HOBBS OCD

JUL 24 2018

RECEIVED

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

# APPLICATION FOR PERMIT TO DRILL OR REENTER

| | |
|---|---|
| 1a. Type of work: ☑ DRILL ☐ REENTER | 5. Lease Serial No. NMNM0559539 |
| | 6. If Indian, Allotee or Tribe Name |
| | 7. If Unit or CA Agreement, Name and No. |
| 1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone | 8. Lease Name and Well No. JAMES 19 FEDERAL 34H (313485) |
| 2. Name of Operator CIMAREX ENERGY COMPANY (215099) | 9. API Well No. 30-025-45020 |
| 3a. Address 202 S. Cheyenne Ave., Ste 1000 Tulsa OK 74 / 3b. Phone No. (include area code) (432)620-1936 | 10. Field and Pool, or Exploratory (53805) BONE SPRING / SAND DUNES; BONE |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface NWNE / 330 FNL / 2390 FEL / LAT 32.296328 / LONG -103.712942 At proposed prod. zone SWSE / 330 FSL / 1430 FEL / LAT 32.283647 / LONG -103.709835 | 11. Sec., T. R. M. or Blk. and Survey or Area SEC 19 / T23S / R32E / NMP |
| 14. Distance in miles and direction from nearest town or post office* 32 miles | 12. County or Parish LEA / 13. State NM |
| 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 1440 / 17. Spacing Unit dedicated to this well 160 |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 20 feet | 19. Proposed Depth 9135 feet / 13602 feet / 20. BLM/BIA Bond No. on file FED: NMB001188 |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3639 feet | 22. Approximate date work will start* 03/01/2018 / 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 11/15/2017 |
| Title Regulatory Analyst | | |
| Approved by (Signature) (Electronic Submission) | Name (Printed/Typed) Cody Layton / Ph: (575)234-5959 | Date 07/06/2018 |
| Title Assistant Field Manager Lands & Minerals | Office CARLSBAD | |

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 3)

*(Instructions on page 2)

GCP Req 07/24/18

KZ 07/25/18

APPROVED WITH CONDITIONS

Approval Date: 07/06/2018

## 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.

(Continued on page 3)





**Approval Date: 07/06/2018**

## Additional Operator Remarks

### Location of Well

1. SHL: NWNE / 330 FNL / 2390 FEL / TWSP: 23S / RANGE: 32E / SECTION: 19 / LAT: 32.296328 / LONG: -103.712942 ( TVD: 0 feet, MD: 0 feet )
   PPP: NWNE / 330 FNL / 1970 FEL / TWSP: 23S / RANGE: 32E / SECTION: 19 / LAT: 32.2963222 / LONG: -103.715833 ( TVD: 9050 feet, MD: 9088 feet )
   BHL: SWSE / 330 FSL / 1430 FEL / TWSP: 23S / RANGE: 32E / SECTION: 19 / LAT: 32.283647 / LONG: -103.709835 ( TVD: 9135 feet, MD: 13602 feet )

## BLM Point of Contact

Name: Judith Yeager
Title: Legal Instruments Examiner
Phone: 5752345936
Email: jyeager@blm.gov

## 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.

AFMSS

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

# Operator Certification Data Report

07/16/2018

## 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:** 10/30/2017

**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:**

AFMSS

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

# Application Data Report

07/16/2018

**APD ID:** 10400024115 **Submission Date:** 11/15/2017

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** JAMES 19 FEDERAL **Well Number:** 34H

**Well Type:** OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

## Section 1 - General

**APD ID:** 10400024115 **Tie to previous NOS?** 10400020133 **Submission Date:** 11/15/2017

**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:** NMNM0559539 **Lease Acres:** 1440

**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 **Mater Development Plan name:**

**Well in Master SUPO?** NO **Master SUPO name:**

**Well in Master Drilling Plan?** NO **Master Drilling Plan name:**

**Well Name:** JAMES 19 FEDERAL **Well Number:** 34H **Well API Number:**

**Field/Pool or Exploratory?** Field and Pool **Field Name:** BONE SPRING **Pool Name:** SAND DUNES; BONE SPRING SOUTH

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

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** JAMES 19 FEDERAL **Well Number:** 34H

**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:** JAMES 19 FEDERAL **Number:** W2E2

**Well Class:** HORIZONTAL **Number of Legs:** 1

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** EXPLORATORY (WILDCAT)

**Describe sub-type:**

**Distance to town:** 32 Miles **Distance to nearest well:** 20 FT **Distance to lease line:** 330 FT

**Reservoir well spacing assigned acres Measurement:** 160 Acres

**Well plat:** James_19_Federal_34H_C102_Plat_20171115121256.pdf

**Well work start Date:** 03/01/2018 **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 | FNL | 2390 | FEL | 23S | 32E | 19 | Aliquot NWNE | 32.296328 | -103.712942 | LEA | NEW MEXICO | NEW MEXICO | F | NMNM 0559539 | 3639 | 0 | 0 |
| KOP Leg #1 | 330 | FNL | 2068 | FEL | 23S | 32E | 19 | Aliquot NWNE | 32.296328 | -103.712942 | LEA | NEW MEXICO | NEW MEXICO | F | NMNM 0559539 | -5121 | 8777 | 8760 |
| PPP Leg #1 | 330 | FNL | 1970 | FEL | 23S | 32E | 19 | Aliquot NWNE | 32.296322 | -103.711583 | LEA | NEW MEXICO | NEW MEXICO | F | NMNM 0559539 | -5411 | 9088 | 9050 |

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** JAMES 19 FEDERAL **Well Number:** 34H

| | 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 | FSL | 1430 | FEL | 23S | 32E | 19 | Aliquot SWSE | 32.283647 | -103.709835 | LEA | NEW MEXICO | NEW MEXICO | F | NMNM 0559539 | -5496 | 13602 | 9135 |
| BHL Leg #1 | 330 | FSL | 1430 | FEL | 23S | 32E | 19 | Aliquot SWSE | 32.283647 | -103.709835 | LEA | NEW MEXICO | NEW MEXICO | F | NMNM 0559539 | -5496 | 13602 | 9135 |

**APD ID:** 10400024115 **Submission Date:** 11/15/2017

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** JAMES 19 FEDERAL **Well Number:** 34H

**Well Type:** OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

## Section 1 - Geologic Formations

| Formation ID | Formation Name | Elevation | True Vertical Depth | Measured Depth | Lithologies | Mineral Resources | Producing Formation |
|---|---|---|---|---|---|---|---|
| 1 | RUSTLER | 3423 | 1160 | 1160 | | USEABLE WATER | No |
| 2 | SALADO | 1163 | 2260 | 2260 | | NONE | No |
| 3 | CASTILE | 163 | 3260 | 3260 | | NONE | No |
| 4 | BASE OF SALT | -1087 | 4510 | 4510 | | NONE | No |
| 5 | DELAWARE SAND | -1297 | 4720 | 4720 | | NATURAL GAS,OIL | No |
| 6 | BONE SPRING | -5077 | 8500 | 8500 | | NATURAL GAS,OIL | Yes |
| 7 | BONE SPRING 1ST | -6227 | 9650 | 9650 | | NATURAL GAS,OIL | No |

## Section 2 - Blowout Prevention

**Pressure Rating (PSI):** 2M **Rating Depth:** 1210

**Equipment:** 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. 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.

