



Job Number: S.L. Sec. 21 19S - 25E
 Company: Yates Petroleum Corp.
 Lease/Well: Patriot AIZ # 11-H
 Location: Eddy County
 Rig Name:
 RKB:
 G.L. or M.S.L.:

State/Country: New Mexico
 Declination: 10 Degrees East
 Grid: True North
 File name: C:\WINSERVE\YATES\PATRIOT.SVY
 Date/Time: 05-Mar-00 / 18:26
 Curve Name: Pilot Hole & Horizontal

30-015-28410

Weatherford - Dailey Int'l. Inc.
 Midland, Texas
 915 - 561- 8892

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 4.96
 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	Direction Deg	Dogleg Severity Deg/100
Gyro Tie-In									
5360.00	2.53	331.56	5358.76	25.45	23.66	27.40	34.75	42.91	.00
Steering tool survey									
5513.00	2.26	335.57	5511.63	31.16	20.81	32.84	37.47	33.73	.21
5665.00	2.00	340.60	5663.52	36.39	18.69	37.87	40.91	27.18	.21
5806.00	1.95	343.23	5804.44	41.00	17.18	42.34	44.46	22.73	.07
5947.00	1.90	346.00	5945.36	45.57	15.92	46.77	48.27	19.26	.07
6090.00	1.89	340.70	6088.28	50.09	14.57	51.17	52.17	16.21	.12
6233.00	1.90	335.40	6231.20	54.48	12.80	55.38	55.96	13.22	.12
6372.00	1.60	332.42	6370.14	58.29	10.94	59.02	59.31	10.63	.23
6510.00	1.30	328.10	6508.09	61.32	9.23	61.89	62.01	8.56	.23
6633.00	1.39	320.35	6631.06	63.65	7.54	64.07	64.10	6.75	.16
6755.00	1.50	313.70	6753.02	65.90	5.44	66.12	66.12	4.72	.16
6780.00	1.70	304.80	6778.01	66.33	4.90	66.51	66.51	4.22	1.27
6810.00	1.40	296.20	6808.00	66.75	4.21	66.86	66.88	3.61	1.26
6843.00	1.30	289.90	6840.99	67.05	3.49	67.11	67.15	2.98	.54
6874.00	1.00	289.40	6871.98	67.26	2.91	67.26	67.33	2.47	.97
6905.00	1.10	303.10	6902.98	67.52	2.40	67.47	67.56	2.04	.87
6935.00	2.40	353.80	6932.97	68.30	2.09	68.22	68.33	1.76	6.35

