

N.M. Oil Cons. DIV-Dist. 2  
1301 Grand Avenue  
Artesia, NM 88210

Form 3160-3  
(August 1999)

FORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANGEMENT

RECEIVED  
DEC 21 2005  
UUL-ARTESIA

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM 108958	
1b. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator EOG Resources, Inc. 7377		7. If Unit or CA Agreement, Name and No.	
3a. Address P.O. Box 2267 Midland, TX 79702		8. Lease Name and Well No. Danube 14 Fed Com No. 2H 34931	
3b. Phone No. (include area code) (432) 686-3714		9. API Well No. 30-015-34494	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 230' FSL & 330' FEL (U/L P) <b>SUBJECT TO LIKE APPROVAL BY STATE</b> At proposed prod. Zone 660' FNL & 760' FEL (U/L A)		10. Field and Pool, or Exploratory Undes, Collins Ranch; Wolfcamp, NE Gas 96023	
11. Sec., T., R., M., or Blk. And Survey or Area Sed 14 T-17-S; R-24-E		12. County or Parish Eddy	
14. Distance in miles and direction from nearest town or post office* 4 mi SW from Loco Hills		13. State NM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. Unit line, if any) 230	16. No. of Acres in lease 1,360	17. Spacing Unit dedicated to this well E/2	
18. Distance from proposed location* to nearest well, drilling, completed applied for, on this lease, ft. 1600'	19. Proposed Depth 5400' TMD 9107'	20. BLM/BIA Bond No. on file NM2308	
21. Elevations (Show whether DF, KDB, RT, GL, etc) Gr 3715	22. Approximate date work will start* 11/15/2005	23. Estimated duration 30 days	
24. Attachments			

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

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest Sytem Lands, the SUPO shall be filed with the appropriate Forest Service Office)
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)
- Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature <i>Mike Francis</i>	Name (Printed/Typed) Mike Francis	Date 9/29/2005
Title Agent		

Approved by (Signature) <i>/s/ Joe G. Lara</i>	Name (Printed/Typed) <i>/s/ Joe G. Lara</i>	Date DEC 20 2005
Title ACTING FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached  
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.  
\* (Instructions on reverse)

**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED**

Roswell Controlled Water Basin

WITNESS 5/8" CEMENT JOB

SD from Santa Fe required to produce from 2 wells in same 320

**DISTRICT I**  
1625 N. French Dr., Hobbs, NM 88240

State of New Mexico

Form C-102

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

Energy, Minerals, and Natural Resources Department

Revised August 15, 2000

Submit to Appropriate District Office

**OIL CONSERVATION DIVISION**

State Lease - 4 copies

Fee Lease - 3 copies

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

1220 South St. Francis Dr.

Santa Fe, New Mexico 87505

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

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number	<sup>2</sup> Pool Code	<sup>3</sup> Pool Name
	96623	Collins Ranch NE, wolfcamp gas
<sup>4</sup> Property Code	<sup>5</sup> Property Name	<sup>6</sup> Well Number
	DANUBE "14" FED COM	2H
<sup>7</sup> OGRID No.	<sup>8</sup> Operator Name	<sup>9</sup> Elevation
7377	EOG RESOURCES, INC.	3715'

