.84	1150.95	-2.14	-9.37	2.11	0.43	93.00	9.61	257.14	92.0
3	1244	1.37	240.01	1243.93	-3.09	-11.02	3.07	0.42	93.00	11.45	254.32	92.0
4	1336	1.16	247.45	1335.91	-4.00	-12.83	3.97	0.29	92.00	13.44	252.69	99.1
5	1429	0.69	293.84	1428.90	-4.14	-14.22	4.10	0.91	93.00	14.81	253.78	99.1
6	1523	1.14	321.65	1522.89	-3.17	-15.31	3.13	0.66	94.00	15.64	258.29	106.3
7	1615	1.75	336.77	1614.86	-1.16	-16.44	1.12	0.78	92.00	16.48	265.95	106.3
8	1708	2.59	353.43	1707.79	2.23	-17.24	-2.27	1.12	93.00	17.38	277.36	113.4
9	1802	3.60	356.98	1801.66	7.28	-17.63	-7.33	1.09	94.00	19.08	292.44	113.4
10	1896	4.30	356.96	1895.43	13.75	-17.98	-13.80	0.74	94.00	22.63	307.41	120.6
11	1991	4.52	347.74	1990.15	20.97	-18.96	-21.02	0.78	95.00	28.27	317.87	120.6
12	2084	4.76	342.23	2082.85	28.22	-20.92	-28.28	0.54	93.00	35.13	323.45	120.6
13	2178	4.91	337.70	2176.51	35.66	-23.63	-35.72	0.44	94.00	42.78	326.46	120.6
14	2272	4.55	337.58	2270.19	42.83	-26.58	-42.90	0.38	94.00	50.40	328.17	120.6
15	2367	4.28	337.11	2364.91	49.57	-29.40	-49.65	0.29	95.00	57.64	329.33	127.7
16	2462	3.82	338.35	2459.67	55.78	-31.94	-55.87	0.49	95.00	64.28	330.20	127.7
17	2556	3.98	339.12	2553.46	61.74	-34.26	-61.83	0.18	94.00	70.61	330.97	127.7
18	2651	4.39	346.57	2648.20	68.36	-36.28	-68.45	0.72	95.00	77.39	332.04	127.7
19	2746	4.19	353.50	2742.94	75.34	-37.52	-75.44	0.58	95.00	84.17	333.53	127.7
20	2841	4.72	351.77	2837.65	82.66	-38.47	-82.76	0.58	95.00	91.17	335.04	127.7
21	2935	4.66	352.43	2931.33	90.27	-39.53	-90.37	0.09	94.00	98.55	336.35	127.7
22	3031	4.18	357.19	3027.05	97.63	-40.21	-97.74	0.63	96.00	105.59	337.61	127.7
23	3125	4.77	356.77	3120.76	104.96	-40.60	-105.06	0.63	94.00	112.54	338.85	120.6
24	3220	5.59	350.84	3215.37	113.47	-41.56	-113.58	1.03	95.00	120.84	339.88	120.6
25	3315	5.74	341.12	3309.91	122.53	-43.83	-122.64	1.02	95.00	130.14	340.32	127.7
26	3410	5.17	335.49	3404.48	130.92	-47.15	-131.04	0.82	95.00	139.15	340.19	127.7
27	3505	4.42	333.28	3499.15	138.08	-50.57	-138.22	0.81	95.00	147.05	339.89	127.7
28	3600	4.33	337.28	3593.87	144.66	-53.60	-144.80	0.33	95.00	154.27	339.67	127.7
29	3695	4.47	343.72	3688.59	151.52	-56.02	-151.67	0.54	95.00	161.55	339.71	127.7
30	3789	4.95	346.18	3782.28	158.98	-58.02	-159.13	0.55	94.00	169.23	339.95	127.7
31	3884	4.81	344.12	3876.93	166.79	-60.09	-166.95	0.24	95.00	177.28	340.19	127.7
32	3979	4.73	339.28	3971.60	174.28	-62.56	-174.45	0.43	95.00	185.17	340.25	127.7
33	4073	4.85	332.38	4065.28	181.43	-65.78	-181.60	0.63	94.00	192.99	340.07	127.7

