



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

Job Number: 71083  
Company: Black Hills Gas Resources  
Lease/Well: Jicarilla 464 #22-32 #11  
Location: Rio Arriba County, NM  
Rig Name: Patterson 744  
RKB: 13'  
G.L. or M.S.L.: 7130'

State/Country: NM/USA  
Declination: 10.14839  
Grid: -0.33  
File name: C:\CURRENT-1171083J-1464#2D.SVY  
Date/Time: 08-Apr-07 / 07:52  
Curve Name: Actual

30-039-29887 D, 32, 30N, 3W

Md 4147 TVL 3743 Surface 975/N 796/W  
Bh 11 819/N 1541/W  
Md 6891 TVL 3690 Bh 12 273/N 1067/E

WINSERVE SURVEY CALCULATIONS  
Minimum Curvature Method  
Vertical Section Plane 78.72  
Vertical Section Referenced to Wellhead  
Rectangular Coordinates Referenced to Wellhead

RCVD APR18'07

OIL CONS. DIV.

DIST. 3

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | Vertical<br>Section<br>FT | N-S<br>FT | E-W<br>FT | CLOSURE<br>Distance<br>FT | Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|------------------|-------------------------------|
| Tie-In                  |                      |                           |                           |                           |           |           |                           |                  |                               |
| 362.00                  | .50                  | 263.10                    | 362.00                    | -1.61                     | -.20      | -1.60     | 1.61                      | 262.87           | .00                           |
| First Nevis MWD Survey  |                      |                           |                           |                           |           |           |                           |                  |                               |
| 549.00                  | .30                  | 270.80                    | 549.00                    | -2.90                     | -.29      | -2.90     | 2.91                      | 264.27           | .11                           |
| 735.00                  | .50                  | 274.20                    | 734.99                    | -4.16                     | -.22      | -4.20     | 4.20                      | 266.93           | .11                           |
| 924.00                  | .00                  | 183.80                    | 923.99                    | -4.95                     | -.16      | -5.02     | 5.02                      | 268.12           | .26                           |
| 1111.00                 | .50                  | 336.80                    | 1110.99                   | -5.12                     | .59       | -5.34     | 5.37                      | 276.26           | .27                           |
| 1298.00                 | .40                  | 157.60                    | 1297.98                   | -5.16                     | .73       | -5.41     | 5.46                      | 277.70           | .48                           |
| 1479.00                 | .60                  | 147.30                    | 1478.98                   | -4.70                     | -.65      | -4.66     | 4.70                      | 262.06           | .12                           |
| 1657.00                 | .40                  | 164.20                    | 1656.97                   | -4.31                     | -2.03     | -3.99     | 4.47                      | 242.99           | .14                           |
| 1838.00                 | .50                  | 197.70                    | 1837.96                   | -4.64                     | -3.39     | -4.06     | 5.29                      | 230.09           | .15                           |
| 2019.00                 | .70                  | 206.70                    | 2018.95                   | -5.70                     | -5.13     | -4.79     | 7.02                      | 223.04           | .12                           |
| 2206.00                 | .60                  | 166.30                    | 2205.94                   | -6.36                     | -7.10     | -5.07     | 8.73                      | 215.53           | .25                           |
| 2394.00                 | .70                  | 205.20                    | 2393.93                   | -7.01                     | -9.10     | -5.33     | 10.55                     | 210.36           | .24                           |
| 2581.00                 | .60                  | 224.60                    | 2580.92                   | -8.50                     | -10.83    | -6.50     | 12.63                     | 210.98           | .13                           |
| 2769.00                 | .80                  | 270.90                    | 2768.91                   | -10.59                    | -11.51    | -8.51     | 14.31                     | 216.46           | .31                           |
| 2841.00                 | .60                  | 297.30                    | 2840.90                   | -11.38                    | -11.33    | -9.34     | 14.69                     | 219.51           | .52                           |
| 2869.00                 | .80                  | 285.90                    | 2868.90                   | -11.67                    | -11.21    | -9.66     | 14.80                     | 220.76           | .87                           |
| 2899.00                 | .60                  | 338.50                    | 2898.90                   | -11.88                    | -11.01    | -9.92     | 14.82                     | 222.03           | 2.15                          |
| 2931.00                 | 1.70                 | 45.00                     | 2930.89                   | -11.52                    | -10.51    | -9.65     | 14.27                     | 222.54           | 4.88                          |
| 2962.00                 | 3.60                 | 61.60                     | 2961.86                   | -10.20                    | -9.73     | -8.47     | 12.89                     | 221.04           | 6.55                          |
| 2994.00                 | 6.50                 | 69.40                     | 2993.73                   | -7.46                     | -8.61     | -5.89     | 10.43                     | 214.36           | 9.29                          |
| 3025.00                 | 8.70                 | 58.00                     | 3024.46                   | -3.53                     | -6.75     | -2.25     | 7.12                      | 198.47           | 8.57                          |

