Form 3160-3
(June 2015)

OCD – HOBBS
09/13/2018
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FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM128835

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
LEA 7 FEDERAL COM [313878]
30H

2. Name of Operator
CIMAREX ENERGY COMPANY [215099]

9. API Well No.
30-025-45200

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
202 S. Cheyenne Ave., Ste 1000 Tulsa OK 74103	(432)620-1936	[97983] BONE SPRING / WILDCAT BONE SPRIN

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface SESE / 191 FSL / 1139 FEL / LAT 32.580939 / LONG -103.491739

At proposed prod. zone NENE / 330 FNL / 660 FEL / LAT 32.594037 / LONG -103.490186

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 7 / T20S / R35E / NMP

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
14 miles	LEA	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
191 feet	319.67	160

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
20 feet	11080 feet / 15849 feet	FED: NMB001188

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3676 feet	07/01/2018	30 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

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 requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Aricka Easterling / Ph: (918)560-7060	01/31/2018

Title
Regulatory Analyst

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	09/10/2018

Title	Office
Assistant Field Manager Lands & Minerals	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.

GCP Rec 09/13/2018

APPROVED WITH CONDITIONS

KZ 09/14/2018

Approval Date: 09/10/2018

(Continued on page 2)

*(Instructions on page 2)

AFMSS

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

Operator Certification Data Report

09/11/2018

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:** 01/31/2018

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:

APD ID: 10400026755 **Submission Date:** 01/31/2018

Operator Name: CIMAREX ENERGY COMPANY

Well Name: LEA 7 FEDERAL COM **Well Number:** 30H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400026755 **Tie to previous NOS?** 10400014628 **Submission Date:** 01/31/2018

BLM Office: CARLSBAD **User:** Aricka Easterling **Title:** Regulatory Analyst

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** IND

Lease number: NMNM128835 **Lease Acres:** 319.67

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: LEA 7 FEDERAL COM **Well Number:** 30H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** BONE SPRING **Pool Name:** WILDCAT 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: LEA 7 FEDERAL COM **Well Number:** 30H

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:** LEA 7 FEDERAL COM **Number:** E2E2

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: 14 Miles **Distance to nearest well:** 20 FT **Distance to lease line:** 191 FT

Reservoir well spacing assigned acres Measurement: 160 Acres

Well plat: Lea_7_Fed_Com_30H_C102_Plat_20180130135131.pdf

Well work start Date: 07/01/2018 **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	191	FSL	1139	FEL	20S	35E	7	Aliquot SESE	32.580939	-103.491739	LEA	NEW MEXICO	NEW MEXICO	F	FEE	3676	0	0
KOP Leg #1	191	FSL	1139	FEL	20S	35E	7	Aliquot SESE	32.580939	-103.491739	LEA	NEW MEXICO	NEW MEXICO	F	FEE	-6847	10523	10523
PPP Leg #1	472	FSL	737	FEL	20S	35E	7	Aliquot SESE	32.581702 8	-103.479042 2	LEA	NEW MEXICO	NEW MEXICO	F	FEE	-7429	11352	11105

Operator Name: CIMAREX ENERGY COMPANY

Well Name: LEA 7 FEDERAL COM **Well Number:** 30H

	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	2640	FSL	660	FWL	20S	35E	7	Aliquot NESE	32.5875806	-103.4902472	LEA	NEW MEXICO	NEW MEXICO	F	FEE	-7437	13500	11113
BHL Leg #1	330	FNL	660	FEL	20S	35E	7	Aliquot NENE	32.594037	-103.490186	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 128835	-7404	15849	11080

APD ID: 10400026755 **Submission Date:** 01/31/2018

Operator Name: CIMAREX ENERGY COMPANY

Well Name: LEA 7 FEDERAL COM **Well Number:** 30H

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	3673	1730	1730		USEABLE WATER	No
2	SALADO	1843	1830	1830		NONE	No
3	TANSILL	293	3380	3380		NONE	No
4	CAPITAN REEF	-327	4000	4000		NONE	No
5	DELAWARE SAND	-2067	5740	5740		NONE	No
6	BRUSHY CANYON	-4527	8200	8200		NATURAL GAS,OIL	No
7	BONE SPRING	-4746	8419	8419		NATURAL GAS,OIL	No
8	BONE SPRING 1ST	-6053	9726	9726		NATURAL GAS,OIL	No
9	BONE SPRING 2ND	-6680	10353	10353		NATURAL GAS,OIL	No
10	BONE SPRING 3RD	-7432	11105	11105		NATURAL GAS,OIL	Yes
11	WOLFCAMP	-7547	11220	11220		NATURAL GAS,OIL	No

Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M **Rating Depth:** 1780

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:

Lea_7_Fed_Com_30H_Choke_2M3M_20180131104758.pdf

BOP Diagram Attachment:

Lea_7_Fed_Com_30H_BOP_2M_20180131104806.pdf

Pressure Rating (PSI): 3M **Rating Depth:** 5720

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.
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Choke Diagram Attachment:

Lea_7_Fed_Com_30H_Choke_2M3M_20180131104826.pdf

BOP Diagram Attachment:

Lea_7_Fed_Com_30H_BOP_3M_20180131104835.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: LEA 7 FEDERAL COM **Well Number:** 30H

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	1780	0	1780	0	1780	1780	J-55	54.5	STC	1.39	3.36	BUOY	5.3	BUOY	5.3
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5720	0	5720	0	5720	5720	J-55	40	LTC	1.31	1.3	BUOY	2.27	BUOY	2.27
3	PRODUCTION	8.75	5.5	NEW	API	N	0	10503	0	10503	0	10503	10503	L-80	17	LTC	1.28	1.57	BUOY	1.79	BUOY	1.79
4	PRODUCTION	8.75	5.5	NEW	API	N	10503	15849	10503	15849	10503	15849	5346	L-80	17	BUTT	1.21	1.49	BUOY	40.47	BUOY	40.47

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Lea_7_Fed_Com_30H_Casing_Assumptions_20180131104903.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: LEA 7 FEDERAL COM **Well Number:** 30H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Lea_7_Fed_Com_30H_Casing_Assumptions_20180131104956.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Lea_7_Fed_Com_30H_Casing_Assumptions_20180131105133.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Lea_7_Fed_Com_30H_Casing_Assumptions_20180131105229.pdf

Section 4 - Cement

Operator Name: CIMAREX ENERGY COMPANY

Well Name: LEA 7 FEDERAL COM **Well Number:** 30H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1780	863	1.72	13.5	1483	50	Class C	Bentonite
SURFACE	Tail		0	1780	231	1.34	14.8	309	25	Class C	LCM
INTERMEDIATE	Lead		0	5720	1079	1.88	12.9	2027	50	35:65 (Poz:C)	Salt, Bentonite
INTERMEDIATE	Tail		0	5720	292	1.34	14.8	391	25	Class C	LCM
PRODUCTION	Lead		0	10503	430	3.64	10.3	1563	25	Tuned Light	LCM
PRODUCTION	Tail		0	10503	1144	1.3	14.2	1486	10	50:50 (Poz:H)	Salt, Bentonite, Fluid Loss, Dispersant, SMS
PRODUCTION	Lead		10503	15849	430	3.64	10.3	1563	25	Tuned Light	LCM
PRODUCTION	Tail		10503	15849	1144	1.3	14.2	1486	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	1780	SPUD MUD	8.3	8.8							

Operator Name: CIMAREX ENERGY COMPANY

Well Name: LEA 7 FEDERAL COM **Well Number:** 30H

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
1780	5720	SALT SATURATED	9.7	10.2							
5720	15849	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: 5185 **Anticipated Surface Pressure:** 2740.14

Anticipated Bottom Hole Temperature(F): 179

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

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:

Lea_7_Fed_Com_30H_H2S_Plan_20180131105612.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: LEA 7 FEDERAL COM **Well Number:** 30H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