Svy	Depth	Inc	Azm	TVD	NS	EW	VS	DLS	CL	CD	CA	Temp
34	4168	4.24	331.70	4159.98	188.08	-69.30	-188.26	0.64	95.00	200.44	339.77	127.7
35	4262	4.44	329.03	4253.71	194.26	-72.82	-194.45	0.30	94.00	207.46	339.45	127.7
36	4357	4.12	327.85	4348.44	200.30	-76.53	-200.50	0.35	95.00	214.42	339.09	127.7
37	4454	3.97	326.07	4445.20	206.04	-80.26	-206.25	0.20	97.00	221.12	338.72	113.4
38	4548	4.87	328.45	4538.92	212.14	-84.16	-212.36	0.98	94.00	228.22	338.36	113.4
39	4643	5.56	331.57	4633.53	219.62	-88.47	-219.85	0.79	95.00	236.77	338.06	120.6
40	4738	5.60	328.53	4728.08	227.62	-93.08	-227.87	0.31	95.00	245.92	337.76	120.6
41	4833	6.02	337.63	4822.59	236.18	-97.39	-236.44	1.06	95.00	255.48	337.59	120.6
42	4928	5.89	339.21	4917.08	245.35	-101.02	-245.61	0.22	95.00	265.33	337.62	120.6
43	5023	5.74	338.06	5011.59	254.31	-104.52	-254.58	0.20	95.00	274.95	337.66	127.7
44	5117	5.73	337.33	5105.12	263.00	-108.09	-263.28	0.08	94.00	284.35	337.66	127.7
45	5212	5.61	337.72	5199.65	271.67	-111.68	-271.97	0.13	95.00	293.73	337.65	127.7
46	5307	5.88	343.09	5294.18	280.63	-114.85	-280.93	0.63	95.00	303.22	337.74	127.7
47	5402	5.37	344.97	5388.72	289.58	-117.42	-289.88	0.57	95.00	312.48	337.93	127.7
48	5497	5.13	339.54	5483.32	297.85	-120.06	-298.16	0.58	95.00	321.13	338.05	127.7
49	5592	5.85	346.89	5577.89	306.54	-122.64	-306.86	1.06	95.00	330.17	338.19	127.7
50	5687	6.29	345.78	5672.35	316.30	-125.02	-316.63	0.48	95.00	340.11	338.43	127.7
51	5782	6.56	339.56	5766.76	326.43	-128.19	-326.77	0.79	95.00	350.70	338.56	127.7
52	5877	6.30	342.78	5861.16	336.50	-131.63	-336.84	0.47	95.00	361.33	338.64	134.9
53	5972	5.80	345.09	5955.63	346.11	-134.41	-346.46	0.59	95.00	371.30	338.78	127.7
54	6067	4.08	350.38	6050.27	354.08	-136.21	-354.44	1.87	95.00	379.38	338.96	127.7
55	6162	3.74	347.32	6145.05	360.44	-137.45	-360.80	0.42	95.00	385.76	339.13	134.9
56	6257	3.49	343.37	6239.86	366.23	-138.96	-366.60	0.37	95.00	391.71	339.22	134.9
57	6352	4.45	350.40	6334.64	372.64	-140.40	-373.00	1.13	95.00	398.21	339.35	134.9
58	6446	4.94	353.66	6428.32	380.26	-141.46	-380.63	0.59	94.00	405.72	339.59	134.9
59	6541	4.59	353.66	6522.99	388.10	-142.33	-388.47	0.37	95.00	413.37	339.86	134.9
60	6635	4.11	355.29	6616.72	395.19	-143.02	-395.57	0.53	94.00	420.28	340.10	134.9
61	6729	2.48	355.95	6710.56	400.58	-143.44	-400.96	1.73	94.00	425.49	340.30	134.9
62	6824	2.01	348.75	6805.49	404.27	-143.91	-404.64	0.58	95.00	429.12	340.41	134.9
