OCD-HOBBS 5-06-04 FORM APPROVED **SUBMIT IN TRIPLICATE*** OMB NO. 1004-0136 (July 1992) UNITED STATES Expires: February 28, 1995 (Other instructions on 5. LEASE DESIGNATION AND SERIAL NO. DEPARTMENT OF THE INTERIOR everse side) 1036 **BUREAU OF LAND MANAGEMENT** NM-4314 6. IF INDIAN, ALLOTTES OR TRIBE NAME APPLICATION FOR PERMIT TO DRILL OR DEEPEN 1a. TYPE OF WORK DRILL X 7. UNIT AGREEMENT NAME DEEPEN 1b. TYPE OF WELL SINGLE MULTIPLE GAS OIL ZONE 8. FARM OR LEASE NAME, WELL NO WELL WELL OTHER **ZONE** 2 NAME OF OPERATOR Pipeline B 6 Federal No. 2 Cimarex Energy Co. of Colorado API WELL NO 3. ADDRESS AND TELEPHONE NO. 30-025-P.O. Box 140907 Irving TX 75014 972-401-3111 10. FIELD AND POO 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*) E-K; Bone Spring 11. SEC. T.,R.,M., BLOCK AND SURVEY 1980' FNL & 1980' FEL -6-19S-34E 14 DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE 12. COUNTY OR PARISH 13. STATE 34 miles West of Hobbs, NM 16. NO. OF ACRES IN LEASE 17. NO. OF ACRES ASSIGNED 15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST TO THIS WELL PROPERTY OR LEASE LINE, T.O. 40 1114.36 (Also to nearest drig, unit line, if any) 20. ROTARY OR CABLE TOOLS 18. DISTANCE FROM PROPOSED LOCATION* 19. PROPOSED DEPTH TO NEAREST WELL, DRILLING COMPLETED. OR APPLIED FOR, ON THIS LEASE, FT. 11000' N/A Rotary 21. ELEVATIONS (Show whether DF, RT, GR, etc.) 22. APPROX. DATE WORK WILL START 3814' GR Rooffen Controlled Weter Bertin 02-15-07 PROPOSED CASING AND CEMENTING PROGRAM SIZE OF HOLE SETTING DEPTH QUANTITY OF CEMENT GRADE, SIZE OF CASING WEIGHT PER FOOT H-40 13-3/8" ST&C 17-1/2" 48# 450 410 sx Prem circ surf 12-1/4" J-55 9-5/8" LT&C 40# 3700 1200 sx Prem circ surf 8-3/4" 11000 2155 sx TOC 1250 P-110 5-1/2" LT&C 17# From the base of the surface pipe through the running of production casing, the well will be equipped with a 5000 - psi BOP system. We are requesting a variance for the 13-3/8" surface casing and BOP testing from Onshore Order No. 2, which states all casing strings below the conductor shall be pressure tested to 0.22 psi per foot or 1500#, whichever is greater, but not to exceed 70% of the manufacturer's stated maximum internal yield. During the running of the surface pipe and the drilling of

the intermediate hole, we do not anticipate any pressures greater than 1000# and are requesting a variance to test the 13-3/8" casing and BOP system to 1000# psi and to use rig pumps instead of an independent service company.

IN ABOVE SPACE, DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone If proposal is to drill or deep en directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any 06-30-06 SIGNED TITLE DATE Mgr. Ops. Admin

This share for Federal or State office use PERMIT No.

ant or certify that the applicant holds legal or equitable title to those rights in the subject

APPROVAL DATE

Application approval does not warrant or corruy uses use upper CONDITIONS OF APPROVAL IS TONY J. Herrell APPROVED BY

TITLE PIE

JUL 2 8 2008

*See Instructions On Reverse Side

APPROVAL FOR YEAR

DATE

Title 18 U.S.C. Section 1001, makes 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.

