OCD-ARTESIA MAY - 92008Form 3160-3 FORM APPROVED (April 2004) OMB No 1004-0137 OCD-ARTESIA Expires March 31, 2007 CAVEKARST UNITED STATES 5. Lease Serial No-DEPARTMENT OF THE INTERIOR NM-0556950 5-7-08 BUREAU OF LAND MANAGEMENT 6. If Indian, Allotee or Tribe Name APPLICATION FOR PERMIT TO DRILL OR REENTER 7 If Unit or CA Agreement, Name and No. 1a. Type of Work X DRILL REENTER Pending 8. Lease Name and Well No Oil Well X Gas Well Other 1b. Type of Well X Single Zone Multiple Zone Federal 33 Com No. 4 2. Name of Operator Cimarex Energy Co. of Colorado 3b. Phone No. (include area code) 3a Address PO Box 140907 Irving, TX 75014 972-401-3111 Loafer Draw; Morrow, SE (Gas) 4. Location of Well (Report location clearly and in accordance with any State requirements.\*) 11. Sec, T R. M. or Blk and Survey or Area 810' FSL & 660' FWL At Surface At proposed prod. Zone 33-21S-23E 14. Distance in miles and direction from nearest town or post office\* 12. County or Parish 13 State 15 miles West of Carlsbad, NM NM Eddy 15 Distance from proposed\* 16 No of acres in lease 17. Spacing Unit dedicated to this well location to nearest property or lease line, ft. (Also to nearest drig unit line if 660' W2 320 anv) BLM/BIA Bond No. on File 18 Distance from proposed location\* 19. Proposed Depth to nearest well, drilling, completed, applied for, on this lease, ft N/A 9,600' NM-2575 Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start\* 23. Estimated duration 4128' GR 4/1/2008 30-35 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 Bond to cover the operations unless covered by an existing bond on file (see 2. A Drilling Plan Item 20 above). A Surface Use Plan (if the location is on National Forest System Lands, the Operator Certification Such other site specific information and/or plans as may be required by the SUPO shall be filed with the appropriate Forest Service Office). authorized officer 25. Signature Name (Printed/Typed) Date Zeno Farris 01.30.08 Title Manager Operations Administration Date MAY Approved By (Signature) Name (Printed/Typed) 2008 Is/ Don Peterson Tıtle Office CARLSBAD FIELD OFFICE

Roswell Controlled Water Basin

any matter within its jurisdiction.

al or equitable title to those rights in the subject lease which would entitle the applicant to

me for any person knowingly and willfully to make to any department or agency of the United

APPROVAL FOR TWO YEARS

SEE ATTACHED FOR CONDITIONS OF APPROVAL

association with the drilling of this

well, an OCD pit permit must be

obtained prior to pit construction.

If earthen pits are used in

**Approval Subject to General Requirements** & Special Stipulations Attached



DISTRICT &
1625 N. French Dr., Hobbs, NM 85240
DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

## State of New Mexico Energy, Minerals and Natural Resources Department

Form C-102 Revised October 12, 2005

Submit to Appropriate District Office

Pool Name

State Lease - 4 Copies Fcc Lease - 3 Copies

#### DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410

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

ADI Number

320

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

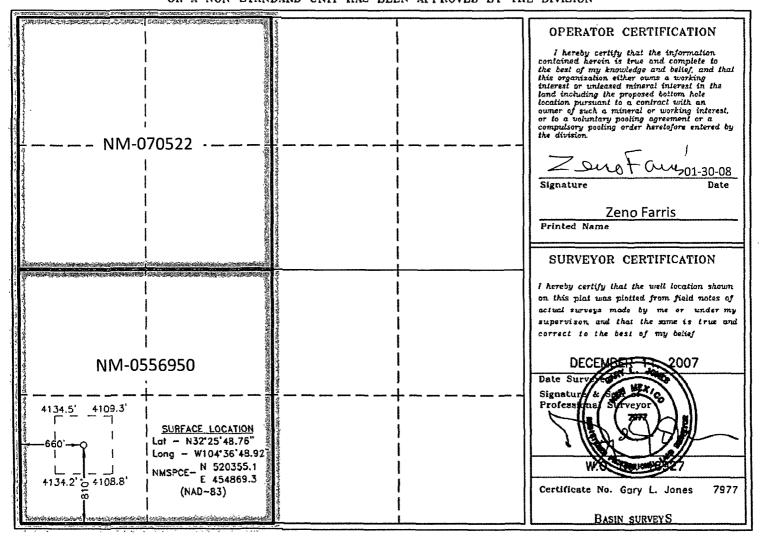
C AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

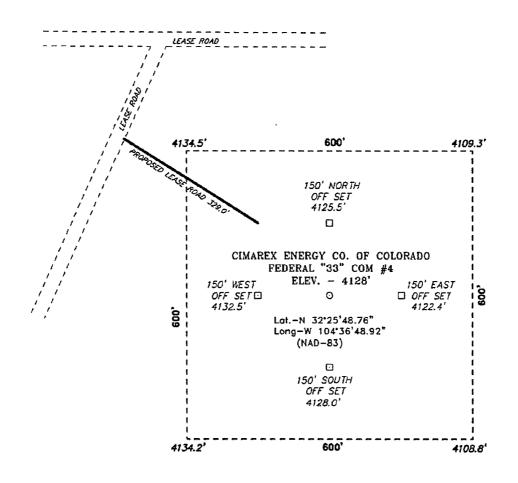
Pool Code

API Number		LOO! CODE							
			97181	, SE (Gas)					
Property (	Code				Property Nam	ıe		Well Number	
3710	02		FEDERAL "33" COM					4	
OGRID N	Э.				Operator Nam	ıe		Elevation	
162683			CIMAREX ENERGY CO. OF COLORADO					4128'	
					Surface Loc	ation		1	
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
М	33	21 S	23 E		810	SOUTH	660	WEST	EDDY
			Bottom	Hole Loc	eation If Diffe	rent From Sur	face		
UL or lat No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acre	s Joint o	or Infill Co	nsolidation	Code Or	der No.				

