or ber N.M. 130	Oil Cons. DIV 1 W. Grand Av	-Dist. 2 venue	2	
Form 3160-3 (April 2004) DETI A UNITED STATES	rtesia, NM 88 RECEI		FORM APPROV OMB No. 1004-0 Expires March 31,	137
DEPARTMENT OF THE I BUREAU OF LAND MAN	INTERIOR FEB 1 4	4 2005	5. Lease Serial No. NM 92739	
APPLICATION FOR PERMIT TO		TESIA	<ol> <li>If Indian, Allotee or Trib</li> <li>N/A</li> </ol>	be Name
la. Type of work: DRILL	ER	7	7 If Unit or CA Agreement,	Name and No.
lb. Type of Well: Oil Well Gas Well Other	Single Zone Multi	ple Zone	8. Lease Name and Well No. LA Federal #2 (re-entry)	
2. Name of Operator Cimarex Energy Co.		9	<ul> <li>API Well No.</li> <li>30-015-22883</li> </ul>	
3a. Address 15 E 5th, Ste 1000 Tulsa, OK 74103	3b. Phone No. (include area code) 918-585-1100	10	D. Field and Pool, or Explorat Morrow	tory
4. Location of Well (Report location clearly and in accordance with any At surface         Sec 12-22S-22E; 661' FNL & 1988' At proposed prod. zone         Same	11	11. Sec., T. R. M. or Blk. and Survey or Area Sec 12-T22S-R22E		
<ol> <li>Distance in miles and direction from nearest town or post office*</li> <li>31 miles West and 3 miles South of Carlsbad NM</li> </ol>		1	2. County or Parish Eddy	13. State
15. Distance from proposed* 3750' location to nearest property or lease line, ft. (Also to nearest drig, unit line, if any)	16. No. of acres in lease 2240.48 acres	17. Spacing U 320 Acre	nit dedicated to this well	NM
<ol> <li>Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.</li> <li>2000'</li> </ol>	19. Proposed Depth 9500'	20. BLM/BIA COB000	Bond No. on file 011	<u> </u>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4144'	22. Approximate date work will sta 09/24/2004		<ol> <li>Estimated duration</li> <li>45 days</li> </ol>	
The following, completed in accordance with the requirements of Onshor	2.0.11000000000		CONTROLLED WA	ATER BASIN
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is or National Forest System I SUPO shall be filed with the appropriate Forest Service Office).</li> </ol>	<ol> <li>Bond to cover the strength of the</li></ol>	he operations u cation specific informa	nless covered by an existing ation and/or plans as may be	·
25. Signature	Name (Printed/Typed) Steve J. Simonton		Date	/19/2004
Title Drilling Superintendent		, <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>		
Approved by (Signature)/s/ Tony J. Herrell	Name (Printed/Typed) /s/ Tony	.J. Herr	FEB	1 1 2005
Title FIELD MANAGER			ELD OFFICE	
Application approval does not warrant or certify that the applicant holds conduct operations thereon. Conditions of approval, if any, are attached.	s legal or equitable title to those right	ts in the subject	lease which would entitle the	••
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a cri States any false, fictitious or fraudulent statements or representations as to	me for any person knowingly and u			

\*(Instructions on page 2)

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

#### Surface Use Plan \_LA Federal #2

1

,

Cimarex Energy Co., LA Federal #2 Section 12-T22S-R22E, Eddy County, New Mexico. (Federal Lease No. US NM 92739).

This plan is to accompany Application for "Permit to Drill" the subject well which is located approximately 25 miles West and 4 miles South of Carlsbad, New Mexico. The following is a discussion of pertinent information concerning the possible effect, which the proposed drilling well may have on the environment of the well and road sites and surrounding acreage. A copy will be posted on the derrick floor so that all contractors and sub-contractors will be aware of all items of this plan.

