USF

Bailey Directional Services

COMPLETED JOB REPORT

YATES PETROLEUM CORP.

HOC FED. COM. #4

EDDY COUNTY, NEW MEXICO

Weatherford

Drilling & Intervention Services

Survey Certification

State of Texas

County of Midland

I, TIM KILPATRICK CETIFY THAT; I AM EMPLOYED BY WEATHERFORD US, LP: THAT I DID ON THE DAY(S) OF 1/31/2021 THROUGH 1/28/2021 CONDUCT OR SUPERVISE THE TAKING OF A Sidetrack Tool SURVEY FROM A DEPTH OF 2247 FEET TO A DEPTH OF 8520 FEET; THE DATA IS TRUE, CORRECT, COMPLETE, AND WITHIN THE LIMITATIONS OF THE TOOL AS SET FORTH BY WEATHERFORD US, LP; THAT I AM AUTHORIZED AND QUALIFIED TO MAKE THIS REPORT; THAT THIS SURVEY WAS CONDUCTED AT THE REQUEST Ridge Petroleum FOR THE HCC Fed. Com #4 WELL API NO. 30-015-30207 IN Eddy COUNTY; TEXAS / NEW MEXICO; AND THAT I HAVE REVIEWED THIS REPORT AND FIND THAT IT CONFORMS TO THE PRINCIPLES AND PROCEDURES AS SET FORTH BY WEATHERFORD US, LP.

William T. Kilpatrick

Job Number: WTX0601D078	State/Country: New Mexico
Company: Yates Petroleum Corp.	Declination: 9.20° East
Lease/Well: HOC Fed. Com. Well #4	Grid: True North
Location: Eddy County	File name: C:\WINSERVE\YATES\HOC#4.SVY
Rig Name: Patterson # 510	Date/Time: 02-Jul-01 / 15:36
RKB:	Curve Name: MWD SURVEY
G.L. or M.S.L.:	

Weatherford Daily

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 256.90
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
Tie In to Gyro Survey									
2247.00	1.05	245.46	2246.50	-35.37	-15.76	23.37	38.72	204.02	.00
2341.00	.80	244.90	2340.49	-36.01	-17.14	24.85	39.88	205.45	.27
2372.00	1.30	261.60	2371.48	-36.15	-17.68	25.41	40.24	206.06	1.87
2404.00	2.00	266.80	2403.47	-36.23	-18.60	26.33	40.73	207.17	2.23
2435.00	2.90	274.70	2434.44	-36.20	-19.92	27.61	41.32	208.82	3.09
2466.00	3.50	282.80	2465.39	-35.93	-21.62	29.20	41.93	211.04	2.42
2498.00	3.60	287.80	2497.33	-35.40	-23.53	30.94	42.51	213.61	1.02
2529.00	3.10	284.00	2528.28	-34.90	-25.27	32.53	43.09	215.91	1.76
2590.00	4.10	265.10	2589.16	-34.69	-29.05	36.15	45.24	219.94	2.52
2621.00	4.80	264.50	2620.07	-34.91	-31.44	38.54	46.98	222.01	2.26
2654.00	5.70	261.80	2652.93	-35.27	-34.44	41.54	49.30	224.31	2.83
2686.00	6.40	258.90	2684.75	-35.84	-37.76	44.90	52.06	226.49	2.39
2717.00	7.30	259.00	2715.53	-36.55	-41.39	48.60	55.22	228.55	2.90
2748.00	8.30	259.20	2746.24	-37.35	-45.52	52.80	58.88	230.63	3.23
2780.00	9.20	258.90	2777.87	-38.27	-50.30	57.67	63.21	232.73	2.82
2812.00	10.10	257.50	2809.41	-39.37	-55.55	63.03	68.09	234.67	2.91
2842.00	10.70	255.40	2838.92	-40.64	-60.81	68.44	73.15	236.24	2.37
2873.00	11.40	255.70	2869.35	-42.13	-66.57	74.38	78.78	237.67	2.27
2905.00	12.30	257.20	2900.66	-43.66	-72.96	80.95	85.02	239.10	2.97
2936.00	13.00	257.40	2930.91	-45.15	-79.58	87.74	91.50	240.43	2.26