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



## SECTION 33, TOWNSHIP 21 SOUTH, RANGE 23 EAST, N.M.P.M., EDDY COUNTY,



Directions to Location:

FROM THE JUNCTION OF WHITE PINE AND MARATHON ROAD, GO WEST 3.0 MILES THEN TURN SOUTH ON LEASE ROAD. GO SOUTH FOR APPROX 1.0 MILES TO "Y", GO RIGHT FOR APPROX. 1.0 MILES THENCE WEST ON LEASE ROAD FOR 1.2 MILES TO "Y", GO LEFT FOR 0.1 MILES TO PROPOSED LEASE ROAD.

BASIN SURVEYS P.O. BOX 1786 -HOBBS, NEW MEXICO

W.O. Number: 18927 Drawn By: J. M. SMALL

12-12-2007 Disk: JMS 18927W 200 200 400 FEET SCALE: 1" = 200'

#### CIMAREX ENERGY CO. OF COLORADO

FEDERAL "33" COM #4 / WELL PAD TOPO

THE FEDERAL "33" COM #4 LOCATED 810' FROM THE SOUTH LINE AND 660' FROM THE WEST LINE OF SECTION 33, TOWNSHIP 21 SOUTH, RANGE 23 EAST,

N.M.P.M., EDDY COUNTY, NEW MEXICO.

Sheets

Survey Date: 12-11-2007 Sheet nf

# Application to Drill Cimarex Energy Co. of Colorado Federal 33 Com No. 4

Unit M Section 33

T 21S R23E 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 810' FSL & 660' FWL

2 Elevation above sea level:

4128' GR

3 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.

5 Proposed drilling depth:

9,600'

#### 6 Estimated tops of geological markers:

San Andres	431'	Strawn	7,509'
Glorieta	1,927'	Atoka	7;812'
Yeso	2,042'	Morrow	8,411'
Bone Spring	3,219'	Middle Morrow	8,564'
3rd Bone Spring Ss	6,026'	<b>Lower Morrow</b>	8,754'
Wolfcamp	6,224'	Barnett	8,930'
Cisco	6,899'	Chester	9,067'
Canyon	7,275¹ ·		

#### 7 Possible mineral bearing formation:

Morrow	Gas	Primary
Wolfcamp	Oil	Secondary
Yeso	Oil	Secondary

#### 8 Proposed Mud Circulating System:

	Depth		Mud Wt	Visc	Fluid Loss	Type Mud
0'	to	1500'	8.5 - 8.6	28-36	May lose circ	FW
1500'	to	7800'	8.4 - 8.6	28-29	May lose circ	FW
7800'	to	9600'	8.4 - 9.0	28-46	NC	Cut brine

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. 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.

# Application to Drill Cimarex Energy Co. of Colorado Federal 33 Com No. 4

#### rederal Unit M

Section 33

T 21S R23E

Eddy County, NM

#### 9 Casing & Cementing Program:

Hole Size		Dept	h	Casiı	ng OD	Weight	Thread	Collar	Grade
12¼"	0,	to	1,500'	New	9%"*	40#	8-R	STC	J-55
8¾"	0'	to	7,800'	New	7"	29#	8-R	LTC	N-80
61/8"	7,700'	to	9,600'	New	4½"	11.6#	8-R	LTC	N-80

\* 9 %" casing is special-drift 8.75" with an 8.835" Inside Diameter

#### 10 Cementing:

9%"\* Surface <u>Lead:</u> 980 sx Class C (wt 12.8, yld 1.94)

<u>Tail:</u> 860 sx Class C + 6% Gel + ¼# Flocele (wt 12.8, yld 1.94)

TOC Surface.

7" Intermediate Stage 1

550 sx 50/50 POZ H + 2% D-20 + 5% D-44 + 0.25% D-29 + 5% Koalite (wt 12.4, yld 2.14)

**Stage 2** (DV Tool @ 5975')

<u>Lead:</u> 970 sx 35/65 Class H + 6% D-20 + 5% D-44 + ¼# D-29 (wt 14.2, yld 1.35)

Tail: 350 sx 50/50 Class H (wt 14.8, yld 1.33)

TOC Surface

4½" Liner

225 sx 50/50 POZ H + 2% D-20 + 5% D-44 + 1/2% D-13 + 1/2% D-44 + 1/2# D-130 (wt 12.7, yld

1.86)

TOC 7,700' - Bee COA

Fresh water will be protected by setting 9%"\* casing at 1,500' and cementing to Surface Hydrocarbon zones will be protected by setting 7" casing at 7,800' and cementing to Surface

and by setting 4½" casing at 9,600' and cementing to 7,700

Cimarex uses the following minimum safety factors:

Burst Collapse Tension 1.125 1.125 1.80

See

# Application to Drill Cimarex Energy Co. of Colorado Federal 33 Com No. 4

Unit M Section 33 T 21S R23E Eddy County, NM

#### 11 Pressure control Equipment:

Exhibit "E". A 13%" 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 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.