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS attached

Witness Surface Casing



Cimarex Energy Co. of Colorado

5215 North O'Connor Blvd.

Suite 1500

Irving, TX 75039

(972) 401-3111

Fax (972) 443-6486 Mailing Address: P.O. Box 140907 □ Irving, TX 75014-0907 A wholly-owned subsidiary of Cimarex Energy Co., a NYSE Listed Company, "XEC"

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

Bureau of Land Management 620 E. Greene St. Carlsbad, New Mexico 88220 Attn: Ms. Linda Denniston

Cimarex Energy Co. of Colorado accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land, or portion thereof, as described below:

Lease No.:

NM-4314 – SW/4NE/4 6-19S-34E

County:

Lea County, New Mexico

Formation (S):

Bone Spring

Bond Coverage:

Statewide BLM Bond

BLM Bond File No.: NM 2575

Authorized Signature:

Representing Cimarex Energy Co. of Colorado

Zeno Fari

Name: Zeno Farris

Title: Manager, Operations Administration

Date: June 30, 2006

Application to Drill

Cimarex Energy Co. of Colorado Pipeline B 6 Federal No. 2 Section 6 Unit G T19S-R34E Lea County, NM

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

Location:

1980' FNL & 1980' FEL

2 Elevation above sea level:

GR 3814'

Geologic name of surface formation:

Quaternery Alluvium Deposits

4 Drilling tools and associated equipment:

Conventional rotary drilling rig using fluid as a circulating

medium for solids removal.

Proposed drilling depth:

11000'

Estimated tops of geological markers:

Yates Queen 3240'

4479'

Bone Spring

7817'

7 Possible mineral bearing formation:

Bone Spring

Oil

8 Casing program:

Hole Size	Interval	Casing OD	Weight	Thread	Collar	Grade	
17-1/2"	0 - 450'	13-3/8"	48	8-R	ST&C	H-40	-
12-1/4"	0 - 3700'	9-5/8"	40	8-R	LT&C	J-55	
8-3/4"	0 - 11000'	5-1/2"	17	8-R	LT&C	P-110	

Application to Drill

Cimarex Energy Co. of Colorado Pipeline B 6 Federal No. 2 Unit G Section 6 T19S-R34E Lea County, NM

9 Cementing & Setting Depth:

13 3/8"	Surface	Set 450' of 13 3/8" H-40 48# ST&C casing. Cement lead with 270 Sx. Of Premium Plus + additives and tail with 140 sx Premium Plus + additives, circulate cement to surface.
9 5/8"	Intermediate	Set 3700' of 9 5/8" J-55 40# LT&C casing. Cement lead with 1000 Sx. Of Class Premium Plus + additives, tail with 200 Sx. Of Premium Plus + additives, circulate cement to surface.
5 1/2"	Production	Set 11000' of 5 1/2" P-110 17# LT&C casing. Cement in two stages, first stage cement with 1555 Sx. of Class POZ/C Cement + additives. Second stage cement with 600 Sx of Class "C". Estimated top of cement 1250'.

10 Pressure control Equipment:

Exhibit "E". A 13 3/8" 5000 PSI working pressure B.O.P. consisting of one set of blind rams and one set of pipe rams and a 5000 # annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 6000'. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor. BOP unit will be hydraulically operated. BOP will be nippled up on the 9 5/8" casing and will be operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling.

11 Proposed Mud Circulating System:

Depth	Mud Wt	Viscosity	Fluid Loss	Type Mud
0 - 450'	8.4 - 8.6	30 - 32	May lose circ.	Fresh water spud mud add paper to control seepage and high viscosity sweeps to clean hole.
450' - 3700'	9.7 - 10.0	28 - 29	May lose circ.	Fresh water to the top of the 1st salt in Rustler, then switch to Brine. Add paper as needed to control seepage and add lime to control pH (9-10). Use high viscosity sweeps to clean hole.
3700' - 8300'	8.4 - 9.9	28 - 29	NC	Brine water. Paper for seepage. Lime for PH (9 - 9.5)
8300' - 11000'	8.45 - 8.9	28 - 29	NC	Cut brine. Caustic for pH control.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs. Mud system monitoring equipment with derrick floor indicators and visual/audio alarms shall be installed and operative prior to drilling into the Wolfcamp formation. This equipment will remain in use until production casing is run and cemented.