<sup>10</sup> Surface Location

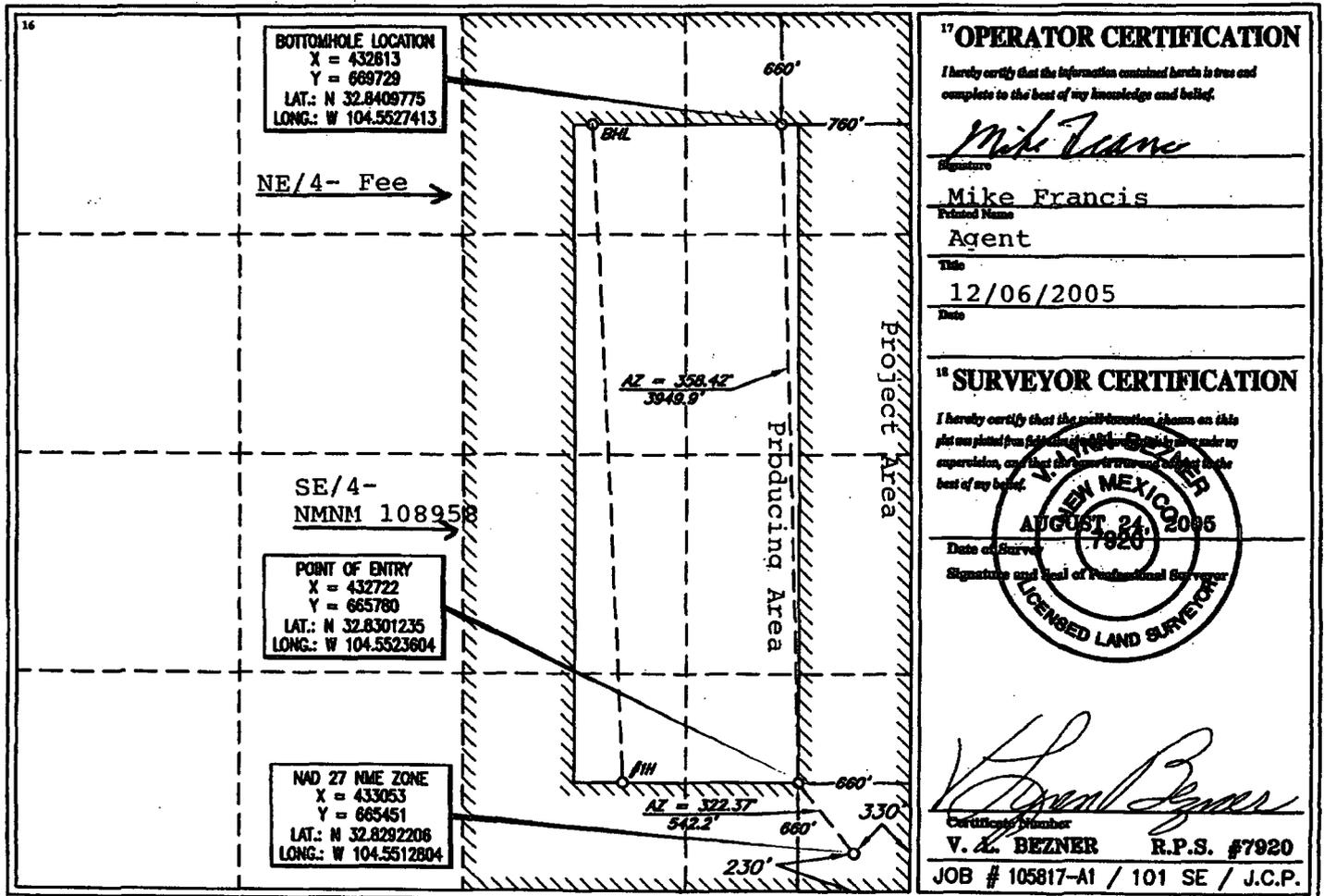
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	14	17 SOUTH	24 EAST, N.M.P.M.		230'	SOUTH	330'	EAST	EDDY

<sup>11</sup> 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
A	14	17 SOUTH	24 EAST, N.M.P.M.		660'	NORTH	760'	EAST	EDDY

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
320			

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



**DRILLING PROGRAM**

**EOG RESOURCES, INC.**  
**Danube 14 Fed Com No.2**  
**Eddy Co. NM**

**1. GEOLOGIC NAME OF SURFACE FORMATION:**

Quaternary Alluvium 0-200

**2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:**

San Andres	665'
Glorieta	2,035'
Tubb	3,326'
Abo Shale	4,015'
Wolfcamp Pay	5,065'

**3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:**

Quaternary Alluvium	0- 200'	Fresh Water
San Andres	665'	Oil
Glorieta	2,035'	Oil/Gas
Tubb	3,326'	Oil/Gas
Abo/Wolfcamp Pay	5,065'	Gas

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 8 5/8" casing at 900' and circulating cement back to surface.