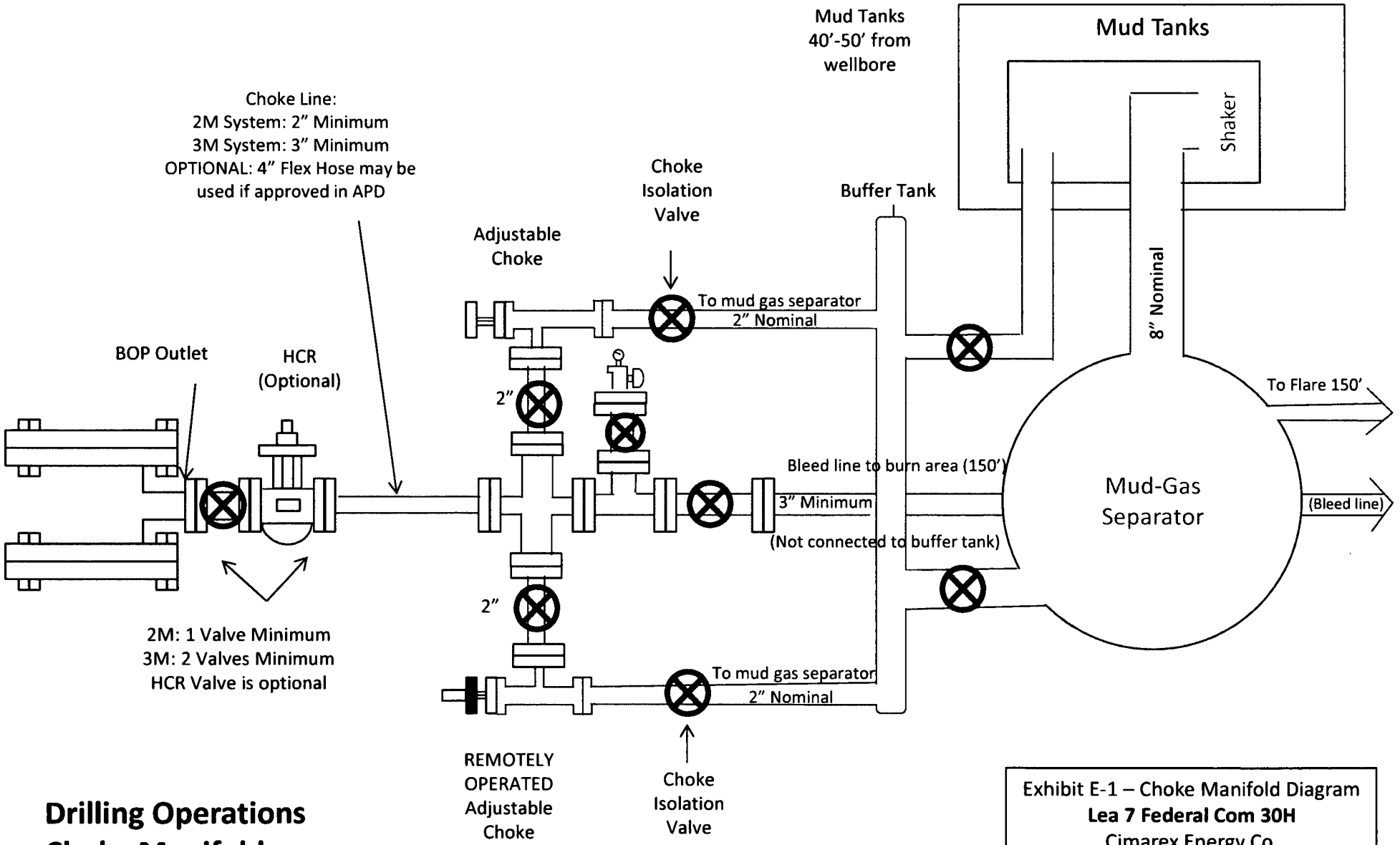
Lea_7_Fed_Com_30H_Directional_Plan_20180131105633.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

