

30-015-42488<sup>1</sup>

**5D Survey Report**

**BOPCO, L.P.**

**Field Name:** *Eddy Co, NM Nad27 NMEZ*

**Site Name:** *Poker Lake Unit 432H*

**Well Name:** *PLU 432H*

**Survey:** *Wft MWD Svy*

28 August 2014

Provide signature page



# **PLU 432H**

|                                                                |                                                              |                                   |                                     |  |
|----------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------|-------------------------------------|--|
| <b>Field Name</b><br>Eddy Co, NM<br>Nad27 NMEZ                 | <b>Map Units :</b> US ft                                     |                                   | <b>Company Name :</b> BOPCO, L.P.   |  |
|                                                                | <b>Vertical Reference Datum (VRD) :</b> Mean Sea Level       |                                   |                                     |  |
|                                                                | <b>Projected Coordinate System :</b> NAD27 / New Mexico East |                                   |                                     |  |
| <b>Comment :</b>                                               |                                                              |                                   |                                     |  |
| <b>Site Name</b><br>Poker Lake Unit<br>432H                    | <b>Units :</b> US ft                                         | <b>North Reference :</b> Grid     | <b>Convergence Angle :</b> 0.25     |  |
|                                                                | <b>Position</b>                                              | <b>Northing :</b> 436251.40 US ft | <b>Latitude :</b> 32° 11' 54.53"    |  |
|                                                                |                                                              | <b>Easting :</b> 646793.60 US ft  | <b>Longitude :</b> -103° 51' 31.59" |  |
| <b>Elevation above Mean Sea Level:</b> 3402.00 US ft           |                                                              |                                   |                                     |  |
| <b>Comment :</b>                                               |                                                              |                                   |                                     |  |
| <b>Slot Name</b><br>PLU 432H                                   | <b>Position (Offsets relative to Site Centre)</b>            |                                   |                                     |  |
|                                                                | <b>+N / -S :</b> 0.00 US ft                                  | <b>Northing :</b> 436251.40 US ft | <b>Latitude :</b> 32° 11' 54.53"    |  |
|                                                                | <b>+E / -W :</b> 0.00 US ft                                  | <b>Easting :</b> 646793.60 US ft  | <b>Longitude :</b> -103° 51' 31.59" |  |
| <b>Slot TVD Reference :</b> Ground Elevation                   |                                                              |                                   |                                     |  |
| <b>Elevation above Mean Sea Level :</b> 3402.00 US ft          |                                                              |                                   |                                     |  |
| <b>Comment :</b>                                               |                                                              |                                   |                                     |  |
| <b>Well Name</b><br>PLU 432H                                   | <b>Type :</b> Main well                                      |                                   | <b>UWI :</b>                        |  |
|                                                                | <b>Rig Height Well TVD Reference :</b> 19.00 US ft           |                                   | <b>Comment :</b>                    |  |
|                                                                | <b>Relative to Mean Sea Level:</b> 3421.00 US ft             |                                   |                                     |  |
| <b>Closure Distance :</b> 9083.84 US ft                        |                                                              | <b>Closure Azimuth :</b> 315.788° |                                     |  |
| <b>Vertical Section (Position of Origin Relative to Slot )</b> |                                                              |                                   |                                     |  |
| <b>+N / -S :</b> 0.00 US ft                                    |                                                              | <b>+E / -W :</b> 0.00 US ft       | <b>Az :</b> 316.11°                 |  |

## **Target Set**

**Name :** PLU 432H      **Number of Targets :** 3

## **Comment :**

|                                          |                                                 |                                   |                                     |  |
|------------------------------------------|-------------------------------------------------|-----------------------------------|-------------------------------------|--|
| <b>Target Name:</b><br>PBHL              | <b>Position (Relative to Slot centre)</b>       |                                   |                                     |  |
|                                          | <b>+N / -S :</b> 6546.30 US ft                  | <b>Northing :</b> 442797.70 US ft | <b>Latitude :</b> 32° 12' 59.59"    |  |
|                                          | <b>+E / -W :</b> -6297.80 US ft                 | <b>Easting :</b> 640495.80 US ft  | <b>Longitude :</b> -103° 52' 44.56" |  |
| <b>Shape:</b><br>Cuboid                  | <b>TVD (Well TVD Reference) :</b> 7656.00 US ft |                                   |                                     |  |
| <b>Orientation Azimuth :</b> 0.00°       |                                                 | <b>Inclination :</b> 0.00°        |                                     |  |
| <b>Dimensions Length :</b> 0.00 US ft    |                                                 | <b>Breadth :</b> 0.00 US ft       | <b>Height :</b> 0.00 US ft          |  |
| <b>Target Name:</b><br>HB-1 For Dwg      | <b>Position (Relative to Slot centre)</b>       |                                   |                                     |  |
|                                          | <b>+N / -S :</b> 0.00 US ft                     | <b>Northing :</b> 436251.40 US ft | <b>Latitude :</b> 32° 11' 54.53"    |  |
|                                          | <b>+E / -W :</b> -22.00 US ft                   | <b>Easting :</b> 646771.60 US ft  | <b>Longitude :</b> -103° 51' 31.85" |  |
| <b>Shape:</b><br>Cuboid                  | <b>TVD (Well TVD Reference) :</b> 7821.00 US ft |                                   |                                     |  |
| <b>Orientation Azimuth :</b> 316.21°     |                                                 | <b>Inclination :</b> 0.50°        |                                     |  |
| <b>Dimensions Length :</b> 6000.00 US ft |                                                 | <b>Breadth :</b> 0.00 US ft       | <b>Height :</b> 2.00 US ft          |  |

