



Scientific Drilling Survey

Company: Stevens & Tull Date: 2/23/2005 Time: 09:27:58 Page: 1
Field: Nadine Co-ordinate(NE) Reference: Well: Diamond #1, Grid North
Site: Lea County, NM Vertical (TVD) Reference: SITE 0.0
Well: Diamond #1 Section (VS) Reference: Well (0.00N,0.00E,128.27Azi)
Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Field: Nadine

Map System: US State Plane Coordinate System 1983
Geo Datum: GRS 1980
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
Coordinate System: Well Centre
Geomagnetic Model: Wmm_2000

Site: Lea County, NM

Site Position: Northing: 601825.13 ft Latitude: 32 38 54.431 N
From: Map Easting: 919348.74 ft Longitude: 103 6 18.787 W
Position Uncertainty: 0.00 ft North Reference: Grid
Ground Level: 0.00 ft Grid Convergence: 0.66 deg

Well: Diamond #1

Slot Name:

Well Position: +N/-S 0.00 ft Northing: 601825.13 ft Latitude: 32 38 54.431 N
+E/-W 0.00 ft Easting: 919348.74 ft Longitude: 103 6 18.787 W
Position Uncertainty: 0.00 ft

Wellpath: 1

Drilled From: Surface
Tie-on Depth: 0.00 ft
Above System Datum: Mean Sea Level
Declination: 8.29 deg
Mag Dip Angle: 60.90 deg
+E/-W Direction deg

Current Datum: SITE Height 0.00 ft
Magnetic Data: 12/29/2004
Field Strength: 49744 nT
Vertical Section: Depth From (TVD) +N/-S
ft ft
0.00 0.00

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	ClsA deg	ClsD ft	Tool
0.00	0.00	359.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
100.00	0.59	230.65	100.00	-0.33	-0.40	-0.11	0.59	0.59	0.00	230.65	0.51	Keeper
200.00	0.40	237.54	199.99	-0.84	-1.09	-0.34	0.20	-0.19	6.89	232.39	1.38	Keeper
300.00	0.47	238.97	299.99	-1.24	-1.74	-0.60	0.07	0.07	1.43	234.50	2.13	Keeper
400.00	0.42	231.74	399.99	-1.68	-2.38	-0.83	0.08	-0.05	-7.23	234.78	2.91	Keeper
500.00	0.37	229.69	499.99	-2.11	-2.91	-0.98	0.05	-0.05	-2.05	234.01	3.60	Keeper
600.00	0.29	227.65	599.98	-2.49	-3.34	-1.08	0.08	-0.08	-2.04	233.29	4.17	Keeper
700.00	0.37	241.41	699.98	-2.82	-3.81	-1.25	0.11	0.08	13.76	233.54	4.74	Keeper
800.00	0.34	234.19	799.98	-3.15	-4.34	-1.46	0.05	-0.03	-7.22	234.05	5.36	Keeper
900.00	0.48	215.50	899.98	-3.66	-4.82	-1.52	0.19	0.14	-18.69	232.80	6.05	Keeper
1000.00	0.59	218.15	999.97	-4.41	-5.38	-1.50	0.11	0.11	2.65	230.70	6.96	Keeper
1100.00	0.54	213.33	1099.97	-5.20	-5.96	-1.46	0.07	-0.05	-4.82	228.87	7.91	Keeper
1200.00	0.62	206.28	1199.96	-6.08	-6.46	-1.30	0.11	0.08	-7.05	226.71	8.87	Keeper
1300.00	0.59	203.35	1299.96	-7.04	-6.90	-1.06	0.04	-0.03	-2.93	224.43	9.86	Keeper
1400.00	0.44	194.82	1399.95	-7.89	-7.20	-0.77	0.17	-0.15	-8.53	222.42	10.68	Keeper
1500.00	0.43	189.42	1499.95	-8.63	-7.36	-0.44	0.04	-0.01	-5.40	220.49	11.34	Keeper
1600.00	0.43	187.67	1599.95	-9.37	-7.48	-0.07	0.01	0.00	-1.75	218.59	11.99	Keeper
1700.00	0.33	197.54	1699.95	-10.02	-7.61	0.23	0.12	-0.10	9.87	217.24	12.58	Keeper
1800.00	0.24	190.51	1799.95	-10.50	-7.74	0.43	0.10	-0.09	-7.03	216.40	13.04	Keeper
1900.00	0.12	169.55	1899.94	-10.80	-7.76	0.60	0.13	-0.12	-20.96	215.67	13.30	Keeper
2000.00	0.12	205.34	1999.94	-11.00	-7.78	0.70	0.07	0.00	35.79	215.27	13.48	Keeper
2100.00	0.09	75.66	2099.94	-11.08	-7.75	0.77	0.19	-0.03	-129.68	214.98	13.52	Keeper
2200.00	0.26	50.85	2199.94	-10.91	-7.50	0.87	0.18	0.17	-24.81	214.49	13.24	Keeper
2300.00	0.69	56.76	2299.94	-10.44	-6.82	1.11	0.43	0.43	5.91	213.15	12.47	Keeper
2400.00	1.15	53.82	2399.93	-9.52	-5.51	1.57	0.46	0.46	-2.94	210.05	11.00	Keeper
2500.00	1.43	56.15	2499.90	-8.23	-3.66	2.22	0.28	0.28	2.33	203.97	9.01	Keeper
2600.00	1.60	54.94	2599.87	-6.73	-1.48	3.01	0.17	0.17	-1.21	192.40	6.90	Keeper
2700.00	1.73	55.34	2699.82	-5.07	0.90	3.85	0.13	0.13	0.40	169.90	5.15	Keeper