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
2968.00	13.90	256.90	2962.03	-46.81	-86.83	95.18	98.65	241.67	2.84
2999.00	14.90	257.40	2992.06	-48.52	-94.35	102.89	106.10	242.78	3.25
3031.00	15.40	255.90	3022.95	-50.46	-102.49	111.26	114.23	243.79	1.99
3062.00	16.20	255.90	3052.77	-52.51	-110.67	119.70	122.50	244.62	2.58
3093.00	17.20	256.40	3082.47	-54.64	-119.32	128.60	131.24	245.39	3.26
3124.00	17.80	255.00	3112.03	-56.95	-128.35	137.92	140.42	246.07	2.36
3156.00	18.80	255.60	3142.41	-59.50	-138.07	147.97	150.35	246.69	3.18
3188.00	19.50	255.40	3172.64	-62.13	-148.24	158.46	160.73	247.26	2.20
3219.00	20.30	255.30	3201.79	-64.79	-158.45	169.01	171.18	247.76	2.58
3250.00	21.10	254.50	3230.79	-67.65	-169.02	179.96	182.06	248.19	2.74
3313.00	22.10	252.40	3289.37	-74.26	-191.25	203.10	205.16	248.78	2.01
3344.00	22.30	252.40	3318.07	-77.81	-202.41	214.78	216.85	248.97	.65
3406.00	22.60	251.00	3375.37	-85.24	-224.89	238.36	240.50	249.24	.99
3468.00	22.70	249.00	3432.59	-93.41	-247.32	262.06	264.37	249.31	1.25
3531.00	22.80	248.50	3490.69	-102.24	-270.03	286.17	288.74	249.26	.35
3594.00	22.50	250.20	3548.83	-110.79	-292.73	310.22	312.99	249.27	1.14
3657.00	22.70	249.40	3606.99	-119.16	-315.45	334.25	337.20	249.31	.58
3720.00	22.70	252.30	3665.11	-127.13	-338.41	358.42	361.50	249.41	1.78
3845.00	23.00	252.20	3780.30	-141.93	-384.64	406.80	409.99	249.75	.24
3906.00	22.20	253.80	3836.62	-148.78	-407.05	430.18	433.39	249.92	1.65
3967.00	21.50	255.60	3893.24	-154.78	-428.95	452.86	456.02	250.16	1.59
4030.00	22.20	256.20	3951.71	-160.49	-451.69	476.31	479.35	250.44	1.17
4092.00	22.10	255.10	4009.14	-166.28	-474.33	499.68	502.64	250.68	.69
4154.00	22.60	254.90	4066.48	-172.39	-497.11	523.24	526.15	250.87	.82
4217.00	23.20	255.30	4124.51	-178.69	-520.80	547.74	550.60	251.06	.98
4280.00	22.50	253.80	4182.57	-185.20	-544.38	572.19	575.02	251.21	1.45
4344.00	22.10	254.90	4241.78	-191.75	-567.76	596.45	599.27	251.34	.90
4407.00	23.10	255.90	4299.94	-197.85	-591.19	620.65	623.42	251.50	1.70
4470.00	22.60	254.80	4358.00	-204.04	-614.86	645.10	647.83	251.64	1.04
4533.00	22.30	254.20	4416.23	-210.46	-638.04	669.14	671.86	251.74	.60
4595.00	22.80	255.60	4473.49	-216.65	-660.99	692.90	695.60	251.85	1.18
4659.00	22.70	255.70	4532.51	-222.79	-684.97	717.64	720.29	251.98	.17
4721.00	22.40	254.10	4589.77	-228.98	-707.93	741.40	744.04	252.08	1.10
4784.00	22.20	253.60	4648.06	-235.63	-730.89	765.27	767.93	252.13	.44
4846.00	22.00	254.80	4705.50	-241.98	-753.33	788.57	791.24	252.19	.80
4909.00	22.00	256.50	4763.91	-247.83	-776.19	812.16	814.80	252.29	1.01
5039.00	22.20	255.60	4884.36	-259.62	-823.66	861.07	863.61	252.50	.30
5102.00	21.20	254.90	4942.90	-265.55	-846.18	884.35	886.87	252.58	1.64
5164.00	21.10	255.10	5000.72	-271.34	-867.79	906.71	909.22	252.64	.20
5227.00	21.50	256.40	5059.42	-276.97	-889.97	929.59	932.07	252.71	.98
5290.00	21.10	258.90	5118.12	-281.87	-912.32	952.46	954.87	252.83	1.57
5353.00	21.30	260.20	5176.85	-286.00	-934.72	975.22	977.50	252.99	.81

