Pan American DRILLING SERVICES

Survey Sheet

Company:	Husky Ventures	Job Number:	OK11133
Well:	Hoffman 1-25	Mag Decl.:	4.43
Location:	McPherson Co, Kansas	Dir Driller:	Greg Becker/Doug Randall
Rig:	Duke #20	MWD Eng:	Anthony Donaruma
Leg:	Main Leg	MWD Eng:	Tyler Garret

Calculation Method:	Minimum Curvature
Proposed Azimuth	355.44
Depth Reference	Directional Driller
Tie Into:	Wireline

Survey Number	Survey Depth (ft)	Inclina-tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)		Coordinates E/W (ft)		Closure Distance (ft)	Closure Direction Azimuth	Dogleg Severity (ft/100')	Build Rate (d/100')	Walk Rate (d/100')
Tie In	210	0.0	355.5		210	0	0	N	0	E			0		
1	420	0.6	313.8	210	420.00	0.82	0.76	N	0.79	W	1.10	313.80	0.29	0.29	-19.83
2	703	0.5	331.6	283	702.98	3.06	2.87	N	2.45	W	3.78	319.54	0.07	-0.04	6.29
3	986	0.5	43.1	283	985.97	5.02	4.86	N	2.19	W	5.33	335.71	0.21	0.00	-101.94
4	1268	1.1	82.0	282	1267.95	6.01	6.14	N	1.33	E	6.28	12.21	0.28	0.21	13.79
5	1547	0.6	95.3	279	1546.92	5.92	6.37	N	5.43	E	8.38	40.45	0.19	-0.18	4.77
6	1831	0.4	78.0	284	1830.91	5.80	6.44	N	7.88	E	10.18	50.75	0.09	-0.07	-6.09
7	2114	0.3	344.2	283	2113.90	6.65	7.36	N	8.65	E	11.36	49.60	0.18	-0.04	94.06
8	2398	0.9	68.4	284	2397.89	8.03	8.90	N	10.52	E	13.78	49.78	0.32	0.21	-97.11
9	2682	1.3	73.8	284	2681.84	9.34	10.62	N	15.69	E	18.94	55.91	0.15	0.14	1.90
10	2754	1.2	73.7	72	2753.82	9.65	11.06	N	17.20	E	20.44	57.26	0.14	-0.14	-0.14
11	2786	1.3	58.3	32	2785.81	9.89	11.34	N	17.83	E	21.13	57.53	1.09	0.31	-48.13
12	2817	2.8	29.1	31	2816.79	10.68	12.19	N	18.49	E	22.15	56.61	5.75	4.84	-94.19
13	2848	5.7	17.4	31	2847.70	12.74	14.32	N	19.32	E	24.05	53.46	9.72	9.35	-37.74
14	2880	8.6	13.2	32	2879.45	16.49	18.17	N	20.34	E	27.27	48.24	9.20	9.06	-13.13
15	2911	11.0	11.4	31	2910.00	21.54	23.32	N	21.46	E	31.69	42.62	7.80	7.74	-5.81
16	2942	13.5	9.4	31	2940.29	27.90	29.79	N	22.63	E	37.41	37.22	8.18	8.06	-6.45
17	2974	16.3	9.0	32	2971.21	35.89	37.91	N	23.95	E	44.84	32.28	8.76	8.75	-1.25
18	3005	19.1	8.0	31	3000.74	45.07	47.24	N	25.33	E	53.60	28.21	9.09	9.03	-3.23
19	3037	22.0	6.5	32	3030.70	56.07	58.38	N	26.74	E	64.21	24.61	9.21	9.06	-4.69
20	3068	24.8	3.9	31	3059.15	68.20	70.64	N	27.84	E	75.92	21.51	9.62	9.03	-8.39
21	3100	27.5	1.9	32	3087.87	82.18	84.72	N	28.54	E	89.40	18.62	8.87	8.44	-6.25
22	3131	30.5	0.7	31	3114.98	97.13	99.74	N	28.88	E	103.84	16.15	9.86	9.68	-3.87
23	3163	33.3	359.9	32	3142.15	113.98	116.65	N	28.96	E	120.19	13.94	8.85	8.75	1122.50
24	3194	36.3	358.9	31	3167.60	131.63	134.34	N	28.77	E	137.38	12.09	9.85	9.68	-3.23
25	3226	39.6	356.6	32	3192.83	151.28	154.00	N	27.98	E	156.52	10.30	11.22	10.31	-7.19
26	3257	43.0	354.6	31	3216.12	171.74	174.39	N	26.40	E	176.38	8.61	11.76	10.97	-6.45
27	3289	46.6	353.6	32	3238.82	194.28	196.81	N	24.08	E	198.28	6.97	11.46	11.25	-3.13