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** JAMES 19 FEDERAL **Well Number:** 34H

**Choke Diagram Attachment:**

James_19_Federal_34H_Choke_2M3M_20171030085242.pdf

**BOP Diagram Attachment:**

James_19_Federal_34H_BOP_2M_20171030085349.pdf

---

**Pressure Rating (PSI):** 3M **Rating Depth:** 4700

**Equipment:** 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. 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:**

James_19_Federal_34H_Choke_2M3M_20171030085405.pdf

**BOP Diagram Attachment:**

James_19_Federal_34H_BOP_3M_20171030085419.pdf

---

## 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 | NON API | N | 0 | 1210 | 0 | 1210 | 0 | 1210 | 1210 | OTHER | 48 | STC | 1.34 | 3.12 | BUOY | 5.54 | BUOY | 5.54 |
| 2 | INTERMEDIATE | 12.25 | 9.625 | NEW | API | N | 0 | 4700 | 0 | 4700 | 0 | 4700 | 4700 | J-55 | 40 | LTC | 1.59 | 1.58 | BUOY | 2.77 | BUOY | 2.77 |

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** JAMES 19 FEDERAL **Well Number:** 34H

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | PRODUCTION | 8.75 | 5.5 | NEW | API | N | 0 | 8721 | 0 | 8721 | 0 | 8721 | 8721 | L-80 | 17 | LTC | 1.54 | 1.9 | BUOY | 2.18 | BUOY | 2.18 |
| 4 | PRODUCTION | 8.75 | 5.5 | NEW | API | N | 8721 | 13602 | 8721 | 13602 | 8721 | 13602 | 4881 | L-80 | 17 | BUTT | 1.47 | 1.81 | BUOY | 56.41 | BUOY | 56.41 |

**Casing Attachments**

**Casing ID:** 1 **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

James_19_Federal_34H_Spec_Sheet_20171115122048.pdf

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

James_19_Federal_34H_Casing_Assumptions_20171115122107.pdf

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

James_19_Federal_34H_Casing_Assumptions_20171115122402.pdf

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** JAMES 19 FEDERAL **Well Number:** 34H

**Casing Attachments**

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

James_19_Federal_34H_Casing_Assumptions_20171115122253.pdf

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

James_19_Federal_34H_Casing_Assumptions_20171115122202.pdf

## Section 4 - Cement

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SURFACE | Lead | | 0 | 1210 | 587 | 1.72 | 13.5 | 1008 | 50 | Class C | Bentonite |
| SURFACE | Tail | | 0 | 1210 | 157 | 1.34 | 14.8 | 210 | 25 | Class C | LCM |
| INTERMEDIATE | Lead | | 0 | 4700 | 880 | 1.88 | 12.9 | 1654 | 50 | 35:65 (Poz:C) | Salt, Bentonite |
| INTERMEDIATE | Tail | | 0 | 4700 | 275 | 1.34 | 14.8 | 368 | 25 | Class C | LCM |
| PRODUCTION | Lead | | 0 | 8721 | 364 | 3.64 | 10.3 | 1322 | 25 | Tuned Light | LCM |

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** JAMES 19 FEDERAL **Well Number:** 34H

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PRODUCTION | Tail | | 0 | 8721 | 1044 | 1.3 | 14.5 | 1357 | 10 | 50:50 (Poz:H) | Salt, Bentonite, Fluid Loss, Dispersant, Expanding Agent, Retarder, Antifoam |
| PRODUCTION | Lead | | 8721 | 13602 | 364 | 3.64 | 10.3 | 1322 | 25 | Tuned Light | LCM |
| PRODUCTION | Tail | | 8721 | 13602 | 1044 | 1.3 | 14.5 | 1357 | 10 | 50:50 (Poz:H) | Salt, Bentonite, Fluid Loss, Dispersant, Expanding Agent, Retarder, Antifoam |

## 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 | 1210 | SPUD MUD | 8.3 | 8.8 | | | | | | | |
| 1210 | 4700 | SALT SATURATED | 9.7 | 10.2 | | | | | | | |
| 4700 | 13602 | OTHER : FW/Cut Brine | 8.5 | 9 | | | | | | | |

## 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:** 4275 **Anticipated Surface Pressure:** 2265.3

**Anticipated Bottom Hole Temperature(F):** 162

**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 geoharzards 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:**

James_19_Federal_34H_H2S_Plan_20171115122904.pdf

## Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

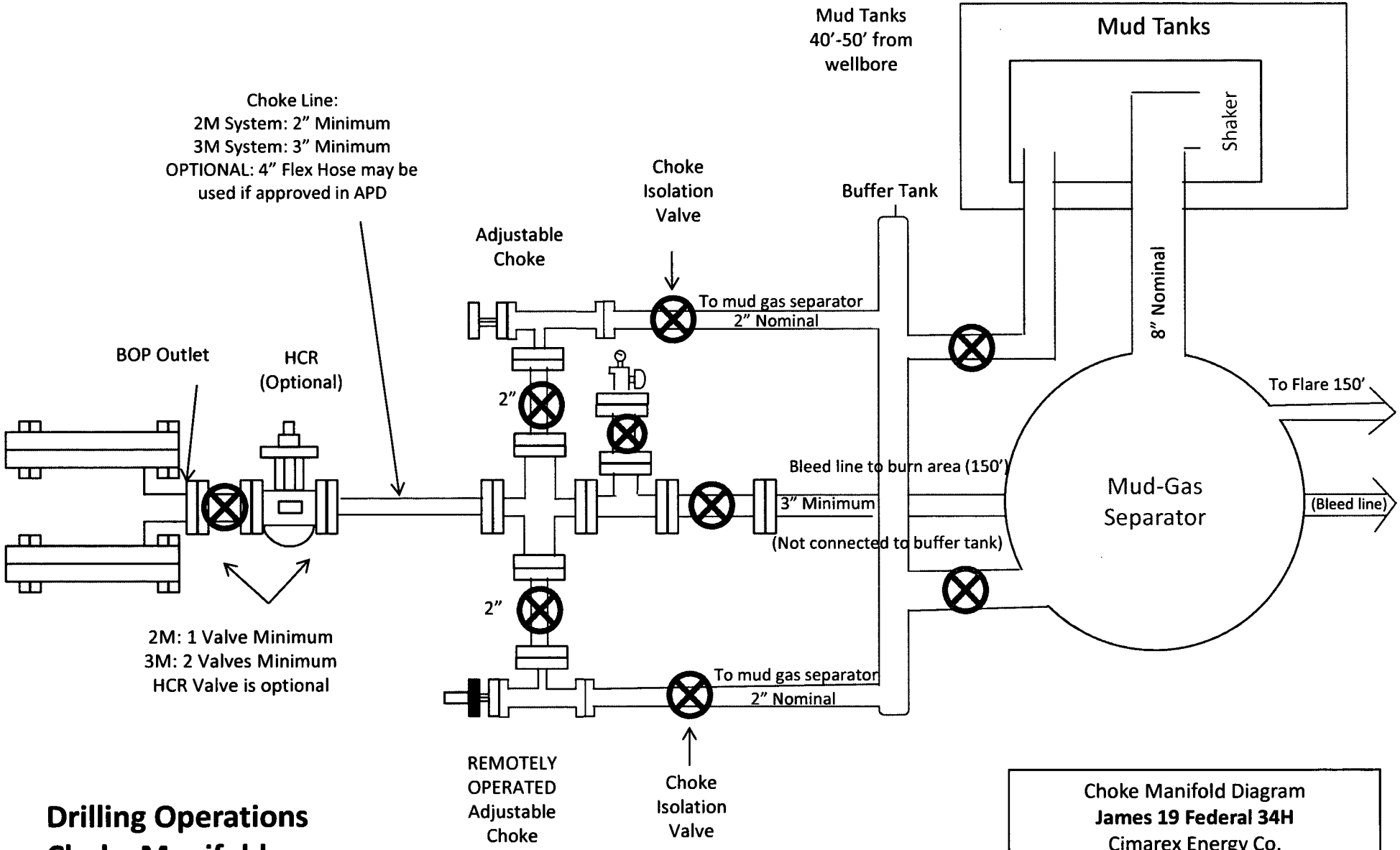
James_19_Federal_34H_Directional_Plan_20171115122918.pdf