File amended C-102 w/correct  
BHL's

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | Vertical<br>Section<br>FT | N-S<br>FT         | E-W<br>FT         | C L O S U R E  |                  | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|---------------------------|-------------------|-------------------|----------------|------------------|-------------------------------|
|                         |                      |                           |                           |                           |                   |                   | Distance<br>FT | Direction<br>Deg |                               |
| 3055.00                 | 11.90                | 63.60                     | 3053.97                   | 1.58                      | -4.17             | 2.44              | 4.83           | 149.66           | 11.16                         |
| 3087.00                 | 14.00                | 65.00                     | 3085.16                   | 8.52                      | -1.07             | 8.91              | 8.97           | 96.84            | 6.63                          |
| 3118.00                 | 15.90                | 67.20                     | 3115.11                   | 16.33                     | 2.16              | 16.22             | 16.36          | 82.41            | 6.40                          |
| 3150.00                 | 18.00                | 70.20                     | 3145.72                   | 25.51                     | 5.54              | 24.91             | 25.52          | 77.47            | 7.11                          |
| 3182.00                 | 20.30                | 73.80                     | 3175.94                   | 35.94                     | 8.76              | 34.90             | 35.98          | 75.91            | 8.08                          |
| 3213.00                 | 22.40                | 76.60                     | 3204.82                   | 47.20                     | 11.63             | 45.81             | 47.26          | 75.76            | 7.53                          |
| 3244.00                 | 24.70                | 77.10                     | 3233.23                   | 59.58                     | 14.44             | 57.87             | 59.65          | 75.99            | 7.45                          |
| 3274.00                 | 27.20                | 77.20                     | 3260.20                   | 72.70                     | 17.36             | 70.67             | 72.77          | 76.20            | 8.33                          |
| 3306.00                 | 29.70                | 77.00                     | 3288.34                   | 87.94                     | 20.77             | 85.53             | 88.01          | 76.35            | 7.82                          |
| 3337.00                 | 32.00                | 77.20                     | 3314.95                   | 103.83                    | 24.32             | 101.02            | 103.91         | 76.47            | 7.43                          |
| 3369.00                 | 34.50                | 78.50                     | 3341.71                   | 121.37                    | 28.00             | 118.17            | 121.44         | 76.67            | 8.12                          |
| 3400.00                 | 36.60                | 80.50                     | 3366.93                   | 139.39                    | 31.28             | 135.89            | 139.45         | 77.04            | 7.74                          |
| 3431.00                 | 38.70                | 81.50                     | 3391.47                   | 158.30                    | 34.24             | 154.59            | 158.34         | 77.51            | 7.05                          |
| 3462.00                 | 41.00                | 81.50                     | 3415.27                   | 178.14                    | 37.17             | 174.24            | 178.16         | 77.96            | 7.42                          |
| 3494.00                 | 43.20                | 81.20                     | 3439.01                   | 199.57                    | 40.40             | 195.45            | 199.58         | 78.32            | 6.90                          |
| 3525.00                 | 44.50                | 81.60                     | 3461.37                   | 221.03                    | 43.61             | 216.68            | 221.03         | 78.62            | 4.29                          |
| 3557.00                 | 46.10                | 81.70                     | 3483.88                   | 243.74                    | 46.91             | 239.18            | 243.74         | 78.90            | 5.00                          |
| 3588.00                 | 48.40                | 81.00                     | 3504.92                   | 266.48                    | 50.34             | 261.69            | 266.49         | 79.11            | 7.60                          |
| 3620.00                 | 50.00                | 80.90                     | 3525.83                   | 290.68                    | 54.15             | 285.61            | 290.70         | 79.26            | 5.01                          |
