



Well Name: COTTON DRAW UNIT 292H

Sub-Division  
DELAWARE BASIN WEST

Region  
BASIN WEST

Field Name  
PADUCA

County  
EDDY

State/Province  
NM

Surface Legal Location  
Sec 36 24S R31E

API/UWI  
3001543261

Latitude (")  
32° 10' 49.94" N

Longitude (")  
103° 43' 33.616" W

Orig KB Elevation (ft)  
3,540.00

Ground Elev MSL (ft)  
3,513.00

KB - GL (ft)  
27.00

Wellbores

Wellbore Name  
OH

Parent Wellbore

SAP Well ID  
39163

Vertical Section Direction (")

Kick Offs & Key Depths

Date  
11/24/2015

Type  
CURVE

Top Depth (ftKB)  
9,730.0

Actual Deviation Survey  
EXTREME, Proposed? No

Definitive?  
No

Proposed?  
No

Proposed Deviation Survey

Deviation Survey

Date  
11/17/2015

Description  
EXTREME

MD Tie In (ftKB)

TVD Tie In (ftKB)

Inclination Tie In (")

Azimuth Tie In (")

NSTie In (ft)

EWtie In (ft)

Survey Data

| Date       | MD (ftKB) | incl (") | Azm (") | TVD (ftKB) | VS (ft) | N/S (ft) | E/W (ft) | DLS<br>("'/100ft) | Survey<br>Tool | Survey Company        |
|------------|-----------|----------|---------|------------|---------|----------|----------|-------------------|----------------|-----------------------|
| 11/17/2... | 0.00      | 0.00     | 0.00    | 0.00       | 0.00    | 0.00     | 0.00     | 0.00              | MWD            | EXTREME               |
| 11/17/2... | 205.00    | 0.09     | 260.20  | 205.00     | 0.03    | -0.03    | -0.16    | 0.04              | MWD            | EXTREME               |
| 11/17/2... | 271.00    | 0.09     | 47.51   | 271.00     | 0.00    | 0.00     | -0.17    | 0.26              | MWD            | EXTREME               |
| 11/17/2... | 328.00    | 0.09     | 107.80  | 328.00     | -0.02   | 0.02     | -0.10    | 0.16              | MWD            | EXTREME               |
| 11/17/2... | 395.00    | 0.00     | 6.95    | 395.00     | 0.00    | 0.00     | -0.05    | 0.13              | MWD            | EXTREME               |
| 11/17/2... | 454.00    | 0.22     | 290.48  | 454.00     | -0.04   | 0.04     | -0.15    | 0.37              | MWD            | EXTREME               |
| 11/17/2... | 515.00    | 0.22     | 306.39  | 515.00     | -0.15   | 0.15     | -0.36    | 0.10              | MWD            | EXTREME               |
| 11/17/2... | 577.00    | 0.09     | 304.28  | 577.00     | -0.25   | 0.25     | -0.49    | 0.21              | MWD            | EXTREME               |
| 11/17/2... | 639.00    | 0.09     | 310.39  | 639.00     | -0.31   | 0.31     | -0.57    | 0.02              | MWD            | EXTREME               |
| 11/17/2... | 724.00    | 0.09     | 256.69  | 724.00     | -0.34   | 0.33     | -0.69    | 0.10              | MWD            | EXTREME               |
| 11/19/2... | 891.00    | 0.40     | 80.80   | 891.00     | -0.40   | 0.40     | -0.24    | 0.29              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 1,078.00  | 0.30     | 74.50   | 1,077.99   | -0.63   | 0.63     | 0.88     | 0.06              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 1,266.00  | 0.30     | 37.90   | 1,265.99   | -1.15   | 1.15     | 1.66     | 0.10              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 1,457.00  | 0.30     | 337.30  | 1,456.99   | -2.01   | 2.01     | 1.77     | 0.16              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 1,647.00  | 0.20     | 301.10  | 1,646.99   | -2.64   | 2.64     | 1.29     | 0.10              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 1,837.00  | 0.00     | 187.70  | 1,836.99   | -2.81   | 2.81     | 1.01     | 0.11              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 2,027.00  | 0.20     | 203.50  | 2,026.99   | -2.50   | 2.51     | 0.88     | 0.11              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 2,217.00  | 0.10     | 119.90  | 2,216.99   | -2.12   | 2.12     | 0.89     | 0.11              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 2,407.00  | 0.20     | 192.30  | 2,406.99   | -1.71   | 1.71     | 0.96     | 0.10              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 2,597.00  | 0.40     | 189.50  | 2,596.98   | -0.73   | 0.73     | 0.78     | 0.11              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 2,787.00  | 0.20     | 206.00  | 2,786.98   | 0.22    | -0.22    | 0.53     | 0.11              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 2,977.00  | 0.40     | 202.10  | 2,976.98   | 1.13    | -1.13    | 0.13     | 0.11              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 3,167.00  | 0.20     | 159.20  | 3,166.98   | 2.06    | -2.06    | 0.00     | 0.15              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 3,357.00  | 0.10     | 39.90   | 3,356.98   | 2.24    | -2.24    | 0.22     | 0.14              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 3,547.00  | 0.10     | 159.60  | 3,546.97   | 2.27    | -2.27    | 0.39     | 0.09              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 3,737.00  | 0.30     | 248.00  | 3,736.97   | 2.61    | -2.61    | -0.01    | 0.17              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 3,928.00  | 0.40     | 230.10  | 3,927.97   | 3.22    | -3.22    | -0.99    | 0.08              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 4,117.00  | 0.40     | 187.90  | 4,116.97   | 4.30    | -4.30    | -1.59    | 0.15              | MWD            | LEAM DRILLING SYSTEMS |
| 11/19/2... | 4,288.00  | 0.50     | 178.20  | 4,287.96   | 5.63    | -5.64    | -1.65    | 0.07              | MWD            | LEAM DRILLING SYSTEMS |
| 11/22/2... | 4,488.00  | 0.70     | 196.70  | 4,487.95   | 7.68    | -7.68    | -1.97    | 0.14              | MWD            | LEAM DRILLING SYSTEMS |
| 11/22/2... | 4,679.00  | 3.00     | 301.10  | 4,678.86   | 6.21    | -6.21    | -6.58    | 1.70              | MWD            | LEAM DRILLING SYSTEMS |
| 11/22/2... | 4,869.00  | 4.90     | 309.30  | 4,868.40   | -1.51   | 1.49     | -17.12   | 1.04              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 5,059.00  | 4.70     | 309.30  | 5,057.74   | -11.60  | 11.56    | -29.43   | 0.11              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 5,249.00  | 5.70     | 311.30  | 5,246.95   | -22.77  | 22.72    | -42.54   | 0.53              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 5,438.00  | 5.00     | 307.60  | 5,435.13   | -34.00  | 33.94    | -56.12   | 0.41              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 5,628.00  | 5.20     | 304.10  | 5,624.38   | -43.90  | 43.82    | -69.80   | 0.19              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 5,818.00  | 5.40     | 299.90  | 5,813.57   | -53.20  | 53.11    | -84.68   | 0.23              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 6,009.00  | 5.50     | 298.10  | 6,003.70   | -62.01  | 61.90    | -100.55  | 0.10              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 6,199.00  | 4.90     | 294.90  | 6,192.92   | -69.73  | 69.60    | -115.94  | 0.35              