28	3320	50.0	353.5	31	3259.44	217.41	219.81	N	21.48	E	220.86	5.58	10.97	10.97	-0.32
29	3352	52.9	354.1	32	3279.38	242.42	244.69	N	18.78	E	245.41	4.39	9.18	9.06	1.88
30	3384	56.1	353.7	32	3297.96	268.46	270.59	N	16.01	E	271.06	3.39	10.05	10.00	-1.25
31	3415	59.1	354.0	31	3314.57	294.62	296.61	N	13.20	E	296.90	2.55	9.71	9.68	0.97
32	3447	61.8	353.6	32	3330.35	322.44	324.28	N	10.20	E	324.44	1.80	8.51	8.44	-1.25
33	3478	64.6	353.4	31	3344.32	350.09	351.77	N	7.06	E	351.84	1.15	9.05	9.03	-0.65
34	3510	67.4	352.2	32	3357.34	379.29	380.77	N	3.40	E	380.78	0.51	9.40	8.75	-3.75
35	3541	70.6	351.6	31	3368.45	408.17	409.42	N	0.68	W	409.42	359.90	10.48	10.32	-1.94
36	3573	74.2	351.7	32	3378.12	438.60	439.59	N	5.11	W	439.62	359.33	11.25	11.25	0.31
37	3605	77.5	350.7	32	3385.94	469.54	470.25	N	9.86	W	470.35	358.80	10.75	10.31	-3.13
38	3636	80.9	350.3	31	3391.75	499.88	500.28	N	14.88	W	500.50	358.30	11.04	10.97	-1.29
39	3668	83.5	351.2	32	3396.09	531.47	531.57	N	19.98	W	531.94	357.85	8.59	8.12	2.81
40	3699	86.2	350.4	31	3398.88	562.24	562.04	N	24.92	W	562.59	357.46	9.08	8.71	-2.58
41	3710	87.3	350.5	11	3399.50	573.18	572.87	N	26.74	W	573.49	357.33	10.04	10.00	0.91
42	3742	89.5	350.5	32	3400.39	605.05	604.42	N	32.02	W	605.26	356.97	6.88	6.88	0.00
43	3773	90.2	350.6	31	3400.47	635.94	635.00	N	37.11	W	636.08	356.66	2.28	2.26	0.32
44	3805	90.4	349.6	32	3400.31	667.80	666.52	N	42.61	W	667.88	356.34	3.19	0.63	-3.13
45	3837	90.5	349.3	32	3400.05	699.62	697.98	N	48.47	W	699.66	356.03	0.99	0.31	-0.94
46	3869	89.9	349.9	32	3399.94	731.45	729.45	N	54.24	W	731.46	355.75	2.65	-1.87	1.87
47	3900	90.1	350.2	31	3399.94	762.32	759.98	N	59.60	W	762.32	355.52	1.16	0.65	0.97
48	3932	89.9	350.7	32	3399.94	794.20	791.54	N	64.91	W	794.20	355.31	1.68	-0.62	1.56
49	3964	89.4	351.7	32	3400.14	826.11	823.16	N	69.80	W	826.12	355.15	3.49	-1.56	3.13
50	3995	89.6	352.7	31	3400.41	857.06	853.87	N	74.01	W	857.08	355.05	3.29	0.65	3.23
51	4027	89.3	353.2	32	3400.72	889.02	885.63	N	77.94	W	889.05	354.97	1.82	-0.94	1.56
52	4059	89.7	353.9	32	3401.00	921.00	917.43	N	81.53	W	921.04	354.92	2.52	1.25	2.19
53	4090	90.2	354.1	31	3401.02	952.00	948.26	N	84.77	W	952.04	354.89	1.74	1.61	0.65
54	4122	90.4	354.8	32	3400.85	983.99	980.11	N	87.87	W	984.04	354.88	2.28	0.63	2.19
55	4154	91.0	354.9	32	3400.46	1015.99	1011.97	N	90.74	W	1016.03	354.88	1.90	1.87	0.31
56	4186	90.9	354.8	32	3399.93	1047.98	1043.84	N	93.61	W	1048.03	354.88	0.44	-0.31	-0.31
57	4217	91.3	354.6	31	3399.34	1078.97	1074.70	N	96.48	W	1079.02	354.87	1.44	1.29	-0.65
58	4249	91.1	354.1	32	3398.67	1110.96	1106.54	N	99.62	W	1111.02	354.86	1.68	-0.63	-1.56
59	4281	90.4	355.5	32	3398.25	1142.95	1138.40	N	102.52	W	1143.01	354.85	4.89	-2.19	4.37
60	4312	89.7	356.0	31	3398.22	1173.95	1169.32	N	104.82	W	1174.01	354.88	2.77	-2.26	1.61
61	4344	89.5	356.3	32	3398.45	1205.95	1201.25	N	106.97	W	1206.00	354.91	1.13	-0.63	0.94