| 3651.00                 | 51.80                | 80.10                     | 3545.38                   | 314.73                    | 58.12             | 309.33            | 314.75         | 79.36            | 6.14                          |
| 3682.00                 | 53.50                | 79.50                     | 3564.18                   | 339.37                    | 62.49             | 333.59            | 339.39         | 79.39            | 5.70                          |
| 3713.00                 | 54.90                | 78.90                     | 3582.32                   | 364.51                    | 67.20             | 358.28            | 364.53         | 79.38            | 4.78                          |
| 3744.00                 | 55.60                | 78.80                     | 3599.99                   | 389.98                    | 72.12             | 383.27            | 390.00         | 79.34            | 2.27                          |
| 3775.00                 | 58.10                | 78.10                     | 3616.94                   | 415.93                    | 77.32             | 408.70            | 415.95         | 79.29            | 8.28                          |
| 3807.00                 | 59.90                | 77.80                     | 3633.42                   | 443.36                    | 83.05             | 435.52            | 443.37         | 79.20            | 5.68                          |
| 3836.00                 | 62.00                | 78.00                     | 3647.50                   | 468.70                    | 88.36             | 460.31            | 468.72         | 79.13            | 7.27                          |
| 3867.00                 | 63.30                | 77.60                     | 3661.74                   | 496.23                    | 94.18             | 487.22            | 496.24         | 79.06            | 4.35                          |
| 3898.00                 | 64.90                | 76.70                     | 3675.28                   | 524.11                    | 100.38            | 514.41            | 524.11         | 78.96            | 5.78                          |
| 3928.00                 | 66.20                | 76.40                     | 3687.70                   | 551.40                    | 106.74            | 540.97            | 551.40         | 78.84            | 4.43                          |
| 3960.00                 | 68.50                | 76.40                     | 3700.02                   | 580.90                    | 113.68            | 569.67            | 580.90         | 78.71            | 7.19                          |
| 3990.00                 | 71.40                | 76.70                     | 3710.31                   | 609.06                    | 120.23            | 597.08            | 609.06         | 78.61            | 9.71                          |
| 4022.00                 | 74.00                | 76.40                     | 3719.82                   | 639.59                    | 127.34            | 626.79            | 639.59         | 78.52            | 8.17                          |
| 4053.00                 | 76.70                | 76.40                     | 3727.66                   | 669.55                    | 134.39            | 655.94            | 669.56         | 78.42            | 8.71                          |
| 4085.00                 | 79.40                | 76.50                     | 3734.29                   | 700.83                    | 141.73            | 686.37            | 700.85         | 78.33            | 8.44                          |
| 4116.00                 | 82.10                | 76.70                     | 3739.27                   | 731.41                    | 148.82            | 716.13            | 731.43         | 78.26            | 8.73                          |
| 4147.00                 | 83.40                | 76.90                     | 3743.18                   | 762.14                    | <del>155.84</del> | <del>746.07</del> | 762.17         | 78.20            | 4.24                          |
| 4227.00                 | 84.00                | 74.00                     | 3751.96                   | 841.52                    | 175.81            | 823.03            | 841.60         | 77.94            | 3.68                          |
| 4267.00                 | 84.40                | 73.80                     | 3756.00                   | 881.17                    | 186.85            | 861.26            | 881.30         | 77.76            | 1.12                          |
| 4298.00                 | 86.30                | 74.70                     | 3758.52                   | 911.98                    | 195.24            | 891.00            | 912.14         | 77.64            | 6.78                          |
| 4330.00                 | 88.40                | 75.40                     | 3760.00                   | 943.87                    | 203.48            | 921.88            | 944.07         | 77.55            | 6.92                          |
| 4361.00                 | 91.00                | 76.20                     | 3760.16                   | 974.83                    | 211.09            | 951.93            | 975.05         | 77.50            | 8.78                          |
