### SEP - 5 2008

#### OCD-ARTESIA



OCD-ARTESIA Form 3160-3 FORM APPROVED OMB No 1004-0137 Expires March 31, 2007 (April 2004) UNITED STATES 5 Lease Serial No. DEPARTMENT OF THE INTERIOR LC-065024 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: REENTER X DRILL 8. Lease Name and Well No. Gas Well Other 1b. Type of Well X Oil Well X Single Zone Multiple Zone Poseidon 3 Federal No. 11 2. Name of Operator 9. API Well No. 30-015-3661C Cimarex Energy Co. of Colorado 10. Field and Pool, or Exploratory 3a. Address PO Box 140907 3b. Phone No. (include area code) 972-401-3111 Loco Hills; Glorieta-Yeso Irving, TX 75014 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 990 FSL & 2310 FWL 8-7-08 CR At Surface At proposed prod. Zone 3-17S-30E 12 County or Parish 14. Distance in miles and direction from nearest town or post office\* 13. State Eddy NM 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 330 240 SESW 40 any) 18 Distance from proposed location\* Proposed Depth 20. BLM/BIA Bond No. on File to nearest well, drilling, completed, applied for, on this lease, ft. NM-2575 6,000' 738' 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start\* 23 Estimated duration 20-25 days 3735' GR 09.01.08 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 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. Name (Printed/Typed) 25. Signature Date Zeno Farris 07.29.08 Title Manager Operations Administration iomes A. Ames Approved By (Signature) Name (Printed/Typed) iomes A. Ames SEP - 3 2008 Title Office CARLSBAD FIELD OFFICE NOTE: NEW PIT RULE

**Roswell Controlled Water Basin** 

ations as to any matter within its jurisdiction

ant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to

make it a crime for any person knowingly and willfully to make to any department or agency of the United

SEE ATTACHED FOR CONDITIONS OF APPROVAL

19-15-17 NMAC PART 17

A form C-144 must be approved

before starting drilling operations.

APPROVAL FOR TWO YEARS

orm 3160-5 (November 1994)

#### **UNITED STATES** DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT



FORM APPROVED OMB No. 1004-0135 Expires July 31, 1996

Lease Serial No.

i	C-	n	6	n	5	2	4

	LC-060524						
Do no abano	6. If Indian, A	Allottee or Tribe Name					
	7. If Unit or 0	CA/Agreement, Name and/or No.					
SUBMIT IN TRI	PLICATE - Other instruction	ons on reverse side					
. Type of Well  X Oil Well Gas Well	Other	SEP -5	2008	8 Well Nam	e and No.		
. Name of Operator		OCD-AR	TEGIA	Poseidon 3 I	ederal No. 11		
Cimarex Energy Co. of Colorado	)			9. API Weli	No.		
a. Address		3b. Phone No. (include	area code)	30-015-			
PO Box 140907; Irving, TX 7501		972-401-3111		10. Field and	Pool, or Exploratory Area		
Location of Well (Footage, Sec., T., R., M.	, or Survey Description)		ļ	Loco Hills; G	lorieta-Yeso		
990 FSL & 2310 FWL					Parish, State		
3-17S-30E	DODDLATE DOV/50\ 7	O INIDIOATE NATI	IDE OF NOTIO	Eddy County			
	ROPRIATE BOX(ES) TO			E, REPORT,	OR OTHER DATA		
TYPE OF SUBMISSION		T <u>Y</u>	PE OF ACTION		<del></del>		
X Notice of Intent	Acidize	Deepen	Production (Start/I	Resume)	Water Shut-Off		
	Alter Casing	Fracture Treat	Reclamation		Well Integrity		
Subsequent Report	Casing Repair	New Construction	Recomplete		Other		
	X Change Plans	Plug and Abandon	Temporarily Aban	/ Abandon			
Final Abandonment Notice	Convert to Injection	Plug Back	Water Disposal	osal			
Attach the bond under which the work will following completion of the involved opera testing has been completed. Final Aband determined that the site is ready for final in Per BLM request to avoid an ollocation as shown below:	ations If the operation results in a n lonment Notices shall be filed only a nspection.)	nultiple completion or recom after all requirements, includ	pletion in a new interva ing reclamation, have b	il, a Form 3160-4 sh een completed, and	all be filed once the operator has		
Old Location	New Location						
990 FSL & 2310 FWL	840 FSL & 231	l0 FWL					
	Please note th	nat a ROW will not be	needed for acce.	ss road to the i	new location.		
Please see attached revised pl	ats.			Eng	8-16-08 my		
I hereby certify that the foregoing is true as Name (Printed/Typed) .	nd correct	Title					
Natalie Krueger		Regulatory A	nalyst				
Signature		Date					
Matalufu	uge	August 6, 20	08				
	THIS SPACE FOR	R FEDERAL OR STAT	E OFFICE USE				
Approved by			Title FIELD MA	NAGER	Date		
Conditions of Approval, if any, are attached. certify that the applicant holds legal or equit which would entitle the applicant to conduct	able title to those rights in the sub		Office CARLSE	BAD FIELD OFF	ICE		
Title 18 U.S.C. Section 1001, makes it a cri			partment or agency of	the United States	any false, fictitious or		

