# Form 3160-5 (November 1994) RECEIVED

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

FORM APPROVED OMB No. 1004-0135

MON 5 3 700A

- 110B	Expires July 31, 1996	
OCD-HOB	5. Lease Serial No.	
i	NM-83611	
ter an posals.	6. If Indian, Allottee or Tribe Name	

HOBBOOLD SUNDRY NO	NM-83611				
•	6. If Indian, Allottee or Tribe Name				
abandoned well. U	7. If Unit or CA/Agreement, Name and/or No.				
SUBMIT IN TRIPLICATE - O	ther instructions on reverse side	The state of the s			
Type of Well		 NM-70966-X			
Oil Well Gas Well Other	8. Well Name and No.				
2. Name of Operator		Laguna Deep Unit No. 11			
Cimarex Energy Co. of Colorado		9. API Well No.			
3a. Address	3b. Phone No. (include area code)	30-025-38755			
5215 N. O'Connor Blvd., Ste. 1500; Irving, T	X 75039 972-401-3111	10. Field and Pool, or Exploratory Area			
4. Location of Well (Footage, Sec., T., R., M., or Survey Descr	ription)	Gem; Morrow, East (Gas)			
660' FNL & 410' FWL / 25-19S-33E		11. County or Parish, State Lea County, NM			
	BOX(ES) TO INDICATE NATURE OF N				
TYPE OF SUBMISSION	TYPE OF AC				
Notice of Intent	DeepenProducti	on (Start/Resume)Water Shut-Off			
Alter Ca	asing Fracture Treat Reclama				
Subsequent Report Casing	Repair New Construction Recomp	lete Other Request Permit			
Change	e Plans Plug and Abandon Tempora	arily Abandon Extension			
Final Abandonment Notice Convert  13. Describe Proposed or Completed Operation (clearly state a	t to Injection Plug Back Water D				
testing has been completed. Final Abandonment Notices sidetermined that the site is ready for final inspection.)	ration results in a multiple completion or recompletion in a noshall be filed only after all requirements, including reclamation in a noshall be filed only after all requirements, including reclamation in a noshall be filed only after all requirements, including reclamation in a noshall be filed only after all requirements, including reclamation in a noshall be filed only after all requirements, including reclamation in a noshall be filed only after all requirements, including reclamation in a noshall be filed only after all requirements, including reclamation in a noshall be filed only after all requirements, including reclamation in a noshall be filed only after all requirements, including reclamation in a noshall be filed only after all requirements, including reclamation in a noshall be filed only after all requirements, including reclamation in a noshall be filed only after all requirements, including reclamation in a noshall be filed only after all requirements, including reclamation in a noshall be also as a filed only after all requirements.				
14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)  Natalie Krueger	Title Reg Analyst				
Signature	Date	PETROLEUM ENGINEER			
Wataliofringe,	May 4, 2009	MOV 2 4 2009			
	IS SPACE FOR FEDERAL OR STATE OFFICE	USE			
Approved by /s/ James Stovall	Title	LD MANAGER Date NOV 1 9 2009			
Conditions of Approval, if any, are attached Approval of this	The state of the s	ARLSBAD FIELD OFFICE			
certify that the applicant holds legal or equitable title to those which would entitle the applicant to conduct operations there	e rights in the subject lease	MILODING			

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

# RECEIVED

# PECOS DISTRICT CONDITIONS OF APPROVAL

NOV 23 2009 HOBBSOCD

OPERATOR'S NAME:	
LEASE NO.:	NM-83611
WELL NAME & NO.:	Laguna Deep Unit No. 11
SURFACE HOLE FOOTAGE:	660' FNL & 410' FWL
BOTTOM HOLE FOOTAGE	660' FNL & 410' FWL
LOCATION:	Section 25, T. 19 S., R 33 E., NMPM
COUNTY:	Lea 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 Site
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	Special Requirements
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	Topsoil
,	Closed Loop System
	Federal Mineral Material Pits
	Well Pads
- :	Roads
X:	Road Section Diagram
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, <u></u>	H2S – Onshore Order 6 requirements
$\Box$	Production (Post Drilling)
Ч.	Well Structures & Facilities
	Pipelines
	Electric Lines
$\boxtimes$	Closed Loop System/Interim Reclamation
	Final Abandanment/Declaration

#### 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 1st through June 15th 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.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972

#### 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 shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

#### C. CLOSED LOOP SYSTEM

Closed Loop System: V-door east

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.

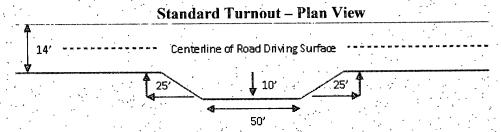
#### Ditching

Ditching shall be required on both sides of the road.

Side

#### 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:



#### 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 Typical Lead-off Ditch 1' Minimum Depth Natural Ground Level Berm on Down:Slope

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: 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.

shoulder. 100 ರ್ಷಾಕೀವಿಡ מכי וונכי בחו intervisible turnouts shall be constructed on الرا الرا الرا add timp! timputs as needed to keep spacing below 1000 feet Typical Turnout Plan embankment slope height of Fil at shoulder 3:1  $G^{\varepsilon}=\Delta^{\varepsilon}$ 2:1 **Embankment Section** crown 03 - 05 A/A earth surface 02 - .04 h/h aggregate surfa .02 - .03 4/B paved surface Depth measured hom the bottom of the disch **Side Hill Section** havel surface - (slope 2 – 4% 1") Typical Inslope Section **Typical Outsloped Section** 

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
  - ✓ Lea CountyCall the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612
- 1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the Yates formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. 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 is 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.

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 for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

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

Possible lost circulation in the Grayburg and Bone Spring formations.

Possible bursts of high pressure gas in the Wolfcamp, Strawn, Atoka, and Morrow.

1. The 13-3/8 inch surface casing shall be set at approximately 1400 feet (minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

Onshore Order II requires casing to be set across a competent bed and the Rustler Anhydrite is the first formation that meets that criteria.

- 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 is to include the lead cement slurry.
- 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 9-5/8 inch intermediate casing is:

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M Com	ant to	curfa	ce It	fcement	does no	ot circ	ulate see	B.1.a.	c-d ab	ove.
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Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

3	. Т	'he	minimu	m required fi	ll of	ceme	ent b	ehind	l the	5-1/2	2 inch	i prodi	action	casing	1S:
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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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi. A variance to test to 2000 psi as per Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17 is approved. 5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 3. 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.

#### 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 easing is run and cemented.

Proposed mud weight may not be adequate for drilling through Wolfcamp.

#### E. DRILL STEM TEST

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

**MAK 070809** 

# 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 & 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.

The 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.** Once the well is drilled, all completion procedures accomplished, and all trash removed, reseed the location and all surrounding disturbed areas as follows:

Seed Mixture 2, for Sandy 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 see 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:

<b>Species</b>		The state of the s				l <u>b/acre</u>
, -, -,,						
Sand d	lropseed (	Sporobolus o	ryptandrus)		* * * * * * * * * * * * * * * * * * * *	1.0
Sand lo	ove grass	(Eragrostis t	richodes)			1.0
Plains	bristlegra	iss (Setaria m	acrostachya	1)	*	2.0

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

Pounds of seed x percent purity x percent germination = pounds 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.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

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.