

# AMOCO PRODUCTION COMPANY

Structure : SEC.6-T30N-R8W

Field : SAN JUAN COUNTY

Location : NEW MEXICO.



## WELL PROFILE DATA

| Point  | MD   | Inc   | Dir    | TVD  | North | East | Deg/100 |
|--------|------|-------|--------|------|-------|------|---------|
| Tie on | 0    | 0.00  | 355.51 | 0    | 0     | 0    | 0.00    |
| KOP    | 4622 | 0.00  | 355.51 | 4622 | 0     | 0    | 0.00    |
| Target | 5236 | 90.00 | 355.51 | 5013 | 389   | -30  | 14.67   |
| Target | 5683 | 90.00 | 356.82 | 5013 | 835   | -60  | 0.29    |
| Target | 6233 | 90.00 | 2.03   | 5013 | 1385  | -66  | 0.95    |
| Target | 7183 | 90.00 | 2.03   | 5013 | 2335  | -32  | 0.00    |
| Target | 7634 | 90.00 | 2.03   | 5013 | 2785  | -16  | 0.00    |
| KOP    | 8384 | 90.00 | 2.03   | 5013 | 3535  | 10   | 0.00    |
| Target | 8484 | 90.00 | 2.02   | 5013 | 3635  | 14   | 0.00    |

