

Form 3160-3
(March 2012)**CONFIDENTIAL**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014**APPLICATION FOR PERMIT TO DRILL OR REENTER**

| | | | |
|--|--|--|--|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | 5. Lease Serial No. BHL: NMLC061863A / SHL: NMLC061873 | |
| 1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone | | 6. If Indian, Allottee or Tribe Name | |
| 2. Name of Operator Devon Energy Production Company, L.P. (6137) | | 7. If Unit or CA Agreement, Name and No. | |
| 3a. Address 333 West Sheridan Avenue Oklahoma City, OK 73102-5010 | | 8. Lease Name and Well No. Cotton Draw Unit 320H (300635) | |
| 3b. Phone No. (include area code) 405-552-6558 | | 9. API Well No. 70-025-43350 | |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface Unit O, 640' FSL & 1405' FEL PP: 510' FSL, 1320' FEL At proposed prod. zone Unit A, 330' FNL & 990' FEL | | 10. Field and Pool, or Exploratory WC-025 G-06 S253206M; Bone Spring [97899] | |
| 14. Distance in miles and direction from nearest town or post office* Approximately 21.5 miles SE of Malaga, NM | | 11. Sec., T. R. M. or Blk. and Survey or Area Sec 7-T25S-R32E | |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) See attached map | | 12. County or Parish Lea | |
| 16. No. of acres in lease SHL: 319.730 Acres BHL: 1882.600 Acres | | 13. State NM | |
| 17. Spacing Unit dedicated to this well 160 Acres | | 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. See attached map | |
| 19. Proposed Depth 13,206' MD / 8950' TVD | | 20. BLM/BIA Bond No. on file CO-1104 | |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3431.4' GL | | 22. Approximate date work will start* 2/27/2017 | |
| 23. Estimated duration 45 Days | | 24. Attachments | |

HOBBS OCD

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The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

| | | |
|---|------------------------------------|---------------------------|
| 25. Signature <i>Linda Good</i> | Name (Printed/Typed) Linda Good | Date Revised 4/29/2016 |
| Title Regulatory Compliance Specialist | | |

| | | |
|---|--|---------------------|
| Approved by (Signature) James A. Amos | Name (Printed/Typed) | Date JUN 23 2016 |
| Title FIELD MANAGER | Office CARLSBAD FIELD OFFICE | |

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARSTitle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212,
States any false, fictitious or fraudulent statements or repres

any department or agency of the United

(Continued on page 2)

Padded w/CDU 312H/313H/319H

See attached NMOCD
Conditions of Approval

*(Instructions on page 2)

*KE 01/01/16***Carlsbad Controlled Water Basin****SEE ATTACHED FOR
CONDITIONS OF APPROVAL****Approval Subject to General Requirements
& Special Stipulations Attached***KE*

Devon Energy, Cotton Draw Unit 320H

1. Geologic Formations

| | | | |
|---------------|---------|-------------------------------|-----|
| TVD of target | 8,950' | Pilot hole depth | N/A |
| MD at TD: | 13,206' | Deepest expected fresh water: | 190 |

Basin

| Formation | Depth (TVD) from KB | Water/Mineral Bearing/ Target Zone? | Hazards* |
|-------------------|------------------------|---|----------|
| Rustler | 675 | Water | |
| Top of Salt | 1,050 | Salt | |
| Base of Salt | 4,195 | Salt | |
| Lamar | 4,435 | Barren | |
| Bell Canyon | 4,472 | Oil/Gas | |
| Cherry Canyon | 5,295 | Oil/Gas | |
| Brushy Canyon | 6,705 | Oil/Gas | |
| Lwr Brushy Canyon | 8,135 | Oil/Gas | |
| Bone Spring | 8,350 | Oil/Gas | |
| Middle Leonard | 8,465 | Oil/Gas | |
| Lower Leonard | 8,865 | Target Zone | |
| Basal Leonard | 9,102 | Oil/Gas | |
| 1st BSPG Sand | 9,410 | Oil/Gas | |
| 2nd BSPG Lime | 9,625 | Oil/Gas | |
| 2nd BSPG Sand | 10,035 | Oil/Gas | |
| 2nd BSPG Sand Upr | 10,135 | Oil/Gas | |
| 2nd BSPG Sand Lwr | 10,467 | Oil/Gas | |
| 3rd BSPG Lime | 10,560 | Oil/Gas | |
| Wolfcamp | 11,765 | Oil/Gas | |
| | | | |
| | | | |