| 4392.00                 | 92.70                | 77.90                     | 3759.16                   | 1005.80                   | 218.03            | 982.12            | 1006.03        | 77.48            | 7.75                          |
| 4424.00                 | 92.70                | 77.50                     | 3757.65                   | 1037.76                   | 224.84            | 1013.35           | 1038.00        | 77.49            | 1.25                          |
| 4455.00                 | 92.80                | 77.80                     | 3756.16                   | 1068.72                   | 231.46            | 1043.60           | 1068.96        | 77.49            | 1.02                          |
| 4487.00                 | 93.80                | 79.40                     | 3754.32                   | 1100.66                   | 237.78            | 1074.92           | 1100.90        | 77.53            | 5.89                          |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | Vertical<br>Section<br>FT | N-S<br>FT | E-W<br>FT | CLOSURE        |                  | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|---------------------------|-----------|-----------|----------------|------------------|-------------------------------|
|                         |                      |                           |                           |                           |           |           | Distance<br>FT | Direction<br>Deg |                               |
| 4518.00                 | 93.90                | 79.60                     | 3752.24                   | 1131.59                   | 243.41    | 1105.33   | 1131.81        | 77.58            | .72                           |
| 4549.00                 | 93.20                | 80.50                     | 3750.32                   | 1162.52                   | 248.76    | 1135.80   | 1162.73        | 77.65            | 3.67                          |
| 4581.00                 | 93.30                | 80.10                     | 3748.50                   | 1194.46                   | 254.14    | 1167.30   | 1194.64        | 77.72            | 1.29                          |
| 4610.00                 | 93.80                | 80.40                     | 3746.71                   | 1223.39                   | 259.04    | 1195.82   | 1223.56        | 77.78            | 2.01                          |
| 4641.00                 | 94.30                | 80.10                     | 3744.52                   | 1254.30                   | 264.28    | 1226.30   | 1254.45        | 77.84            | 1.88                          |
| 4673.00                 | 93.10                | 80.80                     | 3742.45                   | 1286.22                   | 269.58    | 1257.79   | 1286.35        | 77.90            | 4.34                          |
| 4703.00                 | 92.30                | 81.70                     | 3741.04                   | 1316.16                   | 274.14    | 1287.40   | 1316.27        | 77.98            | 4.01                          |
| 4734.00                 | 91.30                | 81.50                     | 3740.07                   | 1347.10                   | 278.66    | 1318.06   | 1347.19        | 78.06            | 3.29                          |
| 4766.00                 | 91.90                | 82.20                     | 3739.17                   | 1379.04                   | 283.20    | 1349.72   | 1379.11        | 78.15            | 2.88                          |
| 4797.00                 | 90.50                | 82.90                     | 3738.52                   | 1409.97                   | 287.21    | 1380.45   | 1410.01        | 78.25            | 5.05                          |
| 4828.00                 | 90.70                | 82.10                     | 3738.20                   | 1440.90                   | 291.26    | 1411.18   | 1440.93        | 78.34            | 2.66                          |
| 4860.00                 | 90.90                | 81.80                     | 3737.75                   | 1472.84                   | 295.74    | 1442.87   | 1472.86        | 78.42            | 1.13                          |
| 4891.00                 | 91.40                | 81.00                     | 3737.13                   | 1503.80                   | 300.38    | 1473.51   | 1503.82        | 78.48            | 3.04                          |
| 4923.00                 | 92.00                | 81.50                     | 3736.18                   | 1535.76                   | 305.24    | 1505.12   | 1535.76        | 78.54            | 2.44                          |
| 4954.00                 | 91.50                | 82.20                     | 3735.24                   | 1566.70                   | 309.63    | 1535.80   | 1566.70        | 78.60            | 2.77                          |
| 4986.00                 | 91.90                | 81.50                     | 3734.29                   | 1598.63                   | 314.17    | 1567.46   | 1598.63        | 78.67            | 2.52                          |
| 5017.00                 | 90.80                | 82.80                     | 3733.56                   | 1629.57                   | 318.40    | 1598.16   | 1629.57        | 78.73            | 5.49                          |