(Instructions on reverse)

DISTRICT I 1625 N. French Dr., Hobbs, NH 68240 DISTRICT II 1301 W. Grand Avenue, Arteria, NM 85210

### 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

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

DISTRICT IV 1220 S. St. Francis Dr., Santa Fe, NM 57505 OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, New Mexico 87505

☐ AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code		
	96718	Loco Hills; Glorieta-	Yeso
3/35()	Proper POSEIDON '	Well Number	
OGRID No. 162683	Operat CIMAREX ENERGY	Elevation 3737'	

#### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	3	17 S	30 E		840	SOUTH	2310	WEST	EDDY

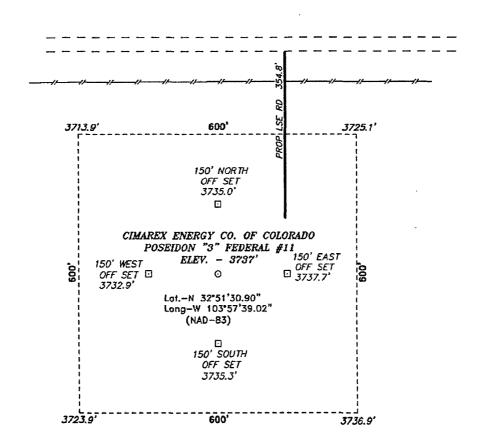
#### Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
						_			
Dedicated Acres	Joint or	Infill Con	nsolidation (	ode Ore	der No.				
40	Υ								

#### 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

	OR A NON-STANI			
				OPERATOR CERTIFICATION  I hereby certify that the information contained herein is true and complete to the best of my knowledge and betief, 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 wokuntary pooling agreement or a compulsory pooling order heretofore entered by the division.
				Signature Date  Zeno Farris  Printed Name
				SURVEYOR CERTIFICATION
	SURFACE LOCATION Lat - N32'51'30.90" Long - W103'57'39.02" NMSPCE- N 676287.4 E 655717.9		\   	I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison and that the same is true and correct to the best of my belief.
	(NAD-83)		 	Date Survey & Signature & Co.
2310*	3713.9' 3725	Poseidon 3 Fed 11		Signatury & Sea Mario Professional Surveyor
1980'	3723.9 \( \frac{1}{2} \) 3736	9* Poseidon 3 Fed 3		Certificate No. Gary L. Jones 7977  Basin surveyS

### SECTION 3, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF OF HWY 82 AND GOAT ROPERS, GO NORTH ON GOAT ROPERS FOR 1.8 MILES TO LEASE ROAD, ON LEASE ROAD GO EAST 0.9 MILES, THENCE NORTH 0.5 MILES; THENCE EAST 0.2 MILES; THENCE NORTH 0.8 MILES; THENCE WEST 0.4 MILES TO PROPOSED LEASE ROAD.

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

W.O. Number: 20168 | Drawn By: J. SMALL

Date: 07-25-2008 | Disk: JMS 20168

n Rv: J SMALL

200 0 200 400 FEET

SCALE: 1" = 200'