## 5D Survey Report

|                                                                |                                           |                             |                            |
|----------------------------------------------------------------|-------------------------------------------|-----------------------------|----------------------------|
| <b>Target Name:</b><br>HB 2 For Dwg<br><b>Shape:</b><br>Cuboid | <b>Position (Relative to Slot centre)</b> |                             |                            |
|                                                                | +N / -S : 6546.30US ft                    | Northing : 442797.70 US ft  | Latitude : 32°12'59.59"    |
|                                                                | +E / -W : -6297.80 US ft                  | Easting : 640495.80US ft    | Longitude : -103°52'44.56" |
| <b>TVD (Well TVD Reference) : 7741.00 US ft</b>                |                                           |                             |                            |
| <b>Orientation Azimuth : 316.21°</b>                           |                                           | <b>Inclination : 0.50°</b>  |                            |
| <b>Dimensions Length : 16003.00 US ft</b>                      |                                           | <b>Breadth : 0.00 US ft</b> | <b>Height : 2.00 US ft</b> |

**Survey Name: Wft MWD Svy****Date : 11/Aug/2014****Survey Tool : MWD****Comment :****Company :****Magnetic Model****Model Name: BGGM****Date: 20/Jun/2014****Field Strength:****Declination: 7.51°****Dip: 60.03°**

48256.7 nT

**Tie Point****MD: 791****Inclination: 2.72 Azimuth: 113.59 TVD: 790.728 North Offset: -10.0929 East Offset: 13.83****Casing Points (Relative to Slot centre, TVD relative to Well TVD Reference)**

| MD (US ft) | Inc (°) | Az (°) | TVD (US ft) | N. Offset (US ft) | E. Offset (US ft) | Northing (US ft) | Easting (US ft) | Name     |
|------------|---------|--------|-------------|-------------------|-------------------|------------------|-----------------|----------|
| 4000.00    | 0.97    | 160.20 | 3998.81     | -22.71            | 40.76             | 436228.69        | 646834.36       | 9 5/8 in |
| 7981.00    | 73.39   | 317.68 | 7712.39     | 323.55            | -310.10           | 436574.95        | 646483.50       | 7 in     |

**Well path created using minimum curvature****Survey Points (Relative to Slot centre, TVD relative to Well TVD Reference)**

| MD (US ft) | Inc (°) | Az (°) | TVD (US ft) | N. Offset (US ft) | E. Offset (US ft) | VS (US ft) | DLS (°/100 US ft) | Northing (US ft) | Easting (US ft) | Comment       |
|------------|---------|--------|-------------|-------------------|-------------------|------------|-------------------|------------------|-----------------|---------------|
| 939.00     | 2.82    | 108.58 | 938.56      | -12.66            | 20.50             | -23.33     | 0.00              | 436238.74        | 646814.10       | First Wft Svy |
| 1129.00    | 3.24    | 62.72  | 1128.32     | -11.69            | 29.70             | -29.01     | 1.26              | 436239.71        | 646823.30       |               |
| 1318.00    | 1.04    | 2.17   | 1317.19     | -7.52             | 34.52             | -29.35     | 1.52              | 436243.88        | 646828.12       |               |
| 1508.00    | 0.98    | 28.61  | 1507.16     | -4.37             | 35.36             | -27.67     | 0.25              | 436247.03        | 646828.96       |               |
| 1697.00    | 0.84    | 30.46  | 1696.14     | -1.76             | 36.84             | -26.81     | 0.08              | 436249.64        | 646830.44       |               |
| 1887.00    | 0.65    | 34.83  | 1886.12     | 0.32              | 38.16             | -26.22     | 0.10              | 436251.72        | 646831.76       |               |
| 2077.00    | 0.22    | 31.93  | 2076.11     | 1.52              | 38.97             | -25.92     | 0.23              | 436252.92        | 646832.57       |               |
| 2267.00    | 0.25    | 235.90 | 2266.11     | 1.60              | 38.82             | -25.76     | 0.24              | 436253.00        | 646832.42       |               |
| 2456.00    | 0.38    | 218.94 | 2455.11     | 0.88              | 38.08             | -25.77     | 0.08              | 436252.28        | 646831.68       |               |
| 2646.00    | 0.43    | 226.57 | 2645.11     | -0.10             | 37.17             | -25.84     | 0.04              | 436251.30        | 646830.77       |               |
| 2836.00    | 0.73    | 252.71 | 2835.10     | -0.95             | 35.49             | -25.29     | 0.21              | 436250.45        | 646829.09       |               |
| 3026.00    | 0.60    | 212.40 | 3025.08     | -2.15             | 33.80             | -24.99     | 0.25              | 436249.25        | 646827.40       |               |
| 3216.00    | 0.94    | 175.67 | 3215.07     | -4.55             | 33.39             | -26.42     | 0.31              | 436246.85        | 646826.99       |               |
| 3406.00    | 1.44    | 156.24 | 3405.03     | -8.29             | 34.47             | -29.87     | 0.33              | 436243.11        | 646828.07       |               |
| 3596.00    | 1.71    | 148.86 | 3594.96     | -12.90            | 36.90             | -34.87     | 0.18              | 436238.50        | 646830.50       |               |
| 3786.00    | 1.72    | 159.13 | 3784.87     | -17.99            | 39.38             | -40.26     | 0.16              | 436233.41        | 646832.98       |               |
| 3933.00    | 1.16    | 169.16 | 3931.82     | -21.51            | 40.44             | -43.54     | 0.42              | 436229.89        | 646834.04       |               |
| 4000.00    | 0.97    | 160.20 | 3998.81     | -22.71            | 40.76             | -44.63     | 0.37              | 436228.69        | 646834.36       | 9 5/8 in      |
| 4067.00    | 0.82    | 147.47 | 4065.80     | -23.65            | 41.21             | -45.62     | 0.37              | 436227.75        | 646834.81       |               |
| 4254.00    | 0.85    | 146.85 | 4252.78     | -25.94            | 42.69             | -48.29     | 0.02              | 436225.46        | 646836.29       |               |
| 4442.00    | 1.13    | 132.52 | 4440.76     | -28.36            | 44.82             | -51.51     | 0.20              | 436223.04        | 646838.42       |               |
| 4628.00    | 1.14    | 129.88 | 4626.72     | -30.79            | 47.59             | -55.18     | 0.03              | 436220.61        | 646841.19       |               |
| 4816.00    | 1.20    | 127.52 | 4814.68     | -33.19            | 50.59             | -58.99     | 0.04              | 436218.21        | 646844.19       |               |
| 5004.00    | 1.07    | 130.14 | 5002.64     | -35.52            | 53.49             | -62.68     | 0.07              | 436215.88        | 646847.09       |               |
| 5192.00    | 1.06    | 131.55 | 5190.61     | -37.80            | 56.14             | -66.16     | 0.01              | 436213.60        | 646849.74       |               |
| 5380.00    | 1.03    | 129.70 | 5378.58     | -40.03            | 58.74             | -69.57     | 0.02              | 436211.37        | 646852.34       |               |
| 5568.00    | 0.80    | 133.13 | 5566.56     | -42.01            | 61.00             | -72.56     | 0.13              | 436209.39        | 646854.60       |               |
| 5755.00    | 0.78    | 138.67 | 5753.54     | -43.86            | 62.79             | -75.14     | 0.04              | 436207.54        | 646856.39       |               |
| 5940.00    | 0.85    | 141.88 | 5938.52     | -45.88            | 64.47             | -77.76     | 0.05              | 436205.52        | 646858.07       |               |
| 6127.00    | 0.91    | 149.79 | 6125.50     | -48.26            | 66.07             | -80.58     | 0.07              | 436203.14        | 646859.67       |               |
| 6315.00    | 0.98    | 186.28 | 6313.47     | -51.15            | 66.65             | -83.06     | 0.32              | 436200.25        | 646860.25       |               |
| 6504.00    | 0.90    | 177.31 | 6502.45     | -54.24            | 66.54             | -85.22     | 0.09              | 436197.16        | 646860.14       |               |

