

HOBBS OCD

AUG 10 2011

OCD-HOBBS

Form 3160-3  
(April 2004)

RECEIVED

FORM APPROVED  
OMB No 1004-0137  
Expires March 31, 2007

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. LC-060329
1b Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6 If Indian, Allottee or Tribe Name
2. Name of Operator Cimarex Energy Co. of Colorado		7. If Unit or CA Agreement, Name and No.
3a Address 600 N. Marienfeld St., Ste. 600; Midland, TX 79701		8 Lease Name and Well No <b>&lt;38399&gt;</b> HT 18 Federal No. 4
3b. Phone No (include area code) 432-571-7800		9 API Well No 30-045-025-40252
4 Location of Well (Report location clearly and in accordance with any State requirements.)* At Surface 2410 FSL & 330 FWL At proposed prod Zone		10 Field and Pool, or Exploratory Maljamar; Yeso-West
14 Distance in miles and direction from nearest town or post office*		11 Sec., T. R. M. or Blk and Survey or Area 18-17S-32E
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line if any) 230	16. No of acres in lease 323.76	12 County or Parish Lea
17 Spacing Unit dedicated to this well NWSW 40.95	13 State NM	
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 594'	19. Proposed Depth 7000'	20 BLM/BIA Bond No. on File NM-2575
21 Elevations (Show whether DF, KDB, RT, GL, etc.) 3946' GR	22 Approximate date work will start* 06.01.11	23. Estimated duration 10-15 days

**UNORTHODOX LOCATION**  
Unit L  
Lot 3

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

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

25. Signature <b>Zeno Farris</b>	Name (Printed/Typed) Zeno Farris	Date 03.23.11
Title Manager Operations Administration		
Approved By (Signature) <b>/s/ Don Peterson</b>	Name (Printed/Typed)	Date AUG - 5 2011
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon

Conditions of approval, if any, are attached

**APPROVAL FOR TWO YEARS**

Title 18 U.S.S. 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

\*(Instructions on page 2)

Roswell Controlled Water Basin

*Ra 09/01/11*

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

Approval Subject to General Requirements  
& Special Stipulations Attached

DISTRICT I  
1925 N. French Dr., Hobbs, NM 88240

DISTRICT II  
1901 W. Grand Avenue, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised July 18, 2010

Submit one copy to appropriate  
District Office

**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

AMENDED REPORT

API Number <b>30-025-40252</b>	Pool Code 44500	Pool Name Maljamar; Yeso-West
Property Code <b>38399</b>	Property Name HT "18" FEDERAL	Well Number 4
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3946'

