Form_3160-3 -(September 2001) UNITED STAT DEPARTMENT OF THE BUREAU OF LAND MAN APPLICATION FOR PERMIT TO Ia. Type of Work: D DRILL REENT 1b. Type of Well: Oil Well Gas Well Other	INTERIOR AGEMENT DRILL OR R	OCD-HO EENTER		FORM APPRO OMB No. 1004 Expires January 5. Lease Serial No. NM9016 6. If Indian, Allottee or Tr 7. If Unit or CA Agreemer 8. Lease Name and Well No Geronimo 30 Federal #5	WED -0136 31, 2004 ribe Name t, Name and No.
2. Name of Operator				9. API Well No. 3/7-1725-32	1.02
Mewbourne Oil Company		(instants and a)			
3a. Address		o. (include area code)		10. Field and Peol, or Exploratory	
PO Box 5270 Hobbs, NM 88240	505-393-59			Lusk BoneSpring 4145 11. Sec., T., R., M., or Blk.	
<ol> <li>Location of Well (Report location clearly and in accordance wind the surface 1900' FNL &amp; 450' FWL</li> <li>At proposed prod. zone</li> <li>Distance in miles and direction from nearest town or post office</li> <li>miles south of Maljamar, NM</li> </ol>	IN CONTROL	LED WATER BA	SIN	Sec 30-T18S-R32E 12. County or Parish Lea	13. State
15. Distance from proposed*	16 No. of A	Acres in lease	17. Spacin	g Unit dedicated to this well	
location to nearest	10.100.011	leres in lease			
property or lease line, ft. (Also to nearest drig. unit line, if any) <b>450'</b>	160		40		
18. Distance from proposed location*	19. Propose	d Depth	20. BLM/I	/BIA Bond No. on file	
to nearest well, drilling, completed, applied for, on this lease, ft.				M - Convertige	
1000*	9400'	imata data work will a		Nationwide 23. Estimated duration	
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	ASAP	imate date work will s	tart.	30	
3683' GL	24. Atta	ahmanta			
				- 6	
<ol> <li>The following, completed in accordance with the requirements of On:</li> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest Syster SUPO shall be filed with the appropriate Forest Service Office).</li> </ol>		<ol> <li>Bond to cover th Item 20 above).</li> <li>Operator certific</li> </ol>	ne operation ation. specific info	s unless covered by an exist prmation and/or plans as ma	
25. Signature the it's Ollar	Name	(Printed/Typed)		Date	;
25. Signature Kniti gleen	Kristi	Green		10/1	9/06
Title <b>V</b>					
Hobbs Regulatory	Nome	(Printed/Typed)		Date	
Approved by (Signature) /s/ Don Peterson Title	Offic	· · · ·	CARL		<u>NOV 2 0 2006</u> FICE
ACTING FIELD MANAGE			(1 1 1	1	
Application approval does not warrant or certify that the applicant hol operations thereon. Conditions of approval, if any, are attached.	ds legal or equita	ble title to those rights 1	n the subject	<b>R</b> .	FOR 1 YEAR
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, mal States any false, fictitious or fraudulent statements or representations	ke it a crime for a as to any matter v	ny person knowingly a vithin its jurisdiction.	nd willfully	to make to any department or	agency of the United
*(Instructions on reverse)		·····			
SEE ATTACHED FOR CONDITIONS OF APPROVAL	61	JW		9202122232425	000000000000000000000000000000000000000

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED



DISTRICT I 1825. N. French<sup>1</sup>Dr., Hobbs, NM 88240 DISTRICT II 1301 W. Grand Avenue, Artesia, NM 88210