63	6919	1.63	353.18	6900.44	407.24	-144.40	-407.62	0.43	95.00	432.08	340.48	134.9
64	7014	1.46	331.44	6995.41	409.65	-145.14	-410.02	0.64	95.00	434.60	340.49	134.9
65	7109	1.09	329.36	7090.38	411.49	-146.18	-411.87	0.39	95.00	436.68	340.44	134.9
66	7204	0.59	323.12	7185.37	412.65	-146.93	-413.04	0.53	95.00	438.03	340.40	134.9
67	7299	0.46	340.70	7280.37	413.41	-147.35	-413.79	0.22	95.00	438.88	340.38	134.9
68	7393	0.23	243.54	7374.37	413.68	-147.64	-414.06	0.57	94.00	439.24	340.36	134.9
69	7488	0.08	86.29	7469.37	413.60	-147.75	-413.98	0.32	95.00	439.19	340.34	134.9
70	7582	0.74	124.32	7563.37	413.26	-147.18	-413.64	0.72	94.00	438.69	340.40	134.9
71	7677	0.88	143.72	7658.36	412.33	-146.24	-412.71	0.32	95.00	437.49	340.47	142.0
72	7772	0.78	60.35	7753.35	412.06	-145.25	-412.44	1.16	95.00	436.91	340.58	134.9

Svy	Depth	Inc	Azm	TVD	NS	EW	VS	DLS	CL	CD	CA	Temp
73	7866	1.36	7.53	7847.33	413.48	-144.55	-413.86	1.15	94.00	438.02	340.73	134.9
74	7961	1.06	354.52	7942.31	415.47	-144.48	-415.85	0.43	95.00	439.88	340.82	142.0
75	8056	0.72	8.68	8037.30	416.94	-144.48	-417.31	0.42	95.00	441.26	340.89	142.0
76	8151	0.38	86.98	8132.30	417.54	-144.07	-417.92	0.78	95.00	441.70	340.96	142.0
77	8245	0.20	212.08	8226.30	417.42	-143.85	-417.80	0.55	94.00	441.51	340.99	142.0
78	8309	0.16	224.28	8290.30	417.26	-143.97	-417.64	0.09	64.00	441.40	340.96	142.0
79	8347	0.28	213.59	8328.30	417.15	-144.06	-417.52	0.33	38.00	441.32	340.95	127.7
80	8371	0.98	207.13	8352.29	416.92	-144.18	-417.29	2.93	24.00	441.14	340.92	134.9
81	8442	7.10	177.29	8423.09	411.99	-144.25	-412.36	8.83	71.00	436.51	340.70	134.9
82	8537	17.02	170.71	8515.88	392.35	-141.72	-392.72	10.53	95.00	417.16	340.14	134.9
83	8582	20.60	167.00	8558.47	378.13	-138.88	-378.50	8.38	45.00	402.83	339.83	127.7
84	8625	25.70	164.60	8598.00	361.76	-134.70	-362.11	12.06	43.00	386.03	339.58	120.6
85	8657	30.32	159.74	8626.24	347.49	-130.06	-347.83	16.09	32.00	371.03	339.48	120.6
86	8689	35.00	157.74	8653.18	331.41	-123.78	-331.73	15.01	32.00	353.77	339.52	127.7
87	8720	39.87	159.12	8677.79	313.88	-116.87	-314.19	15.94	31.00	334.93	339.58	127.7
88	8752	44.26	161.02	8701.54	293.73	-109.57	-294.02	14.28	32.00	313.50	339.54	127.7
89	8783	46.42	163.39	8723.33	272.74	-102.84	-273.00	8.84	31.00	291.48	339.34	127.7
90	8815	49.52	164.84	8744.75	249.88	-96.35	-250.13	10.26	32.00	267.81	338.91	127.7
91	8846	52.41	165.76	8764.27	226.59	-90.24	-226.82	9.60	31.00	243.90	338.28	127.7
92	8878	57.08	166.69	8782.74	201.21	-84.03	-201.43	14.79	32.00	218.05	337.33	127.7