**4. CASING PROGRAM**

<u>Hole Size</u>	<u>Interval</u>	<u>OD Casing</u>	<u>Weight</u>	<u>Grade</u>	<u>Jt. Conn.</u>	<u>Type</u>
12-1/4"	0-900'	8-5/8"	32#	J-55		LT&C
7-7/8"	0-8500'	4-1/2"	11.6#	N-80		LT&C

Cementing Program:

8-5/8" Surface Casing: Cement to surface with 325 sx Prem Plus, 3% Econolite 1/4 pps Flocele, 2% Calcium Chloride, 175 sx Prem Plus, 2% Calcium Chloride, 0.25#/sx Flocele

4-1/2" Production Cement w450sx Interfill C,+ .25#/sx Flocele; 400 sx Premium Cement, 100% Acid soluble Additive, 6% Halad-344 +.8% Econolite+.2% HR-55. .

**5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:**

(SEE EXHIBIT #1)

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (5000 psi WP) preventer and an annular preventer (5000-psi

## DRILLING PROGRAM

EOG RESOURCES, INC.  
Danube 14 Fed Com No.2  
Eddy Co. NM

WP). Units will be hydraulically operated and the ram-type will be equipped with blind rams on top and drill pipe rams on bottom. All BOP's and accessory equipment will be tested in accordance with Onshore Oil & Gas order No. 2. for a 3M system.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

### 6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

The well will be drilled to TD with a combination of brine, cut brine, and polymer mud system. The applicable depths and properties of this system are as follows:

<u>Depth</u>	<u>Type</u>	Wt		ViscositWaterloss	
		<u>(PPG)</u>	<u>(sec)</u>	<u>(cc)</u>	
0-900'	Fresh Water (Spud Mud)	8.6-8.8	28-34	N/c	
900'-4400'	Cut Brine	8.8-9.2	28-34	N/c	
4,400'-5,400'	Cut Brine (Pilot Hole)	8.8-9.2	28-34	10-15	
4,400'-9,500'	Polymer (Lateral)	9.0-9.4	40-45	10-25	

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

### 7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

(A) A kelly cock will be kept in the drill string at all times.

(B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

(C) A mud logging unit complete with H2S detector will be continuously monitoring drilling penetration rate and hydrocarbon shows from 5000' to TD.

### 8. LOGGING, TESTING AND CORING PROGRAM:

Electric logging will consist of GR-Dual Laterlog-MSFL and GR-Compensated Density-Neutron from TD to intermediate casing with a GR- Compensated Neutron ran from Intermediate casing to surface..

Possible sidewall cores based on shows.

### 9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND POTENTIAL HAZARDS:

The estimated bottom hole temperature (BHT) at TD is 125 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 2000 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered,

**DRILLING PROGRAM**

**EOG RESOURCES, INC.  
Danube 14 Fed Com No.2  
Eddy Co. NM**

reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

**10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:**

The drilling operation should be finished in approximately one month. If the well is productive, an additional 30-60 days will be required for completion and testing before a decision is made to install permanent facilities.

## **DRILLING PROGRAM**

**EOG RESOURCES, INC.  
Danube 14 Fed Com No.2  
Eddy Co. NM**

### **SURFACE USE AND OPERATIONS PLAN**

#### **1. EXISTING ROADS:**

Access to location will be made as shown on Exhibit #2

Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

#### **2. PROPOSED ACCESS ROAD:**

827 ' of new road is required See Exhibit 2a

No turnouts necessary.

No culverts, cattleguards, gates, low-water crossings are necessary.

Surfacing material consists of native caliche to be obtained from the nearest BLM-approved caliche pit. Any additional materials required will be purchased from the dirt contractor.

#### **3. LOCATION OF EXISTING WELLS:**

Exhibit #3 shows all existing wells within a one-mile radius of this well.

