



1724-B Townhurst Dr, Houston, Tx 77043
(713) 827-8302
www.nevisenergy.com

Job Number: 71143
Company: Black Hills Gas Resources
Lease/Well: Many Canyons 29-04-11 #134
Location: Rio Arriba County, NM
Rig Name: Patt 744
RKB: 13'
G.L. or M.S.L.: 7049'

State/Country: NM/USA
Declination:
Grid:
File name: Z:\BLACKH-1\71143M-1\29411134.SVY
Date/Time: 05-Jun-07 / 08:05
Curve Name: MC 29-04-11 #134 Actual Surveys

MC 29-4-11 #134

30-039-29981

MC 29-04-11 #134 Actual Surveys

RCVD JUN18'07
OIL CONS. DIV.
DIST. 3

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 284.19
Vertical Section Referenced to Wellhead
Angular Coordinates Referenced to Wellhead

SURF: 1955' FS
I -467
1488' FS

1095' FE
3314
4409' FE
5148

BH2 1468/S

739' FW

BH1 1647/S

1901' E MD3980 TVD3705

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
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Surface Tie-In									
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

First Nevis MWD Survey									
382.00	.50	13.10	382.00	-.54	1.62	.38	1.67	13.10	.13
573.00	.30	1.10	572.99	-.87	2.94	.58	2.99	11.11	.11
761.00	.30	356.10	760.99	-.95	3.92	.55	3.96	8.02	.01
855.00	1.00	180.80	854.98	-.86	3.34	.52	3.38	8.91	1.38
949.00	.20	223.60	948.98	-.64	2.40	.40	2.44	9.43	.92
1044.00	.40	185.80	1043.98	-.45	1.95	.25	1.97	7.34	.29
1139.00	1.00	273.30	1138.97	.44	1.67	-.61	1.78	339.97	1.12
1234.00	.50	212.00	1233.96	1.51	1.37	-1.66	2.15	309.56	.92
1325.00	.50	214.00	1324.96	2.01	.70	-2.09	2.20	288.59	.02
1414.00	.50	198.50	1413.96	2.42	.01	-2.43	2.43	270.29	.15
1504.00	.50	184.20	1503.95	2.65	-.75	-2.58	2.69	253.78	.14
1593.00	.60	197.20	1592.95	2.90	-1.58	-2.75	3.17	240.05	.18
1685.00	.60	189.00	1684.94	3.21	-2.52	-2.97	3.89	229.66	.09
1776.00	.70	185.80	1775.94	3.44	-3.54	-3.10	4.71	221.16	.12
1867.00	.50	182.60	1866.93	3.61	-4.49	-3.17	5.50	215.22	.22
1957.00	.70	169.70	1956.93	3.62	-5.43	-3.09	6.25	209.67	.27
2047.00	.60	157.80	2046.92	3.45	-6.40	-2.82	7.00	203.73	.19
2137.00	.70	145.50	2136.92	3.05	-7.29	-2.33	7.65	197.69	.19
2228.00	.70	151.20	2227.91	2.57	-8.24	-1.74	8.42	191.95	.08
2319.00	.70	160.10	2318.90	2.22	-9.25	-1.29	9.34	187.92	.12