93	8910	62.23	167.41	8798.90	174.31	-77.84	-174.51	16.21	32.00	190.90	335.93	127.7
94	8941	68.02	168.46	8811.93	146.82	-71.97	-147.00	18.93	31.00	163.51	333.88	127.7
95	8973	73.49	169.96	8822.48	117.15	-66.33	-117.32	17.66	32.00	134.62	330.48	127.7
96	9005	78.17	170.74	8830.31	86.57	-61.13	-86.73	14.81	32.00	105.98	324.77	127.7
97	9028	81.31	172.00	8834.41	64.20	-57.74	-64.35	14.68	23.00	86.34	318.03	127.7
98	9057	84.84	172.19	8837.90	35.69	-53.78	-35.83	12.19	29.00	64.54	303.57	127.7
99	9152	91.68	174.74	8840.78	-58.59	-42.98	58.48	7.68	95.00	72.66	216.26	127.7
100	9246	90.03	176.51	8839.38	-152.30	-35.81	152.20	2.57	94.00	156.45	193.23	127.7
101	9341	90.45	178.81	8838.98	-247.21	-31.93	247.13	2.46	95.00	249.26	187.36	134.9
102	9435	90.28	179.23	8838.39	-341.19	-30.33	341.11	0.48	94.00	342.54	185.08	134.9
103	9529	89.33	178.87	8838.71	-435.18	-28.77	435.10	1.08	94.00	436.13	183.78	134.9
104	9624	89.33	178.41	8839.82	-530.15	-26.51	530.07	0.48	95.00	530.81	182.86	134.9
105	9719	90.56	179.80	8839.91	-625.13	-25.03	625.06	1.95	95.00	625.63	182.29	134.9
106	9814	90.62	179.99	8838.93	-720.13	-24.86	720.06	0.21	95.00	720.55	181.98	142.0
107	9909	90.20	180.16	8838.25	-815.12	-24.98	815.05	0.48	95.00	815.50	181.76	142.0
108	10004	89.78	181.64	8838.27	-910.11	-26.47	910.04	1.62	95.00	910.49	181.67	142.0
109	10098	89.52	181.86	8838.84	-1004.06	-29.34	1003.98	0.36	94.00	1004.49	181.67	142.0
110	10193	87.95	181.25	8840.94	-1099.00	-31.92	1098.91	1.77	95.00	1099.46	181.66	142.0
111	10288	88.82	180.06	8843.61	-1193.95	-33.01	1193.86	1.55	95.00	1194.41	181.58	142.0

Svy	Depth	Inc	Azm	TVD	NS	EW	VS	DLS	CL	CD	CA	Temp
112	10383	90.67	179.95	8844.04	-1288.95	-33.01	1288.86	1.95	95.00	1289.37	181.47	142.0
113	10477	90.62	179.42	8842.98	-1382.94	-32.50	1382.85	0.57	94.00	1383.32	181.35	142.0
114	10569	90.70	179.65	8841.92	-1474.93	-31.75	1474.84	0.26	92.00	1475.27	181.23	142.0
115	10660	90.08	178.85	8841.30	-1565.92	-30.56	1565.84	1.11	91.00	1566.22	181.12	149.1
116	10751	90.56	178.75	8840.79	-1656.90	-28.65	1656.82	0.54	91.00	1657.15	180.99	149.1
117	10843	89.86	179.27	8840.45	-1748.88	-27.06	1748.81	0.95	92.00	1749.09	180.89	149.1
118	10935	90.45	179.83	8840.21	-1840.88	-26.34	1840.80	0.88	92.00	1841.07	180.82	149.1
119	11027	89.50	180.85	8840.25	-1932.88	-26.89	1932.80	1.52	92.00	1933.06	180.80	149.1
120	11119	89.86	180.93	8840.76	-2024.86	-28.32	2024.78	0.40	92.00	2025.06	180.80	149.1
