Well name: Operator: String type:

Deveon Energy Production Co. L.P. Production

## Revelation 10 "M" Federal #1

Sec. 10, T22S, R25E, Eddy CO., NM Location:

| Design parameters:<br><u>Collapse</u><br>Mud weight: 6.200 ppg<br>Design is based on evacuated pipe. |         |                                 |              | Minimum design factors:<br><u>Collapse:</u><br>Design factor 1.125 |          |                         | Environment:H2S considered?NoSurface temperature:80 °FBottom hole temperature:168 °FTemperature gradient:0.80 °F/100ftMinimum section length:375 ft |          |       |  |
|--|---------|---------------------------------|--------------|--|----------|-------------------------|---|----------|-------|--|
|  |         |                                 |              | <u>Burst:</u><br>Design factor                                     |          | 1.00                    |   |          |       |  |
| Burst  |         | 6                               |              |  |          |                         |   |          |       |  |
| Max anticipated surface<br>pressure: 3,543 psi   |         |                                 |              |  |          |                         |   |          |       |  |
| pressure: 3,543 psi<br>Internal gradient: 0.000 psi/ft   |         |                                 | Tension:     |  |          | Non-directional string. |   |          |       |  |
|  |         |                                 | 3,543 psi    | 8 Round STC  | ):       | 1.80 (J)                |   | C        |       |  |
|  |         |                                 | 8 Round LTC: |  | 1.80 (J) |                         |   |          |       |  |
| Annular backup: 9.60 ppg   |         |                                 | Buttress:    |  | 1.60 (J) |                         |   |          |       |  |
|  |         |                                 |              | Premium:   |          | 1.50 (J)                |   |          |       |  |
|  |         |                                 |              | Body yield:  |          | 1.60 (B)                |   |          |       |  |
|  |         | Tension is based on air weight. |              |  |          |                         |   |          |       |  |
|  |         |                                 |              | Neutral point: 10,013 ft   |          |                         |   |          |       |  |
|  |         |                                 |              | Estimated co   | ost:     | 51,464 (\$)             |   |          |       |  |
| Run  | Segment |                                 | Nominal      |  | End      | True Vert               | Measured  | Drift    | Est.  |  |
| Seq  | Length  | Size                            | Weight       | Grade  | Finish   | Depth                   | Depth   | Diameter | Cost  |  |
| 204  | (ft)    | (in)                            | (lbs/ft)     |  |          | (ft)                    | (ft)  | (in)     | (\$)  |  |
| 3  | 3500    | 5.5                             | 17.00        | L-80   | LT&C     |                         | 3500  | 4.767    | 22176 |  |
| 2  | 6500    | 5.5                             | 15.50        | J-55   | LT&C     | 10000                   | 10000   | 4.825    | 22952 |  |
| 1  | 1000    | 5.5                             | 17.00        | L-80   | LT&C     | 11000                   | 11000   | 4.767    | 6336  |  |

| 1          | 1000                      | 5.5<br>5.5                    | 17.00                        | L-80                   | LT&C                       | 11000                     | 11000                     | 4.767                         | 6336                        |
|------------|---------------------------|-------------------------------|------------------------------|------------------------|----------------------------|---------------------------|---------------------------|-------------------------------|-----------------------------|
| Run<br>Seq | Collapse<br>Load<br>(psi) | Collapse<br>Strength<br>(psi) | Collapse<br>Design<br>Factor | Burst<br>Load<br>(psi) | Burst<br>Strength<br>(psi) | Burst<br>Design<br>Factor | Tension<br>Load<br>(kips) | Tension<br>Strength<br>(kips) | Tension<br>Design<br>Factor |
| 3          | 1127                      | 5541                          | 4.92                         | 3543                   | 7740                       | 2.18                      | 177.3                     | 3 <b>38</b>                   | 1.91 J                      |
| 2          | 3221                      | 3960                          | 1.23                         | 1797                   | 4810                       | 2.68                      | 117.8                     | 217                           | 1.84 J                      |
| 1          | 3543                      | 6290                          | 1.78                         | 3543                   |                            | 999.00                    | 17                        | 338                           | 19.88 J                     |

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## Remarks:

Collapse is based on a vertical depth of 11000 ft, a mud weight of 6.2 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.