Scale 1 : 100.00

East -->

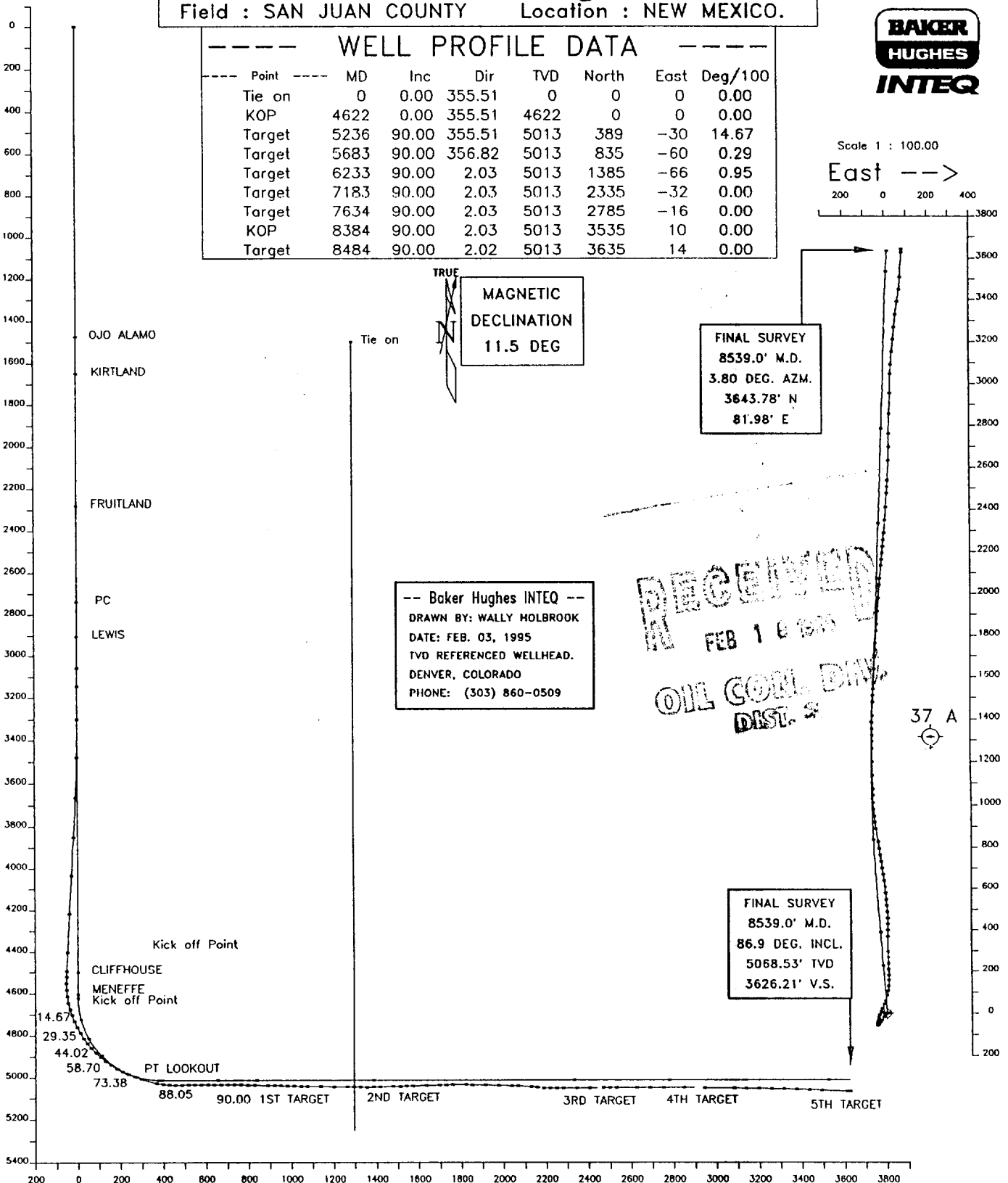
200 0 200 400

Scale 1 : 100.00

<--- North

Scale 1 : 100.00

<--- True Vertical Depth



Scale 1 : 100.00

Vertical Section on 355.51 azimuth with reference 0.00 N, 0.00 E from 37R

AMOCO PRODUCTION COMPANY  
SEC.6-T30N-R8W

37R  
SAN JUAN COUNTY  
NEW MEXICO.

SURVEY LISTING

by  
Baker Hughes Inteq

Your ref : Steering Tool  
Our ref : svy3261  
License :

Date printed : 26-Jan-95  
Date created : 3-Jan-95  
Last revised : 26-Jan-95

Field is centred on n36 30 0.000,w107 40 0  
Structure is centred on n36 30 0.000,w107 40 0

Slot location is n36 30 0.000,w107 40 0.000  
Slot Grid coordinates are N 2001289.673, E 548986.028  
Slot local coordinates are 0.00 N 0.00 E  
Reference North is True North

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DIST. 3

AMOCO PRODUCTION COMPANY  
SEC.6-T30N-R8W,37R  
SAN JUAN COUNTY,NEW MEXICO.

