Form 3160-3
(September 2001)

64

A+S-08-91

OCD-ARTESIA

FORM APPROVED
OMB No 1004-0136
Expires January 31, 2004

5384A

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NOV 27 2007
OCD-ARTESIA

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No
NMNM-0556290

6 If Indian, Allottee or Tribe Name

1a Type of Work ☑ DRILL ☐ REENTER

S

7 If Unit or CA Agreement, Name and No

1b Type of Well ☐ Oil Well ☑ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

8 Lease Name and Well No
Daisy 9 Federal #2 36859

2 Name of Operator
Mewbourne Oil Company - 14744

9 API Well No
30-015-35889

3a Address	3b Phone No *(include area code)*	10 Field and Pool, or Exploratory
PO Box 5270 Hobbs, NM 88240	505-393-5905	East Burton Flat Atoka

4 Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface 1650' FNL & 660' FEL Unit H
At proposed prod zone Same

11 Sec , T , R , M , or Blk and Survey or Area
Sec 9-T20S-R29E

14 Distance in miles and direction from nearest town or post office*	12 County or Parish	13 State
East from Carlsbad approx 12 miles	Eddy	NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) 660'	16 No of Acres in lease	17 Spacing Unit dedicated to this well
	320	320

18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 330'	19 Proposed Depth	20 BLM/BIA Bond No on file
	11200'	NM1693, Nationwide

21 Elevations (Show whether DF, KDB, RT, GL, etc.)	22 Approximate date work will start*	23 Estimated duration
3293' GL	ASAP	45

24. Attachments

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

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

25 Signature	Name *(Printed/Typed)*	Date
Kristi Green	Kristi Green	10/18/07

Title
Hobbs Regulatory

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ James A. Amos	/s/ James A. Amos	NOV 23 2007

Title	Office
FOR FIELD MANAGER	CARLSBAD FIELD OFFICE

Application approval does not warrant or certify that 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 earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

APPROVAL FOR TWO YEARS

Title 18 U S C Section
States any false, fictitiou

y person knowingly and willfully to make to any department or agency of the United thin its jurisdiction

(Instructions on reverse

Test Reef Mud for Chlorides.

Capitan Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

DISTRICT I
1625 N. French 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

State of New Mexico
Energy, Minerals and Natural Resources Department

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

API Number	Pool Code	Pool Name
	73200	East Burton Flat Atoka

Property Code	Property Name	Well Number
36859	DAISY "9" FEDERAL	2

OGRID No.	Operator Name	Elevation
14744	MEWBOURNE OIL COMPANY	3293'

Surface Location

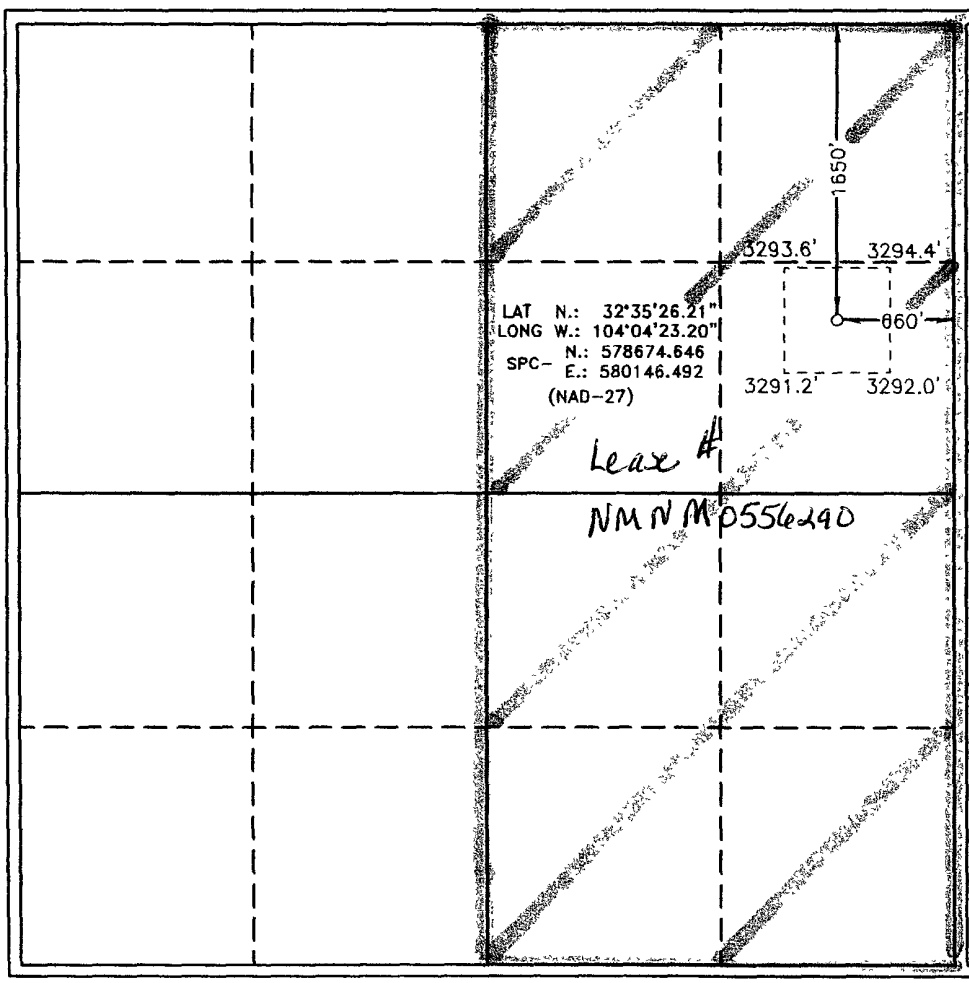
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	9	20 S	29 E		1650	NORTH	660	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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 organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Kristi Green 10/17/07
Signature Date