**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

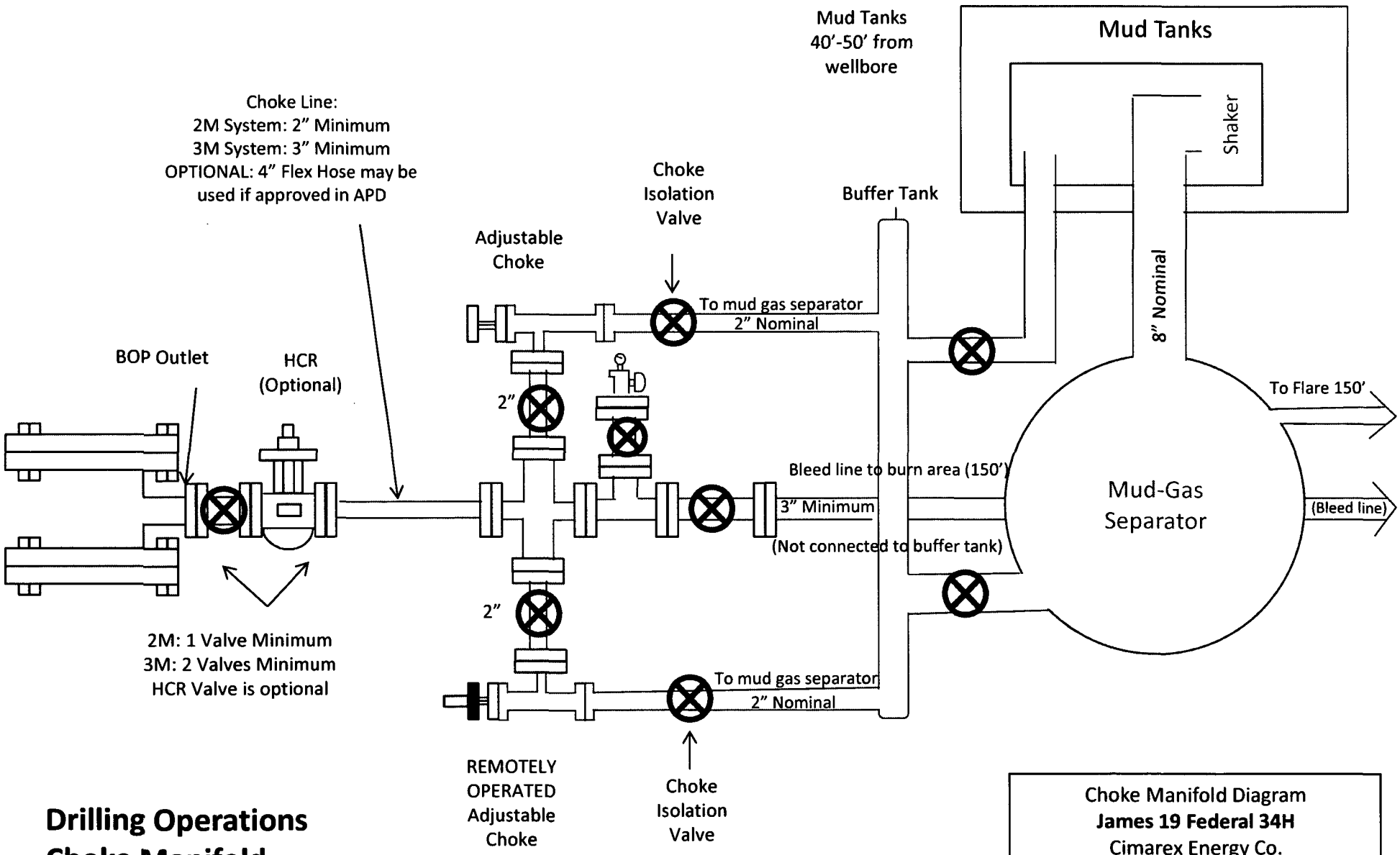
James_19_Federal_34H_Anti_Collision_Rpt_20171115122947.pdf
James_19_Federal_34H_Drilling_Plan_20171115122949.pdf
James_19_Federal_34H_Flex_Hose_20171115122953.pdf
James_19_Federal_34H_Gas_Capture_Plan_20171115122954.pdf