#### **4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:**

There are no existing production facilities. If production is encountered, a temporary facility will be established on the drill pad, and if warranted, a production facility would be built at a later date in the immediate area of the drill pad location. If the well is productive, the flowline will be built on lease to the nearest pipeline.

#### **5. LOCATION AND TYPE OF WATER SUPPLY:**

Fresh water and brine water for drilling will come from commercial sources and transported to the well site over the roads as shown on Exhibit #2. and by temporary water supply lines

#### **6. PLANS FOR RESTORATION OF THE SURFACE:**

**DRILLING PROGRAM**

**EOG RESOURCES, INC.  
Danube 14 Fed Com No.2  
Eddy Co. NM**

After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Location will be cleaned of all trash and junk to leave the well in an aesthetically pleasing condition as possible.

Any unguarded pits containing fluid will be fenced until they are dry and back filled.

After abandonment of the well, surface restoration will be in accordance with current federal laws and regulations. Location will be cleaned, and the well pad removed to promote vegetation and disposal of human waste will be complied with. Trash, waste paper, garbage and junk will be hauled to an approved disposal site in an enclosed trash trailer.

All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion operations.

**ANCILLARY FACILITIES:**

No airstrip, campsite, or other facilities will be built.

**WELL SITE LAYOUT:**

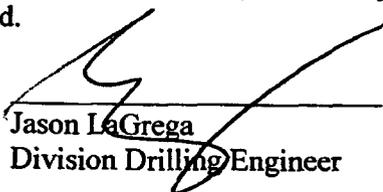
Exhibit #4 shows the relative location and dimensions of the well pad.

**OTHER INFORMATION:**

The area around the well site is grassland and the topsoil is and sandy. The vegetation is native scrub grasses .