| 5048.00                 | 91.30                | 82.10                     | 3732.99                   | 1660.50                   | 322.47    | 1628.88   | 1660.50        | 78.80            | 2.77                          |
| 5080.00                 | 89.50                | 82.70                     | 3732.76                   | 1692.43                   | 326.71    | 1660.60   | 1692.43        | 78.87            | 5.93                          |
| 5111.00                 | 89.80                | 82.70                     | 3732.95                   | 1723.35                   | 330.64    | 1691.35   | 1723.37        | 78.94            | .97                           |
| 5142.00                 | 90.30                | 82.20                     | 3732.93                   | 1754.29                   | 334.72    | 1722.08   | 1754.31        | 79.00            | 2.28                          |
| 5173.00                 | 90.80                | 81.80                     | 3732.63                   | 1785.23                   | 339.03    | 1752.78   | 1785.27        | 79.05            | 2.07                          |
| 5204.00                 | 91.40                | 82.20                     | 3732.03                   | 1816.18                   | 343.35    | 1783.47   | 1816.22        | 79.10            | 2.33                          |
| 5235.00                 | 91.50                | 81.50                     | 3731.25                   | 1847.12                   | 347.74    | 1814.15   | 1847.17        | 79.15            | 2.28                          |
| 5267.00                 | 91.20                | 81.80                     | 3730.50                   | 1879.07                   | 352.38    | 1845.80   | 1879.13        | 79.19            | 1.33                          |
| 5298.00                 | 91.50                | 81.00                     | 3729.76                   | 1910.03                   | 357.02    | 1876.44   | 1910.10        | 79.23            | 2.76                          |
| 5330.00                 | 90.10                | 80.50                     | 3729.32                   | 1942.00                   | 362.16    | 1908.02   | 1942.09        | 79.25            | 4.65                          |
| 5361.00                 | 90.00                | 79.80                     | 3729.29                   | 1972.99                   | 367.47    | 1938.56   | 1973.08        | 79.27            | 2.28                          |
| 5393.00                 | 90.70                | 79.60                     | 3729.10                   | 2004.99                   | 373.19    | 1970.05   | 2005.08        | 79.27            | 2.28                          |
| 5424.00                 | 91.10                | 79.20                     | 3728.61                   | 2035.98                   | 378.89    | 2000.51   | 2036.08        | 79.28            | 1.82                          |
| 5456.00                 | 91.70                | 79.80                     | 3727.83                   | 2067.97                   | 384.72    | 2031.97   | 2068.07        | 79.28            | 2.65                          |
| 5487.00                 | 92.10                | 79.40                     | 3726.80                   | 2098.95                   | 390.31    | 2062.44   | 2099.05        | 79.28            | 1.82                          |
| 5520.00                 | 92.80                | 79.10                     | 3725.39                   | 2131.92                   | 396.46    | 2094.83   | 2132.02        | 79.28            | 2.31                          |
| 5551.00                 | 91.50                | 80.10                     | 3724.23                   | 2162.89                   | 402.05    | 2125.30   | 2163.00        | 79.29            | 5.29                          |
| 5613.00                 | 88.80                | 80.20                     | 3724.06                   | 2224.87                   | 412.66    | 2186.38   | 2224.98        | 79.31            | 4.36                          |
| 5644.00                 | 88.90                | 79.90                     | 3724.69                   | 2255.85                   | 418.01    | 2216.91   | 2255.98        | 79.32            | 1.02                          |
| 5676.00                 | 88.90                | 79.20                     | 3725.30                   | 2287.84                   | 423.82    | 2248.37   | 2287.97        | 79.33            | 2.19                          |
| 5708.00                 | 89.10                | 79.60                     | 3725.86                   | 2319.83                   | 429.70    | 2279.82   | 2319.96        | 79.33            | 1.40                          |
| 5739.00                 | 89.30                | 79.40                     | 3726.29                   | 2350.83                   | 435.35    | 2310.30   | 2350.96        | 79.33            | .91                           |
| 5770.00                 | 89.50                | 79.50                     | 3726.62                   | 2381.82                   | 441.03    | 2340.77   | 2381.96        | 79.33            | .72                           |
| 5802.00                 | 90.70                | 78.20                     | 3726.56                   | 2413.82                   | 447.21    | 2372.17   | 2413.96        | 79.32            | 5.53                          |