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
5416.00	21.80	260.40	5235.45	-289.90	-957.53	998.32	1000.46	253.16	.80
5479.00	22.20	260.20	5293.86	-293.87	-980.80	1021.88	1023.88	253.32	.65
5541.00	21.30	260.20	5351.45	-297.78	-1003.44	1044.82	1046.69	253.47	1.45
5604.00	21.50	259.10	5410.10	-301.91	-1026.05	1067.78	1069.55	253.60	.71
5667.00	22.30	259.10	5468.56	-306.36	-1049.12	1091.26	1092.94	253.72	1.27
5730.00	22.80	259.80	5526.74	-310.78	-1072.87	1115.39	1116.98	253.85	.90
5792.00	22.10	260.10	5584.04	-314.91	-1096.19	1139.03	1140.52	253.97	1.14
5855.00	21.50	260.30	5642.53	-318.90	-1119.24	1162.39	1163.78	254.10	.96
5917.00	21.80	258.30	5700.16	-323.14	-1141.71	1185.24	1186.56	254.20	1.28
5980.00	21.80	255.60	5758.66	-328.43	-1164.50	1208.63	1209.93	254.25	1.59
6043.00	21.50	257.10	5817.21	-333.91	-1187.08	1231.87	1233.15	254.29	1.00
6106.00	22.00	260.00	5875.73	-338.54	-1209.96	1255.20	1256.43	254.37	1.88
6169.00	23.20	259.70	5933.89	-342.81	-1233.79	1279.38	1280.53	254.47	1.91
6232.00	22.30	259.10	5991.99	-347.29	-1257.74	1303.72	1304.80	254.56	1.48
6295.00	21.30	260.00	6050.48	-351.53	-1280.74	1327.09	1328.11	254.65	1.67
6356.00	22.40	259.60	6107.10	-355.56	-1303.09	1349.76	1350.72	254.74	1.82
6418.00	23.50	259.60	6164.19	-359.92	-1326.86	1373.91	1374.81	254.82	1.77
6545.00	24.70	250.70	6280.16	-373.27	-1376.83	1425.60	1426.53	254.83	3.01
6608.00	23.10	254.10	6337.76	-381.00	-1401.14	1451.03	1452.02	254.79	3.35
6669.00	22.60	255.70	6393.97	-387.18	-1424.01	1474.71	1475.71	254.79	1.31
6763.00	25.00	257.70	6479.97	-395.87	-1460.92	1512.63	1513.61	254.84	2.69
6826.00	24.60	257.40	6537.16	-401.57	-1486.73	1539.05	1540.01	254.89	.67
6889.00	24.80	258.90	6594.40	-406.97	-1512.49	1565.37	1566.29	254.94	1.04
6952.00	23.50	258.50	6651.88	-412.02	-1537.77	1591.13	1592.01	255.00	2.08
7015.00	21.80	256.80	6710.02	-417.20	-1561.47	1615.39	1616.24	255.04	2.89
7077.00	21.30	255.60	6767.69	-422.62	-1583.58	1638.16	1639.01	255.06	1.08
7140.00	21.50	255.60	6826.35	-428.34	-1605.85	1661.14	1661.99	255.06	.32
7203.00	22.70	257.80	6884.72	-433.78	-1628.91	1684.84	1685.68	255.09	2.31
7266.00	23.30	258.50	6942.71	-438.83	-1653.00	1709.45	1710.26	255.13	1.05
7329.00	23.80	257.00	7000.46	-444.18	-1677.60	1734.61	1735.41	255.17	1.24
7391.00	23.50	253.00	7057.26	-450.61	-1701.61	1759.46	1760.26	255.17	2.63
7454.00	21.90	252.90	7115.38	-457.73	-1724.85	1783.71	1784.56	255.14	2.54
7517.00	20.70	254.60	7174.07	-464.15	-1746.82	1806.56	1807.43	255.12	2.14
7636.00	22.10	256.40	7284.87	-475.00	-1788.86	1849.96	1850.84	255.13	1.30
7699.00	22.50	256.60	7343.15	-480.58	-1812.10	1873.87	1874.74	255.15	.65
7762.00	22.80	255.80	7401.30	-486.36	-1835.66	1898.13	1899.00	255.16	.68
7889.00	20.10	254.60	7519.49	-498.20	-1880.56	1944.54	1945.44	255.16	2.15
7983.00	21.40	259.10	7607.40	-505.73	-1912.98	1977.82	1978.70	255.19	2.19
8077.00	23.30	258.00	7694.33	-512.84	-1948.01	2013.55	2014.38	255.25	2.07
8169.00	22.30	258.20	7779.14	-520.19	-1982.89	2049.19	2049.99	255.30	1.09
8292.00	26.20	255.00	7891.27	-532.00	-2031.98	2099.68	2100.47	255.33	3.34
8355.00	23.90	253.20	7948.34	-539.29	-2057.64	2126.32	2127.14	255.31	3.85

