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N.M. Oil Cons. DIV-Dist. 2 1301 W. Grand Avenue Artesia, NM 88210

Form 3160 - 3 (April 2004)

FEB 1 4 2005 OGD-ARTESIA

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

UNITED STATES DEPARTMENT OF THE INTERIOR			5. Lease Serial No. NM 92739 6. If Indian, Allotee or Tribe Name N/A			
						BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER						
la. Type of work: DRILL REENT	Type of work: ☐ DRILL					7 If Unit or CA Agreement, Name and No.
Type of Well: Oil Well Gas Well Other Single Zone Multiple Zone			ple Zone	8. Lease Name and Well No. LA Federal #2 (re-entry)		
2. Name of Operator Cimarex Energy Co.				9. API Well No. 30-015-22883		
3a. Address 15 E 5th, Ste 1000	3b. Phone No.	Phone No. (include area code)		10. Field and Pool, or Exploratory		
Tulsa, OK 74103	918-585-1100			Morrow		
4. Location of Well (Report location clearly and in accordance with ar	ty State requireme	nts.*)		11. Sec., T. R. M. or E	lk. and Surv	ey or Area
At surface Sec 12-22S-22E; 661' FNL & 1980' At proposed prod. zone Same	FWL, Eddy	County		Sec 12-T22S-I	R22E	
4. Distance in miles and direction from nearest town or post office*			·	12. County or Parish	T	13. State
31 miles West and 3 miles South of Carlsbad NM				Eddy	ŀ	NM
5. Distance from proposed* location to nearest property or lease line, ft.	16. No. of acres in lease 17. Spacin		ng Unit dedicated to this well			
(Also to nearest drig. unit line, if any)	2240.48 acres 320 A		cres			
8. Distance from proposed location*	19. Proposed Depth 20. BLM		/BIA Bond No. on file			
to nearest well, drilling, completed, applied for, on this lease, ft.	9500'	9500' COB		8000011		
. Elevations (Show whether DF, KDB, RT, GL, etc.) 22.		2 Approximate date work will start*		23. Estimated duration		
4144'	09/24/2004			45 days		
	24. Attac			SBAD CONTRO	LLED W	ATER BAS
he following, completed in accordance with the requirements of Onsho	re Oil and Gas (Order No.1, shall be a	ttached to the	is form:		
. Well plat certified by a registered surveyor. A Drilling Plan.		4. Bond to cover the Item 20 above).	he operation	ns unless covered by an	existing bo	and on file (see
3. A Surface Use Plan (if the location is or National Forest System SUPO shall be filed with the appropriate Forest Service Office).	Lands, the	5. Operator certific6. Such other site authorized offic	specific info	ormation and/or plans as	may be rec	quired by the
25. Signature		Printed/Typed)		Date		
		iteve J. Simonton	08/19/2004			
itle Drilling Superintendent						

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. APPROVAL FOR 1 YEAR

Office

Conditions of approval, if any, are attached

Approved by (Signature)/s/ Tony J. Herrell

FIELD MANAGER

CARLSBAD FIELD OFFICE

EB 1 1 2005

Name (Pringfor Freshy J. Herrell

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.

Title

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS **ATTACHED**

^{*(}Instructions on page 2)

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

Page 2

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

Page 3

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.

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 5th 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 upder which it is approved.

BY: Steve Simonton, Drilling Superintendent

DATE

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 rd 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	<u>DEPTH</u>	<u>FLUID</u>
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'.

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:

Surface 13-3/8" Cemented 4-1979 with 500 sks Class C with 8 yds of

Redi-Mix around Top

Intermediate 9-5/8": 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.

Production 5-1/2" 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^3/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:

DEPTH INTERVAL	WEIGHT (ppg)	VISCOSITY (Sec/Qt)	FLUID LOSS (ml/30 min)	MUD TYPE
0-500 500 - 2004	N/A N/A			
2300 – 9800	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

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hazards such as Hydrogen Sulfide Gas. Low risk H_2S 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.