SURVEY LISTING Page 1  
Your ref : Steering Tool  
Last revised : 26-Jan-95

| Measured<br>Depth | Inclin.<br>Degrees | Azimuth<br>Degrees | True Vert.<br>Depth | R E C T A N G U L A R<br>C O O R D I N A T E S |         | Dogleg<br>Deg/100Ft | Vert<br>Sect |
|-------------------|--------------------|--------------------|---------------------|------------------------------------------------|---------|---------------------|--------------|
| 0.00              | 0.00               | 0.00               | 0.00                | 0.00 N                                         | 0.00 E  | 0.00                | 0.00         |
| 3058.00           | 0.00               | 0.00               | 3058.00             | 0.00 N                                         | 0.00 E  | 0.00                | 0.00         |
| 3144.00           | 0.00               | 261.50             | 3144.00             | 0.00 N                                         | 0.00 E  | 0.00                | 0.00         |
| 3298.00           | 1.00               | 261.50             | 3297.99             | 0.20 S                                         | 1.33 W  | 0.65                | -0.09        |
| 3481.00           | 2.00               | 221.50             | 3480.93             | 2.44 S                                         | 5.45 W  | 0.76                | -2.00        |
| 3667.00           | 3.00               | 211.50             | 3666.75             | 8.95 S                                         | 10.27 W | 0.58                | -8.12        |
| 3851.00           | 4.25               | 216.50             | 3850.38             | 18.59 S                                        | 16.78 W | 0.70                | -17.22       |
| 4036.00           | 4.75               | 211.50             | 4034.80             | 30.62 S                                        | 24.89 W | 0.34                | -28.58       |
| 4220.00           | 3.50               | 216.50             | 4218.32             | 41.59 S                                        | 32.29 W | 0.71                | -38.94       |
| 4405.00           | 3.50               | 221.50             | 4402.98             | 50.37 S                                        | 39.39 W | 0.16                | -47.13       |
| 4496.00           | 3.70               | 215.70             | 4493.80             | 54.83 S                                        | 42.96 W | 0.46                | -51.30       |
| 4524.00           | 3.70               | 217.00             | 4521.74             | 56.28 S                                        | 44.03 W | 0.30                | -52.67       |
| 4554.00           | 2.70               | 231.70             | 4551.69             | 57.48 S                                        | 45.20 W | 4.29                | -53.77       |
| 4585.00           | 3.80               | 324.40             | 4582.64             | 57.26 S                                        | 46.75 W | 15.36               | -53.43       |
| 4616.00           | 7.30               | 357.00             | 4613.49             | 54.47 S                                        | 47.73 W | 14.77               | -50.57       |
| 4647.00           | 11.70              | 10.60              | 4644.06             | 49.38 S                                        | 47.39 W | 15.84               | -45.52       |
| 4679.00           | 16.30              | 9.90               | 4675.10             | 41.76 S                                        | 46.02 W | 14.38               | -38.03       |
| 4709.00           | 21.10              | 6.90               | 4703.51             | 32.25 S                                        | 44.61 W | 16.31               | -28.66       |
| 4740.00           | 26.20              | 12.80              | 4731.90             | 20.00 S                                        | 42.48 W | 18.12               | -16.62       |
| 4772.00           | 28.80              | 20.90              | 4760.28             | 5.88 S                                         | 38.20 W | 14.22               | -2.87        |
| 4803.00           | 32.70              | 25.90              | 4786.92             | 8.66 N                                         | 31.91 W | 15.03               | 11.13        |
| 4834.00           | 37.30              | 24.80              | 4812.30             | 24.72 N                                        | 24.30 W | 14.98               | 26.55        |
| 4866.00           | 41.10              | 21.90              | 4837.10             | 43.29 N                                        | 16.29 W | 13.18               | 44.43        |
| 4897.00           | 44.60              | 18.80              | 4859.82             | 63.05 N                                        | 8.96 W  | 13.18               | 63.56        |
| 4928.00           | 47.40              | 14.00              | 4881.35             | 84.43 N                                        | 2.67 W  | 14.34               | 84.38        |
| 4959.00           | 49.80              | 9.30               | 4901.85             | 107.20 N                                       | 2.03 E  | 13.75               | 106.71       |
| 4989.00           | 52.70              | 5.50               | 4920.63             | 130.40 N                                       | 5.04 E  | 13.82               | 129.60       |
| 5021.00           | 55.80              | 1.20               | 4939.32             | 156.31 N                                       | 6.56 E  | 14.58               | 155.32       |
| 5052.00           | 59.30              | 358.50             | 4955.95             | 182.46 N                                       | 6.49 E  | 13.47               | 181.40       |
| 5083.00           | 64.40              | 358.60             | 4970.57             | 209.78 N                                       | 5.80 E  | 16.45               | 208.68       |
| 5114.00           | 68.70              | 358.00             | 4982.90             | 238.20 N                                       | 4.95 E  | 13.98               | 237.08       |
| 5145.00           | 69.30              | 357.50             | 4994.02             | 267.12 N                                       | 3.82 E  | 2.45                | 266.00       |
| 5177.00           | 69.30              | 357.60             | 5005.33             | 297.03 N                                       | 2.54 E  | 0.29                | 295.92       |
| 5252.00           | 77.60              | 1.20               | 5026.67             | 368.84 N                                       | 1.78 E  | 11.98               | 367.57       |
| 5283.00           | 82.20              | 1.10               | 5032.11             | 399.34 N                                       | 2.40 E  | 14.84               | 397.93       |
| 5313.00           | 86.70              | 0.00               | 5035.01             | 429.20 N                                       | 2.68 E  | 15.44               | 427.67       |
| 5342.00           | 90.30              | 359.20             | 5035.77             | 458.18 N                                       | 2.48 E  | 12.72               | 456.58       |
| 5372.00           | 91.20              | 355.40             | 5035.37             | 488.14 N                                       | 1.07 E  | 13.02               | 486.56       |
| 5403.00           | 90.70              | 352.90             | 5034.86             | 518.97 N                                       | 2.09 W  | 8.22                | 517.54       |
| 5433.00           | 91.00              | 355.40             | 5034.41             | 548.81 N                                       | 5.15 W  | 8.39                | 547.53       |
| 5463.00           | 91.10              | 356.60             | 5033.86             | 578.73 N                                       | 7.24 W  | 4.01                | 577.52       |
| 5493.00           | 90.20              | 353.70             | 5033.52             | 608.62 N                                       | 9.78 W  | 10.12               | 607.52       |
| 5523.00           | 90.60              | 353.60             | 5033.32             | 638.43 N                                       | 13.09 W | 1.37                | 637.50       |
| 5555.00           | 88.90              | 351.40             | 5033.45             | 670.15 N                                       | 17.27 W | 8.69                | 669.45       |
| 5587.00           | 88.90              | 351.30             | 5034.07             | 701.78 N                                       | 22.08 W | 0.31                | 701.36       |
| 5618.00           | 89.00              | 351.30             | 5034.64             | 732.42 N                                       | 26.77 W | 0.32                | 732.27       |
| 5649.00           | 89.10              | 351.50             | 5035.15             | 763.07 N                                       | 31.40 W | 0.72                | 763.19       |
| 5681.00           | 88.80              | 351.60             | 5035.74             | 794.72 N                                       | 36.11 W | 0.99                | 795.11       |
| 5713.00           | 88.70              | 351.40             | 5036.44             | 826.36 N                                       | 40.83 W | 0.70                | 827.02       |
| 5776.00           | 89.00              | 352.00             | 5037.70             | 888.68 N                                       | 49.93 W | 1.06                | 889.87       |

