

Form 3160-3  
(April 2004)

Resubmittal  
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work  DRILL  REENTER

1b. Type of Well  Oil Well  Gas Well  Other  Single Zone  Multiple Zone

2. Name of Operator  
Cimarex Energy Co. of Colorado

3a. Address  
PO Box 140907  
Irving, TX 75014

3b. Phone No (include area code)  
972-401-3111

4. Location of Well (Report location clearly and in accordance with any State requirements. \*)  
At Surface 660' FNL & 150' FEL  
At proposed prod Zone 660' FNL & 330' FWL Horizontal Abo test

14. Distance in miles and direction from nearest town or post office\*

5. Lease Serial No  
SHL State Lease | BHL NM-95630

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No  
Cave Lake 13 Federal Com No. 4 [36811]

9. API Well No  
30-015- 39593

10. Field and Pool, or Exploratory  
Abo Wildcat [97102] CROW FLATS; WC

11. Sec, T R. M or Blk and Survey or Area  
13-16S-28E

12. County or Parish  
Eddy

13. State  
NM

Split Estate

15. Distance from proposed\* location to nearest property or lease line, ft (Also to nearest drig unit line if any) 150'

16. No of acres in lease 1760

17. Spacing Unit dedicated to this well N2N2 160

18. Distance from proposed location\* to nearest well, drilling, completed, applied for, on this lease, ft 1320'

19. Proposed Depth Pilot Hole 7,350' MD 11,426' TVD 6,875'

20. BLM/BIA Bond No on File NM-2575

21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3,587' GR

22. Approximate date work will start\* 05.01.08

23. Estimated duration 25-30 days

24. Attachments

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

- 1. Well plat certified by a registered surveyor
- 2. A Drilling Plan
- 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office)
- 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 required by the authorized officer

25. Signature Zeno Farris Name (Printed/Typed) Zeno Farris Date 08.16.11

Title Manager Operations Administration

Approved By (Signature) /s/ Don Peterson Name (Printed/Typed) Date OCT 31 2011

Title FIELD MANAGER Office CARLSBAD FIELD OFFICE

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

Conditions of approval, if any, are attached

Title 18 U.S.S Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction

\*(Instructions on page 2)

APPROVAL FOR TWO YEARS

Reswell Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

DISTRICT I  
1825 N. French Dr., Hobbs, NM 88240

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

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

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

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-015-39593</b>	Pool Code <b>97162</b>	Pool Name <b>CROWSA FLAT.; WOLF CAMP</b>
Property Code <b>36811</b>	Property Name <b>CAVE LAKE "13" FEDERAL COM</b>	Well Number <b>4</b>
OGRID No. <b>162683</b>	Operator Name <b>CIMAREX ENERGY CO. OF COLORADO</b>	Elevation <b>3587'</b>

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	13	16 S	28 E		660	NORTH	150	EAST	EDDY

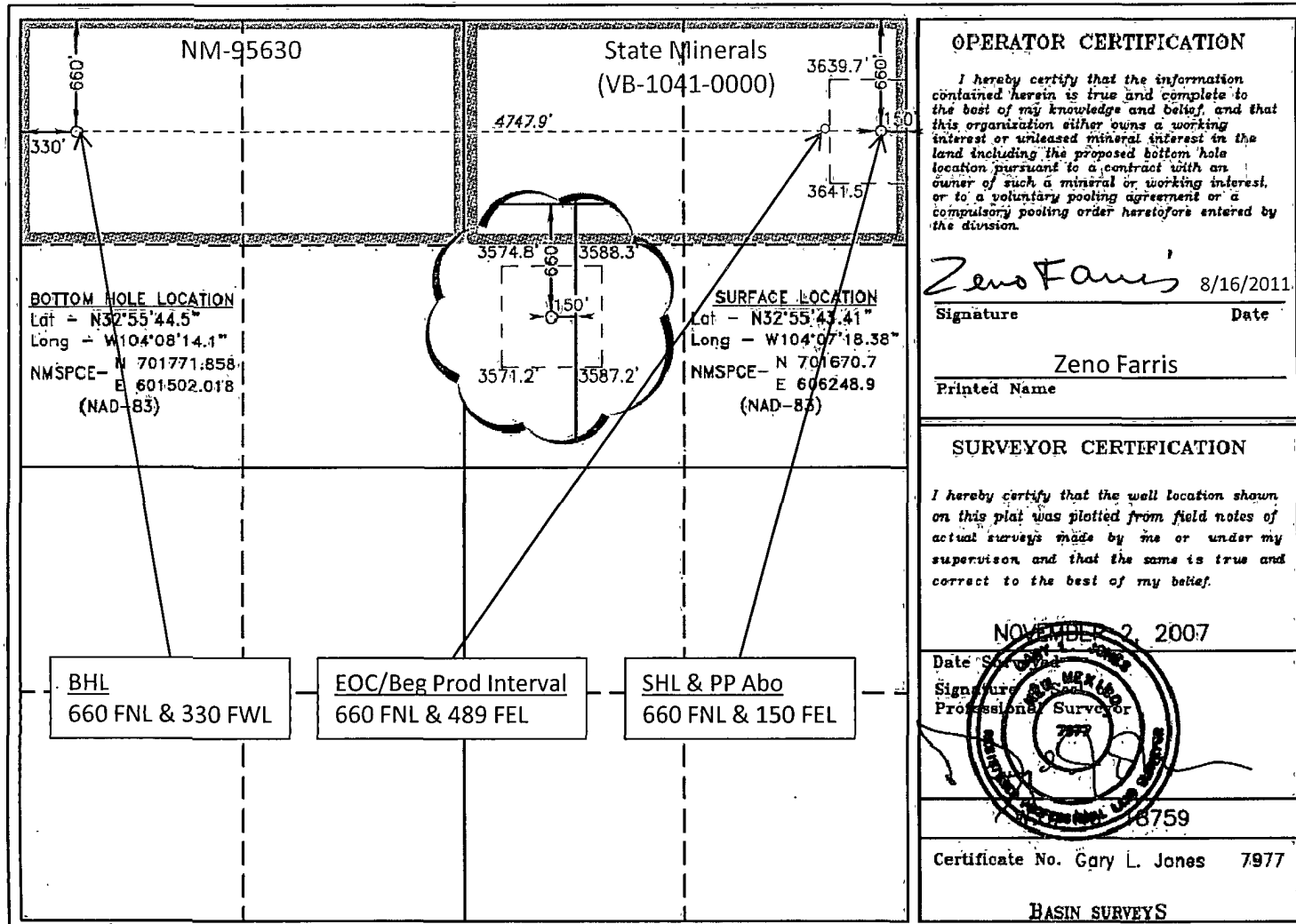
Bottom Hole Location if Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	13	16 S	28 E		660	NORTH	330	WEST	EDDY

