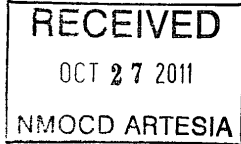




Job Number: 11-198
Company: Unit Petroleum
Lease/Well: HB 3 FED #3H
Location: Eddy County
Rig Name:
RKB:
G.L. or M.S.L.:

State/Country: New Mexico
Declination: 7.76
Grid: -0.19
File name: C:\WINSERVE\11198.SVY
Date/Time: 31-Jul-11 / 01:19
Curve Name: as drilled



WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 270.00
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

<i>Measured Depth FT</i>	<i>Incl Angle Deg</i>	<i>Drift Direction Deg</i>	<i>True Vertical Depth</i>	<i>N-S FT</i>	<i>E-W FT</i>	<i>Vertical Section FT</i>	<i>Dogleg Severity Deg/100</i>
.00	.00	.00	.00	.00	.00	.00	.00
200.00	.73	98.11	199.99	-.18	1.26	-1.26	.36
400.00	.87	80.32	399.98	-.10	4.02	-4.02	.14
600.00	2.29	63.32	599.90	1.95	9.09	-9.09	.74
800.00	2.36	52.33	799.73	6.26	15.92	-15.92	.23
1000.00	2.41	56.38	999.56	11.10	22.68	-22.68	.09
1200.00	3.53	56.63	1199.29	16.82	31.32	-31.32	.56
1400.00	4.17	55.71	1398.83	24.30	42.47	-42.47	.32
1600.00	3.74	59.76	1598.36	31.68	54.11	-54.11	.26
1800.00	4.70	55.08	1797.81	39.66	66.47	-66.47	.51
2000.00	5.86	54.86	1996.96	50.22	81.54	-81.54	.58
2200.00	6.43	46.76	2195.82	63.77	98.04	-98.04	.52
2400.00	7.35	62.14	2394.39	77.42	117.52	-117.52	1.03
2600.00	7.86	77.02	2592.65	86.48	142.15	-142.15	1.01

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
2800.00	9.10	90.43	2790.47	89.43	171.30	-171.30	1.16
3000.00	9.32	91.29	2987.90	88.95	203.31	-203.31	.13
3200.00	7.52	94.44	3185.73	87.57	232.55	-232.55	.93
3400.00	6.30	96.39	3384.28	85.33	256.50	-256.50	.62
3600.00	5.38	89.19	3583.24	84.24	276.78	-276.78	.59
3800.00	4.59	99.04	3782.49	83.12	294.06	-294.06	.58
4000.00	4.23	94.22	3981.89	81.32	309.32	-309.32	.26
4200.00	3.34	95.73	4181.46	80.19	322.47	-322.47	.45
4400.00	3.20	93.03	4381.13	79.32	333.84	-333.84	.10
4600.00	2.56	95.16	4580.88	78.62	343.87	-343.87	.32
4800.00	2.30	97.74	4780.70	77.68	352.29	-352.29	.14
5000.00	2.09	91.32	4980.55	77.05	359.92	-359.92	.16
5200.00	1.96	106.05	5180.43	76.02	366.85	-366.85	.27
5400.00	1.84	107.38	5380.32	74.12	373.20	-373.20	.06
5600.00	1.85	105.88	5580.21	72.28	379.37	-379.37	.02
5774.00	1.57	116.09	5754.14	70.46	384.21	-384.21	.24
5909.00	1.30	125.70	5889.09	68.75	387.12	-387.12	.27
5972.00	1.20	147.80	5952.08	67.78	388.05	-388.05	.78
6035.00	1.70	195.10	6015.06	66.32	388.16	-388.16	1.98
6099.00	2.20	198.60	6079.02	64.24	387.52	-387.52	.80
6161.00	2.70	201.80	6140.97	61.75	386.59	-386.59	.84
6224.00	3.20	212.30	6203.88	58.89	385.10	-385.10	1.17
6288.00	4.10	225.10	6267.75	55.76	382.53	-382.53	1.89
6350.00	4.20	237.80	6329.59	52.99	379.04	-379.04	1.49
6413.00	3.90	238.30	6392.43	50.64	375.26	-375.26	.48
6476.00	3.90	240.30	6455.29	48.45	371.58	-371.58	.22
6539.00	3.80	236.20	6518.15	46.22	367.98	-367.98	.46
6602.00	3.70	240.90	6581.01	44.07	364.47	-364.47	.51
6664.00	3.50	238.20	6642.89	42.10	361.12	-361.12	.42
6727.00	4.70	238.70	6705.73	39.75	357.28	-357.28	1.91
6791.00	5.10	241.00	6769.49	37.01	352.55	-352.55	.70
6854.00	4.60	236.80	6832.27	34.27	347.98	-347.98	.97
6916.00	4.50	242.40	6894.07	31.78	343.75	-343.75	.73
6979.00	3.50	241.70	6956.92	29.72	339.86	-339.86	1.59

