Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., 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

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
May 27, 2004

WELL API NO.
30-015-34929

5. Indicate Type of Lease
STATE ☒ FEE ☐

6. State Oil & Gas Lease No.
VA-2600

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
Manchester State Unit

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

8. Well Number 1

2. Name of Operator
Yates Petroleum Corporation

9. OGRID Number

3. Address of Operator
105 S. 4th Street, Artesia, NM 88210

10. Pool name or Wildcat
WC: Mississippian Gas

4. Well Location
Unit Letter D : 760 feet from the North line and 660 feet from the West line
Section 20 Township 19 S Range 23E NMPM County Eddy

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
4062'

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ **Depth to Groundwater** _____ **Distance from nearest fresh water well** _____ **Distance from nearest surface water** _____

Pit Liner Thickness: _____ **mil** **Below-Grade Tank: Volume** _____ **bbls;** **Construction Material** _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☒	COMMENCE DRILLING OPNS.	☐	P AND A	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
OTHER:	☐			OTHER:	☐		

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Yates Petroleum Corporation respectfully requests permission to omit the 13 3/8" casing on this well. New wellbore and casing program will be as follows:

14 ¾" surface hole with 9 5/8" casing set @ 1,500' with cement circulated to surface.
8 ¾" production hole with 5 ½" casing set @ 8,100' with top of cement 500' into surface casing.

Month-Year
MAR 30 2007
OCD-ARTESIA, NM

Thank you,

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.**

SIGNATURE _____ TITLE: Drilling Engineer Assistant DATE 3/28/07

Type or print name Jeremiah Mullen E-mail address: jmullen@ypcnm.com Telephone No. (505)748-4378

For State Use Only

BRYAN G. ARRANT
DISTRICT II GEOLOGIST

MAR 3 0 2007

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

HALLIBURTON

Fluid Systems

Yates Petroleum Corporation
105 South 4th St.
Artesia, New Mexico 88210

Manchester State Unit #1
Sec. 20, T19S, R23E
760' FNL & 660' FWL
Eddy Co., New Mexico

Drilling Fluids Proposal

Prepared For:

Mr. Tim Bussell
Yates Petroleum Corp.
March 27, 2007

Prepared By:

Billy Sumpter
Technical Professional
Baroid Fluid Services
Halliburton Fluid Systems
4000 North Big Spring, Ste. 300
Midland, Texas 79705
(432) 683-0222

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HALLIBURTON | Fluid Systems

Yates Petroleum Corp.
Manchester State Unit #1
Eddy Co., New Mexico

PROGRAM BRIEFING

Baroid's drilling fluid recommendation for the **Manchester State Unit #1**, to be drilled in Eddy Co.; New Mexico is based on information provided by **Yates Petroleum Corp.** In addition, well data from offset wells was utilized to provide information relative to mud systems, operating procedures, and problem areas.

Based on the above sources, **Baroid** has established the following objectives as focal points for the drilling fluid program:

1) Meet environmental standards.
2) Provide borehole stability.
3) Prevent induced kicks and lost circulation. Minimize swab/surge pressures.
4) Optimize well bore cleaning in large diameter hole.
5) Seal massive and/or depleted sands.
6) Prevent differentially stuck pipe.
7) Safe and economical completion of the project.

In order to meet these objectives, **Baroid** recommends drilling from spud to 1,500' with fresh water/ **AQUAGEL®/EZ-MUD®** sweeps, and from 1,500' to 8,100' with cut brine/**IMPERMEX®/EZ-MUD®** sweeps. ***This premise is without unusual problems, protracted drilling time, mechanical interruptions/failures, excessive lost circulation, water flows, and/or abnormal pressure.***

We anticipate the proposed depth of 8,100' MD to be reached in 17 total days with an estimated drilling fluid cost of **$26,776.50** current contract prices.

Depth (MD/RKB)	Hole Size	Casing Size	Mud Weight (ppg)	Mud Type	Interval Days	Interval Cost
0' – 1,500'	14 3/4" ~~12-1/4"~~	9 5/8"	10.0	Fresh Water	3	$5,259.20
1,500' – 8,100'	8 3/4"	5 1/2"	8.4-9.0	Fresh Water/Cut Brine	14	$21,517.30

This well will be serviced from our Lovington, New Mexico service center. Our Lovington service center stocks a complete line of drilling fluid products, forklifts, and is a 24-hour service facility that will handle all of the product needs for this project. For 24-hour mud deliveries, please call (505)396-1565.

Baroid Fluid Services appreciates the opportunity to participate in the planning of this well. If any additional information is required, please do not hesitate to contact us.

Billy Sumpter
Baroid-Permian Basin
432/557-6525

OBJECTIVES AND METHODS

1) Meet environmental standards.

   The proposed mud system provides economical inhibition and excellent well bore stability.

2) Provide borehole stability.

   The **Baroid Engineer** will control flow properties, gel strengths, and solids in the desired ranges. In addition, we must follow prudent operating procedures such as short trips and optimized penetration rates.

3) Prevent induced kicks and lost circulation. Minimize swab/surge pressures.

4) Optimize well bore cleaning in large diameter hole.

   This is accomplished by coordinating flow rates, penetration rates, and mud properties. Short trips are essential.

5) Seal massive and/or depleted sands/limestone.

   BAROFIBRE®, **HY-SEAL®**, **PLUG-GIT®**, and **BARO-SEAL™** will provide a good particle size distribution and a controlled fluid loss for plugging depleted or weak sands/limestone in the hole intervals.

6) Prevent differentially stuck pipe.

7) Safe and economical completion of the project.

   Baroid personnel are dedicated to safety. The recommended fluid system is quite cost effective, when used to reduce total well cost, by reducing well bore related problems and the associated days.

Yates Petroleum Corp.
Manchester State Unit #1
Eddy Co., New Mexico

Casing Program

Hole Size	Casing Size	Top MD/RKB	Set @ MD / RKB	Fluid Density	Drilling Fluid System
~~12 1/4"~~ 14 3/4"	9 5/8" 36#	350'	1,500'	8.4-8.6	Fresh Water
8 3/4"	5 1/2" 17#	1,500'	8,100'	8.6-9.0	Fresh/Cut Brine

Formation Tops - (Estimated Depths)		
System	**Formation**	**GL (ft)**
	San Andres	235'
	Glorieta	1,435'
	Upper Yeso	1,535'
	Tubb	2,790'
	Lower Yeso	2,890'
	Abo	**3,425'**
	Wolfcamp Pay	4,585'
	Base Wolfcamp Pay	4,675'
	Wolfcamp Shale	4,715'
	Cisco	5,985'
	Strawn	**7,375'**
	Atoka	7,615'
	Middle Marrow	7,835'
	Lower Morrow	7,885'
	Morrow Clastics	7,935'
	Chester Lime	8,015'
	Total Depth	**8,100'**

Recommended Mud Properties

MD(RKB) (ft)	Mud Wt. (ppg)	Funnel Vis.	PV	YP	Fluid Loss	pH	% Solids	Cl⁻
0' – 1,500'	8.4-8.6	28-30	1-3	1-3	N/C	9.5-10.0	<5	<10K
1,500' – 7,300'	8.6-9.0	28-30	1-3	1-3	N/C	9.5-10.0	<5	<60K
7,300' – 8,100'	8.6-9.0	34-36	3-6	6-10	8-10	9.5-10.0	<5	<60K

DRILLING FLUID DISCUSSION BY INTERVAL

Interval: 0 – 1,500' MD: Fresh Water/Sweeps:

Mud Properties:

MD(RKB) (ft)	Mud Wt. (ppg)	Funnel Vis.	PV	YP	Fluid Loss	pH	% Solids	Cl⁻
0 – 1,500'	8.4-8.6	28-30	1-3	1-3	N/C	9.5-10.0	<5	<10K

Operation: Spud in and drill a 12 1/4" hole to 1,500'. Run and cement 9 5/8" surface casing.

Mud System: A fresh water system is recommended for drilling this interval. Build spud mud by filling the working pits with fresh water and add **soda ash** to reduce the total hardness to <120 ppm. Add **AQUAGEL®** for the desired funnel viscosity. **Lime** will be added to aid flocculation and to adjust ph for corrosion control.

Solids Control: Fully utilize at least two linear motion shakers, rig desilter, and rig desander to control drill solids. Run the finest mesh screens that will accommodate pump rates.

Issues: Lost returns/Seepage - Add **drilling paper** for seepage. For excessive seepage or lost returns mix in 100 bbls of fresh water the following: 1 sack of **soda ash**, **AQUAGEL®** for a 35+ viscosity, 8-10 ppb **PLUG-GIT®**, 8-10 ppb **BARO-SEAL®**, and 6-8 ppb **cottonseed hulls**. In the event of complete loss of returns, dry drill (minimum 7 bpm) using gel/paper sweeps to keep the hole clean.

Hole Cleaning: Use **EZ-MUD®** in sweeps as needed or poured directly down the drill pipe on connections. **At TD, sweep the hole with 50 bbls of pre-mixed fresh water/ AQUAGEL®/Lime/ drilling paper with a funnel viscosity of 60-80 sec/qt.** and spot a second pill on bottom for casing operations.

Interval: **1,500' – 8,100' MD: Cut Brine/Sweeps/Starch**

Mud Properties:

MD(RKB) (ft)	Mud Wt. (ppg)	Funnel Vis.	PV	YP	Fluid Loss	pH	% Solids	Cl⁻
1,500' – 7,300'	8.4-9.0	28-32	1-3	1-3	N/C	9.5-10.0	<5	60K
7,300' – 8,100'	8.4-9.0	34-36	3-6	6-10	8-10	9.5-10.0	<5	60K

Operation: Drill out of intermediate casing and obtain a successful shoe test. Drill a 8 3/4" hole to 8,100'. Run and cement 5 1/2" casing.

Mud System: Drill out with cut brine and the chloride content above 60,000 ppm. **Add 4-6% KCL to the system prior to drilling the Abo (3,400')** Use **lime and/or caustic soda** to maintain the pH 9.5-10. ***Mud up by 7,300', prior to drilling the Strawn formation or sooner if hole conditions warrant by mixing IMPERMEX® (starch) to reduce the API fluid loss to 8-10 cc's and raise the viscosity between 34-36 sec per qt.*** **by using ZEOGEL.**

Solids Control: Fully utilize at least two linear motion shakers, rig desilter, and rig desander to control drill solids. Run the finest mesh screens that will accommodate pump rates.

Issues: Lost Returns/Seepage - Add **BAROFIBRE® FINE, PLUG-GIT®,** or **drilling paper** for seepage or lost returns. ***Pump LCM (starting with 3-4 sx/hr of paper) as needed to control seepage and lost circulation.***

Hole Cleaning- **EZ-MUD®** and/or **ZEOGEL®** with **BAROLIFT®** in sweeps. **At TD, sweep the hole with 50 bbls of pre-mixed ZEOGEL®/Lime/ drilling paper with a funnel viscosity of 60-80 sec/qt.** , and spot a second pill on bottom for casing operations