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
6967.00	4.50	356.80	6964.91	70.22	1.95	70.12	70.25	1.59	6.58
Day #2									
6997.00	6.30	358.40	6994.77	73.04	1.84	72.92	73.06	1.44	6.02
7028.00	7.70	1.70	7025.54	76.82	1.85	76.69	76.84	1.38	4.70
7058.00	8.70	.40	7055.23	81.09	1.93	80.96	81.12	1.36	3.39
7090.00	9.20	2.00	7086.84	86.07	2.03	85.92	86.09	1.35	1.75
7120.00	9.80	5.10	7116.43	91.01	2.35	90.87	91.04	1.48	2.63
7152.00	11.00	5.70	7147.91	96.76	2.89	96.65	96.80	1.71	3.77
7183.00	12.00	7.40	7178.28	102.90	3.60	102.82	102.96	2.00	3.41
7214.00	12.70	7.30	7208.57	109.47	4.45	109.45	109.57	2.33	2.26
7245.00	13.70	5.70	7238.75	116.51	5.24	116.53	116.63	2.58	3.43
7278.00	15.90	5.00	7270.65	124.90	6.03	124.95	125.05	2.76	6.69
7309.00	18.00	4.10	7300.30	133.91	6.74	133.99	134.08	2.88	6.83
7340.00	19.00	3.00	7329.70	143.73	7.35	143.82	143.91	2.93	3.42
7371.00	19.40	2.30	7358.97	153.91	7.82	154.01	154.11	2.91	1.49
Day #3									
7402.00	19.80	3.10	7388.18	164.30	8.31	164.40	164.51	2.89	1.55
7433.00	20.60	4.40	7417.27	174.98	9.01	175.10	175.21	2.95	2.96
7464.00	21.20	5.90	7446.23	185.99	10.00	186.16	186.26	3.08	2.59
7495.00	22.30	6.90	7475.03	197.41	11.29	197.64	197.73	3.27	3.74
7526.00	23.60	7.90	7503.57	209.39	12.85	209.72	209.79	3.51	4.38
7557.00	24.50	9.30	7531.88	221.88	14.74	222.33	222.37	3.80	3.44
7588.00	26.30	9.70	7559.88	235.00	16.93	235.58	235.61	4.12	5.83
7620.00	28.20	9.20	7588.33	249.45	19.34	250.19	250.20	4.43	5.98
7652.00	28.30	8.90	7616.52	264.41	21.72	265.29	265.30	4.70	.54
7682.00	27.70	8.20	7643.01	278.33	23.82	279.35	279.35	4.89	2.28
7714.00	28.80	7.00	7671.19	293.35	25.82	294.48	294.48	5.03	3.87
7728.00	29.73	7.00	7683.41	300.14	26.65	301.32	301.32	5.07	6.64
Mag. Interference									
7740.00	34.30	7.00	7693.58	306.45	27.42	307.68	307.68	5.11	38.08
7750.00	38.20	6.50	7701.64	312.32	28.12	313.58	313.59	5.14	39.11
7760.00	42.00	5.90	7709.29	318.73	28.81	320.02	320.02	5.17	38.20
7770.00	45.60	7.80	7716.51	325.59	29.64	326.94	326.94	5.20	38.32
7780.00	49.20	9.40	7723.27	332.87	30.74	334.28	334.29	5.28	37.88
7790.00	52.90	10.90	7729.56	340.52	32.12	342.03	342.04	5.39	38.79
7800.00	56.80	10.50	7735.32	348.56	33.63	350.16	350.18	5.51	39.14
7810.00	60.30	9.30	7740.53	356.96	35.10	358.66	358.68	5.62	36.47
7820.00	63.70	8.80	7745.23	365.68	36.49	367.46	367.49	5.70	34.29
7830.00	67.60	7.30	7749.35	374.70	37.76	376.56	376.59	5.75	41.32
7840.00	71.10	6.20	7752.88	383.99	38.86	385.91	385.95	5.78	36.48
7850.00	74.70	5.90	7755.82	393.49	39.87	395.46	395.51	5.79	36.11

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
7860.00	78.80	5.70	7758.11	403.17	40.85	405.20	405.24	5.79	41.05
7870.00	82.10	5.90	7759.77	412.98	41.85	415.05	415.10	5.79	33.06
7880.00	85.90	6.20	7760.81	422.87	42.89	425.00	425.04	5.79	38.12
7890.00	88.80	6.80	7761.27	432.79	44.03	434.98	435.03	5.81	29.61
7900.00	90.10	6.60	7761.37	442.73	45.19	444.97	445.03	5.83	13.15
7910.00	91.20	7.10	7761.26	452.65	46.38	454.97	455.02	5.85	12.08
7920.00	91.70	7.10	7761.00	462.57	47.62	464.96	465.02	5.88	5.00
7953.00	92.00	6.80	7759.94	495.31	51.61	497.92	498.00	5.95	1.29
7985.00	92.20	6.70	7758.77	527.07	55.37	529.88	529.97	6.00	.70
8016.00	91.50	6.40	7757.76	557.85	58.90	560.86	560.95	6.03	2.46
8047.00	91.00	5.90	7757.09	588.67	62.22	591.84	591.95	6.03	2.28
8079.00	90.40	5.40	7756.70	620.51	65.37	623.84	623.94	6.01	2.44
8109.00	89.90	5.00	7756.62	650.38	68.09	653.84	653.94	5.98	2.13
8141.00	90.30	5.00	7756.56	682.26	70.88	685.84	685.93	5.93	1.25
8172.00	90.70	4.90	7756.29	713.15	73.56	716.83	716.93	5.89	1.33
8204.00	90.40	4.10	7755.99	745.05	76.07	748.83	748.92	5.83	2.67
8235.00	89.90	3.20	7755.90	775.98	78.04	779.82	779.90	5.74	3.32
8266.00	89.30	3.00	7756.12	806.94	79.72	810.81	810.86	5.64	2.04
8297.00	89.50	2.60	7756.45	837.90	81.23	841.78	841.83	5.54	1.44
8328.00	89.40	1.30	7756.74	868.88	82.29	872.74	872.76	5.41	4.21
8359.00	89.60	.10	7757.01	899.87	82.67	903.65	903.66	5.25	3.92
8390.00	89.90	358.60	7757.15	930.87	82.31	934.50	934.50	5.05	4.93
8422.00	89.90	358.60	7757.20	962.86	81.53	966.30	966.31	4.84	.00
8453.00	90.20	357.30	7757.18	993.84	80.42	997.07	997.09	4.63	4.30
8485.00	90.60	357.10	7756.95	1025.80	78.86	1028.78	1028.83	4.40	1.40
8516.00	91.00	356.90	7756.52	1056.75	77.24	1059.48	1059.57	4.18	1.44
8547.00	90.30	356.20	7756.17	1087.70	75.37	1090.14	1090.30	3.96	3.19
8578.00	90.50	355.90	7755.95	1118.62	73.24	1120.76	1121.02	3.75	1.16
8608.00	91.00	355.90	7755.56	1148.54	71.09	1150.39	1150.74	3.54	1.67
8635.00	91.50	355.80	7754.97	1175.46	69.14	1177.04	1177.50	3.37	1.89

-Projection to Bit-

8670.00	92.15	355.67	7753.86	1210.35	66.54	1211.57	1212.18	3.15	1.89
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Job Number: S.L. Sec. 21 19S - 25E

Company: Yates Petroleum Corp.

Lease/Well: Patriot AIZ # 11-H

Location: Eddy County

Rig Name:

RKB:

G.L. or M.S.L.:

State/Country: New Mexico

Declination: 10 Degrees East

Grid: True North

File name: C:\WINSERVE\YATES\PATRIOT.SVY

Date/Time: 24-Feb-00 / 06:42

Curve Name: Pilot Hole

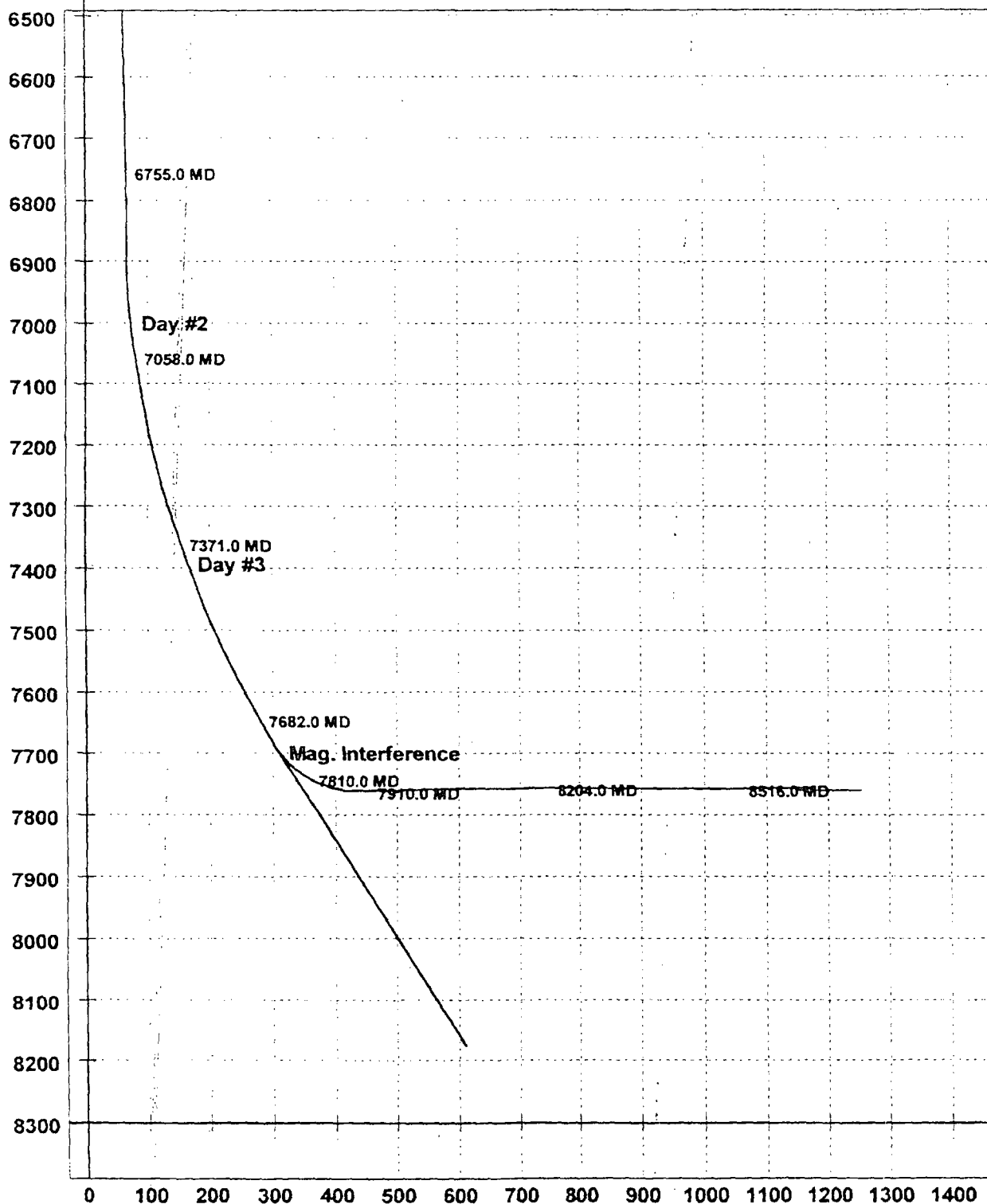
Daily International Inc.
Midland, Texas

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 1.76
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	Direction Deg	Dogleg Severity Deg/100
Top of Window									
7728.00	29.73	7.00	7683.41	300.14	26.65	300.82	301.32	5.07	6.67
Day #4									
7765.00	32.20	7.00	7715.13	319.03	28.97	319.77	320.35	5.19	6.67
Top of Porosity									
7808.00	32.85	6.72	7751.39	341.99	31.73	342.80	343.46	5.30	1.56
7811.00	32.90	6.70	7753.91	343.61	31.92	344.42	345.09	5.31	1.56
Bottom of Porosity									
7833.00	33.11	6.77	7772.36	355.51	33.33	356.36	357.07	5.36	.95
7843.00	33.20	6.80	7780.73	360.94	33.97	361.81	362.53	5.38	.95
7874.00	32.60	6.90	7806.76	377.66	35.98	378.58	379.37	5.44	1.94
7906.00	32.00	6.50	7833.80	394.64	37.98	395.62	396.46	5.50	1.99
7937.00	32.40	6.30	7860.04	411.05	39.82	412.08	412.98	5.53	1.34
7968.00	32.50	6.60	7886.20	427.58	41.69	428.66	429.61	5.57	.61
Day #5									
7999.00	32.60	6.50	7912.33	444.15	43.59	445.28	446.29	5.60	.37
8030.00	32.70	6.60	7938.43	460.77	45.50	461.95	463.01	5.64	.37
8062.00	32.50	6.60	7965.39	477.89	47.48	479.13	480.25	5.67	.62
8093.00	32.20	6.30	7991.57	494.38	49.34	495.66	496.83	5.70	1.10
8124.00	31.90	6.10	8017.85	510.73	51.12	512.06	513.28	5.72	1.03

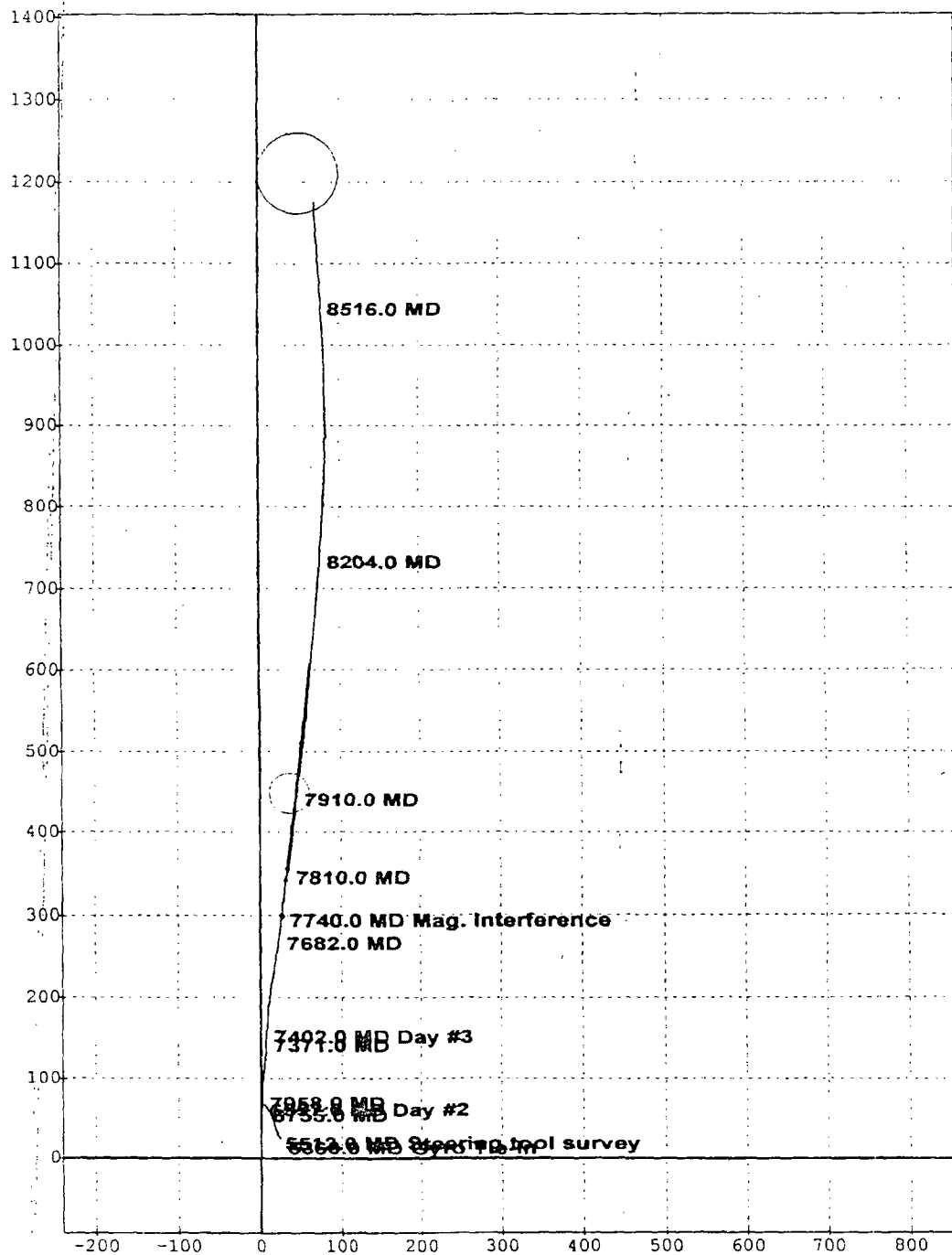
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
8156.00	31.90	6.10	8045.02	527.55	52.91	528.92	530.19	5.73	.00
Day #6									
8217.00	31.80	6.60	8096.83	559.54	56.47	561.01	562.38	5.76	.46
8275.00	31.70	7.40	8146.15	589.83	60.19	591.40	592.89	5.83	.75
Projection @ T.D.									
8310.00	31.70	7.40	8175.93	608.07	62.56	609.70	611.28	5.87	.00

Company: Yates Petroleum Corp.
Lease/Well: Patriot AIZ # 11-H
Location: Eddy County
State/Country: New Mexico
Declination: 10 Degrees East



--- Pilot Hole & Horizontal — Original Pilot Hole

Company: Yates Petroleum Corp.
 Lease/Well: Patriot AIZ # 11-H
 Location: Eddy County
 State/Country: New Mexico
 Declination: 10 Degrees East



— Pilot Hole & Horizontal Pilot Hole