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 6,389.00  | 4.80     | 293.50  | 6,382.24   | -76.33  | 76.19    | -130.59  | 0.08              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 6,580.00  | 4.90     | 294.60  | 6,572.56   | -82.93  | 82.77    | -145.34  | 0.07              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 6,770.00  | 4.90     | 287.20  | 6,761.86   | -88.73  | 88.55    | -160.47  | 0.33              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 6,960.00  | 4.40     | 282.10  | 6,951.24   | -92.67  | 92.48    | -175.35  | 0.34              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 7,150.00  | 4.80     | 285.10  | 7,140.63   | -96.29  | 96.07    | -190.15  | 0.25              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 7,340.00  | 4.70     | 281.40  | 7,329.97   | -99.91  | 99.68    | -205.45  | 0.17              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 7,531.00  | 4.00     | 273.30  | 7,520.43   | -101.86 | 101.61   | -219.78  | 0.49              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 7,721.00  | 3.80     | 271.40  | 7,709.99   | -102.41 | 102.15   | -232.69  | 0.13              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 7,911.00  | 3.50     | 266.10  | 7,899.60   | -102.18 | 101.91   | -244.77  | 0.24              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 8,101.00  | 3.30     | 283.30  | 8,089.27   | -103.06 | 102.77   | -255.87  | 0.54              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 8,291.00  | 3.10     | 294.90  | 8,278.98   | -106.49 | 106.19   | -265.86  | 0.36              | MWD            | LEAM DRILLING SYSTEMS |
| 11/23/2... | 8,480.00  | 2.80     | 284.40  | 8,467.73   | -109.80 | 109.49   | -274.96  | 0.33              | MWD            | LEAM DRILLING SYSTEMS |
| 11/24/2... | 8,671.00  | 1.80     | 270.10  | 8,658.57   | -110.97 | 110.66   | -282.48  | 0.7               | MWD            | LEAM DRILLING SYSTEMS |
| 11/24/2... | 8,860.00  | 1.30     | 181.20  | 8,847.52   | -108.84 | 108.52   | -285.50  | 0.7               | MWD            | LEAM DRILLING SYSTEMS |
| 11/24/2... | 9,050.00  | 0.60     | 139.50  | 9,037.50   | -105.93 | 105.61   | -284.89  | 0.7               | MWD            | LEAM DRILLING SYSTEMS |
| 11/24/2... | 9,240.00  | 0.20     | 97.90   | 9,227.49   | -105.12 | 104.81   | -283.95  | 0.7               | MWD            | LEAM DRILLING SYSTEMS |
| 11/24/2... | 9,430.00  | 1.00     | 179.40  | 9,417.48   | -103.42 | 103.10   | -283.7   | 0.7               | MWD            | LEAM DRILLING SYSTEMS |
| 11/24/2... | 9,620.00  | 1.40     | 190.00  | 9,607.44   | -99.48  | 99.16    | -283.96  | 0.7               | MWD            | LEAM DRILLING SYSTEMS |
| 11/24/2... | 9,671.00  | 1.30     | 189.60  | 9,658.43   | -98.29  | 97.98    | -284.16  | 0.7               | MWD            | LEAM DRILLING SYSTEMS |
| 11/25/2... | 9,712.00  | 1.50     | 187.90  | 9,699.42   | -97.30  | 96.99    | -284.32  | 0.50              | MWD            | LEAM DRILLING SYSTEMS |
| 11/25/2... | 9,759.00  | 5.00     | 145.30  | 9,746.34   | -95.01  | 94.69    | -283.23  | 8.57              | MWD            | LEAM DRILLING SYSTEMS |
| 11/25/2... | 9,807.00  | 11.30    | 136.20  | 9,793.83   | -89.88  | 89.57    | -278.78  | 13.36             | MWD            | LEAM DRILLING SYSTEMS |
| 11/25/2... | 9,854.00  | 18.20    | 133.00  | 9,839.25   | -81.53  | 81.23    | -270.22  | 14.78             | MWD            | LEAM DRILLING SYSTEMS |