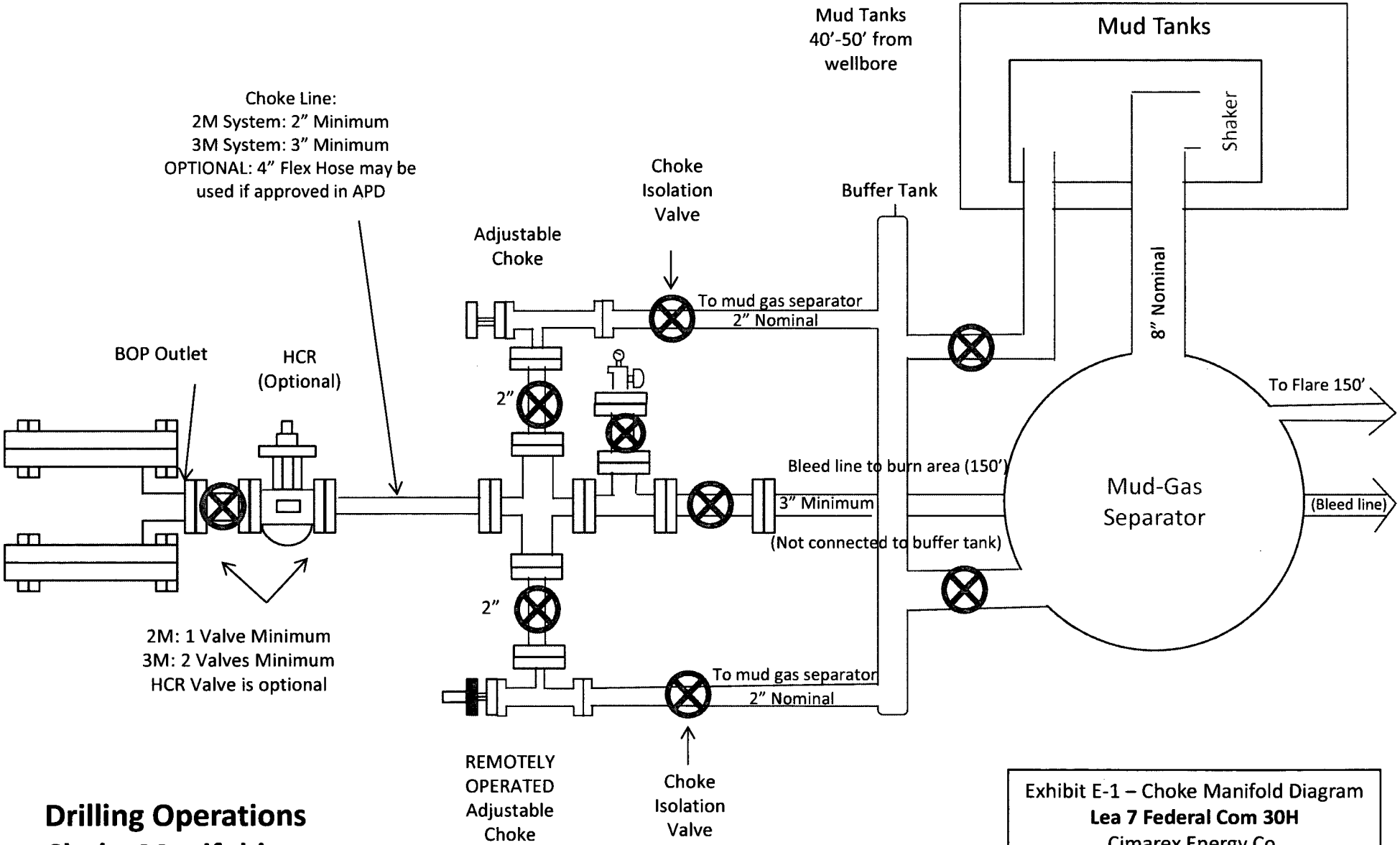
Lea_7_Fed_Com_30H_Drilling_Plan_20180131105645.pdf
Lea_7_Fed_Com_30H_Flex_Hose_20180131105649.pdf
Lea_7_Fed_Com_30H_Gas_Capture_Plan_20180131105650.pdf

Other Variance attachment:



Drilling Operations
Choke Manifold
2M/3M Service

Exhibit E-1 – Choke Manifold Diagram
Lea 7 Federal Com 30H
Cimarex Energy Co.
7-20S-35E
Lea County, NM



Drilling Operations
Choke Manifold
2M/3M Service

Exhibit E-1 – Choke Manifold Diagram
Lea 7 Federal Com 30H
Cimarex Energy Co.
7-20S-35E
Lea County, NM

