| B SUNDRY Do not use thi abandoned we | Contact: RATING LE-Mail: leland@pe | NTERIOR GEMENT RTS ON M drill or to re- b) for such ructions on LELAN AND | page 2 ERS sum.com | <u>resią</u> | OMB NO Expires: Jan | nent, Name and/or No. DERAL COM 21H | |
|---|---|---|--|-------------------------------------|---|---|--|
| 4. Location of Well <i>(Footage, Sec., T</i> Sec 34 T19S R25E NWNE 70 32.622494 N Lat, 104.470985 | 9FNL 2174FEL W Lon | | | | 11. County or Parish, Si EDDY COUNTY, | NM | |
| <u></u> | PPROPRIATE BOX(ES) | TO INDICA | | | | | |
| TYPE OF SUBMISSION | Acidize Alter Casing | pen raulic Fracturing | 🗖 Reclama | | Water Shut-Off Well Integrity Other | | |
| Final Abandonment Notice | Subsequent Report Casing Repair New Construction Recond Final Abandonment Notice Change Plans Plug and Abandon Tempore Convert to Injection Plug Back Water Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any | | | | | | |
| Attach the Bond under which the wo following completion of the involved testing has been completed. Final Al determined that the site is ready for f Changing the production casin plan. | l operations. If the operation re bandonment Notices must be fil inal inspection. | sults in a multip ed only after all | e completion or reco requirements, includ | mpletion in a no ing reclamation | ew interval, a Form 3160 , have been completed an | -4 must be filed once d the operator has | |
| | | | | DIS | TRICT II-ARTESIA (| D.C.D. | |
| | Electronic Submission # For PERCUSSION I nmitted to AFMSS for proc | PETRO OPER | ATING LLC, sent SCILLA PEREZ o | to the Carlsb n 07/10/2018 (| ad | | |
| Name (Printed/Typed) BRIAN W | OOD | | Title CONSU | ILTANT | | | |
| Signature (Electronic | Submission) | | Date 07/05/2 | 018 | | | |
| | THIS SPACE FO | DR FEDER | L OR STATE | OFFICE US | SE | | |
| Approved By Conditions of approval, if any, are attache certify that the applicant holds legal or equivalent would entitle the applicant to condu- | uitable title to those rights in the uct operations thereon. | not warrant or subject lease | Garlsba | ad Fiel | ngineer d Office | JUbate 1 8 2018 | |
| Title 18 U.S.C. Section 1001 and Title 43 States any false, fictitious or fraudulent | | | | willfully to ma | ke to any department or a | igency of the United | |
| (Instructions on page 2) ** BLM REV | ISED ** BLM REVISE | D ** BLM R | EVISED ** BLN | | ** BLM REVISED |) ** | |

٠

.

| 3LM REVISED ** | BLM REVISED ** | BLM REVISED ** | BLM REVISED ** | BLM REVISED * |
|----------------|----------------|----------------|----------------|---------------|
| | | | | |

Ruf 8-8-18

Percussion Petroleum Operating, LLC South Boyd Federal Com 21H SHL 709' FNL & 2174' FEL 34-19S-25E BHL 20' FNL & 2063' FEL 27-19S-25E Eddy County, NM

Drilling Program

| Formation/Lithology | TVD | MD | Contents |
|-------------------------|-------|-------|---------------------|
| Quaternary caliche | 000′ | 000′ | water |
| Grayburg dolomite | 544' | 544′ | hydrocarbons |
| San Andres dolomite | 824' | 826′ | hydrocarbons |
| (КОР | 2039′ | 2050' | hydrocarbons) |
| Glorieta silty dolomite | 2403′ | 2457′ | hydrocarbons |
| Yeso dolomite | 2538′ | 2710' | hydrocarbons & goal |
| TD | 2527′ | 8142' | hydrocarbons |

1. <u>ESTIMATED_TOPS</u> (no change)

2. <u>NOTABLE ZONES</u> (no change)

Yeso is the goal. Closest water well (RA 02958) is 2696' south. Depth to water was not recorded in this 450' deep well.

3. <u>PRESSURE CONTROL</u> (no change)

A 3000-psi 5000' rated BOP stack consisting of annular preventer and double (blind and pipe) ram will be used below surface casing to TD. See attached BOP and choke manifold diagrams.