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

See COA

| Hole Size | Casing Interval | | Csg Size | Weight | Grade | Conn | Safety Factors | | |
|---------------------------|-----------------|-----------------------|----------|--------|-------|------|----------------|----------|--------------------|
| | From | To | | | | | Burst | Collapse | Tension |
| 17 1/2 | 0 | 785 705 | 13 3/8 | 54.5 | J-55 | BTC | 1.82 | 3.67 | 6.80 |
| 12 1/4 | 0 | 4,300 4400 | 9 5/8 | 40 | J-55 | LTC | 1.67 | 1.15 | 2.11 |
| 8 3/4 | 0 | 13,206 | 5 1/2 | 17 | P-110 | BTC | 1.19 | 1.78 | 2.46 |
| BLM Minimum Safety Factor | | | | | | | 1.00 | 1.125 | 1.6 Dry 1.8 Wet |

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

See COA →

| | Y or N |
|--|--------|
| Is casing new? If used, attach certification as required in Onshore Order #1 | Y |
| Does casing meet API specifications? If no, attach casing specification sheet. | Y |
| Is premium or uncommon casing planned? If yes attach casing specification sheet. | N |
| Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria). | Y |
| Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing? | Y |
| Is well located within Capitan Reef? | N |
| If yes, does production casing cement tie back a minimum of 50' above the Reef? | |
| Is well within the designated 4 string boundary. | |
| Is well located in SOPA but not in R-111-P? | N |
| If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing? | |
| Is well located in R-111-P and SOPA? | N |
| If yes, are the first three strings cemented to surface? | |
| Is 2 nd string set 100' to 600' below the base of salt? | |
| Is well located in high Cave/Karst? | N |
| If yes, are there two strings cemented to surface? | |
| (For 2 string wells) If yes, is there a contingency casing if lost circulation occurs? | |
| Is well located in critical Cave/Karst? | N |
| If yes, are there three strings cemented to surface? | |

3. Cementing Program

| Casing | # Sks | Wt. lb/ gal | H ₂ O gal/sk | Yld ft ³ / sack | 500# Comp. Strength (hours) | Slurry Description |
|--------------------------|------------------|-------------------|----------------------------|----------------------------------|--------------------------------------|---|
| 13-3/8" Surf | 760 | 14.8 | 6.32 | 1.33 | 6 | Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake |
| 9-5/8" Inter. | 900 | 12.9 | 9.81 | 1.85 | 14 | Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake |
| | 430 | 14.8 | 6.32 | 1.33 | 6 | Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake |
| 5-1/2" Prod Single Stage | 380 | 9 | 15.64 | 3.56 | 25 | Lead: Tuned Light® Cement |
| | 1270 | 14.5 | 5.31 | 1.2 | 25 | Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite |
| 5-1/2" Prod Two Stage | 560 | 11.9 | 12.89 | 2.31 | n/a | 1 st Stage Lead: (50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 1 lb/sk of Kol-Seal + 0.3% BWOC HR-601 + 0.5lb/sk D-Air 5000 |
| | 1270 | 14.5 | 5.31 | 1.2 | 25 | 1 st Stage Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite |
| | DV Tool = 4350ft | | | | | |
| | 20 | 11 | 14.81 | 2.55 | 22 | 2 nd Stage Lead: Tuned Light® Cement + 0.125 lb/sk Pol-E-Flake |
| | 30 | 14.8 | 6.32 | 1.33 | 6 | 2 nd Stage Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake |

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

| Casing String | TOC | % Excess |
|--|---|----------|
| 13-3/8" Surface | 0' | 100% |
| 9-5/8" Intermediate | 0' | 75% |
| 5-1/2" Production Casing Single Stage Option | 4100' | 25% |
| 5-1/2" Production Casing Two Stage Option | 1 st Stage = 4350' / 2 nd Stage = 4100' | 25% |

4. Pressure Control Equipment - See COA

| | |
|---|--|
| N | A variance is requested for the use of a diverter on the surface casing. See attached for schematic. |
|---|--|

| BOP installed and tested before drilling which hole? | Size? | Min. Required WP | Type | ✓ | Tested to: |
|--|---------|------------------|------------|---|-------------------------|
| 12-1/4" | 13-5/8" | 3M | Annular | x | 50% of working pressure |
| | | | Blind Ram | | 3M |
| | | | Pipe Ram | | |
| | | | Double Ram | x | |
| | | | Other* | | |
| 8-3/4" | 13-5/8" | 3M | Annular | x | 50% testing pressure |
| | | | Blind Ram | | 3M |
| | | | Pipe Ram | | |
| | | | Double Ram | x | |
| | | | Other* | | |
| | | | Annular | | |
| | | | Blind Ram | | |
| | | | Pipe Ram | | |
| | | | Double Ram | | |
| | | | Other* | | |

*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

| | |
|---|--|
| Y | Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i. |
| Y | A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart. |
| Y | Are anchors required by manufacturer? |

See COA

A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.

- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

SEE
COA

After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.

After running the 9-5/8" intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.

See attached schematic.

5. Mud Program

| Depth | | Type | Weight (ppg) | Viscosity | Water Loss |
|-------------------|------------------------------------|-----------------|--------------|-----------|------------|
| From | To | | | | |
| 0 | 705' 785' | FW Gel | 8.6-8.8 | 28-34 | N/C |
| 705' | 4,300' 4400' | Saturated Brine | 10.0-10.2 | 28-34 | N/C |
| 4,300' | 13,206' | Cut Brine | 8.5-9.3 | 28-34 | N/C |

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

| | |
|---|-----------------------------|
| What will be used to monitor the loss or gain of fluid? | PVT/Pason/Visual Monitoring |
|---|-----------------------------|

6. Logging and Testing Procedures *See COA*

| Logging, Coring and Testing. | |
|------------------------------|---|
| x | Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM. |
| | No Logs are planned based on well control or offset log information. |
| | Drill stem test? If yes, explain |
| | Coring? If yes, explain |

| Additional logs planned | | Interval |
|-------------------------|-------------|-------------------------|
| | Resistivity | Int. shoe to KOP |
| | Density | Int. shoe to KOP |
| X | CBL | Production casing |
| X | Mud log | Intermediate shoe to TD |
| | PEX | |

7. Drilling Conditions

| Condition | Specify what type and where? |
|----------------------------|------------------------------|
| BH Pressure at deepest TVD | 4328 psi |
| Abnormal Temperature | No |

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

| | |
|--|-------------------|
| Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM. | |
| N | H2S is present |
| Y | H2S Plan attached |

8. Other facets of operation

Is this a walking operation? No.