We are requesting a variance for testing the surface casing from Onshore Order No. 2, which states that all casing strings below the conductor shall be pressure tested to 0.22 psi per foot or 1500 psi, whichever is greater, but not to exceed 70% of the manufacturer's stated maximum internal yield. We are requesting to test the 9½" casing to 1000 psi using rig pumps. The BOP will be tested to 5000 PSI by an independent service company.

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

A. Mud logging program: 2 man unit from 1500' 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 H<sub>2</sub>S hazard. An H<sub>2</sub>S 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 Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.

Drilling expected to take 30-35 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.

**Morrow** pay will be perforated and stimulated.

The proposed well will be tested and potentialed as a gas well.

# Rig 80

# Cimarex Energy Co. of Colorado

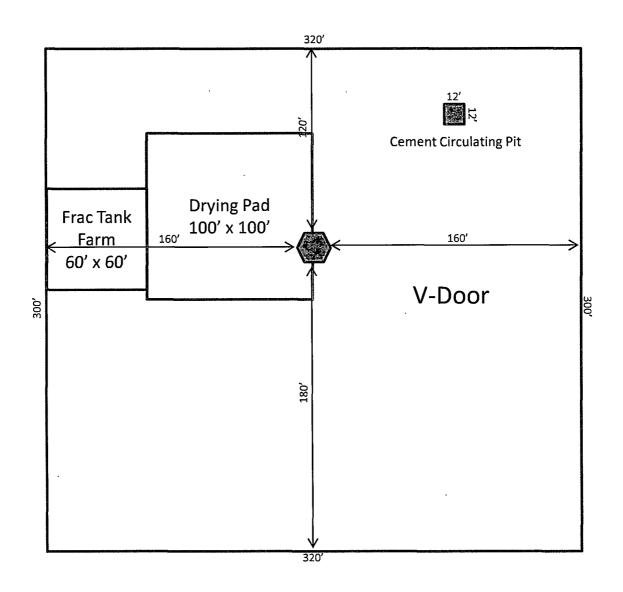
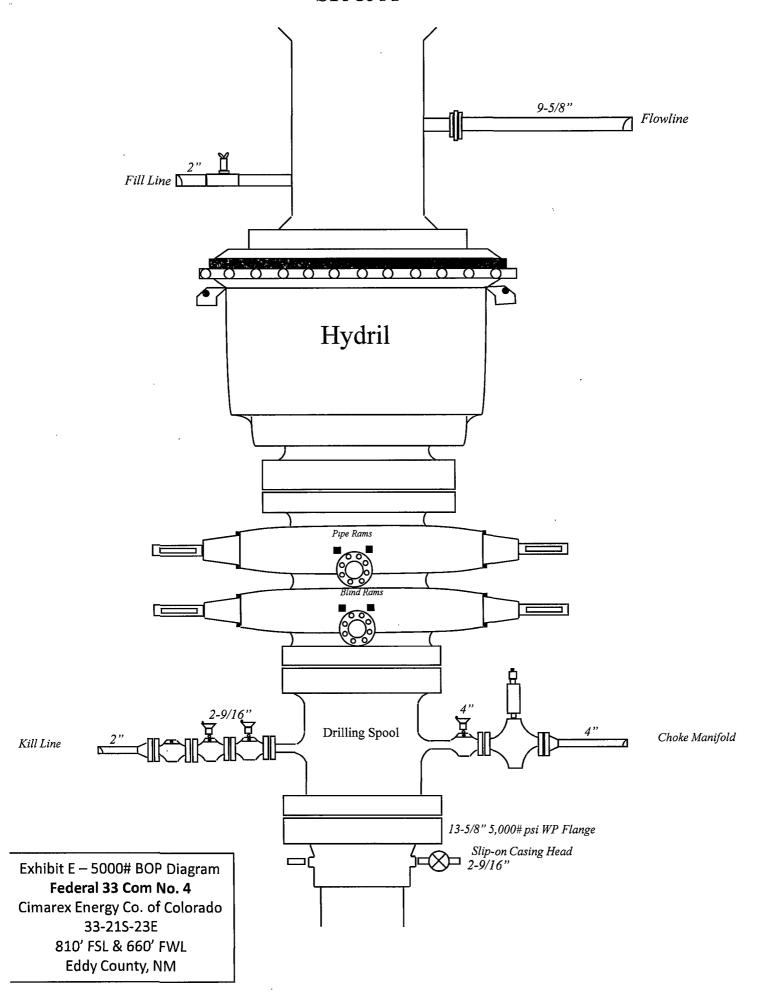


Exhibit D – Rig Layout
Federal 33 Com No. 4
Cimarex Energy Co. of Colorado
33-21S-23E
810' FSL & 660' FWL
Eddy County, NM