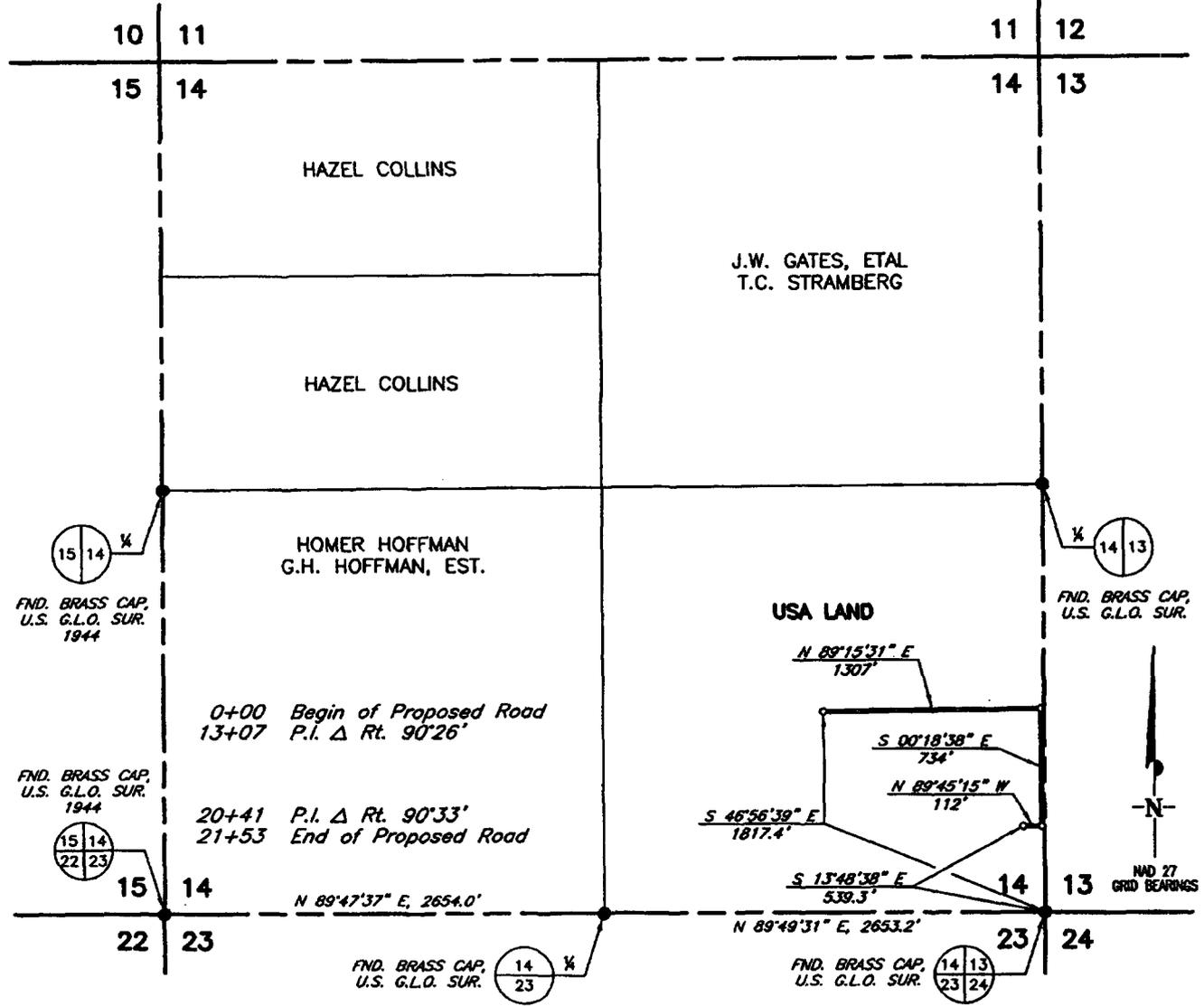
**CERTIFICATION:**

I HEREBY CERTIFY that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by EOG Resources, Inc. and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

  
Jason LaGrega  
Division Drilling Engineer

DATE 9/30/2005

SECTION 14, TOWNSHIP 17 SOUTH, RANGE 24 EAST, N.M.P.M.,  
 EDDY COUNTY NEW MEXICO



LEGAL DESCRIPTION

A strip of land 30.0 feet wide 2153 feet in length and being 15.0 feet Left and 15.0 feet Right of the above centerline survey.



I HEREBY CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

*V. Lynn Bezyer*  
 V. Lynn Bezyer

				<b>EOG RESOURCES, INC.</b>		SCALE: 1" = 1000'
NO.	REVISION	DATE	BY	SURVEYING AND MAPPING BY <b>TOPOGRAPHIC LAND SURVEYORS</b> MIDLAND, TEXAS		DATE: NOVEMBER 4, 2005
SURVEYED BY: C.B. & T.M.						JOB NO.: 107987
DRAWN BY: J.C.P.						QUAD NO.: 101SE
APPROVED BY: V.L.B.						SHEET: 1 OF 1



## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: EOG RESOURCES, INC.  
Well Name & No. 2H - DANUBE 14 FEDERAL COM  
Location: 230' FSL & 330' FEL - SEC 14 - T17S - R24E - EDDY COUNTY (SHL)  
660' FNL & 760' FEL - SEC 14 - T17S - R24E - EDDY COUNTY (BHL)  
Lease: NM-108958

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 234-5909 or (505) 361-2822 (After hours) - for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 8-5/8 inch 4-1/2 inch

C. BOP tests

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing ( size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

5. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

### II. CASING:

1. The 8-5/8 inch surface casing shall be set at 900 feet, below usable water and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the 4-1/2 inch production casing is cement shall extend upward a minimum of 500 feet above the uppermost hydrocarbon bearing interval.

### **III. PRESSURE CONTROL:**

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 8-5/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi.
3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
  - The tests shall be done by an independent service company.
  - The results of the test shall be reported to the appropriate BLM office.
  - Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
  - Testing must be done in a safe workman-like manner. Hard line connections shall be required.
  - BOPE must be tested prior to drilling into the Wolfcamp Formation by an independent service company.

### **IV. 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. Monitoring equipment shall consist of the following:

1. Recording pit level indicator to indicate volume gains and losses.
2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
3. Flow-sensor on the flow line to warn of abnormal mud returns from the well.