Dedicated Acres <b>160</b>	Joint or Infill	Consolidation Code <b>P</b>	Order No.
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NSL Pending

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Zeno Farris* 8/16/2011  
Signature Date  
Zeno Farris  
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief.

NOVEMBER 2, 2007  
Date Signed  
Signature  
Professional Surveyor  
8759  
Certificate No. Gary L. Jones 7977  
BASIN SURVEYS

11-946

Application to Drill  
Cave Lake 13 Federal Com No. 4  
Cimarex Energy Co. of Colorado  
Unit A, Section 13  
T16S-R28E, Eddy County, NM

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

- 1 Location: SHL 660' FNL & 150' FEL  
BHL 660' FNL & 330' FWL
- 2 Elevation above sea level: 3,587 GR
- 3 Geologic name of surface formation: Quaternary Alluvium Deposits
- 4 Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.
- 5 Proposed drilling depth: Pilot Hole 7,350' MD 11,426' TVD 6,875'
- 6 Estimated tops of geological markers:

Rustler	Surface	Glorjeta	3,475'
Top of Salt	370'	Tubb	4700'
Base of Salt	510'	Abo Shale	5450'
Yates	680'	Wolfcamp	7,000'
7 Rivers	810'	Wolfcamp Base	7,600'
Queen	1,210'		
Grayburg	1450'		
San Andres	2,010'		

7 Possible mineral bearing formation:  
Abo, Wolfcamp Oil

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 340' 350'	8.4 - 8.6	28	NC	FW
340' to 2,500'	10.0	30-32	NC	Brine water
2,500' to 7,350'	8.4 - 9.5	30-32	NC	FW, brine
6,500' to 11,426'	8.4	28-32	May lose circ	2% KCL 8.4 ppg keep solids below 3% + add 5.5% - 8.5% oil before TD

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.

Proposed Drilling Plan

After setting surface and (possibly) intermediate casing, drill 8 3/4" hole to 6400 and set and cement 7" casing. Drill out of the bottom of the 7" casing with 6 1/2" bit to 7350 (pilot hole) and cement with 317sks, HalCem -H 0.5% CFR-3 0.1% HR-601, 16.5ppg, 1.06 yield, 0:0% excess (6400-7350). Drill cement to 6500 and kick off 6 1/2" lateral. Drill 6 1/2" hole to MD 11426 and TVD 6875. Install 4 1/2" Peak Completion Assembly from 6393-11426.