SR & A



## ORILLING OPERATIONS CHOKE MANIFOLD 5M SERVICE

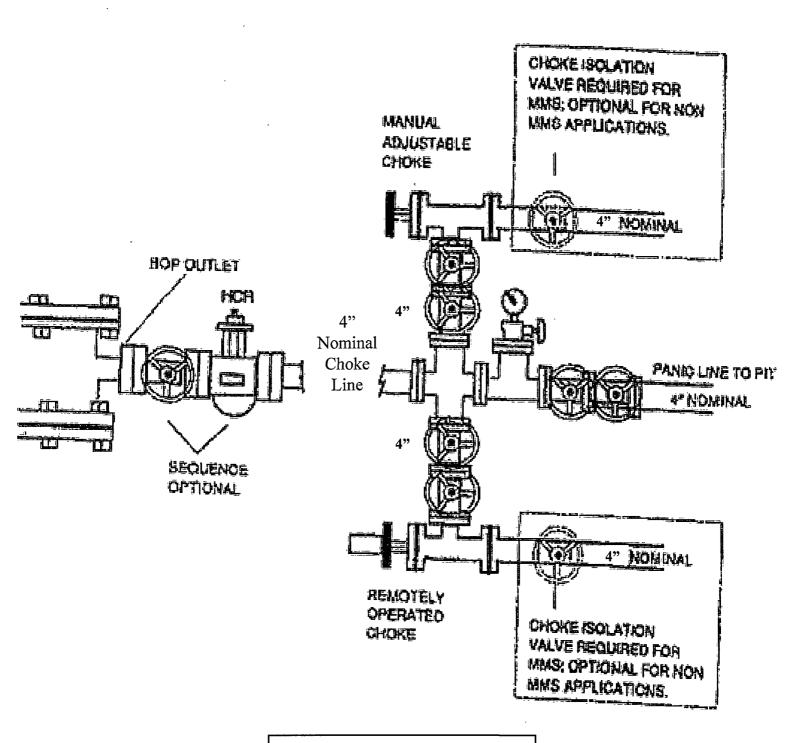


Exhibit E-1 – Choke Manifold Diagram

Federal 33 Com No. 4

Cimarox Energy Co. of Colorado

Cimarex Energy Co. of Colorado 33-21S-23E 810' FSL & 660' FWL Eddy County, NM

### Hydrogen Sulfide Drilling Operations Plan Cimarex Energy Co. of Colorado Federal 33 Com No. 4

Unit M Section 33

T 215 R23E Eddy 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 H<sub>2</sub>S
  - B. Physical effects and hazards
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H<sub>2</sub>S detectors, warning system and briefing areas.
  - E. Evacuation procedure, routes and first aid.
  - F. Proper use of 30 minute pressure demand air pack.

#### 2 H<sub>2</sub>S 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 indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H<sub>2</sub>S 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 foreman's trailer or living quarters.

#### 7 Drillstem Testing:

No DSTs or cores are planned at this time.

- 8 Drilling contractor supervisor will be required to be familiar with the effects H<sub>2</sub>S 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.

### H₂S Contingency Plan Cimarex Energy Co. of Colorado

Pavo Mesa 30 Federal Com No. 2 Unit I, Section 20 T16S-R29E, Eddy County, NM

#### **Emergency Procedures**

In the event of a release of gas containing H<sub>2</sub>S, the first responder(s) must:

- ★ Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- ★ Evacuate any public places encompassed by the 100 ppm ROE.
- ★ Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.
- ★ Use the "buddy system" to ensure no injuries occur during the response.
- ★ Take precautions to avoid personal injury during this operation.
- ★ Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- ★ Have received training in the:
  - Detection of H<sub>2</sub>S, and
  - Measures for protection against the gas,
  - Equipment used for protection and emergency response.

#### **Ignition of Gas Source**

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide  $(SO_2)$ . Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

#### Characteristics of H<sub>2</sub>S and SO<sub>2</sub>

Common	Chemical	Specific	Threshold	Hazardous	Lethal
Name	Formula	Gravity	Limit	Limit	Concentration
Hydrogen Sulfide	H <sub>2</sub> S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	5O <sub>2</sub>	2.21 Air=1	2 ppm	N/A	1000 ppm

#### **Contacting Authorities**

Cimarex Energy Co. of Colorado's personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Cimarex Energy Co. of Colorado's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