DISTRICT I 1625 N. French Dr., Hobbs, NM 86240 DISTRICT II

State of New Mexico Energy, Minerals and Natural Resources Department

Form C-102 Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies Fee Lease - 3 Copies

1301 W. Grand Avenue, Artesia, NM 88210 DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410 DISTRICT IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

30-025-38047	Pool Code 21650	Pool Name E-K; Bone Spring	
Property Code		ty Name 6" FEDERAL	Well Number
OGRID No.	Operat	or Name	Elevation
162683	CIMAREX ENERGY	CO. OF COLORADO	3814'

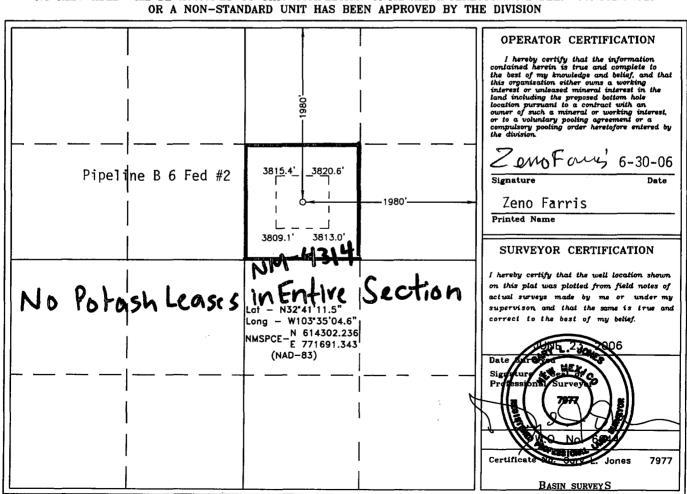
Surface Location

ĺ	UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	G	6	19 S	34 E		1980	NORTH	1980	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint or	Infill Con	nsolidation (ode Or	der No.	<u></u>		<u> </u>	L
40	N								

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED



Application to Drill

Cimarex Energy Co. of Colorado Pipeline B 6 Federal No. 2 Unit G Section 6 T19S-R34E Lea County, NM

12 Testing, Logging and Coring Program:

- A. Mud logging program: Two-man unit from 3000' to TD
- B. Electric logging program: CNL/LDT/CAL/GR, DLL/CAL/GR
- C. No DSTs or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. The area has a potiential H2S hazard. An H2S drilling plan is attached. Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used. Estimated BHP 4000 PSI, estimated BHT 175.

14 Anticipated Starting Date and Duration of Operations:

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take <u>35 - 45</u> days. If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals. The <u>Bone Spring</u> pay will be perforated and stimulated. The well will be tested and potentialed as an oil well.

Hydrogen Sulfide Drilling Operations Plan

Cimarex Energy Co. of Colorado Pipeline B 6 Federal No. 2 Unit G Section 6 T19S-R34E Lea County, NM

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
 - A. Characteristics of H2S
 - B. Physical effects and hazards
 - C. Proper use of safety equipment and life support systems.
 - D. Principle and operation of H2S detectors, warning system and briefing
 - E. Evacuation procedure, routes and first aid.
 - F. Proper use of 30 minute pressure demand air pack.
- 2 H2S Detection and Alarm Systems
 - A. H2S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.
- 3 Windsock and/or wind streamers
 - A. Windsock at mudpit area should be high enough to be visible.
 - B. Windsock at briefing area should be high enough to be visible.
- 4 Condition Flags and Signs
 - A. Warning sign on access road to location.
 - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H2S present in dangerous concentration. Only emergency personnel admitted to location.
- 5 Well control equipment
 - A. See exhibit "E"
- 6 Communication
 - A. While working under masks chalkboards will be used for communication.
 - B. Hand signals will be used where chalk board is inappropriate.
 - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foremen's trailers or living quarters.
- 7 Drillstem Testing not anticipated.

Hydrogen Sulfide Drilling Operations Plan

Cimarex Energy Co. of Colorado Pipeline B 6 Federal No. 2 Unit G Section 6 T19S-R34E Lea County, NM

- 8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.
- 9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with H2S scavengers if necessary.

CONDITIONS OF APPROVAL - DRILLING

Well Name & No.