Company:	Husky Ventures	Job Number:	OK11133	Calculation Method:	Minimum Curvature
Well:	Hoffman 1-25	Mag Decl.:	4.43		
Location:	McPherson Co, Kansas	Dir Driller:	Greg Becker/Doug Randall	Proposed Azimuth	355.44
Rig:	Duke #20	MWD Eng:	Anthony Donaruma	Depth Reference	Directional Driller
Leg:	Main Leg	MWD Eng:	Tyler Garret	Tie Into:	Wireline

Survey Number	Survey Depth (ft)	Inclina-tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)		Coordinates E/W (ft)		Closure Distance (ft)	Closure Direction Azimuth	Dogleg Severity (ft/100')	Build Rate (d/100')	Walk Rate (d/100')
62	4376	89.1	356.3	32	3398.84	1237.94	1233.18	N	109.04	W	1237.99	354.95	1.25	-1.25	0.00
63	4408	89.5	356.4	32	3399.23	1269.94	1265.11	N	111.07	W	1269.98	354.98	1.29	1.25	0.31
64	4440	90.4	356.9	32	3399.26	1301.93	1297.05	N	112.94	W	1301.96	355.02	3.22	2.81	1.56
65	4471	91.2	356.7	31	3398.82	1332.92	1328.00	N	114.67	W	1332.94	355.06	2.66	2.58	-0.65
66	4503	91.2	356.3	32	3398.15	1364.90	1359.94	N	116.63	W	1364.93	355.10	1.25	0.00	-1.25
67	4534	90.9	356.8	31	3397.58	1395.89	1390.87	N	118.49	W	1395.91	355.13	1.88	-0.97	1.61
68	4566	91.0	356.2	32	3397.05	1427.88	1422.81	N	120.44	W	1427.90	355.16	1.90	0.31	-1.88
69	4598	91.0	356.4	32	3396.50	1459.87	1454.74	N	122.51	W	1459.89	355.19	0.62	0.00	0.62
70	4630	91.6	357.0	32	3395.77	1491.86	1486.68	N	124.35	W	1491.87	355.22	2.65	1.87	1.88
71	4661	92.2	356.6	31	3394.74	1522.83	1517.61	N	126.08	W	1522.84	355.25	2.33	1.94	-1.29
72	4693	92.2	356.8	32	3393.51	1554.80	1549.53	N	127.92	W	1554.81	355.28	0.62	0.00	0.62
73	4725	91.6	356.6	32	3392.45	1586.77	1581.46	N	129.76	W	1586.78	355.31	1.98	-1.88	-0.62
74	4757	90.5	356.3	32	3391.87	1618.76	1613.40	N	131.74	W	1618.77	355.33	3.56	-3.44	-0.94
75	4788	89.1	355.0	31	3391.97	1649.76	1644.31	N	134.09	W	1649.76	355.34	6.16	-4.52	-4.19
76	4820	88.4	354.5	32	3392.67	1681.75	1676.16	N	137.02	W	1681.76	355.33	2.69	-2.19	-1.56
77	4852	88.2	354.3	32	3393.62	1713.73	1708.00	N	140.14	W	1713.74	355.31	0.88	-0.63	-0.62
78	4883	89.1	354.4	31	3394.35	1744.72	1738.84	N	143.19	W	1744.72	355.29	2.92	2.90	0.32
79	4915	89.9	356.0	32	3394.63	1776.72	1770.72	N	145.87	W	1776.72	355.29	5.59	2.50	5.00
80	4947	90.5	357.0	32	3394.52	1808.71	1802.66	N	147.82	W	1808.71	355.31	3.64	1.87	3.13