#### CIMAREX ENERGY CO. OF COLORADO

REF: POSEIDON "3" FEDERAL #11 / WELL PAD TOPO

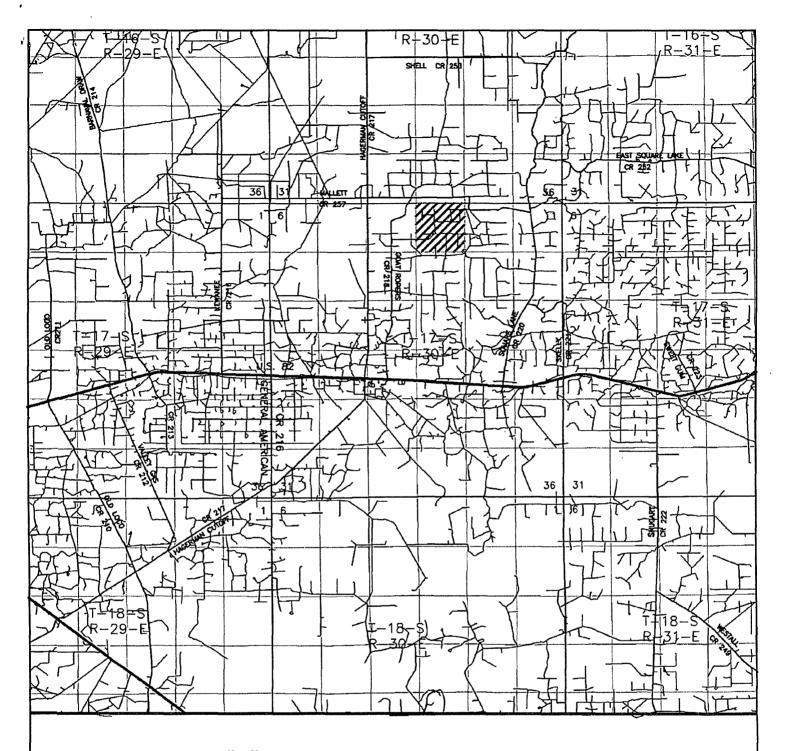
THE POSEIDON "3" FEDERAL #11 LOCATED 840'

FROM THE SOUTH LINE AND 2310' FROM THE WEST LINE OF SECTION 3, TOWNSHIP 17 SOUTH, RANGE 30 EAST,

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

Survey Date: 07-24-2008 Sheet

Sheet 1 of 1 Sheets



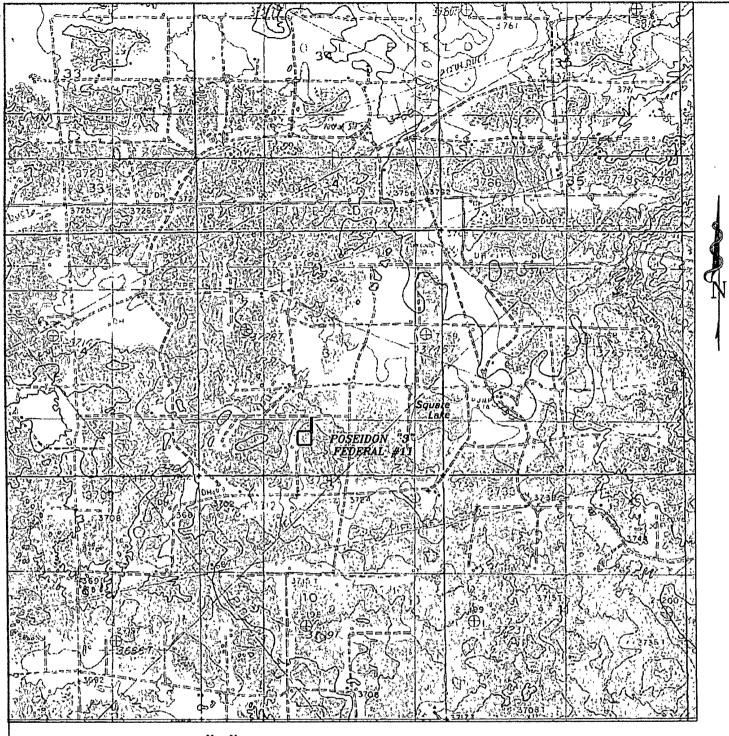
POSEIDON "3" FEDERAL #11 Located 840' FSL and 2310' FWL Section 3, Township 17 South, Range 30 East, N.M.P.M., Eddy County, New Mexico.



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 20168
Survey Date:	07-24-2008
Scale: 1" = 2	MILES
Date: 07-25-	-2008

CIMAREX ENERGY CO. OF COLORADO



POSEIDON "3" FEDERAL #11 Located 840' FSL and 2310' FWL Section 3, Township 17 South, Range 30 East, N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786 1120 N. West County Rd. Hobbs, New Mexico B8241 (505) 393-7316 - Office (505) 392-3074 - Fax basinsurveys.com

W.O. Number JMS 19804	Γ
Survey Date: 07—24—2008	
Scale: 1" = 2000'	
Date: 07-25-2008	l

CIMAREX ENERGY CO. OF COLORADO

# Application to Drill Poseidon 3 Federal No. 11 Cimarex Energy Co. of Colorado

Unit N, Section 3 T17S R30E, 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:

990 FSL & 2310 FWL

2 Elevation above sea level:

3,735 GR

3 Geologic name of surface formation:

**Quaternery Alluvium Deposits** 

4 <u>Drilling tools and associated equipment:</u>

Conventional rotary drilling rig using fluid as a

circulating medium for solids removal.