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
8417.00	22.40	254.00	8005.35	-546.17	-2081.02	2150.65	2151.50	255.29	2.47
8448.00	22.20	254.70	8034.03	-549.35	-2092.35	2162.40	2163.26	255.29	1.07
8485.00	21.40	255.40	8068.38	-552.89	-2105.62	2176.14	2177.00	255.29	2.27
Projection To Bit									
8520.00	21.40	255.40	8100.97	-556.11	-2117.98	2188.90	2189.77	255.29	.00

DIG Drilling Systems
Directional Survey Report
Version 3.2

ompany: YATES PETROLEUM
Well: HOC FED COM #4
Location: EDDY CO,NM
Field:
perator: TOMMY MOORE
Job No.: D078

Survey File -> d078
Probe 2355
Depth Units: Feet
Dec: 9.7

VS Azimuth = 255.3
S Origin North = 0.00
S Origin East = 0.00

Method: Minimum Curvature

Station	MD	Inc	Az	North	East	TVD	VS	DL	DS
0	2449.34	2.5	255.3	-0.55	-2.11	2449.31	2.18	0.0	TI
1	2341.00	0.8	244.9	0.35	0.82	2341.02	-0.88	-1.6	ST
2	2372.00	1.3	261.6	0.21	0.28	2372.01	-0.32	2.1	ST
3	2404.00	2.0	266.8	0.13	-0.66	2404.00	0.61	2.2	ST
4	2435.00	2.9	274.7	0.16	-1.99	2434.97	1.89	3.1	ST
5	2466.00	3.5	282.8	0.44	-3.70	2465.92	3.47	2.3	ST
6	2498.00	3.6	287.8	0.96	-5.60	2497.86	5.18	1.1	ST
7	2559.00	3.2	273.1	1.64	-9.15	2558.75	8.44	1.6	ST
8	2590.00	4.1	265.7	1.60	-11.13	2589.69	10.36	3.2	ST
9	2621.00	4.8	264.5	1.40	-13.53	2620.59	12.73	2.4	ST
10	2654.00	5.7	261.8	1.03	-16.54	2653.45	15.74	2.8	ST
11	2686.00	6.4	258.9	0.46	-19.87	2685.28	19.10	2.3	ST
12	2717.00	7.3	259.0	-0.25	-23.50	2716.05	22.79	2.9	ST
13	2748.00	8.3	259.2	-1.04	-27.63	2746.77	26.98	3.2	ST
14	2780.00	9.2	258.9	-1.97	-32.41	2778.39	31.84	2.9	ST
15	2815.00	10.1	257.5	-3.17	-38.15	2812.90	37.70	2.6	ST
16	2842.00	10.7	255.4	-4.32	-42.89	2839.45	42.58	2.8	ST
17	2873.00	11.4	255.7	-5.80	-48.66	2869.88	48.54	2.3	ST
18	2905.00	12.3	257.2	-7.34	-55.08	2901.19	55.13	3.0	ST
19	2936.00	13.0	257.4	-8.84	-61.71	2931.43	61.93	2.1	ST

DIG Drilling Systems
Directional Survey Report
Version 3.2

ompany: YATES PETROLEUM
well: HOC FED COM #4
Location: EDDY CO,NM
ield:
perator: TOMMY MOORE
ob No.: D078

