Form 3160 3

ATS-09-520 RM

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

5. Lease Serial No. NM 2752 025733

APPLICATION FOR PERMIT TO	DRILL OR RE	ENTRECE	IVED	-6 If Indian, Allottee	or Tribe Na	ame	
la. Type of Work: DRILL REEN	ΓER .	NOV 1	1 2009	7. If Unit or CA Agre	ement, Nam	ne and No	
1b Type of Well Oil Well Gas Well Other	☐ Sin	NMOGD"	MTESI/	8. Lease Name and Wo	ell No Com #1		
2 Name of Operator				9. API Well No	_		
Mewbourne Oil Company - 14744				<u> </u>	<u>3:3754</u>	3 <sup>9</sup> L	
3a. Address	3b. Phone No.	b. Phone No. (include area code) 10. Field and Pool, or Exploratory					
PO Box 5270 Hobbs, NM 88241	575-393-590	)5		Grayburg Morrow			_
4 Location of Well (Report location clearly and in accordance wi	th any State requir	ements. *)		11. Sec., T., R., M., or	Blk and Su	irvey or Are	a
At surface 1980' FNL & 810' FWL Unit E					•		
At proposed prod zone				Sec 7-T17S-R30E			
14. Distance in miles and direction from nearest town or post office*			·	12. County or Parish		13 State	
4 miles NW of Loco Hills				Eddy	N	IM	
15. Distance from proposed* location to nearest property or lease line, ft	16. No of Ac	16. No of Acres in lease		17. Spacing Unit dedicated to this well			
(Also to nearest drig. unit line, if any) 660'	Approx 320		314.75				
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft  NA	19. Proposed			20. BLM/BIA Bond No. on file NM1693, Nationwide			
21. Elevations (Show whether DF, KDB, RT, GL, etc.)		nate date work will s	<u> </u>	23. Estimated duration			
3656' GL	ASAP						
	24. Attacl	hments					
The following, completed in accordance with the requirements of Ons	hore Oil and Gas (	Order No.1, shall be at	ttached to this	form:			
<ol> <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 Syste SUPO shall be filed with the appropriate Forest Service Office).</li> </ol>	m Lands, the	Item 20 above). 5. Operator certific	cation. specific info	rmation and/or plans a			
25 Signature	Name (	Printed/Typed)		Date			_
Jacky Lathan	Jackie	Jackie Lathan					
Title							
Hobbs Regulatory							
Approved by (Signature) /s/ Don Peterson	Name (	(Printed/Typed)			DMOV	9 200	19
Title FIELD MANAGER	· Office		CARLSI	BAD FIELD OFFICE			
Application approval does not warrant or certify that the applicant holoperations thereon.  Conditions of approval, if any, are attached.	ds legal or equitabl	e title to those rights i		lease which would entitle ROVAL FOR TO			ct

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)

Conditions of approval, 1f any, are attached.

Roswell Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

# United States Department of the Interior Bureau of Land Management Carlsbad Field Office 620 E Greene Street Carlbad, New Mexico 88201-1287

# **Statement Accepting Responsibility for Operations**

Operator Name:

Mewbourne Oil Company

Street or Box:

P.O. Box 5270

City, State:

Hobbs, New Mexico

Zip Code:

88241

Mewbourne Oil Company of Hobbs, NM is a field office of Mewbourne Oil Company, 3901 S Broadway, Tyler TX 75701. **Mail connected to this APD should be directed to the Hobbs address.** 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:

Lease Number #NM7752

Legal Description of Land:

Section 7, T-17S, R-30E Eddy County, New Mexico.

Location @ 1980' FNL & 810' FWL.

Formation (if applicable):

Morrow

Bond Coverage:

\$150,000

BLM Bond File:

NM1693, Nationwide

Authorized Signature: M Uchna

Name: NM (Mickey) Young
Title: District Manager

Date: August 27, 2009

DISTRICT I 1625 N. French Dr., Hobbs, NM 68240 DISTRICT II

DISTRICT III

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

# OIL CONSERVATION DIVISION 1000 Rio Brazos Rd., Azteo, NM 67410

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

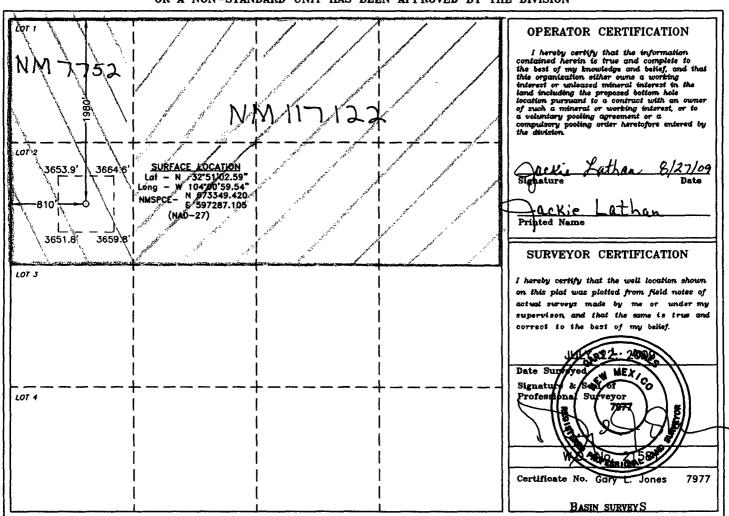
☐ AMENDED REPORT

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

30.01	Number 5.37	559	Pool Code Pool Name  Oraybura Morro					ง <b>พ</b>	
Property 3809				Well Number					
OGRID N			Operator Name MEWBOURNE OIL COMPANY						tion 6'
Surface Location									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 2	7	17 S	30 E		1980	NORTH	810	WEST	EDDY
			Bottom	Hole Loc	cation If Diffe	rent From Sur	face		
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   Consolidation Code   Order No.									

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



SECTION 7, TOWN AIP 17 SOUTH, RANGE JO EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

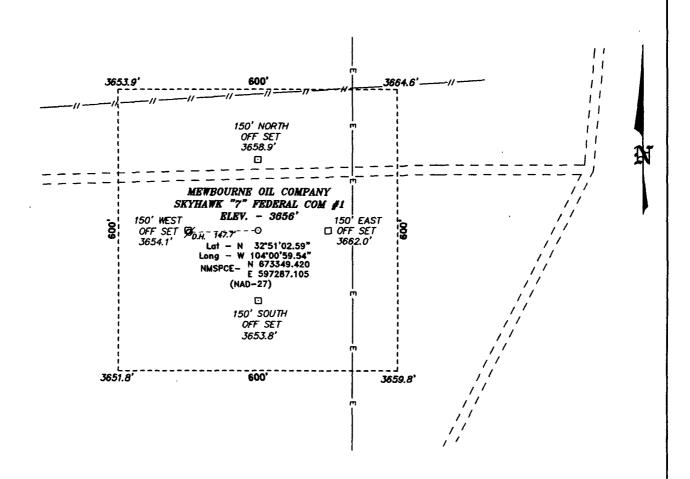


Exhibit 3

Directions to Location:

FROM MILE MARKER 130 OF US HWY 130, GO 0.2 MILES TO LEASE ROAD ON LEASE ROAD GO NORTHERLY 2.3 MILES TO LEASE ROAD, ON LEASE ROAD GO WEST 0.1 MILES TO PROPOSED WELL PAD.

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

200 0 200 400 FEET SCALE: 1" = 200'

# MEWBOURNE OIL COMPANY

REF: SKYHAWK "7" FEDERAL COM #1 / WELL PAD TOPO

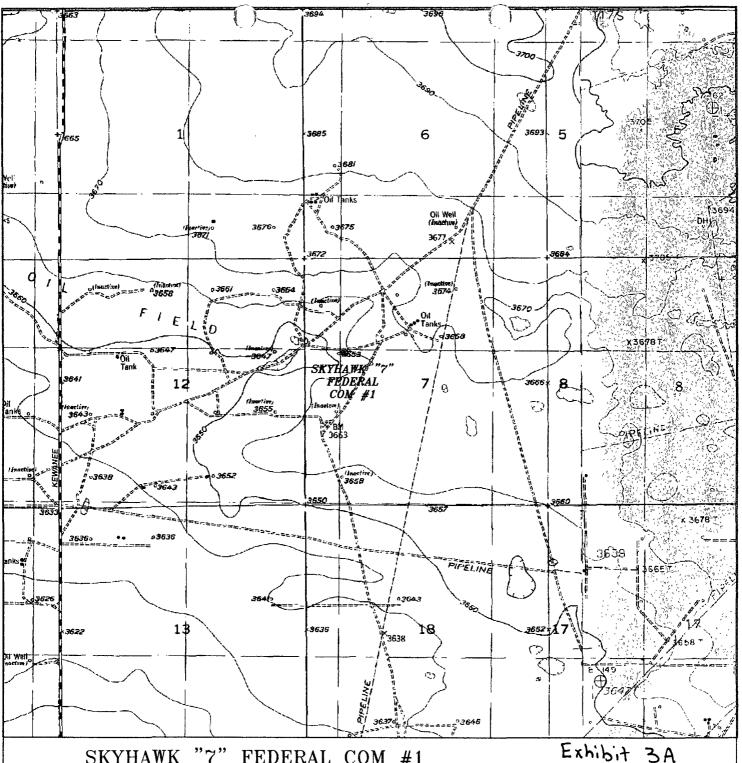
THE SKYHAWK "7" FEDERAL COM #1 LOCATED 1980'