Surface Location

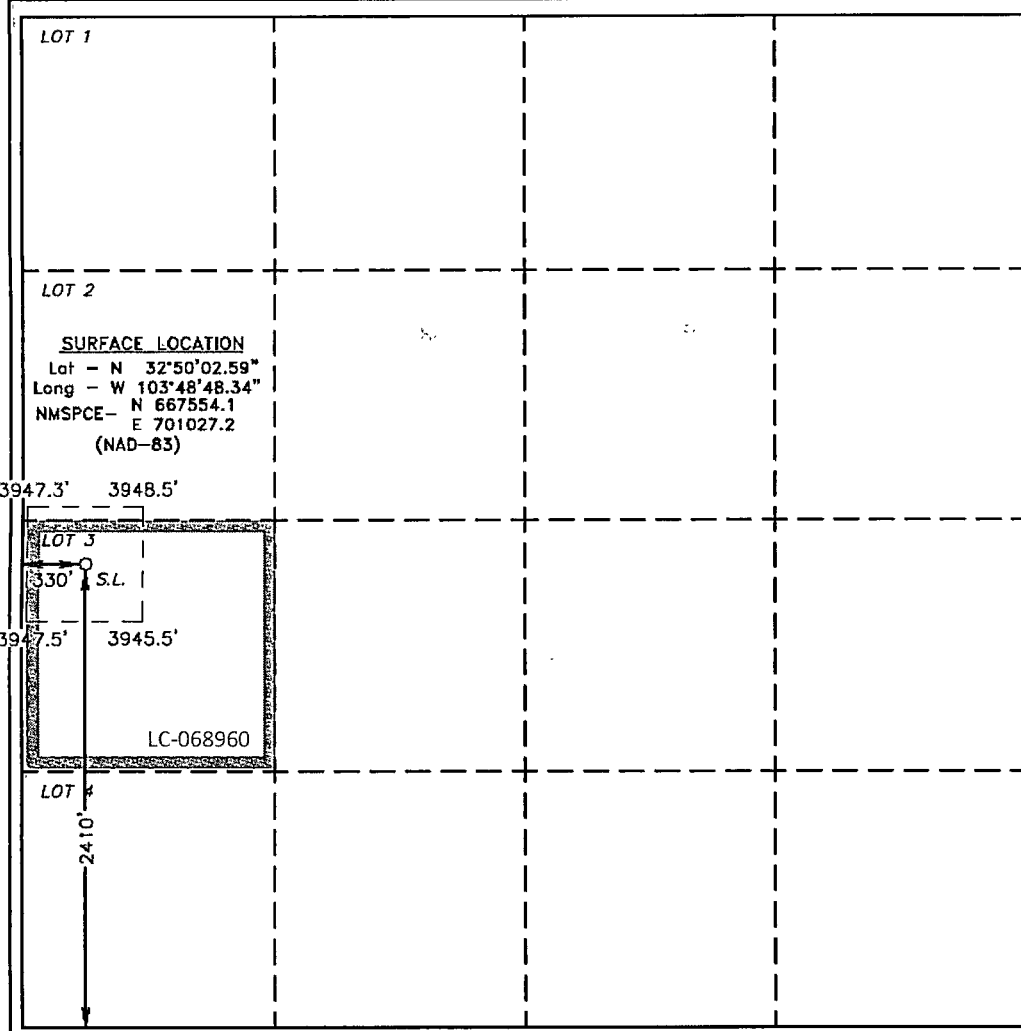
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 3	18	17 S	32 E		2410	SOUTH	330	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres 40.95	Joint or Infill	Consolidation Code	Order No. NSL Pending
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



**OPERATOR CERTIFICATION**  
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.  
Zeno Farris 3/23/2011  
Signature Date  
Printed Name: Zeno Farris  
Email Address: zfarris@cimarex.com

**SURVEYOR CERTIFICATION**  
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.  
Date Surveyed: FEBRUARY 14, 2011  
Signature & Seal of Professional Surveyor: [Seal of Gary L. Jones, State of New Mexico, Professional Surveyor]  
Certificate No. Gary L. Jones 7977  
BASIN SURVEYS 23863

I + E Copy  
11-54

Application to Drill  
HT 18 Federal No. 4  
Cimarex Energy Co. of Colorado  
Lot 3, Section 18  
T17S R32E, Lea County, NM

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In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

- 1 Location: SHL 2410 FSL & 330 FWL
- 2 Elevation above sea level: 3946' GR
- 3 Geologic name of surface formation: Quaternary Alluvium Deposits
- 4 Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.
- 5 Proposed drilling depth: 7,000'

6 Estimated tops of geological markers:

Rustler	740'
T. Salt	900'
B. Salt	1600'
Yates	2025'
7 Rivers	2340'
Queen	2960'
San Andres	3690'
Glorieta	5235'
Paddock	5290'
Blinbry	5875'
Tubb	6715'

7 Possible mineral bearing formation:

- Paddock Oil
- Blinbry Oil

*\* See COA*

8 Proposed Mud Circulating System:

720

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to <del>765'</del> <sup>720'</sup>	8.4 - 8.8	40-45	NC	FW
<del>765'</del> to 1950'	9.9 - 10.1	28-32	NC	Brine
1950' to 7000'	9.1	28-32	NC	Cut Brine

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.