SUR: F-24-19s-38e, 1650N & 1650W
BHL: F-24-19s-38e, 2116N & 2239W
API # 30-025-35963



Scientific Drilling Survey

Company: Stevens & Tull
Field: Nadine
Site: Lea County, NM
Well: Diamond #1
Wellpath: 1

Date: 2/23/2005 Time: 09:27:58 Page: 2
Co-ordinate(N/E) Reference: Well: Diamond #1, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,128.27Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	ClsA deg	ClsD ft	Tool
2800.00	1.78	54.34	2799.78	-3.31	3.41	4.73	0.06	0.05	-1.00	134.17	4.75	Keeper
2900.00	1.21	60.62	2899.74	-1.89	5.59	5.56	0.59	-0.57	6.28	108.66	5.90	Keeper
3000.00	0.64	62.72	2999.73	-1.11	7.01	6.19	0.57	-0.57	2.10	99.03	7.09	Keeper
3100.00	0.32	35.89	3099.73	-0.63	7.67	6.41	0.38	-0.32	-26.83	94.70	7.69	Keeper
3200.00	0.29	35.48	3199.72	-0.20	7.98	6.39	0.03	-0.03	-0.41	91.43	7.98	Keeper
3300.00	0.34	29.52	3299.72	0.27	8.27	6.33	0.06	0.05	-5.96	88.16	8.27	Keeper
3400.00	0.15	18.58	3399.72	0.65	8.46	6.24	0.19	-0.19	-10.94	85.62	8.48	Keeper
3500.00	0.17	328.78	3499.72	0.90	8.42	6.06	0.14	0.02	-49.80	83.91	8.47	Keeper
3600.00	0.17	351.11	3599.72	1.17	8.32	5.81	0.07	0.00	22.33	81.98	8.40	Keeper
3700.00	0.22	324.21	3699.72	1.47	8.19	5.51	0.10	0.05	-26.90	79.79	8.32	Keeper
3800.00	0.26	280.11	3799.72	1.67	7.85	5.13	0.18	0.04	-44.10	77.99	8.03	Keeper
3900.00	0.44	291.42	3899.72	1.85	7.27	4.56	0.19	0.18	11.31	75.72	7.50	Keeper
4000.00	0.62	288.72	3999.71	2.16	6.40	3.69	0.18	0.18	-2.70	71.32	6.76	Keeper
4100.00	0.69	274.51	4099.71	2.39	5.29	2.67	0.18	0.07	-14.21	65.72	5.80	Keeper
4200.00	0.72	280.30	4199.70	2.54	4.07	1.62	0.08	0.03	5.79	57.98	4.80	Keeper
4300.00	0.89	294.74	4299.69	2.98	2.75	0.31	0.26	0.17	14.44	42.64	4.05	Keeper
4400.00	0.91	294.22	4399.68	3.63	1.32	-1.22	0.02	0.02	-0.52	19.92	3.86	Keeper
4500.00	0.76	294.93	4499.67	4.24	-0.01	-2.63	0.15	-0.15	0.71	359.88	4.24	Keeper
4600.00	0.71	289.54	4599.66	4.73	-1.19	-3.86	0.09	-0.05	-5.39	345.81	4.87	Keeper
4700.00	0.74	288.30	4699.65	5.14	-2.39	-5.06	0.03	0.03	-1.24	335.03	5.66	Keeper
4800.00	0.72	279.03	4799.64	5.44	-3.63	-6.21	0.12	-0.02	-9.27	326.31	6.53	Keeper
4900.00	0.69	262.52	4899.64	5.46	-4.84	-7.18	0.20	-0.03	-16.51	318.41	7.30	Keeper
5000.00	0.92	255.81	4999.63	5.18	-6.22	-8.09	0.25	0.23	-6.71	309.81	8.09	Keeper
5100.00	1.89	257.85	5099.59	4.64	-8.61	-9.63	0.97	0.97	2.04	298.31	9.78	Keeper
5200.00	2.04	256.94	5199.54	3.89	-11.95	-11.79	0.15	0.15	-0.91	288.02	12.57	Keeper
5300.00	1.85	255.04	5299.48	3.07	-15.25	-13.87	0.20	-0.19	-1.90	281.38	15.55	Keeper
5400.00	1.61	260.79	5399.43	2.43	-18.19	-15.79	0.30	-0.24	5.75	277.60	18.35	Keeper
5500.00	1.65	263.46	5499.39	2.04	-21.01	-17.76	0.09	0.04	2.67	275.54	21.11	Keeper
5600.00	1.70	262.34	5599.35	1.68	-23.91	-19.81	0.06	0.05	-1.12	274.01	23.97	Keeper
5700.00	1.66	262.52	5699.31	1.29	-26.82	-21.86	0.04	-0.04	0.18	272.76	26.85	Keeper
5800.00	1.56	260.46	5799.27	0.88	-29.60	-23.78	0.12	-0.10	-2.06	271.70	29.61	Keeper
5900.00	1.38	254.98	5899.23	0.34	-32.10	-25.41	0.23	-0.18	-5.48	270.61	32.10	Keeper
6000.00	1.20	261.08	5999.21	-0.14	-34.30	-26.85	0.23	-0.18	6.10	269.77	34.30	Keeper
6100.00	1.23	256.83	6099.19	-0.54	-36.38	-28.23	0.09	0.03	-4.25	269.15	36.38	Keeper
6200.00	1.28	256.87	6199.16	-1.04	-38.51	-29.59	0.05	0.05	0.04	268.45	38.52	Keeper
6300.00	1.29	249.48	6299.14	-1.69	-40.65	-30.87	0.17	0.01	-7.39	267.62	40.69	Keeper
6400.00	1.31	254.64	6399.11	-2.39	-42.81	-32.13	0.12	0.02	5.16	266.81	42.88	Keeper
6500.00	1.34	253.66	6499.08	-3.02	-45.03	-33.49	0.04	0.03	-0.98	266.17	45.13	Keeper
6600.00	1.25	256.88	6599.06	-3.59	-47.22	-34.85	0.12	-0.09	3.22	265.65	47.35	Keeper
6700.00	0.99	274.55	6699.04	-3.77	-49.14	-36.25	0.43	-0.26	17.67	265.61	49.29	Keeper
6800.00	0.83	282.49	6799.03	-3.55	-50.71	-37.62	0.20	-0.16	7.94	266.00	50.83	Keeper
6886.00	0.77	277.61	6885.02	-3.34	-51.89	-38.68	0.11	-0.07	-5.67	266.32	52.00	Keeper
6942.00	13.01	127.16	6940.56	-7.11	-47.22	-32.67	24.44	21.86	-268.66	261.43	47.75	MWD
6974.00	25.68	131.29	6970.70	-13.89	-39.10	-22.10	39.80	39.59	12.91	250.44	41.50	MWD
6984.00	29.55	130.41	6979.55	-16.92	-35.60	-17.47	38.91	38.70	-8.80	244.58	39.41	MWD
7006.00	37.37	129.50	6997.89	-24.70	-26.30	-5.35	35.62	35.55	-4.14	226.80	36.08	MWD
7069.00	58.21	122.33	7040.02	-51.49	11.52	40.93	34.10	33.08	-11.38	167.39	52.76	MWD
7084.00	61.38	122.15	7047.56	-58.41	22.48	53.82	21.16	21.13	-1.20	158.94	62.58	MWD
7100.00	61.99	122.07	7055.15	-65.89	34.42	67.83	3.84	3.81	-0.50	152.42	74.34	MWD
7115.00	62.87	123.12	7062.09	-73.06	45.62	81.06	8.54	5.87	7.00	148.02	86.13	MWD
7131.00	64.19	124.26	7069.23	-81.00	57.53	95.34	10.43	8.25	7.12	144.61	99.35	MWD
7163.00	66.74	126.99	7082.51	-97.96	81.19	124.41	11.12	7.97	8.53	140.35	127.23	MWD



Scientific Drilling Survey

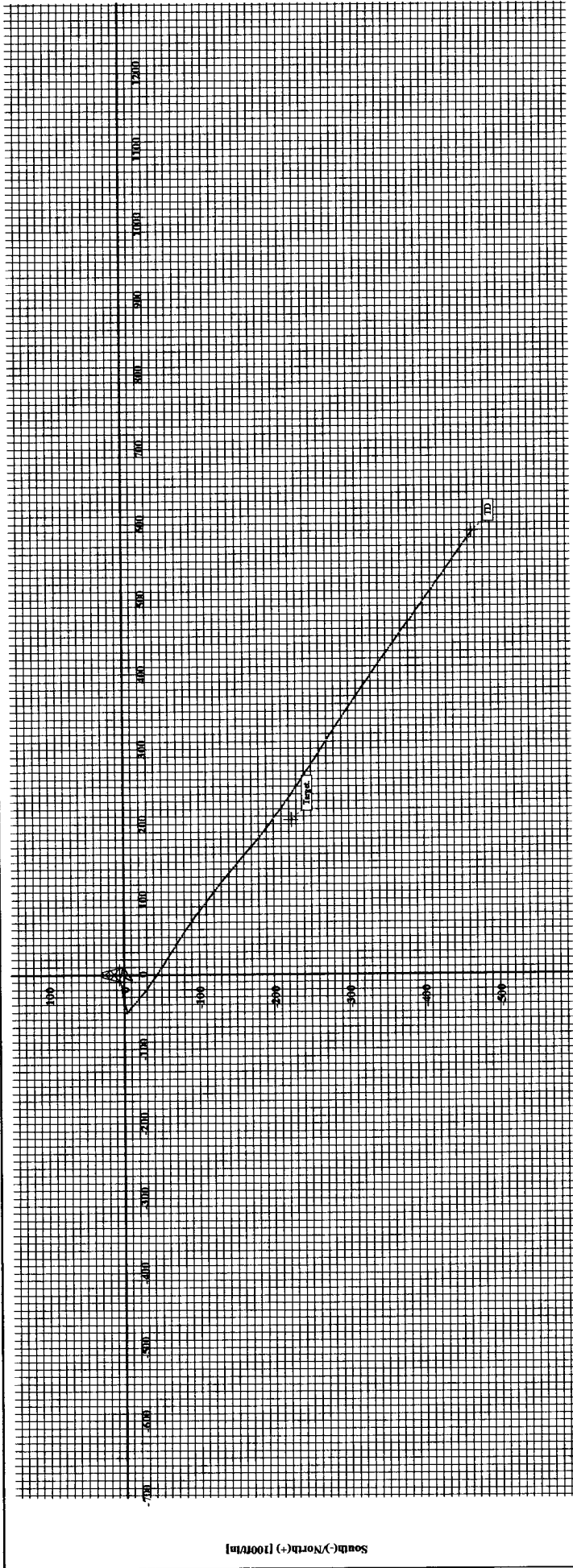
Company: Stevens & Tull	Date: 2/23/2005	Time: 09:27:58	Page: 3
Field: Nadine	Co-ordinate(NE) Reference:	Well: Diamond #1, Grid North	
Site: Lea County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Diamond #1	Section (VS) Reference:	Well (0.00N,0.00E,128.27Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	ClsA deg	ClsD ft	Tool
7194.00	69.20	128.04	7094.14	-115.46	103.98	153.14	8.53	7.94	3.39	138.00	155.38	MWD
7225.00	74.92	128.92	7103.69	-133.81	127.05	182.62	18.65	18.45	2.84	136.48	184.52	MWD
7235.00	77.21	129.27	7106.10	-139.93	134.58	192.33	23.15	22.90	3.50	136.11	194.15	MWD
7256.00	81.69	130.50	7109.94	-153.16	150.42	212.96	22.10	21.33	5.86	135.52	214.67	MWD
7287.00	90.40	131.03	7112.08	-173.34	173.82	243.82	28.15	28.10	1.71	134.92	245.48	MWD
7319.00	92.07	126.72	7111.39	-193.41	198.72	275.81	14.44	5.22	-13.47	134.22	277.30	MWD
7350.00	92.07	126.28	7110.27	-211.84	223.62	306.77	1.42	0.00	-1.42	133.45	308.03	MWD
7382.00	91.28	124.00	7109.33	-230.25	249.78	338.71	7.54	-2.47	-7.12	132.67	339.71	MWD
7414.00	91.98	123.38	7108.42	-247.99	276.39	370.59	2.92	2.19	-1.94	131.90	371.34	MWD