5 Proposed drilling depth:

6,000'

#### 6 Estimated tops of geological markers:

Yates	1,240'
Seven Rivers	1,535'
Queen	2,135'
San Andres	2,870'
Glorieta	4,285'
Paddock	4,400'
Blinebry	4,890'
Tubb	5,830'

#### 7 Possible mineral bearing formation:

Paddock

Oil

Blinebry

Oil

#### 8 Proposed Mud Circulating System:

ם	epth		Mud Wt	Visc	Fluid Loss	Type Mud
0'	to	450'	8.5	28	NC	FW
450'	to	1,100'	9.8 - 10.2	40-45	. NC	Brine
1,100'	to	6,000'	9.0 - 9.2	30-32	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.

## Application to Drill Poseidon 3 Federal No. 11 Cimarex Energy Co. of Colorado

#### Unit N, Section 3 T17S R30E, Eddy County, NM

#### 9 Casing & Cementing Program:

String	Hole Size		Deptl	n '	Casir	ng OD	Weight	Thread	Collar	Grade
Surface	14¾"	0	to	450'	New	11¾"	42#	8-R	STC	H-40
Intermediate	11"	0	to	1,100'	New	8%"	24#	8-R	STC	J-55
Production	7%"	0	to	6,000'	New	5½"	15.5#	8-R	LTC	J-55

#### 10 Cementing:

Surface

530 sx Class H + 2% CaCl2<sub>2</sub> (wt 14.8, yld 1.34)

**TOC** Surface

Intermediate

Lead: 300 sx Class C Lite + 6# Salt + 1/4# CF (wt 12.7, yld 1.99)

Tail: 200 sx Class C + 2% CaCl2<sub>2</sub> (wt 14.8, yld 1.34)

**TOC** Surface

**Production** 

Stage 1

580 sx 50/50/2 Class C + 1% FL25 + 0.3% FL52 + 5% Salt + 0.5% SMS (wt 13.0, yld 1.68)

Stage 2

DV Tool @ 3500'

Lead: 550 sx Class H Lite + 6# Salt + 1/4# CF (wt 12.7, yld 1.92)

Tail: 200 sx Class H + 2% CaCl<sub>2</sub> (wt 13.0, yld 1.68)

TOC 900'

Fresh water zones will be protected by setting 11¾" casing at 450' and cementing to surface. Hydrocarbon zones will be protected by setting 8½" casing at 1100' and cementing to surface and by setting 5½" casing at 6000' and cementing to 900.'

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

### Application to Drill Poseidon 3 Federal No. 11 Cimarex Energy Co. of Colorado

Unit N, Section 3 T17S R30E, Eddy County, NM

#### 11 Pressure control Equipment:

Exhibit "E-1" - Surface Casing - A minimum 11½" 2000 PSI working pressure B.O.P. consisting of a one set of blind rams and one set of pipe rams. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. 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. Ram-type BOP to be function-tested once per day. Ram-type preventor will be tested to 250 psi low and 1000 psi high, by an independent service company.

Exhibit "E-2" - Intermediate & Production Casing - A minimum 8%" 2000 PSI working pressure B.O.P. consisting of one set of blind rams and one set of pipe rams. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 1100'. 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. Ram-type BOP to be tested to 250 psi low and 2000 psi high by an independent service company.

BOP unit will be hydraulically operated. Below intermediate casing shoe, BOP 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.

We are requesting a variance for testing the 11¾" 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 11¾" casing to 1000 psi using rig pumps. The BOP will be tested to 1000 psi by an independent service company.