Survey File -> d078

Probe 2355
Depth Units: Feet
Dec: 9.7

VS Azimuth = 255.3
S Origin North = 0.00
S Origin East = 0.00

Method: Minimum Curvature

Station	MD	Inc	Az	North	East	TVD	VS	DL	DS
20	2968.00	13.9	256.9	-10.49	-68.96	2962.56	69.36	2.7	ST
21	2999.00	14.9	257.4	-12.20	-76.45	2992.59	77.03	3.3	ST
22	3031.00	15.4	255.9	-14.12	-84.57	3023.48	85.38	2.1	ST
23	3062.00	16.2	255.9	-16.18	-92.76	3053.31	93.83	2.6	ST
24	3093.00	17.2	256.4	-18.31	-101.42	3083.00	102.74	3.2	ST
25	3124.00	17.8	255.0	-20.62	-110.44	3112.57	112.05	2.2	ST
26	3156.00	18.8	255.6	-23.18	-120.16	3142.95	122.10	3.4	ST
27	3188.00	19.5	255.4	-25.81	-130.33	3173.17	132.61	2.1	ST
28	3219.00	20.3	255.3	-28.49	-140.54	3202.32	143.16	2.5	ST
29	3250.00	21.1	254.5	-31.35	-151.12	3231.32	154.12	2.7	ST
30	3313.00	22.1	252.4	-37.95	-173.34	3289.90	177.30	2.0	ST
31	3344.00	22.3	252.2	-41.52	-184.51	3318.59	189.00	0.9	ST
32	3406.00	22.6	251.0	-49.01	-206.98	3375.89	212.64	0.8	ST
33	3468.00	22.7	249.0	-57.17	-229.43	3433.10	236.42	1.2	ST
34	3531.00	22.8	248.5	-66.01	-252.17	3491.19	260.66	0.4	ST
35	3657.00	22.7	249.4	-83.51	-297.71	3607.36	309.16	0.3	ST
36	3720.00	22.7	252.3	-91.47	-320.66	3665.49	333.38	1.8	ST
37	3782.00	22.1	251.6	-98.79	-343.12	3722.81	356.96	0.9	ST
38	3845.00	23.0	252.2	-106.28	-366.09	3780.99	381.08	1.3	ST

DIG Drilling Systems
Directional Survey Report
Version 3.2

Company: YATES PETROLEUM
Well: HOC FED COM #4
Location: EDDY CO, NM
Field:
Operator: TOMMY MOORE
Job No.: D078

Survey File -> d078

Probe 2355
Depth Units: Feet
Dec: 9.7

VS Azimuth = 255.3
S Origin North = 0.00
S Origin East = 0.00

Method: Minimum Curvature

Station	MD	Inc	Az	North	East	TVD	VS	DL	DS
39	3906.00	22.2	253.8	-113.13	-388.47	3837.33	404.47	1.6	ST
40	3967.00	21.5	255.6	-119.11	-410.33	3893.96	427.13	1.6	ST
41	4030.00	22.2	256.2	-124.81	-433.06	3952.44	450.56	1.2	ST
42	4092.00	22.1	255.1	-130.60	-455.71	4009.86	473.94	0.6	ST
43	4154.00	22.6	254.9	-136.69	-478.49	4067.20	497.52	0.8	ST
44	4217.00	23.2	255.3	-142.99	-502.15	4125.25	522.01	0.9	ST
45	4280.00	22.5	253.8	-149.50	-525.71	4183.31	546.45	1.4	ST
46	4344.00	22.1	254.9	-156.06	-549.12	4242.51	570.76	0.9	ST
47	4407.00	23.1	255.9	-162.16	-572.58	4300.66	594.99	1.6	ST
48	4470.00	22.6	254.8	-168.35	-596.23	4358.73	619.44	1.1	ST
49	4533.00	22.3	254.2	-174.78	-619.38	4416.96	643.46	0.6	ST
50	4595.00	22.8	255.6	-180.96	-642.34	4474.22	667.25	1.3	ST
51	4659.00	22.7	255.7	-187.09	-666.34	4533.23	692.01	0.3	ST
52	4721.00	22.4	254.1	-193.28	-689.30	4590.49	715.80	1.1	ST
53	4784.00	22.2	253.6	-199.94	-712.26	4648.78	739.69	0.5	ST
54	4846.00	22.0	254.8	-206.27	-734.68	4706.24	762.99	0.8	ST
55	4909.00	22.0	256.5	-212.10	-757.51	4764.66	786.55	1.0	ST
56	4972.00	22.0	256.6	-217.60	-780.46	4823.08	810.14	0.1	ST
57	5039.00	22.2	255.6	-223.67	-804.94	4885.15	835.35	0.6	ST