121	11210	89.66	182.22	8841.14	-2115.83	-30.82	2115.74	1.43	91.00	2116.05	180.83	149.1
122	11303	91.06	183.50	8840.56	-2208.70	-35.46	2208.60	2.04	93.00	2208.99	180.92	149.1
123	11396	88.57	180.07	8840.86	-2301.64	-38.35	2301.53	4.56	93.00	2301.96	180.95	149.1
124	11488	89.05	179.31	8842.77	-2393.62	-37.86	2393.51	0.98	92.00	2393.91	180.91	149.1
125	11582	88.74	179.59	8844.58	-2487.59	-36.95	2487.49	0.44	94.00	2487.87	180.85	156.3
126	11675	88.21	179.60	8847.06	-2580.56	-36.30	2580.45	0.57	93.00	2580.81	180.81	156.3
127	11767	89.75	178.89	8848.69	-2672.53	-35.08	2672.43	1.84	92.00	2672.76	180.75	149.1
128	11860	89.30	179.20	8849.46	-2765.52	-33.53	2765.42	0.59	93.00	2765.72	180.69	156.3
129	11955	90.84	178.99	8849.35	-2860.50	-32.03	2860.41	1.64	95.00	2860.68	180.64	149.1
130	12050	91.21	179.14	8847.65	-2955.47	-30.48	2955.38	0.42	95.00	2955.63	180.59	156.3
131	12145	91.51	178.99	8845.39	-3050.43	-28.93	3050.35	0.35	95.00	3050.57	180.54	156.3
132	12240	91.49	178.46	8842.91	-3145.38	-26.82	3145.30	0.56	95.00	3145.49	180.49	156.3
133	12334	90.56	178.70	8841.23	-3239.33	-24.49	3239.26	1.02	94.00	3239.42	180.43	156.3
134	12429	90.53	178.49	8840.32	-3334.30	-22.16	3334.23	0.22	95.00	3334.37	180.38	156.3
135	12523	90.73	179.14	8839.29	-3428.27	-20.22	3428.21	0.72	94.00	3428.33	180.34	156.3
136	12618	89.92	179.41	8838.75	-3523.26	-19.02	3523.20	0.90	95.00	3523.31	180.31	156.3
137	12712	88.88	178.85	8839.73	-3617.24	-17.59	3617.19	1.26	94.00	3617.29	180.28	163.4
138	12807	90.06	179.29	8840.61	-3712.23	-16.05	3712.17	1.33	95.00	3712.26	180.25	163.4
139	12902	89.75	179.47	8840.77	-3807.22	-15.02	3807.17	0.38	95.00	3807.25	180.23	163.4
140	12996	86.91	176.93	8843.51	-3901.12	-12.07	3901.07	4.05	94.00	3901.14	180.18	163.4
141	13091	87.39	177.26	8848.23	-3995.88	-7.26	3995.84	0.61	95.00	3995.88	180.10	163.4
142	13186	91.09	178.98	8849.49	-4090.80	-4.15	4090.77	4.29	95.00	4090.80	180.06	163.4
143	13281	93.34	181.90	8845.82	-4185.71	-4.87	4185.68	3.88	95.00	4185.71	180.07	149.1
144	13376	93.25	183.08	8840.36	-4280.46	-8.99	4280.42	1.24	95.00	4280.47	180.12	149.1
145	13471	91.37	182.68	8836.53	-4375.26	-13.76	4375.21	2.02	95.00	4375.28	180.18	149.1
146	13566	89.72	181.29	8835.63	-4470.19	-17.05	4470.13	2.27	95.00	4470.22	180.22	149.1
147	13660	88.71	180.99	8836.92	-4564.16	-18.92	4564.10	1.12	94.00	4564.20	180.24	149.1
148	13755	88.57	180.16	8839.17	-4659.13	-19.88	4659.06	0.89	95.00	4659.17	180.24	149.1
149	13850	87.76	179.49	8842.21	-4754.08	-19.59	4754.01	1.11	95.00	4754.12	180.24	149.1