7445.00	91.98	122.59	7107.35	-264.86	302.38	401.44	2.55	0.00	-2.55	131.22	401.97	MWD
7477.00	91.63	123.47	7106.34	-282.29	329.20	433.29	2.96	-1.09	2.75	130.61	433.66	MWD
7508.00	91.80	124.53	7105.41	-299.62	354.88	464.19	3.46	0.55	3.42	130.17	464.45	MWD
7540.00	93.21	124.61	7104.01	-317.76	381.21	496.09	4.41	4.41	0.25	129.81	496.28	MWD
7571.00	94.09	124.61	7102.04	-335.33	406.67	526.97	2.84	2.84	0.00	129.51	527.09	MWD
7602.00	93.56	126.11	7099.97	-353.23	431.89	557.86	5.12	-1.71	4.84	129.28	557.95	MWD
7634.00	93.83	126.02	7097.91	-372.03	457.71	589.77	0.89	0.84	-0.28	129.10	589.83	MWD
7666.00	94.00	125.84	7095.73	-390.76	483.56	621.67	0.77	0.53	-0.56	128.94	621.71	MWD
7697.00	96.81	125.93	7092.81	-408.85	508.56	652.50	9.07	9.06	0.29	128.80	652.53	MWD
7729.00	97.87	125.49	7088.72	-427.37	534.33	684.21	3.58	3.31	-1.37	128.65	684.22	MWD
7757.00	97.87	125.49	7084.88	-443.48	556.91	711.91	0.00	0.00	0.00	128.53	711.92	MWD
7797.00	97.87	125.49	7079.41	-466.48	589.18	751.49	0.00	0.00	0.00	128.37	751.49	MWD



1644 Nader
Site Lee County, NM
Well Diamond #1
Wellpath



West(-)/East(+) [100ft/in]