**Other Variance attachment:**




**Drilling Operations**
**Choke Manifold**
**2M/3M Service**

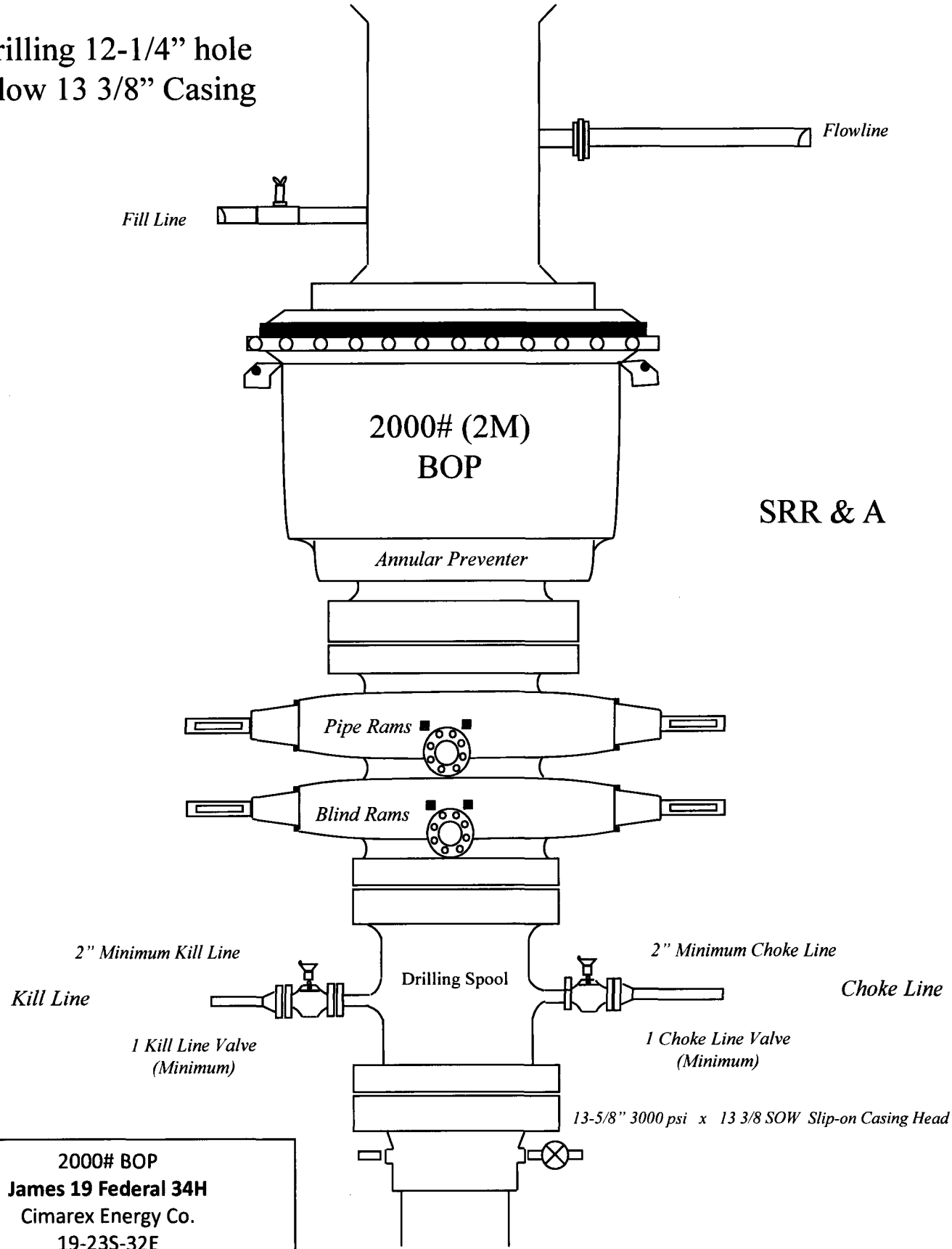
Choke Manifold Diagram
**James 19 Federal 34H**
Cimarex Energy Co.
19-23S-32E
Lea County, NM




**Drilling Operations**
**Choke Manifold**
**2M/3M Service**

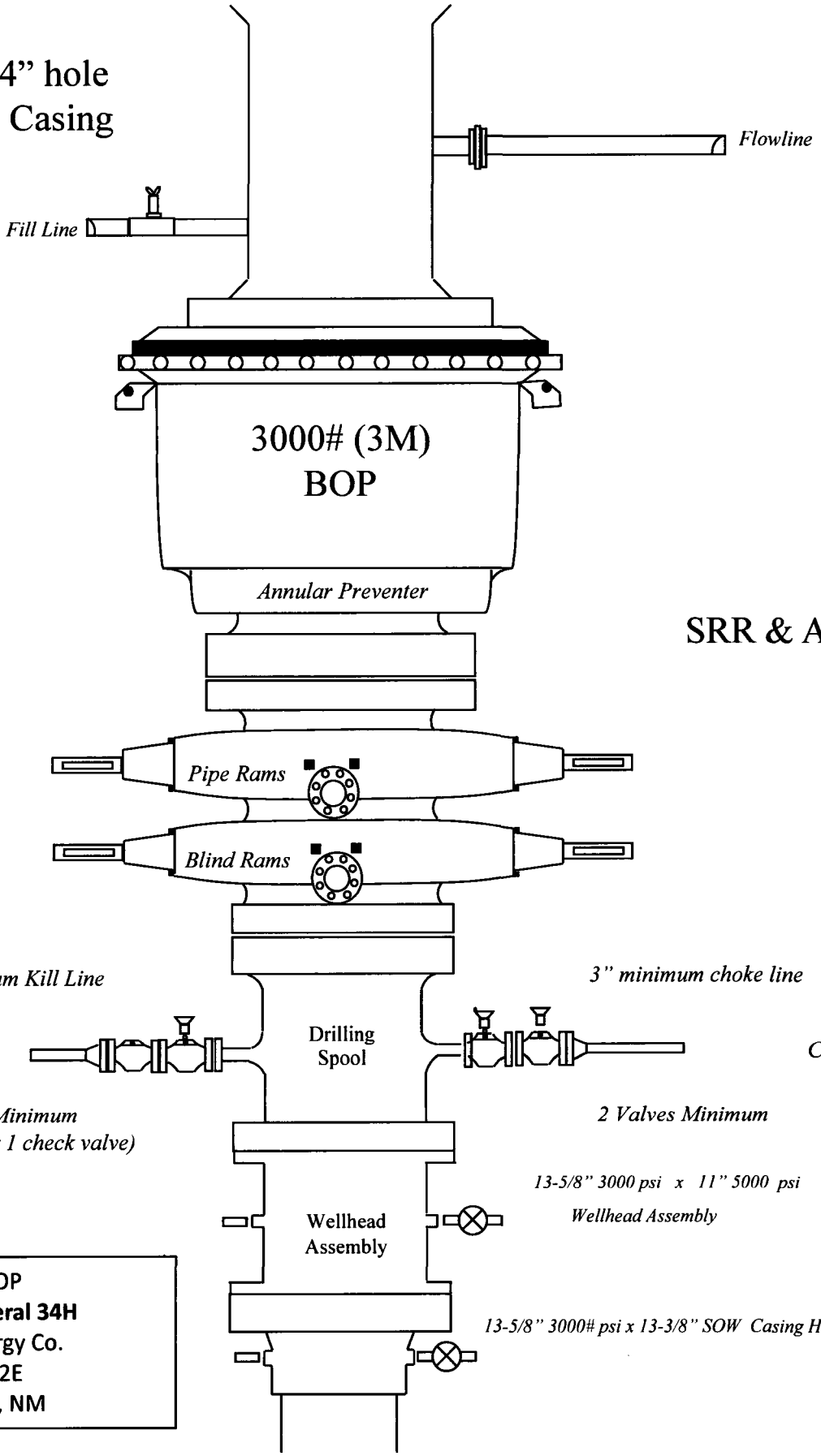
Choke Manifold Diagram
**James 19 Federal 34H**
Cimarex Energy Co.
19-23S-32E
Lea County, NM

Drilling 12-1/4" hole
below 13 3/8" Casing




2000# BOP
**James 19 Federal 34H**
Cimarex Energy Co.
19-23S-32E
Lea County, NM

Drilling 8-3/4" hole
below 9 5/8" Casing




SRR & A

3000# BOP
**James 19 Federal 34H**
Cimarex Energy Co.
19-23S-32E
Lea County, NM

# James 19 Federal 34H

Casing Assumptions

**Casing Program**

| Hole Size | Casing Depth From | Casing Depth To | Casing Size | Weight (lb/ft) | Grade | Conn. | SF Collapse | SF Burst | SF Tension |
|---|---|---|---|---|---|---|---|---|---|
| 17 1/2 | 0 | 1210 | 13-3/8" | 48.00 | H-40/J-55 Hybrid | ST&C | 1.34 | 3.12 | 5.54 |
| 12 1/4 | 0 | 4700 | 9-5/8" | 40.00 | J-55 | LT&C | 1.59 | 1.58 | 2.77 |
| 8 3/4 | 0 | 8721 | 5-1/2" | 17.00 | L-80 | LT&C | 1.54 | 1.90 | 2.18 |
| 8 3/4 | 8721 | 13602 | 5-1/2" | 17.00 | L-80 | BT&C | 1.47 | 1.81 | 56.41 |
| | | | | BLM Minimum Safety Factor | | | 1.125 | 1 | 1.6 Dry<br>1.8 Wet |

TVD was used on all calculations.

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

# James 19 Federal 34H

Casing Assumptions

**Casing Program**

| Hole Size | Casing Depth From | Casing Depth To | Casing Size | Weight (lb/ft) | Grade | Conn. | SF Collapse | SF Burst | SF Tension |
|---|---|---|---|---|---|---|---|---|---|
| 17 1/2 | 0 | 1210 | 13-3/8" | 48.00 | H-40/J-55 Hybrid | ST&C | 1.34 | 3.12 | 5.54 |
| 12 1/4 | 0 | 4700 | 9-5/8" | 40.00 | J-55 | LT&C | 1.59 | 1.58 | 2.77 |
| 8 3/4 | 0 | 8721 | 5-1/2" | 17.00 | L-80 | LT&C | 1.54 | 1.90 | 2.18 |
| 8 3/4 | 8721 | 13602 | 5-1/2" | 17.00 | L-80 | BT&C | 1.47 | 1.81 | 56.41 |
| | | | | BLM Minimum Safety Factor | | | 1.125 | 1 | 1.6 Dry<br>1.8 Wet |

TVD was used on all calculations.

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

# James 19 Federal 34H

Casing Assumptions

## Casing Program

| Hole Size | Casing Depth From | Casing Depth To | Casing Size | Weight (lb/ft) | Grade | Conn. | SF Collapse | SF Burst | SF Tension |
|---|---|---|---|---|---|---|---|---|---|
| 17 1/2 | 0 | 1210 | 13-3/8" | 48.00 | H-40/J-55 Hybrid | ST&C | 1.34 | 3.12 | 5.54 |
| 12 1/4 | 0 | 4700 | 9-5/8" | 40.00 | J-55 | LT&C | 1.59 | 1.58 | 2.77 |
| 8 3/4 | 0 | 8721 | 5-1/2" | 17.00 | L-80 | LT&C | 1.54 | 1.90 | 2.18 |
| 8 3/4 | 8721 | 13602 | 5-1/2" | 17.00 | L-80 | BT&C | 1.47 | 1.81 | 56.41 |
| | | | | BLM Minimum Safety Factor | | | 1.125 | 1 | 1.6 Dry<br>1.8 Wet |

TVD was used on all calculations.

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

# James 19 Federal 34H

Casing Assumptions

## Casing Program

| Hole Size | Casing Depth From | Casing Depth To | Casing Size | Weight (lb/ft) | Grade | Conn. | SF Collapse | SF Burst | SF Tension |
|---|---|---|---|---|---|---|---|---|---|
| 17 1/2 | 0 | 1210 | 13-3/8" | 48.00 | H-40/J-55 Hybrid | ST&C | 1.34 | 3.12 | 5.54 |
| 12 1/4 | 0 | 4700 | 9-5/8" | 40.00 | J-55 | LT&C | 1.59 | 1.58 | 2.77 |
| 8 3/4 | 0 | 8721 | 5-1/2" | 17.00 | L-80 | LT&C | 1.54 | 1.90 | 2.18 |
| 8 3/4 | 8721 | 13602 | 5-1/2" | 17.00 | L-80 | BT&C | 1.47 | 1.81 | 56.41 |
| | | | | BLM Minimum Safety Factor | | | 1.125 | 1 | 1.6 Dry<br>1.8 Wet |

TVD was used on all calculations.

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

## 1. Geological Formations

TVD of target 9,135
MD at TD 13,602

Pilot Hole TD N/A
Deepest expected fresh water

| Formation | Depth (TVD) from KB | Water/Mineral Bearing/Target Zone | Hazards |
|---|---|---|---|
| Rustler | 1160 | N/A | |
| Salado | 2260 | N/A | |
| Castille | 3260 | N/A | |
| Base of Salt | 4510 | N/A | |
| Delaware Sands | 7420 | Hydrocarbons | |
| Bone Spring | 8500 | Hydrocarbons | |
| Avalon shale | 9050 | Hydrocarbons | |
| Avalon Target | 9345 | Hydrocarbons | |
| 1st Bone Spring Sand | 9650 | Hydrocarbons | |

## 2. Casing Program

| Hole Size | Casing Depth From | Casing Depth To | Casing Size | Weight (lb/ft) | Grade | Conn. | SF Collapse | SF Burst | SF Tension |
|---|---|---|---|---|---|---|---|---|---|
| 17 1/2 | 0 | 1210 | 13-3/8" | 48.00 | H-40/J-55 Hybrid | ST&C | 1.34 | 3.12 | 5.54 |
| 12 1/4 | 0 | 4700 | 9-5/8" | 40.00 | J-55 | LT&C | 1.59 | 1.58 | 2.77 |
| 8 3/4 | 0 | 8721 | 5-1/2" | 17.00 | L-80 | LT&C | 1.54 | 1.90 | 2.18 |
| 8 3/4 | 8721 | 13602 | 5-1/2" | 17.00 | L-80 | BT&C | 1.47 | 1.81 | 56.41 |
| | | | | | BLM Minimum Safety Factor | | 1.125 | 1 | 1.6 Dry<br>1.8 Wet |

TVD was used on all calculations.
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

| | 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? | N |
| Is well within the designated 4 string boundary. | N |
| Is well located in SOPA but not in R-111-P? | N |
| If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing? | N |
| Is well located in R-111-P and SOPA? | N |
| If yes, are the first three strings cemented to surface? | N |
| Is 2nd string set 100' to 600' below the base of salt? | N |
| Is well located in high Cave/Karst? | N |
| If yes, are there two strings cemented to surface? | N |
| (For 2 string wells) If yes, is there a contingency casing if lost circulation occurs? | N |
| Is well located in critical Cave/Karst? | N |
| If yes, are there three strings cemented to surface? | N |

### 3. Cementing Program

| Casing | # Sks | Wt. lb/gal | Yld ft3/sack | H2O gal/sk | 500# Comp. Strength (hours) | Slurry Description |
|---|---|---|---|---|---|---|
| **Surface** | 587 | 13.50 | 1.72 | 9.15 | 15.5 | Lead: Class C + Bentonite |
| | 157 | 14.80 | 1.34 | 6.32 | 9.5 | Tail: Class C + LCM |
| | | | | | | |
| **Intermediate** | 880 | 12.90 | 1.88 | 9.65 | 12 | Lead: 35:65 (Poz:C) + Salt + Bentonite |
| | 275 | 14.80 | 1.34 | 6.32 | 9.5 | Tail: Class C + LCM |
| | | | | | | |
| **Production** | 364 | 10.30 | 3.64 | 22.18 | | Lead: Tuned Light + LCM |
| | 1044 | 14.50 | 1.30 | 5.79 | 20 | Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + Expanding Agent + Retarder + Antifoam |
| | | | | | | |

| Casing String | TOC | % Excess |
|---|---|---|
| Surface | 0 | 45 |
| Intermediate | 0 | 44 |
| Production | 4500 | 17 |

## 4. Pressure Control Equipment

| | |
|---|---|
| | 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 | 2M | Annular | X | 50% of working pressure |
| | | | Blind Ram | | 2M |
| | | | Pipe Ram | | |
| | | | Double Ram | X | |
| | | | Other | | |
| 8 3/4 | 13 5/8 | 3M | Annular | X | 50% of working pressure |
| | | | Blind Ram | | 3M |
| | | | Pipe Ram | | |
| | | | Double Ram | X | |
| | | | Other | | |

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.

| | | |
|---|---|---|
| | | Formation integrity test will be performed per Onshore Order #2.<br>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. |
| X | | 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. |
| | N | Are anchors required by manufacturer? |

## 5. Mud Program

| Depth | Type | Weight (ppg) | Viscosity | Water Loss |
|---|---|---|---|---|
| 0' to 1210' | FW Spud Mud | 8.30 - 8.80 | 30-32 | N/C |
| 1210' to 4700' | Brine Water | 9.70 - 10.20 | 30-32 | N/C |
| 4700' to 13602' | FW/Cut Brine | 8.50 - 9.00 | 30-32 | 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

| | Logging, Coring and Testing |
|---|---|
| X | Will run GR/CNL fromTD 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? |
| | Coring? |

| Additional Logs Planned | Interval |
|---|---|

## 7. Drilling Conditions

| Condition | |
|---|---|
| BH Pressure at deepest TVD | 4275 psi |
| Abnormal Temperature | No |

| | 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. |
|---|---|
| X | H2S is present |
| X | H2S plan is attached |

## 8. Other Facets of Operation

## 9. Wellhead

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.

**APD ID:** 10400024115 **Submission Date:** 11/15/2017

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** JAMES 19 FEDERAL **Well Number:** 34H

**Well Type:** OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

## Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

James_19_20_Federal_CTB_Existing_Road_ROW_20171115123008.pdf

**Existing Road Purpose:** ACCESS **Row(s) Exist?** NO

### ROW ID(s)

**ID:**

**Do the existing roads need to be improved?** NO

**Existing Road Improvement Description:**

**Existing Road Improvement Attachment:**

## Section 2 - New or Reconstructed Access Roads

**Will new roads be needed?** YES

**New Road Map:**

James_19_20_Federal_CTB_Road_ROW_20171115123029.pdf

**New road type:** COLLECTOR

**Length:** 8131 Feet **Width (ft.):** 30

**Max slope (%):** 20 **Max grade (%):** 6

**Army Corp of Engineers (ACOE) permit required?** NO

**ACOE Permit Number(s):**

**New road travel width:** 15

**New road access erosion control:** The side slopes of any drainage channels or swales that are crossed will be re-contoured to original grade and compacted and mulched as necessary to avoid erosion. Where steeper slopes cannot be avoided, water bars or silt fence will be constructed, mulch/rip-rap applied, or other measures employed as necessary to control erosion. Hay bales, straw waddles or silt fence may also be installed to control erosion as needed. All disturbed areas will be seeded with a mix appropriate for the area unless specified otherwise by the landowner.

**New road access plan or profile prepared?** NO

**New road access plan attachment:**

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** JAMES 19 FEDERAL **Well Number:** 34H

**Access road engineering design?** NO

**Access road engineering design attachment:**

**Access surfacing type:** GRAVEL

**Access topsoil source:** ONSITE

**Access surfacing type description:**

**Access onsite topsoil source depth:** 6

**Offsite topsoil source description:**

**Onsite topsoil removal process:** Push off and stockpile alongside the location.

**Access other construction information:**

**Access miscellaneous information:**

**Number of access turnouts:** **Access turnout map:**

## Drainage Control

**New road drainage crossing:** CULVERT,LOW WATER,OTHER

**Drainage Control comments:** To control and prevent potentially contaminated precipitation from leaving the pad site, a perimeter berm and settlement pond will be installed. Contaminated water will be removed from pond, stored in waste tanks, and disposed of at a state approved facility. Standing water or puddles will not be allowed. Drainage ditches would be established and maintained on the pad and along access roads to divert water away from operations. Natural drainage areas disturbed during construction would be re-contoured to near original condition prior to construction. Erosion Control Best Management Practices would be used where necessary and consist of seeding, fiber rolls, water bars, silt fences, and temporary diversion dikes. Areas disturbed during construction that are no longer needed for operations would be obliterated, re-contoured to near original condition prior to construction. Erosion Control Best Management Practices would be used where necessary and consist of seeding, fiber rolls, water bars, silt fences, and temporary diversion dikes. Areas disturbed during construction that are no longer needed for operations would be obliterated, re-contoured, and reclaimed to near original condition to re-establish natural drainage.

