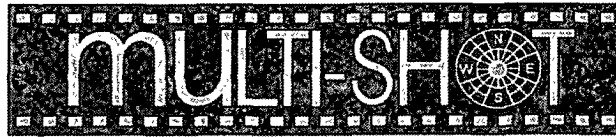


30.015.36635



**Directional Services**

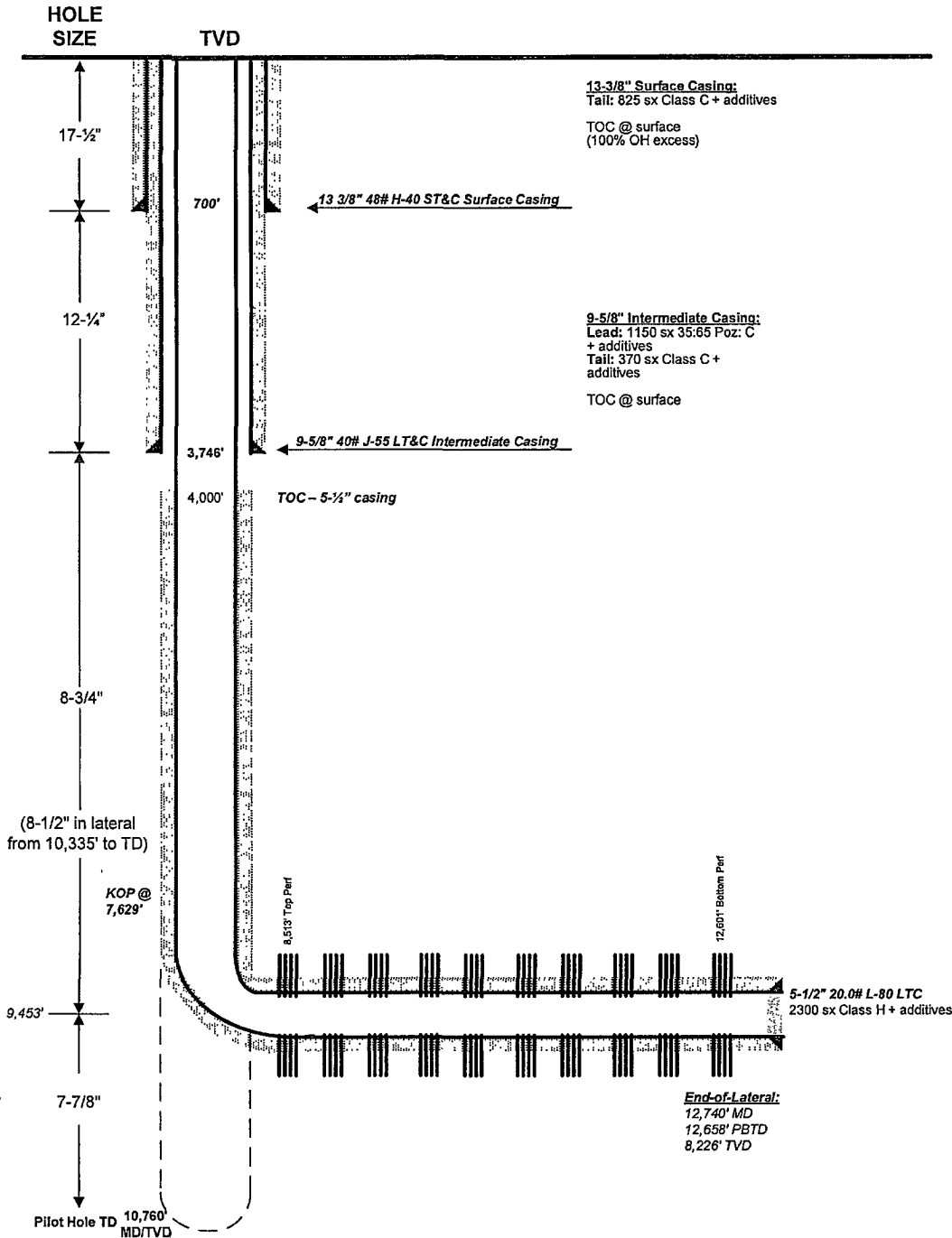
**CUSTOMER:** CHESAPEAKE  
**JOB NUMBER:** 5052176  
**WELL NAME:** PLU PIERCE CANYON 17 FEDERAL #1H  
**LOCATION:** EDDY COUNTY, NEW MEXICO  
**SURVEY DATE:** 10/25/2008  
**SURVEY ENGINEER:** S. SMITH  
**PRO. DIR.** NOE  
**DECLINATION:** 7.8 E TO GRID  
**COMMENTS:** CAPSTAR 32  
 CHUCK