#### H₂S Contingency Plan Emergency Contacts

#### Cimarex Energy Co. of Colorado

Pavo Mesa 30 Federal Com No. 2 Unit I, Section 20 T16S-R29E, Eddy County, NM

Cimarex Energy Co of Colora		800-969-4789		
Co. Office and After-Hours M	enu .			
Kay Baraannal				
<u>Key Personnel</u> Name	Title	Office		Mobile
Doug Park	Drilling Manager	972-443-6463		972-333-1407
Dee Smith	Drilling Super	972-443-6491		972-882-1010
Jim Evans	Drilling Super	972-443-6451		972-465-6564
Dorsey Rogers	Field Super			505-200-6105
Roy Shirley	Field Super			432-634-2136
100,000 N. COLORS N. COLORS N. FRANK, N. ANDREW N. COLORS N. WARRE N.				
<u>Artesia</u>				
Ambulance		911		
State Police		575-746-2703		
City Police		575-746-2703		
Sheriff's Office		575-746-9888		
Fire Department		575-746-2701		
Local Emergency Planning	Committee	575-746-2122		
New Mexico Oil Conservat	ion Division	575-748-1283		
<u>Carlsbad</u>	,			
Ambulance		911		
State Police		575-885-3137		
City Police		575-885-2111		
Sheriff's Office		575-887-7551		
Fire Department	-	575-887-3798		
Local Emergency Planning	Committee	575-887-6544		
US Bureau of Land Manage	ement	575-887-6544		
Santa Fe		-		•
	esponse Commission (Santa Fe)	505-476-9600		
	esponse Commission (Santa Fe) 24 Hrs	505-827-9126		
New Mexico State Emerge		505-476-9635		,
National				
	onse Center (Washington, D.C.)	800-424-8802		
	( 0.5-0,			
<u>Medical</u>		****		
Flight for Life - 4000 24th 5		806-743-9911		
Aerocare - R3, Box 49F; Lul		806-747-8923		
	Yalé Blvd S.E., #D3; Albuquerque, NM	505-842-4433		
SB Air Med Service - 2505	Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949		
Other				
Boots & Coots IWC		800-256-9688	or	281-931-8884
Cudd Pressure Control		432-699-0139	or	432-563-3356
Halliburton		575-746-2757		
B I Consider		575.746.2560		

575-746-3569

B.J. Services

Unit M Section 33
T 21S R23E Eddy County, NM

- 1 <u>Existing Roads:</u> Area maps, Exhibit "B" is a reproduction of Eddy Co. General Highway Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing roads and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.
  - A. Exhibit "A" shows the proposed well site as staked.
  - B. From the junction of White Pine and Marathon Rd, go West 3.0 miles, then turn South on lease road. Go South for approx 1.0 miles to Y. Go right for approx 1.0 miles; thence West on lease road for 1.2 miles to Y. Go left for 0.1 miles to proposed lease road.
- 2 Planned Access Roads: 329' of access road will be constructed on lease.
- 3 Location of Existing Wells in a One-Mile Radius Exhibit A:
  - A. Water wells None known
  - B. Disposal wells None known
  - C. Drilling wells None known
  - D. Producing wells As shown on Exhibit "A"
  - E. Abandoned wells As shown on Exhibit "A"

Unit M Section 33 T 21S R23E Eddy County, NM

4 If on completion this well is a producer, Cimarex Energy Co. of Colorado will furnish maps and/or plats showing on site facilities or off site facilities if needed. This will be accompanied by a Sundry Notice.

#### 5 Location and Type of Water Supply:

Water will be purchased locally from a commercial source and trucked over the access roads or piped in flexible lines laid on top of the ground.

#### 6 Source of Construction Material:

If possible, construction will be obtained from the excavation of drill site. If additional material is needed, it will be purchased from a local source and transported over the access route as shown on Exhibit "C".

#### 7 Methods of Handling Waste Material:

- A. Drill cuttings will be seperated by a series of solids removal equipment and hauled to the cuttings drying area and then disposed of in the cuttings burial cell.
- B. All trash, junk and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary land fill.
- C. Salts remaining after completion of well will be picked up by supplier including broken sacks.
- D. Sewage from living quarters will drain into holding tanks and be cleaned out periodically. A Porta-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of the well.
- E. Drilling fluids will be contained in steel pits in a closed circulating system. Fluids will be cleaned and reused. Water produced during testing will be contained in the steel pits and disposed of at a state approved disposal facility. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

#### 8 Ancillary Facilities:

A. No camps or airstrips to be constructed.

Unit M Section 33 T 21S R23E Eddy County, NM

#### 9 Well Site Layout:

- A. Exhibit "D" shows location and rig layout.
- B. This exhibit indicates proposed location of the 100' X 100' cuttings drying area.
- C. Mud pits in the closed circulating system will be steel pits and the cuttings drying area will be surrounded by a 2' X 2' ring levee and a 2' earthen berm. A 12 mil liner will cover the cuttings drying area and extend a minimum of 2' over the earthen berm where it will be anchored down. A pump off system will pump any accumulated fluids in the ring levee to the rig holding tanks to be cleaned and reused
- D. After drying cuttings will be disposed of in a 50' X 50' cuttings burial cell. The bottom will be lined with a 12 mil liner. Drill cuttings will be hauled from the cuttings drying area and encapsulated in a 12 mil liner. The 12 mil liner will be folded over the cuttings and capped with a 20 mil membrane cap. The cell will be filled with 3' to 4' of top soil and leveled and contoured to conform to the original surrounding area.
- E. If the well is a producer, the cuttings burial area and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

#### 10 Plans for Restoration of Surface:

Rehabilitation of the location and cuttings burial cell will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

However, in either event, the drill cuttings will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The cuttings burial area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be recountoured to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.

Unit M Section 33
T 21S R23E Eddy County, NM

#### 11 Other Information:

- A. Topography consists of a sloping plane with loose tan sands. Vegetation is mainly yucca, mesquite and shin oak.
- B. The wellsite is on surface owned by Department of the Interior, Bureau of Land Management. The land is used mainly for farming, cattle ranching, recreational use, and oil and gas production.
- C. An Archaeological survey will be conducted on the location and proposed roads, and this report will be filed with the Bureau of Land Management in the Carlsbad BLM office.
- D. There are no know dwellings within 1½ miles of this location.