Application to Drill  
 Cave Lake 13 Federal Com No. 4  
 Cimarex Energy Co. of Colorado  
 Unit A, Section 13  
 T16S-R28E, Eddy County, NM

9 Casing & Cementing Program:

String	Hole Size	Depth	Casing OD	Weight	Thread	Collar	Grade
Surface	17½"	0' to 350' <del>340'</del>	New 13½"	48#	8-R	STC	H-40
Intermediate**	12½"	0' to 2,500'	New 9½"	40#	8-R	LTC	J-55
Production	8½"	0' to 6,400'	New 7"	26#	8-R	LTC	P-110
Lateral	6½"	<del>6,393'</del> to 11,426'	New 4½"	11.6#	8-R	LTC	P-110

*See OA*

*6300*

10 Cementing:

**Surface** 370SKS, Halcem C + 2% CaCl 14.2ppg 1.34 yield 100% Excess  
 TOC Surface Centralizers per Onshorder 2.III.B.1.f

**Intermediate\*\*** Lead: 670SKS EconoCem + 5% salt + 5 lbm gilsonite 12.9ppg 1.85 yield 70% % Excess  
 Tail: 200SKS HalCem + 1% CaCl 14.8ppg 1.34 yield 25% Excess  
 TOC Surface

**Production** Lead: 815SKS EconoCem + 0.5 % Halad -322 + 0.2% HR-601 12.9ppg 1.78 yield 50% Excess  
 Tail: 1340SKS Halcem - H + 0.5% CFR-3 + 0.1% HR-601 16.5ppg 1.06 yield 25% Excess Cement will be adjusted accordingly if intermediate casing is set.  
 TOC Surface

**Cement Plug (6400-7350)** Cement pilot hole with 317sks, HalCem -H 0.5% CFR-3 0.1% HR-601, 16.5ppg, 1.06 yield, 0.0% excess

**Lateral** No cement needed. Peak completion assembly.  
Centralizers every 3rd joint in lateral to provide adequate cement coverage every 100' unless lateral doglegs require greater spacing between centralizers.

\*\* Please note that the intermediate string is a contingency string only. Cimarex plans to drill 8½" production hole out of the bottom of the 13½" shoe. If wellbore integrity cannot be maintained while drilling the 8½" hole, it will be reamed out to 12½" and 9½" intermediate casing will be set at 2500 and cemented as shown above.

According to the State Engineer, depth to groundwater is 47'. Fresh water zones will be protected by setting 13½" casing at 340 and cementing to surface. Hydrocarbon zones will be protected by setting 9½" casing at 2500 and cementing to surface (if needed), and by setting 7" casing at 7350 and cementing to surface.

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

Application to Drill  
Cave Lake 13 Federal Com No. 4  
Cimarex Energy Co. of Colorado  
Unit A, Section 13  
T16S-R28E, Eddy County, NM

**11 Pressure control Equipment:**

Exhibit "E". A 13 1/2" 5000 PSI working pressure B.O.P. tested to 3000 PSI 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. Mud-Gas separator will be utilized if drilling in potential H2S area.

BOP unit will be hydraulically operated. BOP will be nipped up and operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the base of the surface pipe through the running of production casing, the well will be equipped with a 5000 psi BOP system tested to 3000 psi.

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

**12 Testing, Logging and Coring Program:**

*see COA*

- A. Mud logging - 2 man unit from 5000' 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. In accordance with Onshore Order 6, Cimarex does not anticipate that there will be enough H<sub>2</sub>S from the surface to the Abo formations to meet the BLM's minimum requirements for the submission of an "H<sub>2</sub>S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H<sub>2</sub>S Safety package on all wells, attached is an "H<sub>2</sub>S Drilling Operations Plan." 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      3300 psi      Estimated BHT      110°

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

Drilling expected to take      10-15 days

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

**15 Other Facets of Operations:**

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

Abo pay will be perforated and stimulated.

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

# **Cimarex Energy Co., Inc.**

Eddy Co., New Mexico

Cave Lake 13 Fed Com #4H

Cave Lake 13 Fed Com #4H

Lateral #1

Plan: Plan #1

## **Standard Survey Report**

27 March, 2008

## Black Viper Energy Survey Report

<b>Company:</b>	Cimarex Energy Co., Inc.	<b>Local Co-ordinate Reference:</b>	Well Cave Lake 13 Fed Com #4H
<b>Project:</b>	Eddy Co., New Mexico	<b>TVD Reference:</b>	WELL @ 3587.00ft (Original Well Elev)
<b>Site:</b>	Cave Lake 13 Fed Com #4H	<b>MD Reference:</b>	WELL @ 3587.00ft (Original Well Elev)
<b>Well:</b>	Cave Lake 13 Fed Com #4H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Lateral #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 2003.14 Server Db

<b>Project</b>	Eddy Co., New Mexico		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Cave Lake 13 Fed Com #4H				
<b>Site Position:</b>	<b>Northing:</b>	701,670.70 ft	<b>Latitude:</b>	32° 55' 43.402 N	
<b>From:</b> Map	<b>Easting:</b>	606,248.90 ft	<b>Longitude:</b>	104° 7' 18.399 W	
<b>Position Uncertainty:</b>	0 00 ft	<b>Slot Radius:</b>	"	<b>Grid Convergence:</b>	0 12 °

<b>Well</b>	Cave Lake 13 Fed Com #4H					
<b>Well Position</b>	<b>+N/-S</b>	0 00 ft	<b>Northing:</b>	701,670.70 ft	<b>Latitude:</b>	32° 55' 43.402 N
	<b>+E/-W</b>	0 00 ft	<b>Easting:</b>	606,248.90 ft	<b>Longitude:</b>	104° 7' 18.399 W
<b>Position Uncertainty</b>		0 00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	3,587.00 ft