81	4978	90.5	357.4	31	3394.25	1839.69	1833.62	N	149.34	W	1839.70	355.34	1.29	0.00	1.29
82	5010	90.4	356.9	32	3394.00	1871.68	1865.58	N	150.93	W	1871.68	355.37	1.59	-0.31	-1.56
83	5042	90.6	357.8	32	3393.72	1903.66	1897.55	N	152.41	W	1903.66	355.41	2.88	0.62	2.81
84	5073	90.5	357.7	31	3393.42	1934.63	1928.52	N	153.63	W	1934.63	355.45	0.46	-0.32	-0.32
85	5105	90.5	357.6	32	3393.14	1966.61	1960.49	N	154.94	W	1966.61	355.48	0.31	0.00	-0.31
86	5137	91.0	357.1	32	3392.72	1998.59	1992.46	N	156.42	W	1998.59	355.51	2.21	1.56	-1.56
87	5168	90.8	357.3	31	3392.24	2029.57	2023.42	N	157.93	W	2029.57	355.54	0.91	-0.65	0.65
88	5200	90.5	356.6	32	3391.87	2061.55	2055.37	N	159.63	W	2061.56	355.56	2.38	-0.94	-2.19
89	5232	89.6	356.2	32	3391.84	2093.55	2087.30	N	161.64	W	2093.55	355.57	3.08	-2.81	-1.25
90	5264	89.3	355.4	32	3392.15	2125.55	2119.22	N	163.99	W	2125.55	355.58	2.67	-0.94	-2.50
91	5295	89.2	355.0	31	3392.56	2156.54	2150.11	N	166.58	W	2156.55	355.57	1.33	-0.32	-1.29
92	5327	90.2	354.2	32	3392.73	2188.54	2181.96	N	169.59	W	2188.54	355.56	4.00	3.13	-2.50
93	5359	90.5	354.3	32	3392.53	2220.53	2213.80	N	172.80	W	2220.53	355.54	0.99	0.94	0.31
94	5390	90.8	355.0	31	3392.18	2251.53	2244.66	N	175.69	W	2251.53	355.52	2.46	0.97	2.26
95	5422	90.9	354.1	32	3391.70	2283.52	2276.52	N	178.73	W	2283.52	355.51	2.83	0.31	-2.81
96	5454	91.0	354.1	32	3391.17	2315.51	2308.34	N	182.02	W	2315.51	355.49	0.31	0.31	0.00
97	5485	90.4	354.3	31	3390.79	2346.50	2339.18	N	185.15	W	2346.50	355.47	2.04	-1.94	0.65
98	5517	90.3	354.2	32	3390.60	2378.49	2371.02	N	188.35	W	2378.49	355.46	0.44	-0.31	-0.31
99	5549	90.7	353.8	32	3390.32	2410.48	2402.84	N	191.70	W	2410.48	355.44	1.77	1.25	-1.25
100	5581	91.0	354.1	32	3389.84	2442.46	2434.66	N	195.07	W	2442.46	355.42	1.33	0.94	0.94
101	5612	91.1	354.5	31	3389.28	2473.45	2465.50	N	198.15	W	2473.45	355.41	1.33	0.32	1.29
102	5644	91.0	354.1	32	3388.69	2505.44	2497.34	N	201.33	W	2505.44	355.39	1.29	-0.31	-1.25
103	5675	90.3	354.6	31	3388.34	2536.43	2528.19	N	204.38	W	2536.43	355.38	2.77	-2.26	1.61
104	5707	90.2	354.9	32	3388.20	2568.43	2560.05	N	207.31	W	2568.43	355.37	0.99	-0.31	0.94
105	5738	89.4	354.4	31	3388.31	2599.43	2590.92	N	210.20	W	2599.43	355.36	3.04	-2.58	-1.61
106	5770	89.4	355.0	32	3388.64	2631.42	2622.78	N	213.15	W	2631.42	355.35	1.87	0.00	1.88