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

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

1220 South St. Francis Dr.

Santa Fe, New Mexico 87505

Form C-102 Revised October 12, 2005 Submit to Appropriate District Office

State Lease - 4 Copies Fee Lease - 3 Copies

□ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT Pool Name Pool Code API Number 30-025-38183 41450 Lusk Bone Spring ell Number Property Name Property Code 5 GERONIMO "30" FEDERAL 35313 Elevation **Operator** Name OGRID No. 3683' 14744 MEWBOURNE OIL COMPANY Surface Location East/West line Feet from the County Feet from the North/South line Lot Idn UL or lot No. Section Township Range 450 WEST LEA 1900 NORTH 32 E 30 18 S E Bottom Hole Location If Different From Surface North/South line Feet from the East/West line County Feet from the UL or lot No. Lot Idn Section Township Range **Consolidation** Code Order No. Joint or Infill Dedicated Acres 40 NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organisation 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 ewe NM 4014 numer of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. 006 9<u>|</u>30/04 Man Atti 3686.8 6<u>85.</u>7 \_at.: "N32 43'12.1" Date Signature Long.: W103\*40'42.7 450 N:: 626282.74 Kristi Green ł 1 E.: 743387.01 Printed Name 3682.4' (NAD-27) 82 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and NM 98189 correct to the belief. EMBER 11 200 SE FIEN Date S Signat a of nofe 72971 NM 94192 AND I IN AN 0110 Certificate No. Gary L. Jones 7977 BASIN SURVEYS

# United States Department of the Interior Bureau of Land Management Roswell Field Office 2909 West Second Street Roswell, New Mexico 88201-1287

# **Statement Accepting Responsibility for Operations**

Operator Name:Mewbourne Oil CompanyStreet or Box:P.O. Box 5270City, State:Hobbs, New MexicoZip Code:88241

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted of the leased land or portion thereof, as described below.

Lease Number:

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r: Lease Number #NM-9016

Legal Description of Land:

Unit E of Section 30, T-18S, R-32E Lea County, New Mexico. Location @ 1900' FNL & 450' FWL.

Formation (if applicable):

Bond Coverage: \$150,000

BLM Bond File:

NM1693, Nationwide

Authorized Signature: <u>Huste</u> Gren for NM Young Name: NM (Micky) Young

ame: NM (Micky) Young Title: District Manager Date: October 19, 2006

# Drilling Program Mewbourne Oil Company Geronimo 30 Federal #5 1900' FNL & 450' FWL Sec 30-T18S-R32E Lea County, New Mexico

#### 1. The estimated top of geological markers are as follows:

Rustler	902'
Salado	1116'
Yates	2452'
Seven Rivers	2895'
Queen	3625'
Penrose	3854'
Delaware	4732'
Bone Spring	6640'
TD	9400'

#### 2. Estimated depths of anticipated fresh water, oil, or gas:

Water	Below 200'
Hydrocarbons	All zones below Delaware

#### 3. Pressure control equipment:

A 2000 psi working pressure annular BOP will be installed on the 13 <sup>3</sup>/<sub>6</sub>" surface casing. A 3000 psi WP Double Ram BOP and a 3000 psi WP Annular will be installed after running 8 <sup>5</sup>/<sub>6</sub>" casing. Pressure tests will be conducted prior to drilling out under all casing strings. BOP controls will be installed prior to drilling under surface casing and will remain in use until completion of drilling operations. BOP's will be inspected and operated as recommended in Onshore Order #2 to insure mechanical integrity and the inspection will be recorded on the daily drilling report. Kelly cock and a sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position when the kelly is not in use.

#### 4. Proposed casing and cementing program:

Α.	Casing Prog	Casing Program:					
	Hole Size	Casing	Wt/Ft.	Grade	<u>Depth</u>		
	17 1⁄2"	13 3/8"	48#	H40	0-500' (Lea County alternative conditions of approval)		
	12 ¼"	8 <sup>5</sup> ⁄8"	32#	J55	0-2400'		
	7 1⁄8"	5 1⁄2"	17#	L80 & J55	0-9400'		

Minimum casing design factors: Collapse 1.2, Burst 1.1, Tensile strength 2.0.

#### B. Cementing Program

- i. <u>Surface Casing</u>: 400 sacks Class C light cement containing ½#/sk cellophane flakes, 2% CaCl, 5#/sk gilsonite. 200 sks Class C cement containing 2% CaCl.
- ii. <u>Intermediate Casing:</u> 700 sacks 35:65 pozmix cement containing 6% gel,5#/sack gilsonite. 200 sacks Class C cement containing 2% CaCl.
- iii. <u>Production Casing</u>: 1200 sacks Class H cement containing fluid loss additive, friction reducer additive, compressive strength enhancer, and NaCl. Shallower productive zones may be protected by utilizing a multiple stage cementing tool in the production casing below potentially productive zones and cementing with a light cement slurry.

\*Mewbourne Oil Company reserves the right to change cement designs as hole conditions may warrant.