#### Operator Certification Statement Cimarex Energy Co. of Colorado Federal 33 Com No. 4

Unit M Section 33 T 21S R23E Eddy County, NM

#### Operator's Representative:

Cimarex Energy Co. of Colorado P.O. Box 140907 Irving, TX 75014

Office Phone: (972) 443-6489

Zeno Farris

**CERTIFICATION**: I hereby certify that the statements and plans made in this APD 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. of Colorado and/or its contractors/subcontractors and is in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of U.S.C. 1001 for the filing of a false statement.

NAME:	Zong Farry
	Zeno Farris
DATE:	January 30, 2008
TITLE:	Manager Operations Administration



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 subsidiary of Cimarex Energy Co. • A NYSE Listed Company • "XEC"

FEB 15 2008 OCD-ARTESIA

January 30, 2008

Oil Conservation Division District II Office 1301 W. Grand Ave. Artesia, New Mexico 88210 Attn: Mr. Bryan Arrant

Re: Statewide Rule 118

Hydrogen Sulfide Gas Contingency Plan Proposed Federal 33 Com No. 4 Well

Dear Mr. Arrant:

In accordance with NMAC 19.15.3.118 C. (1) governing the determination of the hydrogen sulfide concentration in gaseous mixtures in each of its operations, Cimarex Energy Co. of Colorado does not anticipate that there will be enough H2S from the surface to the Morrow formations to meet the OCD's minimum requirements for the submission of a contingency plan for the drilling and completion of the following test(s):

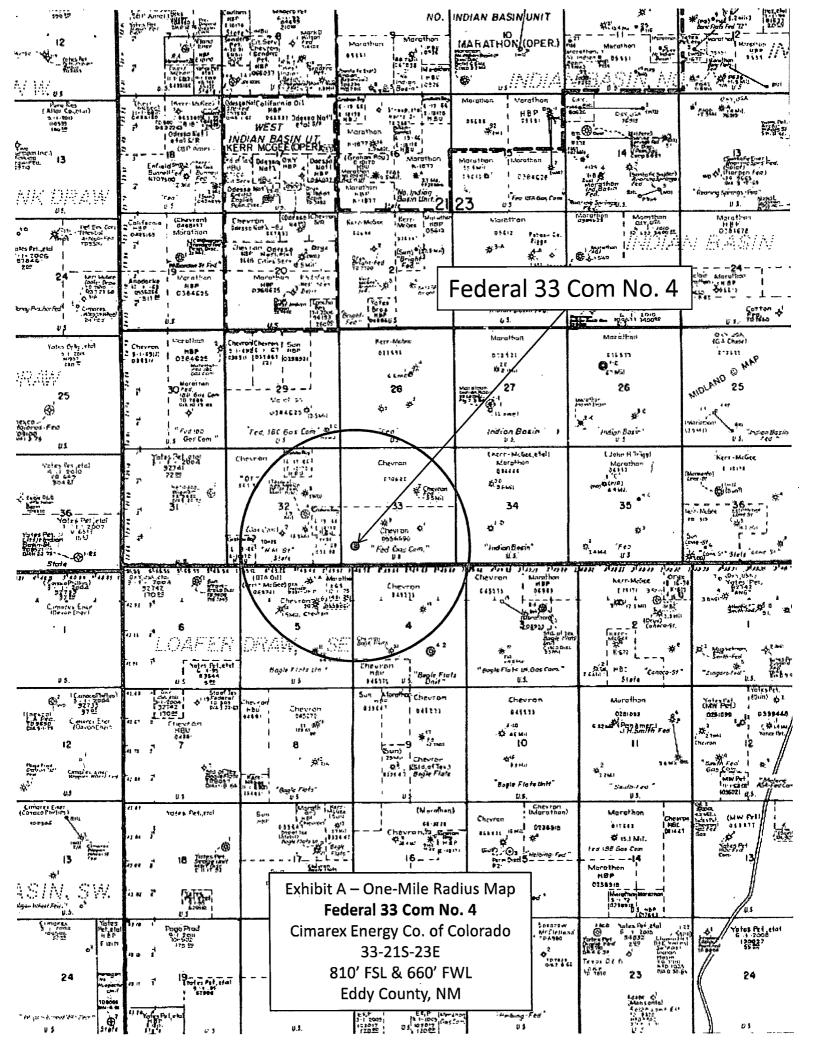
Federal 33 Com No. 4 33-218-23E 810' FSL & 660' FWL Eddy County, NM