107	5802	89.1	355.4	32	3389.06	2663.42	2654.66	N	215.83	W	2663.42	355.35	1.56	-0.94	1.25
108	5833	88.7	356.2	31	3389.66	2694.41	2685.57	N	218.10	W	2694.41	355.36	2.88	-1.29	2.58
109	5865	89.3	357.1	32	3390.21	2726.40	2717.51	N	219.97	W	2726.40	355.37	3.38	1.87	2.81
110	5897	89.8	356.8	32	3390.47	2758.39	2749.47	N	221.67	W	2758.39	355.39	1.82	1.56	-0.94
111	5928	90.0	356.3	31	3390.52	2789.38	2780.41	N	223.54	W	2789.38	355.40	1.74	0.65	-1.61
112	5960	90.1	356.4	32	3390.49	2821.38	2812.34	N	225.58	W	2821.38	355.41	0.44	0.31	0.31
113	5992	90.0	355.8	32	3390.46	2853.37	2844.27	N	227.75	W	2853.37	355.42	1.90	-0.31	-1.87
114	6023	89.8	355.2	31	3390.52	2884.37	2875.17	N	230.18	W	2884.37	355.42	2.04	-0.65	-1.94
115	6055	90.0	355.1	32	3390.57	2916.37	2907.06	N	232.89	W	2916.37	355.42	0.70	0.63	-0.31
116	6087	90.4	354.7	32	3390.46	2948.37	2938.93	N	235.73	W	2948.37	355.41	1.77	1.25	-1.25
117	6118	90.3	354.1	31	3390.27	2979.37	2969.78	N	238.76	W	2979.37	355.40	1.96	-0.32	-1.94
118	6150	89.8	354.8	32	3390.25	3011.36	3001.63	N	241.85	W	3011.36	355.39	2.69	-1.56	2.19
119	6181	89.0	355.0	31	3390.57	3042.36	3032.51	N	244.61	W	3042.36	355.39	2.66	-2.58	0.65
120	6213	89.7	354.8	32	3390.93	3074.35	3064.38	N	247.45	W	3074.35	355.38	2.28	2.19	-0.62
121	6245	90.6	355.8	32	3390.85	3106.35	3096.27	N	250.08	W	3106.35	355.38	4.20	2.81	3.13
122	6276	91.7	355.9	31	3390.23	3137.34	3127.18	N	252.32	W	3137.35	355.39	3.56	3.55	0.32
123	6308	92.4	355.9	32	3389.08	3169.32	3159.08	N	254.61	W	3169.32	355.39	2.19	2.19	0.00
124	6340	92.6	355.7	32	3387.69	3201.29	3190.96	N	256.95	W	3201.29	355.40	0.88	0.62	-0.62
125	6371	92.1	355.9	31	3386.42	3232.27	3221.86	N	259.22	W	3232.27	355.40	1.74	-1.61	0.65
126	6403	90.7	356.1	32	3385.63	3264.25	3253.77	N	261.45	W	3264.25	355.41	4.42	-4.37	0.63
127	6435	89.9	356.7	32	3385.47	3296.25	3285.70	N	263.46	W	3296.25	355.42	3.12	-2.50	1.87
128	6467	90.1	356.8	32	3385.47	3328.24	3317.65	N	265.27	W	3328.24	355.43	0.70	0.62	0.31
129	6498	90.0	356.5	31	3385.44	3359.23	3348.60	N	267.08	W	3359.23	355.44	1.02	-0.32	-0.97
130	6530	90.1	356.3	32	3385.41	3391.23	3380.54	N	269.09	W	3391.23	355.45	0.70	0.31	-0.62
131	6561	90.5	356.1	31	3385.25	3422.22	3411.47	N	271.15	W	3422.22	355.46	1.44	1.29	-0.65

