

# GURTLER 24-21

| Existing Features |    |
|-------------------|----|
| KB                | 13 |

|                            |     |
|----------------------------|-----|
| 8-5/8" Surface csg shoe at | 686 |
|----------------------------|-----|

|                          |      |
|--------------------------|------|
| Bottom of Foxhills (FHM) | 1120 |
|--------------------------|------|

|             |      |
|-------------|------|
| Primary TOC | 2190 |
|-------------|------|

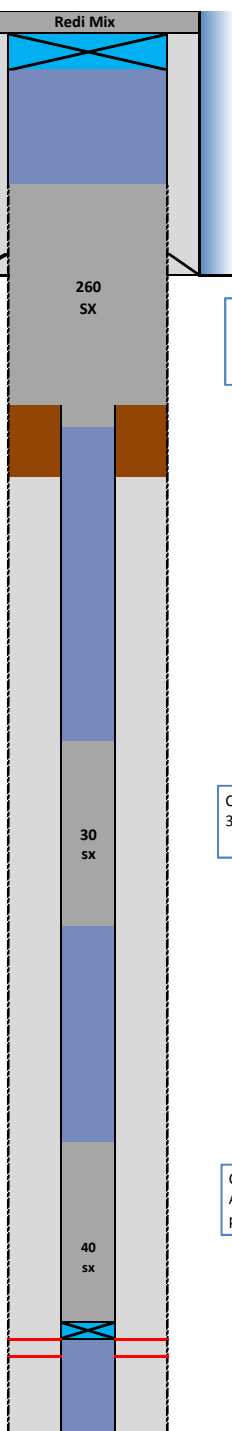
|        |     |      |
|--------|-----|------|
| Sussex | Top | 4390 |
|--------|-----|------|

|                          |        |     |
|--------------------------|--------|-----|
| Shannon                  | Bottom | N/A |
| Not productive in 1 mile |        |     |

|                       |      |
|-----------------------|------|
| Niobrara Geologic Top | 6912 |
|-----------------------|------|

| Geologic Top |             |      |
|--------------|-------------|------|
| Codell       | Perf Top    | 7083 |
|              | Perf Bottom | 7096 |

|                  |      |
|------------------|------|
| PBMD             | 7213 |
| 4-1/2" 11.6# CSG | 7230 |



## Proposed Additions for P&A

|    |               |
|----|---------------|
| 80 | CIBP (8-5/8") |
|----|---------------|

|     |     |
|-----|-----|
| 480 | TOC |
|-----|-----|

Cement Blend: Type III w/ cello flake and CaCl<sub>2</sub>, mixed at 14.8 ppg and 1.33 cuft/sk. with 40% excess and 8" hole size.

|      |                  |
|------|------------------|
| 1220 | Casing Stub      |
| 1320 | Bottom of cement |

|      |               |
|------|---------------|
| 3820 | Top of Cement |
|------|---------------|

Cement Blend: "G" w/ 0.4% CD-32, 0.4% ASA - 301, mixed at 15.8 ppg and 1.15 cuft/sk

|      |                  |
|------|------------------|
| 4220 | Bottom fo Cement |
|------|------------------|

|      |     |
|------|-----|
| 6400 | TOC |
|------|-----|

Cement Blend: "G" w/ 20% silica flour , 0.4% CD -32, 0.4% ASA -301 and R-3 to achieve 2:30 pump time mixed at 15.8 ppg and 1.38 cuft/sk

|      |      |
|------|------|
| 7020 | CIBP |
|------|------|

| API#              | 0512329143    |       |                   |                              |
|-------------------|---------------|-------|-------------------|------------------------------|
| Well:             | GURTLER 24-21 |       |                   |                              |
| Equipment         | Specs.        | Depth | Capacity (bbl/ft) | Capacity ft <sup>3</sup> /ft |
| Surface Casing    | 8-5/8" 24#    | 686   | 0.0636            | 0.3575                       |
| Production Casing | 4.50 (11.6#)  | 7230  | 0.0155            | 0.0872                       |
| Tubing Size       |               |       |                   |                              |
| Bit Size          | 7 7/8         |       | 0.0602            | 0.3382                       |
| Hole Size         | 8             |       | 0.0622            | 0.3491                       |
| Hole Size         | 9.25          |       | 0.0831            | 0.4667                       |

| Cement Calculations |              |              |        |            |
|---------------------|--------------|--------------|--------|------------|
| Section             | Volume cu-ft | Cement Sacks | Excess | Top Plug   |
| S/C hole            | 73.65        | 55.37        |        | 8" Caliper |
| Open Hole           | 260.96       | 196.21       | 40%    |            |
| P/C                 | 8.72         | 6.56         |        |            |
| Total Top Plug      | 343.33       | 258.14       | 260    |            |
| 345.8 cu-ft         |              |              |        |            |

|            |       |       |    |             |
|------------|-------|-------|----|-------------|
| top CICR   | 34.88 | 30.33 |    | SX/ SH Plug |
| Total      | 34.88 | 30.33 | 30 |             |
| 34.5 cu-ft |       |       |    |             |

|              |       |               |               |      |
|--------------|-------|---------------|---------------|------|
| Cement Yield | 1.33  | 1.15          | 1.71          | 1.38 |
| Top Plug     | SX/SH | NB/Cd Squeeze | NB/Cd in pipe |      |

|        |       |       |    |            |
|--------|-------|-------|----|------------|
| NB csg | 54.06 | 39.18 |    | NB/CD Plug |
| Total  | 54.06 | 39.18 | 40 |            |
| 55.20  |       |       |    |            |

| Legend |                           |
|--------|---------------------------|
|        | Existing cement with CBL  |
|        | assumed cement w/ no CBL  |
|        | cast iron cement retainer |
|        | cast iron bridge plug     |
|        | mud                       |
|        | 2% KCL Water              |