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

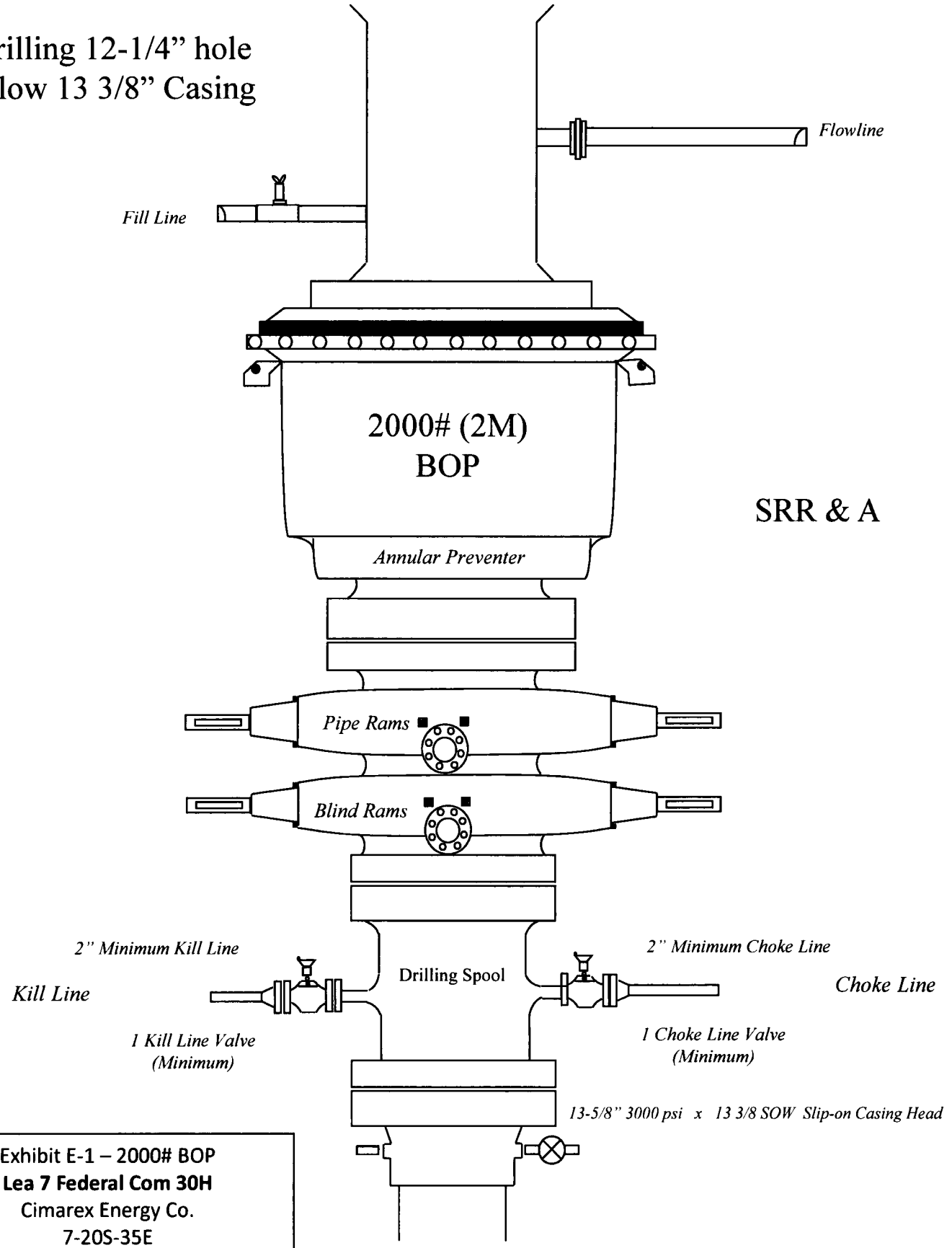
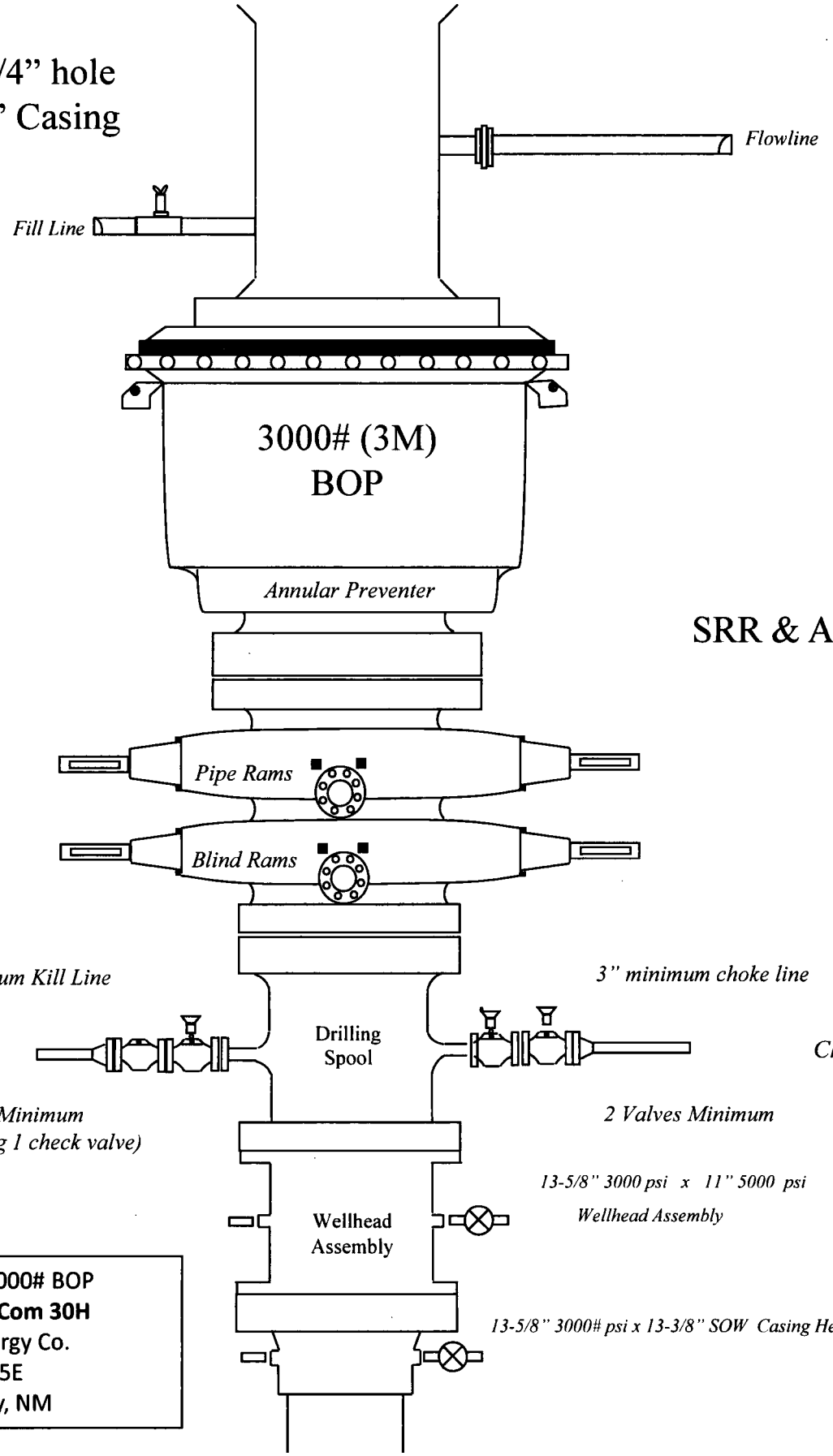