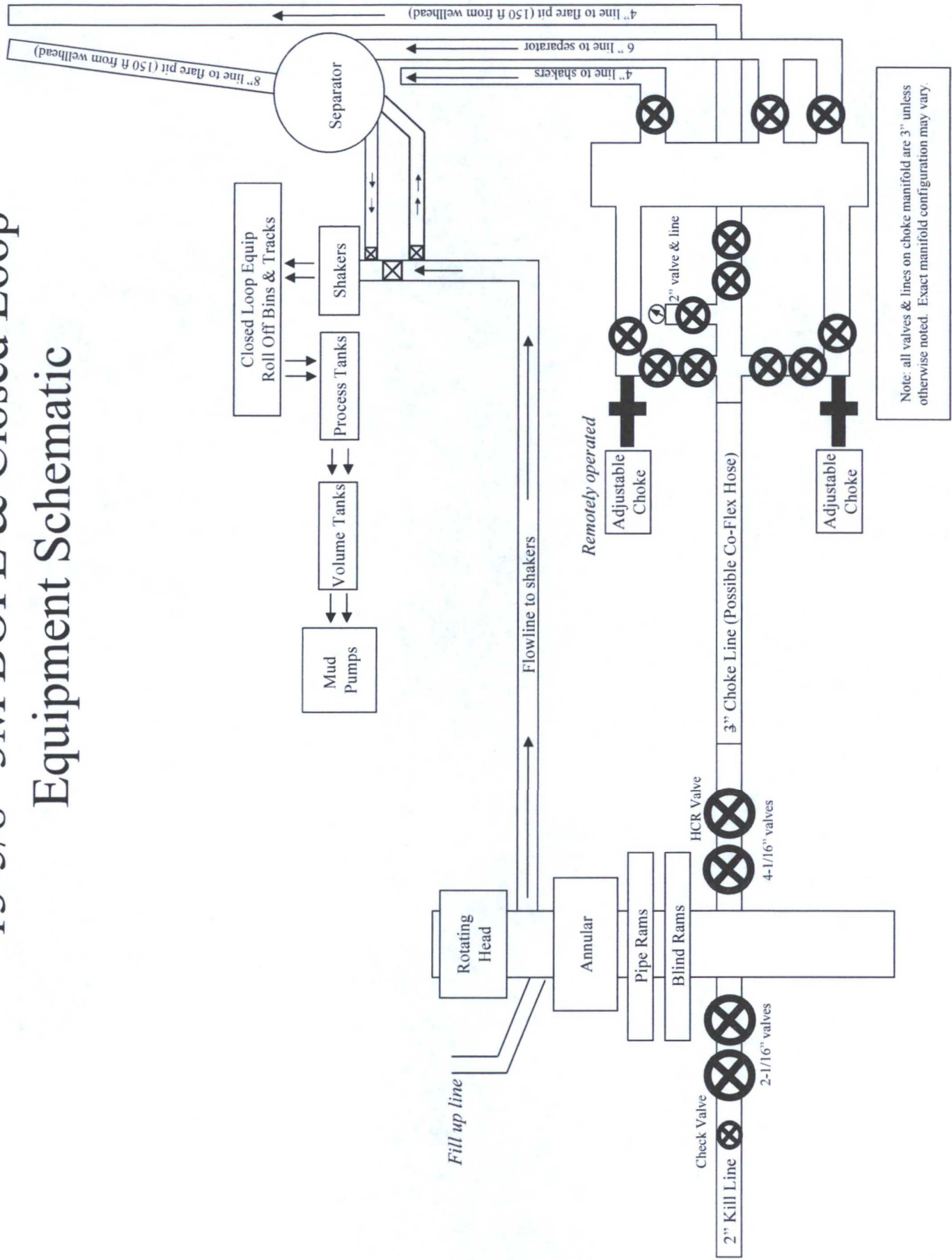
Will be pre-setting casing? No.

Attachments

☒ Directional Plan

☐ Other, describe

13-5/8" 3M BOPE & Closed Loop Equipment Schematic



NOTES REGARDING BLOWOUT PREVENTERS

Devon Energy Production Company, L.P.
COTTON DRAW UNIT 320H

1. Drilling Nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventer and all associated filings will be in operable condition to withstand a minimum of 3000psi working pressure.
4. All fittings will be flanged.
5. A fill bore safety valve tested to a minimum of 3000psi WP with proper thread connections will be available on the rotary rig floor at all times.
6. All choke lines will be anchored to prevent movement.
7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
8. Will maintain a kelly cock attached to the kelly.
9. Hand wheels and wrenches will be properly installed and tested for safe operation.
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