2 - PIPELINE B 6 FEDERAL

Operator's Name:

CIMAREX ENERGY CO. OF COLORADO

Location: Lease: 1980' FNL & 1980' FEL - SEC 6 - T19S - R34E - LEA COUNTY

NM-4314

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

- A. Spudding
- B. Cementing casing: 13-3/8 inch 9-5/8 inch 5-1/2 inch
- C. BOP tests
- 2 Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
- 3. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.
- 4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

II. CASING:

- 1. The <u>13-3/8</u> inch surface casing shall be set at <u>450 feet</u>, below usable water and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string. <u>Note: Operator has agreed to use the Alternative Conditions of Approval Drilling for Lea County (attached).</u>
- 2. The minimum required fill of cement behind the <u>9-5/8</u> inch intermediate casing is <u>circulate cement to the surface.</u>
- 4. The minimum required fill of cement behind the <u>5-1/2</u> inch production casing is <u>cement shall extend</u> <u>upward a minimum of 500 feet above the uppermost hydrocarbon bearing interval.</u>

III. PRESSURE CONTROL:

- 1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the <u>9-5/8</u> inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
- 2. Minimum working pressure of the blowout preventer and related equipment (BOPE) is 3000 psi.
- 3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
- A variance to test the <u>13-3/8 inch surface casing and BOPE</u> to the reduced pressure of <u>1000</u> psi with the rig pumps is approved.
- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.

ALTERNATIVE CONDITIONS OF APPROVAL - DRILLING

Drilling Fluids, Casing and Cementing Requirements for Most of Lea County:

Casing and Cementing

Surface casing is to be set at a sufficient depth to protect useable water zones and cement circulated to surface. In areas where the salt section (Salado) is present, surface casing should be set at least 25 feet into the top of the Rustler Anhydrite and cement circulated to the surface.

As an alternative, surface casing may be set through the Santa Rosa Formation or other potable water bearing zones and circulate cement to surface. For wells requiring an intermediate casing string, such string shall be cemented to the ground surface. In the case where intermediate casing is not required the operator shall case and cement the production hole to the ground surface.

While drilling from the surface casing to the Rustler formation it is recommended that operators periodically sweep the hole with viscous low water loss pills to help build a filter cake across useable water zones in the redbeds.

Drilling Fluid

Fresh water or fresh water spud mud shall be used to drill to surface casing depth. If surface casing is set at a lesser depth than the top of the Rustler formation., fresh water spud mud may be used to drill down to the first salt in the Rustler Formation. after which brine or fresh water may be used.

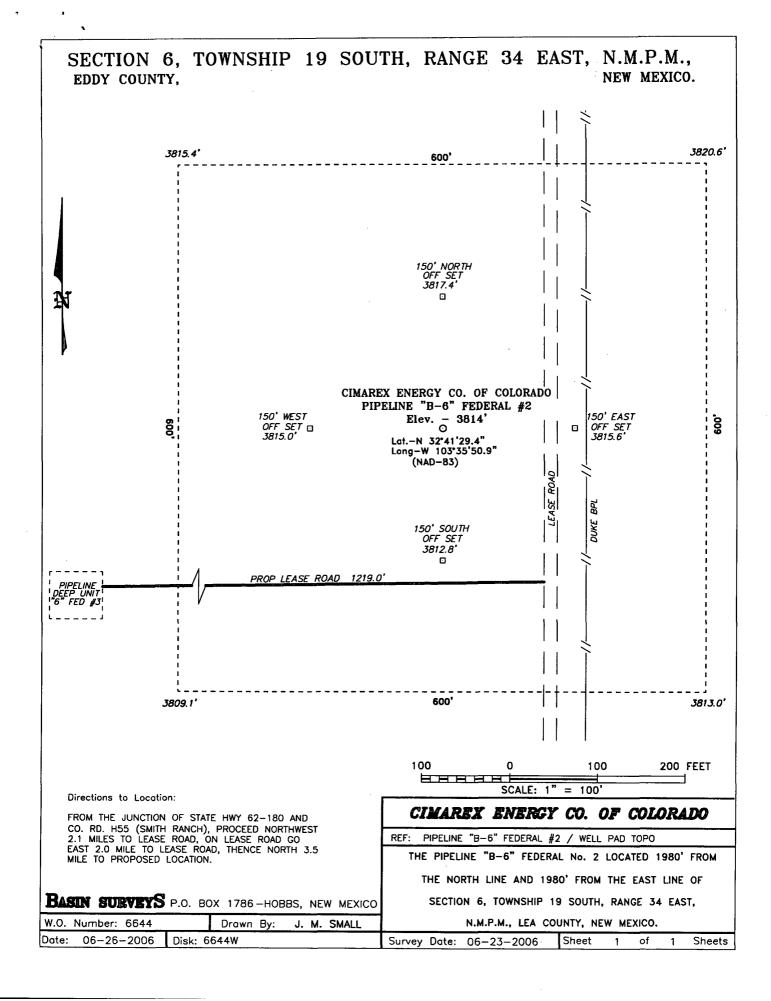
Non-toxic or biodegradable water based polymers, drilling paper, starch and gels may be used in the mud system in order to retard seepage into the redbeds.