Exhibit E-1 – 2000# BOP
Lea 7 Federal Com 30H
Cimarex Energy Co.
7-20S-35E
Lea County, NM

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



SRR & A

Exhibit E-1 – 3000# BOP
Lea 7 Federal Com 30H
Cimarex Energy Co.
7-20S-35E
Lea County, NM

1. Geological Formations

TVD of target 11,080 Pilot Hole TD N/A
MD at TD 15,849 Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1730	N/A	
Salado	1830	N/A	
Tansil	3380	N/A	
Capitan	4000	N/A	
Delaware Sands	5740	N/A	
Brushy Canyon	8200	Hydrocarbons	
Bone Spring	8419	Hydrocarbons	
1st Bone Spring Ss	9726	Hydrocarbons	
2nd Bone Spring Ss	10353	Hydrocarbons	
3rd Bone Spring	11105	Hydrocarbons	
Wolfcamp	11220	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	1780	13-3/8"	54.50	J-55	ST&C	1.39	3.36	5.30
12 1/4	0	5720	9-5/8"	40.00	J-55	LT&C	1.31	1.30	2.27
8 3/4	0	10503	5-1/2"	17.00	L-80	LT&C	1.28	1.57	1.79
8 3/4	10503	15849	5-1/2"	17.00	L-80	BT&C	1.21	1.49	40.47
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 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	863	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	231	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	1079	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	292	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	430	10.30	3.64	22.18		Lead: Tuned Light + LCM
	1144	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	45
Intermediate	0	44
Production	5520	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. 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 1780'	FW Spud Mud	8.30 - 8.80	30-32	N/C
1780' to 5720'	Brine Water	9.70 - 10.20	30-32	N/C
5720' to 15849'	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	5185 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: 10400026755 **Submission Date:** 01/31/2018

Operator Name: CIMAREX ENERGY COMPANY

Well Name: LEA 7 FEDERAL COM **Well Number:** 30H

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? NO

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Lea_7_Fed_Com_E2E2_Road_ROW_20180131105725.pdf