Application to Drill  
**HT 18 Federal No. 4**  
 Cimarex Energy Co. of Colorado  
 Lot 3, Section 18  
 T17S R32E, Lea County, NM

*See COA*

9 Casing Plan:

String	Hole Size	Depth	Casing OD	Weight	Thread	Collar	Grade
Surface	16"	0' to <del>720'</del> 765'	New 11 1/4"	42#	8-R	STC	H-40
Intermediate	11"	0' to 1950'	New 8 5/8"	24#	8-R	STC	K-55
Production	7 7/8"	0' to 7000'	New 5 1/2"	17#	8-R	LTC	J-55

10 Cementing Plan:

**Surface**     Lead: 450 sx Class C + 4% D-20 + 0.2% D-46 + 0.125 ppg D-130 (wt 12.9 ppg, yield 1.99)  
**100% Excess**     Tail: 200 sx Class C + 0.125 pps D130 (wt 14.80, yield 1.34)  
**TOC**     **Surface**     **Centralizers per Onshorder 2.III.B.1.f**

**Intermediate**     Lead: 270 sx 35:65 Poz: Class C + 0.2% Defoamer (D046) + 5% D044 (Salt) + 6% D020 (Extender Gel) + 1/8 pps Polyflake (D130) + 2 pps Gilsonite (D042) (wt 12.6, yld 2.07)  
**70% Excess**     Tail: 200 sx Class C + 0.2% D-13 (wt 14.8, yld 1.33)  
**TOC**     **Surface**

**Production**     Lead: 575 sacks 35:65 POZC + 0.2% Defoamer (D046) + 0.6% Fluid Loss (D167) + 1 lb/sx Extender (D042) + 0.02% Retarder (D013) + 23 lbs/sx Silica (D178) + 40 lbs/sx Extender (D124) (wt 9.9, yield 2.35)  
**25% Excess**     Tail: 450 sacks PVL + 1.3% NaCl (D044) + 0.2% Fluid Loss (D167) + 0.2% Cement Retarder (D013) + 0.2% Dispersant (D065) (wt 13, yld 1.4)  
**TOC**     **1750'**

According to the State Engineer, depth to groundwater is 200.' Fresh water zones will be protected by setting 11 3/4" casing at ~~765'~~ <sup>720'</sup> and cementing to surface. Hydrocarbon zones will be protected by setting 8 5/8" casing at 1950' and cementing to surface and by setting 5 1/2" casing at 7000' and cementing to 1750.'

<u>Collapse Factor</u>	<u>Burst Factor</u>	<u>Tension Factor</u>
1.125	1.125	1.6

Application to Drill  
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Lot 3, Section 18  
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11 Pressure control Equipment: ✓

A 13½" 3000 PSI working pressure B.O.P. consisting of a one set of blind rams and one set of pipe rams and a 3000 psi annular-type preventor. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. A kelly cock 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. Test BOP equipment and choke manifold to 250 psi low and 3000 psi high and annular BOP to 250 psi low and 1500 psi high by an independent service company. Mud gas separator will be available if drilling in H2S areas.

BOP unit will be hydraulically operated. Below intermediate casing shoe, BOP will be operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the base of the surface pipe through the running of production casing, the well will be equipped with a 3000 psi BOP system.

BOPS will be tested by an independent service company to 250 psi low and 3000 psi high. Hydril will be tested to 250 psi low and 1500 psi high.

12 Testing, Logging and Coring Program:

\* See COA

- A. Mud logging No mud logging program.
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
- C. No DSTs or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. The area has a potential H2S hazard. An H2S drilling plan is attached. Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP      **2300 psi**      Estimated BHT      **110°**

14 Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.

Drilling expected to take      10-15 days

If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals.

Blinebry pay will be perforated and stimulated.