Kristi Green
Printed Name

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 correct to the best of my belief

OCTOBER 11, 2007
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977

W.O. Number 24390

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 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 #NMNM0556290

Legal Description of Land: Section 9, T-20S, R-29E Eddy County, New Mexico.
Location @ 1650' FNL & 660' FEL.

Formation (if applicable): Morrow

Bond Coverage: $150,000

BLM Bond File: NM1693, Nationwide

Authorized Signature: _____

Name: NM (Micky) Young
Title: District Manager
Date: October 17, 2007

Drilling Program
Mewbourne Oil Company
Daisy "9" Federal #2
1650' FNL & 660' FEL
Sec 9-T20S-R29E
Eddy County, New Mexico

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

Salt	615'	*Wolfcamp	9310'
*Yates	1010'	*Strawn	10370'
Capitan Reef	1375'	*Atoka	10810'
*Delaware	3315'		
*Bone Spring	5800'		

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

Water	Fresh water will be protected by setting surface casing at 300' and cement to surface.
Hydrocarbons	Oil and Gas are anticipated in the above (*) formations. These zones will be protected by setting 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 3000# WP Annular will be installed after running 9 ⅝" casing. Pressure tests will be conducted prior to drilling out under all casing strings. Testing of 2000# annular will be with rig pump. BOP controls will be installed prior to drilling under deep surface casing and will remain in use until completion of drilling operations. BOP's will be inspected and operated daily 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:

A. Casing Program:

See COA

Hole Size	Casing	Wt/Ft.	Grade	Depth	Jt Type
26"	20" (new)	94#	J55	0-300'	BT&C
17 ½"	13 _" (new)	48#	H40	0-1300'	ST&C
12 ¼"	9 ⅝" (new)	40#	N80	0-100'	LT&C
	9 ⅝" (new)	40#	J55	100-3200'	LT&C
8 ¾"	5 ½" (new)	17#	HCP110	0-1600'	LT&C
	5 ½" (new)	17#	N80	1600-8500'	LT&C
	5 ½" (new)	17#	HCP110	8500-11200'	LT&C

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

B. Cementing Program:

i. Surface Casing: 300 sacks Class C light cement containing ½#/sk cellophane flakes, 2% CaCl, 5#/sk gilsonite. Yield at 1 98 cuft/sk. 200 sks Class C cement containing 2% CaCl. Yield at 1.34 cuft/sk. Cmt circulated to surface

ii. Deep Surface Casing: 700 sacks 35:65 Class "C" light cement containing ½#/sk cellophane flakes & 5 lbs/sack gilsonite. ~~Yield at 1.98~~ cuft/sk. 400 sacks Class "C" cement containing 2% CaCl. ~~Yield at 1.98~~ cuft/sk. 1.34 Cmt circulated to surface. per operator 11-15-07 WWI

iii. Intermediate Casing: 900 sacks 35:65 poz mix cement containing 6% gel, 5#/sack gilsonite. Yield at 1.98 cuft/sk. 400 sacks Class C cement containing 2% CaCl. Cmt circulated to surface. ~~Yield at 1.98 cuft/sk~~ 1.34 1.18 yld

iv. Production Casing: 600 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. Cmt top to be inside surface casing. See COA