150	13945	89.10	179.43	8844.82	-4849.04	-18.69	4848.97	1.41	95.00	4849.07	180.22	149.1

Svy	Depth	Inc	Azm	TVD	NS	EW	VS	DLS	CL	CD	CA	Temp
151	14039	90.59	178.40	8845.07	-4943.02	-16.91	4942.95	1.93	94.00	4943.04	180.20	149.1
152	14134	91.29	178.49	8843.51	-5037.97	-14.33	5037.91	0.74	95.00	5037.99	180.16	156.3
153	14230	91.04	178.94	8841.56	-5133.92	-12.18	5133.87	0.54	96.00	5133.94	180.14	142.0
154	14324	89.80	180.33	8840.87	-5227.91	-11.58	5227.87	1.98	94.00	5227.93	180.13	142.0
155	14419	89.38	180.40	8841.55	-5322.91	-12.19	5322.86	0.45	95.00	5322.92	180.13	149.1
156	14513	90.90	180.47	8841.32	-5416.90	-12.90	5416.85	1.62	94.00	5416.92	180.14	149.1
157	14608	90.78	180.03	8839.93	-5511.89	-13.32	5511.84	0.48	95.00	5511.91	180.14	149.1
158	14703	89.72	179.54	8839.51	-5606.89	-12.96	5606.84	1.23	95.00	5606.90	180.13	149.1
159	14798	91.09	181.19	8838.84	-5701.88	-13.57	5701.82	2.26	95.00	5701.90	180.14	149.1
160	14892	90.76	181.46	8837.32	-5795.84	-15.74	5795.78	0.45	94.00	5795.86	180.16	149.1
161	14988	90.48	181.50	8836.29	-5891.80	-18.22	5891.74	0.29	96.00	5891.83	180.18	156.3
162	15083	89.55	181.61	8836.26	-5986.77	-20.80	5986.69	0.99	95.00	5986.80	180.20	149.1
163	15177	90.78	181.20	8835.99	-6080.74	-23.10	6080.66	1.38	94.00	6080.78	180.22	156.3
164	15272	89.55	179.81	8835.72	-6175.73	-23.94	6175.65	1.95	95.00	6175.78	180.22	149.1
165	15367	89.86	178.84	8836.21	-6270.72	-22.82	6270.64	1.07	95.00	6270.76	180.21	156.3
166	15462	89.78	177.76	8836.50	-6365.68	-20.00	6365.60	1.14	95.00	6365.71	180.18	156.3
167	15557	89.80	178.46	8836.85	-6460.62	-16.87	6460.56	0.74	95.00	6460.65	180.15	156.3
168	15651	89.08	178.50	8837.77	-6554.59	-14.37	6554.53	0.77	94.00	6554.60	180.13	156.3
169	15746	90.42	178.61	8838.19	-6649.55	-11.98	6649.50	1.42	95.00	6649.56	180.10	156.3
170	15841	90.73	178.37	8837.23	-6744.51	-9.48	6744.47	0.41	95.00	6744.52	180.08	156.3
171	15936	91.26	178.60	8835.58	-6839.47	-6.96	6839.42	0.61	95.00	6839.47	180.06	156.3
172	16030	89.13	178.89	8835.26	-6933.44	-4.91	6933.40	2.29	94.00	6933.44	180.04	156.3
173	16125	89.02	179.48	8836.80	-7028.42	-3.55	7028.38	0.63	95.00	7028.42	180.03	156.3
174	16220	88.77	179.26	8838.63	-7123.39	-2.51	7123.36	0.35	95.00	7123.39	180.02	163.4
175	16315	88.32	179.24	8841.04	-7218.35	-1.27	7218.32	0.47	95.00	7218.35	180.01	163.4
176	16410	89.47	179.27	8842.87	-7313.33	-0.03	7313.30	1.21	95.00	7313.33	180.00	163.4
177	16505	88.68	178.82	8844.41	-7408.30	1.55	7408.28	0.96	95.00	7408.30	179.99	163.4