| MEASURED<br>DEPTH | VERTICAL<br>DEPTH | VERTICAL<br>SECTION | INCLINATION | BEARING<br>AZIMUTH | COORDINATES |           | DOG-LEG<br>PER 100 | STATION<br>DISPLACEMENT | DISPLACEMENT<br>DIRECTION |
|-------------------|-------------------|---------------------|-------------|--------------------|-------------|-----------|--------------------|-------------------------|---------------------------|
|                   |                   |                     |             |                    | LATITUDE    | DEPARTURE |                    |                         |                           |
| 0                 | 0                 | 0                   | 0           | 0                  | 0           | 0         | 0                  | 0                       | 0                         |
| 200               | 200               | 0.36                | 0.25        | 325.35             | 0.36        | -0.25     | 0.13               | 0.44                    | 325.35                    |
| 400               | 400               | 0.43                | 0.5         | 250.45             | 0.43        | -1.32     | 0.25               | 1.39                    | 287.9                     |
| 600               | 599.95            | -1.23               | 1.75        | 243.55             | -1.23       | -4.88     | 0.63               | 5.03                    | 255.88                    |
| 800               | 799.8             | -4.49               | 2.75        | 246.63             | -4.49       | -12.01    | 0.5                | 12.83                   | 249.51                    |
| 1000              | 999.55            | -8.95               | 3           | 240.72             | -8.95       | -20.98    | 0.19               | 22.81                   | 246.89                    |
| 1200              | 1199.29           | -13.92              | 2.75        | 239.83             | -13.92      | -29.7     | 0.13               | 32.8                    | 244.88                    |
| 1400              | 1399.12           | -18.13              | 2           | 238.95             | -18.13      | -36.83    | 0.38               | 41.06                   | 243.79                    |
| 1600              | 1599.01           | -21.37              | 1.75        | 242.05             | -21.37      | -42.52    | 0.13               | 47.59                   | 243.32                    |
| 1800              | 1798.91           | -23.98              | 2           | 250.15             | -23.98      | -48.5     | 0.18               | 54.11                   | 243.69                    |
| 2000              | 1998.77           | -26.1               | 2.25        | 256.25             | -26.1       | -55.6     | 0.17               | 61.42                   | 244.85                    |
| 2200              | 2198.6            | -28.04              | 2.5         | 256.6              | -28.04      | -63.65    | 0.13               | 69.56                   | 246.22                    |
| 2400              | 2398.44           | -30.66              | 2           | 242.71             | -30.66      | -71       | 0.37               | 77.33                   | 246.65                    |
| 2600              | 2598.16           | -35.87              | 4           | 238.76             | -35.87      | -80.07    | 1                  | 87.74                   | 245.86                    |
| 2800              | 2797.35           | -45.14              | 6.25        | 238.76             | -45.14      | -95.34    | 1.13               | 105.49                  | 244.66                    |
| 3000              | 2996.3            | -55.74              | 5.5         | 238.9              | -55.74      | -112.86   | 0.38               | 125.87                  | 243.72                    |
| 3200              | 3195.7            | -64.09              | 3.25        | 233.08             | -64.09      | -125.6    | 1.15               | 141.01                  | 242.96                    |
| 3400              | 3395.54           | -69.48              | 1.25        | 205.13             | -69.48      | -131.06   | 1.11               | 148.33                  | 242.07                    |
| 3600              | 3595.5            | -73.41              | 1.25        | 154.14             | -73.41      | -131.03   | 0.54               | 150.2                   | 240.74                    |
| 3800              | 3795.48           | -76.24              | 0.5         | 170.13             | -76.24      | -129.93   | 0.39               | 150.64                  | 239.6                     |
| 4000              | 3995.46           | -78.28              | 0.75        | 155.14             | -78.28      | -129.23   | 0.15               | 151.09                  | 238.79                    |