| 5834.00                 | 91.10                | 79.30                     | 3726.06                   | 2445.82                   | 453.46    | 2403.55   | 2445.95        | 79.32            | 3.66                          |
| 5865.00                 | 91.10                | 79.10                     | 3725.46                   | 2476.81                   | 459.26    | 2434.00   | 2476.94        | 79.31            | .65                           |
| 5896.00                 | 91.10                | 78.60                     | 3724.87                   | 2507.81                   | 465.26    | 2464.40   | 2507.94        | 79.31            | 1.61                          |
| 5928.00                 | 91.10                | 78.50                     | 3724.25                   | 2539.80                   | 471.61    | 2495.76   | 2539.93        | 79.30            | .31                           |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | Vertical<br>Section<br>FT | N-S<br>FT | E-W<br>FT | CLOSURE        |                  | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|---------------------------|-----------|-----------|----------------|------------------|-------------------------------|
|                         |                      |                           |                           |                           |           |           | Distance<br>FT | Direction<br>Deg |                               |
| 5960.00                 | 91.20                | 78.20                     | 3723.61                   | 2571.79                   | 478.07    | 2527.10   | 2571.92        | 79.29            | .99                           |
| 5991.00                 | 91.50                | 78.80                     | 3722.88                   | 2602.78                   | 484.25    | 2557.47   | 2602.91        | 79.28            | 2.16                          |
| 6023.00                 | 91.80                | 77.90                     | 3721.96                   | 2634.77                   | 490.71    | 2588.79   | 2634.89        | 79.27            | 2.96                          |
| 6054.00                 | 92.30                | 78.80                     | 3720.85                   | 2665.75                   | 496.96    | 2619.13   | 2665.86        | 79.26            | 3.32                          |
| 6086.00                 | 92.60                | 78.10                     | 3719.48                   | 2697.72                   | 503.36    | 2650.46   | 2697.83        | 79.25            | 2.38                          |
|                         |                      |                           |                           |                           |           |           |                |                  |                               |
| 6117.00                 | 91.10                | 76.60                     | 3718.48                   | 2728.69                   | 510.15    | 2680.69   | 2728.80        | 79.23            | 6.84                          |
| 6149.00                 | 91.30                | 77.20                     | 3717.81                   | 2760.67                   | 517.40    | 2711.85   | 2760.76        | 79.20            | 1.98                          |
| 6180.00                 | 91.60                | 76.50                     | 3717.03                   | 2791.64                   | 524.45    | 2742.02   | 2791.73        | 79.17            | 2.46                          |
| 6212.00                 | 91.70                | 76.40                     | 3716.10                   | 2823.60                   | 531.94    | 2773.12   | 2823.68        | 79.14            | .44                           |
| 6243.00                 | 92.10                | 76.60                     | 3715.08                   | 2854.56                   | 539.18    | 2803.25   | 2854.63        | 79.11            | 1.44                          |
|                         |                      |                           |                           |                           |           |           |                |                  |                               |
| 6274.00                 | 92.70                | 76.90                     | 3713.78                   | 2885.52                   | 546.28    | 2833.40   | 2885.58        | 79.09            | 2.16                          |
| 6305.00                 | 90.60                | 77.40                     | 3712.89                   | 2916.49                   | 553.17    | 2863.61   | 2916.54        | 79.07            | 6.96                          |
| 6336.00                 | 90.90                | 77.20                     | 3712.48                   | 2947.48                   | 559.98    | 2893.84   | 2947.53        | 79.05            | 1.16                          |
| 6367.00                 | 91.10                | 76.50                     | 3711.94                   | 2978.46                   | 567.03    | 2924.03   | 2978.50        | 79.03            | 2.35                          |
| 6398.00                 | 91.40                | 76.20                     | 3711.26                   | 3009.42                   | 574.35    | 2954.14   | 3009.46        | 79.00            | 1.37                          |