8

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
2408.00	.50	160.60	2407.90	1.99	-10.13	-.97	10.17	185.48	.22
2502.00	.20	152.20	2501.90	1.83	-10.66	-.76	10.68	184.07	.32
2597.00	.30	120.90	2596.90	1.57	-10.93	-.47	10.94	182.45	.17
2692.00	.30	105.10	2691.90	1.14	-11.12	-.01	11.12	180.08	.09
2787.00	.30	83.80	2786.89	.66	-11.16	.47	11.17	177.58	.12
2813.00	.30	82.60	2812.89	.52	-11.15	.61	11.16	176.88	.02
2845.00	.10	207.70	2844.89	.46	-11.16	.68	11.18	176.53	1.15
2877.00	1.50	258.90	2876.89	.89	-11.27	.25	11.27	178.71	4.50
2908.00	3.50	247.80	2907.86	2.20	-11.70	-1.02	11.75	184.99	6.61
2940.00	5.50	248.30	2939.76	4.61	-12.64	-3.35	13.07	194.85	6.25
2972.00	7.40	253.30	2971.55	8.11	-13.80	-6.75	15.36	206.07	6.19
3004.00	9.50	257.90	3003.21	12.76	-14.94	-11.31	18.74	217.11	6.89
3036.00	11.80	255.70	3034.65	18.62	-16.30	-17.06	23.60	226.30	7.30
3067.00	14.00	255.10	3064.87	25.46	-18.05	-23.76	29.84	232.77	7.11
3099.00	13.30	258.80	3095.96	32.95	-19.76	-31.11	36.85	237.57	3.50
3129.00	15.10	255.20	3125.05	40.24	-21.43	-38.27	43.86	240.75	6.68
3161.00	17.80	254.80	3155.74	49.19	-23.78	-47.02	52.69	243.17	8.44
3192.00	20.60	256.00	3185.01	59.26	-26.34	-56.89	62.69	245.15	9.12
3224.00	23.20	256.60	3214.70	71.08	-29.16	-68.48	74.43	246.93	8.15
3256.00	25.60	257.40	3243.84	84.20	-32.13	-81.36	87.48	248.45	7.57
3288.00	28.00	258.80	3272.40	98.54	-35.10	-95.48	101.73	249.82	7.75
3319.00	30.00	260.40	3299.51	113.52	-37.81	-110.26	116.56	251.07	6.92
3350.00	32.50	261.60	3326.01	129.58	-40.32	-126.15	132.43	252.28	8.31
3382.00	34.80	262.90	3352.65	147.30	-42.70	-143.71	149.92	253.45	7.53
3413.00	35.30	261.80	3378.02	165.09	-45.07	-161.36	167.53	254.39	2.60
3445.00	36.20	261.10	3403.99	183.77	-47.85	-179.85	186.10	255.10	3.09
3476.00	38.60	261.80	3428.62	202.57	-50.65	-198.46	204.82	255.68	7.86
3508.00	40.50	261.30	3453.29	222.92	-53.64	-218.62	225.10	256.21	6.02
3539.00	42.70	259.80	3476.47	243.46	-57.03	-238.92	245.63	256.57	7.79
3571.00	44.90	260.20	3499.57	265.55	-60.87	-260.73	267.74	256.86	6.93
3602.00	47.40	261.10	3521.04	287.86	-64.50	-282.78	290.05	257.15	8.33
3633.00	49.40	261.60	3541.62	311.01	-67.99	-305.70	313.17	257.46	6.56
3664.00	51.90	260.80	3561.28	334.95	-71.66	-329.39	337.09	257.73	8.31
3695.00	53.90	262.00	3579.98	359.64	-75.35	-353.83	361.77	257.98	7.15
3727.00	55.80	262.10	3598.40	385.79	-78.97	-379.75	387.87	258.25	5.94
3759.00	57.00	262.90	3616.11	412.43	-82.45	-406.17	414.45	258.53	4.29
3791.00	59.40	263.90	3632.97	439.62	-85.57	-433.19	441.56	258.83	7.96
3822.00	61.50	263.90	3648.26	466.59	-88.43	-460.00	468.42	259.12	6.77
3854.00	64.60	263.80	3662.76	495.11	-91.49	-488.36	496.85	259.39	9.69
3886.00	67.80	261.40	3675.67	524.37	-95.27	-517.38	526.08	259.57	12.13
3950.00	73.00	261.40	3697.13	584.57	-104.28	-576.98	586.32	259.76	8.13
3980.00	X 76.20	262.90	3705.10	613.47	-108.23	-605.62	615.22	259.87	11.71
4011.00	80.40	262.20	3711.38	643.81	-112.16	-635.72	645.54	259.99	13.73
4041.00	84.10	263.60	3715.43	673.52	-115.83	-665.21	675.22	260.12	13.17
4074.00	88.50	265.70	3717.56	706.44	-118.90	-697.99	708.04	260.33	14.77