Provide signature page for Survey



Well Name: COTTON DRAW UNIT 292H

| Sub-Division           |           | Region     | Field Name       |                    |                        |                      | County       |                   | State/Province |                       |
|------------------------|-----------|------------|------------------|--------------------|------------------------|----------------------|--------------|-------------------|----------------|-----------------------|
| DELAWARE BASIN WEST    |           | BASIN WEST | PADUCA           |                    |                        |                      | EDDY         |                   | NM             |                       |
| Surface Legal Location |           | API/UWI    | Latitude (")     | Longitude (")      | Orig KB Elevation (ft) | Ground Elev MSL (ft) | KB - GL (ft) |                   |                |                       |
| Sec 36 24S R31E        |           | 3001543261 | 32° 10' 49.94" N | 103° 43' 33.616" W | 3,540.00               | 3,513.00             | 27.00        |                   |                |                       |
| Survey Data            |           |            |                  |                    |                        |                      |              |                   |                |                       |
| Date                   | MD (ftKB) | Incl (°)   | Azm (°)          | TVD (ftKB)         | VS (ft)                | N/S (ft)             | EW (ft)      | DLS<br>("'/100ft) | Survey<br>Tool | Survey Company        |
| 11/25/2...             | 9,902.00  | 24.20      | 133.40           | 9,883.99           | -69.64                 | 69.35                | -257.58      | 12.50             | MWD            | LEAM DRILLING SYSTEMS |
| 11/25/2...             | 9,949.00  | 28.20      | 136.90           | 9,926.15           | -54.89                 | 54.62                | -242.98      | 9.12              | MWD            | LEAM DRILLING SYSTEMS |
| 11/25/2...             | 9,997.00  | 33.20      | 143.80           | 9,967.42           | -35.96                 | 35.71                | -227.46      | 12.73             | MWD            | LEAM DRILLING SYSTEMS |
| 11/25/2...             | 10,044.00 | 38.50      | 148.50           | 10,005.51          | -13.07                 | 12.83                | -212.20      | 12.70             | MWD            | LEAM DRILLING SYSTEMS |
| 11/25/2...             | 10,092.00 | 45.00      | 149.00           | 10,041.31          | 14.26                  | -14.48               | -195.63      | 13.56             | MWD            | LEAM DRILLING SYSTEMS |
| 11/25/2...             | 10,139.00 | 51.40      | 149.20           | 10,072.62          | 44.33                  | -44.53               | -177.65      | 13.62             | MWD            | LEAM DRILLING SYSTEMS |
| 11/25/2...             | 10,187.00 | 57.10      | 149.70           | 10,100.65          | 77.89                  | -78.07               | -157.87      | 11.90             | MWD            | LEAM DRILLING SYSTEMS |
| 11/25/2...             | 10,234.00 | 61.80      | 150.10           | 10,124.53          | 112.92                 | -113.08              | -137.58      | 10.03             | MWD            | LEAM DRILLING SYSTEMS |
| 11/25/2...             | 10,282.00 | 66.10      | 150.40           | 10,145.61          | 150.38                 | -150.51              | -116.18      | 8.98              | MWD            | LEAM DRILLING SYSTEMS |
| 11/26/2...             | 10,324.00 | 71.10      | 148.30           | 10,160.93          | 184.02                 | -184.13              | -96.25       | 12.78             | MWD            | LEAM DRILLING SYSTEMS |
| 11/26/2...             | 10,355.00 | 74.30      | 150.30           | 10,170.15          | 209.49                 | -209.58              | -81.14       | 12.02             | MWD            | LEAM DRILLING SYSTEMS |
| 11/26/2...             | 10,387.00 | 76.90      | 153.60           | 10,178.11          | 236.85                 | -236.93              | -66.58       | 12.87             | MWD            | LEAM DRILLING SYSTEMS |
| 11/26/2...             | 10,419.00 | 77.90      | 156.10           | 10,185.09          | 265.14                 | -265.20              | -53.31       | 8.24              | MWD            | LEAM DRILLING SYSTEMS |
| 11/26/2...             | 10,451.00 | 78.30      | 157.50           | 10,191.69          | 293.93                 | -293.97              | -40.97       | 4.46              | MWD            | LEAM DRILLING SYSTEMS |
| 11/26/2...             | 10,482.00 | 79.80      | 159.80           | 10,197.57          | 322.29                 | -322.32              | -29.89       | 8.74              | MWD            | LEAM DRILLING SYSTEMS |
| 11/26/2...             | 10,514.00 | 80.90      | 163.60           | 10,202.94          | 352.24                 | -352.27              | -19.99       | 12.20             | MWD            | LEAM DRILLING SYSTEMS |
| 11/26/2...             | 10,545.00 | 82.00      | 167.50           | 10,207.55          | 381.93                 | -381.94              | -12.34       | 12.94             | MWD            | LEAM DRILLING SYSTEMS |
