



MWD SURVEY CERTIFICATION
Legacy Directional Drilling, LLC.

NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 26 2018

RECEIVED

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 December 26, 2017 through February 27, 2018 conduct
or supervise the taking of a MWD survey from a depth of 1,020 feet to a depth of
21,945 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 for the
Lusitano 27-34 FED COM 626H Well, A.P.I. No. 30-015-44428 in
Purple Sage; Wolfcamp 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



Directional Survey Report

Company Name: Devon Energy

Well Name: Lusitano 27-34 FED COM 626H

Field: Purple Sage; Wolfcamp

Rig ID: Independence Contract Drilling 217

State/Prov: NM

County: Eddy

Location: SEC 27 / T25S / R31E

API/UWI: 30-015-44428

Survey Company: Legacy Directional

Job Number: LF170051

Latitude: 32° 6' 28.487" N

Longitude: 103° 45' 30.928" W

Proposed Azimuth: 179.85°

Declination: 6.68°

North Reference: GRID

KB: 3362 FT

Svy	Depth	Inc	Azm	TVD	NS	EW	VS	DLS	CL	CD	CA	Temp
Tie-In	973.5	1.5	267.72	973.44	4.63	-6.66	-4.65	0	0	8.11	304.81	0
1	1020	1.16	282.62	1019.93	4.71	-7.73	-4.73	1.04	46.5	9.05	301.36	71
2	1113	2.18	293.34	1112.89	5.62	-10.27	-5.64	1.14	93	11.70	298.67	71
3	1206	2.9	304.85	1205.80	7.66	-13.82	-7.70	0.95	93	15.81	298.99	78
4	1298	3.7	306.3	1297.64	10.75	-18.13	-10.79	0.87	92	21.07	300.66	78
5	1390	4.62	307.88	1389.40	14.78	-23.44	-14.84	1.01	92	27.71	302.23	85
6	1483	5.23	308.57	1482.06	19.72	-29.71	-19.80	0.66	93	35.66	303.57	85
7	1577	5.39	311.51	1575.65	25.32	-36.37	-25.41	0.34	94	44.32	304.84	85
8	1672	5.64	308.39	1670.21	31.18	-43.37	-31.29	0.41	95	53.41	305.71	92
9	1767	5.6	308.57	1764.76	36.96	-50.65	-37.10	0.05	95	62.71	306.12	92
10	1862	5.42	296.17	1859.32	41.83	-58.30	-41.99	1.26	95	71.76	305.66	92
11	1956	5.45	287.38	1952.90	45.12	-66.55	-45.30	0.89	94	80.41	304.14	99
12	2052	5.35	285.94	2048.47	47.72	-75.20	-47.91	0.18	96	89.06	302.39	99
13	2147	5.16	284.6	2143.07	50.01	-83.60	-50.23	0.24	95	97.41	300.89	99
14	2242	5.05	285.47	2237.70	52.20	-91.76	-52.44	0.14	95	105.57	299.64	106
15	2336	4.93	287.68	2331.34	54.53	-99.60	-54.79	0.24	94	113.55	298.70	106
16	2432	5.69	281.62	2426.93	56.74	-108.19	-57.03	0.98	96	122.16	297.68	99
17	2527	5.32	280.36	2521.49	58.48	-117.13	-58.79	0.41	95	130.92	296.53	106
18	2622	4.85	277.98	2616.12	59.83	-125.44	-60.16	0.54	95	138.98	295.50	106
19	2717	4.32	276.92	2710.81	60.82	-132.97	-61.17	0.56	95	146.22	294.58	113
20	2812	4.3	289.16	2805.55	62.42	-139.89	-62.79	0.97	95	153.18	294.05	113
21	2907	5.21	284.03	2900.22	64.64	-147.44	-65.02	1.06	95	160.98	293.67	113
22	3002	5.24	280.89	2994.82	66.50	-155.88	-66.91	0.30	95	169.47	293.10	121
23	3097	5.11	277.04	3089.44	67.84	-164.34	-68.27	0.39	95	177.79	292.43	121
24	3193	4.88	287.02	3185.07	69.56	-172.49	-70.01	0.93	96	185.98	291.96	113
25	3287	4.35	287.4	3278.77	71.80	-179.71	-72.27	0.56	94	193.52	291.78	121
26	3382	5.04	278.87	3373.45	73.52	-187.27	-74.01	1.03	95	201.19	291.43	113
27	3477	4.99	274.3	3468.09	74.47	-195.52	-74.98	0.42	95	209.22	290.85	121
28	3572	5.65	278.5	3562.68	75.47	-204.26	-76.00	0.81	95	217.76	290.28	121
29	3668	4.5	276.89	3658.30	76.62	-212.67	-77.18	1.21	96	226.06	289.81	121
30	3763	4.4	288.45	3753.02	78.22	-219.83	-78.80	0.95	95	233.33	289.59	121
31	3859	3.77	290.42	3848.77	80.49	-226.28	-81.08	0.67	96	240.17	289.58	128
32	3954	3.39	286.53	3943.59	82.38	-231.90	-82.98	0.47	95	246.10	289.56	128
33	4049	4.31	289.28	4038.37	84.35	-237.96	-84.98	0.99	95	252.47	289.52	121

Svy	Depth	Inc	Azm	TVD	NS	EW	VS	DLS	CL	CD	CA	Temp
34	4146	5.58	294.3	4135.01	87.50	-245.70	-88.14	1.38	97	260.82	289.60	128
35	4239	4.88	295.26	4227.62	91.05	-253.40	-91.71	0.76	93	269.26	289.76	128
36	4334	5.65	291.9	4322.22	94.52	-261.40	-95.20	0.87	95	277.96	289.88	128
37	4429	5.62	293.06	4416.76	98.08	-270.01	-98.79	0.12	95	287.28	289.96	128
38	4524	5.6	291.07	4511.30	101.57	-278.62	-102.30	0.21	95	296.56	290.03	128
39	4619	5.56	293.86	4605.85	105.10	-287.15	-105.85	0.29	95	305.78	290.10	128
40	4714	5.44	292.75	4700.42	108.70	-295.52	-109.47	0.17	95	314.87	290.20	128
41	4809	5.41	295.28	4794.99	112.36	-303.72	-113.15	0.25	95	323.83	290.30	128
42	4904	5.21	292.59	4889.58	115.92	-311.75	-116.74	0.34	95	332.61	290.40	128
43	4999	4.82	289.15	4984.22	118.89	-319.50	-119.73	0.52	95	340.91	290.41	128
44	5094	4.76	277.39	5078.89	120.71	-327.18	-121.56	1.03	95	348.74	290.25	128
45	5189	5.78	281.6	5173.49	122.18	-335.78	-123.05	1.15	95	357.31	289.99	121
46	5285	5.9	281.18	5268.99	124.10	-345.35	-125.01	0.13	96	366.98	289.77	128
47	5380	5.42	281.39	5363.53	125.94	-354.54	-126.87	0.51	95	376.24	289.56	128
48	5475	5.3	279.27	5458.11	127.53	-363.27	-128.48	0.24	95	385.01	289.34	128
49	5571	5.11	281.01	5553.72	129.06	-371.84	-130.03	0.26	96	393.60	289.14	128
50	5666	4.99	282.64	5648.35	130.77	-380.03	-131.77	0.20	95	401.90	288.99	128
51	5760	4.9	284.92	5742.00	132.70	-387.90	-133.72	0.23	94	409.97	288.89	128
52	5856	5.31	285.73	5837.62	134.96	-396.13	-136.00	0.43	96	418.49	288.81	128
53	5951	5.27	287.66	5932.21	137.48	-404.52	-138.54	0.19	95	427.24	288.77	128
54	6046	4.8	287.32	6026.85	139.98	-412.47	-141.06	0.50	95	435.58	288.75	128
55	6141	5.26	293.85	6121.48	142.93	-420.25	-144.03	0.77	95	443.89	288.78	135
56	6236	4.96	288.68	6216.10	146.00	-428.12	-147.12	0.58	95	452.34	288.83	128
57	6331	4.96	287.88	6310.75	148.58	-435.92	-149.72	0.07	95	460.55	288.82	128
58	6426	4.69	288.93	6405.41	151.10	-443.51	-152.26	0.30	95	468.54	288.81	128
59	6522	5.55	294.45	6501.03	154.30	-451.44	-155.48	1.03	96	477.08	288.87	135
60	6617	5.61	296.18	6595.58	158.25	-459.79	-159.45	0.19	95	486.26	288.99	135
61	6712	4.91	295.53	6690.18	162.05	-467.63	-163.27	0.74	95	494.91	289.11	135
62	6807	4.39	296.63	6784.86	165.43	-474.55	-166.67	0.56	95	502.56	289.22	135
63	6902	4.5	294.92	6879.58	168.63	-481.18	-169.89	0.18	95	509.87	289.31	135
64	6997	4.6	296.53	6974.28	171.90	-487.97	-173.18	0.17	95	517.36	289.41	142
65	7092	5.32	295.65	7068.92	175.51	-495.34	-176.80	0.76	95	525.52	289.51	135
66	7187	5.38	295.54	7163.51	179.34	-503.33	-180.65	0.06	95	534.33	289.61	142
67	7283	4.88	296.88	7259.12	183.12	-511.04	-184.46	0.54	96	542.85	289.71	142
68	7378	5.08	287.82	7353.77	186.24	-518.64	-187.59	0.85	95	551.07	289.75	113
69	7474	4.88	284.11	7449.40	188.53	-526.65	-189.91	0.39	96	559.38	289.70	113
70	7569	4.54	284.44	7544.08	190.45	-534.21	-191.85	0.36	95	567.15	289.62	121
71	7664	4.09	283.26	7638.81	192.17	-541.15	-193.59	0.48	95	574.26	289.55	121
72	7759	3.86	282.68	7733.58	193.65	-547.57	-195.08	0.25	95	580.80	289.48	128

Svy	Depth	Inc	Azm	TVD	NS	EW	VS	DLS	CL	CD	CA	Temp
73	7854	3.55	281.93	7828.39	194.96	-553.56	-196.41	0.33	95	586.89	289.40	128
74	7950	3.56	284.25	7924.20	196.31	-559.36	-197.77	0.15	96	592.81	289.34	128
75	8045	3.74	285.45	8019.01	197.86	-565.21	-199.34	0.21	95	598.84	289.29	128
76	8139	3.39	282.19	8112.83	199.26	-570.88	-200.75	0.43	94	604.65	289.24	135
77	8235	3.02	277.63	8208.68	200.20	-576.16	-201.70	0.47	96	609.95	289.16	134.9
78	8330	2.3	270.57	8303.57	200.55	-580.54	-202.07	0.83	95	614.21	289.06	134.9
79	8425	2.03	264.4	8398.51	200.40	-584.13	-201.93	0.38	95	617.55	288.94	142
80	8520	1.69	258.17	8493.46	199.95	-587.17	-201.49	0.42	95	620.28	288.81	142
81	8616	1.39	260.23	8589.42	199.46	-589.70	-201.01	0.32	96	622.52	288.69	134.9
82	8711	1.95	254.28	8684.38	198.83	-592.40	-200.38	0.62	95	624.87	288.55	134.9
83	8806	1.84	298.42	8779.33	199.12	-595.29	-200.68	1.50	95	627.71	288.49	142
84	8896	2.41	300.5	8869.27	200.77	-598.19	-202.33	0.64	90	630.99	288.55	120.6
85	8991	1.18	320.42	8964.22	202.53	-600.54	-204.10	1.43	95	633.77	288.64	120.6
86	9086	0.8	289.09	9059.21	203.50	-601.79	-205.08	0.68	95	635.27	288.68	120.6
87	9181	2.4	331.08	9154.17	205.46	-603.38	-207.04	1.98	95	637.40	288.80	120.6
88	9277	1.84	310.01	9250.11	208.21	-605.53	-209.80	0.99	96	640.33	288.98	127.7
89	9371	0.94	284.91	9344.08	209.38	-607.43	-210.97	1.13	94	642.50	289.02	127.7
90	9516	0.92	311.46	9489.06	210.46	-609.45	-212.05	0.29	145	644.77	289.05	113.4
91	9611	1.49	17.83	9584.04	212.14	-609.65	-213.73	1.48	95	645.50	289.19	113.4
92	9706	1.24	31.91	9679.02	214.19	-608.72	-215.78	0.44	95	645.31	289.39	120.6
93	9801	0.44	96.25	9774.01	215.02	-607.82	-216.61	1.18	95	644.73	289.48	120.6
94	9896	1.01	185.86	9869.00	214.15	-607.54	-215.74	1.16	95	644.18	289.42	120.6
95	9991	0.67	132.44	9963.99	212.94	-607.22	-214.53	0.86	95	643.47	289.32	127.7
96	10086	0.62	128.11	10058.99	212.25	-606.40	-213.83	0.07	95	642.47	289.29	127.7
97	10180	1.23	178.29	10152.98	210.93	-605.97	-212.51	1.02	94	641.63	289.19	127.7
98	10275	1.14	229.59	10247.96	209.29	-606.66	-210.88	1.08	95	641.75	289.03	127.7
99	10371	2.17	249.66	10343.92	208.04	-609.09	-209.64	1.22	96	643.64	288.86	127.7
100	10466	1.39	269.93	10438.87	207.42	-611.93	-209.02	1.04	95	646.13	288.72	127.7
101	10561	2.09	264.72	10533.83	207.26	-614.81	-208.86	0.75	95	648.80	288.63	134.9
102	10656	1.35	287.43	10628.78	207.43	-617.60	-209.05	1.04	95	651.51	288.57	134.9
103	10752	0.67	115.58	10724.78	207.53	-618.17	-209.15	2.10	96	652.08	288.56	134.9
104	10846	1.93	132.42	10818.75	206.22	-616.51	-207.84	1.39	94	650.09	288.50	134.9
105	10942	0.54	117.92	10914.73	204.92	-614.92	-206.53	1.47	96	648.16	288.43	134.9
106	11037	0.16	229.55	11009.73	204.62	-614.62	-206.23	0.65	95	647.79	288.41	134.9
107	11133	0.39	300.76	11105.72	204.70	-615.00	-206.31	0.39	96	648.18	288.41	142
108	11196	0.52	316.18	11168.72	205.02	-615.39	-206.63	0.28	63	648.64	288.43	142
109	11229	0.71	319.17	11201.72	205.28	-615.62	-206.89	0.58	33	648.95	288.44	127.7
110	11261	0.48	279.63	11233.72	205.46	-615.89	-207.07	1.43	32	649.25	288.45	134.9
111	11324	7.69	187.28	11296.53	201.31	-616.68	-202.93	12.26	63	648.71	288.08	134.9