DIG Drilling Systems
Directional Survey Report
Version 3.2

ompany: YATES PETROLEUM
Well: HOC FED COM #4
Location: EDDY CO, NM
ield:
perator: TOMMY MOORE
ob No.: D078

Survey File -> d078
Probe 2355
Depth Units: Feet
Dec: 9.7

VS Azimuth = 255.3
S Origin North = 0.00
S Origin East = 0.00

Method: Minimum Curvature

Station	MD	Inc	Az	North	East	TVD	VS	DL	DS
58	5102.00	21.2	254.9	-229.59	-827.45	4943.69	858.63	1.6	ST
59	5164.00	21.1	255.1	-235.37	-849.05	5001.52	881.00	0.2	ST
60	5227.00	21.5	256.4	-241.00	-871.25	5060.21	903.89	1.0	ST
61	5290.00	21.1	258.9	-245.90	-893.59	5118.91	926.75	1.6	ST
62	5353.00	21.3	260.2	-250.02	-915.97	5177.65	949.44	0.9	ST
63	5416.00	21.8	260.3	-253.93	-938.80	5236.24	972.51	0.9	ST
64	5479.10	22.2	260.2	-257.93	-962.14	5294.73	996.10	0.6	ST
65	5541.00	21.3	260.2	-261.82	-984.78	5352.21	1018.99	1.5	ST
66	5604.00	21.5	259.1	-265.94	-1007.42	5410.86	1041.93	0.7	ST
67	5667.00	22.3	259.1	-270.37	-1030.49	5469.31	1065.37	1.2	ST
68	5730.00	22.8	259.8	-274.79	-1054.23	5527.50	1089.45	0.9	ST
69	5792.00	22.1	260.1	-278.92	-1077.52	5584.81	1113.03	1.2	ST
70	5855.00	21.5	260.3	-282.90	-1100.53	5643.32	1136.30	1.0	ST
71	5917.00	21.8	258.4	-287.13	-1122.98	5700.96	1159.08	1.3	ST
72	5949.00	21.9	256.7	-289.70	-1134.58	5730.67	1170.96	2.0	ST
73	5980.00	21.8	255.6	-292.46	-1145.78	5759.45	1182.48	1.3	ST
74	6043.00	21.5	257.1	-297.94	-1168.37	5818.00	1205.73	1.0	ST
75	6106.00	22.0	260.0	-302.56	-1191.24	5876.52	1229.02	1.9	ST
76	6169.00	23.2	259.7	-306.81	-1215.04	5934.69	1253.12	1.9	ST

DIG Drilling Systems
Directional Survey Report
Version 3.2

ompany: YATES PETROLEUM
well: HOC FED COM #4
Location: EDDY CO, NM
ield:
perator: TOMMY MOORE
ob No.: D078