Drilling Program Geronimo 30 Federal #5 Page 2

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# 5. Mud Program:

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Interval <	Type System	<u>Weight</u>	<u>Viscosity</u>	Fluid Loss
0'-500'	FW spud mud	8.6-9.4	32-34	NA
, 500'-2400'	Brine water	10.0-10.2	28-30	NA
<u>Interval</u> 951 0'-500' 500'-2400' 9522400'-9400'	Cut brine water	8.8-9.2	28-30	8-12

# 6. Evaluation Program:

Samples:	10' samples from intermediate casing to TD
Logging:	Compensated density and dual laterlog from intermediate casing
	to TD
Coring:	As needed for evaluation
Drill Stem Tests:	As needed for evaluation

# 7. Downhole Conditions

Zones of abnormal pressure:	None anticipated
Zones of lost circulation:	Anticipated in surface and intermediate holes
Maximum bottom hole temperature:	150 degree F
Maximum bottom hole pressure:	8.6 lbs/gal gradient or less

# 8. Anticipated Starting Date:

Mewbourne Oil Company intends to drill this well as soon as possible after receiving approval with approximately 30 days involved in drilling operations and an additional 10 days involved in completion operations on the project.

Hydrogen Sulfide Drilling Operations Plan Mewbourne Oil Company Geronimo 30 Federal #5 1900' FNL & 450' FWL Sec 30-T18S-R32E Lea County, New Mexico

## 1. General Requirements

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Rule 118 does not apply to this well because MOC has researched this area and no high concentrations of H2S were found. MOC will have on location and working all H2S safety equipment before the Yates formation for purposes of safety and insurance requirements.

# 2. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will have received training from a qualified instructor in the following areas prior to entering the drilling pad area of the well:

- 1. The hazards and characteristics of hydrogen sulfide gas.
- 2. The proper use of personal protective equipment and life support systems.
- 3. The proper use of hydrogen sulfide detectors, alarms, warning systems, briefing areas, evacuation procedures.
- 4. The proper techniques for first aid and rescue operations.

Additionally, supervisory personnel will be trained in the following areas:

- 1 The effects of hydrogen sulfide on metal components. If high tensile tubular systems are utilized, supervisory personnel will be trained in their special maintenance requirements.
- 2 Corrective action and shut in procedures, blowout prevention, and well control procedures while drilling a well.
- 3 The contents of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering a know hydrogen sulfide source. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan.

## 3. Hydrogen Sulfide Safety Equipment and Systems

All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the intermediate casing.

- 1. <u>Well Control Equipment</u>
  - A. Flare line with automatic igniter or continuous ignition source.
  - B. Choke manifold with minimum of one adjustable choke.
  - C. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
  - D. Auxiliary equipment including rotating head and annular type blowout preventer.
- 2. <u>Protective Equipment for Essential Personnel</u> Thirty minute self contained work unit located at briefing area as indicated on wellsite diagram.

<u>Hydrogen Sulfide Drilling Operations Plan</u> Mewbourne Oil Company Geronimo 30 Federal #5 Page 2

#### 3. Hydrogen Sulfide Protection and Monitoring Equipment

Two portable hydrogen sulfide monitors positioned on location for optimum coverage and detection. The units shall have audible sirens to notify personnel when hydrogen sulfide levels exceed 20 ppm.

#### 4. Visual Warning Systems

A. Wind direction indicators as indicated on the wellsite diagram.

B. Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.

## 4. Mud Program

The mud program has been designed to minimize the amount of hydrogen sulfide entrained in the mud system. Proper mud weight, safe drilling practices, and the use of hydrogen sulfide scavengers will minimize hazards while drilling the well.

## 5. Metallurgy

All tubular systems, wellheads, blowout preventers, drilling spools, kill lines, choke manifolds, and valves shall be suitable for service in a hydrogen sulfide environment when chemically treated.

#### 6. Communications

State & County Officials phone numbers are posted on rig floor and supervisors trailer. Communications in company vehicles and toolpushers are either two way radios or cellular phones.

## 7. Well Testing

Drill stem testing is not an anticipated requirement for evaluation of this well. A drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

# Notes Regarding Blowout Preventer Mewbourne Oil Company Geronimo 30 Federal #5 1900' FNL & 450' FWL Sec 30-T18S-R32E Lea County, New Mexico

- I. Drilling nipple (bell nipple) to be constructed so that it can be removed without the use of a welder through the opening of the rotary table, with minimum internal diameter equal to blowout preventer bore.
- II. Blowout preventer and all fittings must be in good condition with a minimum 3000 psi working pressure below intermediate casing.
- III. Safety valve must be available on the rig floor at all times with proper connections to install in the drill string. Valve must be full bore with minimum 3000 psi working pressure.
- IV. Equipment through which bit must pass shall be at least as large as internal diameter of the casing.
- V. A kelly cock shall be installed on the kelly at all times.