Company:	Husky Ventures	Job Number:	OK11133
Well:	Hoffman 1-25	Mag Decl.:	4.43
Location:	McPherson Co, Kansas	Dir Driller:	Greg Becker/Doug Randall
Rig:	Duke #20	MWD Eng:	Anthony Donaruma
Leg:	Main Leg	MWD Eng:	Tyler Garret

Calculation Method:	Minimum Curvature
Proposed Azimuth	355.44
Depth Reference	Directional Driller
Tie Into:	Wireline

Survey Number	Survey Depth (ft)	Inclina-tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)		Coordinates E/W (ft)		Closure Distance (ft)	Closure Direction Azimuth	Dogleg Severity (ft/100')	Build Rate (d/100')	Walk Rate (d/100')
132	6593	90.7	356.4	32	3384.91	3454.22	3443.40	N	273.24	W	3454.22	355.46	1.13	0.63	0.94
133	6625	91.7	356.4	32	3384.24	3486.21	3475.33	N	275.25	W	3486.21	355.47	3.12	3.13	0.00
134	6656	91.9	356.0	31	3383.27	3517.19	3506.24	N	277.30	W	3517.19	355.48	1.44	0.65	-1.29
135	6688	92.3	355.4	32	3382.10	3549.17	3538.13	N	279.70	W	3549.17	355.48	2.25	1.25	-1.88
136	6720	92.7	355.0	32	3380.70	3581.14	3569.99	N	282.37	W	3581.14	355.48	1.77	1.25	-1.25
137	6751	91.1	355.3	31	3379.67	3612.12	3600.86	N	284.99	W	3612.12	355.47	5.25	-5.16	0.97
138	6783	90.0	356.1	32	3379.37	3644.12	3632.77	N	287.39	W	3644.12	355.48	4.25	-3.44	2.50
139	6815	89.7	356.0	32	3379.45	3676.11	3664.69	N	289.60	W	3676.11	355.48	0.99	-0.94	-0.31
140	6846	89.7	355.8	31	3379.61	3707.11	3695.61	N	291.81	W	3707.11	355.49	0.65	0.00	-0.65
141	6878	89.6	355.4	32	3379.81	3739.11	3727.52	N	294.27	W	3739.11	355.49	1.29	-0.31	-1.25
142	6900	89.6	355.2	22	3379.96	3761.11	3749.44	N	296.07	W	3761.11	355.49	0.91	0.00	-0.91
143	6932	89.8	355.4	32	3380.13	3793.11	3781.33	N	298.69	W	3793.11	355.48	0.88	0.63	0.62
144	6963	90.8	355.8	31	3379.97	3824.11	3812.24	N	301.07	W	3824.11	355.48	3.47	3.23	1.29
145	6995	90.9	356.1	32	3379.49	3856.10	3844.16	N	303.33	W	3856.11	355.49	0.99	0.31	0.94
146	7027	91.4	355.9	32	3378.85	3888.10	3876.07	N	305.56	W	3888.10	355.49	1.68	1.56	-0.63
147	7058	91.4	355.8	31	3378.09	3919.09	3906.98	N	307.81	W	3919.09	355.50	0.32	0.00	-0.32
148	7090	90.6	356.4	32	3377.53	3951.08	3938.90	N	309.98	W	3951.08	355.50	3.12	-2.50	1.87
149	7122	90.5	356.3	32	3377.23	3983.07	3970.84	N	312.02	W	3983.08	355.51	0.44	-0.31	-0.31
150	7153	90.6	356.2	31	3376.93	4014.07	4001.77	N	314.05	W	4014.07	355.51	0.46	0.32	-0.32
151	7185	91.0	356.5	32	3376.48	4046.06	4033.70	N	316.08	W	4046.07	355.52	1.56	1.25	0.94
152	7217	91.4	356.2	32	3375.81	4078.05	4065.63	N	318.12	W	4078.06	355.53	1.56	1.25	-0.94
153	7248	91.2	355.9	31	3375.11	4109.04	4096.55	N	320.25	W	4109.05	355.53	1.16	-0.65	-0.97
154	7280	90.6	356.2	32	3374.61	4141.03	4128.47	N	322.46	W	4141.04	355.53	2.10	-1.88	0.94
155	7312	90.5	355.5	32	3374.30	4173.03	4160.38	N	324.77	W	4173.04	355.54	2.21	-0.31	-2.19
156	7343	91.0	357.0	31	3373.89	4204.03	4191.31	N	326.80	W	4204.03	355.54	5.10	1.61	4.84
157	7375	91.3	357.4	32	3373.25	4236.00	4223.27	N	328.36	W	4236.01	355.55	1.56	0.94	1.25
158	7407	90.6	357.3	32	3372.72	4267.98	4255.23	N	329.84	W	4267.99	355.57	2.21	-2.19	-0.31
159	7439	90.3	357.8	32	3372.47	4299.96	4287.20	N	331.21	W	4299.97	355.58	1.82	-0.94	1.56