Survey File -> d078

Probe 2355
Depth Units: Feet
Dec: 9.7

VS Azimuth = 255.3
S Origin North = 0.00
S Origin East = 0.00

Method: Minimum Curvature

Station	MD	Inc	Az	North	East	TVD	VS	DL	DS
77	6232.00	22.3	259.1	-311.27	-1238.97	5992.80	1277.40	1.4	ST
78	6295.00	21.3	260.0	-315.51	-1262.00	6051.29	1300.74	1.7	ST
79	6356.00	22.4	259.6	-319.52	-1284.34	6107.90	1323.37	1.8	ST
80	6418.00	23.5	259.6	-323.88	-1308.12	6164.99	1347.48	1.8	ST
81	6482.00	25.1	256.8	-329.28	-1333.90	6223.32	1373.78	3.0	ST
82	6545.00	24.7	250.6	-336.70	-1359.31	6280.48	1400.25	4.3	ST
83	6608.00	23.1	254.1	-344.47	-1383.61	6338.09	1425.72	3.3	ST
84	6669.00	22.6	255.7	-350.66	-1406.47	6394.30	1449.41	1.3	ST
85	6763.00	25.0	257.7	-359.36	-1443.39	6480.30	1487.32	2.7	ST
86	6826.00	24.6	257.4	-365.04	-1469.21	6537.48	1513.74	0.6	ST
87	6889.00	24.8	258.9	-370.43	-1494.98	6594.71	1540.03	1.0	ST
88	6952.00	23.5	258.5	-375.46	-1520.24	6652.21	1565.73	2.1	ST
89	7015.00	21.8	256.7	-380.63	-1543.89	6710.37	1589.93	2.9	ST
90	7077.00	21.3	255.6	-386.07	-1565.97	6768.05	1612.66	1.0	ST
91	7140.00	21.5	255.6	-391.78	-1588.24	6826.70	1635.65	0.4	ST
92	7203.00	22.7	257.8	-397.21	-1611.32	6885.07	1659.36	2.3	ST
93	7266.00	23.3	258.5	-402.25	-1635.40	6943.07	1683.92	1.0	ST
94	7329.00	23.8	257.0	-407.57	-1659.96	7000.84	1709.03	1.3	ST
95	7391.00	23.5	253.0	-413.99	-1683.94	7057.65	1733.85	2.6	ST

DIG Drilling Systems
Directional Survey Report
Version 3.2

ompany: YATES PETROLEUM
Well: HOC FED COM #4
Location: EDDY CO,NM
Field:
perator: TOMMY MOORE
Job No.: D078

Survey File -> d078
Probe 2355
Depth Units: Feet
Dec: 9.7

VS Azimuth = 255.3
S Origin North = 0.00
S Origin East = 0.00

Method: Minimum Curvature

Station	MD	Inc	Az	North	East	TVD	VS	DL	DS
96	7454.00	21.9	252.9	-421.09	-1707.14	7115.79	1758.10	2.6	ST
97	7517.00	20.7	254.6	-427.49	-1729.06	7174.50	1780.93	2.1	ST
98	7573.00	22.1	256.2	-432.64	-1748.80	7226.65	1801.33	2.7	ST
99	7636.00	22.1	256.4	-438.25	-1771.80	7285.03	1825.00	0.1	ST
00	7699.00	22.5	256.7	-443.82	-1795.07	7343.31	1848.92	0.7	ST
101	7761.00	22.7	255.8	-449.49	-1818.24	7400.54	1872.77	0.6	ST
02	7826.00	20.3	254.0	-455.69	-1841.28	7461.00	1896.62	3.8	ST
103	7889.00	20.1	254.6	-461.58	-1862.24	7520.12	1918.40	0.5	ST
04	7920.00	20.3	256.6	-464.24	-1872.61	7549.21	1929.10	2.4	ST
105	8014.00	21.9	260.0	-471.08	-1905.72	7636.91	1962.87	2.1	ST
06	8025.00	22.3	259.9	-471.81	-1909.80	7647.10	1966.99	4.4	ST
07	8077.00	23.3	258.0	-475.68	-1929.59	7695.03	1987.12	2.3	ST
108	8108.00	22.7	257.8	-478.22	-1941.44	7723.56	1999.22	2.0	ST
09	8169.00	22.3	258.3	-483.08	-1964.30	7779.91	2022.57	0.7	ST
110	8230.00	25.0	256.6	-488.42	-1988.21	7835.77	2047.05	4.5	ST
11	8292.00	26.2	255.0	-495.00	-2014.17	7891.68	2073.83	2.2	ST
12	8355.00	23.9	253.2	-502.30	-2039.78	7948.77	2100.46	3.9	ST
13	8417.00	22.4	254.0	-509.19	-2063.14	8005.79	2124.80	2.4	ST
14	8448.00	22.2	254.7	-512.36	-2074.46	8034.47	2136.55	1.2	ST

DIG Drilling Systems
Directional Survey Report
Version 3.2

ompany: YATES PETROLEUM
Well: HOC FED COM #4
Location: EDDY CO,NM
Field:
perator: TOMMY MOORE
Job No.: D078

Survey File -> d078
Probe 2355
Depth Units: Feet
Dec: 9.7

VS Azimuth = 255.3
S Origin North = 0.00
S Origin East = 0.00

Method: Minimum Curvature

Station	MD	Inc	Az	North	East	TVD	VS	DL	DS
.15	8485.00	21.4	255.4	-515.89	-2087.72	8068.83	2150.27	2.2	ST