#### 1. EXISTING ROADS

- A. Directions to well: From the intersection of Eddy Co Rd #401 (Marathon Plant Road) and Cawley Rd, go south on Cawley Rd for 0.9 mi. At "Y" go right (SW) for 0.8 miles. Road bends left and goes south for 0.5 mi. At "Y" turn right and go SW 0.5 mi to another "Y". Go left heading SW for 0.75 mi. Road bends to the left and heads south for 1.0 mi. At "T" in road, turn left and follow road 0.75 mi bending SE. Turn right and go NW for 0.4 mi. Road bends back left (after cattleguard) and go 0.3 mi SW. Road bends right and heads NW for 2.2 mi to end of road well pad. Take two track NE 0.6 mi to proposed road survey. Follow road survey approx 900' to this location.
- B. **Pad Mitigation**: The topsoil will be stockpiled for surface restoration; will maintain a 3:1 slope ratio. The reserve pit will be lined. The pad will be drained above the cut on the west side of location draining east. Culverts will be placed along the new road construction as necessary to accommodate runoff. All surface equipment will be painted Fed Juniper Green. Upon completion of drilling the location and surrounding area will be cleared of debris and will be reseeded using the appropriate BLM Seed Mix. During the life of the well, there may be either a compressor or a pump-jack installed. No drilling or construction will take place during those restricted periods of time as determined by the BLM.

#### 2. PLANNED ACCESS ROADS:

- A. Length and Width: 883' of new access road is needed. The existing and new access road right-of-way will be approximately 20 feet wide, with the actual road surface being approximately 16 feet wide.
- B. **Construction:** The 883' of new access road to the proposed LA Federal #2 well site will be new road construction and will provide all weather access to this property. Native on-site material will be used for surfacing with gravel furnished from a private commercial source. The entire length of location road will be maintained in a prudent manner with a motor grader as an all weather road. Maintenance activity shall include but not be limited to rerocking, reshaping, compacting and crowning said location road as necessary. Any ruts, rills, and eroded areas will be filled, and blocked drainages and culverts will be cleared. Attached is a plat of the proposed location road and detailed section maps showing the location of existing roads.

#### Surface Use Plan \_LA Federal #2

4

.

- C. Turnouts: No turnouts are proposed
- D. Culverts: Culverts are proposed as necessary
- E. Cuts and Fills: An approximate 1.3' cut along the South side of the well site and an approximate 1.5' fill along the North side of the well site will be required. An approximate 1.0' cut along the West side of the well site and an approximate 0.4' fill along the East side of the well site will be required. (see attached plat).
- F. Gates, Cattleguards: No Gates or Cattleguards are needed
- G. Off Lease ROW: None

#### 3. LOCATION OF EXISTING WELLS ----

A. See Attachment II for location of wells within a 1 mile radius:

#### 4. LOCATION OF EXSITING AND/OR PROPOSED FACILITIES:

- A. Location of Tank Batteries, Production Facilities, Production Gathering and Service Lines:
  - In the event of production, production facilities will be located on the drill pad. The actual placement of this equipment will be determined when the well's production characteristics can be evaluated after completion (including compression). The condensate tank will be enclosed by a dike and all BLM standards regarding compressors will be met.
  - 2 The flow-line from this well will have to be constructed. It will be buried gas pipeline that will be approx. 2964.9' in length (See attached pipeline plat) and tie into an existing gas transmission pipeline. The pipe diameter, wall thickness and pipe wall strength will be determined upon the establishment of production and will be in accordance to BLM standards and regulations. The line will be owned and operated by Cimarex Energy Co. and qualifies for APD/ROW process.
  - 3 Produced water, if any, will be stored on the well site in a closed or netted water tank and on regular intervals will be hauled to an approved disposal site.

#### 5. LOCATION AND TYPE OF WATER SUPPLY

A. Water will be obtained from a non-federal private source.

#### 6. SOURCE OF CONSTRUCTION MATERIALS:

A. No additional construction materials will be required to build the proposed location. The topsoil will be stockpiled for restoration. The dirt from the reserve pit will be back-sloped and saved for use when the pit is rehabilitated.

#### Surface Use Plan \_LA Federal #2

.

