

HOBBS CO

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCT 30 2017

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

| | | |
|---|---|---|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | 5. Lease Serial No. NMNM26394 |
| 1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone | | 6. If Indian, Allottee or Tribe Name |
| 2. Name of Operator CIMAREX ENERGY COMPANY | | 7. If Unit or CA Agreement, Name and No. |
| 3a. Address 202 S. Cheyenne Ave., Ste 1000 Tulsa OK 74 | | 8. Lease Name and Well No. (319775) VACA DRAW 20-17 FEDERAL 6H |
| 3b. Phone No. (include area code) (432)620-1936 | | 9. API Well No. 30-825- |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface SWSW / 330 FSL / 690 FWL / LAT 32.109739 / LONG -103.600619 At proposed prod. zone NWNW / 330 FNL / 380 FWL / LAT 32.13695 / LONG -103.599672 | | 10. Field and Pool, or Exploratory BONE SPRING / WILDCAT UPPER BO |
| 11. Sec., T. R. M. or Blk. and Survey or Area SEC 20 / T25S / R33E / NMP | | 12. County or Parish LEA |
| 13. State NM | | 14. Distance in miles and direction from nearest town or post office* 24 miles |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330 feet | 16. No. of acres in lease 2560 | 17. Spacing Unit dedicated to this well 320 |
| 18. Distance from proposed location* to nearest well, drilling, completed, 20 feet applied for, on this lease, ft. | 19. Proposed Depth 12371 feet / 22113 feet | 20. BLM/BIA Bond No. on file FED: NMB001188 |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3423 feet | 22. Approximate date work will start* 12/01/2017 | 23. Estimated duration 30 days |

24. Attachments

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

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

| | | |
|--|---|--------------------|
| 25. Signature (Electronic Submission) | Name (Printed/Typed) Aricka Easterling / Ph: (918)560-7060 | Date 05/03/2017 |
| Title Regulatory Analyst | | |
| Approved by (Signature) (Electronic Submission) | Name (Printed/Typed) Cody Layton / Ph: (575)234-5959 | Date 10/26/2017 |
| Title Supervisor Multiple Resources | | |

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.

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.

(Continued on page 2)

*(Instructions on page 2)

APPROVED WITH CONDITIONS

KZ
10/30/17
Double checked
SBC

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications.

Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Additional Operator Remarks

Location of Well

1. SHL: SWSW / 330 FSL / 690 FWL / TWSP: 25S / RANGE: 33E / SECTION: 20 / LAT: 32.109739 / LONG: -103.600619 (TVD: 0 feet, MD: 0 feet)
PPP: SWSW / 446 FSL / 769 FWL / TWSP: 25S / RANGE: 33E / SECTION: 20 / LAT: 32.1100555 / LONG: -103.60036 (TVD: 0 feet, MD: 0 feet)
BHL: NWNW / 330 FNL / 380 FWL / TWSP: 25S / RANGE: 33E / SECTION: 17 / LAT: 32.13695 / LONG: -103.599672 (TVD: 12371 feet, MD: 22113 feet)

BLM Point of Contact

Name: Priscilla Perez

Title: Legal Instruments Examiner

Phone: 5752345934

Email: pperez@blm.gov

CONFIDENTIAL

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

CONFIDENTIAL



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Operator Certification Data Report

10/26/2017

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Aricka Easterling

Signed on: 05/03/2017

Title: Regulatory Analyst

Street Address: 202 S. Cheyenne Ave, Ste 1000

City: Tulsa

State: OK

Zip: 74103

Phone: (918)560-7060

Email address: aeasterling@cimarex.com

Field Representative

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:



U. S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Application Data Report

10/26/2017

APD ID: 10400013570

Submission Date: 05/03/2017

Highlighted data
reflects the most
recent changes

Operator Name: CIMAREX ENERGY COMPANY

Well Name: VACA DRAW 20-17 FEDERAL

Well Number: 6H

[Show Final Text](#)

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

Section 1 - General

APD ID: 10400013570

Tie to previous NOS? 10400008396

Submission Date: 05/03/2017

BLM Office: CARLSBAD

User: Aricka Easterling

Title: Regulatory Analyst

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM26394

Lease Acres: 2560

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO

APD Operator: CIMAREX ENERGY COMPANY

Operator letter of designation:

Operator Info

Operator Organization Name: CIMAREX ENERGY COMPANY

Operator Address: 202 S. Cheyenne Ave., Ste 1000

Zip: 74103

Operator PO Box:

Operator City: Tulsa

State: OK

Operator Phone: (432)620-1936

Operator Internet Address: tstathem@cimarex.com

Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: VACA DRAW 20-17 FEDERAL

Well Number: 6H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: BONE SPRING

Pool Name: WILDCAT UPPER
BONE SPRING

Is the proposed well in an area containing other mineral resources? USEABLE WATER, NATURAL GAS, OIL

Operator Name: CIMAREX ENERGY COMPANY

Well Name: VACA DRAW 20-17 FEDERAL

Well Number: 6H

Describe other minerals:

Is the proposed well in a Helium production area? N Use Existing Well Pad? NO New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name: VACA Number: 1

Well Class: HORIZONTAL

DRAW SUPER PAD

Number of Legs: 1

Well Work Type: Drill

Well Type: CONVENTIONAL GAS WELL

Describe Well Type:

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: 24 Miles

Distance to nearest well: 20 FT

Distance to lease line: 330 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: Vaca_Draw_20_17_Fed_6H_C102_Plat_20171011104428.pdf

Well work start Date: 12/01/2017

Duration: 30 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number:

| | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude | Longitude | County | State | Meridian | Lease Type | Lease Number | Elevation | MD | TVD |
|------------------|---------|--------------|---------|--------------|------|-------|---------|---------------------|----------------|---------------------|--------|-------------------|-------------------|------------|---------------|---------------|-----------|-----------|
| SHL Leg #1 | 330 | FSL | 690 | FWL | 25S | 33E | 20 | Aliquot SWS W | 32.10973 9 | - 103.6006 19 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 26394 | 342 3 | 0 | 0 |
| KOP Leg #1 | 330 | FSL | 690 | FWL | 25S | 33E | 20 | Aliquot SWS W | 32.10973 9 | - 103.6006 19 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 26394 | - 843 5 | 118 58 | 118 58 |
| PPP Leg #1 | 446 | FSL | 769 | FWL | 25S | 33E | 20 | Aliquot SWS W | 32.11005 55 | - 103.6003 6 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 26394 | 342 3 | 0 | 0 |

Operator Name: CIMAREX ENERGY COMPANY

Well Name: VACA DRAW 20-17 FEDERAL

Well Number: 6H

| | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude | Longitude | County | State | Meridian | Lease Type | Lease Number | Elevation | MD | TVD |
|--------------------|---------|--------------|---------|--------------|------|-------|---------|---------------------|----------|---------------------|--------|-------------------|-------------------|------------|---------------|---------------|-----------|-----------|
| EXIT Leg. #1 | 330 | FNL | 380 | FWL | 25S | 33E | 17 | Aliquot NWN W | 32.13695 | - 103.5996 72 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 26394 | - 894 8 | 221 13 | 123 71 |
| BHL Leg. #1 | 330 | FNL | 380 | FWL | 25S | 33E | 17 | Aliquot NWN W | 32.13695 | - 103.5996 72 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 26394 | - 894 8 | 221 13 | 123 71 |

Operator Name: CIMAREX ENERGY COMPANY

Well Name: VACA DRAW 20-17 FEDERAL

Well Number: 6H

test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendor's representative. A copy of the installation instructions has been sent to the BLM field office. The wellhead will be installed by a third-party welder while being monitored by the wellhead vendor representative. All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 3000 psi. The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater. The casing string utilizing steel body pack-off will be tested to 70% of casing burst. If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Choke Diagram Attachment:

Vaca_Draw_20_17_Fed_6H_Choke_2M3M_04-21-2017.pdf

BOP Diagram Attachment:

Vaca_Draw_20_17_Fed_6H_BOP_2M_04-21-2017.pdf

Pressure Rating (PSI): 3M

Rating Depth: 8774

Equipment: Exhibit "E-1". A BOP consisting of three rams, including one blind ram and two pipe rams and one annular preventer. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A rotating head may be installed as needed. A Kelly clock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

Requesting Variance? YES

Variance request: Co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached (Please see Exhibit F, F-1, F-2, F-3). The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Variance to include Hammer Union connections on lines downstream of the buffer tank only.

Testing Procedure: A multi-bowl wellhead system will be utilized. After running the 13-3/8" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 3000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3000 psi test. Annular will be tested to 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendor's representative. A copy of the installation instructions has been sent to the BLM field office. The wellhead will be installed by a third-party welder while being monitored by the wellhead vendor representative. All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 3000 psi. The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater. The casing string utilizing steel body pack-off will be tested to 70% of casing burst. If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Choke Diagram Attachment:

Vaca_Draw_20_17_Fed_6H_Choke_2M3M_04-21-2017.pdf

BOP Diagram Attachment:

Vaca_Draw_20_17_Fed_6H_BOP_3M_04-21-2017.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: VACA DRAW 20-17 FEDERAL

Well Number: 6H

Section 3 - Casing

| Casing ID | String Type | Hole Size | Csg Size | Condition | Standard | Tapered String | Top Set MD | Bottom Set MD | Top Set TVD | Bottom Set TVD | Top Set MSL | Bottom Set MSL | Calculated casing length MD | Grade | Weight | Joint Type | Collapse SF | Burst SF | Joint SF Type | Joint SF | Body SF Type | Body SF |
|-----------|--------------|-----------|----------|-----------|----------|----------------|------------|---------------|-------------|----------------|-------------|----------------|-----------------------------|-------|--------|------------|-------------|----------|---------------|----------|--------------|---------|
| 1 | SURFACE | 17.5 | 13.375 | NEW | API | N | 0 | 1000 | 0 | 1000 | 0 | 1000 | 1000 | OTHER | 48 | STC | 1.63 2 | 3.78 | BUOY | 6.71 | BUOY | 6.71 |
| 2 | INTERMEDIATE | 12.25 | 9.625 | NEW | API | N | 0 | 4870 | 0 | 4870 | 0 | 4870 | 4870 | J-55 | 40 | LTC | 1.57 | 1.53 | BUOY | 2.67 | BUOY | 2.67 |
| 3 | PRODUCTION | 8.75 | 5.5 | NEW | API | N | 0 | 8774 | 0 | 8774 | 0 | 8774 | 8774 | L-80 | 17 | LTC | 1.5 | 1.84 | BUOY | 2.14 | BUOY | 2.14 |
| 4 | PRODUCTION | 8.75 | 5.5 | NEW | API | N | 8774 | 19040 | 8774 | 19040 | 8774 | 19040 | 10266 | L-80 | 17 | BUTT | 1.42 | 1.74 | BUOY | 46.24 | BUOY | 46.24 |

Casing Attachments

Casing ID: 1 String Type: SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Vaca_Draw_20_17_Fed_6H_Casing_Assumptions_20171011105108.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: VACA DRAW 20-17 FEDERAL

Well Number: 6H

Casing Attachments

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Vaca_Draw_20_17_Fed_6H_Casing_Assumptions_20171011105151.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Vaca_Draw_20_17_Fed_6H_Casing_Assumptions_20171011105309.pdf

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Vaca_Draw_20_17_Fed_6H_Casing_Assumptions_20171011105358.pdf

Section 4 - Cement

Operator Name: CIMAREX ENERGY COMPANY

Well Name: VACA DRAW 20-17 FEDERAL

Well Number: 6H

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|--------------|-----------|------------------|--------|-----------|--------------|-------|---------|-------|---------|---------------|--|
| SURFACE | Lead | | 0 | 1000 | 424 | 1.72 | 13.5 | 729 | 50 | Class C | Bentonite |
| SURFACE | Tail | | 0 | 1000 | 195 | 1.34 | 14.8 | 260 | 25 | Class C | LCM |
| INTERMEDIATE | Lead | | 0 | 4870 | 925 | 1.88 | 12.9 | 1738 | 50 | 35:65 (Poz:C) | Salt, Bentonite |
| INTERMEDIATE | Tail | | 0 | 4870 | 285 | 1.34 | 14.8 | 381 | 25 | Class C | LCM |
| PRODUCTION | Lead | | 0 | 8774 | 373 | 3.45 | 10.5 | 1285 | 25 | NeoCem | n/a |
| PRODUCTION | Tail | | 0 | 8774 | 2195 | 1.3 | 14.2 | 2853 | 10 | 50:50 (Poz:H) | Salt, Bentonite, Fluid Loss, Dispersant, SMS |
| PRODUCTION | Lead | | 8774 | 19040 | 373 | 3.45 | 10.5 | 1285 | 25 | NeoCem | n/a |
| PRODUCTION | Tail | | 8774 | 19040 | 2195 | 1.3 | 14.2 | 2853 | 10 | 50:50 (Poz:H) | Salt, Bentonite, Fluid Loss, Dispersant, SMS |

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

Describe the mud monitoring system utilized: PVT/Pason/Visual Monitoring

Circulating Medium Table

| Top Depth | Bottom Depth | Mud Type | Min Weight (lbs/gal) | Max Weight (lbs/gal) | Density (lbs/cu ft) | Gel Strength (lbs/100 sqft) | PH | Viscosity (CP) | Salinity (ppm) | Filtration (cc) | Additional Characteristics |
|-----------|--------------|----------|----------------------|----------------------|---------------------|-----------------------------|----|----------------|----------------|-----------------|----------------------------|
| 0 | 1000 | SPUD MUD | 8.3 | 8.8 | | | | | | | |

Operator Name: CIMAREX ENERGY COMPANY

Well Name: VACA DRAW 20-17 FEDERAL

Well Number: 6H

| Top Depth | Bottom Depth | Mud Type | Min Weight (lbs/gal) | Max Weight (lbs/gal) | Density (lbs/cu ft) | Gel Strength (lbs/100 sqft) | PH | Viscosity (CP) | Salinity (ppm) | Filtration (cc) | Additional Characteristics |
|-----------|--------------|-------------------------|----------------------|----------------------|---------------------|-----------------------------|----|----------------|----------------|-----------------|----------------------------|
| 1000 | 4870 | SALT SATURATED | 9.7 | 10.2 | | | | | | | |
| 4870 | 1904 0 | OTHER : FW/Cut Brine | 8.7 | 9.2 | | | | | | | |

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

No DST Planned

List of open and cased hole logs run in the well:

CNL,DS,GR

Coring operation description for the well:

n/a

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4439

Anticipated Surface Pressure: 1717.38

Anticipated Bottom Hole Temperature(F): 163

Anticipated abnormal pressures, temperatures, or potential geologic hazards? YES

Describe:

Lost circulation may be encountered in the Delaware mountain group. Abnormal pressure as well as hole stability issues may be encountered in the Wolfcamp.

Contingency Plans geohazards description:

Lost circulation material will be available, as well as additional drilling fluid along with the fluid volume in the drilling rig pit system. Drilling fluid can be mixed on location or mixed in vendor mud plant and trucked to location if needed. Sufficient barite will be available to maintain appropriate mud weight for the Wolfcamp interval.

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Vaca_Draw_20_17_Fed_6H_H2S_Plan_04-21-2017.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: VACA DRAW 20-17 FEDERAL

Well Number: 6H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Vaca_Draw_20_17_Fed_6H_Anti_Collision_report_20171011105847.pdf

Vaca_Draw_20_17_Fed_6H_Directional_Plan_20171011105848.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Vaca_Draw_20_17_Fed_6H_Drilling_Plan_20171011105906.pdf

Vaca_Draw_20_17_Fed_6H_Flex_Hose_20171011105910.pdf

Vaca_Draw_20_17_Fed_6H_Gas_Capture_Plan_20171011105910.pdf

Other Variance attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number:

Assigned injection well API number?

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Injection well name:

Injection well API number:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

PWD disturbance (acres):

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

PWD disturbance (acres):



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Bond Info Data Report

10/26/2017

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001188

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

EXHIBIT NO. 1Date of Issue:
8/21/2017Bureau of Land Management, Carlsbad Field Office
620 E. Greene Street Carlsbad, NM 88220

Cultural and Archaeological Resources

BLM Report No.
17-0295**NOTICE OF STIPULATIONS**

17-0334

Historic properties in the vicinity of this project are protected by federal law. In order to ensure that they are not damaged or destroyed by construction activities, the project proponent and construction supervisors shall ensure that the following stipulations are implemented.

| | |
|--|--|
| Project Name: | Vaca Draw 20-17 |
| | 1). A 3-day preconstruction call-in notification. Contact BLM Inspection and Enforcement at |
| Required | 2. Professional archaeological monitoring. Contact your BLM project archaeologist at (575) 234-5917 for assistance. |
| A. <input checked="" type="checkbox"/> | These stipulations must be given to your monitor at least 5 days prior to the start of construction. |
| B. <input checked="" type="checkbox"/> | No construction, including vegetation removal or other site prep may begin prior to the arrival of the monitor. |
| | 3. Cultural site barrier fencing. (Your monitor will assist you). |
| A. <input type="checkbox"/> | A temporary site protection barrier(s) shall be erected prior to all ground-disturbing activities. The minimum barrier(s) shall consist of upright wooden survey lath spaced no more than ten (10) feet apart and marked with blue ribbon flagging or blue paint. There shall be no construction activities or vehicular traffic past the barrier(s) at any time. |
| B. <input type="checkbox"/> | A permanent, 4-strand barbed wire fence strung on standard "T-posts" shall be erected prior to all ground-disturbing activities. No construction activities or vehicle traffic are allowed past the fence. |
| Required | 4. The archaeological monitor shall: |
| A. <input type="checkbox"/> | |
| B. <input checked="" type="checkbox"/> | Observe all ground-disturbing activities within 100 feet of cultural sites LA 128148 and LA 128149. |
| C. <input type="checkbox"/> | Ensure that the proposed |
| D. <input checked="" type="checkbox"/> | Ensure the proposed reroute for LA 128149 is adhered to. |
| E. <input checked="" type="checkbox"/> | Submit a brief monitoring report within 30 days of completion of monitoring. |
| | If subsurface cultural resources are encountered during the monitoring, all activities shall cease and a BLM-CFO archaeologist shall be notified immediately. |
| Other: | IF THE CONTRACT ARCHAEOLOGIST DOES NOT KNOW WHERE THE SITE(S) ARE LOCATED AT PLEASE COME BY THE CARLSBAD BLM AND MAPS AND OTHER DATA WILL BE PROVIDED UPON REQUEST TO THE CONTRACT ARCHAEOLOGIST |

Site Protection and Employee Education: It is the responsibility of the project proponent and his construction supervisor to inform all employees and subcontractors that cultural and archaeological sites are to be avoided by all personnel, vehicles, and equipment; and that it is illegal to collect, damage, or disturb cultural resources on Public Lands.

For assistance contact:

Bruce Boeke (575) 234-5917