| 11/26/2...             | 10,577.00 | 82.60      | 171.90           | 10,211.84          | 413.13                 | -413.14              | -6.68        | 13.75             | MWD            | LEAM DRILLING SYSTEMS |
| 11/26/2...             | 10,608.00 | 83.20      | 176.50           | 10,215.67          | 443.73                 | -443.73              | -3.57        | 14.85             | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 10,640.00 | 83.60      | 178.40           | 10,219.35          | 475.49                 | -475.49              | -2.16        | 6.03              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 10,672.00 | 84.80      | 178.40           | 10,222.59          | 507.31                 | -507.31              | -1.27        | 3.75              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 10,703.00 | 86.40      | 178.60           | 10,224.96          | 538.21                 | -538.21              | -0.46        | 5.20              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 10,735.00 | 88.20      | 179.60           | 10,226.47          | 570.17                 | -570.17              | 0.04         | 6.43              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 10,766.00 | 89.20      | 179.60           | 10,227.18          | 601.16                 | -601.16              | 0.26         | 3.23              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 10,861.00 | 89.50      | 179.40           | 10,228.25          | 696.15                 | -696.15              | 1.09         | 0.38              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 10,956.00 | 91.80      | 180.80           | 10,227.18          | 791.13                 | -791.13              | 0.92         | 2.83              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 11,052.00 | 92.10      | 181.60           | 10,223.91          | 887.05                 | -887.06              | -1.09        | 0.89              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 11,147.00 | 92.50      | 181.90           | 10,220.10          | 981.93                 | -981.94              | -3.98        | 0.53              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 11,242.00 | 90.80      | 182.40           | 10,217.36          | 1,076.82               | -1,076.83            | -7.55        | 1.87              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 11,337.00 | 90.50      | 182.10           | 10,216.28          | 1,171.73               | -1,171.75            | -11.28       | 0.45              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 11,432.00 | 90.40      | 180.80           | 10,215.54          | 1,266.69               | -1,266.71            | -13.68       | 1.37              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 11,527.00 | 90.70      | 180.50           | 10,214.63          | 1,361.68               | -1,361.70            | -14.76       | 0.45              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 11,623.00 | 90.50      | 179.60           | 10,213.62          | 1,457.68               | -1,457.69            | -14.84       | 0.96              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 11,718.00 | 91.00      | 180.30           | 10,212.38          | 1,552.67               | -1,552.68            | -14.76       | 0.91              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 11,813.00 | 90.90      | 180.10           | 10,210.80          | 1,647.65               | -1,647.67            | -15.09       | 0.24              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 11,908.00 | 90.60      | 179.30           | 10,209.56          | 1,742.64               | -1,742.66            | -14.59       | 0.90              | MWD            | LEAM DRILLING SYSTEMS |
| 11/27/2...             | 12,003.00 | 90.90      | 179.40           | 10,208.31          | 1,837.63               | -1,837.65            | -13.52       | 0.33              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 12,098.00 | 91.10      | 180.10           | 10,206.66          | 1,932.61               | -1,932.63            | -13.10       | 0.77              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 12,193.00 | 91.50      | 180.50           | 10,204.50          | 2,027.59               | -2,027.60            | -13.60       | 0.60              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 12,288.00 | 89.80      | 179.80           | 10,203.42          | 2,122.58               | -2,122.59            | -13.85       | 1.94              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 12,383.00 | 90.00      | 179.60           | 10,203.59          | 2,217.58               | -2,217.59            | -13.35       | 0.30              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 12,479.00 | 89.90      | 180.10           | 10,203.67          | 2,313.57               | -2,313.59            | -13.10       | 0.53              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 12,574.00 | 89.70      | 181.00           | 10,204.00          | 2,408.57               | -2,408.58            | -14.01       | 0.97              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 12,669.00 | 89.80      | 179.40           | 10,204.42          | 2,503.56               | -2,503.58            | -14.34       | 