| 4200              | 4195.46           | -79.9               | 0.25        | 167.14             | -79.9       | -128.58   | 0.25               | 151.38                  | 238.14                    |
| 4400              | 4395.45           | -81.09              | 0.5         | 152.14             | -81.09      | -128.08   | 0.13               | 151.59                  | 237.66                    |
| 4600              | 4595.44           | -82.72              | 0.5         | 192.14             | -82.72      | -127.85   | 0.17               | 152.28                  | 237.1                     |
| 4800              | 4795.44           | -84.26              | 0.5         | 218.14             | -84.26      | -128.58   | 0.11               | 153.72                  | 236.76                    |
| 5000              | 4995.42           | -85.65              | 0.75        | 237.14             | -85.65      | -130.21   | 0.16               | 155.86                  | 236.66                    |
| 5200              | 5195.41           | -87.11              | 0.75        | 235.14             | -87.11      | -132.39   | 0.01               | 158.48                  | 236.65                    |
| 5400              | 5395.39           | -88.69              | 0.75        | 230.75             | -88.69      | -134.48   | 0.03               | 161.09                  | 236.59                    |
| 5600              | 5595.38           | -90.22              | 0.5         | 216.35             | -90.22      | -136.01   | 0.15               | 163.21                  | 236.44                    |
| 5800              | 5795.36           | -92.35              | 1           | 214.95             | -92.35      | -137.52   | 0.25               | 165.66                  | 236.12                    |
| 6000              | 5995.32           | -95.74              | 1.25        | 206.55             | -95.74      | -139.5    | 0.15               | 169.19                  | 235.54                    |
| 6200              | 6195.28           | -99.04              | 1           | 219.15             | -99.04      | -141.58   | 0.18               | 172.78                  | 235.03                    |
| 6400              | 6395.25           | -101.84             | 1           | 213.75             | -101.84     | -143.65   | 0.05               | 176.09                  | 234.66                    |
| 6600              | 6595.24           | -104.13             | 0.5         | 163.36             | -104.13     | -144.37   | 0.39               | 178                     | 234.2                     |
| 6800              | 6795.23           | -105.84             | 0.5         | 177.96             | -105.84     | -144.09   | 0.06               | 178.78                  | 233.7                     |
| 7000              | 6995.22           | -107.94             | 0.75        | 159.56             | -107.94     | -143.6    | 0.16               | 179.64                  | 233.07                    |
| 7200              | 7195.19           | -111.35             | 1.25        | 178.16             | -111.35     | -143.07   | 0.29               | 181.29                  | 232.11                    |
| 7400              | 7395.14           | -115.71             | 1.25        | 177.77             | -115.71     | -142.92   | 0                  | 183.68                  | 231.01                    |
| 7600              | 7595.11           | -118.75             | 1           | 240.36             | -118.75     | -144.35   | 0.59               | 186.92                  | 230.56                    |
| 7800              | 7795.04           | -120.92             | 2           | 247.96             | -120.92     | -149.1    | 0.51               | 191.97                  | 230.96                    |
| 8000              | 7994.87           | -124.81             | 2.75        | 237.54             | -124.81     | -156.38   | 0.43               | 200.08                  | 231.41                    |
| 8200              | 8194.66           | -130.81             | 2.5         | 218.14             | -130.81     | -163.12   | 0.46               | 209.1                   | 231.27                    |
| 8250              | 8244.62           | -132.47             | 2.25        | 214.95             | -132.47     | -164.36   | 0.57               | 211.1                   | 231.13                    |

# CHESAPEAKE OPERATING INC

## Well Schematic

WELL : PLU PIERCE CANYON 17 FEDERAL 1H  
SHL : Section 17 - 25S - 30E, 350' FSL & 350' FEL  
BHL : Section 17 - 25S - 30E, 350' FNL & 350' FEL  
COUNTY : Eddy  
STATE : New Mexico  
FIELD : Delaware Basin North  
ELEVATION : GL - 3,233' RKB - 3,245'



PREPARED BY: M Bruce

DATE: 4/01/2009

APPROVED BY:

DATE: