

30-015-42660



Job Number: SVMO-141685  
Company: Matador Production Co.  
Lease/Well: Guitar 10-24S-28E RB 202H  
Location: Eddy County, NM  
Rig Name: Patterson #203  
RKB: 25'  
G.L. or M.S.L.: GL

State/Country: New Mexico/USA  
Declination: 7.42°  
Grid: East To Grid North  
File name: Y:\WINSER~1\2014SU~1\MATADO~1\GUITAR\1024S28E\RB202H.SVY  
Date/Time: 15-Dec-14 / 15:01  
Curve Name: Surface - 8700' M.D. (Rate Gyro)

MS Survey

WINSERVE SURVEY CALCULATIONS  
Minimum Curvature Method  
Vertical Section Plane .00  
Vertical Section Referenced to Wellhead  
Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from  
Surface MD to 8700 MD is, to the best of  
our knowledge a true and accurate account of  
the well bore.  
Curbs Bingham 12/15/14  
MS Energy Services Date

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | C L O S U R E  |                  | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|----------------|------------------|-------------------------------|
|                         |                      |                           |                           |           |           |                           | Distance<br>FT | Direction<br>Deg |                               |
| .00                     | .00                  | .00                       | .00                       | .00       | .00       | .00                       | .00            | .00              | .00                           |
| 100.00                  | .25                  | 16.63                     | 100.00                    | .21       | .06       | .21                       | .22            | 16.63            | .25                           |
| 200.00                  | .54                  | 51.38                     | 200.00                    | .71       | .49       | .71                       | .87            | 34.69            | .36                           |
| 300.00                  | .82                  | 23.88                     | 299.99                    | 1.66      | 1.15      | 1.66                      | 2.02           | 34.72            | .42                           |
| 400.00                  | 1.31                 | 83.07                     | 399.98                    | 2.45      | 2.58      | 2.45                      | 3.56           | 46.40            | 1.13                          |
| 500.00                  | 1.05                 | 88.87                     | 499.95                    | 2.61      | 4.63      | 2.61                      | 5.31           | 60.58            | .29                           |
| 600.00                  | .78                  | 87.88                     | 599.94                    | 2.65      | 6.22      | 2.65                      | 6.76           | 66.92            | .27                           |
| 700.00                  | .79                  | 95.06                     | 699.93                    | 2.62      | 7.59      | 2.62                      | 8.03           | 70.98            | .10                           |
| 800.00                  | .88                  | 87.04                     | 799.92                    | 2.60      | 9.04      | 2.60                      | 9.41           | 73.99            | .15                           |
| 900.00                  | .97                  | 108.46                    | 899.91                    | 2.37      | 10.61     | 2.37                      | 10.87          | 77.43            | .35                           |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | C L O S U R E  |                  | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|----------------|------------------|-------------------------------|
|                         |                      |                           |                           |           |           |                           | Distance<br>FT | Direction<br>Deg |                               |
| 1000.00                 | .85                  | 92.85                     | 999.90                    | 2.06      | 12.16     | 2.06                      | 12.33          | 80.37            | .27                           |
| 1100.00                 | .19                  | 349.92                    | 1099.89                   | 2.19      | 12.87     | 2.19                      | 13.05          | 80.35            | .91                           |
| 1200.00                 | .39                  | 291.31                    | 1199.89                   | 2.48      | 12.52     | 2.48                      | 12.76          | 78.82            | .33                           |
| 1300.00                 | .55                  | 285.79                    | 1299.89                   | 2.73      | 11.74     | 2.73                      | 12.06          | 76.91            | .17                           |
| 1400.00                 | .40                  | 283.66                    | 1399.88                   | 2.94      | 10.94     | 2.94                      | 11.33          | 74.95            | .15                           |
| 1500.00                 | .67                  | 273.83                    | 1499.88                   | 3.06      | 10.02     | 3.06                      | 10.48          | 73.00            | .28                           |
| 1600.00                 | .29                  | 355.24                    | 1599.88                   | 3.36      | 9.42      | 3.36                      | 10.00          | 70.38            | .69                           |
| 1700.00                 | .36                  | 94.54                     | 1699.88                   | 3.58      | 9.71      | 3.58                      | 10.35          | 69.74            | .50                           |
| 1800.00                 | .25                  | 181.65                    | 1799.88                   | 3.34      | 10.01     | 3.34                      | 10.56          | 71.56            | .43                           |
| 1900.00                 | .15                  | 151.70                    | 1899.87                   | 3.01      | 10.07     | 3.01                      | 10.51          | 73.38            | .14                           |
| 2000.00                 | 1.02                 | 116.44                    | 1999.87                   | 2.49      | 10.93     | 2.49                      | 11.21          | 77.14            | .90                           |
| 2100.00                 | 1.12                 | 102.01                    | 2099.85                   | 1.90      | 12.68     | 1.90                      | 12.82          | 81.50            | .29                           |
| 2200.00                 | 1.29                 | 101.75                    | 2199.83                   | 1.46      | 14.74     | 1.46                      | 14.81          | 84.33            | .17                           |
| 2300.00                 | 1.61                 | 101.84                    | 2299.80                   | .95       | 17.22     | .95                       | 17.24          | 86.86            | .32                           |
| 2400.00                 | 1.57                 | 105.98                    | 2399.76                   | .28       | 19.91     | .28                       | 19.91          | 89.19            | .12                           |
| 2500.00                 | 1.42                 | 95.37                     | 2499.72                   | -.21      | 22.46     | -.21                      | 22.46          | 90.54            | .31                           |
| 2600.00                 | .87                  | 109.79                    | 2599.70                   | -.59      | 24.41     | -.59                      | 24.41          | 91.38            | .62                           |
| 2700.00                 | .66                  | 116.16                    | 2699.70                   | -1.10     | 25.64     | -1.10                     | 25.66          | 92.45            | .23                           |
| 2800.00                 | .82                  | 128.46                    | 2799.69                   | -1.80     | 26.72     | -1.80                     | 26.78          | 93.85            | .22                           |
| 2900.00                 | .78                  | 125.53                    | 2899.68                   | -2.64     | 27.83     | -2.64                     | 27.95          | 95.41            | .06                           |
| 3000.00                 | .71                  | 129.61                    | 2999.67                   | -3.43     | 28.86     | -3.43                     | 29.06          | 96.77            | .09                           |
| 3100.00                 | 1.20                 | 121.46                    | 3099.65                   | -4.37     | 30.23     | -4.37                     | 30.55          | 98.22            | .51                           |
| 3200.00                 | 1.07                 | 124.25                    | 3199.64                   | -5.44     | 31.90     | -5.44                     | 32.36          | 99.68            | .14                           |
| 3300.00                 | 1.33                 | 119.98                    | 3299.61                   | -6.55     | 33.67     | -6.55                     | 34.30          | 101.00           | .27                           |
| 3400.00                 | 1.32                 | 116.82                    | 3399.59                   | -7.65     | 35.71     | -7.65                     | 36.52          | 102.09           | .07                           |
| 3500.00                 | .96                  | 103.37                    | 3499.57                   | -8.36     | 37.55     | -8.36                     | 38.47          | 102.55           | .45                           |
| 3600.00                 | .67                  | 134.23                    | 3599.56                   | -8.96     | 38.78     | -8.96                     | 39.81          | 103.01           | .52                           |
| 3700.00                 | .91                  | 101.60                    | 3699.55                   | -9.53     | 39.98     | -9.53                     | 41.10          | 103.40           | .50                           |
| 3800.00                 | .56                  | 137.07                    | 3799.54                   | -10.05    | 41.09     | -10.05                    | 42.30          | 103.74           | .56                           |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | C L O S U R E  |                  | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|----------------|------------------|-------------------------------|
|                         |                      |                           |                           |           |           |                           | Distance<br>FT | Direction<br>Deg |                               |
| 3900.00                 | .51                  | 68.11                     | 3899.54                   | -10.24    | 41.84     | -10.24                    | 43.07          | 103.75           | .61                           |
| 4000.00                 | .49                  | 151.82                    | 3999.53                   | -10.45    | 42.45     | -10.45                    | 43.72          | 103.83           | .67                           |
| 4100.00                 | .53                  | 86.27                     | 4099.53                   | -10.80    | 43.12     | -10.80                    | 44.45          | 104.06           | .55                           |
| 4200.00                 | .69                  | 148.89                    | 4199.53                   | -11.28    | 43.89     | -11.28                    | 45.32          | 104.42           | .65                           |
| 4300.00                 | .35                  | 95.18                     | 4299.52                   | -11.82    | 44.50     | -11.82                    | 46.05          | 104.88           | .56                           |
| 4400.00                 | .47                  | 170.01                    | 4399.52                   | -12.26    | 44.88     | -12.26                    | 46.52          | 105.27           | .51                           |
| 4500.00                 | .62                  | 165.06                    | 4499.52                   | -13.18    | 45.09     | -13.18                    | 46.98          | 106.30           | .16                           |
| 4600.00                 | .84                  | 115.20                    | 4599.51                   | -14.02    | 45.89     | -14.02                    | 47.99          | 106.98           | .65                           |
| 4700.00                 | .78                  | 116.04                    | 4699.50                   | -14.63    | 47.17     | -14.63                    | 49.38          | 107.23           | .06                           |
| 4800.00                 | .86                  | 128.07                    | 4799.49                   | -15.39    | 48.37     | -15.39                    | 50.76          | 107.65           | .19                           |
| 4900.00                 | 1.28                 | 157.35                    | 4899.47                   | -16.88    | 49.39     | -16.88                    | 52.20          | 108.87           | .68                           |
| 5000.00                 | 2.40                 | 160.35                    | 4999.42                   | -19.89    | 50.52     | -19.89                    | 54.30          | 111.48           | 1.12                          |
| 5100.00                 | 4.58                 | 166.99                    | 5099.23                   | -25.75    | 52.13     | -25.75                    | 58.14          | 116.29           | 2.21                          |
| 5200.00                 | 6.66                 | 168.54                    | 5198.74                   | -35.32    | 54.18     | -35.32                    | 64.68          | 123.10           | 2.09                          |
| 5300.00                 | 8.24                 | 169.02                    | 5297.89                   | -48.04    | 56.70     | -48.04                    | 74.31          | 130.28           | 1.58                          |
| 5400.00                 | 10.05                | 173.50                    | 5396.62                   | -63.75    | 59.05     | -63.75                    | 86.89          | 137.19           | 1.94                          |
| 5500.00                 | 11.88                | 173.50                    | 5494.79                   | -82.65    | 61.20     | -82.65                    | 102.84         | 143.48           | 1.83                          |
| 5600.00                 | 11.64                | 173.75                    | 5592.69                   | -102.90   | 63.47     | -102.90                   | 120.90         | 148.33           | .25                           |
| 5700.00                 | 10.00                | 169.46                    | 5690.91                   | -121.47   | 66.15     | -121.47                   | 138.31         | 151.43           | 1.83                          |
| 5800.00                 | 9.98                 | 172.07                    | 5789.40                   | -138.58   | 68.94     | -138.58                   | 154.78         | 153.55           | .45                           |
| 5900.00                 | 10.78                | 178.76                    | 5887.76                   | -156.52   | 70.33     | -156.52                   | 171.59         | 155.80           | 1.45                          |
| 6000.00                 | 12.03                | 177.98                    | 5985.79                   | -176.28   | 70.90     | -176.28                   | 190.01         | 158.09           | 1.26                          |
| 6100.00                 | 11.82                | 178.99                    | 6083.63                   | -196.94   | 71.45     | -196.94                   | 209.50         | 160.06           | .30                           |
| 6200.00                 | 9.99                 | 180.29                    | 6181.82                   | -215.85   | 71.59     | -215.85                   | 227.41         | 161.65           | 1.85                          |
| 6300.00                 | 7.89                 | 180.10                    | 6280.60                   | -231.39   | 71.53     | -231.39                   | 242.20         | 162.82           | 2.10                          |
| 6400.00                 | 4.86                 | 170.57                    | 6379.97                   | -242.44   | 72.21     | -242.44                   | 252.96         | 163.41           | 3.20                          |
| 6500.00                 | 2.24                 | 168.56                    | 6479.77                   | -248.53   | 73.30     | -248.53                   | 259.12         | 163.57           | 2.62                          |
| 6600.00                 | 1.51                 | 157.83                    | 6579.72                   | -251.67   | 74.18     | -251.67                   | 262.37         | 163.58           | .81                           |
| 6700.00                 | 1.50                 | 96.60                     | 6679.69                   | -253.04   | 75.98     | -253.04                   | 264.20         | 163.29           | 1.53                          |

| Measured<br>Depth<br>FT           | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | C L O S U R E  |                  | Dogleg<br>Severity<br>Deg/100 |
|-----------------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|----------------|------------------|-------------------------------|
|                                   |                      |                           |                           |           |           |                           | Distance<br>FT | Direction<br>Deg |                               |
| 6800.00                           | 1.06                 | 96.30                     | 6779.66                   | -253.29   | 78.20     | -253.29                   | 265.09         | 162.84           | .44                           |
| 6900.00                           | .62                  | 62.75                     | 6879.65                   | -253.14   | 79.60     | -253.14                   | 265.36         | 162.54           | .64                           |
| 7000.00                           | 3.20                 | 341.34                    | 6979.60                   | -250.25   | 79.19     | -250.25                   | 262.48         | 162.44           | 3.17                          |
| 7100.00                           | 4.95                 | 342.23                    | 7079.34                   | -243.50   | 76.98     | -243.50                   | 255.38         | 162.46           | 1.75                          |
| 7200.00                           | 2.59                 | 354.55                    | 7179.12                   | -237.14   | 75.45     | -237.14                   | 248.85         | 162.35           | 2.48                          |
| 7300.00                           | 1.56                 | 6.63                      | 7279.05                   | -233.54   | 75.39     | -233.54                   | 245.41         | 162.11           | 1.11                          |
| 7400.00                           | 1.15                 | 330.66                    | 7379.02                   | -231.31   | 75.05     | -231.31                   | 243.18         | 162.02           | .92                           |
| 7500.00                           | 1.27                 | 330.43                    | 7479.00                   | -229.47   | 74.01     | -229.47                   | 241.11         | 162.12           | .12                           |
| 7600.00                           | 2.43                 | 337.44                    | 7578.95                   | -226.55   | 72.65     | -226.55                   | 237.92         | 162.22           | 1.18                          |
| 7700.00                           | 1.28                 | 351.69                    | 7678.89                   | -223.49   | 71.68     | -223.49                   | 234.70         | 162.22           | 1.23                          |
| 7800.00                           | 1.60                 | 353.63                    | 7778.86                   | -221.00   | 71.36     | -221.00                   | 232.23         | 162.10           | .32                           |
| 7900.00                           | 2.90                 | 344.26                    | 7878.78                   | -217.17   | 70.52     | -217.17                   | 228.34         | 162.01           | 1.35                          |
| 8000.00                           | 1.98                 | 328.14                    | 7978.69                   | -213.27   | 68.92     | -213.27                   | 224.13         | 162.09           | 1.14                          |
| 8100.00                           | 3.65                 | 293.35                    | 8078.58                   | -210.54   | 65.09     | -210.54                   | 220.37         | 162.82           | 2.32                          |
| 8200.00                           | 2.65                 | 282.47                    | 8178.42                   | -208.78   | 59.91     | -208.78                   | 217.21         | 163.99           | 1.16                          |
| 8300.00                           | 2.82                 | 272.37                    | 8278.31                   | -208.18   | 55.19     | -208.18                   | 215.37         | 165.15           | .51                           |
| 8400.00                           | 1.86                 | 285.97                    | 8378.23                   | -207.63   | 51.18     | -207.63                   | 213.85         | 166.15           | 1.10                          |
| 8500.00                           | 1.75                 | 270.26                    | 8478.18                   | -207.18   | 48.09     | -207.18                   | 212.69         | 166.93           | .51                           |
| 8600.00                           | 1.22                 | 235.03                    | 8578.15                   | -207.78   | 45.69     | -207.78                   | 212.75         | 167.60           | 1.03                          |
| <b>Last Survey Depth Recorded</b> |                      |                           |                           |           |           |                           |                |                  |                               |
| 8700.00                           | 2.52                 | 223.29                    | 8678.09                   | -209.99   | 43.31     | -209.99                   | 214.41         | 168.35           | 1.35                          |