

OCD-ARTESIA

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Form 3160-3
(September 2001)

2003 JUN 24 PM 1 33

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICEFORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. LC-050158
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name NA
2. Name of Operator McQuadrangle, LLC		7. If Unit or CA Agreement, Name and No. None
3a. Address 7008 Salem Ave., Lubbock, TX 79424	3b. Phone No. (include area code) (806)797-3162	8. Lease Name and Well No. Midnight Matador #1
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 2310' FNL, 990' FEL (SE/4NE/4) At proposed prod. zone 2310' FNL, 990' FEL (SE/4NE/4)		9. API Well No. 30-015-32861
14. Distance in miles and direction from nearest town or post office* 8 miles SE of ARTESIA, NM		10. Field and Pool, or Exploratory S. Redlake-GB-SA
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of Acres in lease 80	11. Sec., T., R., M., or Blk. and Survey or Area Sec. 35, T17S, R27E
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 2,390'	12. County or Parish Eddy
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3621' GRC	22. Approximate date work will start* July 1, 2003	13. State NM
20. BLM/BIA Bond No. on file NM2742		17. Spacing Unit dedicated to this well 40
23. Estimated duration 30 days		

Ausable Controlled Water Basin

24. Attachments Drilling Program, Surface Use & Operating

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

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

25. Signature 	Name (Printed/Typed) Jim Pierce	Date 05/11/03
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Approved by (Signature) /S/ JOE G. LARA	Name (Printed/Typed) /S/ JOE G. LARA	Date JUN 27 2003
Title ACTING FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify the the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR 1 YEAR

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on reverse)

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-10
Revised February 10, 1999
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code		3 Pool Name	
4 Property Code		5 Property Name MIDNIGHT MATADOR			6 Well Number 1
7 OGRID No.		8 Operator Name McQuadrangle, L. L. C.			9 Elevation 3619


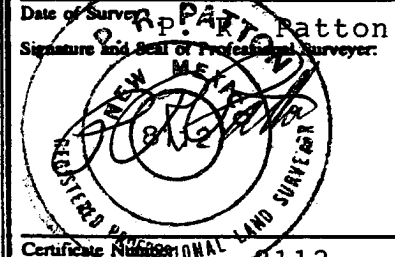
10 Surface Location

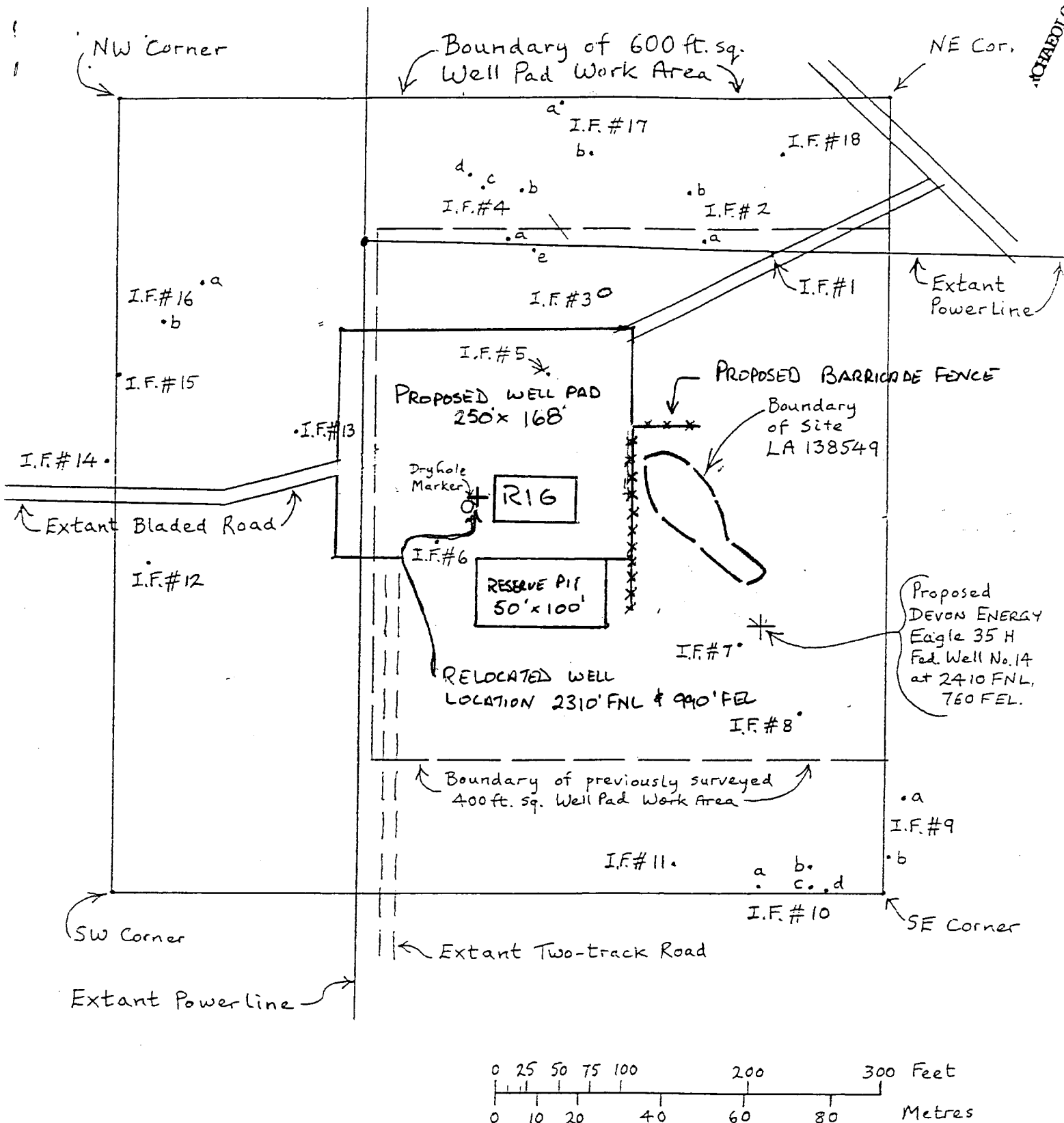
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	35	17 S	27 E		2310	North	990	East	Eddy

11 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
12 Dedicated Acres 40		13 Joint or Infill		14 Consolidation Code		15 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

16				17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature Jim Pierce Printed Name Agent Title 5/12/03 Date	
3608.0 3629.3				3602.1 3622.4	
2310'				990'	
18 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 supervision, and that the same is true and correct to the best of my belief. May 21, 2003 Date of Survey Signature and Seal of Professional Surveyor:  Certificate Number 8112					



McQUADRANGLE, L.L.C.
RELOCATED MIDNIGHT MATADOR FEDERAL WELL NO. 1 and ACCESS ROAD R/W

Site LA 138549
T17S, R27E, Section 35 (SW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$), Eddy County, New Mexico.

ASC Report 03-030

Mapped by means of Garmin 12 G.P.S. unit utilizing U.T.M. Grid Zone 13,
1927 North American Datum. Original recording: JVS/DMG, 21 December 2002.
Site updates: JVS/DMG, 21 March 2003; and JVS/DMG, 21 May 2003.

Drilling Program
McQuadrangle LLC
Midnight Matador Fed. #1
Eddy County, New Mexico

1. Geologic Name of Surface Formation: Permian
2. Estimated Tops of Important Geologic Makers:

Grayburg	1500'
San Andres	2100'

3. Estimated Depths of Anticipated Fresh Water, Oil or Gas:

Upper Permian Sands	100'	fresh water
Grayburg	1500'	oil
San Andres	2100'	

No other formations are expected to give up oil, gas, or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 8 5/8" casing at ~~400'~~^{350'} and circulating cement to the surface. Any shallower zones above T. D. which contain commercial quantities of oil and/or gas will have cement circulated across them.

4. Casing Program:

Hole Size	Interval	OD Casing	Weight Grade
12 1/4"	0 - 350'	8 5/8"	24#, J-55
7 7/8"	0 - 2,400'	5 1/2"	15.5#, J-55

5. Cement Program:

A. 8 5/8 surface casing: Cemented to surface with 350 sxs. "C" with 4% gel with 2% cacl and 1/2#/sx Flocele.

B. 5 1/2 surface casing: Cemented with 75 sxs. "C" with 3% SMS with 1/4#/sx. Flocele, plus 500 sxs. "H" 0.8% FL-62 with .2% CD32 and .2% SMS.

6. Minimum Specifications for Pressure Control: The B. O. P. shown on Exhibit 1 will consist of a double ram-type (3000 psi WP) preventor and a bag-type (hydril) preventor (3000 psi WP). Both will be operated hydraulically and the ram-type preventor will be equipped with blind rams on top and 4 1/2" drill pipe rams on bottom. Both B. O. P.s will be nipped up on the 13 3/8" surface casing and used continuously until T. D. is reached. The B. O. P.s and accessory equipment will be tested to 1000 psi before drilling out surface casing. Before drilling out intermediate casing, the ram-type B. O. P. and accessory equipment will be tested to 3000 psi and the hydril to 70% (2100 psi) of rated working pressure.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A 2" kill line and 3" choke line will be included in the drilling spool located below the ram-type B. O. P. Other accessories to the B. O. P. equipment will include a kelly cock and floor safety valve (inside B. O. P.) and choke lines and choke manifold with 3000 psi rating.

7. Types and Characteristics of the mud System: The well will be drilled to T. D. with a combination of brine, cut brine and polymer/KCI mud system. The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity (sec)	Waterloss (cc)
0' - 350'	fresh water (spud)	8.5	40 - 45	n. c
350' - T.D.	cut brine	8.8 - 9.2	28	n. c

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

8. Auxiliary Well Control and Monitoring Equipment:

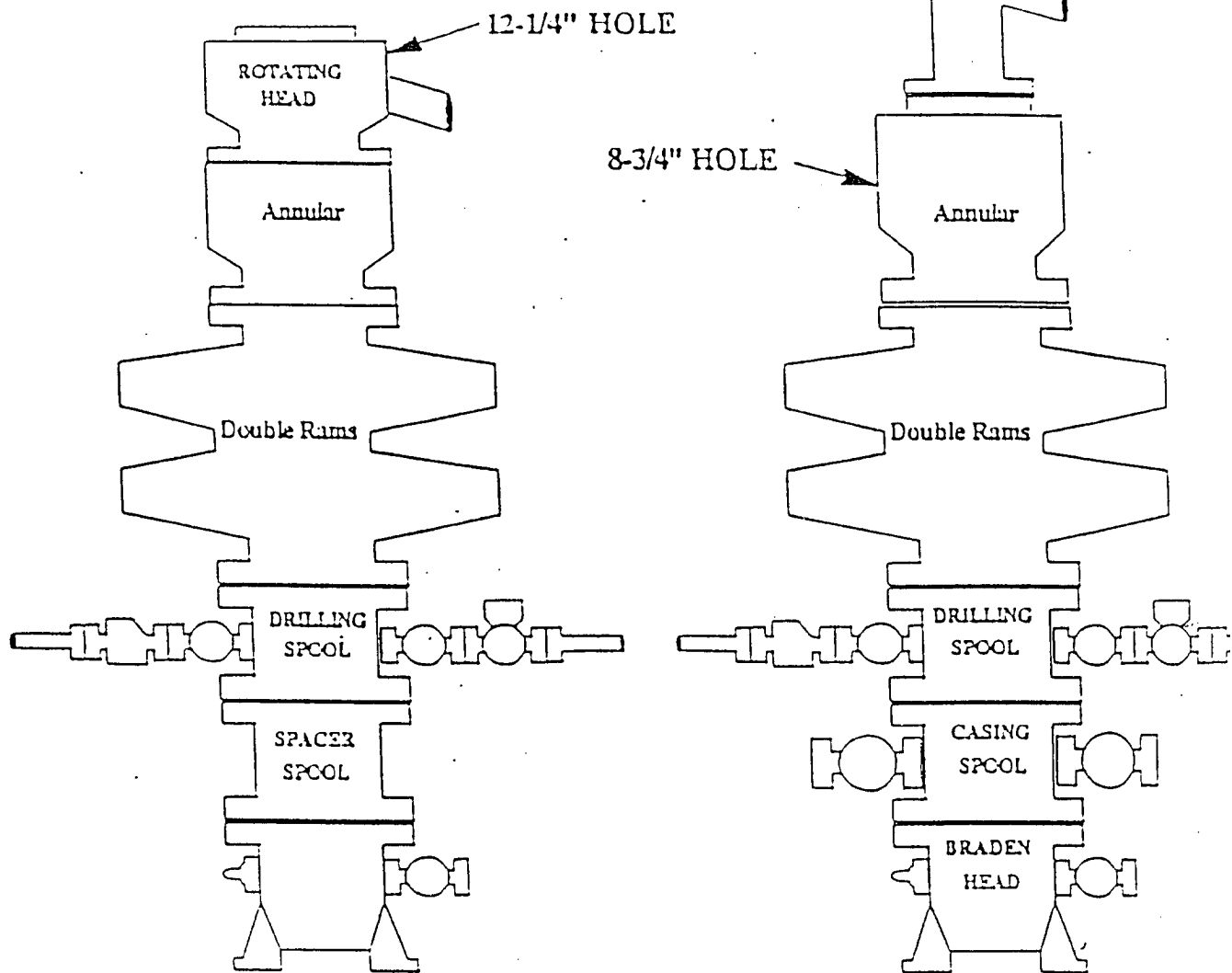
- A. A kelly cock will be kept in the drill string at all at times.
- B. A full-opening drill pipe stabbing valve (inside B. O. P.) with proper drill pipe connections will be on the rig floor at all times.
- C. A mud logging unit complete with hydrogen sulfide detector will continuously monitor drilling penetration rate and hydrocarbon shows to T. D.

9. Logging, Testing and Coring Program:

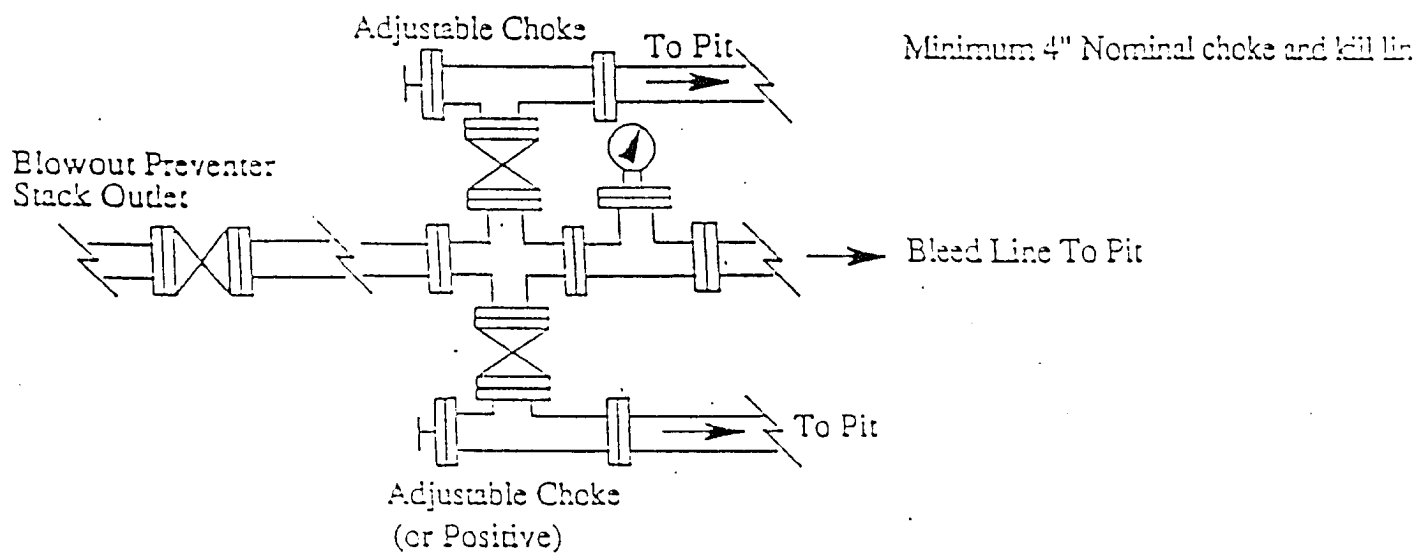
- A. Drill stem tests may be run on the basis of drilling shows.
- B. The electric logging program will consist of GR-CNL from T. D. to surface casing, and GR-CNL from T. D. to surface. Selected cores may be taken in zones of interest.
- C. No conventional coring is anticipated.
- D. Further testing procedures will be determined after the 5 1/2" production casing has been cemented at T. D., based on drill shows, log evaluation, and drill stem tests.

10. Abnormal Conditions, Pressures, Temperatures, or Potential Hazards: No abnormal pressures or temperatures are anticipated. The estimated bottom hole temperature at T. D. is 140 degrees Fahrenheit. The estimated maximum bottom hole pressure is 3000 psig. No hydrogen sulfide is known to exist at this depth in this area. No major circulation loss zones have been reported in offsetting wells.

11. Anticipated Starting Date and Duration of Operations: Road and location work will begin after receiving B. L. M. approval. The anticipated spud date is February 1, 2003. Once commenced, the drilling operations should be finished in approximately 30 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made to install permanent facilities.



Choke Manifold Requirement (3000 psi WP)



MINIMUM BLOWOUT PREVENTER REQUIREMENTS

3,000 psi Working Pressure

3 MWP

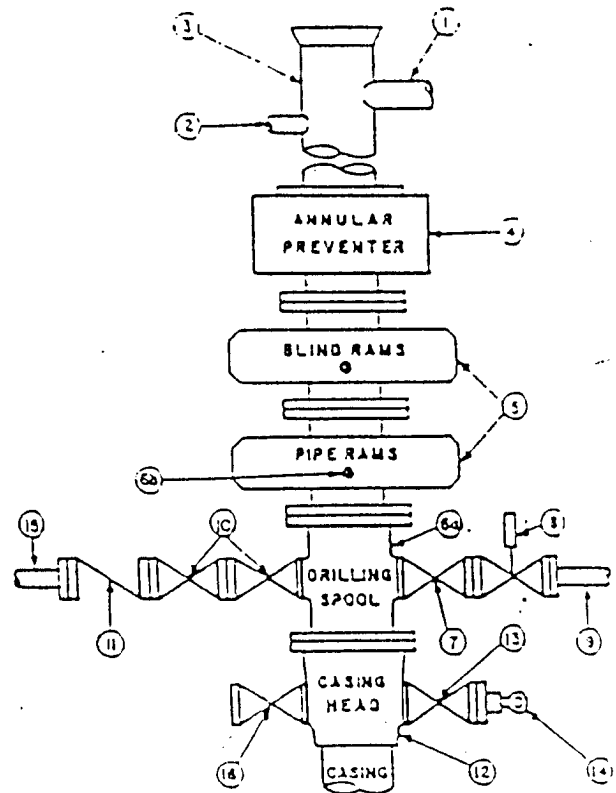
STACK REQUIREMENTS

No	Item	Min. I.D.	Min. Nominal
1	Flowline		
2	Fill up line		2"
3	Drilling nipple		
4	Annular preventer		
5	Two single or one dual hydraulically operated rams		
6a	Drilling spool with 2" min. kill line and 3" min. choke line outlets		
6b	2" min. kill line and 3" min. choke line outlets in ram. (Alternate to 6a above.)		
7	Valve	Gate <input type="checkbox"/> Plug <input type="checkbox"/>	3-1/8"
8	Gate valve—power operated		3-1/8"
9	Line to choke manifold		3"
10	Valves	Gate <input type="checkbox"/> Plug <input type="checkbox"/>	2-1/16"
11	Check valve		2-1/16"
12	Casing head		
13	Valve	Gate <input type="checkbox"/> Plug <input type="checkbox"/>	1-13/16"
14	Pressure gauge with needle valve		
15	Kill line to rig mud pump manifold		2"

OPTIONAL

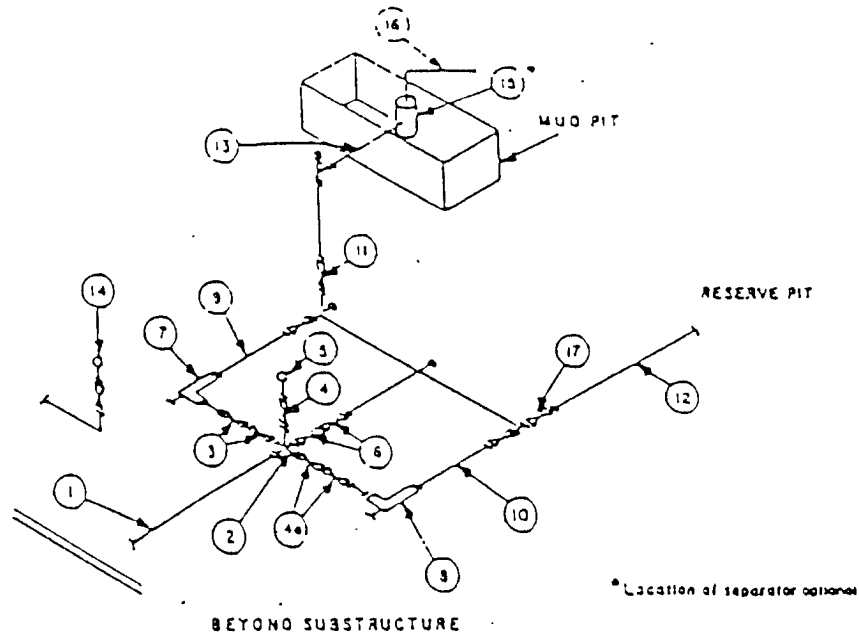
16	Flanged valve	1-13/16"
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CONFIGURATION 1



MINIMUM CHOKE MANIFOLD
3,000, 5,000 and 10,000 PSI Working Pressure

3 MWP • 5 MWP • 10 MWP



MINIMUM REQUIREMENTS										
No.		3,000 MWP			5,000 MWP			10,000 MWP		
		I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING
1	Line from drilling spool		3"	3,000		3"	5,000		3"	10,000
2	Cross 3"x3"x3"x2"			3,000			5,000			
	Cross 3"x3"x3"x3"									10,000
3	Valves(1) Gate <input type="checkbox"/> Plug <input type="checkbox"/> (2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
4	Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/> (2)	1-13/16"		3,000	1-13/16"		5,000	1-13/16"		10,000
4a	Valves(1)	2-1/16"		3,000	2-1/16"		5,000	3-1/8"		10,000
5	Pressure Gauge			3,000			5,000			10,000
6	Valves Gate <input type="checkbox"/> Plug <input type="checkbox"/> (2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
7	Adjustable Choke(3)	2"		3,000	2"		5,000	2"		10,000
8	Adjustable Choke	1"		3,000	1"		5,000	2"		10,000
9	Line		3"	3,000		3"	5,000		3"	10,000
10	Line		2"	3,000		2"	5,000		3"	10,000
11	Valves Gate <input type="checkbox"/> Plug <input type="checkbox"/> (2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
12	Lines		3"	1,000		3"	1,000		3"	2,000
13	Lines		3"	1,000		3"	1,000		3"	2,000
14	Remote reading compound standpipe pressure gauge			3,000			5,000			10,000
15	Gas Separator		2'x5'			2'x5'			2'x5'	
16	Line		4"	1,000		4"	1,000		4"	2,000
17	Valves Gate <input type="checkbox"/> Plug <input type="checkbox"/> (2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000

(1) Only one required in Class 3M.

(2) Gate valves only shall be used for Class 10M.

(3) Remote operated hydraulic choke required on 5,000 psi and 10,000 psi for drilling.

EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS

- All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
- All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
- All lines shall be securely anchored.
- Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
- Choke manifold pressure and standpipe pressure gauges shall be available at the choke manifold to assist in regulating chokes. As an alternate with automatic chokes, a choke manifold pressure gauge shall be located on the rig floor in conjunction with the standpipe pressure gauge.
- Line from drilling spool to choke manifold should be as straight as possible. Lines downstream from chokes shall make turns by large bends or 90° bends using bull plugged tees.

Notes Regarding Blowout Preventers
McQuandgranle, LLC
Midnight Matador Federal #1
Eddy County, New Mexico

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal B. O. P. bore.
2. Wear ring will be properly installed in head.
3. B. O. P and all associated fittings will be in operable condition to withstand a minimum 3000 psi working pressure.
4. All fittings will be flanged.
5. A full bore safety valve tested to a minimum 3000psi W. P. with proper thread connections will be available on the rotary rig floor at all times.
6. All choke lines will be anchored to prevent movement.
7. All B. O. P. equipment will be equal to or larger in bore than the internal diameter of the last casing string.
8. Will maintain a kelly cock attached to the kelly.
9. Hand wheels and wrenches will be properly installed and tested for safe operation.
10. Hydraulic floor control for B. O. P. will be located as near in proximity to driller's controls as possible.
11. All B. O. P. equipment will meet A. P. I. standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

Hydrogen Sulfide drilling Operations Plan
McQuadrangle, Inc.
Midnight Matador Federal #1
Eddy County, New Mexico

I. Hydrogen Sulfide Training: All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H₂S).
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H₂S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H₂S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500') and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S Drilling Operations Plan and the Public Protection Plan. This Plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

II. H₂S Safety Equipment and Systems; All H₂S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500' above, or 3 days prior to penetrating the first zone containing or reasonably expected to contain H₂S.

1. Well Control Equipment:
 - A. Flare line with electronic igniter or continuous pilot.
 - B. Choke manifold with a minimum of 1 remote choke.

C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

D. Auxiliary equipment will include annular preventer, mud-gas separator, rotating head, and flare gun with flares.

2. Protective equipment for essential personnel is Mark II Surviveair 30 minute units located in the dog house and at briefing areas, as indicated on well site diagram.

3. H2S Detection and Monitoring Equipment:

A. 2 portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.

B. 1 portable SO2 monitor positioned near flare line.

4. Visual Warning Systems:

A. Wind direction indicators as shown on well site diagram.

B. Caution/Danger signs shall be posted on roads providing direct access to the location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. When appropriate, bilingual signs will be used.

5. Mud Program:

A. The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

B. A mud-gas separator and an H2S gas buster will be utilized.

6. Metallurgy:

A. All drill strings, casings, tubing, wellhead, B. O. P.s, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

B. All elastomers used for packing and seals shall be H2S trim.

7. Communication:

A. Radio communications in company vehicles included cellular telephone and 2-way radio.

B. Telephone communications at field office.

8. Well Testing: Drill stem testing will be performed with the minimum number of personnel in the immediate area necessary to safely and adequately conduct the testing. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill stem testing operations conducted in an H₂S environment will use the closed chamber method of testing.

JIM PIERCE

200 WEST FIRST STREET
SUITE 859
ROSWELL, NEW MEXICO 88203-4697

OIL AND GAS PROPERTIES

PHONE 505-622-7246
FAX 505-622-1711
EMAIL: jplandman@dfn.com

July 4, 2003

NMOCD
District II Office
1301 West Grand Avenue
Artesia, NM 88210

RE: OCD Rule 118 Compliance
Midnight Matador Fed. #1
Section 35: SENE
T17S, R27E, NMPM,
Eddy County, NM

Gentlemen:

Per our conversations following the BLM approval of the APD and Sundry Notice for the captioned federal well, and the research we have conducted in the immediate area offsetting subject location concerning Rule 118, it is our opinion that there will not be H2S produced by the drilling of the Midnight Matador Federal #1 well.

Included is a copy of the OCD Rule 118 H2S Reference Guide by which we are basing our study and this contingency plan.

Standard practices and measures will be in place to insure the safety of everyone involved.

On behalf of McQuadrangle, LLC, we appreciate your consideration.

Please contact us should you have questions.

Truly,



Jim Pierce, RLP

Encl.

Xc: McQuadrangle, LLC