State of New Mexico

DISTRICT I 1625 N. FRENCH DR., HOBBS, NM 88240

Energy, Minerals and Natural Resources Department

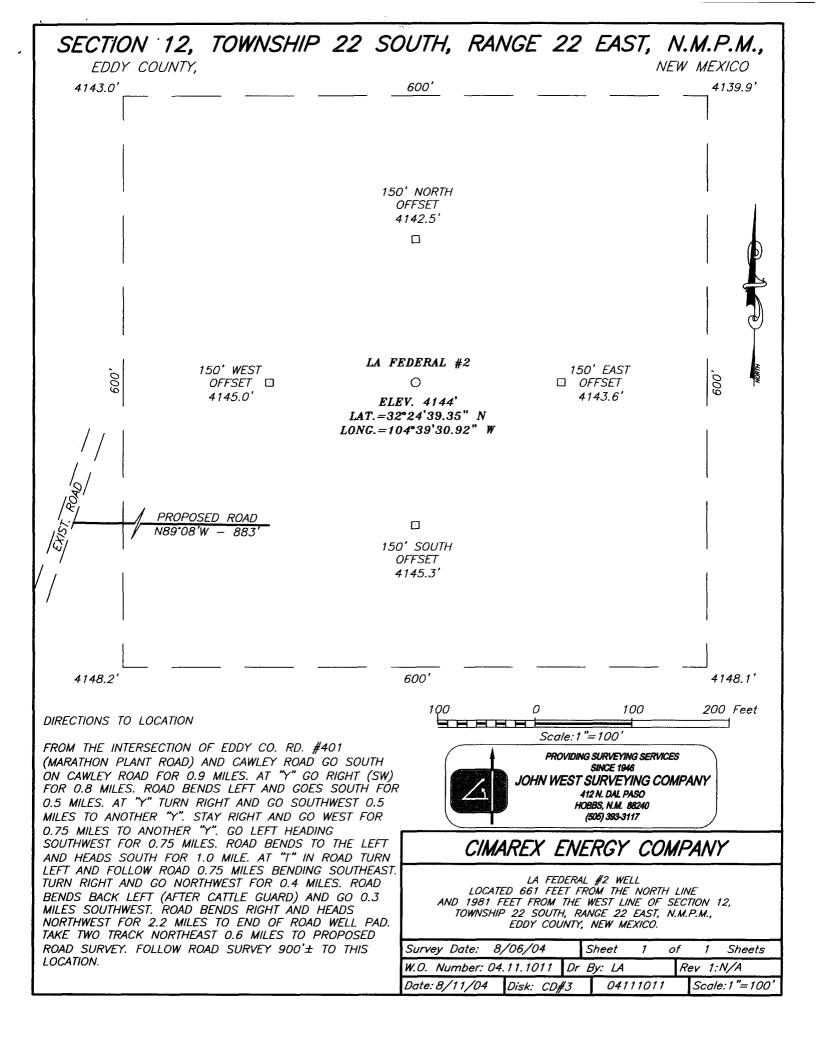
Form C-102

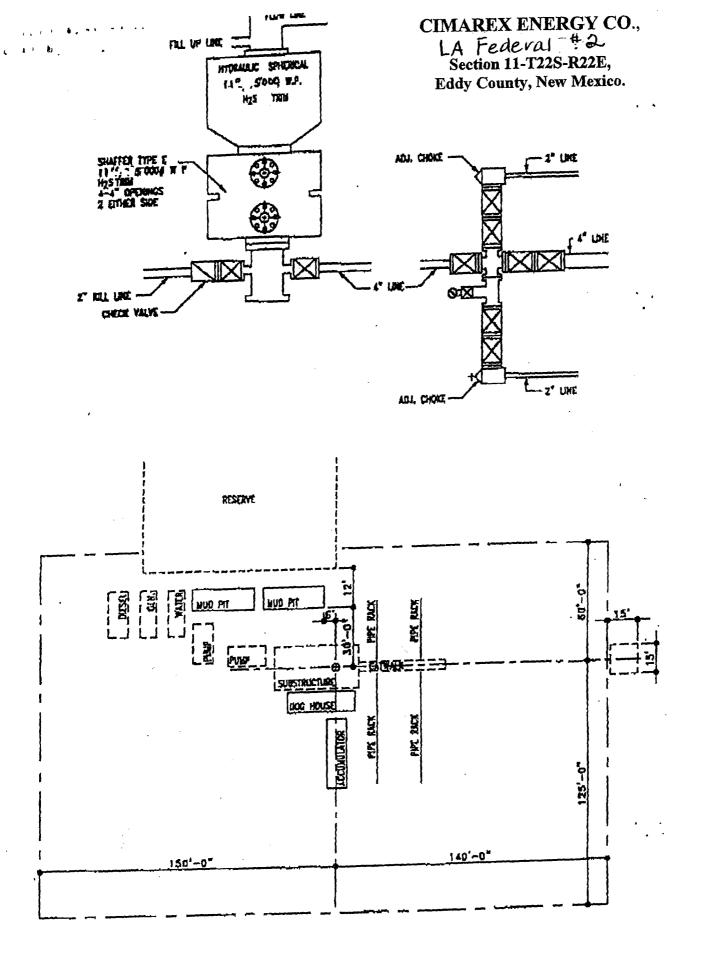
DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 68210

DISTRICT III

OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505 Revised JUNE 10, 2003 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

1000 Rio Brazos Rd., Aztec, NM 87410 DISTRICT IV WELL LOCATION AND ACREAGE DEDICATION PLAT ☐ AMENDED REPORT 1220 S. ST. FRANCIS DR., SANTA PE, NM 87505 Pool Name API Number Pool Code Property Code Property Name Well Number LA FEDERAL 2 Operator Name Elevation OGRID No. CIMAREX ENERGY COMPANY 4144 Surface Location Feet from the North/South line East/West line UL or lot No. Section Township Range Lot Idn Feet from the County C 661' 12 22-S 22-E NORTH 1981' WEST **EDDY** Bottom Hole Location If Different From Surface North/South line UL or lot No. Lot Idn Feet from the East/West line County Section Township Range Feet from the Dedicated Acres Joint or Infill Consolidation Code Order No. 520 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 4143.0' 4139.9 I hereby certify the the information ed herein is true and complete to the belief. 1981 4148.2 GEODETIC COORDINATES NAD 27 NME Y=513363.3 N Title X=399624.3 E Date LAT.=32'24'39.35" N LONG. = 104*39'30.92" W 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 supervison, and that the same is true and correct to the best of my belief. AUGUST 6, 2004 Date Surveyed LA Signature & Scal of Professional Surveyor 3239 12641 PROFESSION