**Road Drainage Control Structures (DCS) description:** N/A

**Road Drainage Control Structures (DCS) attachment:**

## Access Additional Attachments

**Additional Attachment(s):**

## Section 2 - New or Reconstructed Access Roads

**Will new roads be needed?** YES

**New Road Map:**

James_19_20_Federal_CTB_Road_ROW_20171115123029.pdf

**New road type:**

**Length:** **Width (ft.):**

**Max slope (%):** **Max grade (%):**

**Army Corp of Engineers (ACOE) permit required?**

**ACOE Permit Number(s):**

**New road travel width:**

**New road access erosion control:**

**New road access plan or profile prepared?**

**New road access plan attachment:**

**Access road engineering design?**

**Access road engineering design attachment:**

**Access surfacing type:**

**Access topsoil source:**

**Access surfacing type description:**

**Access onsite topsoil source depth:**

**Offsite topsoil source description:**

**Onsite topsoil removal process:**

**Access other construction information:**

**Access miscellaneous information:**

**Number of access turnouts:** **Access turnout map:**

## Drainage Control

**New road drainage crossing:**

**Drainage Control comments:**

**Road Drainage Control Structures (DCS) description:**

**Road Drainage Control Structures (DCS) attachment:**

## Access Additional Attachments

**Additional Attachment(s):**

## Section 2 - New or Reconstructed Access Roads

**Will new roads be needed?** YES

**New Road Map:**

James_19_20_Federal_CTB_Road_ROW_20171115123029.pdf

**New road type:**

**Length:** **Width (ft.):**

**Max slope (%):** **Max grade (%):**

**Army Corp of Engineers (ACOE) permit required?**

**ACOE Permit Number(s):**

**New road travel width:**

**New road access erosion control:**

**New road access plan or profile prepared?**

**New road access plan attachment:**

**Access road engineering design?**

**Access road engineering design attachment:**

**Access surfacing type:**

**Access topsoil source:**

**Access surfacing type description:**

**Access onsite topsoil source depth:**

**Offsite topsoil source description:**

**Onsite topsoil removal process:**

**Access other construction information:**

**Access miscellaneous information:**

**Number of access turnouts:** **Access turnout map:**

## Drainage Control

**New road drainage crossing:**

**Drainage Control comments:**

**Road Drainage Control Structures (DCS) description:**

**Road Drainage Control Structures (DCS) attachment:**

## Access Additional Attachments

**Additional Attachment(s):**

## Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

James_19_Federal_34H_Mile_Radius_Existing_wells_20171030083207.pdf

**Existing Wells description:**

## Section 4 - Location of Existing and/or Proposed Production Facilities

**Submit or defer a Proposed Production Facilities plan?** SUBMIT

**Production Facilities description:**

**Production Facilities map:**

James_19_Federal_East_CTB_Layout_20171030083222.pdf

## Section 5 - Location and Types of Water Supply

### Water Source Table

**Water source use type:** INTERMEDIATE/PRODUCTION CASING, SURFACE CASING
**Water source type:** MUNICIPAL
**Describe type:**
**Source latitude:**
**Source longitude:**
**Source datum:**
**Water source permit type:** WATER RIGHT,WATER RIGHT
**Permit Number:**
**Source land ownership:** STATE
**Water source transport method:** PIPELINE,PIPELINE,TRUCKING,TRUCKING
**Source transportation land ownership:** STATE
**Water source volume (barrels):** 5000
**Source volume (acre-feet):** 0.6444655
**Source volume (gal):** 210000

**Water source and transportation map:**

James_19_Federal_34H_Drilling_Water_Sources_20171030083238.pdf

**Water source comments:**

**New water well?** NO

### New Water Well Info

**Well latitude:** **Well Longitude:** **Well datum:**
**Well target aquifer:**
**Est. depth to top of aquifer(ft):** **Est thickness of aquifer:**
**Aquifer comments:**
**Aquifer documentation:**
**Well depth (ft):** **Well casing type:**

**Well casing outside diameter (in.):** **Well casing inside diameter (in.):**

**New water well casing?** **Used casing source:**

**Drilling method:** **Drill material:**

**Grout material:** **Grout depth:**

**Casing length (ft.):** **Casing top depth (ft.):**

**Well Production type:** **Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

## Section 6 - Construction Materials

**Construction Materials description:** The drilling and testing operations will be conducted on a watered and compacted native soil grade. Soft spots will be covered with scoria, free of large rocks (3" diameter). Upon completion as a commercial producer the location will be covered with scoria, free of large rocks (3" dia.) from an existing privately owned gravel pit.
**Construction Materials source location attachment:**

## Section 7 - Methods for Handling Waste

**Waste type:** DRILLING

**Waste content description:** Drilling Fluids, drill cuttings, water and other waste produced from the well during drilling operations.
**Amount of waste:** 15000 barrels

**Waste disposal frequency :** Weekly

**Safe containment description:** n/a

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
**Disposal type description:**

**Disposal location description:** Haul to R360 commercial Disposal

**Waste type:** GARBAGE

**Waste content description:** Garbage and trash produced during drilling and completion operations

**Amount of waste:** 32500 pounds

**Waste disposal frequency :** Weekly

**Safe containment description:** n/a

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
**Disposal type description:**

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** JAMES 19 FEDERAL **Well Number:** 34H

**Disposal location description:** Windmill Spraying Service hauls trash to Lea County Landfill

## Reserve Pit

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?**

**Reserve pit length (ft.)** **Reserve pit width (ft.)**

**Reserve pit depth (ft.)** **Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

## Cuttings Area

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** NO

**Description of cuttings location**

**Cuttings area length (ft.)** **Cuttings area width (ft.)**

**Cuttings area depth (ft.)** **Cuttings area volume (cu. yd.)**

**Is at least 50% of the cuttings area in cut?**

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

## Section 8 - Ancillary Facilities

**Are you requesting any Ancillary Facilities?:** NO

**Ancillary Facilities attachment:**

**Comments:**

## Section 9 - Well Site Layout

**Well Site Layout Diagram:**

James_19_Federal_34H_Well_Location_20171030083306.pdf

**Comments:**

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** JAMES 19 FEDERAL **Well Number:** 34H

## Section 10 - Plans for Surface Reclamation

**Type of disturbance:** New Surface Disturbance **Multiple Well Pad Name:** JAMES 19 FEDERAL

**Multiple Well Pad Number:** W2E2

**Recontouring attachment:**

James_19_Federal_34H_Interim_Reclaim_20171030083321.pdf

**Drainage/Erosion control construction:** To control and prevent potentially contaminated precipitation from leaving the pad site, a perimeter berm and settlement pond will be installed. Contaminated water will be removed from pond, stored in waste tanks, and disposed of at a state approved facility. Standing water or puddles will not be allowed. Drainage ditches would be established and maintained on the pad and along access roads to divert water away from operations. Natural drainage areas disturbed during construction would be re-contoured to near original condition prior to construction. Erosion Control Best Management Practices would be used where necessary and consist of seeding, fiber rolls, water bars, silt fences, and temporary diversion dikes. Areas disturbed during construction that are no longer needed for operations would be obliterated, re-contoured to near original condition prior to construction. Erosion Control Best Management Practices would be used where necessary and consist of seeding, fiber rolls, water bars, silt fences, and temporary diversion dikes. Areas disturbed during construction that are no longer needed for operations would be obliterated, re-contoured, and reclaimed to near original condition to re-establish natural drainage.

