

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT Sundry Print Report

Well Name: COTTON DRAW UNIT Well Location: T25S / R31E / SEC 12 / County or Parish/State:

SWSW /

Well Number: 541H Type of Well: OIL WELL Allottee or Tribe Name:

Lease Number: NMNM0503 Unit or CA Name: COTTON DRAW **Unit or CA Number:** NMNM70928X

UNIT

Well Status: Approved Application for **Operator:** DEVON ENERGY Permit to Drill

PRODUCTION COMPANY LP

Notice of Intent

US Well Number: 3001548983

Sundry ID: 2645503

Type of Submission: Notice of Intent Type of Action: Other

Date Sundry Submitted: 11/23/2021 Time Sundry Submitted: 08:31

Date proposed operation will begin: 11/23/2021

Procedure Description: Devon Energy Production Co., L.P. (Devon) respectfully requests to have the option to move intermediate casing down to 8,400' TVD and have the option to use a 8-5/8" casing design due to the close proximity of depletion from multiple active Delaware producers. The offset wells are lateral producers landed in the Delaware formation group. Setting our intermediate string deeper will allow for us to case off potential loss zones. This will allow us to increase mud weight as necessary for well conditions in the production hole, allowing us to better handle any well control issues that may arise while drilling the lateral. This is a contingency plan based on final drilling results. Attached are the two proposed plans.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

COTTON_DRAW_UNIT_541H_Deep_Set_20211123082920.pdf

COTTON_DRAW_UNIT_541H_8.625_20211123082916.pdf

well Name: COTTON DRAW UNIT Well Location: T25S / R31E / SEC 12 / County or Parish/State:

SWSW /

Well Number: 541H Type of Well: OIL WELL Allottee or Tribe Name:

Lease Number: NMNM0503 Unit or CA Name: COTTON DRAW Unit or CA Number:

UNIT NMNM70928X

US Well Number: 3001548983 Well Status: Approved Application for Operator: DEVON ENERGY

Permit to Drill PRODUCTION COMPANY LP

Page 2 of

Conditions of Approval

Additional Reviews

Cotton_Draw_Unit_541H_Dr_COA_Sundry_ID_2645503_20211201143947.pdf

Operator Certification

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: JENNY HARMS Signed on: NOV 23, 2021 08:30 AM

Name: DEVON ENERGY PRODUCTION COMPANY LP

Title: Regulatory Compliance Professional **Street Address:** 333 West Sheridan Avenue

City: Oklahoma City State: OK

Phone: (405) 552-6560

Email address: jennifer.harms@dvn.com

Field Representative

Representative Name:

Street Address:

City: State: Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234 BLM POC Email Address: cwalls@blm.gov

Disposition: Approved **Disposition Date:** 12/20/2021

Signature: Cody R. Layton

Page 2 of 2

1. Geologic Formations

| TVD of target | 8795 | Pilot hole depth | N/A |
|---------------|-------|------------------------------|-----|
| MD at TD: | 19237 | Deepest expected fresh water | |

Basin

| Dasin | | TT / / / / / / / / / / / / / / / / / / | |
|----------------------|---------|--|----------|
| | Depth | Water/Mineral | |
| Formation | (TVD) | Bearing/Target | Hazards* |
| | from KB | Zone? | |
| Rustler | 640 | | |
| Salt | 1020 | | |
| Base of Salt | 4176 | | |
| Lamar | 4402 | | |
| Delaware | 4434 | | |
| Cherry Canyon | 5250 | | |
| Brushy Canyon | 6662 | | |
| 1st Bone Spring Lime | 8304 | | |
| Leonard | 8390 | | |
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^{*}H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

| | | Wt | | | Casing | Interval | Casing | Interval |
|-----------|-----------|-------|-------|------|-----------|----------|------------|----------|
| Hole Size | Csg. Size | (PPF) | Grade | Conn | From (MD) | To (MD) | From (TVD) | To (TVD) |
| 17 1/2 | 13 3/8 | 48 | H40 | ВТС | 0 | 665 | 0 | 665 |
| 9 7/8 | 8 5/8 | 32 | P110 | TLW | 0 | 8400 | 0 | 8400 |
| 7 7/8 | 5 1/2 | 17 | P110 | ВТС | 0 | 19237 | 0 | 8795 |

[•] All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for continengcy casing.

3. Cementing Program (3-String Primary Design)

| Casing | # Sks | TOC | Wt. (lb/gal) | Yld (ft3/sack) | Slurry Description |
|--------------|--------------|--------------------|-----------------|-------------------|--|
| Surface | 520 | Surf | 13.2 | 1.4 | Lead: Class C Cement + additives |
| Total 1 | 460 | Surf | 9.0 | 3.3 | Lead: Class C Cement + additives |
| Int 1 | 67 | 500' above shoe | 13.2 | 1.4 | Tail: Class H / C + additives |
| Int 1 | As Needed | Surf | 9.0 | 3.3 | Squeeze Lead: Class C Cement + additives |
| Intermediate | 460 | Surf | 9.0 | 3.3 | Lead: Class C Cement + additives |
| Squeeze | 67 | 500' above shoe | 13.2 | 1.4 | Tail: Class H / C + additives |
| Production | 29 | 500' tieback | 9.0 | 3.3 | Lead: Class H /C + additives |
| Froduction | 1436 | KOP | 13.2 | 1.4 | Tail: Class H / C + additives |

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

| Casing String | % Excess |
|---------------|----------|
| Surface | 50% |
| Intermediate | 30% |
| Production | 10% |

4. Pressure Control Equipment (Three String Design)

| BOP installed and tested before drilling which hole? | Size? | Min. Required WP | Ty | ype | ~ | Tested to: | | | | | | | | | | | | | | | | | | | | |
|--|---------|------------------------|------------|---------|----|-------------------------------|-------|---|----|--|--|--|--|--|--|---|--|--|--|--|--|--|------|--------|---|------|
| | | | Anı | Annular | | 50% of rated working pressure | | | | | | | | | | | | | | | | | | | | |
| Int 1 | 13-58" | 5M | Blind | d Ram | X | | | | | | | | | | | | | | | | | | | | | |
| IIIt I | 13-36 | 3101 | • | Ram | | 5M | | | | | | | | | | | | | | | | | | | | |
| | | | Doub | le Ram | X | 3101 | | | | | | | | | | | | | | | | | | | | |
| | | | Other* | | | | | | | | | | | | | | | | | | | | | | | |
| | 13-5/8" | 5M | Anı | nular | X | 50% of rated working pressure | | | | | | | | | | | | | | | | | | | | |
| Production | | | 5M | 5M | 5M | Blind | d Ram | X | | | | | | | | | | | | | | | | | | |
| Floduction | | | | | | | Ram | | 5M | | | | | | | | | | | | | | | | | |
| | | | 1 | | | | | | | | | | | | | ļ | | | | | | | Doub | le Ram | X | J1V1 |
| | | | Other* | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Annul | ar (5M) | | | | | | | | | | | | | | | | | | | | | | |
| | | | Blind | d Ram | | | | | | | | | | | | | | | | | | | | | | |
| | | | Pipe Ram | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Double Ram | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Other* | | | | | | | | | | | | | | | | | | | | | | | |

5. Mud Program (Three String Design)

| Section | Туре | Weight (ppg) |
|--------------|--------|-----------------|
| Surface | FW Gel | 8.5-9 |
| Intermediate | Brine | 10-10.5 |
| Production | WBM | 8.5-9 |

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

| Logging, C | Logging, Coring and Testing | | | | | |
|------------|---|--|--|--|--|--|
| | Will run GR/CNL from TD to surface (horizontal well - vertical portion of hole). Stated logs run will be in the | | | | | |
| X | Completion Report and sbumitted 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 | |
| | Density | |
| X | CBL | Production casing |
| X | Mud log | KOP to TD |
| | PEX | |

7. Drilling Conditions

| Condition | Specfiy what type and where? |
|----------------------------|------------------------------|
| BH pressure at deepest TVD | 4116 |
| Abnormal temperature | No |

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

Hydrogren 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.

| Ľ | encountered measured varies and formations will be provided to the BLM. | |
|---|---|--------------------|
| | N | H2S is present |
| Γ | Y | H2S plan attached. |

8. Other facets of operation

Is this a walking operation? Potentially

- 1 If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
- 2 The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
- 3 The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

- 1 Spudder rig will move in and batch drill surface hole.
 - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
- 3 The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pad.
- 6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 7 Drilling operations will be performed with drilling rig. At that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
 - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

| Attachment | ts |
|------------|------------------|
| X | Directional Plan |
| | Other, describe |

1. Geologic Formations

| TVD of target | 8795 | Pilot hole depth | N/A |
|---------------|-------|------------------------------|-----|
| MD at TD: | 19237 | Deepest expected fresh water | |

Basin

| Formation | Depth (TVD) | Water/Mineral Bearing/Target | Hazards* |
|----------------------|-------------|---------------------------------|-----------|
| rormation | from KB | Zone? | 11azai us |
| Rustler | 640 | | |
| Salt | 1020 | | |
| Base of Salt | 4176 | | |
| Lamar | 4402 | | |
| Delaware | 4434 | | |
| Cherry Canyon | 5250 | | |
| Brushy Canyon | 6662 | | |
| 1st Bone Spring Lime | 8304 | | |
| Leonard | 8390 | | |
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^{*}H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

| | | Wt | | | Casing Interval | | Casing Interval | |
|-----------|-----------|-------|-------|------|-----------------|---------|-----------------|----------|
| Hole Size | Csg. Size | (PPF) | Grade | Conn | From (MD) | To (MD) | From (TVD) | To (TVD) |
| 17 1/2 | 13 3/8 | 48 | H40 | ВТС | 0 | 665 | 0 | 665 |
| 12 1/4 | 9 5/8 | 40 | J-55 | ВТС | 0 | 8400 | 0 | 8400 |
| 8 3/4 | 5 1/2 | 17 | P110 | ВТС | 0 | 19237 | 0 | 8795 |

[•] All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for continengcy casing.

3. Cementing Program (3-String Primary Design)

| Casing | # Sks | TOC | Wt. (lb/gal) | Yld (ft3/sack) | Slurry Description |
|--------------|--------------|--------------------|-----------------|-------------------|--|
| Surface | 520 | Surf | 13.2 | 1.4 | Lead: Class C Cement + additives |
| Int 1 | 977 | Surf | 9.0 | 3.3 | Lead: Class C Cement + additives |
| 1111. 1 | 154 | 500' above shoe | 13.2 | 1.4 | Tail: Class H / C + additives |
| Int 1 | As Needed | Surf | 9.0 | 3.3 | Squeeze Lead: Class C Cement + additives |
| Intermediate | 977 | Surf | 9.0 | 3.3 | Lead: Class C Cement + additives |
| Squeeze | 154 | 500' above shoe | 13.2 | 1.4 | Tail: Class H / C + additives |
| Production | 43 | 500' tieback | 9.0 | 3.3 | Lead: Class H /C + additives |
| Floduction | 2093 | KOP | 13.2 | 1.4 | Tail: Class H / C + additives |

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

| Casing String | % Excess |
|---------------|----------|
| Surface | 50% |
| Intermediate | 30% |
| Production | 10% |

4. Pressure Control Equipment (Three String Design)

| BOP installed and tested before drilling which hole? | Size? | Min. Required WP | Туре | | ✓ | Tested to: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---------|------------------------|------------|------------|----------|-------------------------------|--|------------|------------|-------------|------------|-------------|------------|------------|------------|------------|------------|--|--|--|-----------|--------|----|----|----|----|----|---------|----|--------|----|------|----|----|----|----|----|-------|-------|------|------|
| | | | Anı | nular | X | 50% of rated working pressure | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Int 1 | 13-58" | 5M | Blind | d Ram | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IIIt I | 13-36 | 3101 | • | Ram | | 5M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Doub | le Ram | X | JIVI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Other* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Anı | nular | X | 50% of rated working pressure | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Production | 13-5/8" | 13-5/8" | 13-5/8" 5 | 13-5/8" 5M | 13-5/8" | 13-5/8" | | 12 5/9" 5M | 12.5/8" 5M | 12 5/Q" 5N/ | 12 5/9" 5M | 12 5/9" 5M | 12 5/Q" 5M | 12 5/Q" 5M | 12 5/Q" 5M | 12 5/Q" 5M | 13 5/8" 5M | | | | 3-5/8" 5M | /8" 5M | 5M | 5M | 5M | 5M | 5M | 5/8" 5M | 5M | 5M | 5M | 5M | 5M | 5M | 5M | 5M | 5M | Blind | d Ram | X | |
| Troduction | | | | | | | | J-3/6 JIVI | o Jivi | 3101 | J1V1 | 13-5/6 3141 | 13-3/6 | Sivi | 3101 | | | | | | | | | | | | | | | | | | | | | | | JIVI | 3111 | 3111 | 3141 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | le Ram | X | JIVI | | | | | | | | | |
| | | | Other* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Annul | ar (5M) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Blind Ram | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Pipe Ram | | |] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Double Ram | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Other* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

5. Mud Program (Three String Design)

| Section | Туре | Weight (ppg) |
|--------------|--------|-----------------|
| Surface | FW Gel | 8.5-9 |
| Intermediate | Brine | 10-10.5 |
| Production | WBM | 8.5-9 |

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

| Logging, C | Logging, Coring and Testing | | | | |
|------------|---|--|--|--|--|
| | Will run GR/CNL from TD to surface (horizontal well - vertical portion of hole). Stated logs run will be in the | | | | |
| X | Completion Report and sbumitted 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 | |
| | Density | |
| X | CBL | Production casing |
| X | Mud log | KOP to TD |
| | PEX | |

7. Drilling Conditions

| Condition | Specfiy what type and where? |
|----------------------------|------------------------------|
| BH pressure at deepest TVD | 4116 |
| Abnormal temperature | No |

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

Hydrogren 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.

| L | encountered measured values and formations will be provided to the BEN. | |
|---|---|--------------------|
| | N | H2S is present |
| ſ | Y | H2S plan attached. |

8. Other facets of operation

Is this a walking operation? Potentially

- 1 If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
- 2 The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
- 3 The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

- 1 Spudder rig will move in and batch drill surface hole.
 - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
- 3 The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pad.
- 6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 7 Drilling operations will be performed with drilling rig. At that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
 - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

| Attachments | 1 |
|-------------|------------------|
| X | Directional Plan |
| | Other, describe |

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:
LEASE NO.:
NMNM0000503
LOCATION:
COUNTY:
Devon Energy Production Company LP
NMNM0000503
Section 12, T.25 S., R.31 E., NMPM
Eddy County, New Mexico

WELL NAME & NO.: Cotton Draw Unit 541H
SURFACE HOLE FOOTAGE: 552'/S & 944'/W
BOTTOM HOLE FOOTAGE 20'/N & 990'/W

COA

| H2S | • Yes | □ No | |
|----------------------|------------------|----------------|--------------|
| Potash | None | ☐ Secretary | □ R-111-P |
| Cave/Karst Potential | Low | ☐ Medium | High |
| Cave/Karst Potential | Critical | | |
| Variance | None | Flex Hose | Other |
| Wellhead | Conventional | Multibowl | Both |
| Other | ☐4 String Area | ☐ Capitan Reef | □WIPP |
| Other | Fluid Filled | | ☐ Pilot Hole |
| Special Requirements | ☐ Water Disposal | □ COM | ☑ Unit |

All Previous COAs still apply.

Primary Casing Design:

B. CASING

- 1. The 13-3/8 inch surface casing shall be set at approximately 700 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8** hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours

- after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing shall is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.

Operator has proposed to pump down 13-3/8" X 9-5/8" annulus. Operator must run a CBL from TD of the 9-5/8" casing to surface. Submit results to BLM.

Alternate Casing Design:

B. CASING

- 1. The 13-3/8 inch surface casing shall be set at approximately 700 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8** hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

- 2. The minimum required fill of cement behind the 8-5/8 inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.

Operator has proposed to pump down 13-3/8" X 8-5/8" annulus. Operator must run a CBL from TD of the 8-5/8" casing to surface. Submit results to BLM.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)
 - ☑ Eddy CountyCall the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822
 - Lea County
 Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)
 393-3612
- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

- 1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
- 2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. 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. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

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State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. **Santa Fe, NM 87505**

COMMENTS

Action 70111

COMMENTS

| Operator: | OGRID: |
|-------------------------------------|--------------------------------------|
| DEVON ENERGY PRODUCTION COMPANY, LP | 6137 |
| 333 West Sheridan Ave. | Action Number: |
| Oklahoma City, OK 73102 | 70111 |
| | Action Type: |
| | [C-103] NOI Change of Plans (C-103A) |

COMMENTS

| Created By | Comment | Comment Date |
|------------|---|-----------------|
| jagarcia | Approved, John Garcia, Petroleum Engineer | 1/21/2022 |

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CONDITIONS

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CONDITIONS

| Created By | Condition | Condition Date |
|------------|-----------|-------------------|
| jagarcia | None | 1/21/2022 |