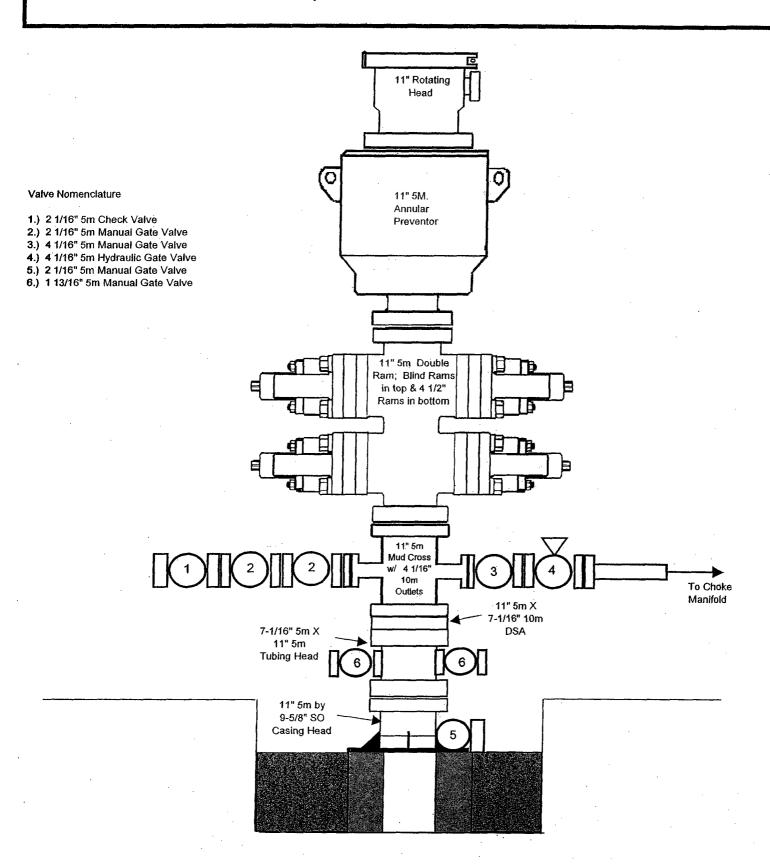




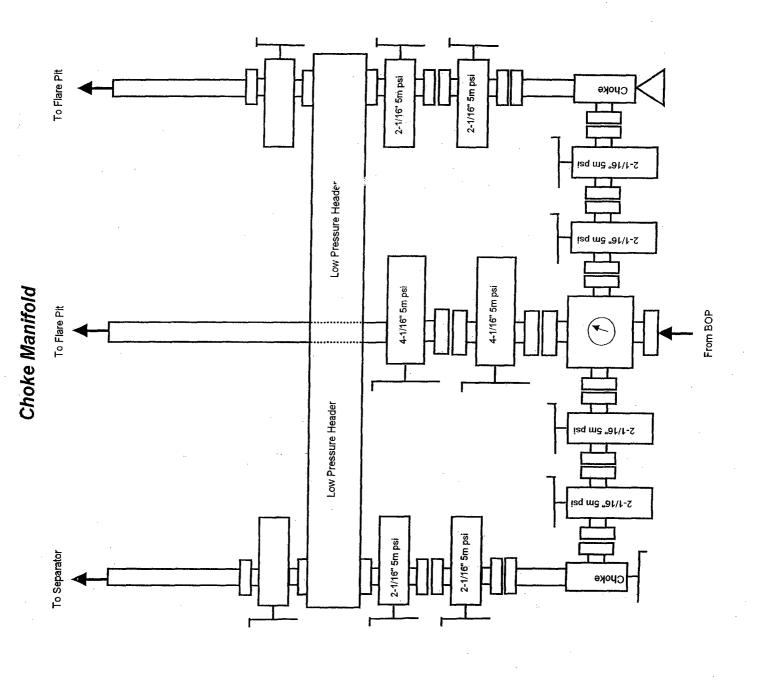
CIMAREX ENERGY CO.

LA FEDERAL #2 (RE-ENTRY)

Proposed Blowout Preventor Stack



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



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

Operator Name:

Cimarex Energy Co. 15 E 5th, Ste 1000

Street or Box:

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

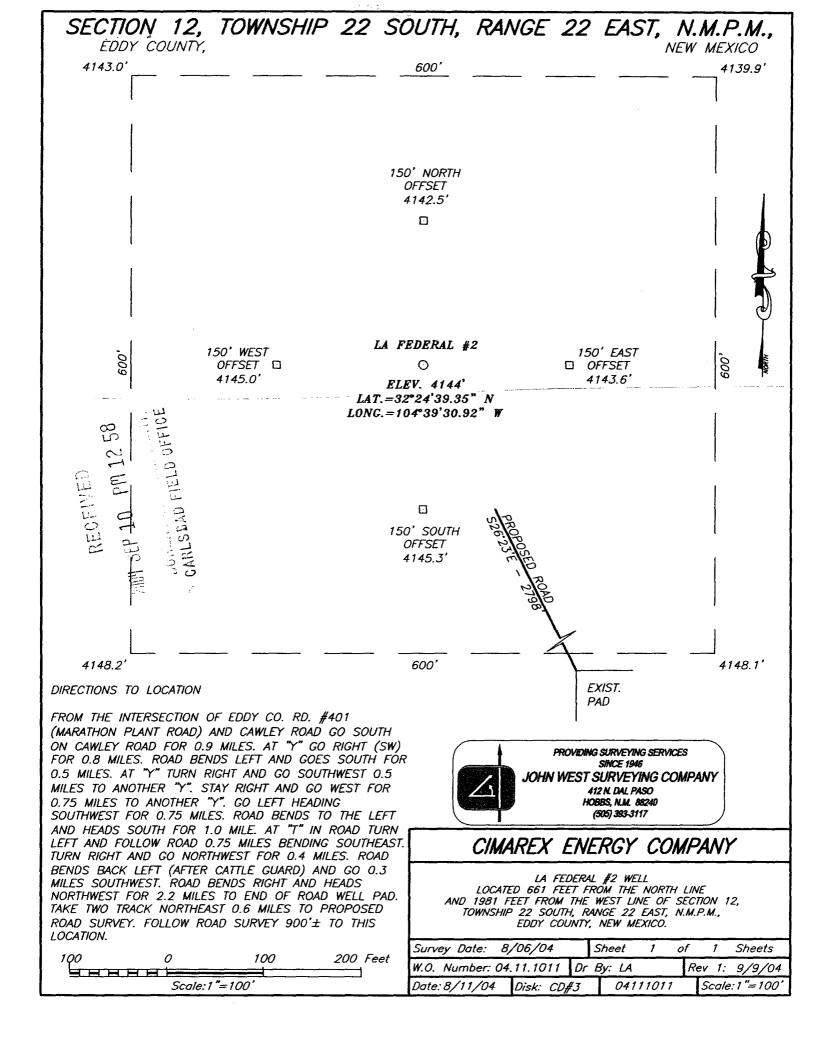
Authorized Signature:

Title:

Drilling Superintendent

Date:

August 16, 2004



Current Well Configuration



: LA Federal #2 **WELL**

: Sec: 12 22S 22E LOCATION

: Eddy County, New Mexico : '660' FNL & 1,980' FWL

Surf. Loc. Target Loc.

: Same as above

Phone **Email**

: 11" 5M x 8-5/8" sow Wellhead

: 2-9/16 5K Tree

: 6,650' 2-7/8" 6.5# N-80 **Tubing**

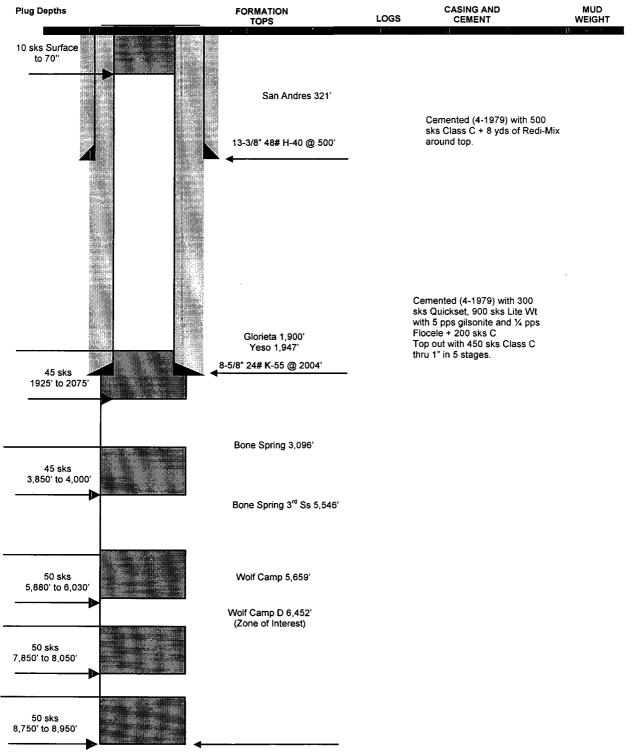
AFE No.