<b>Wellbore</b>	Lateral #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
	IGRF200510	3/27/2008	(°)	(°)	(nT)
			8.27	60.83	49,324

<b>Design:</b>	Plan #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	6,480.00	
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0 00	0 00	0 00	270.00	

<b>Survey Tool Program</b>	Date	3/27/2008			
<b>From</b>	<b>To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
(ft)	(ft)				
0.00	6,480.00	OH (OH)	MWD	MWD - Standard	
6,480.00	11,425.96	Plan #1 (Lateral #1)			

<b>Planned Survey</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Vertical Section</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	
6,480.00	0.00	0.00	6,480.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Tie In</b>										
6,485.60	0.00	0.00	6,485.60	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Top of Window</b>										
6,495.00	3.00	270.00	6,495.00	0.00	-0.25	0.25	31.91	31.91	0.00	
<b>Base of Window</b>										
6,500.00	3.00	270.00	6,499.99	0.00	-0.51	0.51	0.00	0.00	0.00	
<b>KOP Build 16.71°/100'</b>										
7,016.91	89.35	270.00	6,825.00	0.00	-339.13	339.13	16.71	16.71	0.00	
<b>EOC Hold 89.35° INC :: 270° AZI</b>										
11,425.96	89.35	270.00	6,875.00	0.00	-4,747.90	4,747.90	0.00	0.00	0.00	

# Black Viper Energy

## Survey Report

<b>Company:</b>	Cimarex Energy Co., Inc.	<b>Local Co-ordinate Reference:</b>	Well Cave Lake 13 Fed Com #4H
<b>Project:</b>	Eddy Co., New Mexico	<b>TVD Reference:</b>	WELL @ 3587.00ft (Original Well Elev)
<b>Site:</b>	Cave Lake 13 Fed Com #4H	<b>MD Reference:</b>	WELL @ 3587.00ft (Original Well Elev)
<b>Well:</b>	Cave Lake 13 Fed Com #4H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Lateral #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 2003 14 Server Db

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
HL[CL13FC#4H] - plan misses by 6480.00ft at 6480 00ft MD (6480.00 TVD, 0 00 N, 0 00 E) - Rectangle (sides W4,620 00 H4,867.90 D0.00)	0.00	0 00	0.00	0.00	0.00	701,670 70	606,248.90	32° 55' 43.402 N	104° 7' 18 399 W
LL[CL13FC#4H] - plan misses by 6480 00ft at 6480 00ft MD (6480 00 TVD, 0 00 N, 0 00 E) - Rectangle (sides W5,280.00 H5,227 90 D0 00)	0.00	0 00	0.00	0 00	0 00	701,670 70	606,248.90	32° 55' 43.402 N	104° 7' 18 399 W
PBHL#1[CL13FC#4H] - plan hits target - Point	0.00	0 00	6,875.00	0.00	-4,747.90	701,661.17	601,501.01	32° 55' 43 399 N	104° 8' 14 107 W

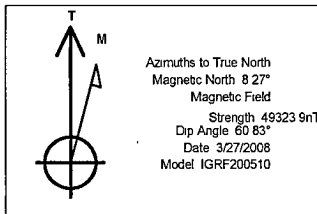
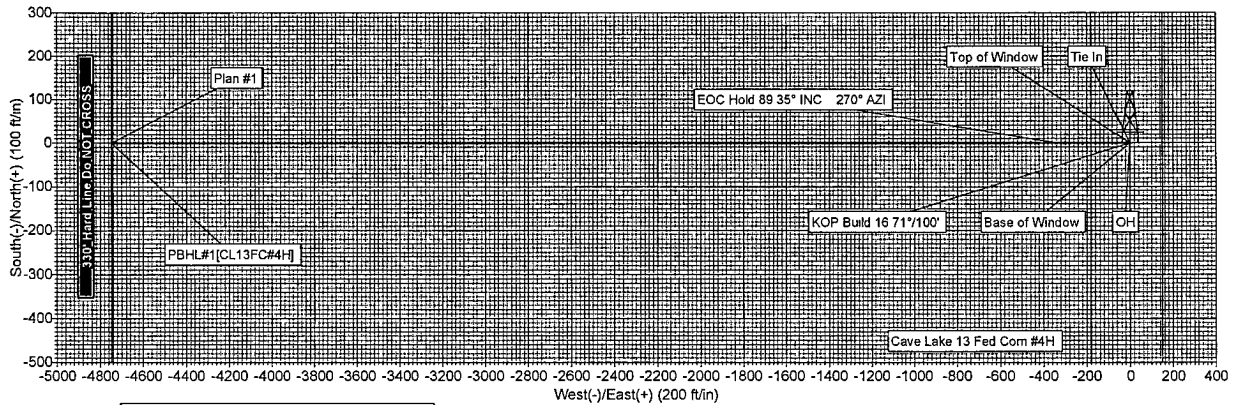
Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
6,480 00	6,480 00	0.00	0 00	Tie In
6,485.60	6,485.60	0 00	0 00	Top of Window
6,495 00	6,495 00	0.00	-0 25	Base of Window
6,500 00	6,499 99	0.00	-0 51	KOP Build 16.71°/100'
7,016 91	6,825.00	0.00	-339 13	EOC Hold 89 35° INC : 270° AZI