Blowout preventer closing equipment to include and accumulator of at least 40 gallon capacity, two independent sources of pressure on closing unit, and meet all other API specifications.



# Mewbourne Oil Company BOP Schematic for 8 3/4" or 7 7/8" Hole



Lea, NM

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# Mewbourne Oil Company



**Rig Location Schematic** 

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# **Proposed Production Facilities Schematic**



#### **CONDITIONS OF APPROVAL - DRILLING**

<b>Operator's Name:</b>	Mewbourne Oil Co
Well Name & No.	Geronimo 30 Federal # 5
Location:	1900' FNL, 450' FWL, SEC 30, T18S, R32E, Lea county, NM
Lease:	NM-9016

#### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 - 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: <u>13 3/8</u> inch <u>8 5/8</u> inch <u>5 1/2</u> inch

#### C. BOP tests

2. A Hydrogen Sulfide (H2S) Drilling Plan should be activated prior to drilling into the <u>N/A</u> Formation. A copy of the plan shall be posted at the drilling site.

3 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.

4. 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.

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

6. 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.

7. Gamma-Ray/Neutron logs shall be run from the base of the Salado Formation to the surface; cable speed not to exceed 30 feet per minute.

#### **II. CASING:**

1. The <u>13 3/8</u> inch surface casing shall be set at <u>APPROXIMATELY 500</u> 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 <u>8 5/8</u> inch intermediate casing is <u>circulate cement to</u> the surface. This casing string will be set below the salt @ approximately 2400 feet.

4. The minimum required fill of cement behind the 5-1/2 inch production casing is <u>cement shall extend</u> upward a minimum of 200 feet above the base of the intermediate casing string.

5. Whenever a casing string is cemented in the R-111-P Potash Area, cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

# **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 <u>13 3/8</u> 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) required for drilling the surface and intermediate casing shall be <u>2000</u> psi. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the <u>8 5/8</u> inch casing shall be <u>3000</u> psi.

- 3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
- A variance to test the\_\_\_\_\_ to the reduced pressure of \_\_\_psi with the rig pumps is approved.
- 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 <u>Wolfcamp</u> 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.

4. Fresh water based mud will be used to drill down to a depth of 951' to protect fresh water zones. The well will periodically be swept with viscous low water loss pills to build a filter cake to help to protect the fresh water that is deeper than the surface casing. Saturated brine based mud will be used to drill the salt section, together with low water loss materials to reduce contamination of the shallower fresh water.

Engineering may be contacted at 505-706-2779 for variances if necessary.

Fwright 11/07/06

District II       1301 W. Grand Avenue, Artesia, NM 88240       Energy M         District III       000 Rio Brazos Road, Aztec, NM 87410       011 0         District IV       1220 S. St. Francis Dr., Santa Fe, NM 8755       S         Pit or Below-Graz         Is pit or below-grade tar	J South St. Francis Dr. F	No X V53420		
Operator:      Mewbourne Oil CompanyTelephon         Address:      PO Box 5270Hobbs, NM 88240         Facility or well name:      Geronimo 30 Federal #5API #: 3D-D2E         LatitudeN32°43'12.1"LongitudeW103°40'42.7"         Surface Owner       Federal X State [] Private [] Indian []	- 381			
Pit         Type:       Drilling Production Disposal         Workover       Emergency         Lined Unlined       D         Liner type:       Synthetic Thickness 20_mil       Clay         Volume       24,000       bbl	Below-grade tank         Volume:      bbl         Type of fluid:          Construction material:          Double-walled, with leak detection?       Yes			
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) ( 0 points) X		
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	(20 points) ( 0 points) X		
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) ( 0 points) X		
Ranking Score (Total Points)       0 points         If this is a pit closure:       (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location:         onsite       offsite       If offsite, name of facility       (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered:       No       Yes       If yes, show depth below ground surface       ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.         I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines and a general permit and (attached) alternative OCD-approved plan         Date:				
	<b>v</b>	ABO TE BECENTESA TO TE BECENTE		