۲

#### 7. METHODS FOR HANDLING WASTE DISPOSAL:

- A. A Conventional Drilling System will be used. The drill cuttings, fluids and completion fluids will be placed in the reserve pit. The reserve pit will be fenced with wire mesh on three sides away from the pad during drilling and the fourth side fenced as soon as the rig moves out. The reserve pit will be backfilled and leveled as soon as practical.
- B. All garbage and trash will be placed in specially constructed wire mesh containers. Upon cleanup, the refuse in the containers will be hauled to an approved landfill site.
  - 1 All produced water will be collected in tanks until transported to an approved disposal system.

#### 8. ANCILLARY FACILITIES:

A. None

#### 9. WELL SITE LAYOUT:

A. Attached sketch shows the relative location and dimensions of the well pad, and reserve pit. The well pad will be 300' X 200'. The reserve pit will be 150' X 150'. (see diagram).

#### **10. PLANS FOR RESTORATION OF SURFACE:**

A. Pit will be filled and leveled as soon as practical. If well is productive, drilling pad will remain as well service pad. If dry hole, the pad will be ripped and reseeded per regulations. See Pad Mitigation for details of the surface restoration and seeding details.

#### Page 3

#### Surface Use Plan - LA Federal #2

,

#### 11. OTHER INFORMATION:

- A. **Terrain/Topography** Gently sloping areas with ridges or mesa tops and Limestone out crops in places.
- B. Soil: *Ector stony loam, 0 to 9 percent slope-* grayish brown stony loam to light colored limestone bedrock
- C. Flora and Fauna: scrubland community consisting mainly of black grama, blue grama, beargrass, tobosa, sotol, agave, ocotillo, snakeweed, tarbush, and yucca.
- D. Ponds and Streams: None. Playas in the area will be avoided.
- E. **Residence and Other Structures:** There are no occupied residences or buildings within one quarter of a mile of the proposed well location
- F. Land Use: grazing, wildlife, mineral development.
- G. Water Wells: No water wells are located in Section.
- H. Arroyos, Canyons, etc.: none.
- I. Well Sign; Sign identifying and locating the well will be maintained at drill site with the spudding of the well.
- J. Archaeological Resources: Archaeological Survey is forth coming.
- K. Surface Ownership: Bureau of Land Management
- 12. **Operator's Representatives:** Field personnel who can be contacted concerning compliance of the Surface Use Plan are as follows:

Steve Simonton, Drilling Superintendent Cimarex Energy Co. 15 East 5<sup>th</sup> Street, Suite 1000 Tulsa, OK 74103 918-295-1710

#### 13. Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct, and that the work associated with the operations proposed herein will be performed by Cimarex Energy Co., and its contractors and sub-contractors in conformity with this plan and the terms and conditions upper which it is approved.

BY: Steve Simonton, Drilling Superintendent

Page 4

DATE

.

1

## CIMAREX ENERGY CO.

#### WELL NAME: LA Federal #2

#### **DRILLING PROGNOSIS**

- 1. Location of Proposed Well: 661' FNL & 1981' FWL Section 12, T22S-R22E Eddy County, New Mexico
- 2. Unprepared Ground Elevation: 4144'
- 3. The geological name of the surface formation is Queen
- 4. Type of drilling tools will be rotary
- 5. Proposed drilling depth is 7500'

The estimated tops of important geologic markers are as follows:

ZONES	TOPS (MD) Surface		
Queen			
San Andres	321		
Glorieta	1900		
Yeso	1947		
Bone Spring	3096		
Bone Spring 3 <sup>rd</sup> SS	5546		
Wolfcamp	5659		
Wolfcamp "D"	6452		

7. The estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered are as follows:

ZONES	<b>DEPTH</b>	FLUID
San Andres	0-1000'	Water
Wolfcamp	6504 - 6522'	Gas

#### 8. The proposed casing program is as follows:

Surface: 13-3/8" 48# H-40 ST&C casing set @ 500'. Burst – 1730 psi, Collapse – 740 psi, Joint Strength – 322,000#, Body Strength – 541,000#. (Values are quoted for new pipe.) Cemented 4-1979, details below.

Intermediate: 8-5/8", 24 ppf, K-55, ST&C set at 2004'.

#### **Drilling Prognosis LA Federal #2**

1

Burst – 2020 psi, Collapse – 3520 psi, Joint Strength – 394,000#, Body Strength – 564,000#. (Values are quoted for new pipe.) Cemented 4-1979, details below.

**Production:** 5-1/2", 17 ppf, N80, LTC set at 7500'; Burst - 7740 psi, Collapse - 6280 psi, Joint Strength - 348,000#, Body Strength - 397,000#

9. Cement Program: <u>Surface 13-3/8"</u> Cemented 4-1979 with 500 sks Class C with 8 yds of Redi-Mix around Top
<u>Intermediate 9- 5/8"</u>: Cemented 4-1979 with 300 sks Quik-Set + 900 sks Lite Wt with 5 pps gilsonite & ¼ pps Flocele + 200 sks Class C. Topped out with 1" pipe with 450 sks Class C in 5 stages.
<u>Production 5-1/2"</u> 785 sks 50:50 Poz H + 5% salt + 2% Bentonite + 0.3% Fluid Loss + 0.2% dispersant + 0.2% antifoam + 0.2% retarder mixed @ 14.4 ppg, 6.0 gps, 1.31 ft<sup>3</sup>/sk. 30% excess over gauge .

Stage Collar Program: Not anticipated at this time.

#### **10.** Pressure Control Equipment:

A schematic diagram of the final BOP stack showing sizes and pressure ratings is attached. A schematic diagram of the manifold showing sizes and pressure ratings is attached. The BOP will be set on casing head after drilling and setting surface casing. Pressure tests will be done as needed & after nippling up on the surface casing. Ram-Type preventors shall be actuated to test proper functioning at least once a day. The annular-type blowout preventor shall be actuated on the drill pipe at least once each week.

#### 11 **Drilling Mud Prognosis:**

<b>DEPTH</b> <b>INTERVAL</b> 0-500 500 - 2004	<b>WEIGHT (ppg)</b> N/A N/A	VISCOSITY (Sec/Qt)	FLUID LOSS (ml/30 min)	MUD TYPE
2300 - 2004	N/A 8.4 – 9.5	28 – 45	NC-10	Low Solids / Lightly dispersed

- 12. The testing, logging, and coring programs are as follows: BHC Sonic Log 2,050' to 7,200'
- 13. Abnormal temperatures are not anticipated to be encountered nor any other potential

#### Drilling Prognosis LA Federal #2

•

•

.

٠

hazards such as Hydrogen Sulfide Gas. Low risk H<sub>2</sub>S equipment will be used.

Estimated Bottom hole pressures: Wolfcamp - +/- 3000 psi

14. The anticipated starting date is sometime around September 17, 2004 with duration of drilling/completion operations for approximately 45 days thereafter.