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
4103.00	89.90	267.10	3717.96	735.41	-120.72	-726.93	736.88	260.57	6.83
4134.00	90.10	266.80	3717.96	766.38	-122.37	-757.88	767.70	260.83	1.16
4165.00	90.10	267.10	3717.91	797.34	-124.02	-788.84	798.53	261.07	.97
4196.00	90.10	267.10	3717.86	828.30	-125.59	-819.80	829.36	261.29	.00
4228.00	90.10	266.80	3717.80	860.26	-127.29	-851.75	861.21	261.50	.94
4260.00	90.10	266.80	3717.74	892.23	-129.08	-883.70	893.08	261.69	.00
4292.00	89.70	265.70	3717.80	924.21	-131.17	-915.63	924.98	261.85	3.66
4323.00	89.70	266.10	3717.96	955.19	-133.39	-946.55	955.91	261.98	1.29
4354.00	89.90	265.40	3718.07	986.18	-135.69	-977.47	986.84	262.10	2.35
4386.00	90.10	265.40	3718.07	1018.18	-138.25	-1009.36	1018.79	262.20	.62
4418.00	89.80	264.70	3718.10	1050.17	-141.01	-1041.25	1050.75	262.29	2.38
4449.00	89.90	264.60	3718.18	1081.17	-143.90	-1072.11	1081.72	262.36	.46
4481.00	90.30	264.70	3718.12	1113.17	-146.89	-1103.97	1113.70	262.42	1.29
4513.00	90.60	265.00	3717.87	1145.17	-149.76	-1135.84	1145.67	262.49	1.33
4545.00	89.40	265.70	3717.87	1177.16	-152.35	-1167.73	1177.63	262.57	4.34
4576.00	89.40	265.40	3718.20	1208.15	-154.76	-1198.64	1208.59	262.64	.97
4608.00	89.60	265.40	3718.48	1240.14	-157.33	-1230.53	1240.55	262.71	.62
4639.00	89.60	265.00	3718.69	1271.13	-159.92	-1261.43	1271.52	262.77	1.29
4671.00	89.70	264.70	3718.89	1303.13	-162.79	-1293.30	1303.50	262.83	.99
4702.00	90.10	264.70	3718.94	1334.13	-165.66	-1324.16	1334.48	262.87	1.29
4734.00	90.60	265.00	3718.75	1366.13	-168.53	-1356.03	1366.46	262.92	1.82
4764.00	89.20	264.30	3718.80	1396.13	-171.32	-1385.90	1396.45	262.95	5.22
4796.00	89.40	264.30	3719.19	1428.12	-174.50	-1417.74	1428.44	262.98	.62
4828.00	89.50	264.30	3719.50	1460.12	-177.68	-1449.58	1460.43	263.01	.31
4859.00	89.50	264.30	3719.77	1491.12	-180.76	-1480.43	1491.42	263.04	.00
4891.00	89.50	264.00	3720.05	1523.12	-184.02	-1512.26	1523.41	263.06	.94
4922.00	89.70	264.30	3720.26	1554.12	-187.18	-1543.10	1554.41	263.08	1.16
4953.00	89.70	264.30	3720.43	1585.12	-190.26	-1573.94	1585.40	263.11	.00
4985.00	90.00	264.70	3720.51	1617.12	-193.33	-1605.79	1617.39	263.14	1.56
5016.00	90.20	264.30	3720.46	1648.12	-196.30	-1636.65	1648.38	263.16	1.44
5047.00	88.80	263.60	3720.73	1679.11	-199.57	-1667.48	1679.38	263.18	5.05
5079.00	88.50	263.30	3721.48	1711.10	-203.21	-1699.26	1711.37	263.18	1.33
5111.00	88.50	262.90	3722.32	1743.09	-207.06	-1731.02	1743.36	263.18	1.25
5142.00	88.30	263.60	3723.18	1774.07	-210.70	-1761.79	1774.34	263.18	2.35
5174.00	88.30	262.60	3724.13	1806.05	-214.54	-1793.54	1806.33	263.18	3.12
5206.00	88.50	262.90	3725.03	1838.03	-218.58	-1825.28	1838.32	263.17	1.13
5238.00	88.70	263.30	3725.81	1870.01	-222.42	-1857.03	1870.31	263.17	1.40
5269.00	88.90	263.30	3726.46	1901.00	-226.04	-1887.82	1901.30	263.17	.65
5301.00	89.00	262.90	3727.04	1932.99	-229.88	-1919.58	1933.29	263.17	1.29
5332.00	89.20	263.20	3727.53	1963.98	-233.63	-1950.35	1964.29	263.17	1.16
5364.00	89.30	263.30	3727.95	1995.97	-237.39	-1982.12	1996.29	263.17	.44
5396.00	89.60	263.30	3728.26	2027.97	-241.13	-2013.90	2028.29	263.17	.94
5427.00	89.70	263.60	3728.45	2058.96	-244.66	-2044.70	2059.28	263.18	1.02
5459.00	89.90	263.60	3728.56	2090.96	-248.23	-2076.50	2091.28	263.18	.62
5491.00	90.10	264.00	3728.56	2122.96	-251.69	-2108.31	2123.28	263.19	1.40