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

- A. Mud logging No mud logging program.
- 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 2300 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 20-25 days

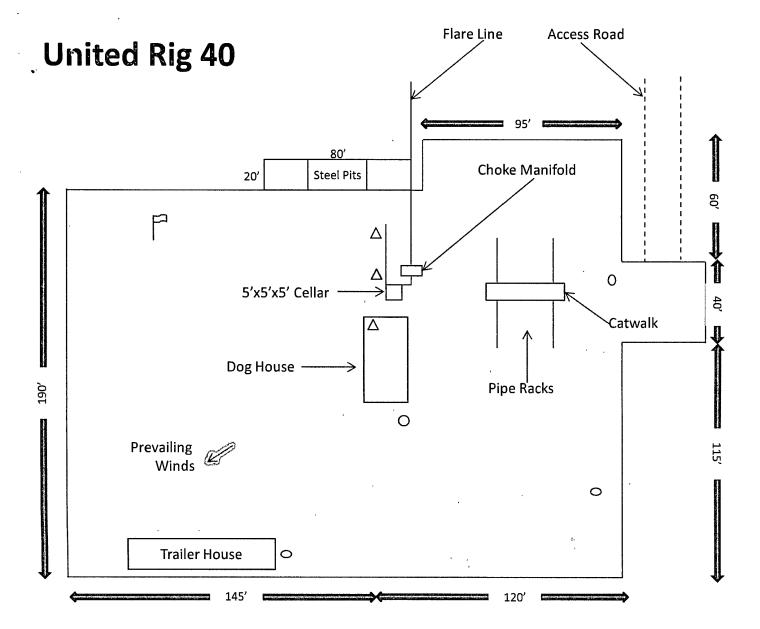
If production casing is run an additional 30 days will be required to complete and construct surface facilities.

#### 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.

Blinebry pay will be perforated and stimulated.

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



- Wind Direction Indicators (wind sock or streamers)
- O Briefing Areas
- O Remote BOP Closing Unit