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DIST. 3

All data is in feet unless otherwise stated  
Coordinates from 37R and TVD from wellhead.  
Vertical section is from wellhead on azimuth 355.51 degrees.  
Declination is 11.59 degrees, Convergence is 0.10 degrees.  
Calculation uses the radius of curvature method.  
Presented by Baker Hughes Inteq

AMOCO PRODUCTION COMPANY  
SEC.6-T30N-R8W,37R  
SAN JUAN COUNTY,NEW MEXICO.

SURVEY LISTING Page 2  
Your ref : Steering Tool  
Last revised : 26-Jan-95

| Measured<br>Depth | Inclin.<br>Degrees | Azimuth<br>Degrees | True Vert.<br>Depth | R E C T A N G U L A R<br>C O O R D I N A T E S |         | Dogleg<br>Deg/100Ft | Vert<br>Sect                 |
|-------------------|--------------------|--------------------|---------------------|------------------------------------------------|---------|---------------------|------------------------------|
| 5807.00           | 88.90              | 351.90             | 5038.27             | 919.38 N                                       | 54.27 W | 0.46                | 920.80                       |
| 5837.00           | 87.50              | 352.90             | 5039.21             | 949.10 N                                       | 58.23 W | 5.73                | 950.74                       |
| 5867.00           | 87.80              | 355.30             | 5040.44             | 978.91 N                                       | 61.31 W | 8.06                | 980.71                       |
| 5899.00           | 87.40              | 357.20             | 5041.78             | 1010.81 N                                      | 63.40 W | 6.06                | 1012.67                      |
| 5931.00           | 88.20              | 358.60             | 5043.01             | 1042.76 N                                      | 64.58 W | 5.04                | 1044.62                      |
| 5961.00           | 89.60              | 359.60             | 5043.58             | 1072.75 N                                      | 65.05 W | 5.73                | 1074.56                      |
| 6024.00           | 90.00              | 359.20             | 5043.80             | 1135.75 N                                      | 65.71 W | 0.90                | 1137.41                      |
| 6087.00           | 89.00              | 359.50             | 5044.35             | 1198.74 N                                      | 66.42 W | 1.66                | 1200.27                      |
| 6149.00           | 89.40              | 359.80             | 5045.22             | 1260.74 N                                      | 66.80 W | 0.81                | 1262.10                      |
| 6181.00           | 89.30              | 359.70             | 5045.58             | 1292.73 N                                      | 66.94 W | 0.44                | 1294.01                      |
| 6211.00           | 88.90              | 359.90             | 5046.05             | 1322.73 N                                      | 67.04 W | 1.49                | 1323.92                      |
| 6242.00           | 89.50              | 1.10               | 5046.49             | 1353.72 N                                      | 66.77 W | 4.33                | 1354.80                      |
| 6273.00           | 91.30              | 2.00               | 5046.27             | 1384.71 N                                      | 65.94 W | 6.49                | 1385.63                      |
| 6304.00           | 92.00              | 2.30               | 5045.38             | 1415.68 N                                      | 64.77 W | 2.46                | 1416.40                      |
| 6367.00           | 91.90              | 2.40               | 5043.23             | 1478.59 N                                      | 62.19 W | 0.22                | 1478.92                      |
| 6399.00           | 91.00              | 2.20               | 5042.42             | 1510.55 N                                      | 60.91 W | 2.88                | 1510.69                      |
| 6430.00           | 91.10              | 2.20               | 5041.86             | 1541.52 N                                      | 59.72 W | 0.32                | 1541.47                      |
| 6461.00           | 91.60              | 2.20               | 5041.13             | 1572.49 N                                      | 58.53 W | 1.61                | 1572.25                      |
| 6524.00           | 91.50              | 2.50               | 5039.42             | 1635.41 N                                      | 55.95 W | 0.50                | 1634.78                      |
| 6587.00           | 92.50              | 2.90               | 5037.22             | 1698.30 N                                      | 52.98 W | 1.71                | 1697.25                      |
| 6619.00           | 92.70              | 2.50               | 5035.77             | 1730.24 N                                      | 51.47 W | 1.40                | 1728.96                      |
| 6650.00           | 91.00              | 2.90               | 5034.77             | 1761.18 N                                      | 50.02 W | 5.63                | 1759.70                      |
| 6712.00           | 88.80              | 3.40               | 5034.88             | 1823.09 N                                      | 46.61 W | 3.64                | 1821.15                      |