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_





Project Eddy Co, New Mexico  
 Site Cave Lake 13 Fed Corn #4H  
 Well Cave Lake 13 Fed Corn #4H  
 Wellbore Lateral #1  
 Plan Plan #1 (Cave Lake 13 Fed Corn #4H/Lateral #1)

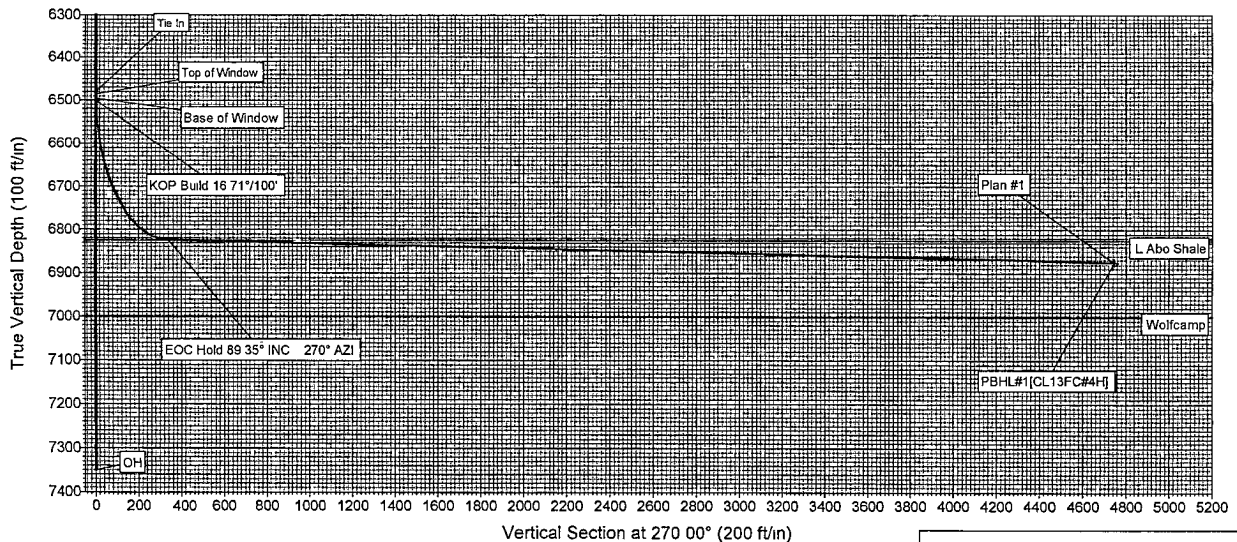


ANNOTATIONS

TVD	MD	Annotation
6480 00	6480 00	Tie In
6485 60	6485 60	Top of Window
6495 00	6495 00	Base of Window
6499 99	6500 00	KOP Build 16 71°/100'
6825 00	7016 91	EOC Hold 89 35° INC 270° AZI