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5522.00	90.40	263.30	3728.42	2153.96	-255.11	-2139.12	2154.28	263.20	2.46
5554.00	90.60	263.30	3728.14	2185.95	-258.85	-2170.90	2186.28	263.20	.62
5586.00	90.80	263.30	3727.75	2217.95	-262.58	-2202.68	2218.28	263.20	.63
5617.00	91.00	263.30	3727.26	2248.94	-266.20	-2233.47	2249.27	263.20	.65
5649.00	91.00	262.90	3726.71	2280.93	-270.04	-2265.23	2281.27	263.20	1.25
5681.00	91.00	263.30	3726.15	2312.92	-273.88	-2296.99	2313.26	263.20	1.25
5713.00	90.80	262.20	3725.65	2344.90	-277.92	-2328.73	2345.26	263.19	3.49
5745.00	90.80	262.20	3725.20	2376.88	-282.27	-2360.43	2377.25	263.18	.00
5776.00	90.80	261.50	3724.77	2407.85	-286.66	-2391.12	2408.24	263.16	2.26
5808.00	90.80	261.20	3724.32	2439.81	-291.47	-2422.75	2440.22	263.14	.94
5840.00	90.80	261.20	3723.87	2471.76	-296.37	-2454.37	2472.20	263.11	.00
5872.00	90.80	261.20	3723.43	2503.72	-301.26	-2485.99	2504.18	263.09	.00
5904.00	90.60	260.50	3723.03	2535.66	-306.35	-2517.58	2536.15	263.06	2.27
5935.00	90.30	260.80	3722.79	2566.60	-311.39	-2548.17	2567.12	263.03	1.37
5965.00	90.10	260.10	3722.69	2596.53	-316.36	-2577.75	2597.09	263.00	2.43
5997.00	89.90	259.80	3722.69	2628.45	-321.95	-2609.26	2629.05	262.97	1.13
6029.00	89.90	259.40	3722.74	2660.34	-327.72	-2640.73	2660.99	262.93	1.25
6060.00	90.30	260.10	3722.69	2691.25	-333.24	-2671.24	2691.94	262.89	2.60
6092.00	90.30	260.10	3722.52	2723.17	-338.74	-2702.76	2723.91	262.86	.00
6124.00	90.10	260.10	3722.41	2755.09	-344.24	-2734.29	2755.87	262.82	.62
6155.00	90.10	259.40	3722.35	2785.99	-349.76	-2764.79	2786.83	262.79	2.26
6186.00	90.30	259.40	3722.25	2816.89	-355.46	-2795.26	2817.77	262.75	.65
6218.00	90.10	259.10	3722.13	2848.77	-361.43	-2826.70	2849.71	262.71	1.13
6249.00	90.10	258.70	3722.08	2879.63	-367.40	-2857.12	2880.64	262.67	1.29
6281.00	90.30	259.10	3721.97	2911.50	-373.56	-2888.52	2912.58	262.63	1.40
6312.00	90.40	260.10	3721.78	2942.40	-379.16	-2919.01	2943.53	262.60	3.24
6344.00	90.40	260.10	3721.56	2974.31	-384.66	-2950.53	2975.50	262.57	.00
6375.00	90.30	258.70	3721.37	3005.21	-390.36	-2981.00	3006.45	262.54	4.53
6407.00	90.10	258.70	3721.25	3037.06	-396.63	-3012.38	3038.38	262.50	.62
6438.00	90.20	258.00	3721.17	3067.90	-402.89	-3042.74	3069.30	262.46	2.28
6469.00	90.20	258.40	3721.07	3098.73	-409.23	-3073.09	3100.22	262.41	1.29
6500.00	90.10	257.30	3720.98	3129.54	-415.75	-3103.39	3131.12	262.37	3.56
6531.00	89.90	257.30	3720.98	3160.31	-422.57	-3133.63	3162.00	262.32	.65
6563.00	89.90	256.90	3721.04	3192.07	-429.71	-3164.83	3193.87	262.27	1.25
6595.00	89.70	256.60	3721.15	3223.80	-437.05	-3195.97	3225.72	262.21	1.13
6627.00	89.70	255.90	3721.32	3255.49	-444.65	-3227.06	3257.55	262.15	2.19
Last Nevis MWD Survey									
6658.00	89.90	255.20	3721.43	3286.14	-452.39	-3257.08	3288.34	262.09	2.35
Survey Projection to TD									
6717.00	90.00	255.20	3721.48	3344.41	-467.46	-3314.12	3346.92	261.97	.17