| 6743.00           | 88.60              | 3.50               | 5035.58             | 1854.02 N                                      | 44.74 W | 0.72                | 1851.84                      |
| 6805.00           | 88.70              | 3.90               | 5037.04             | 1915.88 N                                      | 40.74 W | 0.66                | 1913.19                      |
| 6868.00           | 88.50              | 4.30               | 5038.58             | 1978.70 N                                      | 36.24 W | 0.71                | 1975.47                      |
| 6930.00           | 87.80              | 5.90               | 5040.58             | 2040.42 N                                      | 30.73 W | 2.82                | 2036.57                      |
| 6961.00           | 87.70              | 5.40               | 5041.80             | 2071.24 N                                      | 27.68 W | 1.64                | 2067.06                      |
| 7025.00           | 85.50              | 5.20               | 5045.60             | 2134.85 N                                      | 21.78 W | 3.45                | 2130.02                      |
| 7053.00           | 84.30              | 5.90               | 5048.08             | 2162.61 N                                      | 19.08 W | 4.96                | 2157.48                      |
| 7084.00           | 85.50              | 5.60               | 5050.84             | 2193.33 N                                      | 15.99 W | 3.99                | 2187.86                      |
| 7115.00           | 88.70              | 5.20               | 5052.41             | 2224.15 N                                      | 13.08 W | 10.40               | 2218.36                      |
| 7147.00           | 90.20              | 4.90               | 5052.72             | 2256.02 N                                      | 10.26 W | 4.78                | 2249.91                      |
| 7179.00           | 90.40              | 4.90               | 5052.55             | 2287.91 N                                      | 7.53 W  | 0.62                | 2281.49                      |
| 7242.00           | 90.80              | 4.40               | 5051.89             | 2350.70 N                                      | 2.42 W  | 1.02                | 2343.68                      |
| 7304.00           | 90.50              | 4.60               | 5051.18             | 2412.50 N                                      | 2.44 E  | 0.58                | 2404.92                      |
| 7368.00           | 90.50              | 3.50               | 5050.63             | 2476.34 N                                      | 6.96 E  | 1.72                | 2468.20                      |
| 7400.00           | 90.50              | 3.40               | 5050.35             | 2508.28 N                                      | 8.89 E  | 0.31                | 2499.90                      |
| 7431.00           | 90.40              | 2.60               | 5050.10             | 2539.23 N                                      | 10.51 E | 2.60                | 2530.63                      |
| 7526.00           | 90.30              | 2.70               | 5049.52             | 2634.13 N                                      | 14.90 E | 0.15                | 2624.90                      |
| 7589.00           | 90.10              | 1.40               | 5049.30             | 2697.09 N                                      | 17.16 E | 2.09                | 2687.48                      |
| 7653.00           | 89.80              | 1.50               | 5049.36             | 2761.07 N                                      | 18.78 E | 0.49                | 2751.14                      |
| 7748.00           | 89.40              | 1.20               | 5050.02             | 2856.04 N                                      | 21.01 E | 0.53                | 2845.64                      |
| 7846.00           | 89.20              | 2.00               | 5051.22             | 2953.99 N                                      | 23.75 E | 0.84                | 2943.08                      |
| 7940.00           | 89.60              | 2.00               | 5052.20             | 3047.93 N                                      | 27.03 E | 0.42                | 3036.48 AZIMUTH EXTRAPOLATED |
| 7983.00           | 89.10              | 5.50               | 5052.69             | 3090.83 N                                      | 29.84 E | 8.22                | 3079.02                      |
| 8043.00           | 89.00              | 6.00               | 5053.69             | 3150.52 N                                      | 35.85 E | 0.85                | 3138.06                      |
| 8103.00           | 89.10              | 4.20               | 5054.68             | 3210.27 N                                      | 41.18 E | 3.00                | 3197.21                      |
| 8163.00           | 89.10              | 6.40               | 5055.62             | 3270.00 N                                      | 46.73 E | 3.67                | 3256.33                      |
| 8223.00           | 88.70              | 8.00               | 5056.78             | 3329.52 N                                      | 54.24 E | 2.75                | 3315.07                      |