1.69              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 12,764.00 | 89.60      | 178.20           | 10,204.92          | 2,598.54               | -2,598.56            | -12.35       | 1.28              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 12,859.00 | 89.60      | 178.70           | 10,205.58          | 2,693.51               | -2,693.52            | -9.78        | 0.53              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 12,954.00 | 89.70      | 179.30           | 10,206.16          | 2,788.49               | -2,788.50            | -8.12        | 0.64              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 13,049.00 | 91.30      | 179.40           | 10,205.33          | 2,883.48               | -2,883.49            | -7.05        | 1.69              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 13,144.00 | 91.90      | 179.80           | 10,202.68          | 2,978.44               | -2,978.45            | -6.38        | 0.76              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 13,239.00 | 92.00      | 180.50           | 10,199.45          | 3,073.38               | -3,073.39            | -6.63        | 0.74              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 13,334.00 | 92.30      | 181.00           | 10,195.88          | 3,168.31               | -3,168.32            | -7.87        | 0.61              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 13,429.00 | 91.30      | 180.80           | 10,192.90          | 3,263.25               | -3,263.26            | -9.37        | 1.07              | MWD            | LEAM DRILLING SYSTEMS |
| 11/28/2...             | 13,524.00 | 89.70      | 179.60           | 10,192.07          | 3,358.24               | -3,358.25            | -9.70        | 2.11              | MWD            | LEAM DRILLING SYSTEMS |
| 11/29/2...             | 13,619.00 | 89.90      | 179.40           | 10,192.40          | 3,453.23               | -3,453.24            | -8.87        | 0.30              | MWD            | LEAM DRILLING SYSTEMS |
| 11/29/2...             | 13,713.00 | 89.90      | 180.10           | 10,192.56          | 3,547.23               | -3,547.24            | -8.46        | 0.74              | MWD            | LEAM DRILLING SYSTEMS |
| 11/29/2...             | 13,809.00 | 90.00      | 180.30           | 10,192.65          | 3,643.23               | -3,643.24            | -8.79        | 0.23              | MWD            | LEAM DRILLING SYSTEMS |
| 11/29/2...             | 13,904.00 | 89.50      | 180.80           | 10,193.06          | 3,738.22               | -3,738.24            | -9.71        | 0.74              | MWD            | LEAM DRILLING SYSTEMS |
| 11/29/2...             | 13,998.00 | 89.50      | 179.40           | 10,193.88          | 3,832.22               | -3,832.23            | -9.87        | 1.49              | MWD            | LEAM DRILLING SYSTEMS |
| 11/29/2...             | 14,093.00 | 90.20      | 179.30           | 10,194.13          | 3,927.21               | -3,927.22            | -8.79        | 0.74              | MWD            | LEAM DRILLING SYSTEMS |
| 11/29/2...             | 14,188.00 | 91.50      | 178.20           | 10,192.72          | 4,022.18               | -4,022.19            | -6.72        | 1.79              | MWD            | LEAM DRILLING SYSTEMS |
| 11/29/2...             | 14,283.00 | 92.20      | 178.00           | 10,189.66          | 4,117.08               | -4,117.08            | -3.57        | 0.77              | MWD            | LEAM DRILLING SYSTEMS |
| 11/29/2...             | 14,378.00 | 92.80      | 178.40           | 10,185.51          | 4,211.94               | -4,211.95            | -0.59        | 0.76              | MWD            | LEAM DRILLING SYSTEMS |
| 11/29/2...             | 14,473.00 | 90.70      | 178.60           | 10,182.61          | 4,306.86               | -4,306.86            | 1.89         | 2.22              | MWD            | LEAM DRILLING SYSTEMS |
| 11/30/2...             | 14,568.00 | 90.30      | 179.30           | 10,181.78          | 4,401.85               | -4,401.84            | 3.64         | 0.85              | MWD            | LEAM DRILLING SYSTEMS |
| 11/30/2...             | 14,663.00 | 90.50      | 179.30           | 10,181.12          | 4,496.84               | -4,496.83            | 4.80         | 0.21              | MWD            | LEAM DRILLING SYSTEMS |
| 12/2/2015              | 14,759.00 | 91.00      | 180.00           | 10,179.86          | 4,592.83               | -4,592.82            | 5.38         | 0.90              | MWD            | LEAM DRILLING SYSTEMS |
| 12/2/2015              | 14,854.00 | 91.80      | 180.00           | 10,177.54          | 4,687.80               | -4,687.79            | 5.38         | 0.84              | MWD            | LEAM DRILLING SYSTEMS |
| 12/2/2015              | 14,942.00 | 92.20      | 180.00           | 10,174.47          | 4,775.74               | -4,775.74            | 5.38         | 0.45              | MWD            | LEAM DRILLING SYSTEMS |
| 12/2/2015              | 14,999.00 | 92.20      | 180.00           | 10,172.28          | 4,832.70               | -4,832.70            | 5.38         | 0.00              | BIT            | LEAM DRILLING SYSTEMS |