Company:	Husky Ventures	Job Number:	OK11133	Calculation Method:	Minimum Curvature
Well:	Hoffman 1-25	Mag Decl.:	4.43		
Location:	McPherson Co, Kansas	Dir Driller:	Greg Becker/Doug Randall	Proposed Azimuth	355.44
Rig:	Duke #20	MWD Eng:	Anthony Donaruma	Depth Reference	Directional Driller
Leg:	Main Leg	MWD Eng:	Tyler Garret	Tie Into:	Wireline

Survey Number	Survey Depth (ft)	Inclina-tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)		E/W (ft)		Closure Distance (ft)	Direction Azimuth	Dogleg Severity (ft/100')	Build Rate (d/100')	Walk Rate (d/100')
160	7470	89.6	358.1	31	3372.50	4330.93	4318.18	N	332.32	W	4330.95	355.60	2.46	-2.26	0.97
161	7502	88.6	358.1	32	3373.00	4362.89	4350.16	N	333.38	W	4362.91	355.62	3.12	-3.13	0.00
162	7533	88.0	357.3	31	3373.92	4393.85	4381.12	N	334.62	W	4393.88	355.63	3.22	-1.94	-2.58
163	7565	88.6	357.5	32	3374.87	4425.82	4413.07	N	336.08	W	4425.85	355.65	1.98	1.87	0.62
164	7597	89.2	357.8	32	3375.48	4457.79	4445.04	N	337.39	W	4457.82	355.66	2.10	1.88	0.94
165	7628	87.9	357.8	31	3376.27	4488.75	4476.00	N	338.58	W	4488.79	355.67	4.19	-4.19	0.00
166	7660	87.7	357.5	32	3377.49	4520.70	4507.95	N	339.89	W	4520.75	355.69	1.13	-0.63	-0.94
167	7692	88.3	357.6	32	3378.61	4552.66	4539.90	N	341.26	W	4552.71	355.70	1.90	1.87	0.31
168	7724	88.9	357.4	32	3379.39	4584.63	4571.86	N	342.65	W	4584.69	355.71	1.98	1.88	-0.63
169	7755	89.6	357.5	31	3379.80	4615.61	4602.83	N	344.03	W	4615.67	355.73	2.28	2.26	0.32
170	7787	90.6	357.9	32	3379.74	4647.59	4634.80	N	345.31	W	4647.65	355.74	3.37	3.13	1.25
171	7819	91.7	358.3	32	3379.10	4679.54	4666.78	N	346.37	W	4679.61	355.76	3.66	3.44	1.25
172	7850	93.1	359.0	31	3377.80	4710.47	4697.74	N	347.10	W	4710.55	355.77	5.05	4.52	2.26
173	7882	92.6	359.4	32	3376.21	4742.36	4729.70	N	347.55	W	4742.45	355.80	2.00	-1.56	1.25
174	7896	92.3	359.3	14	3375.61	4756.31	4743.69	N	347.71	W	4756.41	355.81	2.26	-2.14	-0.71
175	7950	92.3	359.3	54	3373.45	4810.15	4797.64	N	348.37	W	4810.27	355.85	0.00	0.00	0.00
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Company:	Husky Ventures	Job Number:	OK11133
Well:	Hoffman 1-25	Mag Decl.:	4.43
Location:	McPherson Co, Kansas	Dir Driller:	Greg Becker/Doug Randall
Rig:	Duke #20	MWD Eng:	Anthony Donaruma
Leg:	Main Leg	MWD Eng:	Tyler Garret

