

RECEIVED

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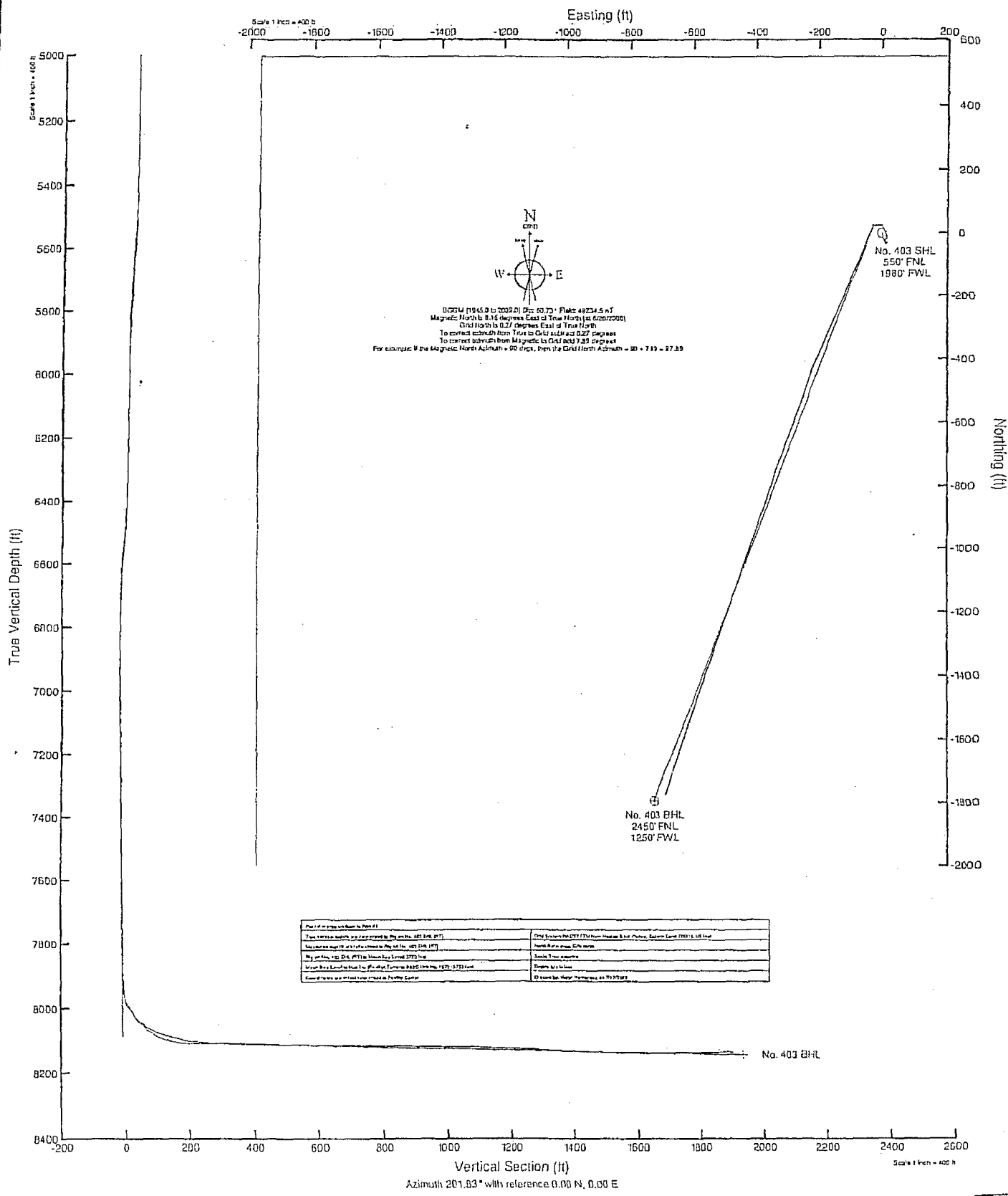
HOBBSON

