

Unit Petroleum

Reno County, Kansas [NAD 83]

Section 6 T26S-R10W

Rooney 6 #1H

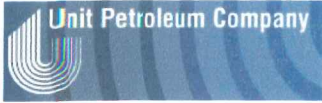
STK

Design: STK

EOW Report

23 December, 2014





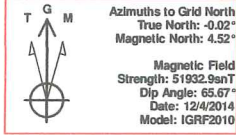
Unit Petroleum
 Project: Reno County, Kansas [NAD 83]
 Site: Section 6 T26S-R10W
 Well: Rooney 6 #1H
 Wellbore: STK
 Design: Design #2
 Lat: 37° 48' 21.297 N
 Long: 98° 27' 45.900 W
 Pad GL: 1786.00
 KB: 14' KB @ 1800.00usft (UDI 331)



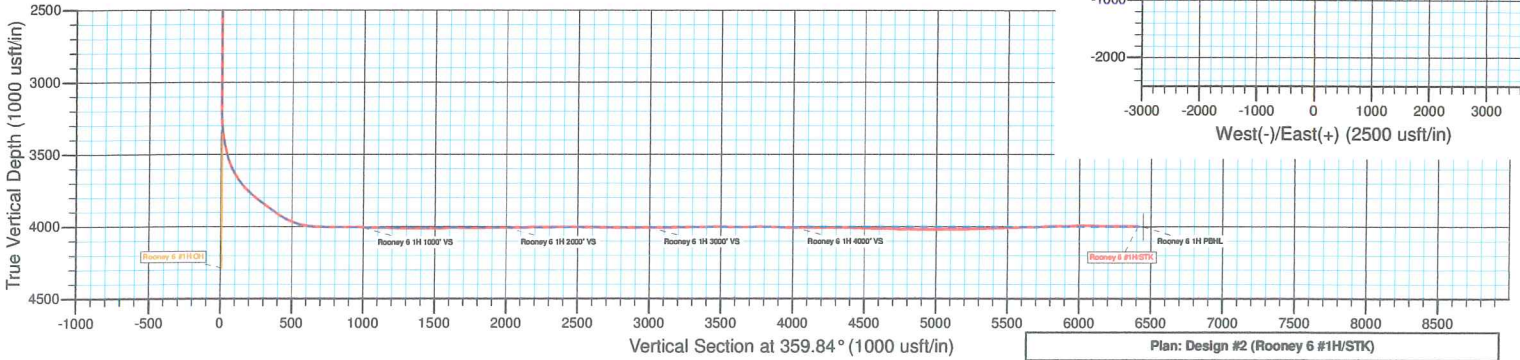
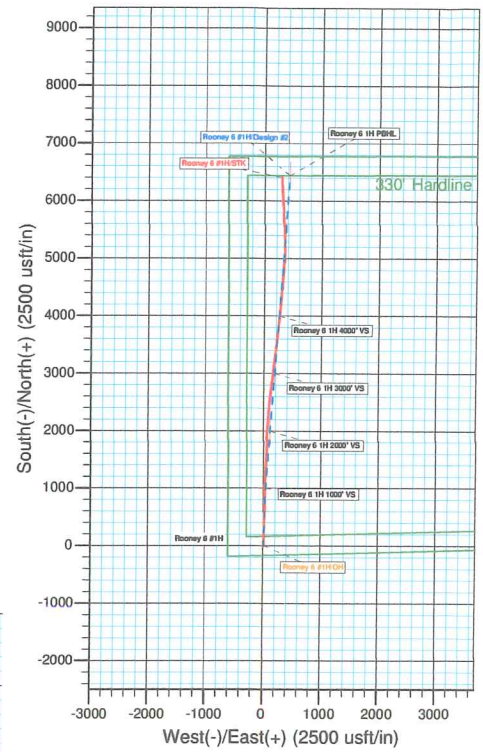
SECTION DETAILS									
MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	
4404.00	88.80	0.60	4002.79	722.09	24.44	0.00	0.00	722.02	
4580.04	88.69	4.12	4006.65	897.92	31.69	2.00	91.83	897.83	
4682.53	88.69	4.12	4008.99	1000.11	38.05	0.00	0.00	1000.00	
4756.53	90.17	4.12	4009.73	1073.91	44.36	2.00	0.00	1073.78	
5885.34	90.17	4.12	4006.97	2000.32	111.09	0.00	0.00	2000.00	
5885.21	90.11	4.12	4006.97	2003.19	111.30	2.00	177.73	2002.87	
6888.13	90.11	4.12	4005.00	3000.52	183.18	0.00	0.00	3000.00	
7690.94	90.11	4.12	4003.03	4000.73	255.27	0.00	0.00	4000.00	
7694.09	90.05	4.13	4003.02	4003.88	255.49	2.00	172.96	4003.15	
10140.97	90.05	4.13	4000.89	6444.40	431.72	0.00	0.00	6443.17	