Calculation Method:	Minimum Curvature
Proposed Azimuth	355.44
Depth Reference	Directional Driller
Tie Into:	Wireline

Survey Number	Survey Depth (ft)	Inclina-tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)		Coordinates E/W (ft)		Closure Distance (ft)	Closure Direction Azimuth	Dogleg Severity (ft/100')	Build Rate (d/100')	Walk Rate (d/100')
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Company:	Husky Ventures	Job Number:	OK11133
Well:	Hoffman 1-25	Mag Decl.:	4.43
Location:	McPherson Co, Kansas	Dir Driller:	Greg Becker/Doug Randall
Rig:	Duke #20	MWD Eng:	Anthony Donaruma
Leg:	Main Leg	MWD Eng:	Tyler Garret

Calculation Method:	Minimum Curvature
Proposed Azimuth	355.44
Depth Reference	Directional Driller
Tie Into:	Wireline

Survey Number	Survey Depth (ft)	Inclina-tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Direction Azimuth	Dogleg Severity (ft/100')	Build Rate (d/100')	Walk Rate (d/100')
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Company:	Husky Ventures	Job Number:	OK11133
Well:	Hoffman 1-25	Mag Decl.:	4.43
Location:	McPherson Co, Kansas	Dir Driller:	Greg Becker/Doug Randall
Rig:	Duke #20	MWD Eng:	Anthony Donaruma
Leg:	Main Leg	MWD Eng:	Tyler Garret

Calculation Method:	Minimum Curvature
Proposed Azimuth	355.44
Depth Reference	Directional Driller
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Survey Number	Survey Depth (ft)	Inclina-tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)		Coordinates E/W (ft)		Closure Distance (ft)	Closure Direction Azimuth	Dogleg Severity (ft/100')	Build Rate (d/100')	Walk Rate (d/100')
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Company:	Husky Ventures	Job Number:	OK11133
Well:	Hoffman 1-25	Mag Decl.:	4.43
Location:	McPherson Co, Kansas	Dir Driller:	Greg Becker/Doug Randall
Rig:	Duke #20	MWD Eng:	Anthony Donaruma
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Calculation Method:	Minimum Curvature
Proposed Azimuth	355.44
Depth Reference	Directional Driller
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Survey Number	Survey Depth (ft)	Inclina-tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Direction Azimuth	Dogleg Severity (ft/100')	Build Rate (d/100')	Walk Rate (d/100')
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Company:	Husky Ventures	Job Number:	OK11133
Well:	Hoffman 1-25	Mag Decl.:	4.43
Location:	McPherson Co, Kansas	Dir Driller:	Greg Becker/Doug Randall
Rig:	Duke #20	MWD Eng:	Anthony Donaruma
Leg:	Main Leg	MWD Eng:	Tyler Garret

Calculation Method:	Minimum Curvature
Proposed Azimuth	355.44
Depth Reference	Directional Driller
Tie Into:	Wireline

Survey Number	Survey Depth (ft)	Inclina-tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Direction Azimuth	Dogleg Severity (ft/100')	Build Rate (d/100')	Walk Rate (d/100')
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Company:	Husky Ventures	Job Number:	OK11133
Well:	Hoffman 1-25	Mag Decl.:	4.43
Location:	McPherson Co, Kansas	Dir Driller:	Greg Becker/Doug Randall
Rig:	Duke #20	MWD Eng:	Anthony Donaruma
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Calculation Method:	Minimum Curvature
Proposed Azimuth	355.44
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Survey Number	Survey Depth (ft)	Inclina-tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Distance (ft)	Closure Direction Azimuth	Dogleg Severity (ft/100')	Build Rate (d/100')	Walk Rate (d/100')
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