**Drainage/Erosion control reclamation:** All disturbed and re-contoured areas would be reseeded according to specifications. Approved seed mixtures would be certified weed free and consist of grasses, forbs, or shrubs similar to the surrounding area. Compacted soil areas may need to be obliterated and reclaimed to near natural conditions by re-contouring all slopes to facilitate and re-establish natural drainage.

**Well pad proposed disturbance (acres):** 7.155
**Road proposed disturbance (acres):** 5.599
**Powerline proposed disturbance (acres):** 4.643
**Pipeline proposed disturbance (acres):** 54.659
**Other proposed disturbance (acres):** 4.993
**Total proposed disturbance:** 77.049

**Well pad interim reclamation (acres):** 3.558
**Road interim reclamation (acres):** 0
**Powerline interim reclamation (acres):** 0
**Pipeline interim reclamation (acres):** 54.659
**Other interim reclamation (acres):** 0
**Total interim reclamation:** 58.217

**Well pad long term disturbance (acres):** 3.597
**Road long term disturbance (acres):** 5.59
**Powerline long term disturbance (acres):** 4.643
**Pipeline long term disturbance (acres):** 0
**Other long term disturbance (acres):** 4.993
**Total long term disturbance:** 18.823

**Disturbance Comments:** Gas Pipeline: 11767', SWD: 66402', Flowline: 1197', Gas lift: 1197' Temp fresh water line: 21060'

**Reconstruction method:** After well plugging, all disturbed areas would be returned to the original contour or a contour that blends with the surrounding landform including roads unless the surface owner requests that they be left intact. In consultation with the surface owners it will be determined if any gravel or similar materials used to reinforce an area are to be removed, buried, or left in place during final reclamation. Salvaged topsoil, if any, would be re-spread evenly over the surfaces to be re-vegetated. As necessary, the soil surface would be prepared to provide a seedbed for re-establishment of desirable vegetation. Site preparation may include gouging, scarifying, dozer track-walking, mulching, or fertilizing. Reclamation, Re-vegetation, and Drainage: All disturbed and re-contoured areas would be reseeded using techniques outlined under Phase I and II of this plan or as specified by the land owner. Approved seed mixtures would be certified weed free and consist of grasses, forbs, or shrubs similar to the surrounding area. Compacted soil areas may need to be obliterated and reclaimed to near natural conditions by re-contouring all slopes to facilitate and re-establish natural drainage.
**Topsoil redistribution:** Salvaged topsoil, if any, would be re-spread evenly over the surfaces to be re-vegetated.

**Soil treatment:** As necessary, the soil surface would be prepared to provide a seedbed for re-establishment of desirable vegetation. Site preparation may include gouging, scarifying, dozer track-walking, mulching or fertilizing.
**Existing Vegetation at the well pad:**

**Existing Vegetation at the well pad attachment:**

**Existing Vegetation Community at the road:**

**Existing Vegetation Community at the road attachment:**

**Existing Vegetation Community at the pipeline:**

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:**

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?**

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?**

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?**

**Seed harvest description:**

**Seed harvest description attachment:**

## Seed Management

### Seed Table

**Seed type:** **Seed source:**

**Seed name:**

**Source name:** **Source address:**

**Source phone:**

**Seed cultivar:**

**Seed use location:**

**PLS pounds per acre:** **Proposed seeding season:**

### Seed Summary

| Seed Type | Pounds/Acre |
|---|---|

**Total pounds/Acre:**

**Seed reclamation attachment:**

## Operator Contact/Responsible Official Contact Info

**First Name:** **Last Name:**

**Phone:** **Email:**

**Seedbed prep:**

**Seed BMP:**

**Seed method:**

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** N/A

**Weed treatment plan attachment:**

**Monitoring plan description:** N/A

**Monitoring plan attachment:**

**Success standards:** N/A

**Pit closure description:** N/A

**Pit closure attachment:**

## Section 11 - Surface Ownership

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:** **USFS Ranger District:**

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** JAMES 19 FEDERAL **Well Number:** 34H

## Section 12 - Other Information

**Right of Way needed?** YES **Use APD as ROW?** YES

**ROW Type(s):** 281001 ROW - ROADS,285003 ROW – POWER TRANS,288100 ROW – O&G Pipeline,288101 ROW – O&G Facility Sites,288103 ROW – Salt Water Disposal Pipeline/Facility,288104 ROW – Salt Water Disposal Apln/Fac-FLPMA,289001 ROW- O&G Well Pad,FLPMA (Powerline),Other

## ROW Applications

**SUPO Additional Information:**

**Use a previously conducted onsite?** YES

**Previous Onsite information:** Onsite with BLM (Jesse Bassett) and Cimarex (Barry Hunt) on 8/29/17.

## Other SUPO Attachment

James_19_Federal_34H_Public_Access_20171030084126.pdf
James_19_Federal_34H_Road_Description_20171030084127.pdf
James_19_Federal_34H_Temp_Fresh_water_route_20171030084128.pdf
James_19_20_Federal_CTB_Gas_Sales_ROW_20171115123346.pdf
James_19_20_Federal_CTB_Power_line_ROW_20171115123347.pdf
James_19_20_Federal_CTB_SWD_ROW_20171115123350.pdf
James_19_Federal_34H_SUPO_20171115123411.pdf
James_19_Federal_34H_Flow_Line_Gas_lift_ROW_20171115123632.pdf

## Section 1 - General

**Would you like to address long-term produced water disposal?** NO

## Section 2 - Lined Pits

**Would you like to utilize Lined Pit PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Lined pit PWD on or off channel:**

**Lined pit PWD discharge volume (bbl/day):**

**Lined pit specifications:**

**Pit liner description:**

**Pit liner manufacturers information:**

**Precipitated solids disposal:**

**Decribe precipitated solids disposal:**

**Precipitated solids disposal permit:**

**Lined pit precipitated solids disposal schedule:**

**Lined pit precipitated solids disposal schedule attachment:**

**Lined pit reclamation description:**

**Lined pit reclamation attachment:**

**Leak detection system description:**

**Leak detection system attachment:**

**Lined pit Monitor description:**

**Lined pit Monitor attachment:**

**Lined pit: do you have a reclamation bond for the pit?**

**Is the reclamation bond a rider under the BLM bond?**

**Lined pit bond number:**

**Lined pit bond amount:**

**Additional bond information 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:**

**Decribe 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:** **Injection well name:**

**Assigned injection well API number?** **Injection well API number:**

**Injection well new surface disturbance (acres):**

**Minerals protection information:**

**Mineral protection attachment:**

**Underground Injection Control (UIC) Permit?**

**UIC Permit attachment:**

## Section 5 - Surface Discharge

**Would you like to utilize Surface Discharge PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:** **PWD disturbance (acres):**

**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:**

## Section 6 - Other

**Would you like to utilize Other PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:** **PWD disturbance (acres):**

**Other PWD discharge volume (bbl/day):**

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**

AFMSS

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

# Bond Info Data Report

07/16/2018

## 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:**