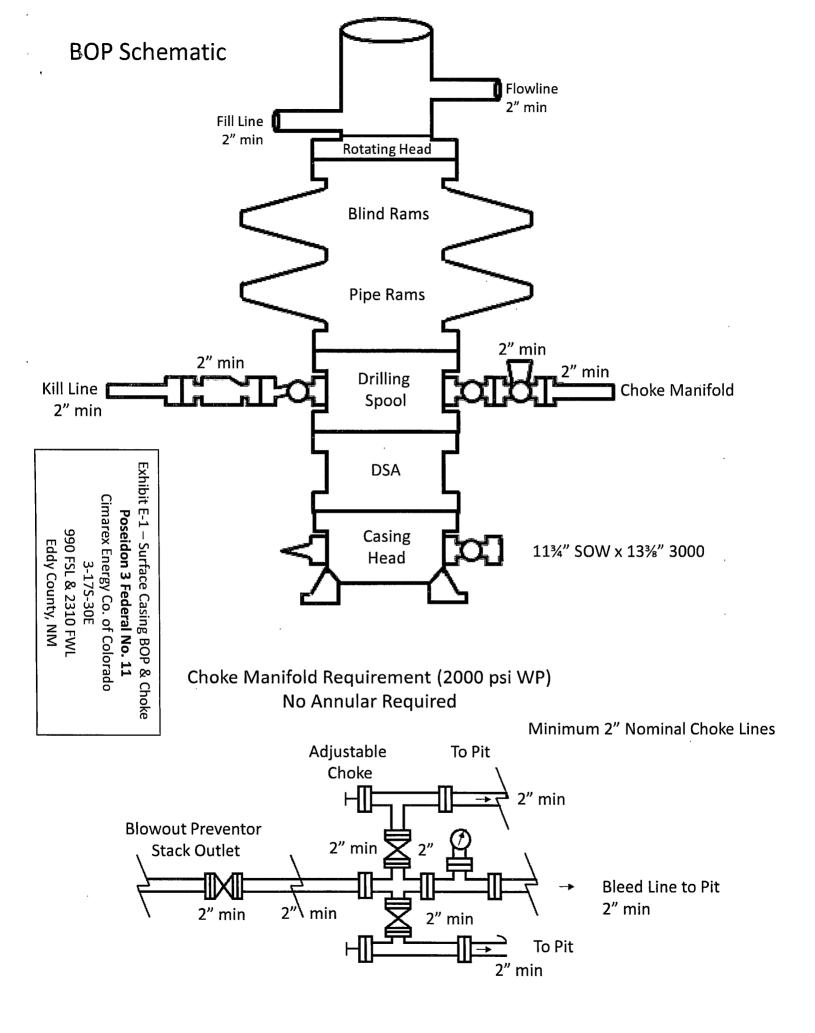
Exhibit D – Rig Diagram

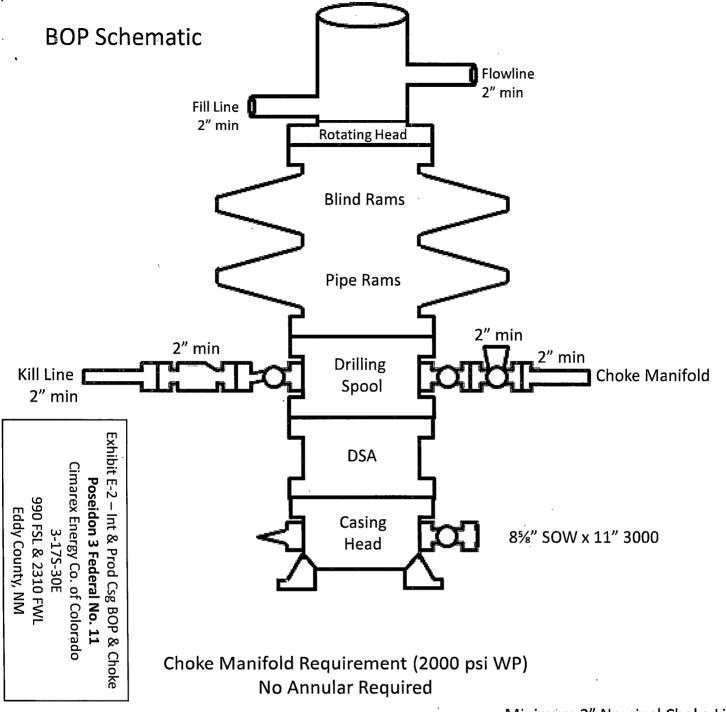
Poseidon 3 Federal No. 11

Cimarex Energy Co. of Colorado
3-17S-30E

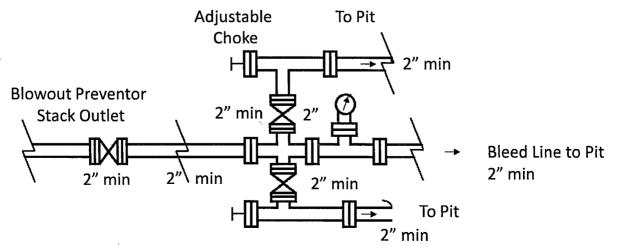
990 FSL & 2310 FWL

Eddy County, NM





Minimum 2" Nominal Choke Lines



#### Hydrogen Sulfide Drilling Operations Plan Poseidon 3 Federal No. 11 Cimarex Energy Co. of Colorado

Unit N, Section 3 T17S R30E, Eddy County, NM

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H<sub>2</sub>S 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. H<sub>2</sub>S 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 (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 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 H<sub>2</sub>S 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 H<sub>2</sub>S scavengers if necessary.

# H₂S Contingency Plan Poseidon 3 Federal No. 11 Cimarex Energy Co. of Colorado Unit N, Section 3 T17S R30E, 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<sub>2</sub>). 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		Lethal
Name	Formula	Gravity ·	Limit	Hazardous Limit	Concentration
Hydrogen Sulfide	H₂S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO₂	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 Poseidon 3 Federal No. 11 Cimarex Energy Co. of Colorado

Unit N, Section 3 T17S R30E, Eddy County, NM

### **Company Office**

Cimarex Energy Co. of Colorado Co. Office and After-Hours Menu 800-969-4789

<i>« »«» » «» « »«» » »»» » »»» » »»» » »»» » »»» » »»» » </i>		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
	,	-	
<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 Conservation 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 Management		575-887-6544	L. Vi

/ Santa Fe	8 1201 8 1201 8 1201 8 1200 8 1200 8 1200 8 1200 8 1200 8 1200 8 1200 8 1200 8 1200 8 1200 8 1200 8 1200 8 1200
New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635

National	
National Emergency Response Center (Washington, D.C.)	800-424-8802
ות זו ביותר או הווות הווות או הווות	به بسمار به مصدم به بحدور من بصدر بن جمعو بن بصدر بن جمدر بر بدون بر بصدر بن مصدر بن مصدر بر مصدر کر مصدر کر بمدار مر مصد

<u>Medical</u>	
Flight for Life - 4000 24th St.; Lubbock, TX	806-743-9911
Aerocare - R3, Box 49F; Lubbock, TX	806-747-8923
Med Flight Air Amb - 2301 Yale 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.J. Services	575-746-3569			

# Surface Use Plan Poseidon 3 Federal No. 11 Cimarex Energy Co. of Colorado

Unit N, Section 3 T17S R30E, 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 Hwy 82 and Goat Ropers, go North on Goat Ropers for 1.8 miles to lease road. On lease road, go East 0.9 miles; thence North 0.5 miles; thence East 0.2 miles; thence North 0.8 miles; thence West 0.4 miles to proposed lease road.
- 2 Planned Access Roads: 354.8' of on-lease access road is proposed.
- 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"
- 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".