|                         |                      |                           |                           |                           |           |           |                |                  |                               |
| 6430.00                 | 91.50                | 75.80                     | 3710.45                   | 3041.38                   | 582.09    | 2985.18   | 3041.40        | 78.97            | 1.29                          |
| 6461.00                 | 91.90                | 75.60                     | 3709.53                   | 3072.32                   | 589.74    | 3015.21   | 3072.34        | 78.93            | 1.44                          |
| 6493.00                 | 92.90                | 76.20                     | 3708.19                   | 3104.25                   | 597.53    | 3046.22   | 3104.27        | 78.90            | 3.64                          |
| 6524.00                 | 92.80                | 75.80                     | 3706.65                   | 3135.18                   | 605.02    | 3076.26   | 3135.19        | 78.87            | 1.33                          |
| 6555.00                 | 93.00                | 75.60                     | 3705.08                   | 3166.10                   | 612.67    | 3106.26   | 3166.10        | 78.84            | .91                           |
|                         |                      |                           |                           |                           |           |           |                |                  |                               |
| 6586.00                 | 92.20                | 75.90                     | 3703.68                   | 3197.02                   | 620.29    | 3136.28   | 3197.03        | 78.81            | 2.76                          |
| 6617.00                 | 92.00                | 75.20                     | 3702.54                   | 3227.95                   | 628.02    | 3166.27   | 3227.96        | 78.78            | 2.35                          |
| 6649.00                 | 91.70                | 75.10                     | 3701.51                   | 3259.88                   | 636.22    | 3197.19   | 3259.88        | 78.75            | .99                           |
| 6680.00                 | 91.80                | 75.00                     | 3700.56                   | 3290.80                   | 644.21    | 3227.13   | 3290.80        | 78.71            | .46                           |
| 6711.00                 | 92.00                | 74.20                     | 3699.53                   | 3321.70                   | 652.44    | 3257.00   | 3321.70        | 78.67            | 2.66                          |
|                         |                      |                           |                           |                           |           |           |                |                  |                               |
| 6743.00                 | 92.20                | 74.20                     | 3698.36                   | 3353.58                   | 661.14    | 3287.77   | 3353.58        | 78.63            | .62                           |
| 6774.00                 | 92.20                | 73.90                     | 3697.17                   | 3384.45                   | 669.66    | 3317.55   | 3384.46        | 78.59            | .97                           |
| 6806.00                 | 92.60                | 73.70                     | 3695.83                   | 3416.31                   | 678.58    | 3348.25   | 3416.32        | 78.54            | 1.40                          |
|                         |                      |                           |                           |                           |           |           |                |                  |                               |
| Last Nevis MWD Survey   |                      |                           |                           |                           |           |           |                |                  |                               |
| 6836.00                 | 93.30                | 74.20                     | 3694.29                   | 3446.16                   | 686.86    | 3377.05   | 3446.19        | 78.50            | 2.87                          |
| 6886.00                 | 93.60                | 74.20                     | 3691.28                   | 3495.92                   | 700.45    | 3425.07   | 3495.96        | 78.44            | .60                           |
|                         |                      |                           |                           |                           |           |           |                |                  |                               |
| Survey Projection to TD |                      |                           |                           |                           |           |           |                |                  |                               |
| 6891.00                 | 93.60                | 74.20                     | 3690.96                   | 3500.89                   | 701.81    | 3429.87   | 3500.94        | 78.44            | .00                           |

JIC 464-32 #111

D  
SURF: 975' FNL 795' FW  
-702 3430  
273' FN 4225' FW  
-2652  
-2640  
1067 FE

BH:  
A

30-039-29887