## 5D Survey Report

| Survey Points (Relative to Slot centre, TVD relative to Well TVD Reference) |             |           |                |                      |                      |               |                      |                     |                    |         |
|-----------------------------------------------------------------------------|-------------|-----------|----------------|----------------------|----------------------|---------------|----------------------|---------------------|--------------------|---------|
| MD<br>(US ft)                                                               | Inc.<br>(°) | Az<br>(°) | TVD<br>(US ft) | H. Offset<br>(US ft) | E. Offset<br>(US ft) | VS<br>(US ft) | DLS<br>(°/100 US ft) | Northing<br>(US ft) | Easting<br>(US ft) | Comment |
| 6692.00                                                                     | 0.98        | 184.49    | 6690.42        | -57.31               | 66.48                | -87.39        | 0.08                 | 436194.09           | 646860.08          |         |
| 6881.00                                                                     | 1.01        | 175.49    | 6879.39        | -60.59               | 66.49                | -89.76        | 0.08                 | 436190.81           | 646860.09          |         |
| 6984.00                                                                     | 1.05        | 173.57    | 6982.38        | -62.43               | 66.66                | -91.21        | 0.05                 | 436188.97           | 646860.26          |         |
| 7003.00                                                                     | 1.06        | 169.00    | 7001.38        | -62.77               | 66.72                | -91.49        | 0.45                 | 436188.63           | 646860.32          |         |
| 7034.00                                                                     | 0.60        | 193.64    | 7032.37        | -63.21               | 66.73                | -91.82        | 1.85                 | 436188.19           | 646860.33          |         |
| 7064.00                                                                     | 1.41        | 296.18    | 7062.37        | -63.20               | 66.36                | -91.56        | 5.49                 | 436188.20           | 646859.96          |         |
| 7096.00                                                                     | 4.43        | 315.20    | 7094.32        | -62.15               | 65.14                | -89.95        | 9.78                 | 436189.25           | 646858.74          |         |
| 7128.00                                                                     | 7.00        | 324.84    | 7126.16        | -59.68               | 63.15                | -86.79        | 8.55                 | 436191.72           | 646856.75          |         |
| 7159.00                                                                     | 8.95        | 326.98    | 7156.86        | -56.11               | 60.74                | -82.55        | 6.36                 | 436195.29           | 646854.34          |         |
| 7190.00                                                                     | 12.44       | 328.60    | 7187.32        | -51.24               | 57.69                | -76.92        | 11.30                | 436200.16           | 646851.29          |         |
| 7222.00                                                                     | 14.72       | 325.47    | 7218.42        | -44.95               | 53.59                | -69.54        | 7.48                 | 436206.45           | 646847.19          |         |
| 7252.00                                                                     | 17.02       | 324.25    | 7247.28        | -38.24               | 48.86                | -61.44        | 7.75                 | 436213.16           | 646842.46          |         |
| 7284.00                                                                     | 19.09       | 321.23    | 7277.70        | -30.36               | 42.85                | -51.59        | 7.10                 | 436221.04           | 646836.45          |         |
| 7314.00                                                                     | 21.44       | 316.85    | 7305.84        | -22.54               | 36.03                | -41.22        | 9.32                 | 436228.86           | 646829.63          |         |
| 7345.00                                                                     | 24.30       | 314.25    | 7334.40        | -13.95               | 27.58                | -29.17        | 9.78                 | 436237.45           | 646821.18          |         |
| 7377.00                                                                     | 27.43       | 312.77    | 7363.19        | -4.35                | 17.45                | -15.23        | 9.99                 | 436247.05           | 646811.05          |         |
| 7408.00                                                                     | 29.17       | 312.62    | 7390.49        | 5.62                 | 6.65                 | -0.56         | 5.62                 | 436257.02           | 646800.25          |         |
| 7439.00                                                                     | 31.16       | 310.64    | 7417.29        | 15.96                | -5.00                | 14.97         | 7.18                 | 436267.36           | 646788.60          |         |
| 7470.00                                                                     | 32.55       | 310.54    | 7443.62        | 26.60                | -17.42               | 31.25         | 4.49                 | 436278.00           | 646776.18          |         |
| 7501.00                                                                     | 35.57       | 309.94    | 7469.30        | 37.81                | -30.68               | 48.52         | 9.80                 | 436289.21           | 646762.92          |         |
| 7532.00                                                                     | 38.33       | 310.37    | 7494.07        | 49.83                | -44.92               | 67.05         | 8.94                 | 436301.23           | 646748.68          |         |
| 7563.00                                                                     | 40.56       | 310.29    | 7518.01        | 62.58                | -59.93               | 86.64         | 7.20                 | 436313.98           | 646733.67          |         |
| 7596.00                                                                     | 43.24       | 311.24    | 7542.57        | 76.97                | -76.62               | 108.59        | 8.35                 | 436328.37           | 646716.98          |         |
| 7627.00                                                                     | 46.68       | 312.82    | 7564.50        | 91.64                | -92.88               | 130.43        | 11.67                | 436343.04           | 646700.72          |         |
| 7659.00                                                                     | 50.61       | 313.95    | 7585.64        | 108.14               | -110.33              | 154.42        | 12.56                | 436359.54           | 646683.27          |         |
| 7691.00                                                                     | 55.98       | 315.55    | 7604.76        | 126.20               | -128.53              | 180.06        | 17.25                | 436377.60           | 646665.07          |         |
| 7723.00                                                                     | 60.29       | 316.49    | 7621.65        | 145.76               | -147.39              | 207.23        | 13.70                | 436397.16           | 646646.21          |         |
| 7754.00                                                                     | 64.42       | 317.09    | 7636.03        | 165.77               | -166.19              | 234.68        | 13.43                | 436417.17           | 646627.41          |         |