# Surface Use Plan Poseidon 3 Federal No. 11 Cimarex Energy Co. of Colorado

Unit N, Section 3 T17S R30E, Eddy County, NM

#### 7 Methods of Handling Waste Material:

- A. Drill cuttings will be seperated by a series of solids removal equipment and stored in steel containment pits and then hauled to a state-approved disposal facility.
- 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.

#### 9 Well Site Layout:

- A. Exhibit "D" shows location and rig layout.
- B. Mud pits in the closed circulating system will be steel pits and the cuttings will be stored in steel containment pits.
- C. Cuttings will be stored in steel pits until they are hauled to a state-approved disposal facility.
- D. If the well is a producer, those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

# Surface Use Plan Poseidon 3 Federal No. 11 Cimarex Energy Co. of Colorado

Unit N, Section 3 T17S R30E, Eddy County, NM

#### 10 Plans for Restoration of Surface:

Rehabilitation of the location 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.

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.

#### 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 Poseidon 3 Federal No. 11 Cimarex Energy Co. of Colorado Unit N, Section 3 T17S R30E, 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:	Zeno Farris		
	Zeno Farris		
DATE:	July 29, 2008		
TITLE:	Manager Operations Administration		

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CIMAREX ENERGY CO. OF COLORADO
LEASE NO.:	LC065024
WELL NAME & NO.:	POSEIDON 3 FEDERAL #11
SURFACE HOLE FOOTAGE:	990' FSL & 2310' FWL
BOTTOM HOLE FOOTAGE	'FL&'FL
LOCATION:	Section 3, T. 17 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico

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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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Archaeology, Paleontology, and Historical Sites
Noxious Weeds
Special Requirements
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<b>⊠</b> Construction
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#### 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)

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1 through June 15 annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

#### 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 (575) 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 to be stripped is approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

#### C. CLOSED LOOP SYSTEM

Although this is a closed loop system and no reserve pits will be utilized, the v-door will be on the east side of the well bore.

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 (575) 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.

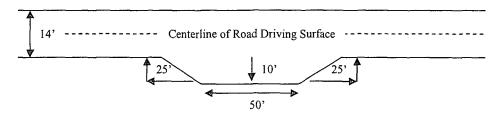
#### Ditching

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

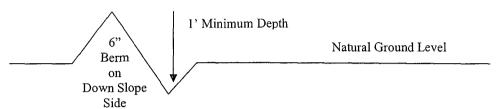


#### Drainage

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.

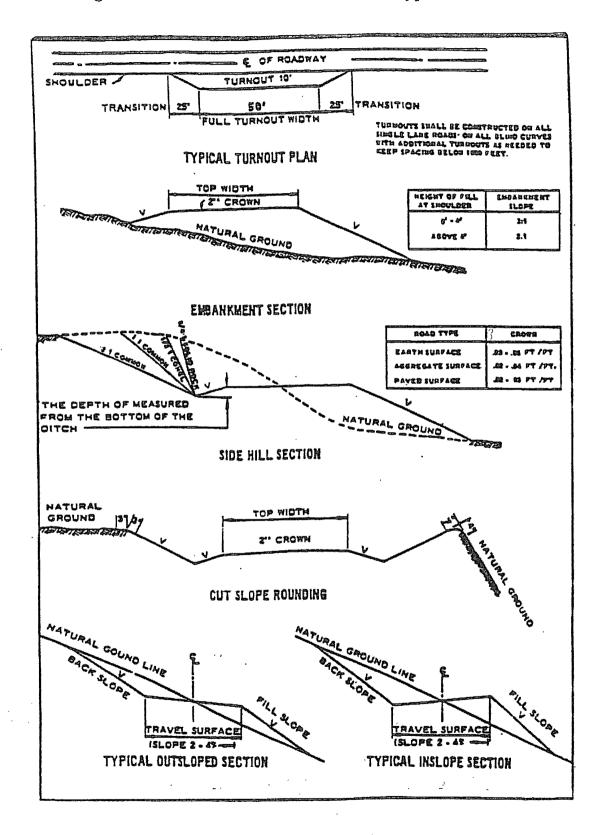
The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

#### **Public Access**

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

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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. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.
- 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

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string.

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 compression strength, whichever is greater. (This is to include the lead cement).