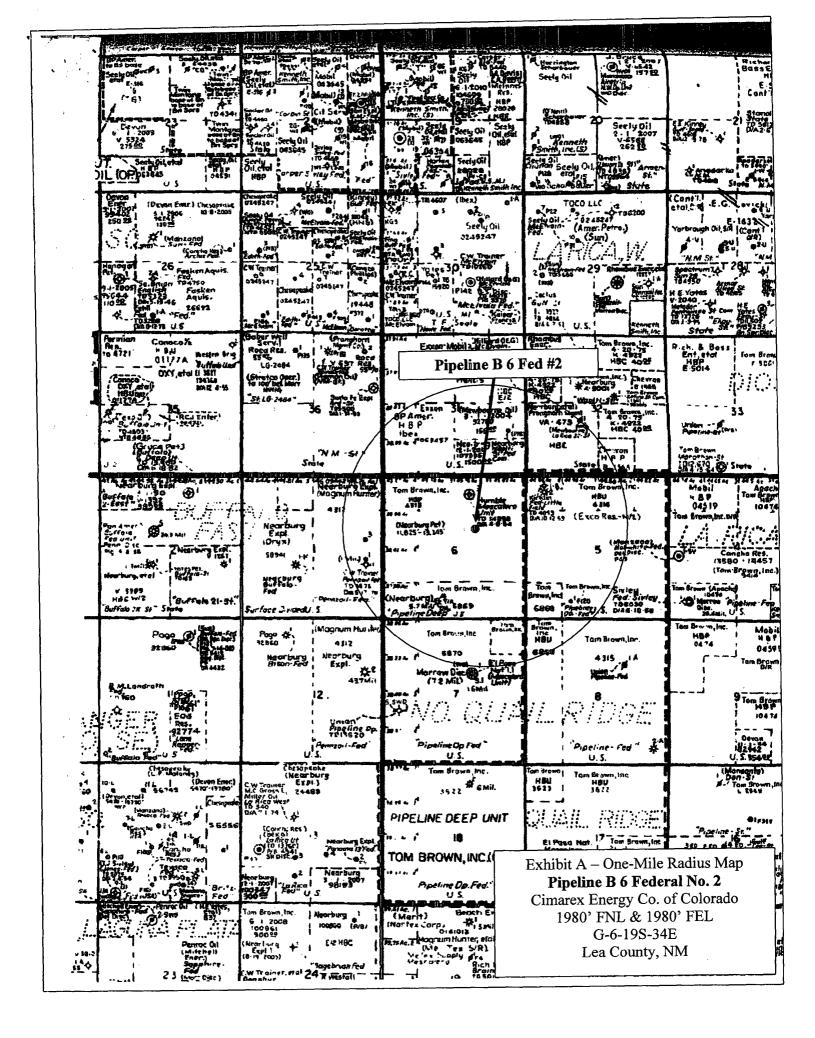
Two to five percent diesel or crude oil may be used in the redbed section in order to control heaving shales and mudstones.

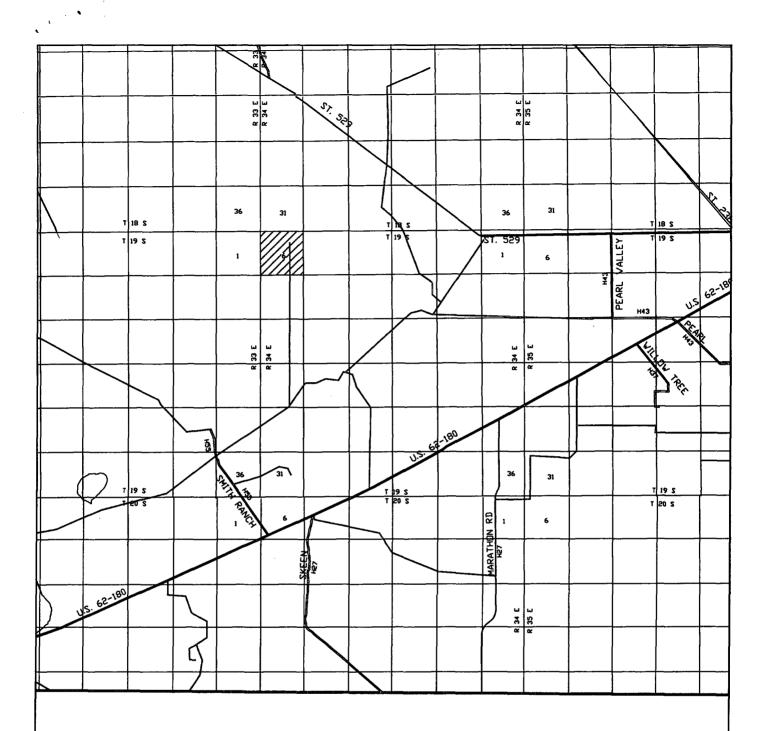
Caustics and Lime shall not be used in the red beds but may be added when the Rustler formation is reached. However, sodium carbonate maybe used for alkalinity or ph control while drilling the redbeds above the Rustler formation.

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Additionally, questions of whether an additive may be used should be referred to the Roswell Field office.







PIPELINE "B-6" FEDERAL #2 Located at 1980' FNL AND 1980' FEL Section 6, Township 19 South, Range 34 East, N.M.P.M., LEA County, New Mexico.



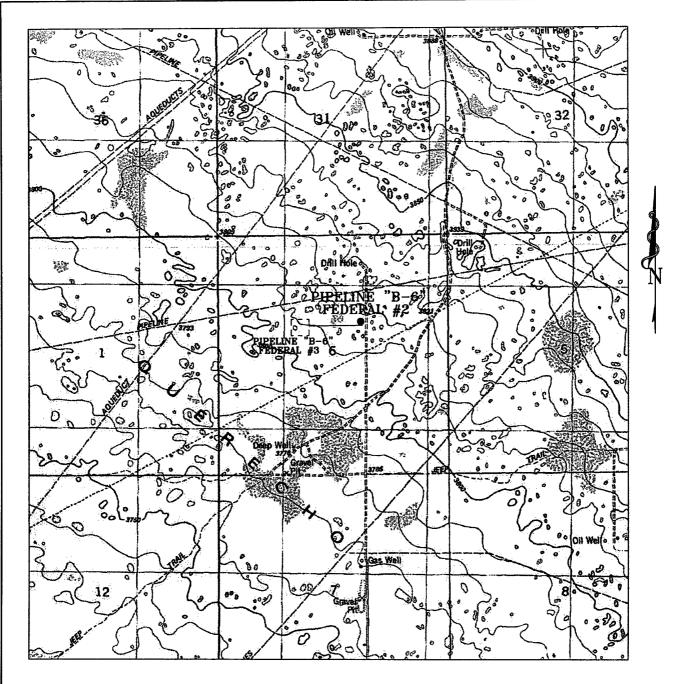
P.O. Box 1786 1120 N. West County Rd. Hobbs, New Mexico 88241 (505) 393-7316 - Office (505) 392-3074 - Fax basinsurveys.com W.O. Number: JMS 6644T

Survey Date: 06-23-2006

Scale: 1" = 2 MILES

Date: 06-27-2006

CIMAREX ENERGY CO. OF COLORADO



PIPELINE "B-6" FEDERAL #2 Located at 1980' FNL AND 1980' FEL Section 6, Township 19 South, Range 34 East, N.M.P.M., LEA County, New Mexico.