FROM THE NORTH LINE AND 810' FROM THE WEST LINE OF

SECTION 7, TOWNSHIP 17 SOUTH, RANGE 30 EAST,

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

Survey Date: 07-22-2009 Sheet 1 of 1 Sheets



SKYHAWK "7" FEDERAL COM #1

Located 1980' FNL and 810' FWL

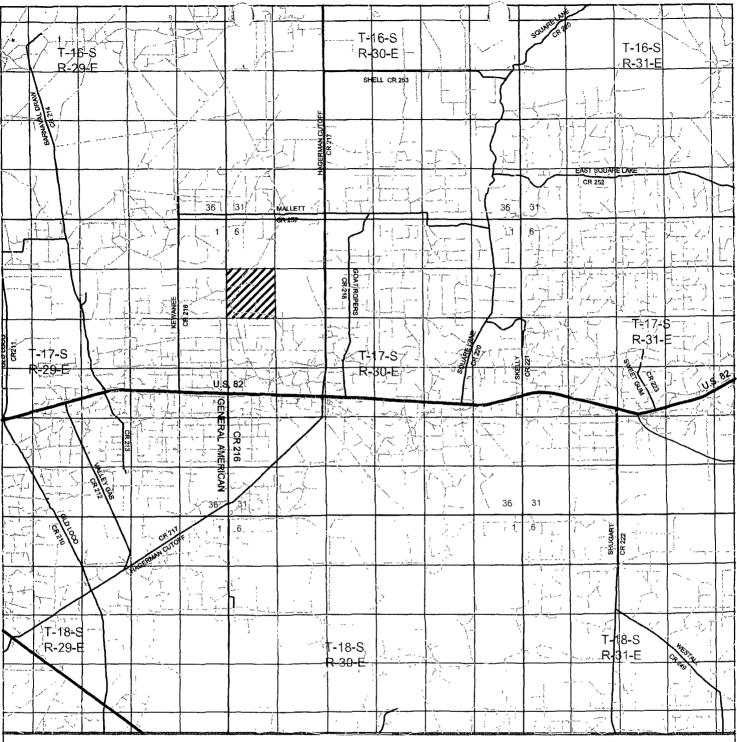
Section 7, Township 17 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786 1120 N. West County Rd. Hobbs, New Mexico 88241 (575) 393-7316 — Office (575) 392-2206 — Fax basinsurveys.com

The second second	W.O. Number	JMS	21581	
The second second	Survey Date.	07-	22-2009	
Contract of the last	Scale: 1" =	2000'		
COSPECTS	Date 07-2	3-2009		

MEWBOURNE OIL COMPANY



SKYHAWK "7" FEDERAL COM #1

Located 1980' FNL and 810' FWL

Section 7, 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 (575) 393—7316 — Office (575) 392—2206 — Fax basinsurveys.com W.O. Number: JMS 21581

Survey Date: 07-22-2009

Scale: 1" = 2 Miles

Date: 07-23-2009

MEWBOURNE OIL COMPANY

# Exhibit #4 Status of Wells in Immediate Vicinity

Mewbourne Oil Company Skyhawk 7 Federal Com #1 1980' FNL & 810' FWL Sec 7-T17S-R30E Eddy County, New Mexico

# Section 7-T17S-R30E

Operator: Tandem Energy Corporation

Well Name: Square Lake 12 Unit #110

Unit letter: Unit F

Status: Flowing

Field: Square Lake G-SA

# **Section 7-17S-R30E**

Operator: Kewanee Oil Co.

Well Name: Square Lake 12 Unit #2B

Unit letter: E

Status: P&A

Field: Square Lake G-SA

# <u>Drilling Program</u> Mewbourne Oil Company

Skyhawk 7 Federal Com #1 1980' FNL & 810' FWL Sec 7-T17S-R30E Eddy County, New Mexico

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

*Yates	1150'	*Atoka	10300'
*Queen	2040'	*Morrow	10745'
*Grayburg	2445'	*Barnett	10955'
*San Andres	2860'	*Chester	11200'
*Wolfcamp	7460'		
*Strawn	10085'		

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

Water Fresh water will be protected by setting surface casing at 400' and

cemented to surface.

Hydrocarbons Oil and Gas are anticipated in the above (\*) formations. These zones will

be protected by casing and cementing as necessary.

3. Pressure control equipment: See COA

A 2000# working pressure annular BOP will be installed on the 13 %" surface casing. A 5000# WP Double Ram BOP and 5000# WP Annular will be installed after running 9 %" 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. A 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 used. MOC would like to waive the low pressure test on the 13 %" BOPE stack and test with rig pump to 70% of burst rate. Will test the 9 %" BOPE to 5000# and Annular to 2500# with a third party testing company before drilling below 9 %" shoe, but will test again, if needed, in 30 days from the 1st test as per BLM Onshore Oil and Gas Order #2.

# 4. Proposed casing and cementing program:

A. Casi	ng Program: See Co	119		See COA			
Hole Size	Casing	Wt/Ft.	<u>Grade</u>	<u>Depth</u>	Jt Type		
17 ½"	13 ¾" (new)	48#	H40	0-400° 375′	ST&C		
12 1/4"	9 %" (new)	40#	N80	0-120'	LT&C		
12 1/4"	9 %" (new)	40#	J55	120'-2900'	LT&C		
8 3/4"	4 ½" (new)	11.6#	HCP110	0'-11200'	LT&C		

Minimum casing design factors: Collapse 1.125, Burst 1.0, Tensile strength 1.8.

<u>Drilling Program</u> Mewbourne Oil Company Skyhawk 7 Fed Com #1 Page 2

# **B.** Cementing Program:

- Surface Casing: 450 sks Class C cement containing 2% CaC2. Yield at 1.34 i. cuft/sk. Cmt circulated to surface.
- Intermediate Casing: 800 sacks Class C light cement with additives. Yield at ii. 1.96 cuft/sk 400 sacks Class C cement containing 1% CaCl. Yield at 1.34 cuft/sk Cmt circulated to surface.
- Production Casing: 425 sacks Class H Lite cement with additives. Yield at 1.95 iii. cuft/sk, and w/400 sks Class H w/additives. Yield at 1.28 cuft/sk. Gmt top to be-Sell Contacted 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.

# 5. Mud Program:

Interval	Type System	<u>Weight</u>	Viscosity	Fluid Loss
0'-350' 71	FW spud mud	8.6-9.4	32-34	NA
Interval 0'-356' 375 375 400'-2900'	Brine water	10.0-10.2	28-30	NA
2900'-TD	Cut Brine water	9.5-10.0	30-35	6-10 WL

(Note: Any Weight Above 8.6#/gallon would be to hold back Wolfcamp shale, rather than abnormal BHP.)

6. Evaluation Program: See COA

This well is planned to be a directional well per exhibit #7- Not per plat

Samples:

10' samples from intermediate casing to TD

Logging:

Compensated density and dual laterlog from intermediate casing

to TD. Gamma Ray Newtron to surface.

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:

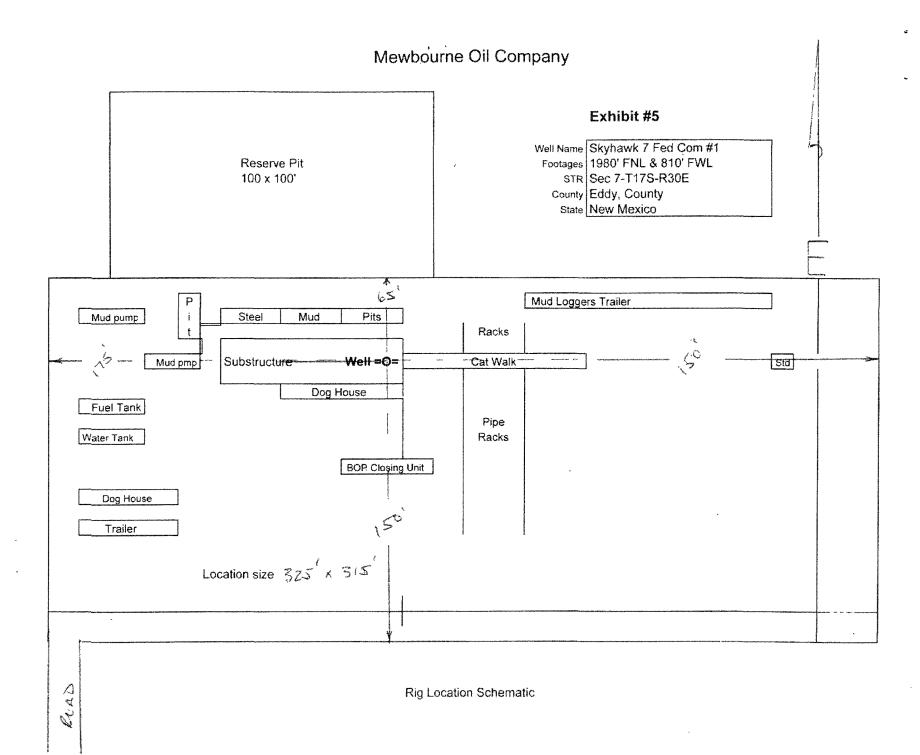
150 degree F

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 35 days involved in drilling operations and an additional 10 days involved in completion operations on the project.

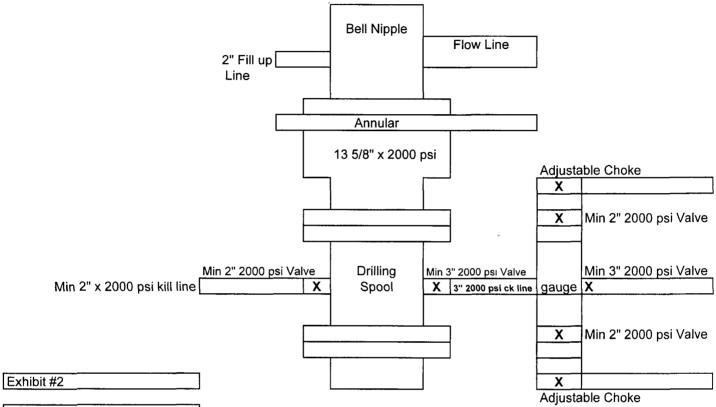


# Notes Regarding Blowout Preventer Mewbourne Oil Company

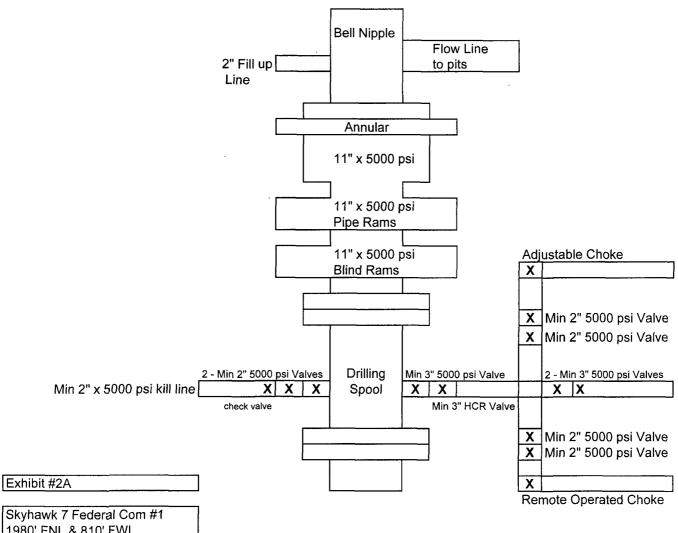
Skyhawk 7 Federal Com #1 1980' FNL & 810' FWL Sec 7-T17S-R30E Eddy County, New Mexico

- 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 2000 psi working pressure on 13 %" casing and 5000 psi working pressure on 9 %" 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 5000 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.

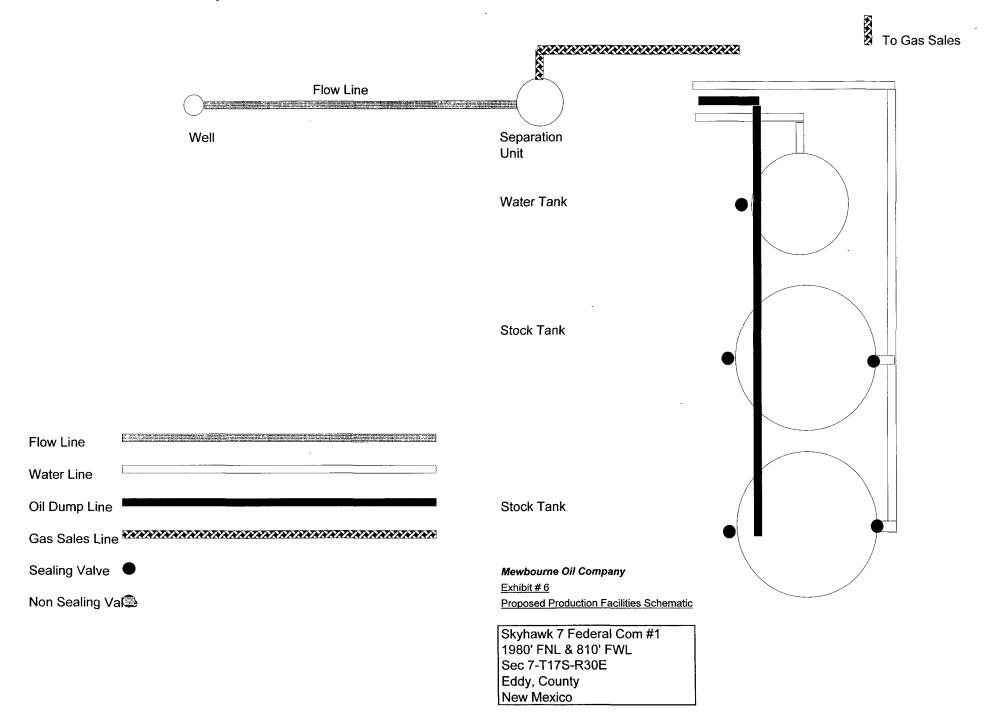


Skyhawk 7 Federal Com #1 1980' FNL & 810' FWL Sec 7-T17S-R30E Eddy, County New Mexico



Skyhawk 7 Federal Com #1 1980' FNL & 810' FWL Sec 7-T17S-R30E Eddy, County New Mexico

# **Proposed Production Facilities Schematic**



# Hydrogen Sulfide Drilling Operations Plan

Mewbourne Oil Company Skyhawk 7 Federal Com #1 1980' FNL & 810' FWL Sec 7-T17S-R30E Eddy County, New Mexico

# 1. General Requirements

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:

- 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.
- 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. Well Control Equipment

- 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. Protective Equipment for Essential Personnel

Thirty minute self contained work unit located at briefing area as indicated on wellsite diagram.

Hydrogen Sulfide Drilling Operations Plan Mewbourne Oil Company Skyhawk 7 Federal Com #1 Page 2

# 3. <u>Hydrogen Sulfide Protection and Monitoring Equipment</u>

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.

#### 8. Emergency Phone Numbers

Eddy County Sheriff's Office	575-746-9888
Ambulance Service	911 or 575-746-5051
Artesia Fire Dept	911 or 575-746-5051
Loco Hills Volunteer Fire Dept.	911 or 575-677-3266
Closest Medical Facility Artesia General Hospital	575-748-3333

Mewbourne Oil Company	Hobbs District Office Fax 2 <sup>nd</sup> Fax	575-393-5905 575-397-6252 575-393-7259
District Manager	Micky Young	575-390-0999
<b>Drilling Superintendent</b>	Frosty Lathan	575-390-4103
Drilling Foreman	Wesley Noseff	575-441-0729

# MULTI-POINT SURFACE USE AND OPERATIONS PLAN MEWBOURNE OIL COMPANY

Skyhawk 7 Federal Com #1 1980' FNL & 810' FWL Sec 7-T17S-R30E Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, Covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved, and the procedures to be followed in restoring the surface so that a complete appraisal can be made of the environmental impact associated with the proposed operations.

# 1. Existing Roads:

- A. Exhibit #3 is a road map showing the location of the proposed well. Existing roads are highlighted in black and proposed road is highlighted in blue. Exhibit #3A is a topographic map showing the location of the proposed well and access road. Existing and proposed roads are highlighted in black.
- B. Directions to location from Loco Hills: West on US 82, for 3 miles. Turn right (North) on Eddy Co 215 (Kewanee Rd). Continue North 1.6 miles. Turn Right (NE) & continue NE 0.1 miles to location.

# 2. Proposed Access Road:

- A No new road will be needed.
- B. The access to the location will be limited to 16' in width and will adequately drain runoff and control erosion as presently constructed.

# 3. Location of Existing Wells:

There are producing wells within the immediate vicinity of the well site. Exhibit #4 shows the proposed well and existing wells within a one mile radius.

# 4. Location of Existing and/or Proposed Facilities:

- A. There are no production facilities on this lease at the present time.
- B. In the event that the well is productive, production facilities will be located on the well pad.
- C. All production vessels left on location will be painted to conform with BLM painting stipulations within 180 days of installation.

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

The well will be drilled with a combination of fresh water and brine water based mud systems. The water will be obtained from commercial suppliers in the area and/or hauled to the location by transport trucks over existing and proposed roads as indicated in Exhibit #3.

#### 6. Source of Construction Materials

All material required for construction of the drill pad and access roads will be obtained from private, state, or federal pits. The construction contractor will be solely responsible for securing construction materials required for this operation and paying any royalties that may be required on those materials.

# 7. Methods of Handling Waste Disposal:

- A. Drill cuttings not retained for evaluation purposed will be disposed of in the reserve pit.
- B. Drilling fluids will be allowed to evaporate in the reserve pit prior to closure.
- C. Water produced during operations will be disposed of in the reserve pit then disposed of in a public SWD.
- D. If any liquid hydrocarbons are produced during operations, those liquids will be stored in suitable tanks until sold.
- E. Current regulations regarding the proper disposal of human waste will be followed.
- F. All trash, junk, and other waste materials will be stored in proper containers to prevent dispersal and will be removed to an appropriate facility within one week of cessation of drilling and completion activities.

# 8. Ancillary Facilities

There are no ancillary facilities within the immediate vicinity of the proposed well site.

#### 9. Well Site Layout

- A diagram of the drill pad is shown in Exhibit #5. Dimensions of the pad, pits, and location of major rig components are shown.
- B. The reserve pit will be lined with a high quality plastic sheeting to prevent migration of fluids.
- C. The pad dimension of 325' x 315' has been staked and flagged.
- An archaeological survey is in the process of being conducted on the proposed location pad.

#### 10. Plans for Restoration of Surface

- A. Upon cessation of the proposed operations, if the well is abandoned, the location and road will be ripped and re-seeded. The reserve pit area, after allowing to dry will be leveled. The entire location will be restored to the original contour as much as reasonable possible. All trash, garbage, and pit lining will be hauled to appropriate disposal to assure the location is aesthetically pleasing as reasonable possible. All restoration work will be completed within 180 days of cessation of activities.
- B. The disturbed area will be restored by re-seeding during the proper growing season.
- C. Three sides of the reserve pit will be fenced prior to and during drilling operations. The reserve pit will be fenced on the fourth side after the drilling rig is removed to prevent the endangerment of livestock. The fence will remain in place until the pit area has been leveled and restored.

Page 3

- D. Upon cessation of the proposed operations, if the well is not abandoned, the reserve pit area will be restored as per BLM/OCD guidelines. Any additional caliche required for production facilities will be obtained from a source as described in Section 6.
- E. Within 90 days of cessation of drilling and completion operations, all equipment not necessary for production operations will be removed. The location will be cleaned of all trash and junk to assure the well site is left as aesthetically pleasing as reasonably possible.

# 11. Surface Ownership:

The surface is owned by: BLM.

#### 12. Other Information:

- A. Refer to the archaeological report for a detailed description of flora, Topography: fauna, soil characteristics, dwellings, and historical or cultural sites.
- B. The primary use of the surface at the location is for grazing of livestock.

#### 13. **Operator's Representative:**

A. Through APD approval, drilling, completion and production operations:

> N.M. Young, District Manager Mewbourne Oil Company PO Box 5270 Hobbs, NM 88241 575-393-5905

# Mewbourne Oil Company

PO Box 5270 Hobbs, NM 88241 (575) 393-5905

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route for the Skyhawk 7 Federal Com #1, 1980' FNL & 810' FWL of Sec 7-T17S- R30E, Eddy County, New Mexico; that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by Mewbourne Oil Company, its contractors and subcontractors, in accordance with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Signature: NM young by Jackie Lathan Date: 8/27/09

Print: NM Young

**Hobbs District Manager** 

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Mewbourne Oil Company
LEASE NO.:	NM025733
WELL NAME & NO.:	1-Skyhawk 7 Fed Com
SURFACE HOLE FOOTAGE:	1980' FNL & 810' FWL
BOTTOM HOLE FOOTAGE	'FL&'FL
LOCATION:	Section 7, T. 17 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico

# TABLE OF CONTENTS

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

General Provisions
Permit Expiration
Archaeology, Paleontology, and Historical Site
Noxious Weeds
Special Requirements
Lesser Prairie-Chicken
Ground-level Abandoned Well Marker
V-door
Transportation Access
Communitization Agreement
Construction
Notification
Topsoil
Reserve Pit
Federal Mineral Material Pits
Well Pads
Roads
Road Section Diagram
□ Drilling
H2S Requirements, Onshore Order #6
Logging Requirements
Casing Depth Change
Production (Post Drilling)
Well Structures & Facilities
Reserve Pit Closure/Interim Reclamation
Final Abandonment/Reclamation

# I. GENERAL PROVISIONS

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

# II. PERMIT EXPIRATION

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

# III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

# IV. NOXIOUS WEEDS

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

# V. SPECIAL REQUIREMENT(S)

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.

V-door: South / Reserve Pits - East

**Transportation Access:** The existing road that the well pad will be built upon shall be rerouted around the north side of the well pad to allow transportation access around the well pad. Public access on this road shall not be restricted by the operator. Upon interim reclamation, this rerouted road shall be reclaimed and public access shall be granted through the well pad after drilling operations have been completed.

# Communitization Agreement

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. Operator to supply NMOCD order, which details the vertical and horizontal extent of pool to verify that requested communitization is within an approved and established pool.

# 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. RESERVE PITS

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 100' X 100' on the East side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

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

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

# 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.

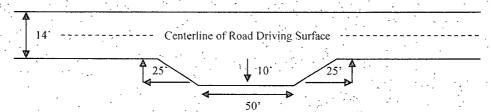
#### Ditching

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

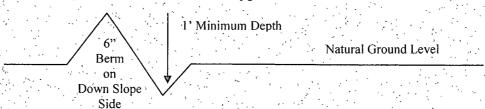


# **Drainage**

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

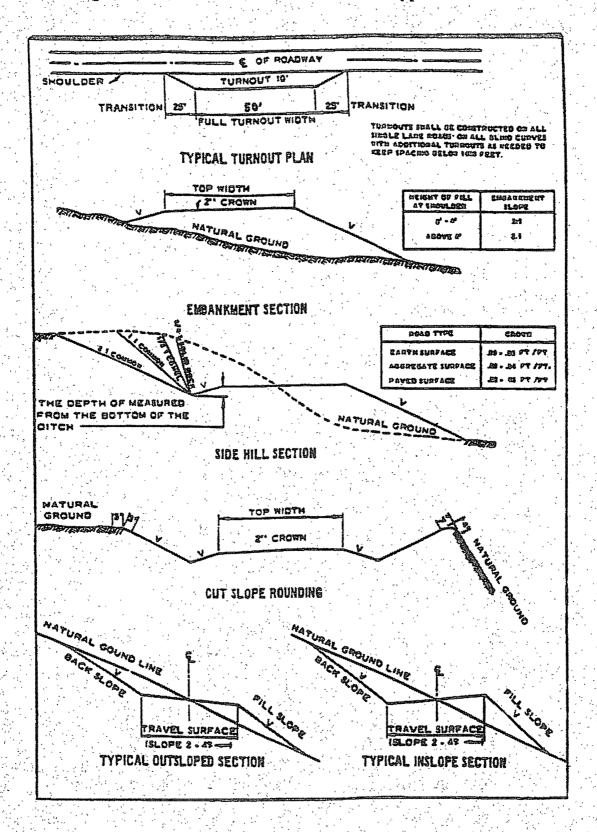
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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.

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 Grayburg 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 are located, this does not include the dog house or stairway area.
- 4. The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

#### 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 water flows in the Salado and Artesia Groups.

Possible lost circulation in the Grayburg and San Andres Formations.

- 1. The 13-3/8 inch surface casing shall be set at approximately 375 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. If the salt is encountered set the casing 25 feet above the top of salt.
  - 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.

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.

2.	The	minimu	m requ	ired fil	lofc	ement	behind	the 9-5/	8 inch	interm	ediate	casing	į is:
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	3.	Cem 🖯	ent to	surface	If c	ement (	does no	t circula	ite see	B.1.a,	c-d abo	ve	÷

- 3. The minimum required fill of cement behind the 4-1/2 inch production easing is:
  - Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. Additional cement may be required, as the excess calculated to be less than 0%. If a multistage cement program is used a sundry must be submitted and approved prior to commencing work.
- 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 **2000 (2M)** psi.
- 3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8" intermediate casing shoe shall be 5000 (5M) psi. 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.
- 4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. The tests shall be done by an independent service company.
  - b. The results of the test shall be reported to the appropriate BLM office.
  - c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
  - d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

- e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.
- f. Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.

# D. DRILLING MUD

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

# E. DRILL STEM TEST

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

CRW 092309

# VIII. PRODUCTION (POST DRILLING)

# A. WELL STRUCTURES & FACILITIES

# Placement of Production Facilities

Production facilities shall be placed on the north side of the well pad to allow for maximum interim recontouring and revegetation of the south side 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 & RESERVE PIT CLOSURE

# A. INTERIM RECLAMATION

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

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

Upon interim reclamation, the road that was rerouted around the north side of the well pad shall be reclaimed and public access shall be granted through the well pad after drilling operations have been completed completed.

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

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

# B. RESERVE PIT CLOSURE

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	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
	2lbs/A
Sand Dropseed	1lbs/A
	2 2 1 3 1

<sup>\*\*</sup>Four-winged Saltbush

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

<sup>5</sup>lbs/A

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

<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.

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.