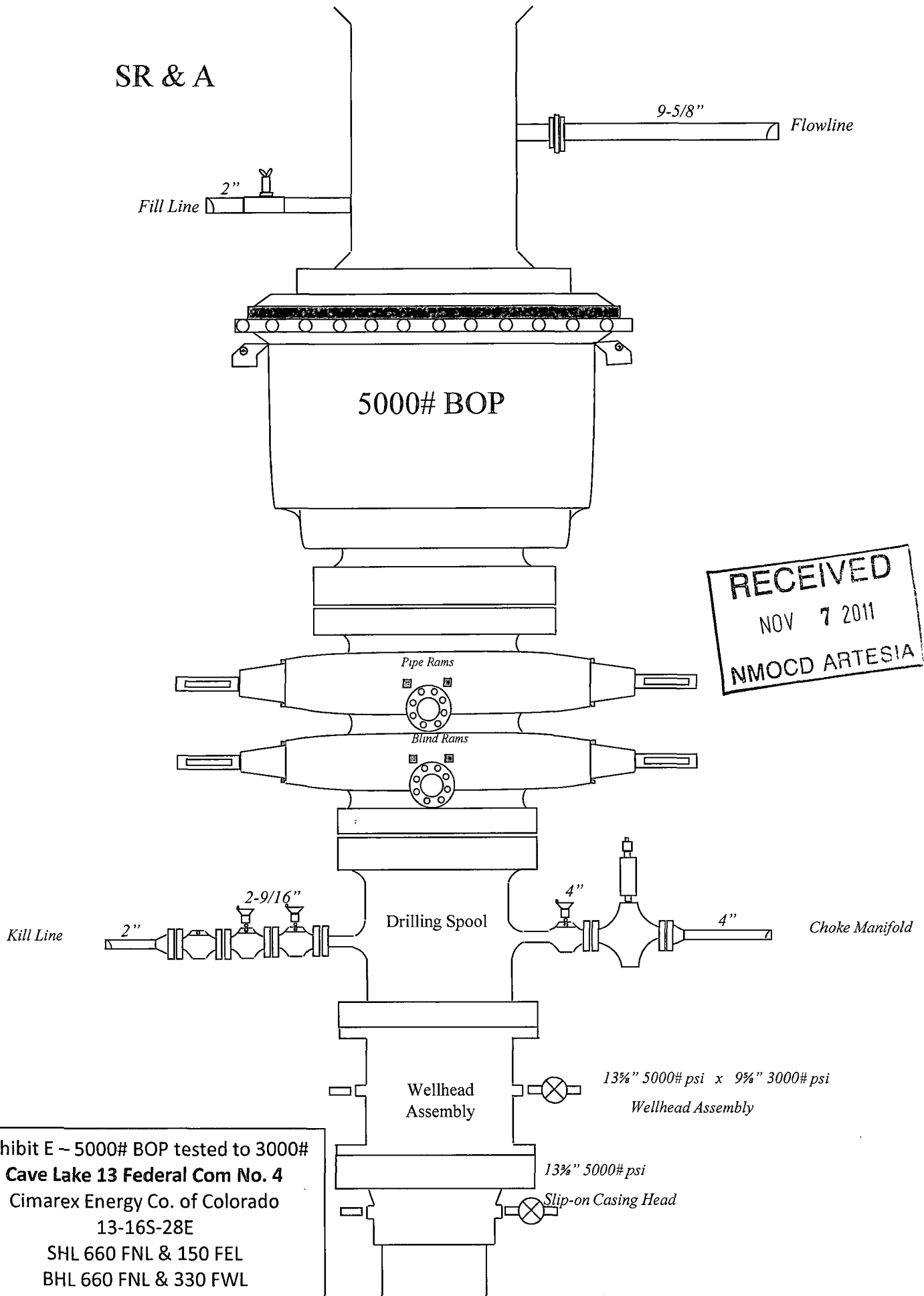
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFace	VSec	Target
1	6480 00	0 00	0 00	6480 00	0 00	0 00	0 00	0 00	0 00	
2	6485 60	0 00	0 00	6485 60	0 00	0 00	0 00	0 00	0 00	
3	6495 00	3 00	270 00	6495 00	0 00	-0 25	31 91	270 00	0 25	
4	6500 00	3 00	270 00	6499 99	0 00	-0 51	0 00	0 00	0 51	
5	7016 91	89 35	270 00	6825 00	0 00	-339 13	16 71	0 00	339 13	
6	11425 96	89 35	270 00	6875 00	0 00	-4747 90	0 00	0 00	4747 90	PBHL#1[CL13FC#4H]



Plan Plan #1 (Cave Lake 13 Fed Corn #4H/Lateral #1)  
 Created By Heather Vannoy Date March 27, 2008