P.O. Box 1786 1120 N. West County Rd. Hobbs, New Mexico 88241 (505) 393-7316 - Office (505) 392-3074 - Fax basinsurveys.com

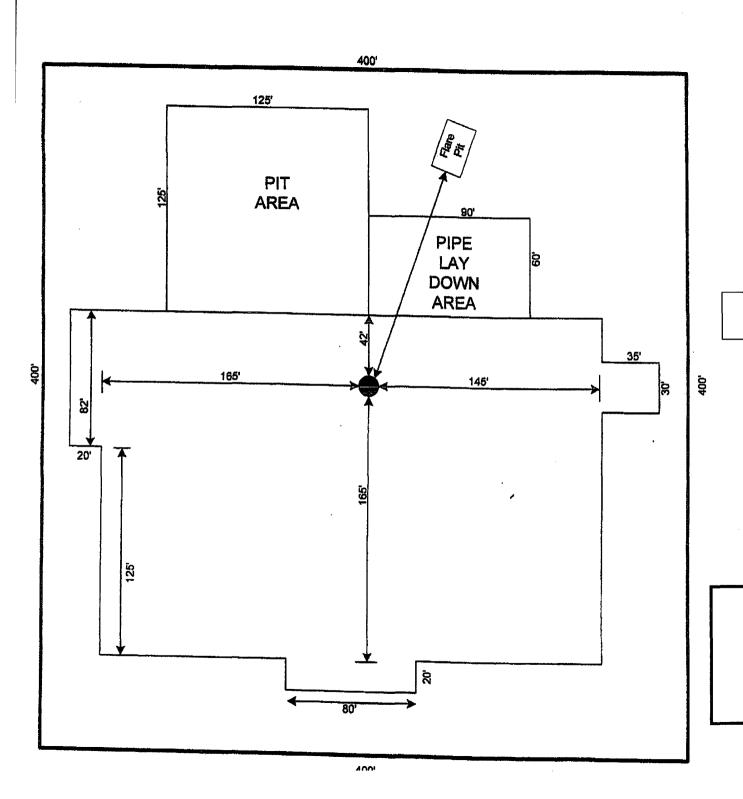
W.O. Number: JMS 6644T

Survey Date: 06-23-2006

Scale: 1" = 2000'

Date: 06-27-2006

CIMAREX ENERGY CO. OF COLORADO



Patterson-UTI Rig 75

SCALE 1"=60'

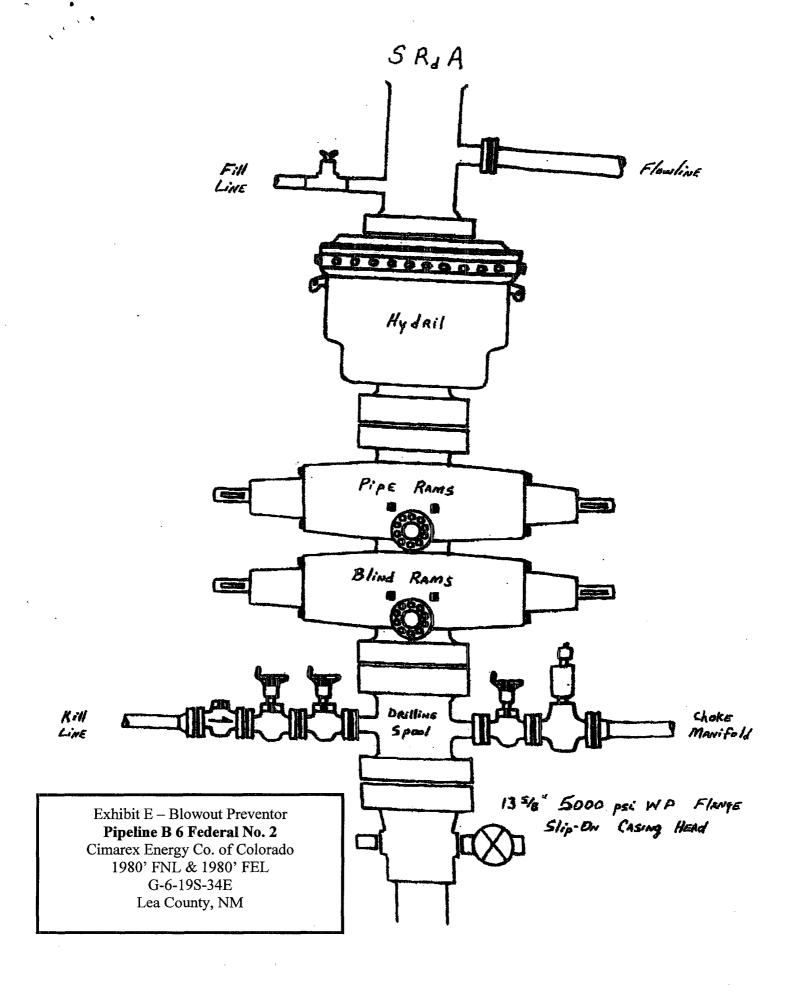
Exhibit D – Rig Layout

Pipeline B 6 Federal No. 2

Cimarex Energy Co. of Colorado
1980' FNL & 1980' FEL

G-6-19S-34E

Lea County, NM



ORILLING OPERATIONS CHOKE MANIFOLD 5M SERVICE

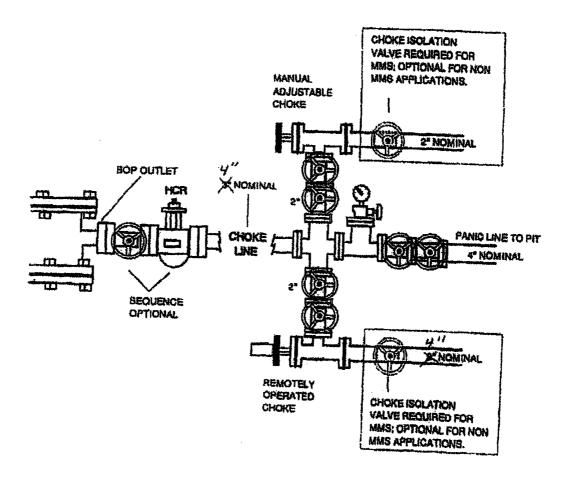


Exhibit E 1 – Chode Manifold Diagram

Pipeline B 6 Federal No. 2

Cimarex Energy Co. of Colorado

1980' FNL & 1980' FEL

G-6-19S-34E

Lea County, NM

District I
1625 N. French Dr., Hobbs. NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

For drilling and appropriate NMC For downstream office

Form C-144
March 12, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure
Is pit or below-grade tank covered by a "general plan"? Yes \(\subseteq \text{No \(\subseteq \)} \)

3-6489 e-mail address: zfarris@cimarex.co DUL or Qtt/QtrG Sec 6 T198 6 W NAD: 1927 □ 1983 ☒ Surface Own DW-grade tank ume:bbl Type of fluid: struction material: tble-walled, with leak detection? Yes □ If not,	S_R34E ner Federal ⊠ State □ Private □ Indian □					
ow-grade tank ume:bbl Type of fluid: struction material:	ner Federal ⊠ State □ Private □ Indian □					
ow-grade tank ume:bbl Type of fluid: struction material:	ner Federal ⊠ State □ Private □ Indian □					
ow-grade tank ume:bbl Type of fluid: struction material:						
ume:bbl Type of fluid:struction material:						
ume:bbl Type of fluid:struction material:						
struction material:						
	explain why not.					
tble-walled, with leak detection? Yes [] If not,	explain why not.					
s than 50 feet	(20 points)					
eet or more, but less than 100 feet	(10 points)					
feet or more	(0 points)					
	(00 / 1)					
	(20 points)					
•	(0 points)					
s than 200 feet	(20 points)					
	(10 points)					
	(10 points)					
o rect of more	o points					
king Score (Total Points)	0					
onship to other equipment and tanks (2) Indicate	disposal location:					
	•					
- · · · · ·	_					
date. (4) Groundwater encountered: No Tyes Tyes, show depth below ground surface ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.						
owledge and belief I further certify that the all all permit , or an (attached) alternative OCI	bove-described pit or below-grade tank has D-approved plan □.					
sature Levo Fares						
the operator of liability should the contents of the or of its responsibility for compliance with any or	ne pit or tank contaminate ground water or ther federal, state, or local laws and/or					
ature						
f f f f f f f f f f f f f f f f f f f	than 200 feet eet or more, but less than 100 feet eet or more, but less than 1000 feet feet or more, but less than 1000 feet feet or more shing Score (Total Points) ship to other equipment and tanks. (2) Indicate Attach a general description of remedial action ad surface					