WELL DETAILS: Rooney 6 #1H					
+N-S	+E-W	Northing	Ground Level: Easting	1786.00 Latitude	98° 27' 45.900 W Longitude
0.00	0.00	1727161.00	1323095.00	37° 48' 21.297 N	

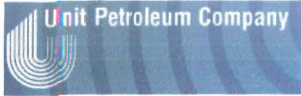
PROJECT DETAILS: Reno County, Kansas [NAD 83]
 Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Kansas Southern Zone
 System Datum: Mean Sea Level



NOTE: All Lease lines and Hard lines are estimates only and are subject to the customers' approval.



Plan: Design #2 (Rooney 6 #1H/STK)
 Created By: Derek Stephens Date: 5:31, December 20 2014



Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Rooney 6 #1H
Project:	Reno County, Kansas [NAD 83]	TVD Reference:	14' KB @ 1800.00usft (UDI 331)
Site:	Section 6 T26S-R10W	MD Reference:	14' KB @ 1800.00usft (UDI 331)
Well:	Rooney 6 #1H	North Reference:	Grid
Wellbore:	STK	Survey Calculation Method:	Minimum Curvature
Design:	STK	Database:	EDM ON IWSERVER

Project	Reno County, Kansas [NAD 83]		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Kansas Southern Zone	Using geodetic scale factor	

Site	Section 6 T26S-R10W				
Site Position:		Northing:	1,727,161.00 usft	Latitude:	37° 48' 21.297 N
From:	Map	Easting:	1,323,095.00 usft	Longitude:	98° 27' 45.900 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.02 °

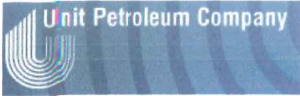
Well	Rooney 6 #1H					
Well Position	+N/-S	0.00 usft	Northing:	1,727,161.00 usft	Latitude:	37° 48' 21.297 N
	+E/-W	0.00 usft	Easting:	1,323,095.00 usft	Longitude:	98° 27' 45.900 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	1,786.00 usft

Wellbore	STK				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/4/2014	4.55	65.67	51,933

Design	STK				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	3,139.00
Vertical Section:		Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
		0.00	0.00	0.00	359.84

Survey Program	Date 12/20/2014				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	3,139.00	VEG Gyro (OH)	CB-GYRO-MS	Camera based gyro multishot	
3,224.00	10,110.00	STK (STK)	MWD	MWD - Standard	

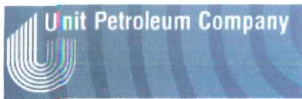
Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.19	41.57	100.00	0.12	0.11	0.12	0.12	0.19
200.00	0.15	25.16	200.00	0.37	0.28	0.37	0.37	0.06
300.00	0.22	142.94	300.00	0.33	0.45	0.33	0.33	0.32
400.00	0.16	326.68	400.00	0.30	0.49	0.29	0.29	0.38
500.00	0.15	148.22	500.00	0.30	0.48	0.30	0.30	0.31
600.00	0.15	331.12	600.00	0.30	0.48	0.30	0.30	0.30
700.00	0.22	183.84	700.00	0.23	0.41	0.23	0.23	0.36
800.00	0.19	84.07	800.00	0.05	0.56	0.05	0.05	0.31
900.00	0.24	40.87	900.00	0.23	0.86	0.23	0.23	0.16
1,000.00	0.19	61.46	1,000.00	0.47	1.14	0.46	0.46	0.09



Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Rooney 6 #1H
Project:	Reno County, Kansas [NAD 83]	TVD Reference:	14' KB @ 1800.00usft (UDI 331)
Site:	Section 6 T26S-R10W	MD Reference:	14' KB @ 1800.00usft (UDI 331)
Well:	Rooney 6 #1H	North Reference:	Grid
Wellbore:	STK	Survey Calculation Method:	Minimum Curvature
Design:	STK	Database:	EDM ON IWSERVER

Survey

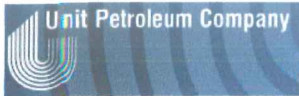
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,100.00	0.22	11.51	1,100.00	0.73	1.33	0.73	0.18
1,200.00	0.25	139.95	1,200.00	0.75	1.51	0.75	0.42
1,300.00	0.22	118.36	1,299.99	0.50	1.82	0.49	0.09
1,400.00	0.36	121.04	1,399.99	0.24	2.25	0.24	0.14
1,445.00	0.24	190.05	1,444.99	0.08	2.36	0.07	0.79
1,500.00	0.00	0.00	1,499.99	-0.04	2.34	-0.04	0.44
1,535.00	0.30	122.70	1,534.99	-0.09	2.42	-0.09	0.86
1,625.00	0.10	164.70	1,624.99	-0.29	2.64	-0.30	0.26
1,715.00	0.20	154.70	1,714.99	-0.51	2.72	-0.51	0.11
1,805.00	1.10	358.70	1,804.99	0.22	2.77	0.21	1.43
1,910.00	0.30	45.70	1,909.98	1.41	2.94	1.41	0.88
2,004.00	0.40	65.70	2,003.98	1.72	3.42	1.71	0.17
2,099.00	0.40	58.70	2,098.97	2.03	4.01	2.02	0.05
2,195.00	0.40	53.70	2,194.97	2.40	4.56	2.39	0.04
2,290.00	0.40	67.70	2,289.97	2.73	5.14	2.71	0.10
2,384.00	0.40	80.70	2,383.97	2.90	5.76	2.89	0.10
2,477.00	0.40	112.70	2,476.97	2.83	6.38	2.81	0.24
2,571.00	0.30	113.70	2,570.96	2.60	6.91	2.58	0.11
2,667.00	0.20	123.70	2,666.96	2.41	7.28	2.39	0.11
2,762.00	0.60	122.70	2,761.96	2.05	7.84	2.03	0.42
2,856.00	0.40	123.70	2,855.96	1.60	8.52	1.58	0.21
2,949.00	0.20	109.70	2,948.96	1.37	8.95	1.34	0.23
3,045.00	0.20	54.70	3,044.96	1.41	9.24	1.38	0.19
3,139.00	0.30	36.70	3,138.95	1.70	9.52	1.67	0.13
3,224.00	1.10	3.90	3,223.95	2.69	9.71	2.66	1.02
3,256.00	2.10	357.30	3,255.93	3.58	9.70	3.56	3.17
3,288.00	4.00	356.00	3,287.89	5.28	9.60	5.26	5.94
3,319.00	5.80	357.50	3,318.77	7.93	9.46	7.90	5.82
3,352.00	7.80	358.90	3,351.54	11.83	9.34	11.81	6.08
3,383.00	9.70	358.10	3,382.18	16.55	9.21	16.52	6.14
3,415.00	11.40	357.80	3,413.64	22.40	9.00	22.38	5.32
3,447.00	12.90	358.30	3,444.92	29.13	8.77	29.11	4.70
3,478.00	14.00	357.80	3,475.07	36.34	8.53	36.31	3.57
3,510.00	15.90	356.90	3,505.98	44.58	8.14	44.56	5.98
3,542.00	18.60	359.80	3,536.54	54.07	7.89	54.04	8.85
3,573.00	21.90	3.70	3,565.62	64.78	8.24	64.76	11.50
3,605.00	25.60	5.00	3,594.91	77.63	9.23	77.60	11.68
3,636.00	29.20	3.30	3,622.43	91.85	10.25	91.83	11.88
3,668.00	32.20	358.70	3,649.94	108.18	10.51	108.15	11.90
3,699.00	35.60	358.40	3,675.67	125.46	10.07	125.43	10.98
3,731.00	39.10	359.60	3,701.10	144.87	9.74	144.84	11.17
3,763.00	42.10	0.80	3,725.40	165.69	9.82	165.66	9.69
3,794.00	45.40	1.50	3,747.79	187.12	10.25	187.09	10.76
3,825.00	48.10	1.70	3,769.03	209.69	10.88	209.65	8.72