The proposed well will be tested and potentialized as      **an oil well.**

SR & A

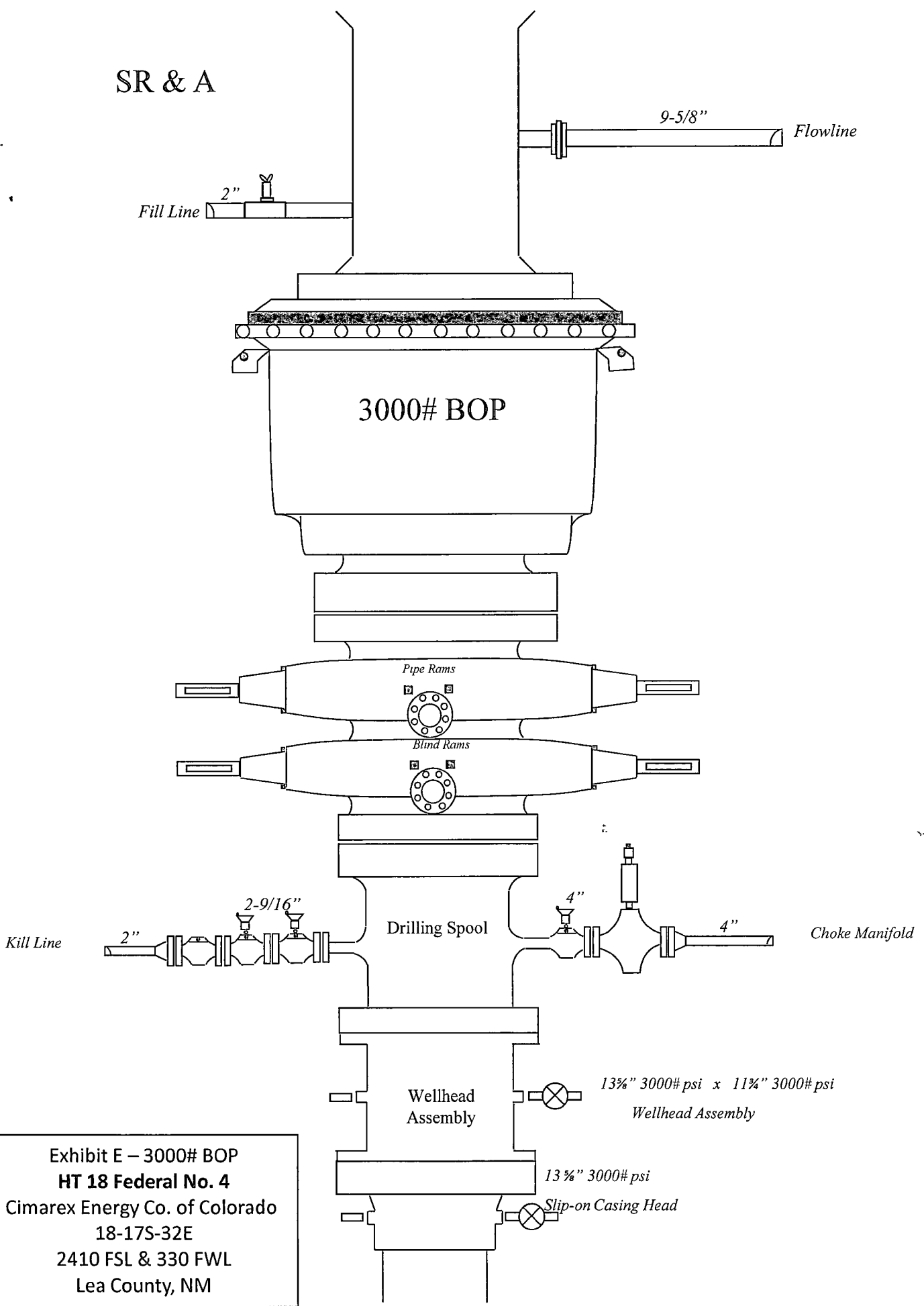
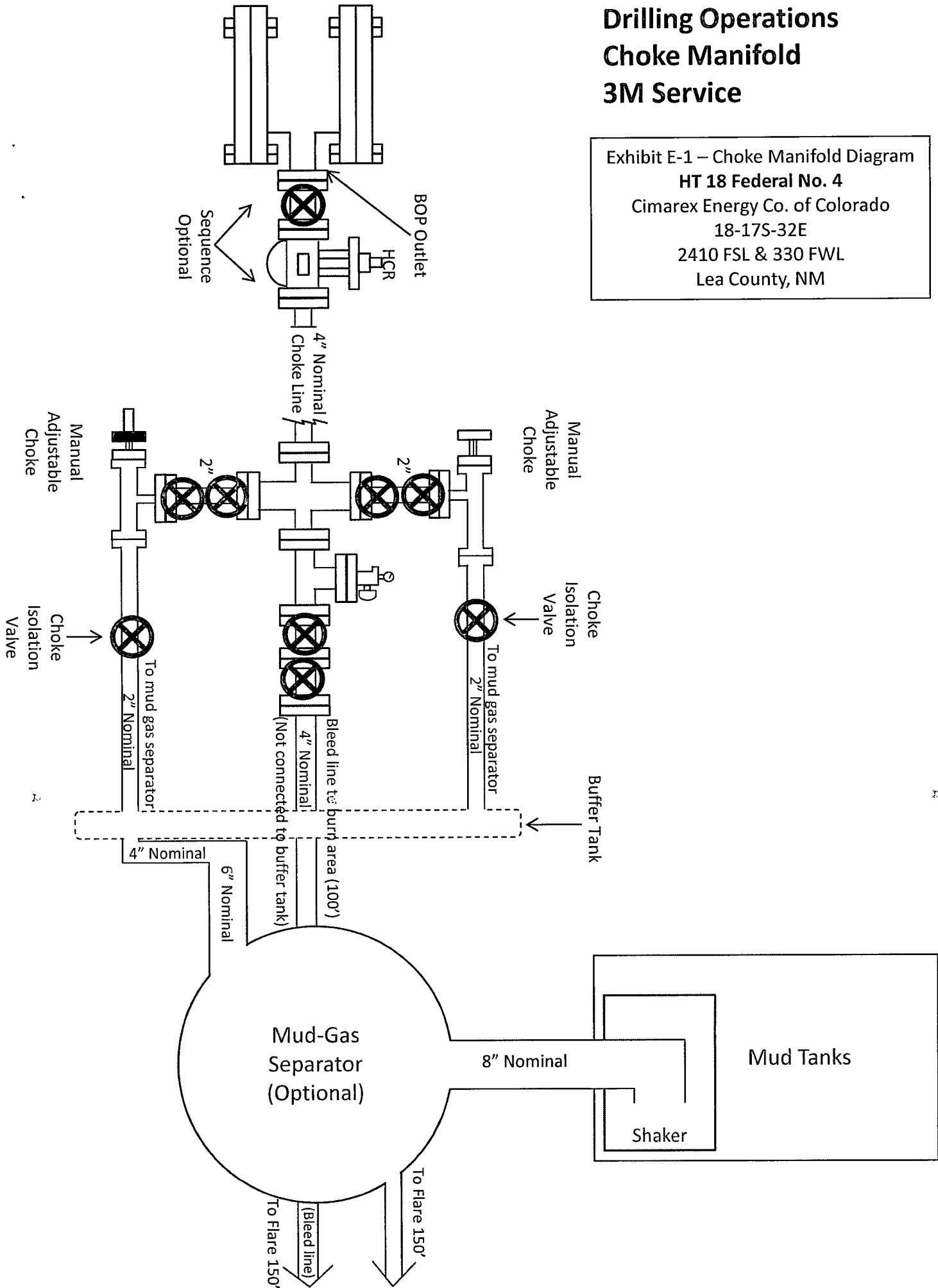