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
7043.00	3.60	240.90	7020.80	27.82	336.39	-336.39	.17
7106.00	3.60	250.10	7083.67	26.18	332.80	-332.80	.92
7170.00	3.50	255.40	7147.55	25.01	329.02	-329.02	.54
7207.00	3.20	249.90	7184.49	24.37	326.96	-326.96	1.19
7239.00	3.50	259.60	7216.43	23.89	325.16	-325.16	2.00
7271.00	3.10	255.60	7248.38	23.49	323.36	-323.36	1.44
7302.00	3.10	268.20	7279.33	23.26	321.71	-321.71	2.19
7333.00	3.20	259.00	7310.29	23.07	320.02	-320.02	1.66
7364.00	3.00	272.00	7341.24	22.93	318.36	-318.36	2.35
7396.00	4.50	280.40	7373.17	23.19	316.29	-316.29	4.98
7427.00	8.20	281.30	7403.98	23.84	312.93	-312.93	11.94
7458.00	12.00	283.40	7434.49	25.02	307.62	-307.62	12.31
7490.00	16.10	282.90	7465.53	26.78	300.06	-300.06	12.82
7521.00	19.20	280.20	7495.06	28.65	290.85	-290.85	10.34
7553.00	22.20	277.70	7525.00	30.39	279.68	-279.68	9.77
7584.00	24.20	276.70	7553.49	31.91	267.56	-267.56	6.58
7616.00	26.10	275.60	7582.45	33.37	254.04	-254.04	6.11
7647.00	28.20	275.40	7610.04	34.72	239.96	-239.96	6.78
7679.00	30.90	275.50	7637.87	36.22	224.25	-224.25	8.44
7711.00	33.40	274.50	7664.96	37.70	207.29	-207.29	7.99
7742.00	35.80	274.30	7690.48	39.05	189.74	-189.74	7.75
7773.00	38.40	274.20	7715.20	40.43	171.09	-171.09	8.39
7804.00	41.00	274.80	7739.05	41.99	151.35	-151.35	8.48
7835.00	44.10	274.80	7761.88	43.74	130.47	-130.47	10.00
7866.00	46.90	274.40	7783.61	45.52	108.43	-108.43	9.08
7898.00	49.80	274.00	7804.87	47.26	84.58	-84.58	9.11
7929.00	53.40	274.00	7824.13	48.96	60.35	-60.35	11.61
7961.00	56.90	274.00	7842.41	50.79	34.16	-34.16	10.94
7993.00	60.20	274.10	7859.10	52.72	6.93	-6.93	10.32
8024.00	63.80	274.40	7873.66	54.75	-20.36	20.36	11.64
8056.00	68.00	274.20	7886.72	56.94	-49.48	49.48	13.14
8088.00	71.10	273.60	7897.90	58.97	-79.39	79.39	9.85
8119.00	73.80	274.10	7907.25	60.96	-108.88	108.88	8.84
8150.00	76.00	273.90	7915.32	63.05	-138.73	138.73	7.12

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
8182.00	78.00	272.80	7922.52	64.87	-169.86	169.86	7.09
8213.00	79.70	271.20	7928.51	65.93	-200.25	200.25	7.46
8245.00	80.60	269.70	7933.99	66.17	-231.78	231.78	5.41
8276.00	82.10	268.70	7938.65	65.75	-262.42	262.42	5.80
8308.00	84.80	268.00	7942.30	64.83	-294.20	294.20	8.71
8339.00	86.40	268.10	7944.68	63.78	-325.09	325.09	5.17
8371.00	87.90	267.90	7946.27	62.66	-357.03	357.03	4.73
8403.00	89.00	268.00	7947.13	61.52	-388.99	388.99	3.45
8435.00	89.40	267.80	7947.58	60.35	-420.97	420.97	1.40
8467.00	90.50	267.60	7947.61	59.06	-452.94	452.94	3.49
8499.00	90.70	267.20	7947.27	57.61	-484.91	484.91	1.40
8530.00	91.10	267.30	7946.79	56.12	-515.87	515.87	1.33
8562.00	91.10	267.20	7946.17	54.59	-547.83	547.83	.31
8594.00	91.70	267.20	7945.39	53.03	-579.78	579.78	1.88
8626.00	91.60	267.20	7944.47	51.46	-611.73	611.73	.31
8658.00	90.80	267.20	7943.80	49.90	-643.68	643.68	2.50
8689.00	90.80	266.90	7943.37	48.31	-674.64	674.64	.97
8722.00	90.70	266.60	7942.94	46.43	-707.58	707.58	.96
8753.00	91.00	266.50	7942.48	44.57	-738.52	738.52	1.02
8785.00	91.10	266.10	7941.89	42.50	-770.45	770.45	1.29
8848.00	91.40	265.90	7940.51	38.11	-833.28	833.28	.57
8912.00	90.90	266.10	7939.23	33.65	-897.11	897.11	.84
8975.00	90.70	265.90	7938.35	29.25	-959.95	959.95	.45
9038.00	90.80	265.70	7937.53	24.64	-1022.78	1022.78	.35
9101.00	91.00	265.30	7936.54	19.70	-1085.57	1085.57	.71
9164.00	91.10	265.20	7935.38	14.48	-1148.35	1148.35	.22
9227.00	91.50	264.80	7933.95	8.99	-1211.09	1211.09	.90
9290.00	90.30	264.40	7932.96	3.06	-1273.80	1273.80	2.01
9351.00	89.90	265.00	7932.86	-2.57	-1334.54	1334.54	1.18
9414.00	90.30	265.50	7932.75	-7.79	-1397.32	1397.32	1.02
9477.00	90.20	265.40	7932.47	-12.78	-1460.13	1460.13	.22
9539.00	90.70	265.20	7931.98	-17.86	-1521.91	1521.91	.87
9602.00	91.70	265.30	7930.67	-23.08	-1584.68	1584.68	1.60
9665.00	92.30	264.80	7928.47	-28.51	-1647.41	1647.41	1.24