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Wellbore:	STK	Survey Calculation Method:	Minimum Curvature
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Survey

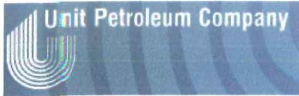
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
3,857.00	50.50	2.10	3,789.89	233.93	11.69	233.90	7.56
3,888.00	52.60	1.70	3,809.17	258.19	12.49	258.16	6.85
3,920.00	53.60	1.70	3,828.38	283.77	13.25	283.73	3.12
3,951.00	54.00	1.70	3,846.69	308.78	13.99	308.74	1.29
3,982.00	54.10	1.20	3,864.89	333.86	14.63	333.82	1.34
4,014.00	54.30	1.40	3,883.61	359.81	15.22	359.77	0.80
4,046.00	54.50	1.40	3,902.24	385.82	15.85	385.78	0.62
4,078.00	56.80	0.90	3,920.29	412.24	16.38	412.19	7.30
4,110.00	60.50	0.80	3,936.94	439.56	16.78	439.51	11.57
4,141.00	64.40	1.30	3,951.27	467.03	17.29	466.98	12.66
4,173.00	67.10	2.40	3,964.41	496.19	18.24	496.14	9.00
4,204.00	70.60	2.80	3,975.60	525.07	19.55	525.01	11.35
4,236.00	74.80	2.40	3,985.11	555.58	20.93	555.52	13.18
4,267.00	78.90	2.30	3,992.16	585.73	22.17	585.67	13.23
4,299.00	82.70	2.00	3,997.28	617.30	23.35	617.23	11.91
4,330.00	86.70	0.60	4,000.14	648.15	24.05	648.08	13.66
4,362.00	88.00	0.00	4,001.62	680.11	24.22	680.04	4.47
4,404.00	88.80	0.60	4,002.79	722.09	24.44	722.02	2.38
4,484.00	89.60	0.10	4,003.91	802.08	24.93	802.01	1.18
4,546.00	89.80	359.50	4,004.23	864.08	24.71	864.01	1.02
4,609.00	90.10	359.10	4,004.29	927.08	23.94	927.01	0.79
4,670.00	88.80	0.70	4,004.87	988.07	23.84	988.00	3.38
4,682.21	88.80	0.56	4,005.13	1,000.28	23.97	1,000.21	1.11
Rooney 6 1H 1000' VS							
4,733.00	88.80	0.00	4,006.19	1,051.06	24.22	1,050.98	1.11
4,795.00	88.70	1.90	4,007.55	1,113.03	25.25	1,112.96	3.07
4,857.00	88.70	2.50	4,008.95	1,174.97	27.63	1,174.89	0.97
4,918.00	88.90	3.10	4,010.23	1,235.88	30.61	1,235.79	1.04
4,980.00	88.80	3.10	4,011.47	1,297.78	33.96	1,297.68	0.16
5,042.00	89.40	3.60	4,012.45	1,359.66	37.58	1,359.55	1.26
5,104.00	90.40	3.00	4,012.56	1,421.56	41.15	1,421.44	1.88
5,165.00	90.70	2.60	4,011.97	1,482.48	44.13	1,482.36	0.82
5,226.00	91.00	2.40	4,011.07	1,543.42	46.79	1,543.28	0.59
5,288.00	91.20	2.40	4,009.88	1,605.35	49.39	1,605.21	0.32
5,350.00	89.10	2.20	4,009.71	1,667.30	51.87	1,667.15	3.40
5,411.00	89.80	1.40	4,010.30	1,728.27	53.79	1,728.11	1.74
5,473.00	90.10	1.20	4,010.35	1,790.25	55.20	1,790.09	0.58
5,534.00	90.70	1.40	4,009.93	1,851.23	56.58	1,851.07	1.04
5,596.00	90.30	2.40	4,009.39	1,913.20	58.64	1,913.02	1.74
5,657.00	91.20	1.90	4,008.59	1,974.15	60.92	1,973.97	1.69
5,685.70	91.15	2.87	4,008.00	2,002.81	62.12	2,002.63	3.39
Rooney 6 1H 2000' VS							
5,719.00	91.10	4.00	4,007.34	2,036.05	64.11	2,035.86	3.39
5,780.00	91.10	4.10	4,006.17	2,096.89	68.42	2,096.69	0.16
5,842.00	90.20	4.40	4,005.47	2,158.71	73.02	2,158.50	1.53



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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,902.00	90.10	4.30	4,005.31	2,218.54	77.57	2,218.31	0.24
5,964.00	90.40	4.20	4,005.04	2,280.37	82.16	2,280.13	0.51
6,026.00	90.90	4.30	4,004.34	2,342.19	86.76	2,341.94	0.82
6,087.00	89.70	4.80	4,004.02	2,403.00	91.60	2,402.73	2.13
6,148.00	89.60	4.70	4,004.39	2,463.79	96.65	2,463.51	0.23
6,210.00	89.40	5.10	4,004.93	2,525.56	101.94	2,525.26	0.72
6,273.00	89.20	5.40	4,005.70	2,588.29	107.71	2,587.98	0.57
6,337.00	89.60	6.10	4,006.37	2,651.96	114.12	2,651.63	1.26
6,400.00	89.80	6.20	4,006.70	2,714.60	120.87	2,714.25	0.35
6,464.00	89.00	6.80	4,007.37	2,778.18	128.11	2,777.81	1.56
6,528.00	90.40	6.80	4,007.71	2,841.73	135.69	2,841.34	2.19
6,591.00	90.30	6.50	4,007.32	2,904.30	142.98	2,903.89	0.50
6,654.00	90.40	6.60	4,006.94	2,966.89	150.17	2,966.46	0.22
6,691.10	90.16	6.36	4,006.76	3,003.76	154.36	3,003.32	0.90
Rooney 6 1H 3000' VS							
6,717.00	90.00	6.20	4,006.72	3,029.50	157.19	3,029.05	0.90
6,781.00	90.00	5.80	4,006.72	3,093.15	163.88	3,092.68	0.62
6,844.00	90.40	6.30	4,006.50	3,155.80	170.52	3,155.31	1.02
6,908.00	91.10	6.50	4,005.66	3,219.39	177.66	3,218.88	1.14
6,972.00	90.00	6.50	4,005.05	3,282.98	184.90	3,282.45	1.72
7,035.00	90.80	6.40	4,004.61	3,345.58	191.98	3,345.03	1.28
7,098.00	91.10	5.80	4,003.56	3,408.21	198.67	3,407.64	1.06
7,161.00	89.70	6.30	4,003.12	3,470.86	205.31	3,470.27	2.36
7,225.00	89.70	6.40	4,003.46	3,534.46	212.39	3,533.86	0.16
7,289.00	89.70	6.40	4,003.79	3,598.06	219.52	3,597.44	0.00
7,352.00	90.40	6.40	4,003.74	3,660.67	226.55	3,660.02	1.11
7,415.00	90.60	6.20	4,003.19	3,723.29	233.46	3,722.62	0.45
7,478.00	89.90	5.90	4,002.91	3,785.94	240.10	3,785.25	1.21
7,541.00	88.80	5.50	4,003.63	3,848.62	246.36	3,847.92	1.86
7,604.00	88.70	5.40	4,005.00	3,911.32	252.34	3,910.60	0.22
7,668.00	88.20	5.60	4,006.73	3,975.00	258.47	3,974.26	0.84
7,693.23	88.55	5.32	4,007.45	4,000.11	260.87	3,999.37	1.78
Rooney 6 1H 4000' VS							
7,732.00	89.10	4.90	4,008.24	4,038.71	264.32	4,037.96	1.78
7,796.00	89.10	4.90	4,009.25	4,102.47	269.79	4,101.70	0.00
7,858.00	89.60	4.70	4,009.95	4,164.25	274.98	4,163.47	0.87
7,921.00	90.30	5.10	4,010.00	4,227.02	280.36	4,226.22	1.28
7,983.00	91.00	5.10	4,009.30	4,288.77	285.87	4,287.95	1.13
8,045.00	90.50	4.90	4,008.49	4,350.53	291.27	4,349.70	0.87
8,109.00	88.50	4.00	4,009.05	4,414.33	296.24	4,413.48	3.43
8,172.00	87.80	4.30	4,011.08	4,477.13	300.80	4,476.27	1.21
8,234.00	88.30	4.40	4,013.19	4,538.92	305.50	4,538.04	0.82
8,297.00	89.00	4.60	4,014.68	4,601.70	310.44	4,600.82	1.16
8,359.00	89.10	4.20	4,015.70	4,663.51	315.19	4,662.61	0.66



Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Rooney 6 #1H
Project:	Reno County, Kansas [NAD 83]	TVD Reference:	14' KB @ 1800.00usft (UDI 331)
Site:	Section 6 T26S-R10W	MD Reference:	14' KB @ 1800.00usft (UDI 331)
Well:	Rooney 6 #1H	North Reference:	Grid
Wellbore:	STK	Survey Calculation Method:	Minimum Curvature
Design:	STK	Database:	EDM ON IWSERVER

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
8,422.00	88.00	4.40	4,017.30	4,726.31	319.91	4,725.40	1.77	
8,486.00	88.90	4.60	4,019.03	4,790.09	324.93	4,789.17	1.44	
8,550.00	88.80	4.30	4,020.31	4,853.89	329.90	4,852.95	0.49	
8,613.00	89.40	3.70	4,021.30	4,916.72	334.29	4,915.77	1.35	
8,675.00	90.80	2.60	4,021.19	4,978.63	337.70	4,977.67	2.87	
8,740.00	90.60	2.00	4,020.40	5,043.57	340.31	5,042.60	0.97	
8,802.00	90.70	2.10	4,019.70	5,105.53	342.53	5,104.55	0.23	
8,864.00	89.90	1.30	4,019.37	5,167.50	344.37	5,166.52	1.82	
8,927.00	92.20	359.40	4,018.22	5,230.48	344.75	5,229.50	4.73	
8,989.00	92.40	358.70	4,015.73	5,292.42	343.72	5,291.44	1.17	
9,052.00	92.30	358.10	4,013.15	5,355.34	341.97	5,354.37	0.96	
9,114.00	91.70	358.20	4,010.98	5,417.27	339.97	5,416.30	0.98	
9,174.00	91.90	358.10	4,009.10	5,477.21	338.03	5,476.25	0.37	
9,235.00	91.90	357.80	4,007.08	5,538.14	335.85	5,537.18	0.49	
9,297.00	91.30	357.80	4,005.34	5,600.07	333.47	5,599.12	0.97	
9,359.00	91.60	357.30	4,003.78	5,661.99	330.82	5,661.05	0.94	
9,422.00	91.70	357.40	4,001.96	5,724.90	327.91	5,723.96	0.22	
9,486.00	91.50	357.50	4,000.17	5,788.81	325.06	5,787.88	0.35	
9,549.00	91.60	357.60	3,998.47	5,851.73	322.37	5,850.81	0.22	
9,613.00	91.50	357.10	3,996.74	5,915.64	319.41	5,914.72	0.80	
9,677.00	91.50	356.70	3,995.06	5,979.52	315.95	5,978.62	0.62	
9,739.00	89.20	356.30	3,994.69	6,041.40	312.17	6,040.50	3.77	
9,802.00	89.10	355.80	3,995.62	6,104.24	307.83	6,103.36	0.81	
9,865.00	89.00	356.80	3,996.66	6,167.10	303.76	6,166.23	1.60	
9,927.00	89.00	357.00	3,997.75	6,229.00	300.41	6,228.14	0.32	
9,991.00	89.00	356.80	3,998.86	6,292.90	296.95	6,292.05	0.31	
10,065.00	89.50	356.90	3,999.83	6,366.78	292.88	6,365.94	0.69	
Last Survey: 10065' MD 3999.20' TVD								
10,110.00	89.50	356.90	4,000.22	6,411.71	290.45	6,410.88	0.00	
TD Projected To MD: 10110' MD - Rooney 6 1H PBHL								

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,065.00	3,999.83	6,366.78	292.88	Last Survey: 10065' MD 3999.20' TVD
10,110.00	4,000.22	6,411.71	290.45	TD Projected To MD: 10110' MD

Checked By: _____ Approved By: _____ Date: _____