| 7847.00                                                                     | 71.32       | 318.00    | 7671.05        | 229.30               | -224.29              | 320.75        | 7.47                 | 436480.70           | 646569.31          |         |
| 7912.00                                                                     | 71.67       | 317.53    | 7691.68        | 274.94               | -265.72              | 382.36        | 0.87                 | 436526.34           | 646527.88          |         |
| 7981.00                                                                     | 73.39       | 317.68    | 7712.39        | 323.55               | -310.10              | 448.15        | 2.50                 | 436574.95           | 646483.50          | 7 in    |
| 8024.00                                                                     | 74.46       | 317.78    | 7724.30        | 354.12               | -337.89              | 489.45        | 2.50                 | 436605.52           | 646455.71          |         |
| 8055.00                                                                     | 75.82       | 317.82    | 7732.25        | 376.32               | -358.01              | 519.40        | 4.39                 | 436627.72           | 646435.59          |         |
| 8085.00                                                                     | 76.50       | 317.62    | 7739.42        | 397.87               | -377.61              | 548.52        | 2.36                 | 436649.27           | 646415.99          |         |
| 8117.00                                                                     | 77.33       | 317.95    | 7746.67        | 420.96               | -398.55              | 579.68        | 2.78                 | 436672.36           | 646395.05          |         |
| 8148.00                                                                     | 78.57       | 317.95    | 7753.14        | 443.47               | -418.86              | 609.98        | 4.00                 | 436694.87           | 646374.74          |         |
| 8179.00                                                                     | 79.20       | 317.79    | 7759.12        | 466.03               | -439.26              | 640.38        | 2.09                 | 436717.43           | 646354.34          |         |
| 8210.00                                                                     | 81.05       | 317.53    | 7764.43        | 488.60               | -459.83              | 670.91        | 6.02                 | 436740.00           | 646333.77          |         |
| 8242.00                                                                     | 82.32       | 317.18    | 7769.06        | 511.89               | -481.28              | 702.57        | 4.11                 | 436763.29           | 646312.32          |         |
| 8272.00                                                                     | 83.38       | 317.06    | 7772.79        | 533.70               | -501.54              | 732.33        | 3.56                 | 436785.10           | 646292.06          |         |
| 8303.00                                                                     | 85.06       | 317.38    | 7775.91        | 556.34               | -522.48              | 763.16        | 5.52                 | 436807.74           | 646271.12          |         |
| 8333.00                                                                     | 88.83       | 318.76    | 7777.51        | 578.62               | -542.50              | 793.10        | 13.38                | 436830.02           | 646251.10          |         |
| 8365.00                                                                     | 92.22       | 319.39    | 7777.22        | 602.79               | -563.45              | 825.05        | 10.78                | 436854.19           | 646230.15          |         |
| 8459.00                                                                     | 91.97       | 318.45    | 7773.78        | 673.60               | -625.18              | 918.87        | 1.03                 | 436925.00           | 646168.42          |         |
| 8551.00                                                                     | 92.29       | 317.71    | 7770.36        | 742.01               | -686.60              | 1010.75       | 0.88                 | 436993.41           | 646107.00          |         |
| 8645.00                                                                     | 92.04       | 317.35    | 7766.81        | 811.30               | -750.03              | 1104.66       | 0.47                 | 437062.70           | 646043.57          |         |
| 8738.00                                                                     | 92.16       | 317.36    | 7763.41        | 879.66               | -812.99              | 1197.57       | 0.13                 | 437131.06           | 645980.61          |         |
| 8832.00                                                                     | 91.73       | 316.24    | 7760.22        | 948.14               | -877.30              | 1291.51       | 1.28                 | 437199.54           | 645916.30          |         |
| 8926.00                                                                     | 92.22       | 314.75    | 7756.98        | 1015.14              | -943.15              | 1385.44       | 1.67                 | 437266.54           | 645850.45          |         |
| 9019.00                                                                     | 92.28       | 314.54    | 7753.32        | 1080.44              | -1009.26             | 1478.34       | 0.23                 | 437331.84           | 645784.34          |         |
| 9113.00                                                                     | 92.34       | 313.91    | 7749.54        | 1145.95              | -1076.57             | 1572.21       | 0.67                 | 437397.35           | 645717.03          |         |
| 9207.00                                                                     | 92.10       | 314.96    | 7745.89        | 1211.71              | -1143.64             | 1666.10       | 1.15                 | 437463.11           | 645649.96          |         |
| 9300.00                                                                     | 91.42       | 316.15    | 7743.04        | 1278.07              | -1208.73             | 1759.05       | 1.47                 | 437529.47           | 645584.87          |         |
| 9394.00                                                                     | 92.22       | 316.36    | 7740.05        | 1345.95              | -1273.69             | 1853.00       | 0.88                 | 437597.35           | 645519.91          |         |
| 9487.00                                                                     | 91.85       | 315.48    | 7736.75        | 1412.71              | -1338.34             | 1945.94       | 1.03                 | 437664.11           | 645455.26          |         |
| 9581.00                                                                     | 91.98       | 314.17    | 7733.61        | 1478.94              | -1404.98             | 2039.86       | 1.40                 | 437730.34           | 645388.62          |         |
| 9675.00                                                                     | 90.62       | 313.29    | 7731.48        | 1543.90              | -1472.88             | 2133.76       | 1.72                 | 437795.30           | 645320.72          |         |
| 9768.00                                                                     | 90.49       | 312.52    | 7730.58        | 1607.21              | -1541.00             | 2226.61       | 0.84                 | 437858.61           | 645252.60          |         |
| 9862.00                                                                     | 90.55       | 313.08    | 7729.72        | 1671.07              | -1609.97             | 2320.44       | 0.60                 | 437922.47           | 645183.63          |         |