Svy	Depth	Inc	Azm	TVD	NS	EW	VS	DLS	CL	CD	CA	Temp
112	11419	20.34	190.14	11388.52	178.66	-620.41	-180.29	13.33	95	645.62	286.07	134.9
113	11514	27.5	186.09	11475.31	140.55	-625.65	-142.19	7.73	95	641.24	282.66	142
114	11610	35.99	184.95	11556.87	90.32	-630.44	-91.97	8.87	96	636.88	278.15	142
115	11705	45.6	183.31	11628.71	28.48	-634.82	-30.14	10.18	95	635.46	272.57	142
116	11800	52.88	178.09	11690.72	-43.38	-635.52	41.72	8.72	95	637.00	266.09	149.1
117	11895	58.77	174.94	11744.06	-121.78	-630.67	120.13	6.78	95	642.32	259.07	149.1
118	11989	67.72	176.09	11786.34	-205.37	-624.15	203.74	9.58	94	657.07	251.79	149.1
119	12084	79.4	183.69	11813.22	-296.25	-624.15	294.62	14.48	95	690.89	244.61	149.1
120	12180	82.52	184.49	11828.30	-390.81	-630.92	389.15	3.35	96	742.15	238.22	149.1
121	12221	84.78	184.26	11832.83	-431.43	-634.03	429.77	5.54	41	766.89	235.77	149.1
122	12283	89.02	182.42	11836.18	-493.22	-637.63	491.55	7.45	62	806.13	232.28	149.1
123	12360	93.07	180.14	11834.78	-570.17	-639.35	568.49	6.04	77	856.66	228.27	163.4
124	12455	91.62	180.29	11830.89	-665.08	-639.71	663.41	1.53	95	922.80	223.89	0
125	12550	90.21	179.93	11829.38	-760.07	-639.89	758.39	1.53	95	993.56	220.09	0
126	12645	89.07	175.84	11829.97	-854.98	-636.38	853.31	4.47	95	1065.82	216.66	0
127	12740	89.2	179.55	11831.41	-949.88	-632.56	948.22	3.91	95	1141.23	213.66	0
128	12835	89.4	182.09	11832.57	-1044.85	-633.92	1043.19	2.68	95	1222.12	211.25	0
129	12930	89.59	178.85	11833.41	-1139.83	-634.70	1138.17	3.42	95	1304.63	209.11	0
130	13024	90.01	178.46	11833.73	-1233.81	-632.50	1232.15	0.61	94	1386.48	207.14	0
131	13118	90.01	179.49	11833.72	-1327.79	-630.82	1326.13	1.10	94	1470.02	205.41	0
132	13208	89.86	183.49	11833.82	-1417.74	-633.16	1416.08	4.45	90	1552.70	204.07	0
133	13303	91.18	177.94	11832.96	-1512.69	-634.34	1511.02	6.00	95	1640.31	202.75	0
134	13397	90.36	175.69	11831.69	-1606.53	-629.12	1604.88	2.55	94	1725.32	201.39	0
135	13487	90.11	178.7	11831.32	-1696.41	-624.71	1694.77	3.36	90	1807.78	200.22	0
136	13581	89.9	177.67	11831.32	-1790.36	-621.74	1788.73	1.12	94	1895.25	199.15	0
137	13675	90.92	176.77	11830.64	-1884.25	-617.18	1882.63	1.45	94	1982.75	198.14	0
138	13770	88.79	175.67	11830.88	-1979.03	-610.92	1977.43	2.52	95	2071.18	197.16	170.6
139	13865	91.23	175.42	11830.87	-2073.74	-603.54	2072.15	2.58	95	2159.78	196.23	0
140	13960	92.97	179.02	11827.39	-2168.54	-598.93	2166.97	4.21	95	2249.73	195.44	170.6
141	14056	91.37	180.99	11823.75	-2264.47	-598.94	2262.89	2.64	96	2342.34	194.82	177.7
142	14151	92.52	180.1	11820.53	-2359.41	-599.85	2357.83	1.53	95	2434.46	194.26	170.6
143	14246	90.64	180.73	11817.91	-2454.36	-600.53	2452.78	2.09	95	2526.76	193.75	177.7
144	14341	90.39	182.68	11817.05	-2549.31	-603.36	2547.72	2.07	95	2619.74	193.32	177.7
145	14435	89.5	183.33	11817.14	-2643.18	-608.29	2641.58	1.17	94	2712.27	192.96	177.7
146	14529	88.77	183.21	11818.56	-2737.02	-613.65	2735.40	0.79	94	2804.96	192.64	177.7
147	14623	88.71	181.3	11820.63	-2830.92	-617.35	2829.29	2.03	94	2897.45	192.30	177.7
148	14718	88.74	180.93	11822.74	-2925.88	-619.19	2924.24	0.39	95	2990.68	191.95	177.7
149	14812	88.79	181.37	11824.77	-3019.83	-621.08	3018.20	0.47	94	3083.04	191.62	177.7
150	14906	91.57	178.45	11824.47	-3113.81	-620.93	3112.18	4.29	94	3175.12	191.28	177.7

Svy	Depth	Inc	Azm	TVD	NS	EW	VS	DLS	CL	CD	CA	Temp
151	15001	87.17	179.2	11825.52	-3208.76	-618.99	3207.13	4.70	95	3267.92	190.92	177.7
152	15095	90.25	177.74	11827.63	-3302.69	-616.48	3301.07	3.63	94	3359.74	190.57	177.7
153	15188	90.56	176.72	11826.98	-3395.58	-611.98	3393.97	1.15	93	3450.29	190.22	184.9
154	15283	90.45	176.41	11826.14	-3490.41	-606.29	3488.81	0.35	95	3542.67	189.85	177.7
155	15377	91.32	178.26	11824.69	-3584.29	-601.92	3582.70	2.17	94	3634.48	189.53	177.7
156	15472	90.79	180.28	11822.94	-3679.26	-600.71	3677.67	2.20	95	3727.98	189.27	177.7
157	15566	89.75	180.44	11822.50	-3773.26	-601.30	3771.67	1.12	94	3820.87	189.05	177.7
158	15660	89.52	180.42	11823.09	-3867.25	-602.01	3865.66	0.25	94	3913.83	188.85	184.9
159	15754	89.61	180.58	11823.81	-3961.24	-602.83	3959.65	0.20	94	4006.85	188.65	184.9
160	15848	91.09	180.05	11823.23	-4055.24	-603.34	4053.65	1.67	94	4099.88	188.46	184.9
161	15942	91.54	180.17	11821.08	-4149.21	-603.52	4147.62	0.50	94	4192.88	188.28	184.9
162	16036	89.19	180.28	11820.48	-4243.20	-603.89	4241.61	2.50	94	4285.96	188.10	192
163	16130	89.94	180.74	11821.19	-4337.20	-604.73	4335.60	0.94	94	4379.15	187.94	184.9
164	16224	92.41	182.72	11819.26	-4431.12	-607.57	4429.52	3.37	94	4472.58	187.81	184.9
165	16318	90.53	180.21	11816.85	-4525.05	-609.97	4523.44	3.34	94	4565.97	187.68	192
166	16412	90.79	179.44	11815.77	-4619.04	-608.68	4617.43	0.86	94	4659.10	187.52	184.9
167	16506	89.69	179.35	11815.38	-4711.03	-608.69	4711.42	1.17	94	4752.18	187.36	192
168	16600	90.39	180.15	11815.31	-4807.03	-608.28	4805.42	1.13	94	4845.36	187.21	184.9
169	16695	89.86	178.98	11815.10	-4902.03	-607.56	4900.42	1.35	95	4939.53	187.07	192
170	16789	90.56	180.22	11814.76	-4996.02	-606.90	4994.42	1.51	94	5032.75	186.93	192
171	16883	91.05	177.89	11813.40	-5089.99	-605.35	5088.39	2.54	94	5125.86	186.78	192
172	16978	92.05	178.67	11810.80	-5184.91	-602.50	5183.32	1.30	95	5219.80	186.63	192
173	17072	90.93	178.15	11808.36	-5278.84	-599.89	5277.25	1.31	94	5312.82	186.48	192
174	17166	91.6	178.56	11806.28	-5372.78	-597.19	5371.20	0.84	94	5405.87	186.34	192
175	17261	92.47	179.39	11802.91	-5467.70	-595.49	5466.12	1.27	95	5500.04	186.22	192
176	17356	90.56	178.89	11800.40	-5562.65	-594.07	5561.08	2.08	95	5594.29	186.10	199.1
177	17450	91.79	179.64	11798.47	-5656.62	-592.86	5655.05	1.53	94	5687.61	185.98	192
178	17544	90.2	179.65	11796.84	-5750.61	-592.28	5749.03	1.69	94	5781.03	185.88	192
179	17638	91.26	180.74	11795.64	-5844.59	-592.60	5843.02	1.62	94	5874.56	185.79	192
180	17732	91.74	181.59	11793.18	-5938.54	-594.51	5936.96	1.04	94	5968.23	185.72	199.1
181	17826	92.07	181.32	11790.05	-6032.46	-596.90	6030.88	0.45	94	6061.92	185.65	0
182	17921	89.44	180.32	11788.80	-6127.43	-598.26	6125.84	2.96	95	6156.57	185.58	0
183	18015	90	180.21	11789.26	-6221.43	-598.69	6219.84	0.61	94	6250.17	185.50	0
184	18110	89.72	180.75	11789.49	-6316.42	-599.49	6314.83	0.64	95	6344.81	185.42	0
185	18204	91.35	178.91	11788.62	-6410.41	-599.21	6408.82	2.61	94	6438.36	185.34	0
186	18298	91.23	178.81	11786.50	-6504.37	-597.34	6502.78	0.17	94	6531.74	185.25	0
187	18392	88.88	179.12	11786.41	-6598.35	-595.64	6596.77	2.52	94	6625.18	185.16	0
188	18486	89.89	179.88	11787.42	-6692.34	-594.82	6690.76	1.34	94	6718.72	185.08	0
189	18580	88.37	179.02	11788.85	-6786.32	-593.92	6784.74	1.86	94	6812.26	185.00	0