SR & A

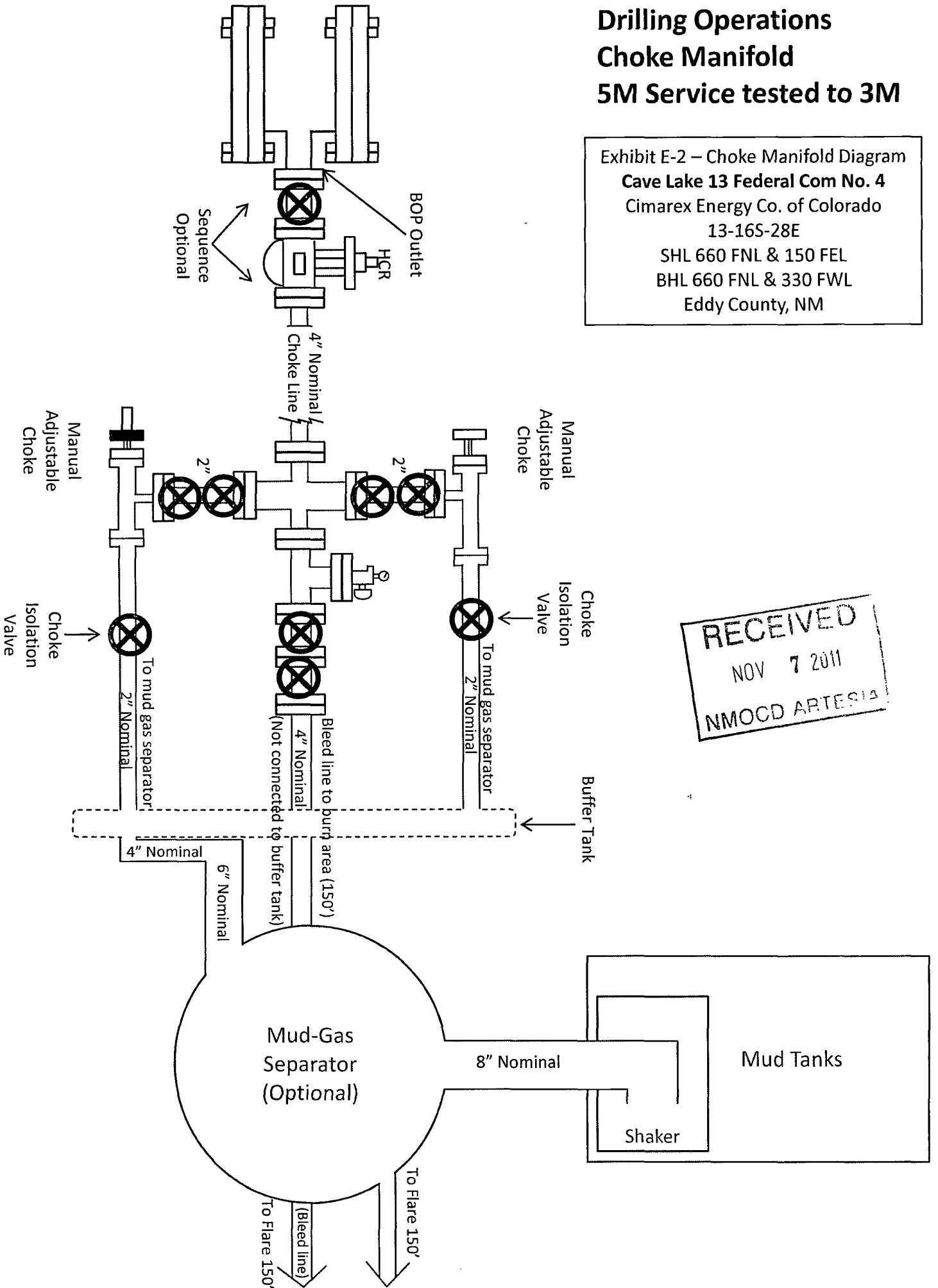


RECEIVED  
NOV 7 2011  
NMOCD ARTESIA

Exhibit E - 5000# BOP tested to 3000#  
Cave Lake 13 Federal Com No. 4  
Cimarex Energy Co. of Colorado  
13-16S-28E  
SHL 660 FNL & 150 FEL  
BHL 660 FNL & 330 FWL  
Eddy County, NM

# Drilling Operations Choke Manifold 5M Service tested to 3M

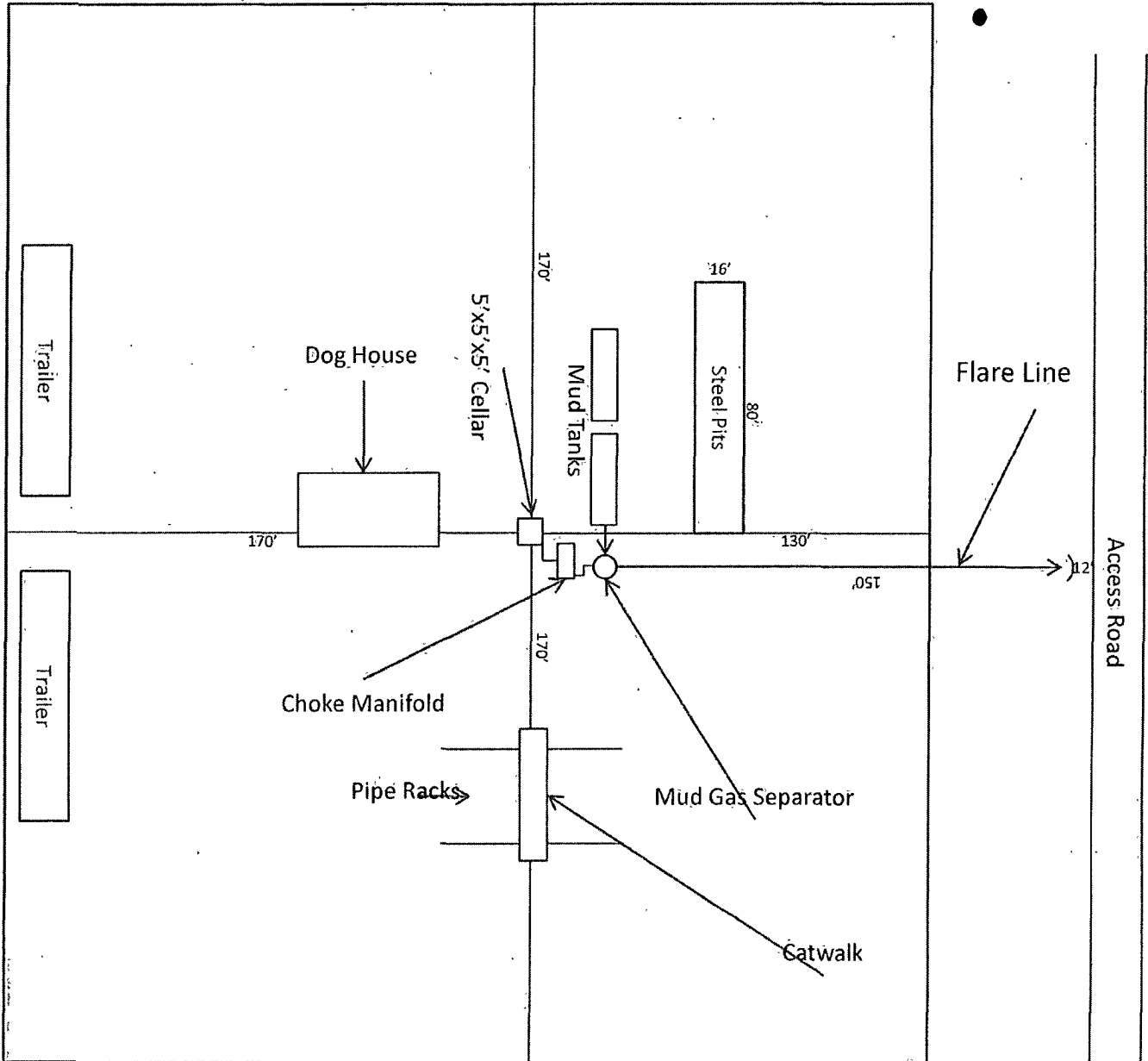
Exhibit E-2 – Choke Manifold Diagram  
**Cave Lake 13 Federal Com No. 4**  
 Cimarex Energy Co. of Colorado  
 13-16S-28E  
 SHL 660 FNL & 150 FEL  
 BHL 660 FNL & 330 FWL  
 Eddy County, NM