Pressure tests will be conducted before drilling out from under all casing strings. Third party test crews will conduct all tests. All tests will be recorded for 10-minutes on low pressure (500 psi) and 10-minutes on high pressure (3000-psi). After BOP testing is complete, test casing (without test plug) to 2000-psi for 30 minutes. All tests will be charted on a plot. BOPs will be function tested every day.



DRILL PLAN PAGE 2 7-3-18

Percussion Petroleum Operating, LLC South Boyd Federal Com 21H SHL 709' FNL & 2174' FEL 34-19S-25E BHL 20' FNL & 2063' FEL 27-19S-25E Eddy County, NM

4. <u>CASING & CEMENT</u> (change to tapered long string & reduce cement volume)

All casing will be API and new. A contingency plan is attached.

| Hole O. D. | Set MD | Set TVD | Casing O. D. | Weight (lb/ft) | Grade | Joint | Collapse | Burst | Tension |
|---------------|------------------|---------------------|-------------------------------------|-------------------|-------|-------|----------|-------|---------|
| 12.25" | 0′ - 1274' | 0′ - 1268' | Surface 9.625" | 36 | J-55 | STC | 1.125 | 1.125 | 1.8 |
| 8.75″ | 0' - 2325' | 0' – 2299' | 1 st Product. 7″ | 32 | L-80 | BTC | 1.125 | 1.125 | 1.8 |
| 8.75" | 2325′ - 8142' | 2299' - 2527' | 2 nd Product. 5.5" | 17 | L-80 | втс | 1.125 | 1.125 | 1.8 |

| Casing Name | Туре | Sacks | Yield | Cu. Ft. | Weight | Blend |
|----------------------|---|---|-------|---------|--------------------------------|---|
| Surface | Lead | 635 | 1.32 | 838 | 14.8 | Class C + 2% CaCl + ¼ pound per sack celloflake |
| TOC = GL | TOC = GL 100% Excess centralizers per Onshore Orc | | | | ntralizers per Onshore Order 2 | |
| Production . | Lead | 445 | 1.97 | 876 | 12.6 | 65/65/6 Class C + 6% gel + 5% salt + ¼ pound per sack celloflake + 0.2% C41-P |
| | Tail | 1470 | 1.32 | 1940 | 14.8 | Class C + 2% CaCl + ¼ pound per sack celloflake |
| TOC = GL >50% Excess | | 1 centralizer on 1 st collar and every 10 th collar to 1200' + 1 inside the surface casing | | | | |

5. <u>MUD PROGRAM</u> (no change)

An electronic/mechanical mud monitor with a minimum pit volume totalizer, stroke counter, and flow sensor will be used. All necessary mud products (LCM) will be on site to handle any abnormal hole condition that may be encountered while drilling this well. A closed loop system will be used.



Percussion Petroleum Operating, LLC South Boyd Federal Com 21H SHL 709' FNL & 2174' FEL 34-19S-25E BHL 20' FNL & 2063' FEL 27-19S-25E Eddy County, NM DRILL PLAN PAGE 3 7-3-18

| Туре | Interval (MD) | lb/gal | Viscosity | Fluid Loss | Plastic Viscosity | Yield Point |
|-----------------------|---------------|-----------|-----------|---------------|----------------------|----------------|
| fresh water/gel | 0' - 1274' | 8.4 - 9.2 | 36-42 | NC | 3-5 | 5-7 |
| fresh water/cut brine | 1274' - 2050' | 8.3 - 9.2 | 28-30 | NC | 1 | 1 |
| cut brine | 2050' - 8142' | 8.6 - 9.2 | 29-32 | NC | 4-5 | 6-10 |

6. <u>CORES, TESTS, & LOGS</u> (no change)

No core or drill stem test is planned.

A mud logger will be used from GL to TD. Samples will be collected every 10' in the lateral pay zone.

No electric logs are planned at this time.

7. <u>DOWN HOLE CONDITIONS</u> (no change)

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈ 1097 psi. Expected bottom hole temperature is ≈ 108 ° F.

A Hydrogen Sulfide Drilling Operation Plan is attached.

8. OTHER INFORMATION (no change)

Anticipated spud date is upon approval. It is expected it will take ≈ 1 month to drill and complete the well.

St. Devote LLC has operating rights in NMNM-504364B. St. Devote LLC is a subsidiary of Percussion.