Svy	Depth	Inc	Azm	TVD	NS	EW	VS	DLS	CL	CD	CA	Temp
190	18674	91.71	179.52	11788.78	-6880.30	-592.72	6878.72	3.59	94	6905.78	184.92	0
191	18768	90.42	179.3	11787.03	-6974.27	-591.75	6972.70	1.39	94	6999.33	184.85	0
192	18862	88.52	179.01	11787.90	-7068.26	-590.37	7066.69	2.04	94	7092.87	184.77	0
193	18956	90.14	179.25	11789.00	-7162.24	-588.94	7160.67	1.74	94	7186.41	184.70	0
194	19050	93.48	180.85	11786.03	-7256.17	-589.02	7254.61	3.94	94	7280.04	184.64	0
195	19145	90.76	180.77	11782.52	-7351.09	-590.36	7349.52	2.86	95	7374.76	184.59	0
196	19239	90.14	179.63	11781.78	-7445.08	-590.69	7443.51	1.38	94	7468.48	184.54	0
197	19333	90	180.17	11781.67	-7539.08	-590.53	7537.51	0.59	94	7562.17	184.48	0
198	19427	91.68	179.46	11780.29	-7633.07	-590.22	7631.50	1.94	94	7655.85	184.42	0
199	19521	92.24	180.18	11777.07	-7727.01	-589.93	7725.44	0.97	94	7749.50	184.37	0
200	19615	91.48	180.79	11774.02	-7820.96	-590.72	7819.38	1.04	94	7843.23	184.32	0
201	19710	89.36	180.38	11773.33	-7915.94	-591.69	7914.37	2.27	95	7938.03	184.27	0
202	19804	90.34	180.26	11773.57	-8009.94	-592.22	8008.36	1.05	94	8031.80	184.23	0
203	19898	88.18	179.18	11774.79	-8103.93	-591.76	8102.35	2.57	94	8125.50	184.18	0
204	19992	86.44	178.17	11779.20	-8197.79	-589.59	8196.22	2.14	94	8218.97	184.11	0
205	20086	89.38	178.84	11782.62	-8291.69	-587.14	8290.12	3.21	94	8312.45	184.05	0
206	20181	91.04	178.29	11782.28	-8386.65	-584.76	8385.09	1.84	95	8407.01	183.99	0
207	20275	90.45	178.76	11781.05	-8480.61	-582.34	8479.06	0.80	94	8500.58	183.93	0
208	20369	90.76	177.5	11780.06	-8574.56	-579.27	8573.01	1.3803244	94	8594.10	183.86	0
209	20464	89.55	175.77	11779.80	-8669.39	-573.70	8667.85	2.22	95	8688.35	183.79	0
210	20557	90.48	176.29	11779.78	-8762.16	-567.26	8760.65	1.15	93	8780.50	183.70	0
211	20651	93.36	178.37	11776.63	-8855.99	-562.88	8854.49	3.78	94	8873.86	183.64	0
212	20746	92.77	178.64	11771.55	-8950.82	-560.41	8949.33	0.68	95	8968.35	183.58	0
213	20840	92.22	179.43	11767.46	-9044.72	-558.83	9043.23	1.02	94	9061.97	183.54	0
214	20935	89.3	178.94	11766.20	-9139.69	-557.47	9138.20	3.12	95	9156.68	183.49	0
215	21029	91.82	181.17	11765.28	-9233.67	-557.56	9232.18	3.58	94	9250.49	183.46	0
216	21123	96.4	184.5	11758.54	-9327.28	-562.19	9325.77	6.02	94	9344.21	183.45	0
217	21217	94.15	183.27	11749.90	-9420.66	-568.53	9419.14	2.73	94	9437.80	183.45	0
218	21311	92.19	184.62	11744.70	-9514.28	-574.99	9512.75	2.5305619	94	9531.64	183.46	206.3
219	21405	93.98	183.7	11739.64	-9607.90	-581.80	9606.34	2.14	94	9625.50	183.47	206.3
220	21499	90.95	183.96	11735.60	-9701.59	-588.07	9700.02	3.24	94	9719.40	183.47	206.3
221	21593	87.76	184.23	11736.66	-9795.33	-594.78	9793.74	3.41	94	9813.37	183.47	213.4
222	21688	87.87	184.5	11740.28	-9889.99	-602.01	9888.38	0.31	95	9908.29	183.48	213.4
223	21782	91.66	185.66	11740.67	-9983.60	-610.33	9981.96	4.22	94	10002.24	183.50	213.4
224	21877	91.32	185.88	11738.20	-10078.08	-619.88	10076.43	0.43	95	10097.13	183.52	206.3
PTB	21945	91.32	185.88	11736.63	-10145.71	-626.84	10144.03	0.00	68	10165.05	183.54	0

MD	INC	AZI	Course Length	TVD	Subsea Depth	N/-S	E/-W	X	Y	Lat	Long	Dogleg Severity
0.00	0.00	0.00	0.00	0.00	3362.00	0.00	0.00	719293.08	403469.53	32.11	-103.76	0.00
147.50	0.50	351.72	147.50	147.50	3214.50	0.64	-0.09	719292.99	403470.17	32.11	-103.76	0.34
209.50	0.50	305.72	62.00	209.50	3152.50	1.06	-0.35	719292.73	403470.59	32.11	-103.76	0.63
239.50	0.80	337.72	30.00	239.49	3122.51	1.33	-0.54	719292.54	403470.86	32.11	-103.76	1.53
333.50	0.70	352.72	94.00	333.49	3028.51	2.51	-0.86	719292.22	403472.04	32.11	-103.76	0.23
428.50	0.80	335.72	95.00	428.48	2933.52	3.69	-1.20	719291.88	403473.22	32.11	-103.76	0.26
522.50	0.40	307.72	94.00	522.47	2839.53	4.49	-1.73	719291.35	403474.02	32.11	-103.76	0.52
616.50	0.30	292.72	94.00	616.47	2745.53	4.78	-2.22	719290.86	403474.31	32.11	-103.76	0.14
710.50	0.60	269.72	94.00	710.47	2651.53	4.88	-2.94	719290.14	403474.41	32.11	-103.76	0.37
804.50	0.50	277.72	94.00	804.46	2557.54	4.93	-3.84	719289.24	403474.46	32.11	-103.76	0.13
899.50	1.00	257.72	95.00	899.46	2462.54	4.81	-5.06	719288.02	403474.34	32.11	-103.76	0.59
973.50	1.50	267.72	74.00	973.44	2388.56	4.63	-6.66	719286.42	403474.16	32.11	-103.76	0.73
1020.00	1.16	282.62	46.50	1019.93	2342.07	4.71	-7.73	719285.35	403474.24	32.11	-103.76	1.04
1113.00	2.18	293.34	93.00	1112.88	2249.12	5.62	-10.27	719282.81	403475.15	32.11	-103.76	1.14
1206.00	2.90	304.85	93.00	1205.79	2156.21	7.66	-13.82	719279.26	403477.19	32.11	-103.76	0.95
1298.00	3.70	306.30	92.00	1297.64	2064.36	10.75	-18.13	719274.95	403480.28	32.11	-103.76	0.87
1390.00	4.62	307.88	92.00	1389.40	1972.60	14.78	-23.44	719269.64	403484.31	32.11	-103.76	1.01
1483.00	5.23	308.57	93.00	1482.05	1879.95	19.73	-29.71	719263.37	403489.26	32.11	-103.76	0.66
1577.00	5.39	311.51	94.00	1575.65	1786.35	25.32	-36.37	719256.71	403494.85	32.11	-103.76	0.34
1672.00	5.64	308.39	95.00	1670.21	1691.79	31.18	-43.37	719249.71	403500.71	32.11	-103.76	0.41
1767.00	5.60	308.57	95.00	1764.75	1597.25	36.97	-50.65	719242.43	403506.50	32.11	-103.76	0.05
1862.00	5.42	296.17	95.00	1859.32	1502.68	41.84	-58.30	719234.78	403511.37	32.11	-103.76	1.26
1956.00	5.45	287.38	94.00	1952.90	1409.10	45.13	-66.55	719226.53	403514.66	32.11	-103.76	0.89
2052.00	5.35	285.94	96.00	2048.47	1313.53	47.72	-75.20	719217.88	403517.25	32.11	-103.76	0.18
2147.00	5.16	284.60	95.00	2143.07	1218.93	50.01	-83.59	719209.49	403519.54	32.11	-103.76	0.24
2242.00	5.05	285.47	95.00	2237.69	1124.31	52.20	-91.76	719201.32	403521.73	32.11	-103.76	0.14
2336.00	4.93	287.68	94.00	2331.34	1030.66	54.53	-99.59	719193.49	403524.06	32.11	-103.76	0.24
2432.00	5.69	281.62	96.00	2426.93	935.07	56.75	-108.19	719184.89	403526.28	32.11	-103.76	0.98
2527.00	5.32	280.36	95.00	2521.49	840.51	58.49	-117.13	719175.95	403528.02	32.11	-103.76	0.41
2622.00	4.85	277.98	95.00	2616.11	745.89	59.84	-125.44	719167.64	403529.37	32.11	-103.76	0.54
2717.00	4.32	276.92	95.00	2710.81	651.19	60.82	-132.97	719160.11	403530.35	32.11	-103.76	0.56
2812.00	4.30	289.16	95.00	2805.54	556.46	62.42	-139.89	719153.19	403531.95	32.11	-103.76	0.97
2907.00	5.21	284.03	95.00	2900.22	461.78	64.64	-147.43	719145.65	403534.17	32.11	-103.76	1.06
3002.00	5.24	280.89	95.00	2994.82	367.18	66.50	-155.88	719137.20	403536.03	32.11	-103.76	0.30
3097.00	5.11	277.04	95.00	3089.43	272.57	67.84	-164.34	719128.74	403537.37	32.11	-103.76	0.39
3193.00	4.88	287.02	96.00	3185.07	176.93	69.56	-172.49	719120.59	403539.09	32.11	-103.76	0.93
3287.00	4.35	287.40	94.00	3278.77	83.23	71.80	-179.71	719113.37	403541.33	32.11	-103.76	0.56
3382.00	5.04	278.87	95.00	3373.45	-11.45	73.52	-187.27	719105.81	403543.05	32.11	-103.76	1.03
3477.00	4.99	274.30	95.00	3468.09	-106.09	74.47	-195.51	719097.57	403544.00	32.11	-103.76	0.42
3572.00	5.65	278.50	95.00	3562.68	-200.68	75.47	-204.26	719088.82	403545.00	32.11	-103.76	0.81
3668.00	4.50	276.89	96.00	3658.30	-296.30	76.62	-212.67	719080.41	403546.15	32.11	-103.76	1.21
3763.00	4.40	288.45	95.00	3753.01	-391.01	78.22	-219.83	719073.25	403547.75	32.11	-103.76	0.95
3859.00	3.77	290.42	96.00	3848.77	-486.77	80.49	-226.28	719066.80	403550.02	32.11	-103.76	0.67
3954.00	3.39	286.53	95.00	3943.58	-581.58	82.38	-231.90	719061.18	403551.91	32.11	-103.76	0.47
4049.00	4.31	289.28	95.00	4038.37	-676.37	84.36	-237.96	719055.12	403553.89	32.11	-103.76	0.99
4146.00	5.58	294.30	97.00	4135.01	-773.01	87.50	-245.70	719047.38	403557.03	32.11	-103.76	1.38
4239.00	4.88	295.26	93.00	4227.62	-865.62	91.05	-253.40	719039.68	403560.58	32.11	-103.76	0.76
4334.00	5.65	291.90	95.00	4322.22	-960.22	94.52	-261.39	719031.69	403564.05	32.11	-103.76	0.87
4429.00	5.62	293.06	95.00	4416.76	-1054.76	98.09	-270.01	719023.07	403567.62	32.11	-103.76	0.12
4524.00	5.60	291.07	95.00	4511.30	-1149.30	101.57	-278.62	719014.46	403571.10	32.11	-103.76	0.21
4619.00	5.56	293.86	95.00	4605.85	-1243.85	105.10	-287.15	719005.93	403574.63	32.11	-103.76	0.29
4714.00	5.44	292.75	95.00	4700.42	-1338.42	108.70	-295.51	718997.57	403578.23	32.11	-103.76	0.17
4809.00	5.41	295.28	95.00	4794.99	-1432.99	112.36	-303.72	718989.36	403581.89	32.11	-103.76	0.25
4904.00	5.21	292.59	95.00	4889.58	-1527.58	115.93	-311.75	718981.33	403585.46	32.11	-103.76	0.34
4999.00	4.82	289.15	95.00	4984.22	-1622.22	118.89	-319.50	718973.58	403588.42	32.11	-103.76	0.52
5094.00	4.76	277.39	95.00	5078.89	-1716.89	120.71	-327.18	718965.90	403590.24	32.11	-103.76	1.03
5189.00	5.78	281.60	95.00	5173.49	-1811.49	122.18	-335.78	718957.30	403591.71	32.11	-103.76	1.15
5285.00	5.90	281.18	96.00	5268.99	-1906.99	124.11	-345.35	718947.73	403593.64	32.11	-103.76	0.13
5380.00	5.42	281.39	95.00	5363.53	-2001.53	125.94	-354.54	718938.54	403595.47	32.11	-103.76	0.51
5475.00	5.30	279.27	95.00	5458.11	-2096.11	127.53	-363.27	718929.81	403597.06	32.11	-103.76	0.24

5571.00	5.11	281.01	96.00	5553.71	-2191.71	129.06	-371.84	718921.24	403598.59	32.11	-103.76	0.26
5666.00	4.99	282.64	95.00	5648.35	-2286.35	130.78	-380.02	718913.06	403600.31	32.11	-103.76	0.20
5760.00	4.90	284.92	94.00	5742.00	-2380.00	132.70	-387.89	718905.19	403602.23	32.11	-103.76	0.23
5856.00	5.31	285.73	96.00	5837.61	-2475.61	134.96	-396.13	718896.95	403604.49	32.11	-103.76	0.43
5951.00	5.27	287.66	95.00	5932.21	-2570.21	137.48	-404.52	718888.56	403607.01	32.11	-103.76	0.19
6046.00	4.80	287.32	95.00	6026.84	-2664.84	139.99	-412.47	718880.61	403609.52	32.11	-103.76	0.50
6141.00	5.26	293.85	95.00	6121.48	-2759.48	142.93	-420.25	718872.83	403612.46	32.11	-103.76	0.77
6236.00	4.96	288.68	95.00	6216.10	-2854.10	146.01	-428.12	718864.96	403615.54	32.11	-103.76	0.58
6331.00	4.96	287.88	95.00	6310.74	-2948.74	148.58	-435.92	718857.16	403618.11	32.11	-103.76	0.07
6426.00	4.69	288.93	95.00	6405.41	-3043.41	151.10	-443.50	718849.58	403620.63	32.11	-103.76	0.30
6522.00	5.55	294.45	96.00	6501.02	-3139.02	154.30	-451.44	718841.64	403623.83	32.11	-103.76	1.03
6617.00	5.61	296.18	95.00	6595.57	-3233.57	158.25	-459.79	718833.29	403627.78	32.11	-103.76	0.19
6712.00	4.91	295.53	95.00	6690.17	-3328.17	162.05	-467.63	718825.45	403631.58	32.11	-103.76	0.74
6807.00	4.39	296.63	95.00	6784.86	-3422.86	165.43	-474.55	718818.53	403634.96	32.11	-103.76	0.56
6902.00	4.50	294.92	95.00	6879.58	-3517.58	168.63	-481.18	718811.90	403638.16	32.11	-103.76	0.18
6997.00	4.60	296.53	95.00	6974.28	-3612.28	171.90	-487.96	718805.12	403641.43	32.11	-103.76	0.17
7092.00	5.32	295.65	95.00	7068.92	-3706.92	175.51	-495.34	718797.74	403645.04	32.11	-103.76	0.76
7187.00	5.38	295.54	95.00	7163.51	-3801.51	179.34	-503.33	718789.75	403648.87	32.11	-103.76	0.06
7283.00	4.88	296.88	96.00	7259.12	-3897.12	183.12	-511.03	718782.05	403652.65	32.11	-103.76	0.54
7378.00	5.08	287.82	95.00	7353.76	-3991.76	186.24	-518.64	718774.44	403655.77	32.11	-103.76	0.85
7474.00	4.88	284.11	96.00	7449.40	-4087.40	188.54	-526.65	718766.43	403658.07	32.11	-103.76	0.39
7569.00	4.54	284.44	95.00	7544.08	-4182.08	190.46	-534.21	718758.87	403659.99	32.11	-103.76	0.36
7664.00	4.09	283.26	95.00	7638.81	-4276.81	192.17	-541.15	718751.93	403661.70	32.11	-103.76	0.48
7759.00	3.86	282.68	95.00	7733.58	-4371.58	193.65	-547.56	718745.52	403663.18	32.11	-103.76	0.25
7854.00	3.55	281.93	95.00	7828.38	-4466.38	194.96	-553.56	718739.52	403664.49	32.11	-103.76	0.33
7950.00	3.56	284.25	96.00	7924.20	-4562.20	196.31	-559.36	718733.72	403665.84	32.11	-103.76	0.15
8045.00	3.74	285.45	95.00	8019.01	-4657.01	197.86	-565.20	718727.88	403667.39	32.11	-103.76	0.21
8139.00	3.39	282.19	94.00	8112.82	-4750.82	199.26	-570.88	718722.21	403668.79	32.11	-103.76	0.43
8235.00	3.02	277.63	96.00	8208.67	-4846.67	200.20	-576.16	718716.92	403669.73	32.11	-103.76	0.47
8330.00	2.30	270.57	95.00	8303.57	-4941.57	200.55	-580.54	718712.54	403670.08	32.11	-103.76	0.83
8425.00	2.03	264.40	95.00	8398.50	-5036.50	200.41	-584.12	718708.96	403669.94	32.11	-103.76	0.38
8520.00	1.69	258.17	95.00	8493.45	-5131.45	199.95	-587.17	718705.91	403669.48	32.11	-103.76	0.42
8616.00	1.39	260.23	96.00	8589.42	-5227.42	199.47	-589.70	718703.38	403669.00	32.11	-103.76	0.32
8711.00	1.95	254.28	95.00	8684.38	-5322.38	198.83	-592.39	718700.69	403668.36	32.11	-103.76	0.62
8806.00	1.84	298.42	95.00	8779.33	-5417.33	199.12	-595.29	718697.79	403668.65	32.11	-103.76	1.50
8896.00	2.41	300.50	90.00	8869.27	-5507.27	200.77	-598.19	718694.89	403670.30	32.11	-103.76	0.64
8991.00	1.18	320.42	95.00	8964.22	-5602.22	202.54	-600.54	718692.54	403672.07	32.11	-103.76	1.43
9086.00	0.80	289.09	95.00	9059.21	-5697.21	203.51	-601.79	718691.29	403673.04	32.11	-103.76	0.68
9181.00	2.40	331.08	95.00	9154.17	-5792.17	205.47	-603.38	718689.71	403675.00	32.11	-103.76	1.98
9277.00	1.84	310.01	96.00	9250.11	-5888.11	208.22	-605.53	718687.55	403677.75	32.11	-103.76	0.99
9371.00	0.94	284.91	94.00	9344.08	-5982.08	209.38	-607.43	718685.65	403678.91	32.11	-103.76	1.13
9516.00	0.92	311.46	145.00	9489.06	-6127.06	210.46	-609.45	718683.63	403679.99	32.11	-103.76	0.29
9611.00	1.49	17.83	95.00	9584.04	-6222.04	212.14	-609.64	718683.44	403681.67	32.11	-103.76	1.48
9706.00	1.24	31.91	95.00	9679.01	-6317.01	214.19	-608.72	718684.36	403683.72	32.11	-103.76	0.44
9801.00	0.44	96.25	95.00	9774.01	-6412.01	215.02	-607.82	718685.26	403684.55	32.11	-103.76	1.18
9896.00	1.01	185.86	95.00	9869.00	-6507.00	214.15	-607.54	718685.54	403683.68	32.11	-103.76	1.16
9991.00	0.67	132.44	95.00	9963.99	-6601.99	212.94	-607.21	718685.87	403682.47	32.11	-103.76	0.86
10086.00	0.62	128.11	95.00	10058.98	-6696.98	212.25	-606.40	718686.68	403681.78	32.11	-103.76	0.07
10180.00	1.23	178.29	94.00	10152.97	-6790.97	210.93	-605.97	718687.11	403680.46	32.11	-103.76	1.02
10275.00	1.14	229.59	95.00	10247.96	-6885.96	209.30	-606.66	718686.42	403678.83	32.11	-103.76	1.08
10371.00	2.17	249.66	96.00	10343.91	-6981.91	208.05	-609.09	718683.99	403677.58	32.11	-103.76	1.22
10466.00	1.39	269.93	95.00	10438.87	-7076.87	207.42	-611.93	718681.15	403676.95	32.11	-103.76	1.04
10561.00	2.09	264.72	95.00	10533.82	-7171.82	207.26	-614.81	718678.27	403676.79	32.11	-103.76	0.75
10656.00	1.35	287.43	95.00	10628.78	-7266.78	207.43	-617.60	718675.48	403676.96	32.11	-103.76	1.04
10752.00	0.67	115.58	96.00	10724.78	-7362.78	207.53	-618.17	718674.91	403677.06	32.11	-103.76	2.10
10846.00	1.93	132.42	94.00	10818.75	-7456.75	206.23	-616.51	718676.57	403675.76	32.11	-103.76	1.39
10942.00	0.54	117.92	96.00	10914.73	-7552.73	204.92	-614.91	718678.17	403674.45	32.11	-103.76	1.47
11037.00	0.16	229.55	95.00	11009.72	-7647.72	204.63	-614.62	718678.46	403674.16	32.11	-103.76	0.65
11133.00	0.39	300.76	96.00	11105.72	-7743.72	204.71	-615.00	718678.08	403674.24	32.11	-103.76	0.39
11196.00	0.52	316.18	63.00	11168.72	-7806.72	205.02	-615.38	718677.70	403674.55	32.11	-103.76	0.28
11229.00	0.71	319.17	33.00	11201.72	-7839.72	205.29	-615.62	718677.46	403674.82	32.11	-103.76	0.58
11261.00	0.48	279.63	32.00	11233.72	-7871.72	205.46	-615.88	718677.20	403674.99	32.11	-103.76	1.43
11324.00	7.69	187.28	63.00	11296.53	-7934.53	201.32	-616.68	718676.40	403670.85	32.11	-103.76	12.26