All data is in feet unless otherwise stated  
Coordinates from 37R and TVD from wellhead.  
Vertical section is from wellhead on azimuth 355.51 degrees.  
Declination is 11.59 degrees, Convergence is 0.10 degrees.  
Calculation uses the radius of curvature method.  
Presented by Baker Hughes Inteq

AMOCO PRODUCTION COMPANY  
SEC.6-T30N-R8W,37R  
SAN JUAN COUNTY,NEW MEXICO.

SURVEY LISTING Page 4  
Your ref : Steering Tool  
Last revised : 26-Jan-95

Comments in wellpath  
=====

| MD      | TVD     | Rectangular Coords. | Comment              |
|---------|---------|---------------------|----------------------|
| 7940.00 | 5052.20 | 3047.93 N 27.03 E   | AZIMUTH EXTRAPOLATED |

All data is in feet unless otherwise stated  
Coordinates from 37R and TVD from wellhead.  
Bottom hole distance is 3644.70 on azimuth 1.29 degrees from wellhead.  
Vertical section is from wellhead on azimuth 355.51 degrees.  
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SEC.6-T30N-R8W,37R  
SAN JUAN COUNTY,NEW MEXICO.

SURVEY LISTING Page 3  
Your ref : Steering Tool  
Last revised : 26-Jan-95

| Measured<br>Depth | Inclin.<br>Degrees | Azimuth<br>Degrees | True Vert.<br>Depth | R E C T A N G U L A R<br>C O O R D I N A T E S | Dogleg<br>Deg/100Ft | Vert<br>Sect |
|-------------------|--------------------|--------------------|---------------------|------------------------------------------------|---------------------|--------------|
| 8283.00           | 88.40              | 8.20               | 5058.30             | 3388.90 N 62.70 E                              | 0.60                | 3373.61      |
| 8343.00           | 88.10              | 7.00               | 5060.13             | 3448.34 N 70.63 E                              | 2.06                | 3432.25      |
| 8403.00           | 87.90              | 1.70               | 5062.22             | 3508.11 N 75.17 E                              | 8.83                | 3491.48      |
| 8523.00           | 86.90              | 3.80               | 5067.66             | 3627.84 N 80.92 E                              | 1.94                | 3610.40      |
| 8539.00           | 86.90              | 3.80               | 5068.53             | 3643.78 N 81.98 E                              | 0.00                | 3626.21      |

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