•	DISTRICT I 1625 N. FRENCH DR., 1	HOBRS. NM 68			En			W Mexico Resources Department				
	DISTRICT II 1301 W. GRAND AVENUE DISTRICT III 1000 Rio Brazos Ro	, ARTISSIA, NW	88210	OIL	1220	o sou	TH ST.	ON DIVIS FRANCIS DR. Jexico 87505	ION Subm	Revised J lit to Appropriate D State Lease	orm C-102 UNE 10, 2003 Histrict Office e - 4 Copies e - 3 Copies	
	DISTRICT IV 1220 S. ST. FRANCIS D	R. SANTA PR.	NM 87505	WELL LO	CATI	ION AN	D ACRE	AGE DEDICATI	ON PLAT	🗆 AMENDI	ED REPORT	
		Number			Pool Co	ode			Pool Name			
	Property C	ode		Property Name LA FEDERAL					Well Number 2			
	OGRID No	•			CIM	AREX	Operator Nar ENERGY	ne COMPANY		Elevation 4144'		
	L						rface Loc				т	
	UL or lot No. C	Section 12	Township 22-S	Range 22-E	Lot I	dn Fee	et from the 661'	North/South line	Feet from the 1981'	East/West line WEST	county EDDY	
				Bottom	Hole	Locatio	on If Diff	erent From Sur	face	A		
	UL or lot No.	Section	Township	Range	Lot i	dn Fee	t from the	North/South line	Feet from the	East/West line	County	
	Dedicated Acres	Joint o	r Infill C	onsolidation (	Code	Order N	ío.	· · · · · · · · · · · · · · · · · · ·	1		<u> </u>	
	NO ALLO	WABLE W						UNTIL ALL INTER APPROVED BY		EN CONSOLIDA	ATED	
					N		1		OPERATO	OR CERTIFICAT	NOI	
			4143.0						I hereb	y certify the the inj	formation	
1	×	י –1981' <del> </del> -					1		contained hereis best of my know	n is true and comple riedge and belief.	ete to the	
1	$\mathbf{h}$	l	60	<u>10.</u> ]	1							
	$\mathbf{h}$		4148.2'	4148.1' ?					AP/ (	flin		
1		- <u></u> . 		GEODETIC			' :		Signature	J. Simons	son	
/	$\downarrow$ .				27 N		′   ·		Printed Nam			
					3363. 9624.				Title	sapt.		
4		1					İ		Date 2/0	107		
		LAT.=32'24'39.35" N LONG.=104'39'30.92" W SURVEYOR CERTIFICATI						ION				
J	2 ) () I hereby certify that the well location shown											
	<ul> <li>320</li> <li>acr</li> </ul>		on this plat was plotted from field n actual surveys made by me or un				under my					
4		es I					1		11 -	d that the same is e best of my belief	11	
		1		ا			1		AUG	UST 6, 2004		
+	└						l		Date Surveye	Seal of /0 00	LA	
4				7					Signature & Professional	Sarveyor Of		
		1	DE MEX COL									
	$\mathbf{r}$							8-04				
T		Certificate No. RONALD.J. SD50N 3239										
1			$\langle \rangle$		$\sim$		1			OFESSION	12641	
L							<b>I</b>	· · · · · · · · · · · · · · · · · · ·		Million Mare	J	



VICINITY MAP



SEC. <u>12</u> TWP.<u>22–S</u> RGE. <u>22–E</u> SURVEY <u>N.M.P.M.</u> COUNTY <u>EDDY</u> DESCRIPTION <u>661' FNL & 1981' FWL</u> ELEVATION <u>4144'</u> OPERATOR <u>CIMAREX ENERGY COMPANY</u> LEASE <u>LA FEDERAL</u>



# LOCATION VERIFICATION MAP







## CIMAREX ENERGY CO.

## LA FEDERAL #2 (RE-ENTRY)

# Proposed Blowout Preventor Stack



# CIMAREX ENERGY CO. - LA FEDERAL #2 (RE-ENTRY)



From BOP

#### United State Department of the Interior Bureau of Land Management Roswell Field Office 2909 West Second Street Roswell, New Mexico 88201-1287

#### Statement Accepting Responsibility for Operations

<b>Operator Name:</b>	Cimarex Energy Co.
Street or Box:	15 E 5 <sup>th</sup> , Ste 1000
City, State:	Tulsa, OK
Zip Code:	74103

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Lease No: NM 92739

. . .

Legal Description of Land:	Sec 24-22S-22E
	Eddy County, NM

Formation(s) (if applicable):

Bond Coverage: Cimarex Energy Co. is individually bonded with the BLM

BLM Bond File No.:

C0B000011

Authorized Signature:

in Drilling Superintendent

Title:

Date:

August 16, 2004

# LOCATION VERIFICATION MAP



- SEC. 12 TWP. 22-S RGE. 22-E
- SURVEY N.M.P.M.
- COUNTY\_\_\_\_\_EDDY
- DESCRIPTION 661' FNL & 1981' FWL
- ELEVATION \_\_\_\_\_ 4144'

OPERATOR CIMAREX ENERGY COMPANY LEASE\_\_\_\_\_LA FEDERAL

U.S.G.S. TOPOGRAPHIC MAP CAWLEY DRAW, N.M.

CAWLEY DRAW, N.M. - 10'