## Legacy Reserves

Location: Eddy County, NM  
Field: (Tamano) Sec 11, T18S, R31E  
Facility: Tamano BSSC Unit No. 403

Slot: No. 403 SHL  
Well: No. 403  
Wellbore: No. 403 PWB

BAKER  
HUGHES  
TEO





# Actual Wellpath Report

No. 403 AWB

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## REFERENCE DATA IDENTIFICATION

|          |                             |                |                              |
|----------|-----------------------------|----------------|------------------------------|
| Operator | Legacy Reserves             | Slot           | No. 403 SHL                  |
| Area     | Eddy County, NM             | Well           | No. 403                      |
| Field    | (Tamano) Sec 11, T18S, R31E | Wellbore       | No. 403 AWB                  |
| Facility | Tamano BSSC Unit No. 403    | Sidetrack from | No. 403 AWB OH at 7900.00 MD |

## TECHNICAL INFORMATION

|                     |                                                                  |                      |                            |
|---------------------|------------------------------------------------------------------|----------------------|----------------------------|
| Projection System   | NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet | Software System      | WellArchitect® 2.0         |
| North Reference     | Grid                                                             | User                 | Victor Hernandez           |
| Scale               | 0.999935                                                         | Report Generated     | 7/17/2008 at 8:28:43 AM    |
| Convergence at slot | 0.27° East                                                       | Database/Source file | WA_Midland/No. 403_AWB.xml |

## WELLBORE LOCATION

|                       | Local coordinates |          | Grid coordinates |                | Geographic coordinates |                 |
|-----------------------|-------------------|----------|------------------|----------------|------------------------|-----------------|
|                       | North[ft]         | East[ft] | Easting[USft]    | Northing[USft] | Latitude               | Longitude       |
| Well Location         | 0.00              | 0.00     | 651075.20        | 643234.60      | 32°46'02.569"N         | 103°50'30.663"W |
| Facility Reference Pt |                   |          | 651075.20        | 643234.60      | 32°46'02.569"N         | 103°50'30.663"W |
| Field Reference Pt    |                   |          | 651075.20        | 643234.60      | 32°46'02.569"N         | 103°50'30.663"W |

## WELLBORE DATUM

|                          |                         |                                                    |                   |
|--------------------------|-------------------------|----------------------------------------------------|-------------------|
| Calculation method       | Minimum curvature       | Rig on No. 403 SHL (RT) to Facility Vertical Datum | 20.00ft           |
| Horizontal Reference Pt  | Facility Center         | Rig on No. 403 SHL (RT) to Mean Sea Level          | 3773.00ft         |
| Critical Reference Pt    | Rig on No. 403 SHL (RT) | Facility Vertical Datum to Mud Line (Facility)     | 0.00ft            |
| ID Reference Pt          | Rig on No. 403 SHL (RT) | Section Origin                                     | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level          | Section Azimuth                                    | 201.83°           |



# Actual Wellpath Report

No. 403 AWB

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INTEQ

## REFERENCE DATA IDENTIFICATION

|          |                             |                |                              |
|----------|-----------------------------|----------------|------------------------------|
| Operator | Legacy Reserves             | Slot           | No. 403 SHL                  |
| Area     | Eddy County, NM             | Well           | No. 403                      |
| Field    | (Tamano) Sec 11, T18S, R31E | Wellbore       | No. 403 AWB                  |
| Facility | Tamano BSSC Unit No. 403    | Sidetrack from | No. 403 AWB OH at 7900.00 MD |

## WELLPATH DATA (121 stations)

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | DLS<br>[°/100ft] |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|
| 0.00       | 0.000              | 168.430        | 0.00        | 0.00              | 0.00          | 0.00         | 0.00             |
| 100.00     | 0.560              | 168.430        | 100.00      | 0.41              | -0.48         | 0.10         | 0.56             |
| 200.00     | 0.550              | 158.420        | 199.99      | 1.16              | -1.40         | 0.37         | 0.10             |
| 300.00     | 0.620              | 157.450        | 299.99      | 1.90              | -2.35         | 0.76         | 0.07             |
| 400.00     | 0.550              | 157.120        | 399.08      | 2.66              | -3.10         | 1.52         | 0.13             |
| 500.00     | 1.460              | 161.670        | 499.96      | 4.02              | -5.16         | 2.08         | 0.76             |
| 600.00     | 1.680              | 163.810        | 599.92      | 6.14              | -7.78         | 2.88         | 0.23             |
| 700.00     | 1.600              | 166.840        | 699.88      | 8.44              | -10.54        | 3.61         | 0.12             |
| 800.00     | 1.430              | 165.310        | 799.85      | 10.59             | -13.11        | 4.25         | 0.17             |
| 900.00     | 1.890              | 150.470        | 899.33      | 12.19             | -20.45        | 4.99         | 0.15             |
| 1000.00    | 1.210              | 158.600        | 999.79      | 14.15             | -17.57        | 5.80         | 0.18             |
| 1100.00    | 1.190              | 159.700        | 1099.77     | 15.69             | -19.53        | 6.54         | 0.03             |
| 1200.00    | 1.040              | 159.220        | 1199.75     | 17.13             | -21.35        | 7.23         | 0.15             |
| 1300.00    | 0.840              | 161.090        | 1299.74     | 18.35             | -22.89        | 7.79         | 0.20             |
| 1400.00    | 0.750              | 160.800        | 1399.73     | 19.41             | -24.21        | 8.25         | 0.08             |
| 1500.00    | 0.690              | 157.830        | 1499.72     | 20.34             | -25.39        | 8.70         | 0.08             |
| 1600.00    | 0.630              | 154.360        | 1599.71     | 21.14             | -26.44        | 9.16         | 0.07             |
| 1700.00    | 0.610              | 149.520        | 1699.71     | 21.84             | -27.40        | 9.67         | 0.06             |
| 1800.00    | 0.560              | 138.630        | 1799.70     | 22.38             | -28.22        | 10.26        | 0.12             |
| 1900.00    | 0.560              | 118.950        | 1899.70     | 22.72             | -28.79        | 11.03        | 0.24             |
| 2000.00    | 0.680              | 99.920         | 1999.69     | 22.52             | -29.09        | 12.06        | 0.19             |
| 2100.00    | 0.720              | 95.810         | 2099.69     | 22.22             | -29.26        | 13.27        | 0.06             |
| 2200.00    | 0.750              | 99.930         | 2199.68     | 21.91             | -29.43        | 14.54        | 0.06             |
| 2300.00    | 0.540              | 106.660        | 2299.67     | 21.74             | -29.68        | 15.64        | 0.22             |
| 2400.00    | 0.370              | 96.060         | 2399.67     | 21.61             | -29.85        | 16.71        | 0.19             |
| 2500.00    | 0.260              | 79.780         | 2499.67     | 21.40             | -29.84        | 16.96        | 0.14             |
| 2600.00    | 0.310              | 89.020         | 2599.66     | 21.17             | -29.80        | 17.45        | 0.07             |
| 2700.00    | 0.060              | 115.540        | 2699.66     | 21.07             | -29.82        | 17.77        | 0.26             |
| 2800.00    | 0.300              | 212.260        | 2799.66     | 21.33             | -30.06        | 17.68        | 0.31             |
| 2900.00    | 0.260              | 112.200        | 2899.66     | 21.60             | -30.45        | 17.30        | 0.06             |



# Actual Wellpath Report

No. 403 AWB

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INTEQ

## REFERENCE DATA IDENTIFICATION

|          |                             |                |                              |
|----------|-----------------------------|----------------|------------------------------|
| Operator | Legacy Reserves             | Slot           | No. 403 SHL                  |
| Area     | Eddy County, NM             | Well           | No. 403                      |
| Field    | (Tamano) Sec 11, T18S, R31E | Wellbore       | No. 403 AWB                  |
| Facility | Tamano WSSC Unit No. 403    | Sidetrack from | No. 403 AWB OH at 7900.00 MD |

## WELLPATH DATA (121 Stations)

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | DLS<br>[°/100ft] |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|
| 3000.00    | 0.310              | 242.490        | 2999.66     | 22.22             | -30.75        | 17.00        | 0.12             |
| 3100.00    | 0.360              | 212.870        | 3099.66     | 22.74             | -31.14        | 16.59        | 0.18             |
| 3200.00    | 0.500              | 226.530        | 3199.66     | 23.44             | -31.70        | 16.10        | 0.17             |
| 3300.00    | 0.430              | 222.160        | 3299.65     | 24.19             | -32.28        | 15.53        | 0.08             |
| 3400.00    | 0.590              | 204.160        | 3409.65     | 25.01             | -32.81        | 14.88        | 0.23             |
| 3500.00    | 0.590              | 236.590        | 3499.64     | 25.76             | -33.34        | 13.95        | 0.05             |
| 3600.00    | 0.440              | 230.580        | 3599.64     | 26.52             | -33.86        | 13.22        | 0.16             |
| 3700.00    | 0.420              | 233.340        | 3699.64     | 27.17             | -34.33        | 12.63        | 0.03             |
| 3800.00    | 0.400              | 218.990        | 3799.63     | 27.81             | -34.82        | 12.12        | 0.10             |
| 3900.00    | 0.450              | 204.900        | 3899.63     | 28.48             | -35.35        | 11.77        | 0.14             |
| 4000.00    | 0.310              | 261.350        | 3999.63     | 28.86             | -35.65        | 11.39        | 0.30             |
| 4100.00    | 0.300              | 276.030        | 4099.63     | 29.07             | -35.66        | 10.86        | 0.08             |
| 4200.00    | 0.300              | 343.800        | 4199.63     | 28.93             | -35.38        | 10.52        | 0.33             |
| 4300.00    | 0.340              | 296.100        | 4299.63     | 28.70             | -35.00        | 10.19        | 0.26             |
| 4400.00    | 0.410              | 307.100        | 4399.63     | 28.11             | -34.60        | 9.90         | 0.32             |
| 4500.00    | 0.500              | 335.190        | 4499.62     | 27.90             | -33.94        | 9.69         | 0.23             |
| 4600.00    | 0.560              | 347.600        | 4599.62     | 27.19             | -33.06        | 9.40         | 0.13             |
| 4700.00    | 0.750              | 354.320        | 4699.61     | 26.21             | -31.93        | 9.23         | 0.20             |
| 4800.00    | 0.740              | 348.500        | 4799.60     | 25.09             | -30.65        | 9.04         | 0.08             |
| 4900.00    | 0.740              | 326.560        | 4899.60     | 24.02             | -29.07        | 8.76         | 0.08             |
| 5000.00    | 0.850              | 351.650        | 4999.59     | 22.86             | -28.03        | 8.50         | 0.13             |
| 5100.00    | 0.900              | 8.080          | 5099.57     | 21.45             | -26.52        | 8.51         | 0.25             |
| 5200.00    | 0.970              | 26.880         | 5199.56     | 19.85             | -24.98        | 9.00         | 0.31             |
| 5300.00    | 1.210              | 35.290         | 5299.54     | 17.98             | -23.37        | 9.99         | 0.29             |
| 5400.00    | 1.450              | 31.660         | 5399.52     | 15.70             | -21.13        | 11.26        | 0.25             |
| 5500.00    | 1.600              | 31.940         | 5499.48     | 13.08             | -19.17        | 12.67        | 0.15             |
| 5600.00    | 1.710              | 31.200         | 5599.44     | 10.23             | -16.71        | 14.18        | 0.11             |
| 5700.00    | 1.450              | 18.940         | 5699.40     | 7.50              | -14.23        | 15.36        | 0.43             |
| 5800.00    | 0.980              | 353.180        | 5799.38     | 5.48              | -12.19        | 15.67        | 0.71             |
| 5900.00    | 0.800              | 388.050        | 5899.40     | 4.05              | -10.40        | 15.25        | 0.29             |



# Actual Wellpath Report

No. 403 AWB

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| REFERENCE WELL PATH IDENTIFICATION |                             |                |                              |
|------------------------------------|-----------------------------|----------------|------------------------------|
| Operator                           | Legacy Reserves             | Slot           | No. 403 SHL                  |
| Area                               | Eddy County, NM             | Well           | No. 403                      |
| Field                              | (Tamano) Sec 11, T18S, R31E | Wellbore       | No. 403 AWB                  |
| Facility                           | Tamano BSSC Unit No. 403    | Sidetrack from | No. 403 AWB OH at 7900.00 MD |

| WELLPATH DATA (121 stations) |                    |                |             |                   |               |              |                  |
|------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|
| MD<br>[ft]                   | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | DLS<br>[°/100ft] |
| 6000.00                      | 1.240              | 343.740        | 5999.34     | 2.52              | -8.55         | 14.56        | 0.20             |
| 6100.00                      | 1.380              | 346.220        | 6099.32     | 0.69              | -6.34         | 13.97        | 0.15             |
| 6200.00                      | 1.570              | 333.760        | 6199.28     | -1.20             | -3.94         | 13.08        | 0.37             |
| 6300.00                      | 3.540              | 337.720        | 6299.18     | -4.34             | 0.14          | 11.30        | 1.98             |
| 6400.00                      | 3.810              | 338.900        | 6398.90     | -3.08             | 6.10          | 7.90         | 0.29             |
| 6500.00                      | 3.460              | 336.840        | 6498.77     | -13.54            | 11.98         | 6.49         | 0.38             |
| 6600.00                      | 3.340              | 335.920        | 6598.59     | -17.70            | 17.42         | 4.11         | 0.13             |
| 6700.00                      | 2.690              | 329.730        | 6698.46     | -21.16            | 22.10         | 1.74         | 0.73             |
| 6800.00                      | 1.710              | 323.640        | 6798.38     | -23.39            | 25.33         | -0.33        | 1.01             |
| 6900.00                      | 0.760              | 318.190        | 6898.31     | -24.47            | 27.02         | -1.06        | 0.96             |
| 7000.00                      | 0.660              | 261.100        | 6998.35     | -24.47            | 27.43         | -2.67        | 0.68             |
| 7100.00                      | 1.080              | 232.750        | 7098.34     | -23.37            | 26.77         | -3.99        | 0.59             |
| 7200.00                      | 1.370              | 236.650        | 7198.32     | -21.58            | 25.55         | -5.73        | 0.30             |
| 7300.00                      | 1.670              | 256.450        | 7298.28     | -19.76            | 24.55         | -8.15        | 0.60             |
| 7400.00                      | 1.830              | 258.890        | 7398.23     | -16.10            | 21.90         | -10.14       | 0.19             |
| 7500.00                      | 2.010              | 265.530        | 7498.18     | -16.39            | 23.46         | -14.47       | 0.28             |
| 7600.00                      | 1.760              | 271.730        | 7598.12     | -15.09            | 23.37         | -17.75       | 0.32             |
| 7700.00                      | 1.800              | 271.470        | 7698.08     | -14.01            | 23.45         | -20.85       | 0.04             |
| 7800.00                      | 1.830              | 271.890        | 7798.03     | -12.92            | 23.54         | -24.02       | 0.03             |
| 7900.00                      | 1.730              | 278.730        | 7897.98     | -12.01            | 23.82         | -27.11       | 0.23             |
| 7930.00                      | 5.500              | 201.000        | 7927.92     | -10.49            | 22.55         | -28.07       | 18.01            |
| 7962.00                      | 12.700             | 206.200        | 7959.50     | -5.45             | 17.96         | -30.18       | 22.62            |
| 7993.00                      | 23.900             | 205.500        | 7988.89     | 4.25              | 9.20          | -34.40       | 36.14            |
| 8024.00                      | 35.900             | 203.400        | 8015.71     | 19.66             | -4.86         | -40.73       | 38.85            |
| 8055.00                      | 46.800             | 202.700        | 8031.95     | 10.10             | -24.68        | -43.71       | 35.10            |
| 8087.00                      | 57.800             | 202.300        | 8058.49     | 65.38             | -47.04        | -58.40       | 34.39            |
| 8116.00                      | 67.200             | 202.000        | 8071.86     | 91.07             | -70.84        | -68.08       | 32.43            |
| 8147.00                      | 74.400             | 201.300        | 8082.05     | 120.33            | -98.03        | -78.87       | 23.32            |
| 8179.00                      | 75.200             | 201.600        | 8090.44     | 151.21            | -126.77       | -90.16       | 2.66             |
| 8210.00                      | 78.100             | 201.600        | 8099.60     | 118.15            | -150.81       | -101.27      | 0.35             |



# Actual Wellpath Report

No. 403 AWB

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## INTERDRILL WELL PATH IDENTIFICATION

|          |                             |                |                              |
|----------|-----------------------------|----------------|------------------------------|
| Operator | Legacy Resources            | Slot           | No. 403 SHL                  |
| Area     | Eddy County, NM             | Well           | No. 403                      |
| Field    | (Tamano) Sec 11, T18S, R31E | Wellbore       | No. 403 AWB                  |
| Facility | Tamano BSSC Unit No. 403    | Sidetrack from | No. 403 AWB OH at 7900.00 MD |

## WELLPATH DATA (121 stations)

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | DLS<br>[°/100ft] |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|
| 8242.00    | 82.100             | 202.600        | 8103.10     | 212.89            | -184.01       | -113.13      | 12.87            |
| 8273.00    | 85.000             | 203.400        | 8106.58     | 243.68            | -212.36       | -125.16      | 9.70             |
| 8305.00    | 88.600             | 203.400        | 8108.37     | 275.61            | -241.68       | -137.85      | 11.25            |
| 8337.00    | 88.700             | 203.400        | 8109.12     | 307.59            | -271.04       | -150.55      | 0.31             |
| 8368.00    | 88.600             | 203.400        | 8109.85     | 339.57            | -299.48       | -162.86      | 0.32             |
| 8400.00    | 88.600             | 204.000        | 8110.63     | 370.54            | -328.78       | -175.72      | 1.87             |
| 8432.00    | 88.700             | 203.400        | 8111.39     | 402.52            | -358.07       | -188.58      | 1.90             |
| 8463.00    | 89.100             | 204.100        | 8111.98     | 433.49            | -386.44       | -201.06      | 2.60             |
| 8495.00    | 89.300             | 202.300        | 8112.43     | 465.48            | -415.85       | -213.67      | 5.66             |
| 8529.00    | 89.400             | 199.100        | 8113.13     | 497.45            | -445.70       | -226.25      | 5.02             |
| 8622.00    | 89.100             | 199.800        | 8114.53     | 592.39            | -535.09       | -257.26      | 1.16             |
| 8685.00    | 89.000             | 199.800        | 8115.58     | 655.34            | -594.36       | -278.59      | 0.16             |
| 8748.00    | 89.100             | 200.600        | 8116.62     | 718.30            | -653.48       | -300.35      | 1.28             |
| 8811.00    | 90.300             | 200.700        | 8116.95     | 781.29            | -712.43       | -322.56      | 1.91             |
| 8875.00    | 89.000             | 198.300        | 8117.64     | 844.24            | -771.72       | -344.85      | 2.65             |
| 8937.00    | 89.000             | 198.800        | 8118.44     | 907.14            | -831.35       | -364.15      | 0.00             |
| 9000.00    | 89.400             | 199.100        | 8119.32     | 970.06            | -890.93       | -384.61      | 0.79             |
| 9062.00    | 90.100             | 199.100        | 8119.59     | 1031.99           | -949.51       | -404.89      | 1.13             |
| 9126.00    | 88.300             | 199.100        | 8120.48     | 1095.91           | -1009.98      | -425.83      | 2.81             |
| 9190.00    | 87.800             | 198.100        | 8122.66     | 1159.78           | -1070.55      | -447.10      | 1.34             |
| 9253.00    | 87.500             | 199.800        | 8125.24     | 1222.65           | -1130.03      | -466.99      | 2.27             |
| 9316.00    | 87.500             | 198.800        | 8127.99     | 1285.53           | -1189.43      | -487.79      | 1.59             |
| 9379.00    | 86.800             | 199.100        | 8131.12     | 1348.37           | -1248.94      | -508.22      | 1.21             |
| 9442.00    | 88.100             | 199.500        | 8133.93     | 1411.24           | -1308.34      | -529.03      | 2.16             |
| 9506.00    | 87.600             | 199.500        | 8136.53     | 1475.15           | -1368.63      | -550.17      | 0.78             |
| 9569.00    | 88.900             | 199.100        | 8138.25     | 1538.05           | -1428.06      | -571.19      | 2.16             |
| 9633.00    | 89.500             | 199.100        | 8139.14     | 1601.97           | -1488.53      | -592.13      | 0.94             |
| 9695.00    | 89.600             | 198.100        | 8139.63     | 1663.87           | -1547.29      | -611.90      | 1.62             |
| 9788.00    | 91.000             | 197.400        | 8139.14     | 1756.63           | -1635.86      | -640.25      | 1.68             |
| 9885.00    | 91.600             | 196.000        | 8136.99     | 1851.22           | -1726.82      | -667.53      | 6.60             |



# Actual Wellpath Report

No. 403 AWB

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INTEQ

## NEED-TO-KNOW WELLPATH IDENTIFICATION

|          |                             |                |                              |
|----------|-----------------------------|----------------|------------------------------|
| Operator | Legacy Reserves             | Slot           | No. 403 SHL                  |
| Area     | Eddy County, NM             | Well           | No. 403                      |
| Field    | (Tamano) Sec 11, T18S, R31E | Wellbore       | No. 403 AWB                  |
| Facility | Tamano BSSC Unit No. 403    | Sidetrack from | No. 403 AWB OH at 7900.00 MD |

## WELLPATH DATA (121 stations) = interpolated/extrapolated station

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | DLS<br>[°/100ft] |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|
| 9933.00+   | 91.600             | 196.000        | 8135.59     | 1900.95           | -1774.87      | -681.32      | 0.00             |

## TARGETS

| Name        | MD<br>[ft] | TVD<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[srv ft] | Grid North<br>[srv ft] | Latitude       | Longitude       | Shape |
|-------------|------------|-------------|---------------|--------------|-----------------------|------------------------|----------------|-----------------|-------|
| No. 403 BHL |            | 8144.00     | -1794.02      | -718.75      | 650356.50             | 641440.70              | 32°45'44.851"N | 103°50'39.177"W | point |

## WELLPATH COMPOSITION Ref Wellbore: No. 403 AWB Ref Wellpath: No. 403 AWB

| Start MD<br>[ft] | End MD<br>[ft] | Positional Uncertainty Model         | Log Name/Comment  | Wellbore       |
|------------------|----------------|--------------------------------------|-------------------|----------------|
| 0.00             | 7900.00        | Generic gyro - continuous (Standard) | GYRO              | No. 403 AWB OH |
| 7900.00          | 9883.00        | NaviTrak (Standard)                  | MWD               | No. 403 AWB    |
| 9883.00          | 9933.00        | Blind Drilling (std)                 | Projection to bit | No. 403 AWB    |