## 5D Survey Report

| Survey Points (Relative to Slot centre, TVD relative to Well TVD Reference) |            |           |                |                      |                      |               |                      |                     |                    |              |
|-----------------------------------------------------------------------------|------------|-----------|----------------|----------------------|----------------------|---------------|----------------------|---------------------|--------------------|--------------|
| MD<br>(US ft)                                                               | Inc<br>(°) | Az<br>(°) | TVD<br>(US ft) | N. Offset<br>(US ft) | E. Offset<br>(US ft) | VS<br>(US ft) | DLS<br>(°/100 US ft) | Northing<br>(US ft) | Easting<br>(US ft) | Comment      |
| 9955.00                                                                     | 90.68      | 313.08    | 7728.72        | 1734.59              | -1677.89             | 2413.31       | 0.14                 | 437985.99           | 645115.71          |              |
| 10048.00                                                                    | 90.74      | 313.65    | 7727.57        | 1798.44              | -1745.49             | 2506.20       | 0.62                 | 438049.84           | 645048.11          |              |
| 10143.00                                                                    | 91.30      | 314.60    | 7725.88        | 1864.57              | -1813.68             | 2601.12       | 1.16                 | 438115.97           | 644979.92          |              |
| 10237.00                                                                    | 91.11      | 315.64    | 7723.90        | 1931.16              | -1879.99             | 2695.09       | 1.12                 | 438182.56           | 644913.61          |              |
| 10330.00                                                                    | 91.23      | 316.90    | 7722.00        | 1998.35              | -1944.26             | 2788.06       | 1.36                 | 438249.75           | 644849.34          |              |
| 10424.00                                                                    | 91.17      | 318.90    | 7720.04        | 2068.08              | -2007.26             | 2881.99       | 2.13                 | 438319.48           | 644786.34          |              |
| 10518.00                                                                    | 90.62      | 315.94    | 7718.57        | 2137.27              | -2070.85             | 2975.95       | 3.20                 | 438388.67           | 644722.75          |              |
| 10612.00                                                                    | 89.94      | 313.73    | 7718.11        | 2203.55              | -2137.51             | 3069.92       | 2.46                 | 438454.95           | 644656.09          |              |
| 10706.00                                                                    | 90.19      | 314.94    | 7718.00        | 2269.24              | -2204.74             | 3163.87       | 1.31                 | 438520.64           | 644588.86          |              |
| 10799.00                                                                    | 88.95      | 314.77    | 7718.70        | 2334.83              | -2270.66             | 3256.84       | 1.35                 | 438586.23           | 644522.94          |              |
| 10893.00                                                                    | 91.79      | 316.98    | 7718.09        | 2402.29              | -2336.10             | 3350.82       | 3.83                 | 438653.69           | 644457.50          |              |
| 10986.00                                                                    | 89.44      | 314.56    | 7717.09        | 2468.91              | -2400.96             | 3443.80       | 3.63                 | 438720.31           | 644392.64          |              |
| 11080.00                                                                    | 89.14      | 312.36    | 7718.26        | 2533.56              | -2469.18             | 3537.69       | 2.36                 | 438784.96           | 644324.42          |              |
| 11173.00                                                                    | 90.00      | 312.31    | 7718.96        | 2596.19              | -2537.92             | 3630.48       | 0.93                 | 438847.59           | 644255.68          |              |
| 11266.00                                                                    | 90.00      | 311.93    | 7718.96        | 2658.57              | -2606.90             | 3723.26       | 0.41                 | 438909.97           | 644186.70          |              |
| 11360.00                                                                    | 89.94      | 310.66    | 7719.01        | 2720.60              | -2677.53             | 3816.92       | 1.35                 | 438972.00           | 644116.07          |              |
| 11454.00                                                                    | 90.31      | 312.30    | 7718.80        | 2782.86              | -2747.95             | 3910.61       | 1.79                 | 439034.26           | 644045.65          |              |
| 11548.00                                                                    | 90.99      | 313.74    | 7717.73        | 2846.98              | -2816.66             | 4004.47       | 1.69                 | 439098.38           | 643976.94          |              |
| 11642.00                                                                    | 91.48      | 315.44    | 7715.71        | 2912.96              | -2883.59             | 4098.41       | 1.88                 | 439164.36           | 643910.01          |              |
| 11735.00                                                                    | 90.92      | 316.29    | 7713.76        | 2979.69              | -2948.33             | 4191.39       | 1.09                 | 439231.09           | 643845.27          |              |
| 11827.00                                                                    | 91.23      | 317.06    | 7712.03        | 3046.60              | -3011.45             | 4283.37       | 0.90                 | 439298.00           | 643782.15          |              |
| 11921.00                                                                    | 91.17      | 317.17    | 7710.07        | 3115.46              | -3075.40             | 4377.33       | 0.13                 | 439366.86           | 643718.20          |              |
| 12014.00                                                                    | 90.37      | 318.30    | 7708.82        | 3184.28              | -3137.94             | 4470.28       | 1.49                 | 439435.68           | 643655.66          |              |
| 12108.00                                                                    | 90.18      | 318.88    | 7708.36        | 3254.78              | -3200.12             | 4564.19       | 0.65                 | 439506.18           | 643593.48          |              |
| 12201.00                                                                    | 90.74      | 319.58    | 7707.62        | 3325.21              | -3260.85             | 4657.05       | 0.96                 | 439576.61           | 643532.75          |              |
| 12295.00                                                                    | 91.17      | 320.55    | 7706.05        | 3397.27              | -3321.18             | 4750.81       | 1.13                 | 439648.67           | 643472.42          |              |
| 12389.00                                                                    | 91.54      | 320.53    | 7703.83        | 3469.83              | -3380.90             | 4844.51       | 0.39                 | 439721.23           | 643412.70          |              |
| 12483.00                                                                    | 91.48      | 318.48    | 7701.35        | 3541.28              | -3441.92             | 4938.30       | 2.18                 | 439792.68           | 643351.68          |              |