WOC for water basin or potash applies to entire wellbore.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possible loss of circulation in the Grayburg and San Andres formations. Possible brine/water flows in the Salado and Artesia groups.

- 1. The 11-3/4 inch surface casing shall be set at approximately 450 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. The Rustler Anhydrite may be encountered at a shallower depth.
  - 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.
  - 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 cementing will be done prior to drilling out that string.
- 2. The minimum required fill of cement behind the 8-5/8 inch intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a-d above.
- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - a. First stage to DV tool, cement shall:
  - Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with second stage cement job.
  - b. Second stage above DV tool, cement shall:
  - 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. 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 1000 psi by an independent service company.

#### D. DRILL STEM TEST

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

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### 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

#### IX. INTERIM RECLAMATION & RESEEDING PROCEDURE

#### 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.

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. RESEEDING PROCEDURE

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

#### Seed Mixture for LPC Sand/Shinnery 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 by the authorized officer.

Seed will be planted using a drill equipped with a 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 (smaller/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:

Species	<u>lb/acre</u>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A
**Four-winged Saltbush	5lbs/A

<sup>\*</sup> This can be used around well pads and other areas where caliche cannot be removed.

Pounds of seed x percent purity x percent germination = pounds pure live seed

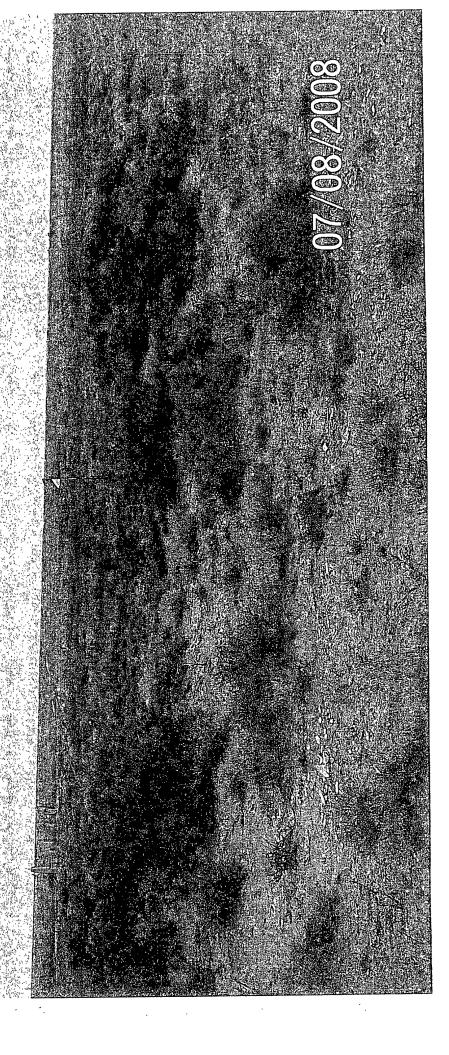
<sup>\*</sup>Pounds of pure live seed:

### X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

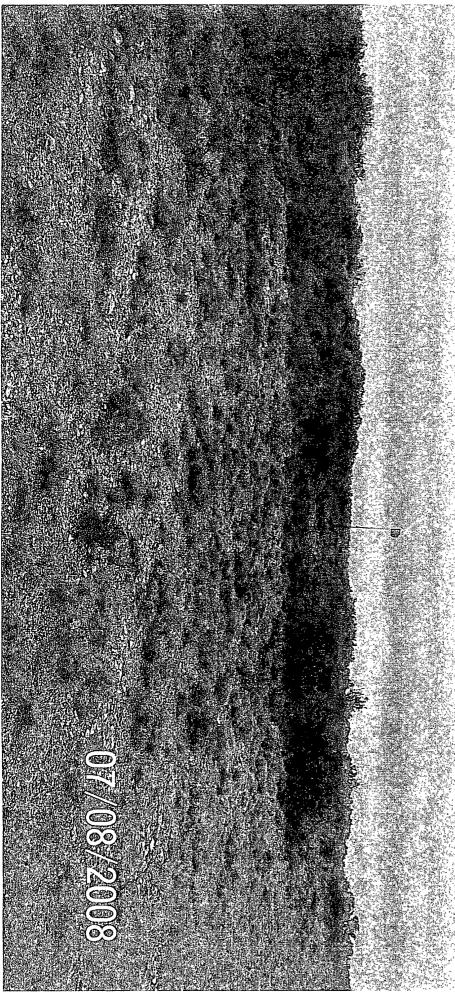
Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

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.

NEW IN TH







Burrowing Owl NEST South A North