Exhibit E – 3000# BOP  
HT 18 Federal No. 4  
Cimarex Energy Co. of Colorado  
18-17S-32E  
2410 FSL & 330 FWL  
Lea County, NM

# Drilling Operations Choke Manifold 3M Service

Exhibit E-1 – Choke Manifold Diagram  
**HT 18 Federal No. 4**  
 Cimarex Energy Co. of Colorado  
 18-17S-32E  
 2410 FSL & 330 FWL  
 Lea County, NM



# Silver Oak #3

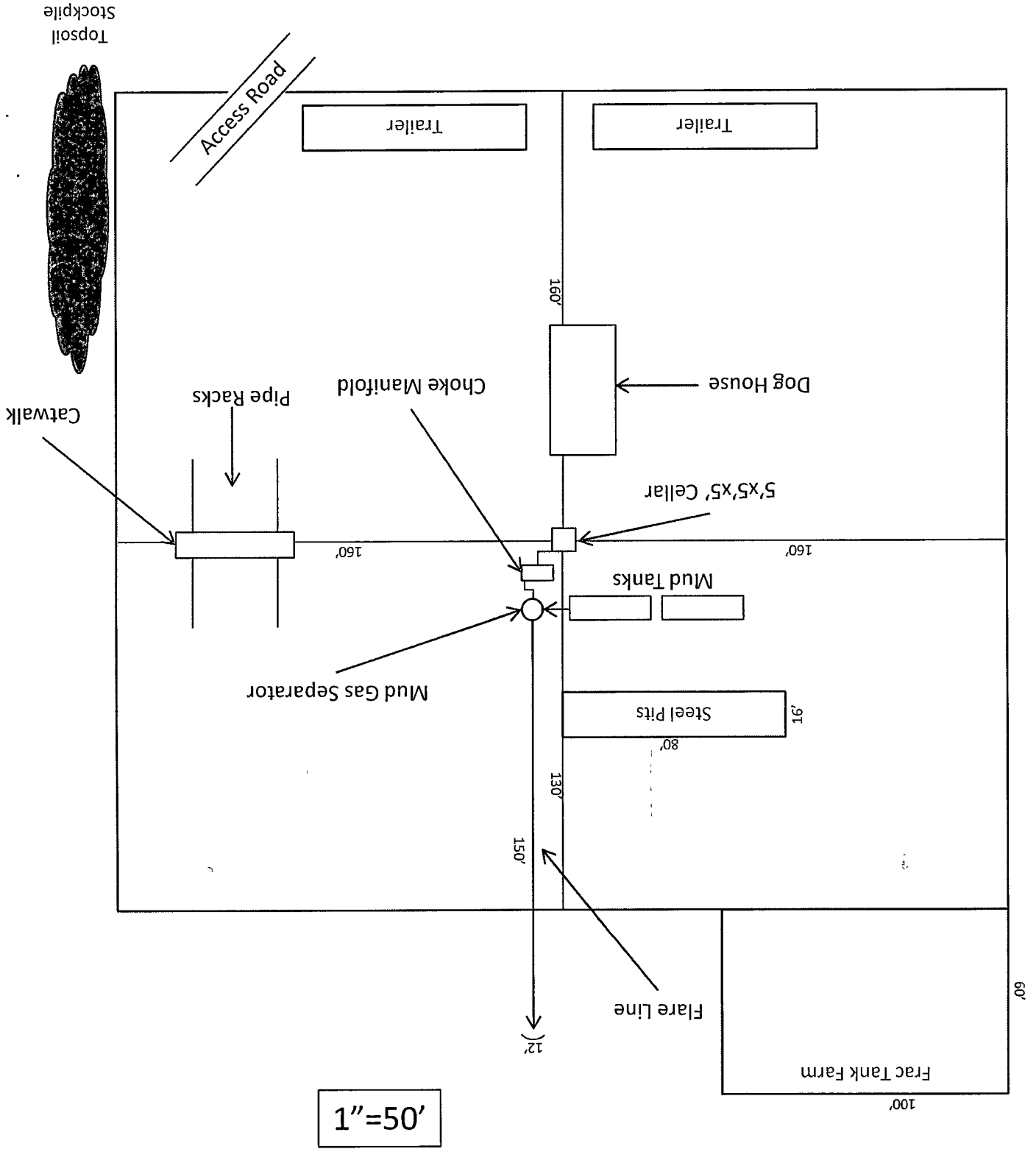


Exhibit D – Rig Diagram  
**HT 18 Federal No. 4**  
 Cimarex Energy Co. of Colorado  
 18-175-32E  
 2410 FSL & 330 FWL  
 Lea County, NM