11419.00	20.34	190.14	95.00	11388.51	-8026.51	178.67	-620.41	718672.67	403648.20	32.11	-103.76	13.33
11514.00	27.50	186.09	95.00	11475.30	-8113.30	140.55	-625.65	718667.43	403610.08	32.11	-103.76	7.73
11610.00	35.99	184.95	96.00	11556.87	-8194.87	90.32	-630.44	718662.64	403559.85	32.11	-103.76	8.87
11705.00	45.60	183.31	95.00	11628.71	-8266.71	28.48	-634.82	718658.26	403498.01	32.11	-103.76	10.18
11800.00	52.88	178.09	95.00	11690.71	-8328.71	-43.38	-635.52	718657.56	403426.15	32.11	-103.76	8.72
11895.00	58.77	174.94	95.00	11744.06	-8382.06	-121.77	-630.67	718662.41	403347.76	32.11	-103.76	6.78
11989.00	67.72	176.09	94.00	11786.34	-8424.34	-205.37	-624.14	718668.94	403264.16	32.11	-103.76	9.58
12084.00	79.40	183.69	95.00	11813.21	-8451.21	-296.25	-624.15	718668.93	403173.28	32.11	-103.76	14.48
12180.00	82.52	184.49	96.00	11828.30	-8466.30	-390.80	-630.92	718662.16	403078.73	32.11	-103.76	3.35
12221.00	84.78	184.26	41.00	11832.83	-8470.83	-431.43	-634.02	718659.06	403038.10	32.11	-103.76	5.54
12283.00	89.02	182.42	62.00	11836.18	-8474.18	-493.22	-637.63	718655.45	402976.31	32.11	-103.76	7.45
12360.00	93.07	180.14	77.00	11834.78	-8472.78	-570.16	-639.35	718653.73	402899.37	32.11	-103.76	6.04
12455.00	91.62	180.29	95.00	11830.89	-8468.89	-665.08	-639.71	718653.37	402804.45	32.11	-103.76	1.53
12550.00	90.21	179.93	95.00	11829.37	-8467.37	-760.07	-639.89	718653.19	402709.46	32.11	-103.76	1.53
12645.00	89.07	175.84	95.00	11829.97	-8467.97	-854.98	-636.38	718656.70	402614.55	32.11	-103.76	4.47
12740.00	89.20	179.55	95.00	11831.41	-8469.41	-949.87	-632.56	718660.52	402519.66	32.11	-103.76	3.91
12835.00	89.40	182.09	95.00	11832.57	-8470.57	-1044.85	-633.92	718659.16	402424.68	32.11	-103.76	2.68
12930.00	89.59	178.85	95.00	11833.40	-8471.40	-1139.83	-634.70	718658.38	402329.70	32.10	-103.76	3.42
13024.00	90.01	178.46	94.00	11833.73	-8471.73	-1233.80	-632.49	718660.59	402235.73	32.10	-103.76	0.61
13118.00	90.01	179.49	94.00	11833.72	-8471.72	-1327.79	-630.81	718662.27	402141.74	32.10	-103.76	1.10
13208.00	89.86	183.49	90.00	11833.82	-8471.82	-1417.74	-633.15	718659.93	402051.79	32.10	-103.76	4.45
13303.00	91.18	177.94	95.00	11832.96	-8470.96	-1512.69	-634.34	718658.74	401956.84	32.10	-103.76	6.00
13397.00	90.36	175.69	94.00	11831.69	-8469.69	-1606.53	-629.12	718663.96	401863.00	32.10	-103.76	2.55
13487.00	90.11	178.70	90.00	11831.32	-8469.32	-1696.41	-624.71	718668.37	401773.12	32.10	-103.76	3.36
13581.00	89.90	177.67	94.00	11831.31	-8469.31	-1790.36	-621.74	718671.34	401679.17	32.10	-103.76	1.12
13675.00	90.92	176.77	94.00	11830.64	-8468.64	-1884.24	-617.18	718675.90	401585.29	32.10	-103.76	1.45
13770.00	88.79	175.67	95.00	11830.88	-8468.88	-1979.03	-610.91	718682.17	401490.50	32.10	-103.76	2.52
13865.00	91.23	175.42	95.00	11830.87	-8468.87	-2073.74	-603.54	718689.54	401395.79	32.10	-103.76	2.58
13960.00	92.97	179.02	95.00	11827.38	-8465.38	-2168.54	-598.93	718694.15	401300.99	32.10	-103.76	4.21
14056.00	91.37	180.99	96.00	11823.75	-8461.75	-2264.46	-598.94	718694.14	401205.07	32.10	-103.76	2.64
14151.00	92.52	180.10	95.00	11820.52	-8458.52	-2359.40	-599.84	718693.24	401110.13	32.10	-103.76	1.53
14246.00	90.64	180.73	95.00	11817.90	-8455.90	-2454.36	-600.53	718692.55	401015.17	32.10	-103.76	2.09
14341.00	90.39	182.68	95.00	11817.05	-8455.05	-2549.31	-603.36	718689.72	400920.22	32.10	-103.76	2.07
14435.00	89.50	183.33	94.00	11817.14	-8455.14	-2643.18	-608.29	718684.79	400826.35	32.10	-103.76	1.17
14529.00	88.77	183.21	94.00	11818.56	-8456.56	-2737.01	-613.65	718679.43	400732.52	32.10	-103.76	0.79
14623.00	88.71	181.30	94.00	11820.63	-8458.63	-2830.91	-617.34	718675.74	400638.62	32.10	-103.76	2.03
14718.00	88.74	180.93	95.00	11822.74	-8460.74	-2925.87	-619.19	718673.89	400543.66	32.10	-103.76	0.39
14812.00	88.79	181.37	94.00	11824.77	-8462.77	-3019.83	-621.08	718672.00	400449.70	32.10	-103.76	0.47
14906.00	91.57	178.45	94.00	11824.47	-8462.47	-3113.81	-620.93	718672.15	400355.72	32.10	-103.76	4.29
15001.00	87.17	179.20	95.00	11825.52	-8463.52	-3208.76	-618.98	718674.10	400260.77	32.10	-103.76	4.70
15095.00	90.25	177.74	94.00	11827.63	-8465.63	-3302.69	-616.47	718676.61	400166.84	32.10	-103.76	3.63
15188.00	90.56	176.72	93.00	11826.97	-8464.97	-3395.58	-611.98	718681.10	400073.95	32.10	-103.76	1.15
15283.00	90.45	176.41	95.00	11826.14	-8464.14	-3490.40	-606.29	718686.79	399979.13	32.10	-103.76	0.35
15377.00	91.32	178.26	94.00	11824.69	-8462.69	-3584.29	-601.92	718691.16	399885.24	32.10	-103.76	2.17
15472.00	90.79	180.28	95.00	11822.94	-8460.94	-3679.26	-600.71	718692.37	399790.27	32.10	-103.76	2.20
15566.00	89.75	180.44	94.00	11822.49	-8460.49	-3773.25	-601.30	718691.78	399696.28	32.10	-103.76	1.12
15660.00	89.52	180.42	94.00	11823.09	-8461.09	-3867.25	-602.00	718691.08	399602.28	32.10	-103.76	0.25
15754.00	89.61	180.58	94.00	11823.81	-8461.81	-3961.24	-602.82	718690.26	399508.29	32.10	-103.76	0.20
15848.00	91.09	180.05	94.00	11823.23	-8461.23	-4055.24	-603.34	718689.74	399414.29	32.10	-103.76	1.67
15942.00	91.54	180.17	94.00	11821.07	-8459.07	-4149.21	-603.52	718689.56	399320.32	32.10	-103.76	0.50
16036.00	89.19	180.28	94.00	11820.48	-8458.48	-4243.20	-603.89	718689.19	399226.33	32.10	-103.76	2.50
16130.00	89.94	180.74	94.00	11821.19	-8459.19	-4337.19	-604.73	718688.35	399132.34	32.10	-103.76	0.94
16224.00	92.41	182.72	94.00	11819.26	-8457.26	-4431.12	-607.56	718685.52	399038.41	32.10	-103.76	3.37
16318.00	90.53	180.21	94.00	11816.85	-8454.85	-4525.05	-609.96	718683.12	398944.48	32.10	-103.76	3.34
16412.00	90.79	179.44	94.00	11815.77	-8453.77	-4619.04	-609.68	718683.40	398850.49	32.10	-103.76	0.86
16506.00	89.69	179.35	94.00	11815.37	-8453.37	-4713.03	-608.68	718684.40	398756.50	32.10	-103.76	1.17
16600.00	90.39	180.15	94.00	11815.31	-8453.31	-4807.03	-608.27	718684.81	398662.50	32.09	-103.76	1.13
16695.00	89.86	178.98	95.00	11815.10	-8453.10	-4902.02	-607.55	718685.53	398567.51	32.09	-103.76	1.35
16789.00	90.56	180.22	94.00	11814.76	-8452.76	-4996.02	-606.90	718686.18	398473.51	32.09	-103.76	1.51
16883.00	91.09	177.89	94.00	11813.40	-8451.40	-5089.99	-605.35	718687.73	398379.54	32.09	-103.76	2.54
16978.00	92.05	178.67	95.00	11810.80	-8448.80	-5184.91	-602.50	718690.58	398284.62	32.09	-103.76	1.30
17072.00	90.93	178.15	94.00	11808.36	-8446.36	-5278.84	-599.89	718693.19	398190.69	32.09	-103.76	1.31
17166.00	91.60	178.56	94.00	11806.28	-8444.28	-5372.78	-597.19	718695.89	398096.75	32.09	-103.76	0.84

17261.00	92.47	179.39	95.00	11802.91	-8440.91	-5467.70	-595.49	718697.59	398001.83	32.09	-103.76	1.27
17356.00	90.56	178.89	95.00	11800.39	-8438.39	-5562.65	-594.07	718699.01	397906.88	32.09	-103.76	2.08
17450.00	91.79	179.64	94.00	11798.47	-8436.47	-5656.62	-592.86	718700.22	397812.91	32.09	-103.76	1.53
17544.00	90.20	179.65	94.00	11796.84	-8434.84	-5750.60	-592.28	718700.80	397718.93	32.09	-103.76	1.69
17638.00	91.26	180.74	94.00	11795.64	-8433.64	-5844.59	-592.60	718700.48	397624.94	32.09	-103.76	1.62
17732.00	91.74	181.59	94.00	11793.18	-8431.18	-5938.54	-594.51	718698.57	397530.99	32.09	-103.76	1.04
17826.00	92.07	181.32	94.00	11790.05	-8428.05	-6032.46	-596.90	718696.18	397437.07	32.09	-103.76	0.45
17921.00	89.44	180.32	95.00	11788.80	-8426.80	-6127.43	-598.25	718694.83	397342.10	32.09	-103.76	2.96
18015.00	90.00	180.21	94.00	11789.26	-8427.26	-6221.43	-598.69	718694.39	397248.10	32.09	-103.76	0.61
18110.00	89.72	180.75	95.00	11789.49	-8427.49	-6316.42	-599.48	718693.60	397153.11	32.09	-103.76	0.64
18204.00	91.35	178.91	94.00	11788.61	-8426.61	-6410.41	-599.21	718693.87	397059.12	32.09	-103.76	2.61
18298.00	91.23	178.81	94.00	11786.50	-8424.50	-6504.37	-597.34	718695.74	396965.16	32.09	-103.76	0.17
18392.00	88.88	179.12	94.00	11786.41	-8424.41	-6598.35	-595.64	718697.44	396871.18	32.09	-103.76	2.52
18486.00	89.89	179.88	94.00	11787.42	-8425.42	-6692.33	-594.82	718698.26	396777.20	32.09	-103.76	1.34
18580.00	88.37	179.02	94.00	11788.84	-8426.84	-6786.32	-593.92	718699.16	396683.21	32.09	-103.76	1.86
18674.00	91.71	179.52	94.00	11788.78	-8426.78	-6880.29	-592.72	718700.36	396589.24	32.09	-103.76	3.59
18768.00	90.42	179.30	94.00	11787.03	-8425.03	-6974.27	-591.75	718701.33	396495.26	32.09	-103.76	1.39
18862.00	88.52	179.01	94.00	11787.90	-8425.90	-7068.25	-590.37	718702.71	396401.28	32.09	-103.76	2.04
18956.00	90.14	179.25	94.00	11789.00	-8427.00	-7162.23	-588.94	718704.14	396307.30	32.09	-103.76	1.74
19050.00	93.48	180.85	94.00	11786.03	-8424.03	-7256.17	-589.02	718704.06	396213.36	32.09	-103.76	3.94
19145.00	90.76	180.77	95.00	11782.52	-8420.52	-7351.09	-590.36	718702.72	396118.44	32.09	-103.76	2.86
19239.00	90.14	179.63	94.00	11781.78	-8419.78	-7445.08	-590.69	718702.39	396024.45	32.09	-103.76	1.38
19333.00	90.00	180.17	94.00	11781.66	-8419.66	-7539.08	-590.52	718702.56	395930.45	32.09	-103.76	0.59
19427.00	91.68	179.46	94.00	11780.29	-8418.29	-7633.06	-590.22	718702.86	395836.47	32.09	-103.76	1.94
19521.00	92.24	180.18	94.00	11777.07	-8415.07	-7727.01	-589.93	718703.15	395742.52	32.09	-103.76	0.97
19615.00	91.48	180.79	94.00	11774.02	-8412.02	-7820.95	-590.72	718702.36	395648.58	32.09	-103.76	1.04
19710.00	89.36	180.38	95.00	11773.32	-8411.32	-7915.94	-591.69	718701.39	395553.59	32.09	-103.76	2.27
19804.00	90.34	180.26	94.00	11773.57	-8411.57	-8009.94	-592.22	718700.86	395459.59	32.09	-103.76	1.05
19898.00	88.18	179.18	94.00	11774.78	-8412.78	-8103.92	-591.76	718701.32	395365.61	32.09	-103.76	2.57
19992.00	86.44	178.17	94.00	11779.20	-8417.20	-8197.79	-589.59	718703.49	395271.74	32.09	-103.76	2.14
20086.00	89.38	178.84	94.00	11782.62	-8420.62	-8291.68	-587.14	718705.94	395177.85	32.09	-103.76	3.21
20181.00	91.04	178.29	95.00	11782.27	-8420.27	-8386.65	-584.76	718708.32	395082.88	32.08	-103.76	1.84
20275.00	90.45	178.76	94.00	11781.05	-8419.05	-8480.61	-582.34	718710.74	394988.92	32.08	-103.76	0.80
20369.00	90.76	177.50	94.00	11780.06	-8418.06	-8574.55	-579.27	718713.81	394894.98	32.08	-103.76	1.38
20464.00	89.55	175.77	95.00	11779.80	-8417.80	-8669.38	-573.70	718719.38	394800.15	32.08	-103.76	2.22
20557.00	90.48	176.29	93.00	11779.78	-8417.78	-8762.16	-567.26	718725.82	394707.37	32.08	-103.76	1.15
20651.00	93.36	178.37	94.00	11776.63	-8414.63	-8855.99	-562.88	718730.20	394613.54	32.08	-103.76	3.78
20746.00	92.77	178.64	95.00	11771.55	-8409.55	-8950.82	-560.40	718732.68	394518.71	32.08	-103.76	0.68
20840.00	92.22	179.43	94.00	11767.46	-8405.46	-9044.72	-558.82	718734.26	394424.81	32.08	-103.76	1.02
20935.00	89.30	178.94	95.00	11766.20	-8404.20	-9139.69	-557.47	718735.61	394329.84	32.08	-103.76	3.12
21029.00	91.82	181.17	94.00	11765.28	-8403.28	-9233.67	-557.56	718735.52	394235.86	32.08	-103.76	3.58
21123.00	96.40	184.50	94.00	11758.54	-8396.54	-9327.28	-562.19	718730.89	394142.25	32.08	-103.76	6.02
21217.00	94.15	183.27	94.00	11749.90	-8387.90	-9420.65	-568.53	718724.55	394048.88	32.08	-103.76	2.73
21311.00	92.19	184.62	94.00	11744.70	-8382.70	-9514.28	-574.99	718718.09	393955.25	32.08	-103.76	2.53
21405.00	93.98	183.70	94.00	11739.64	-8377.64	-9607.89	-581.80	718711.28	393861.64	32.08	-103.76	2.14
21499.00	90.95	183.96	94.00	11735.60	-8373.60	-9701.59	-588.07	718705.01	393767.94	32.08	-103.76	3.24
21593.00	87.76	184.23	94.00	11736.66	-8374.66	-9795.33	-594.78	718698.30	393674.20	32.08	-103.76	3.41
21688.00	87.87	184.50	95.00	11740.28	-8378.28	-9889.98	-602.01	718691.07	393579.55	32.08	-103.76	0.31
21782.00	91.66	185.66	94.00	11740.67	-8378.67	-9983.59	-610.33	718682.75	393485.94	32.08	-103.76	4.22
21877.00	91.32	185.88	95.00	11738.20	-8376.20	-10078.08	-619.87	718673.21	393391.45	32.08	-103.76	0.43
21945.00	91.32	185.88	68.00	11736.63	-8374.63	-10145.70	-626.84	718666.24	393323.83	32.08	-103.76	0.00



Company: Devon Energy
Field: Eddy County, New Mexico (NAD 83)
Location: Lusitano 27-34 FED COM
Well: 626H
OH
Plan: Plan 7
GL 3336' + 26' KB @ 3362.00usft (ICD 217)



Azimuths to Grid North
True North: -0.31°
Magnetic North: 6.66°
Magnetic Field
Strength: 47785.8nT
Dip Angle: 59.92°
Date: 1/31/2018
Model: IGRF2015



To convert a Magnetic Direction to a Grid Direction, Add 6.66°
To convert a True Direction to a Grid Direction, Subtract 0.31°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	18204.00	91.35	178.91	11788.61	-6410.41	-599.21	0.00	0.00	6408.82	Tie into Survey at 18204
2	18262.00	91.35	178.91	11787.25	-6468.38	-598.10	0.00	0.00	6466.80	Start DLS 1.50 TFO 167
3	18405.68	89.25	179.39	11786.50	-6612.04	-595.98	1.50	167.00	6610.46	89.25° at 18405.68 MD
4	18466.18	89.25	179.39	11787.29	-6672.53	-595.34	0.00	0.00	6670.95	Start DLS 1.00 TFO 121
5	18615.20	90.70	179.72	11787.35	-6821.54	-594.19	1.00	12.70	6819.96	90.70° at 18615.20 MD
6	21818.76	90.70	179.72	11748.00	-10024.82	-578.67	0.00	0.00	10023.27	TD at 21818.76

PROJECT DETAILS: Eddy County, New Mexico (NAD 83)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

WELL DETAILS: 626H

GL 3336' + 26' KB @ 3362.00usft (ICD 217)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	403469.53	719293.08	32.107913	-103.758591

FTP:
330' FNL / 1017.35' FEL
Y=403370.56 X=718660.56
Lat 32.107650 Long -103.760636

LTP:
330' FSL / 1024.54' FEL
Y=393444.51 X=718678.61
Lat 32.080365 Long -103.760748