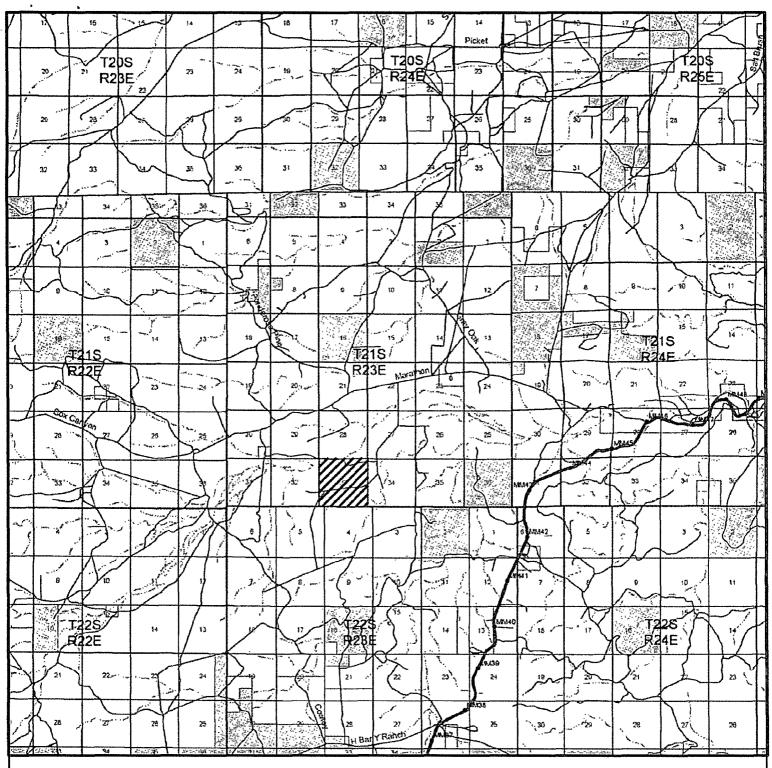
If anything further is needed regarding this issue, or if you have any questions, please feel free to contact the undersigned at 972-443-6489.

Yours truly,

Zeno Farris

Manager, Operations Administration





FEDERAL "33" COM #4 Located 810' FSL and 660' FWL Section 33, Township 21 South, Range 23 East, N.M.P.M., Eddy County, New Mexico.

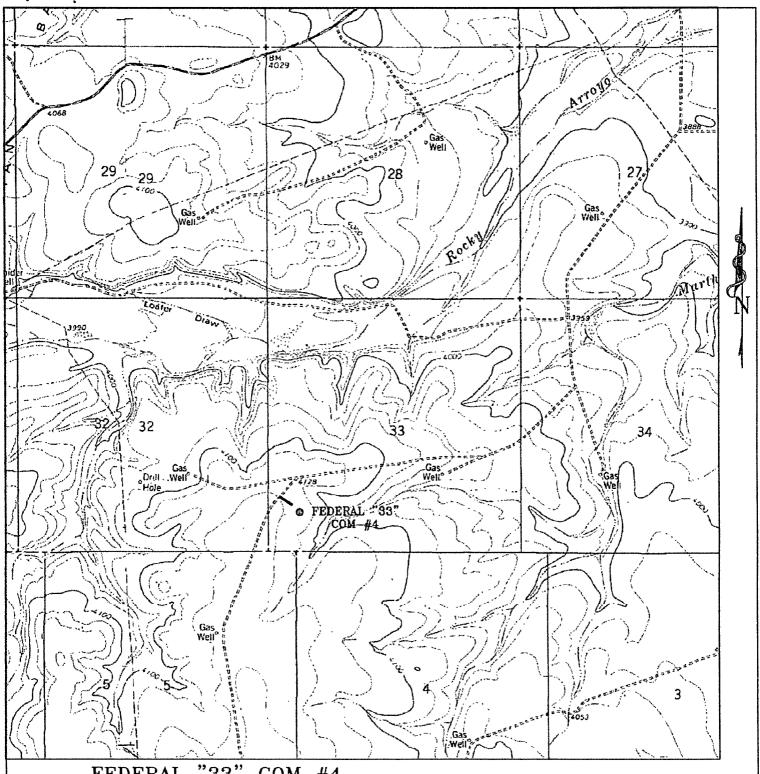


in the oilfield

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 18927TR
-	Survey Date: 12-11-2007
	Scale: 1" = 2 MILES
	Date: 12-12-2007
_	

CIMAREX ENERGY CO. OF COLORADO



FEDERAL "33" COM #4 Located 810' FSL and 660' FWL Section 33, Township 21 South, Range 23 East, N.M.P.M., Eddy 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 18927T

Survey Date: 12-11-2007

Scale: 1" = 2000'

Date: 12-12-2007

CIMAREX ENERGY CO. OF COLORADO

## PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME: Cimarex Energy Co of Colorado

LEASE NO.: NM-0556950

WELL NAME & NO.: 4-Federal 33 Com

SURFACE HOLE FOOTAGE: 810' FSL & 660' FWL

BOTTOM HOLE FOOTAGE | Same

LOCATION: | Section 33, T. 21 S., R 23 E., NMPM

COUNTY: | Eddy County, New Mexico

#### TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

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Permit Expiration
Archaeology, Paleontology, and Historical Sites
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Special Requirements
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<b>◯</b> Construction
Notification
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Reserve Pit
Federal Mineral Material Pits
Well Pads
Roads
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☑ Drilling
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Well Structures & Facilities
Pipelines
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Interim Reclamation
Final Abandonment/Reclamation

#### I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

#### II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

### III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

#### IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

### V. SPECIAL REQUIREMENT(S)

Mitigation Measures: The mitigation measures include the special drilling stipulations, the standard stipulation for high cave/karst occurrence, and the standard stipulations for permanent resource roads. The company will also need to berm the North side and the East side of the location. This will ensure that any excess water will not run off of the proposed location eroding away the pad and damaging vegetation and soil components below the pad location. It will also help to prevent any further erosion concerns below the pads construction.

Cave/Karst – The location has been designated as high karst occurrence. Conditions of Approval will include berming of tanks for retention of leaks to prevent possible contamination of karst aquifers and contamination of nearby water well.

Federal 33 Com. # 4: Closed loop system West, V-Door North

#### VI. CONSTRUCTION

#### A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (505) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

#### B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil shall not be used to backfill the cuttings burial cell and will be used for interim and final reclamation.

There is no measurable soil on this well pad to stockpile. No topsoil stockpile is required.

#### C. Cuttings Burial Cell

The Cuttings burial cell shall be constructed and closed in accordance with the NMOCD rules.

The cuttings burial cell shall be constructed 50' X 50' on the West side of the well pad V-Door North.

The cuttings burial cell shall be constructed, so that upon completion of drilling operations, the dried burial cell contents shall be buried a minimum depth of three feet

below ground level. Should the burial cell content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The cuttings burial cell shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the burial cell. The berms surrounding the entire perimeter of the burial cell shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the burial cell be allowed to rise above ground level.

The cuttings burial cell shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

#### D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (505) 234-5972.

#### E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

#### F. ON LEASE ACCESS ROADS

#### Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

#### **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

#### Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

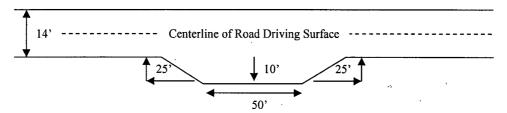
#### Ditching

Ditching shall be required on both sides of the road.

#### **Turnouts**

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

#### Standard Turnout - Plan View

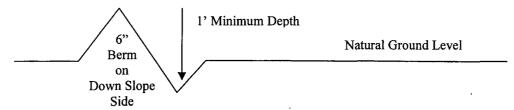


#### **Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

#### Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

#### Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: 
$$\frac{400'}{4\%}$$
 + 100' = 200' lead-off ditch interval

#### **Culvert Installations**

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

#### Cattleguards

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

#### Fence Requirement

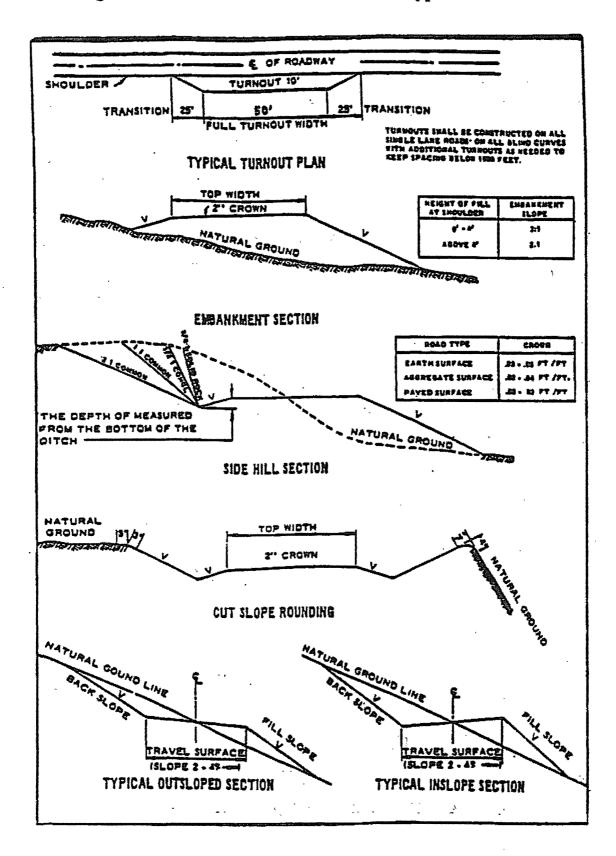
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

#### **Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 - Cross Sections and Plans For Typical Road Sections



#### VII. DRILLING

#### A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

### **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

- 1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Yates** formation.
- 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. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

#### B. CASING

- 1. The 9-5/8 inch surface casing shall be set at approximately 1500 feet and cemented to the surface. Centralizers required on surface casing per Onshore Order 2.III.B.1.f.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement). Please provide WOC times to inspector for cement slurries.

- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial action will be done prior to drilling out that string.

#### High cave/karst.

Possible lost circulation in the San Andres and Wolfcamp formations. Possible high pressure gas bursts in the Wolfcamp and high pressure in the Pennsylvanian section.

- 2. The minimum required fill of cement behind the 7 inch intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a-d above. Please provide WOC times to inspector for cement slurries.

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

- 3. The minimum required fill of cement behind the 4-1/2 inch production casing is:
  - Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.
- 4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

#### C. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. The tests shall be done by an independent service company.
  - b. The results of the test shall be reported to the appropriate BLM office.
  - c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be

submitted to the appropriate BLM office.

- d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
- e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.
- f. A variance to test only the surface casing to the reduced pressure of 1000 psi with the rig pumps is approved. The BOP will be tested to 5000 psi by an independent service company.

#### D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

#### E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

WWI 030108

### VIII. PRODUCTION (POST DRILLING)

#### A. WELL STRUCTURES & FACILITIES

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color Shale Green, Munsell Soil Color Chart # 5Y 4/2

- B. PIPELINES
- C. ELECTRIC LINES

#### IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

#### A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

#### B. Cuttings Burial Cell

The cuttings burial cell, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

#### Seed Mixture 1, for Loamy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be <u>no</u> primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection bye the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0

<sup>\*</sup>Pounds of pure live seed:

Pounds of seed x percent purity x percent gemination = pounds pure live seed (Insert Seed Mixture Here)

## X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.