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
9728.00	91.70	264.20	7926.27	-34.55	-1710.08	1710.08	1.35
9790.00	92.10	264.30	7924.21	-40.76	-1771.74	1771.74	.66
9854.00	92.60	264.00	7921.59	-47.27	-1835.35	1835.35	.91
9916.00	91.60	264.10	7919.32	-53.70	-1896.97	1896.97	1.62
9978.00	92.00	263.90	7917.37	-60.17	-1958.60	1958.60	.72
10038.00	92.20	264.50	7915.17	-66.23	-2018.25	2018.25	1.05
10101.00	92.30	264.30	7912.70	-72.38	-2080.91	2080.91	.35
10163.00	91.50	264.60	7910.64	-78.37	-2142.58	2142.58	1.38
10225.00	91.90	264.50	7908.80	-84.26	-2204.27	2204.27	.66
10288.00	91.50	264.20	7906.93	-90.45	-2266.94	2266.94	.79
10350.00	91.00	264.30	7905.58	-96.66	-2328.61	2328.61	.82
10413.00	91.30	264.00	7904.32	-103.08	-2391.27	2391.27	.67
10476.00	91.20	263.80	7902.94	-109.78	-2453.90	2453.90	.35
10539.00	91.60	264.10	7901.40	-116.42	-2516.53	2516.53	.79
10601.00	90.80	263.90	7900.10	-122.90	-2578.18	2578.18	1.33
10664.00	91.00	264.10	7899.11	-129.48	-2640.82	2640.82	.45
10727.00	91.40	263.70	7897.80	-136.17	-2703.45	2703.45	.90
10790.00	91.40	264.10	7896.26	-142.87	-2766.08	2766.08	.63
10853.00	90.90	264.20	7894.99	-149.29	-2828.74	2828.74	.81
10917.00	91.30	264.20	7893.76	-155.75	-2892.40	2892.40	.63
10980.00	91.20	264.30	7892.39	-162.06	-2955.06	2955.06	.22
11044.00	91.60	264.30	7890.82	-168.42	-3018.73	3018.73	.63
11108.00	90.70	264.60	7889.54	-174.60	-3082.42	3082.42	1.48
11171.00	90.70	264.70	7888.77	-180.48	-3145.14	3145.14	.16
11235.00	91.00	264.60	7887.82	-186.45	-3208.85	3208.85	.49
11298.00	91.00	264.70	7886.72	-192.32	-3271.57	3271.57	.16
11360.00	90.80	264.60	7885.75	-198.10	-3333.29	3333.29	.36
11423.00	91.30	264.50	7884.59	-204.08	-3395.99	3395.99	.81
11486.00	91.30	264.80	7883.16	-209.95	-3458.70	3458.70	.48
11549.00	90.40	264.80	7882.23	-215.66	-3521.44	3521.44	1.43
11613.00	90.40	264.60	7881.78	-221.57	-3585.16	3585.16	.31
11676.00	90.50	264.60	7881.29	-227.50	-3647.88	3647.88	.16
11740.00	90.40	263.90	7880.79	-233.91	-3711.55	3711.55	1.10
11804.00	90.10	263.90	7880.51	-240.72	-3775.19	3775.19	.47

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
11867.00	90.40	263.80	7880.23	-247.46	-3837.83	3837.83	.50
11931.00	90.70	264.50	7879.62	-253.99	-3901.49	3901.49	1.19
11995.00	92.00	265.50	7878.11	-259.56	-3965.23	3965.23	2.56
12089.00	91.20	265.90	7875.48	-266.61	-4058.93	4058.93	.95
12152.00	91.60	265.90	7873.95	-271.11	-4121.75	4121.75	.63
12215.00	91.60	265.70	7872.19	-275.72	-4184.55	4184.55	.32
12278.00	91.30	265.90	7870.59	-280.34	-4247.36	4247.36	.57
12345.00	91.40	266.00	7869.01	-285.07	-4314.18	4314.18	.21
Bit Projection:							
12400.00	91.40	266.00	7867.67	-288.90	-4369.03	4369.03	.00