FIELD : Solomon **OBJECTIVE** : Wolfcamp TVD/MD : 7,500

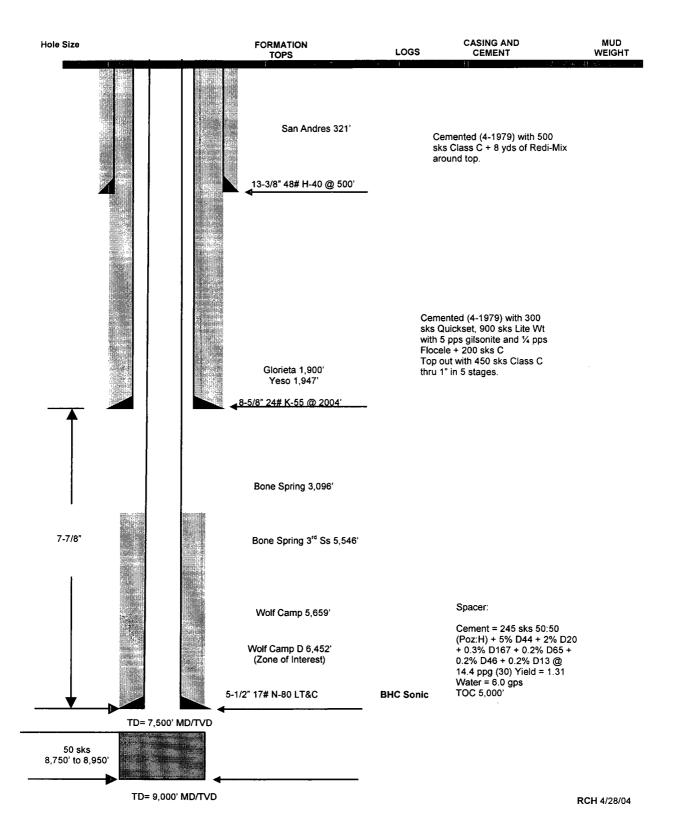
Cementing : Schlumberger Mud : Baroid

Bits : HTC

Rig **Offset Well Logs**



Proposed Well Configuration





Drilling Plan

- 1. Check location/Clean up as necessary
- 2. Locate Work Over Rig
- 3. File Sundry Notice
- 4. MIRT
- 5. RURT
- 6. Install 11" 5m x 8-5/8" SOW
- 7. Nipple up BOP
- 8. Test BOP
- 9. Drill Surface Plug
- 10. Wash/Clean to ± 1,925'
- 11. Circulate casing
- 12. Test Surface casing to 1,200 psi surface pressure.
 - a. 8-5/8" 24# K-55 Assume lowest grade Burst = 2,950 psi.
 - b. Assume water in casing.
- 13. Record for 15 mins
- 14. Drill plug to 2,075 ft
- 15. Wash/Ream to 3,850'
- 16. Drill plug from 3,850' to 4,000'
- 17. Wash/Ream to 5,880'
- 18. Drill plug from 5,880' to 6,030'
- 19. Wash/Ream to 7,500'
- 20.C&C
- 21.POOH
- 22. Run BHC Sonic Log
- 23.TIH
- 24.C&C
- 25.LDDP
- 26. P/U 5-1/2" casing
- 27. C&C for cement job
- 28. Cement
- 29. WOC/ NDBOP's
- 30. Set Slips on 5-1/2" w/ 170,000 lbs
- 31. Cut off casing
- 32. Remove BOP's
- 33. Install 11" 5M X 7-1/16" 5m TBG Head
- 34. Completion procedure to follow.