| 12576.00                                                                    | 90.92      | 318.16    | 7699.40        | 3610.73              | -3503.75             | 5031.21       | 0.69                 | 439862.13           | 643289.85          |              |
| 12669.00                                                                    | 91.60      | 322.57    | 7697.36        | 3682.31              | -3563.04             | 5123.91       | 4.80                 | 439933.71           | 643230.56          |              |
| 12763.00                                                                    | 92.10      | 326.65    | 7694.32        | 3758.89              | -3617.44             | 5216.81       | 4.37                 | 440010.29           | 643176.16          |              |
| 12857.00                                                                    | 90.56      | 324.86    | 7692.14        | 3836.56              | -3670.32             | 5309.45       | 2.51                 | 440087.96           | 643123.28          |              |
| 12950.00                                                                    | 90.49      | 322.66    | 7691.29        | 3911.56              | -3725.29             | 5401.61       | 2.37                 | 440162.96           | 643068.31          |              |
| 13043.00                                                                    | 90.00      | 319.08    | 7690.89        | 3983.69              | -3783.97             | 5494.28       | 3.89                 | 440235.09           | 643009.63          |              |
| 13137.00                                                                    | 89.94      | 317.10    | 7690.94        | 4053.64              | -3846.76             | 5588.22       | 2.11                 | 440305.04           | 642946.84          |              |
| 13231.00                                                                    | 90.06      | 316.12    | 7690.94        | 4121.95              | -3911.33             | 5682.21       | 1.05                 | 440373.35           | 642882.27          |              |
| 13324.00                                                                    | 90.31      | 315.74    | 7690.64        | 4188.77              | -3976.02             | 5775.21       | 0.49                 | 440440.17           | 642817.58          |              |
| 13417.00                                                                    | 91.23      | 315.81    | 7689.39        | 4255.41              | -4040.88             | 5868.20       | 0.99                 | 440506.81           | 642752.72          |              |
| 13511.00                                                                    | 90.25      | 316.25    | 7688.17        | 4323.06              | -4106.13             | 5962.19       | 1.14                 | 440574.46           | 642687.47          |              |
| 13604.00                                                                    | 90.31      | 314.00    | 7687.72        | 4388.95              | -4171.75             | 6055.17       | 2.42                 | 440640.35           | 642621.85          |              |
| 13696.00                                                                    | 90.18      | 313.60    | 7687.33        | 4452.63              | -4238.15             | 6147.09       | 0.46                 | 440704.03           | 642555.45          |              |
| 13789.00                                                                    | 89.94      | 312.36    | 7687.23        | 4516.03              | -4306.18             | 6239.95       | 1.36                 | 440767.43           | 642487.42          |              |
| 13882.00                                                                    | 91.17      | 316.46    | 7686.33        | 4581.09              | -4372.60             | 6332.88       | 4.60                 | 440832.49           | 642421.00          |              |
| 13976.00                                                                    | 92.04      | 318.01    | 7683.70        | 4650.07              | -4436.40             | 6426.83       | 1.89                 | 440901.47           | 642357.20          |              |
| 14070.00                                                                    | 89.32      | 315.17    | 7682.58        | 4718.34              | -4500.98             | 6520.80       | 4.18                 | 440969.74           | 642292.62          |              |
| 14257.00                                                                    | 91.05      | 313.43    | 7681.98        | 4848.93              | -4634.80             | 6707.69       | 1.31                 | 441100.33           | 642158.80          |              |
| 14444.00                                                                    | 91.91      | 318.09    | 7677.14        | 4982.82              | -4765.19             | 6894.57       | 2.53                 | 441234.22           | 642028.41          |              |
| 14632.00                                                                    | 90.74      | 313.97    | 7672.79        | 5118.06              | -4895.65             | 7082.48       | 2.28                 | 441369.46           | 641897.95          |              |
| 14819.00                                                                    | 89.20      | 311.78    | 7672.89        | 5245.28              | -5032.68             | 7269.16       | 1.43                 | 441496.68           | 641760.92          |              |
| 15006.00                                                                    | 91.23      | 310.95    | 7672.19        | 5368.85              | -5173.01             | 7455.51       | 1.17                 | 441620.25           | 641620.59          |              |
| 15189.00                                                                    | 90.74      | 315.36    | 7669.04        | 5493.97              | -5306.46             | 7638.19       | 2.42                 | 441745.37           | 641487.14          |              |
| 15371.00                                                                    | 89.44      | 316.72    | 7668.76        | 5624.97              | -5432.79             | 7820.18       | 1.03                 | 441876.37           | 641360.81          |              |
| 15553.00                                                                    | 90.99      | 319.26    | 7668.07        | 5760.19              | -5554.58             | 8002.06       | 1.63                 | 442011.59           | 641239.02          |              |
| 15736.00                                                                    | 91.85      | 312.74    | 7663.53        | 5891.71              | -5681.59             | 8184.91       | 3.59                 | 442143.11           | 641112.01          |              |
| 15917.00                                                                    | 91.30      | 308.70    | 7658.56        | 6009.72              | -5818.69             | 8365.00       | 2.25                 | 442261.12           | 640974.91          |              |
| 16099.00                                                                    | 90.74      | 312.76    | 7655.32        | 6128.43              | -5956.56             | 8546.13       | 2.25                 | 442379.83           | 640837.04          |              |
| 16281.00                                                                    | 91.91      | 314.72    | 7651.11        | 6254.22              | -6088.01             | 8727.91       | 1.25                 | 442505.62           | 640705.59          |              |
| 16463.00                                                                    | 86.54      | 316.12    | 7653.57        | 6383.79              | -6215.69             | 8909.81       | 3.05                 | 442635.19           | 640577.91          |              |
| 16615.00                                                                    | 91.85      | 317.65    | 7655.70        | 6494.70              | -6319.53             | 9061.72       | 3.64                 | 442746.10           | 640474.07          | Last Wft Svy |

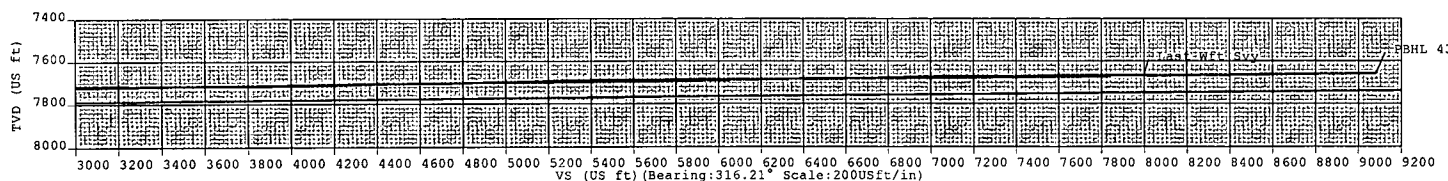
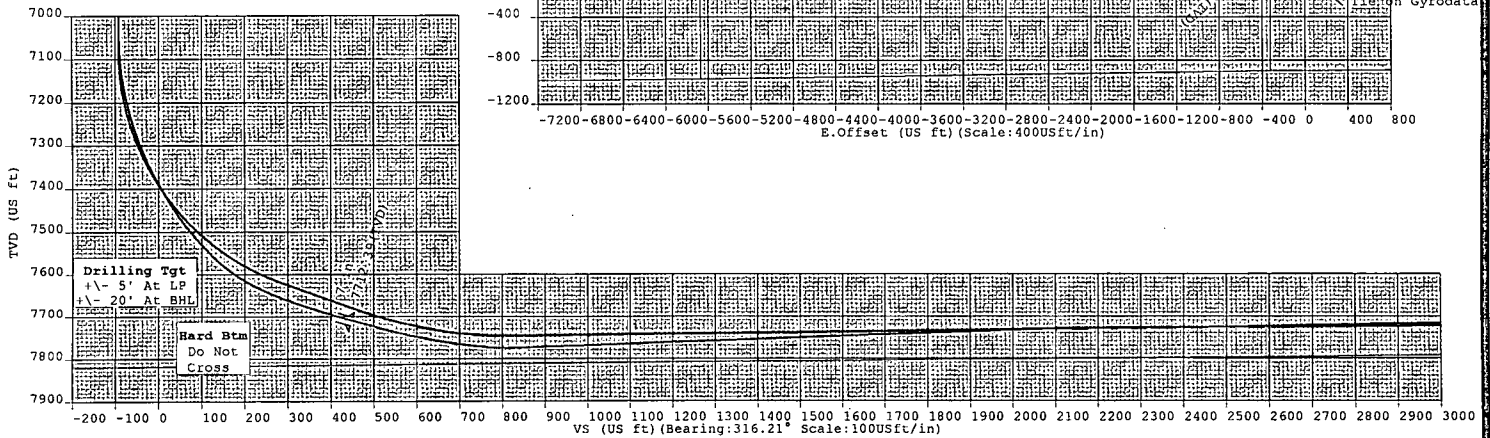
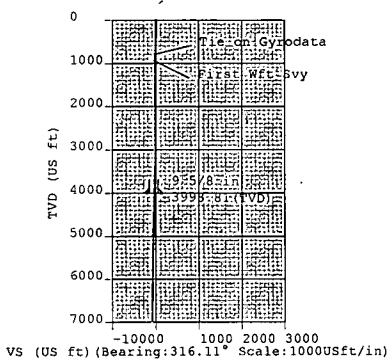
## 5D Survey Report

| Survey Points (Relative to Slot centre, TVD relative to Well TVD Reference.) |            |           |                |                      |                      |               |                      |                     |                    |                      |
|------------------------------------------------------------------------------|------------|-----------|----------------|----------------------|----------------------|---------------|----------------------|---------------------|--------------------|----------------------|
| MD<br>(US ft)                                                                | Inc<br>(°) | Az<br>(°) | TVD<br>(US ft) | N. Offset<br>(US ft) | E. Offset<br>(US ft) | VS<br>(US ft) | DLS<br>(°/100 US ft) | Northing<br>(US ft) | Easting<br>(US ft) | Comment              |
| 16637.00                                                                     | 92.62      | 317.87    | 7654.85        | 6510.97              | -6334.31             | 9083.70       | 3.64                 | 442762.37           | 640459.29          | Proj. To Bit<br>432H |

**BOPCO, L.P.**  
Poker Lake Unit 432H  
Eddy Co, NM



KB: 3421  
GR: 3402



Plan Data for PLU 432H

Plan Point Information:

| MD       | Inc   | Az     | TVD     | N/-S    | E/-W     | Northing  | Easting   | VSec    | DLS   |
|----------|-------|--------|---------|---------|----------|-----------|-----------|---------|-------|
| US(ft)   | (°)   | (°)    | (USft)  | (USft)  | (USft)   | (USft)    | (USft)    | (USft)  | (DLS) |
| 6984.00  | 1.05  | 173.57 | 6982.38 | -62.43  | 66.67    | 436188.97 | 646860.27 | -91.20  | 0.05  |
| 7075.60  | 1.05  | 173.57 | 7073.96 | -64.10  | 66.86    | 436187.30 | 646860.46 | -92.54  | 0.00  |
| 7783.95  | 70.00 | 316.11 | 7620.89 | 204.41  | -197.74  | 436455.81 | 646595.86 | 284.40  | 10.00 |
| 7983.95  | 70.00 | 316.11 | 7689.09 | 339.85  | -328.03  | 436591.23 | 646465.57 | 472.33  | 0.00  |
| 8327.74  | 90.63 | 316.11 | 7746.63 | 582.77  | -561.70  | 436834.17 | 646231.90 | 809.40  | 6.00  |
| 16602.65 | 90.63 | 316.11 | 7656.00 | 6546.30 | -6297.80 | 442797.70 | 640495.80 | 9083.84 | 0.00  |

Plan Data for PLU 432H

Target Set Information:

| Name         | TVD     | N/-S     | E/-W    | Northing | Easting   | Shape     | Comment |
|--------------|---------|----------|---------|----------|-----------|-----------|---------|
| PBM          | 7654.00 | -4235.00 | 6546.30 | -6297.80 | 442797.70 | 640495.80 | Cuboid  |
| HB 1 For Dwg | 7821.00 | -4400.00 | 0.00    | -22.00   | 436251.40 | 646771.60 | Cuboid  |
| HB 2 For Dwg | 7741.00 | -4320.00 | 6546.30 | -6297.80 | 442797.70 | 640495.80 | Cuboid  |

Plan Data for PLU 432H

Slot: PLU 432H

Position:

| Offset         | Is from Site centre | Northing      | Easting       | Latitude    | Longitude     | Elevation Above VDU |
|----------------|---------------------|---------------|---------------|-------------|---------------|---------------------|
| N/-S: 0.00USft |                     | 436251.40USft |               | 32°11'54.5" |               |                     |
| E/-W: 0.00USft |                     |               | 646771.60USft |             | -103°51'31.6" |                     |
|                |                     |               |               |             |               | 3402.00USft         |

Plan Data for PLU 432H

Well: PLU 432H

Type: Main Well

File Number:

| Plan Folder                                                   | P2 | Plan: P2V1                       |
|---------------------------------------------------------------|----|----------------------------------|
| Vertical Section: Position offset or origin from slot centre: |    |                                  |
| N/-S: 0.00USft                                                |    | 436251.40USft                    |
| E/-W: 0.00USft                                                |    | 646771.60USft                    |
|                                                               |    | Latitude: 32°11'54.5"            |
|                                                               |    | Longitude: -103°51'31.6"         |
|                                                               |    | Elevation Above VDU: 3402.00USft |

Magnetic Parameters:

| Model | Field Strength | Declination | Dip    | Date       |
|-------|----------------|-------------|--------|------------|
| AG02H | 4825(nT)       | 7.31°       | 60.63° | 2014-06-20 |

Sign Off: Russell Joyner