178	16599	89.02	179.21	8846.29	-7502.27	3.17	7502.25	0.55	94.00	7502.27	179.98	163.4
179	16694	91.43	180.29	8845.92	-7597.26	3.58	7597.24	2.78	95.00	7597.26	179.97	163.4
180	16789	92.41	180.69	8842.74	-7692.20	2.77	7692.18	1.11	95.00	7692.20	179.98	163.4
181	16884	92.69	180.61	8838.51	-7787.10	1.69	7787.07	0.31	95.00	7787.10	179.99	163.4
182	16979	92.64	180.31	8834.09	-7881.99	0.93	7881.97	0.32	95.00	7881.99	179.99	163.4
183	17074	93.20	180.31	8829.25	-7976.87	0.42	7976.84	0.59	95.00	7976.87	180.00	163.4
184	17168	90.84	178.93	8825.94	-8070.80	1.04	8070.77	2.91	94.00	8070.80	179.99	163.4
185	17263	91.40	178.43	8824.08	-8165.75	3.23	8165.73	0.79	95.00	8165.75	179.98	163.4
186	17358	91.15	179.60	8821.97	-8260.71	4.86	8260.70	1.26	95.00	8260.71	179.97	163.4
187	17452	92.55	180.75	8818.93	-8354.66	4.58	8354.64	1.93	94.00	8354.66	179.97	163.4
188	17547	93.03	181.63	8814.31	-8449.53	2.61	8449.50	1.05	95.00	8449.53	179.98	163.4
189	17641	92.64	181.49	8809.66	-8543.38	0.05	8543.35	0.44	94.00	8543.38	180.00	163.4

Svy	Depth	Inc	Azm	TVD	NS	EW	VS	DLS	CL	CD	CA	Temp
190	17736	93.20	182.11	8804.82	-8638.20	-2.93	8638.17	0.88	95.00	8638.21	180.02	156.3
191	17830	94.91	182.89	8798.17	-8731.88	-7.02	8731.83	2.00	94.00	8731.88	180.05	163.4
192	17925	93.11	182.09	8791.53	-8826.55	-11.14	8826.49	2.07	95.00	8826.56	180.07	163.4
193	18020	91.85	181.14	8787.42	-8921.42	-13.81	8921.35	1.66	95.00	8921.43	180.09	163.4
194	18115	91.79	181.25	8784.40	-9016.35	-15.79	9016.28	0.13	95.00	9016.36	180.10	163.4
195	18210	91.68	180.29	8781.53	-9111.30	-17.07	9111.22	1.02	95.00	9111.31	180.11	163.4
196	18304	90.39	178.82	8779.83	-9205.28	-16.34	9205.20	2.08	94.00	9205.29	180.10	163.4
197	18399	90.31	177.99	8779.25	-9300.24	-13.69	9300.17	0.88	95.00	9300.25	180.08	163.4
198	18493	91.18	177.94	8778.03	-9394.17	-10.35	9394.11	0.93	94.00	9394.17	180.06	163.4
199	18588	92.10	178.12	8775.31	-9489.07	-7.09	9489.02	0.99	95.00	9489.07	180.04	170.6
200	18683	92.27	177.87	8771.69	-9583.94	-3.77	9583.90	0.32	95.00	9583.94	180.02	170.6
201	18778	93.08	177.56	8767.25	-9678.76	0.01	9678.73	0.91	95.00	9678.76	180.00	170.6
202	18872	93.62	177.02	8761.76	-9772.50	4.45	9772.48	0.81	94.00	9772.50	179.97	170.6
203	18968	93.84	177.24	8755.51	-9868.17	9.25	9868.16	0.32	96.00	9868.18	179.95	170.6
204	18992	93.65	177.78	8753.95	-9892.10	10.29	9892.09	2.38	24.00	9892.11	179.94	170.6
PTB	19055	93.65	177.78	8749.94	-9954.93	12.72	9954.93	0.00	63.00	9954.94	179.93	0.5