Lea_7_Fed_Com_East_CTB_Road_ROW_20180131105727.pdf

New road type: COLLECTOR

Length: 674 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: 18

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:

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:

Lea_7_Fed_Com_E2E2_Road_ROW_20180131105725.pdf
Lea_7_Fed_Com_East_CTB_Road_ROW_20180131105727.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:

Lea_7_Fed_Com_E2E2_Road_ROW_20180131105725.pdf
Lea_7_Fed_Com_East_CTB_Road_ROW_20180131105727.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:

Lea_7_Fed_Com_E2E2_One_Mile_Radius_Existing_Wells_20180131105742.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:

Lea_7_Fed_Com_East_CTB_Layout_20180131105758.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:

Lea_7_Fed_Com_E2E2_Drilling_Water_Route_20180131105810.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:

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:

Lea_7_Fed_Com_30H_Wellsite_Layout_20180131105854.pdf

Comments:

Operator Name: CIMAREX ENERGY COMPANY

Well Name: LEA 7 FEDERAL COM **Well Number:** 30H

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** LEA 7 FEDERAL COM

Multiple Well Pad Number: E2E2

Recontouring attachment:

Lea_7_Fed_Com_E2E2_Interim_Reclaim_20180131105905.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): 6.907
Road proposed disturbance (acres): 0.395
Powerline proposed disturbance (acres): 2.809
Pipeline proposed disturbance (acres): 7.175
Other proposed disturbance (acres): 4
Total proposed disturbance: 21.286

Well pad interim reclamation (acres): 2.711
Road interim reclamation (acres): 0
Powerline interim reclamation (acres): 0
Pipeline interim reclamation (acres): 0
Other interim reclamation (acres): 0
Total interim reclamation: 2.711

Well pad long term disturbance (acres): 3.356
Road long term disturbance (acres): 0.395
Powerline long term disturbance (acres): 2.809
Pipeline long term disturbance (acres): 7.175
Other long term disturbance (acres): 4
Total long term disturbance: 17.735

Disturbance Comments: Flowline: 1084', Gas lift: 1084', SWD: 2928', Sales: 2948', Power: 4080' Temp fresh water line: 13837'

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

Total pounds/Acre:

Seed Type	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: PRIVATE OWNERSHIP

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:**

Fee Owner: S&S Inc, Pearl Valley Limited Partnership (Pat Sims)
Phone: (575)390-2642

Fee Owner Address: PO BOx 1046 Eunice, NM 88231

Email:

Surface use plan certification: YES

Surface use plan certification document:

Lea_7_Fed_Com_30H_Operator_Land_Owner_Agmt_20180131105937.pdf

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: See Operator-Land Owner Agreement

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Section 12 - Other Information

Right of Way needed? YES

Use APD as ROW? YES

ROW Type(s): 288100 ROW – O&G Pipeline,Other

ROW Applications

SUPO Additional Information: The proposed routes for SWD, Road, Power, Sales, Gas lift & Flowlines are the same for the Lea 7 Federal Com 29H & 30H APD applications.
Use a previously conducted onsite? YES

Previous Onsite information: Onsite with BLM (Barry Hunt) and Cimarex (Barry Hunt) on 6/1/17.

Other SUPO Attachment

Lea_7_Fed_Com_30H_SUPO_20180131110007.pdf
Lea_7_Fed_Com_E2E2_Flow_Gas_lift_ROW_20180131110008.pdf
Lea_7_Fed_Com_E2E2_Power_ROW_20180131110010.pdf
Lea_7_Fed_Com_E2E2_Public_Access_20180131110011.pdf
Lea_7_Fed_Com_E2E2_Road_Description_20180131110012.pdf
Lea_7_Fed_Com_East_CTB_Gas_Sales_ROWpdf_20180131110015.pdf
Lea_7_Fed_Com_East_CTB_SWD_ROW_20180131110016.pdf
Lea_7_Fed_Com_E2E2_Temp_Water_Route_20180131110013.pdf
Lea_7_Fed_Com_Marshall_and_Winston___Agreement_to_Operate_E2_Sec_7_T20S_R35E_20180131110016.pdf

Cimarex Lea 7 Federal Com 30H
Surface Use Plan

Upon approval of the Application for Permit to Drill (APD) the following surface use plan of operations will be followed and carried out. The surface use plan outlines the proposed surface disturbance. If any other disturbance is needed after the APD is approved, a BLM sundry notice or right of way application will be submitted for approval prior to any additional surface disturbance.