**RECEIVED**  
 NOV 7 2011  
 NMOCD ARTESIA

Patriot 4

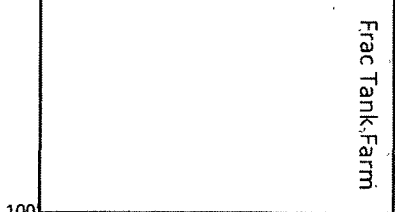
Survey Marker  
to be avoided  
↓  
•



Topsoil  
Stockpile

1"=50'

Rig Diagram  
Cave Lake 13 Federal Com No. 4  
Cimarex Energy Co. of Colorado  
13-16S-28E  
SHL 660 FNL & 150-FEL  
BHL 660 FNL & 330 FWL  
Eddy County, NM



DISTRICT 1 --- CHECKLIST FOR INTENTS TO DRILL

Operator CIMAREX ✓ OGRID # 162683  
Well Name & # CAVE LAKE 13 FEDERAL COM #44 Surface Type (F) (S) (P)  
Location: UL A, Sect 13, Township 16s, RNG 28e, Sub-surface Type (F) (S) (P)

3/8/11

A. Date C101 rec'd 11/07/2011 C101 reviewed 11/08/2011

- B. 1. Check mark, Information is OK on Forms:  
 OGRID , BONDING , PROP CODE , WELL # , SIGNATURE   
 2. Inactive Well list as of: 11/08/2011 # wells 1238, # Inactive wells 5  
 a. District Grant APD but see number of inactive wells:  
 No letter required ; Sent Letter to Operator , to Santa Fe   
 3. Additional Bonding as of: 11/08/2011  
 a. District Denial because operator needs addition bonding:  
 No Letter required ; Sent Letter to Operator , To Santa Fe   
 b. District Denial because of Inactive well list and Financial Assurance:  
 No Letter required ; Sent Letter to Operator , To Santa Fe

C. C102 YES , NO , Signature  CROWS FLAT / WOLF CREEK

1. Pool Ad/Wolf Creek WC, Code 97102  
 a. Dedicated acreage , What Units   
 b. SUR. Location Standard : Non-Standard Location   
 c. Well shares acres: Yes , No , # of wells  plus this well #   
 2. 2<sup>nd</sup>. Operator in same acreage, Yes , No   
 Agreement Letter , Disagreement letter   
 3. Intent to Directional Drill Yes , No   
 a. Dedicated acreage 160, What Units A-B-C-D  
 b. Bottomhole Location Standard , Non-Standard Bottomhole   
 4. Downhole Commingle: Yes , No   
 a. Pool #2 , Code , Acres   
 Pool #3 , Code , Acres   
 Pool #4 , Code , Acres   
 5. POTASH Area Yes , No

D. Blowout Preventer Yes , No

E. H2S Yes , No

F. C144 Pit Registration Yes , No

- G. Does APD require Santa Fe Approval:  
 1. Non-Standard Location: Yes , No , NSL # POTASH  
 2. Non-Standard Proration: Yes , No , NSP #   
 3. Simultaneous Dedication: Yes , No , SD #   
 Number of wells  Plus #   
 4. Injection order Yes , No ; PMX #  or WFX #   
 5. SWD order Yes , NO ; SWD #   
 6. DHC from SF ; DHC-HOB ; Holding

7. OCD Approval Date 11/08/2011 API #30-05 39593

8. Reviewers TCS