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

5. Mud Program:

Interval	Type System	Weight	Viscosity	Fluid Loss
0'-300'	FW spud mud	8.6-9 4	32-34	NA
300'-1300'	Brine water	10.0-10.2	28-30	NA
1300'-3200'	Fresh water	8.4-8 6	28-30	NA
3200'-10000'	Cut brine water	8.8-9.2	28-30	NA
10000'-TD	BW/Starch	9.2-9.8	30-40	8-15

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

It may become necessary to drill thru the Capitan reef with air-assist to maintain circulation.

6. Evaluation Program:

Samples:	10' samples from top of Delaware
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:	180 degree F
Maximum bottom hole pressure:	9.0 lbs/gal gradient or less

8. Anticipated Starting Date:

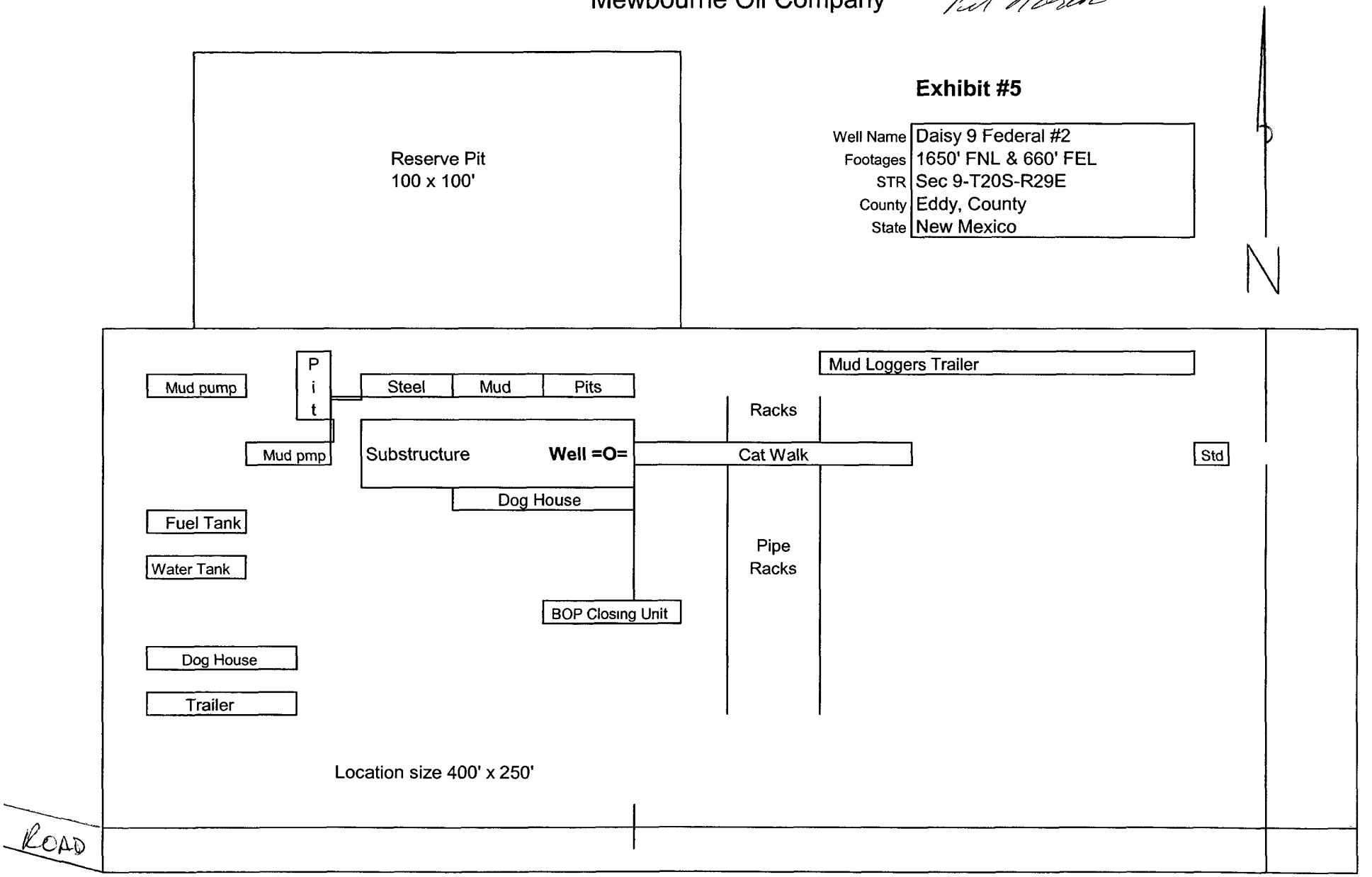
Mewbourne Oil Company intends to drill this well as soon as possible after receiving approval with approximately 45 days involved in drilling operations and an additional 10 days involved in completion operations on the project.

See COA's Pit North

Mewbourne Oil Company

Exhibit #5

Well Name	Daisy 9 Federal #2
Footages	1650' FNL & 660' FEL
STR	Sec 9-T20S-R29E
County	Eddy, County
State	New Mexico



Rig Location Schematic

Mewbourne Oil Company
BOP Scematic for
12 ¼" Hole

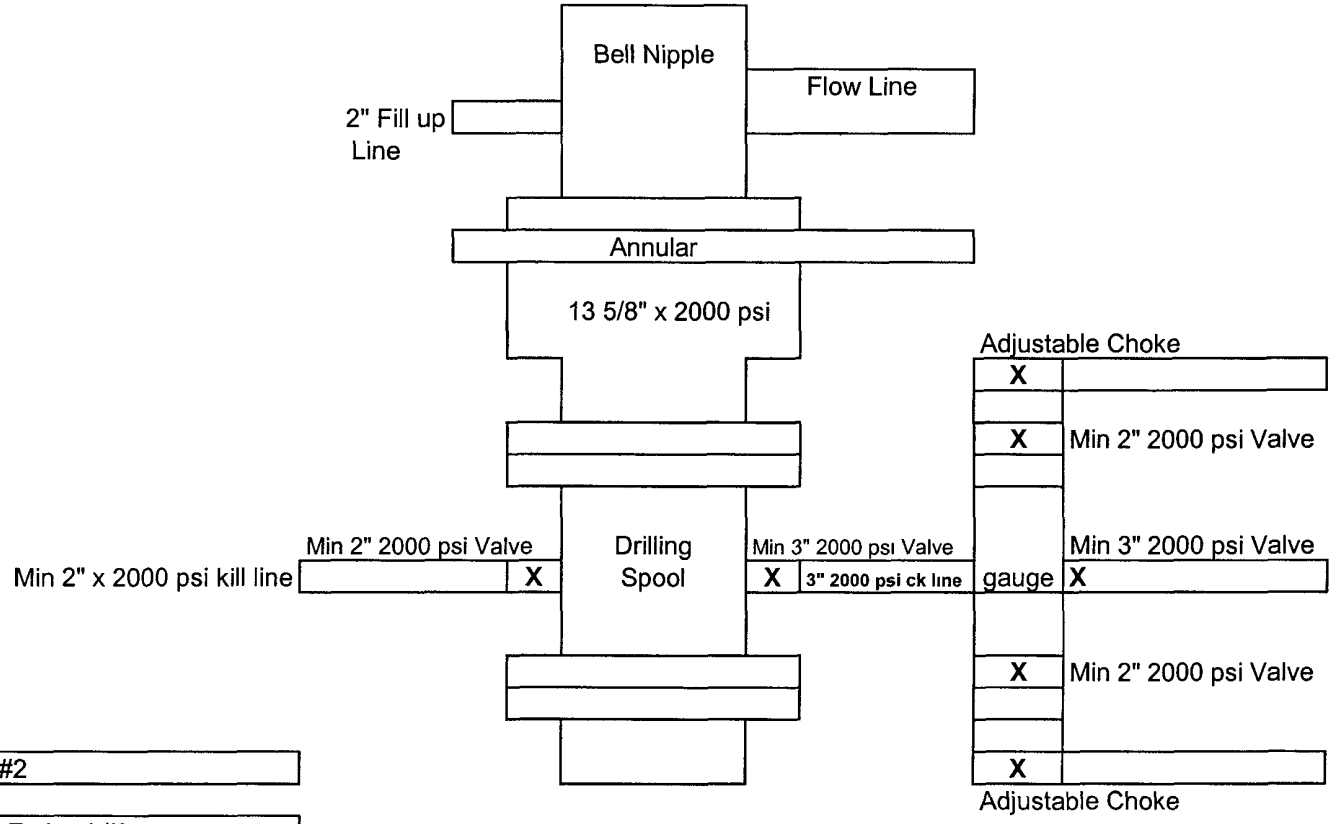


Exhibit #2

Daisy 9 Federal #2
1650' FNL & 660' FEL
Sec 9-T20S-R29E
Eddy, County
New Mexico

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

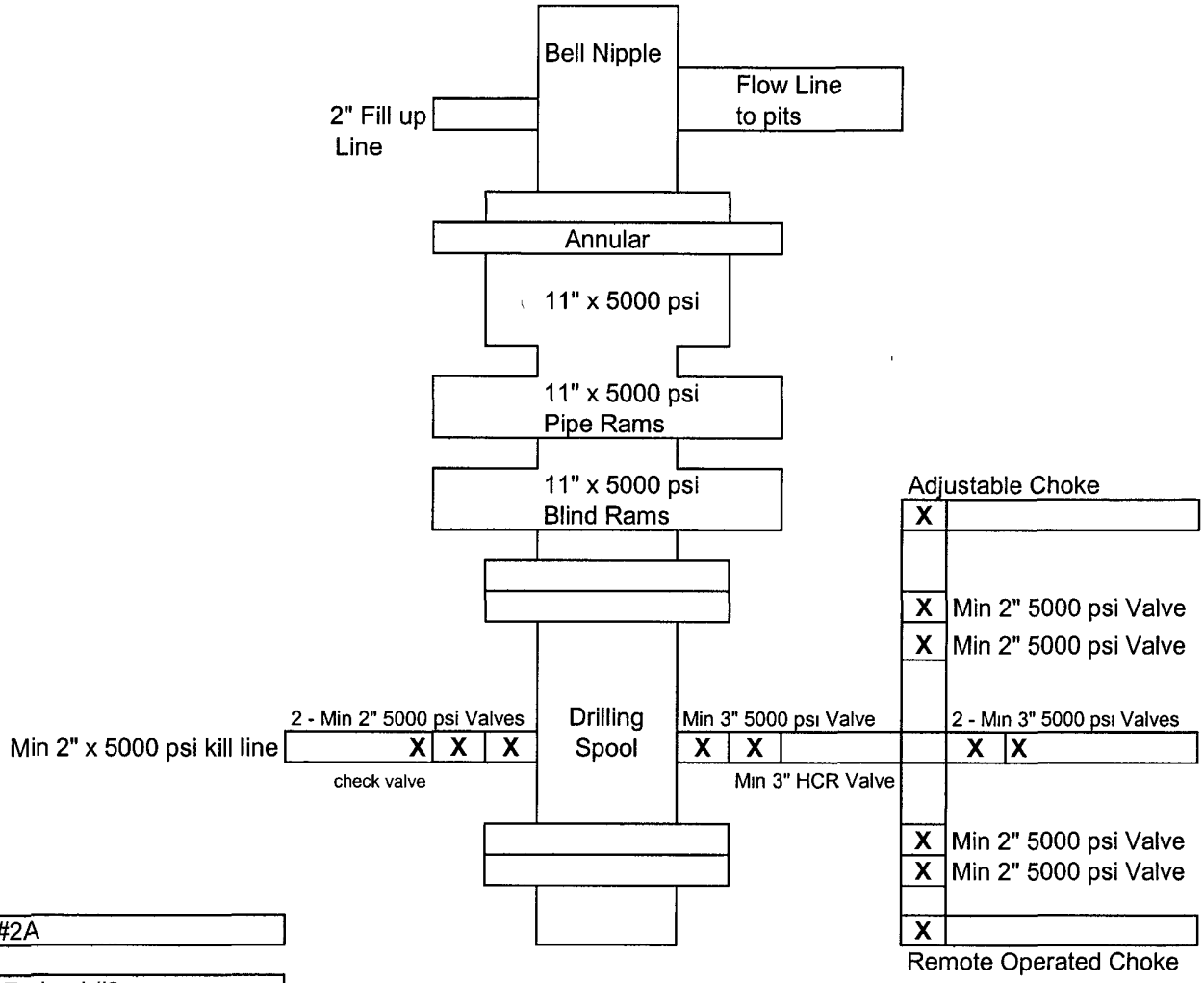


Exhibit #2A

Daisy 9 Federal #2
1650' FNL & 660' FEL
Sec 9-T20S-R29E
Eddy, County
New Mexico

Notes Regarding Blowout Preventer
Mewbourne Oil Company
Daisy "9" Federal #2
1650' FNL & 660' FEL
Sec 9-T20S-R29E
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 5000 psi working pressure.

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.

Hydrogen Sulfide Drilling Operations Plan

Mewbourne Oil Company

Daisy "9" Federal #2

1650' FNL & 660' FEL

Sec 9-T20S-R29E

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:

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. 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.

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.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN
MEWBOURNE OIL COMPANY

Daisy "9" Federal #2
1650' FNL & 660' FEL
Sec 9-T20S-R29E
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 Carlsbad: Go east on Hwy 62/180 to MM 44. Turn left (north) on Eddy Co 243 (Magnum Rd). Continue north 5.8 miles to Eddy Co 238 (Burton Flat Rd). Turn right (east) and continue east 2 miles. Turn left (north) and continue north then west 1.0 mile. Turn right (north) and continue north then east 0.2 miles. Turn left (NE) 0.25 miles. Turn right to new location.

2. Proposed Access Road:

A Will need approx 500' of new road.

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.
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 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 400' X 250' has been staked and flagged.
D. An archaeological survey is in the process of being conducted on the proposed access road and 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.

D. Upon cessation of the proposed operations, if the well is not abandoned, the reserve pit area will be restored as per 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: Located entirely on federal surface.

12. Other Information:

A. Topography: Refer to the archaeological report for a detailed description of flora, fauna, soil characteristics, dwellings, and historical or cultural sites.

B. The primary use of the surface at the location is for grazing of livestock.

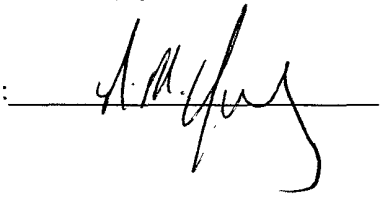
13. Operator's Representative:

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

N.M. Young, District Manager
Mewbourne Oil Company
PO Box 5270
Hobbs, NM 88241
505-393-5905

14. 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 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.

Date: 10/17/07 Signature: 

N.M. Young, District Manager
Mewbourne Oil Company
PO Box 5270
Hobbs, NM 88241
(505) 393-5905

Exhibit #4
Status of Wells in Immediate Vicinity
Mewbourne Oil Company
Daisy "9" Federal #2
1650' FNL & 660' FEL
Sec 9-T20S-R29E
Eddy County, New Mexico

Section 9-T20S-R29E

Operator:	Mewbourne Oil Company
Well Name:	Browning 9 Federal #1
Unit letter:	M
Status:	Flowing
Field:	East Burton Flat Morrow

Section 9-T20S-R29E

Operator:	EP Campbell
Well Name:	Langie Federal #1
Unit letter:	N
Status:	P&A
Field:	Burton Flat Delaware

Section 9-T20S-R29E

Operator:	Shackelford Oil Company
Well Name:	ROG Federal #1
Unit letter:	P
Status:	Salt Water Disposal
Field:	Getty Yates

SECTION 9, TOWNSHIP 20 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, **NEW MEXICO.**

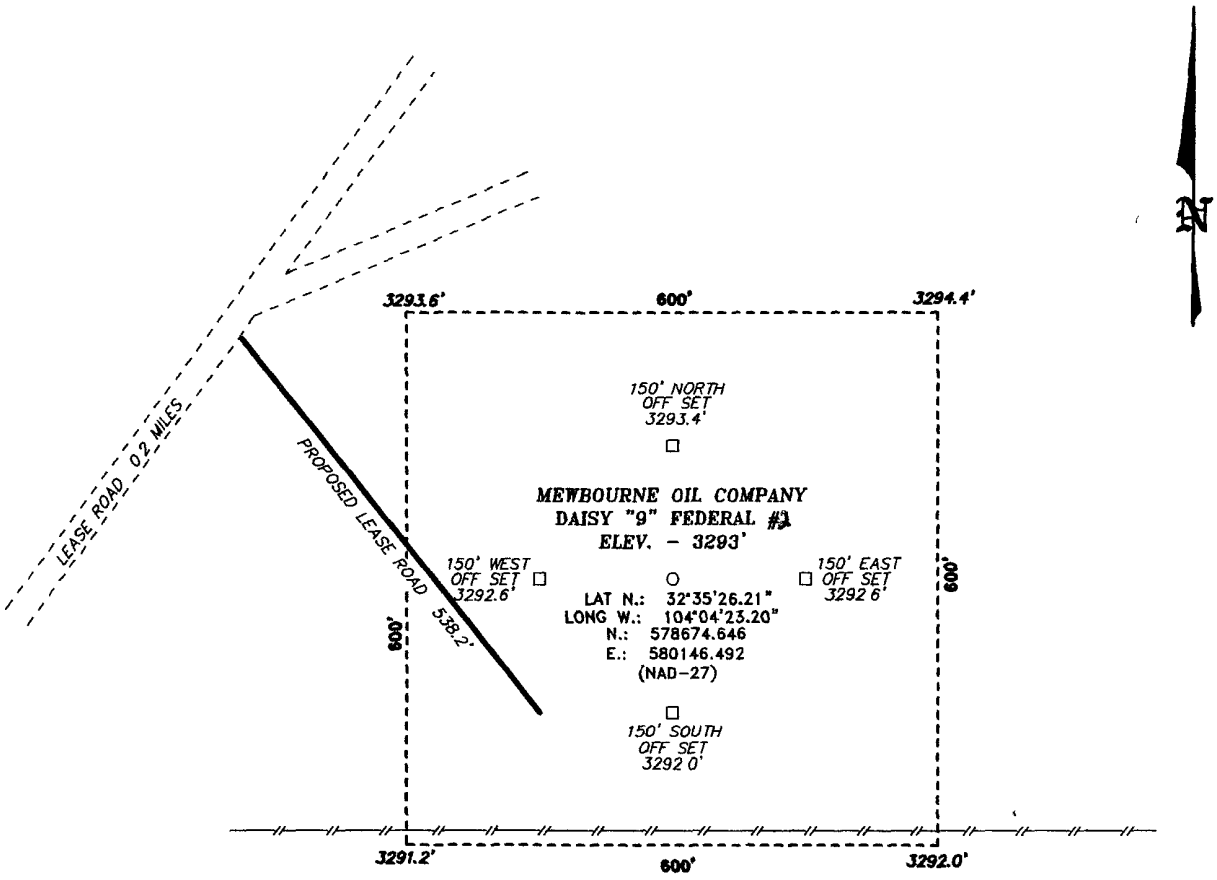


Exhibit 3

200 0 200 400 FEET

SCALE: 1" = 200'

DRIVING DIRECTIONS:

FROM THE JUNCTION OF US HWY 62-180 AND CO. RD 238, GO NORTHWEST ON CO RD 238 FOR 4.9 MILES THENCE TURN RIGHT AT DCP MAGNUM BOOSTER SIGN AND GO NORTH 1.0 MILES ON LEASE ROAD, THENCE WEST 0.3 MILES, THENCE NORTH 0.8 MILES, THENCE EAST 0.5 MILES, THENCE NORTHEAST 0.2 MILES TO PROPOSED LEASE ROAD.

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

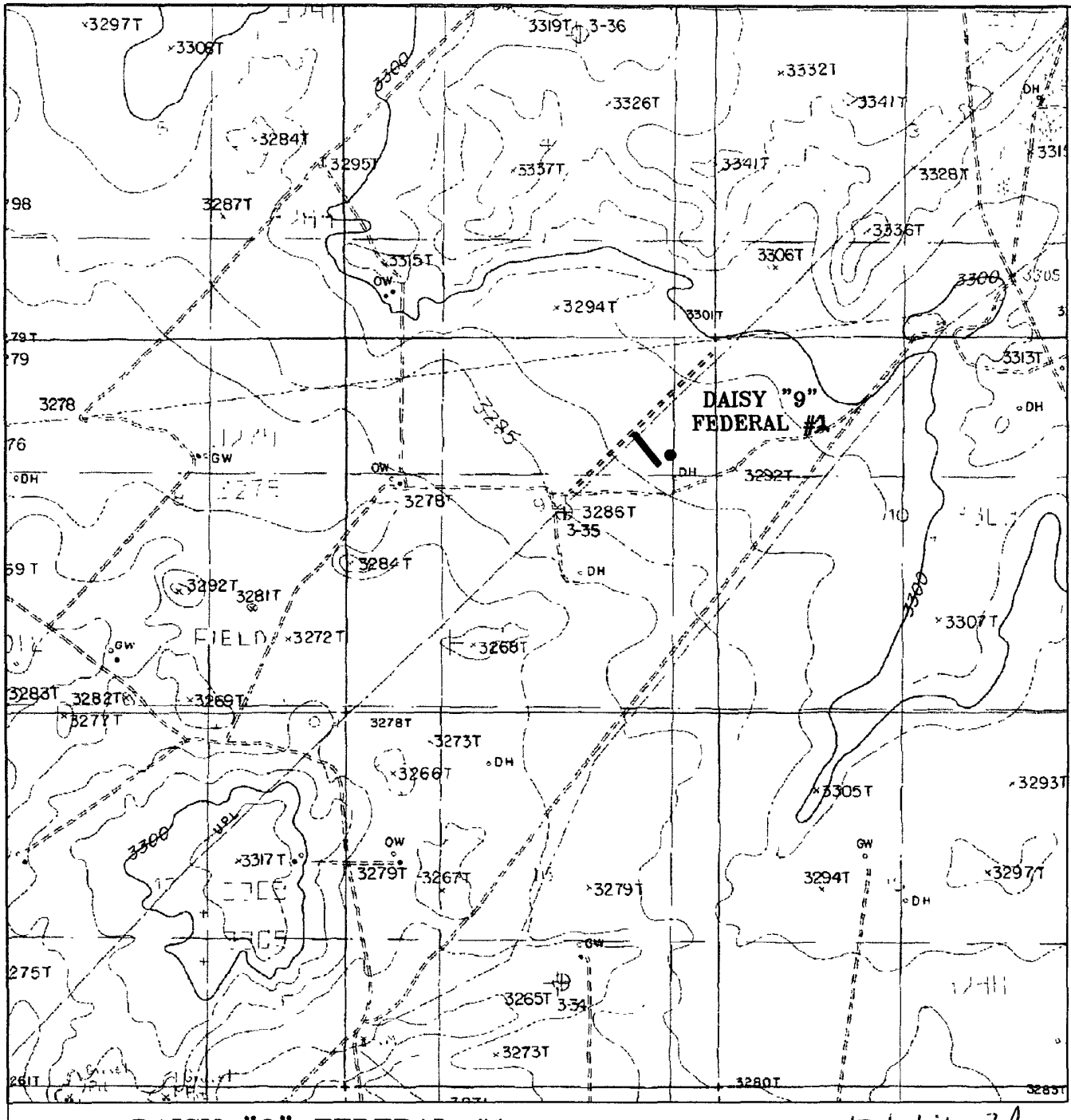
W.O. Number: 18690	Drawn By: J. SMALL
Date: 10-14-2007	Disk JMS 18690W

MEWBOURNE OIL COMPANY

REF: DAISY "9" FEDERAL #2 / WELL PAD TOPO

THE DAISY "8" FEDERAL #1 LOCATED 1650' FROM THE NORTH LINE AND 660' FROM THE EAST LINE OF SECTION 9, TOWNSHIP 20 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 10-11-2007	Sheet 1 of 1 Sheets



DAISY "9" FEDERAL #1

Exhibit 3A

Located 1650' FNL and 660' FEL
Section 9, Township 20 South, Range 29 East,
N.M.P.M., Eddy County, New Mexico.

basin surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W O Number:	18690T JMS
Survey Date	10-11-2007
Scale. 1" = 2000'	
Date	10-14-2007

MEWBOURNE OIL CO.

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 2 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, (505) 361-2822

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard.**

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

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING

1. The **20** inch surface casing shall be set **at approximately 300** feet and cemented to the surface.

   a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

   b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).

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 action will be done prior to drilling out that string.

High cave/karst.
Possible lost circulation in the Artesia Group, Delaware and Bone Spring formations.
Good possibility of encountering high pressure gas bursts in the Wolfcamp with possible pressures of 5600 psi.
Possible that the Pennsylvanian Section may be over pressured.

2. The minimum required fill of cement behind the **13-3/8** inch intermediate casing is:

   ☒ Cement to surface. If cement does not circulate see B.1.a-d above.

3. The minimum required fill of cement behind the **9-5/8** inch second intermediate casing is:

   ☒ Cement to surface. If cement does not circulate see B.1.a-d above.
   Set casing above Delaware Mountain Group.

4. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **Additional cement will be required.**

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 **20"** 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. **Annular to be rated to 5000 psi.**

4. The appropriate BLM office shall be notified a minimum of 2 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. A variance to test the **surface casing (20")/first intermediate casing (13-3/8")** and BOP/BOPE to the reduced pressure of **1000** psi with the rig pumps is approved.

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.

Approved to use aerated mud in the Capitan Reef if required to maintain circulation.

E. DRILL STEM TEST

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

Engineer on call phone (after hours): Carlsbad: (575) 706-2779

WWI 111507

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2