Existing Roads

- Directions to location - Exhibit A.
- Public access route - Exhibit B.
- Existing access road for the proposed project. Please see Exhibit B and C.
- Cimarex Energy will:
    - Improve and/or maintain existing road(s) condition the same as or better than before the operations began.
    - Provide plans for improvement and /or maintenance of existing roads if requested.
    - Repair or replace damaged or deteriorated structures as needed. Including cattle guards and culverts.
    - Prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or other events.
    - Obtain written BLM approval prior to the application of surfactants, binding agents, or other dust suppression chemicals on the roadways.
- The maximum width of the driving surface will be 18'. The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1' deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.

New or Reconstructed Access Roads

Cimarex Energy plans to construct a new off-lease access road

- Length: 674'
- Width: 30'
- Road Plat - Exhibit D.
- A ROW will be submitted to the BLM for approval.
- Cimarex Energy will complete improvements to the driving surface as needed.
- The maximum width of the driving surface for all roads above will be 18'.
- The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface.
- The ditches will be 1' deep with 3:1 slopes.
- The driving surface will be made of 6" rolled and compacted caliche.
- Cimarex Energy will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or other events.

Well Radius Map

Please see Exhibit E for wells within one mile or proposed well SHL and BHL.

Proposed or Existing Production Facility

A new facility will be constructed for this project if the well is productive.

- Lea 7 Federal Com East CTB - Exhibit F
    - Direction to facility
    - Facility pad location layout and cut and fill
    - Facility pad archeological boundary
    - Facility pad flowline corridor
    - Facility pad access road

Gas Pipeline Specifications

- Cimarex plans to construct an on-lease gas pipeline to service this battery location.
- Please see Exhibit G for proposed pipeline route.
- Three pipelines: 12" LP Steel, 8" HP Steel, 4" HP Steel.
- Pipeline Length: 2,948'. Pipeline Width: 45'.
- Pipeline will be buried and will require a construction width of 75'.
- MAOP: 1,440psi.
- Anticipated working pressure: 12": 300psi; 8" & 4": 1100 psi.

Cimarex Energy Co.
600 N. Marienfeld St
Suite 600
Midland, TX 79701
(Main) 432 571 7800

CIMAREX

RECEIVED JUL 1 1 2017

July 10, 2017

Marshall & Winston, Inc.
P.O. Box 50880
Midland, Texas 79710
Attn: Kevin Hammit

RE: Operating Agreement dated June 24, 2014
All of Section 7, Township 20, Range 35 East
Lea County, New Mexico

Dear Kevin:

Per the above-described Operating Agreement, Cimarex Energy Co. ("Cimarex") is designated Operator of the W/2 of Section 7 and Marshall & Winston, Inc. ("M&W") is designated Operator the E/2 of Section 7.

Now, Cimarex proposes to be the designated Operator for all of Section 7. Cimarex believes maintaining Operatorship in the E/2 would be beneficial for both parties for the following reasons:

- Cimarex has drilled and completed the Lea 7 Federal 1H well, and recently proposed to drill the Lea 7 Federal 2H well
  - Seamless transition of drilling experience from the 1H & 2H to future wells in the E/2
- Complexity of the leasehold in the S/2 of Section 7:
  - Cimarex has over 67 Oil & Gas leases with various primary term dates and continuous drilling provisions, which need to be considered when planning rig schedules
  - Knowledge of unleased mineral owners that may need to be compulsory pooled in the 2H may also need to be pooled in future wells
- Existing Surface Use Agreement in place covering all of Section 7
  - Cimarex has an existing Surface Use Agreement in place with Surface Tenant
  - M&W may have to negotiate a new Surface Use Agreement for the E/2 which could result in delays or higher costs
- Permitting:
  - Cimarex recently staked the Lea 7 Federal 3H & 4H wells, and would like to coordinate with M&W on best locations and file for permits as soon as possible

If the foregoing adequately provides reason for Cimarex to operate the E/2 of Section 7, we ask that you signify your agreement by signing and returning one original of this letter.

Respectfully,

Cody Elliott

AGREED AND ACCEPTED this 28th day of July 2017.

Marshall & Winston, Inc.

Name: Tom M. Brandt

Title: Tom M. Brandt, President

Date: July 28, 2017

AFMSS

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

PWD Data Report
09/11/2018

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

09/11/2018

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: