Form 3160-5 (April 2004)

# UNITED STATES DEPARTMENT OF THE INTERIOR CD-ARTESIA BUREAU OF LAND MANAGEMENT

FORM APPROVED OM B No. 1004-0137 Expires: March 31, 2007

5.	Lease Serial No.
	NM:24160 54865 (EAD)
6.	If Indian, Allottee or Tribe Name

SUNDRY	1 MM 24100 3 4863 (C/B)	P			
Do not use to abandoned w	6. If Indian, Allottee or Tribe Name				
SUBMIT IN TR	7. If Unit or CA/Agreement, Name and/or No.  Parkway Delaware Unit				
1. Type of Well  ✓ Oil Well	Gas Well Other		RECEIVED	8. Well Name and No.	
2. Name of Operator ST. MARY I	AND & EXPLORATION CO	JAN 1 0 2006	PDU # 706 9. API Weli No.		
3a Address			<b>WUNNITEDM</b>		
580 Westlake Park Blvd., Suite		281/677-2800		10. Field and Pool, or Exploratory Area PARKWAY DELAWARE	
4. Location of Well (Footage, Sec.,	11. County or Parish, State				
(H), 1980' FNL & 430' FEL ,	SEC 35, TIAS, 1	7 24 <b>£</b>		EDDY, NM	
12. CHECK A	PPROPRIATE BOX(ES) TO	INDICATE NATO	JRE OF NOTICE, RI	EPORT, OR OTHER DATA	
TYPE OF SUBMISSION	YPE OF ACTION				
Notice of Intent	Acidize  Alter Casing freyram  Casing Repair	Deepen Fracture Treat New Construction	Production (Star	rt/Resume)	
Subsequent Report	Change Plans	Plug and Abandon			
Final Abandonment Notice	Convert to Injection	Plug Back	Water Disposal		
following completion of the inv testing has been completed. Fir determined that the site is ready	olved operations. If the operation re al Abandonment Notices shall be fi	esults in a multiple con iled only after all requi	npletion or recompletion in rements, including reclama	d subsequent reports shall be filed within 30 da n a new interval, a Form 3160-4 shall be filed on ation, have been completed, and the operator ha	nce
14. I hereby certify that the foreg Name (Printed/Typed)  Tiffagy D. Grant  Signature	oing is true and correct	Title I	Regulatory Technician	/12/2005	
<del></del>	THIS SPACE FOR FI		TATE OFFICE U	JSE	
	oe G. Lara	ACTIN	3		<del></del>
Conditions of approval, if any, are att certify that the applicant holds legal of which would entitle the applicant to of	or equitable title to those rights in the	he subject lease	Office CARLSE	BAD FIELD OFFICE	

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.

### Nine Point Drilling Plan (Supplement to BLM 3160-3)

St. Mary Land and Exploration Co.

PDU #706

1980' FNL, 430' FEL; Sec 35, TI9S, R29E

Parkway Delaware Unit

Parkway (Delaware) Field

Eddy Co., NM

NM-24160

1. Name and estimated tops of geologic horizons

> Rustler 146' Slado 351' Tansill 1261' Yates 1513' Capitan Reef 1695 Delaware 2698'

- 2. Protection of possible useable water will be achieved by setting 13.375" surface casing @ 400'+/- and cementing it to surface. Isolation of the productive Delaware-Brushy Canyon will be achieved by setting 5.5" casing @ 4600' +/-, and cementing back to surface.
- 3. The well control equipment to be employed during the drilling of this well is illustrated on attached EXHIBIT A. This equipment includes a two ram BOP, annular BOP and choke manifold of comparable pressure rating. Equipment will be rated for 3000 PSI and will be tested to 80% of that pressure prior to drilling out of the 13 3/8" surface casing. A hydraulic closing unit will be a part of this equipment and will be function tested daily.
- 4. The casing strings will consist of the following:

Surface:

13 3/8" OD, 48#/ft, H40, STC, new pipe @ 400' in 17 1/2" hole.

NEW Intermediate 1: 9.625" OD, 36#/ft, J55, STC, new pipe @ 1500'+/- in 12.25" hole.

Intermediate 2: 7" OD, 23#/ft, J55, STC, new pipe @ 3200' +/- in 8.75" hole.

Production: 4.50" OD, 11.6#/ft, J55, LTC, new pipe @ 4600'+/- in 6.25" hole

### 5. Cementing programs for the above casing strings are:

Surface:

**Lead Slurry:** 195 sx Class C Cement w/ 4% bwoc Bentonite, 2% bwoc CaCl, .25#/sc celloflake. .004 gps FP-13L mixed at 13.5 ppg, and having a yield of 1.75 cu ft/sk.

**Tail Slurry:** 150 sx Class C Cement w/ 2% bwoc CaCl, .004 gps FP-13L mixed @ 14.8 ppg, and having a yield of 1.34 cu ft/sk.

The above volume represents 80% excess over calculated hole volume, and will be adjusted to actual setting depth of casing. The slurries will be preceded by a fresh water spacer, and displaced with brine water.

#### Intermediate 1 @ 1500':

Lead Slurry: 280 sx (50:50) Poz (Fly Ash): Class C Cement w/ 10% bwoc Bentonite, 5% bwoc CaCl, .25#/sk celloflake, .004 gps FP-13L mixed at 11.9 ppg, and having a yield of 2.37 cu ft/sk.

**Tail Slurry:** 200 sx Class C Cement w/ 2% bwoc CaCl, .004 gps FP-13L mixed at 14.8 ppg, and having a yield of 1.35 cu ft/sk.

The above are BJ Services products with 120% excess open hole volume - actual volumes will be adjusted to the open hole caliper of this wellbore. The cement slurries will be preceded by 12 bbls cement wash for mud removal and displaced with fresh water. Equivalent products from another vendor may be substituted for BJ depending on price/availability.

#### Intermediate 2 @ 3200':

**Lead Slurry:** 115 sx (50:50) Poz (Fly Ash): Class C Cement w/ 10% bwoc Bentonite, 5% bwoc CaCl, .25#/sk celloflake, .004 gps FP-13L mixed at 11.9 ppg, and having a yield of 2.37 cu ft/sk.

**Tail Slurry:** 150 sx Class C Cement w/ 2% bwoc CaCl, .004 gps FP-13L mixed at 14.8 ppg and having a yield of 1.35 cu ft/sk.

The above are B J Services products with 60% excess open hole volume – actual volumes will be adjusted to the open hole caliper of this wellbore. The cement slurries will be preceded by 12 bbls cement wash for mud removal and displaced with fresh water. Equivalent products from another vendor may be substituted for B J depending on price/availability.

#### Production:

**Lead Slurry:** 145sx (50:50) Poz (Fly Ash): Class C Cement w/ 10% bwoc Bentonite, 5% bwoc CaCl, .25#/sk celloflake, .004 gps FP-13L, 5#/sk LCM-1 mixed at 11.5 ppg, and having a yield of 2.71 cu ft/sc.

Tail Slurry: 100 sx Class C Cement w/ 12% bwoc CSE-2, 1% bwoc FL-62, .004 gps FP-13L mixed at 13.6 ppg, and having a yield of 1.8 cu ft/sk.

The above are B J Services products with 30% excess volume - actual volumes will be adjusted to the open hole caliper of this wellbore. Equivalent products from another vendor may be substituted for B J depending on price/availability.

6. It is anticipated that this well will be drilled to TD utilizing the fluids shown below:

0-400': Gel/Lime "spud mud" 8.6-9.0 PPG. Utilize native solids to maintain

sufficient viscosity to clean hole. Mix paper as required to control

seepage loss.

**300-1800':** Brine 9.9 - 10.0 PPG. Circulate thru reserve pit for gravitational solids

solids removal. Add paper as required to control seepage loss while maintaining pH at 10.0 - 10.5 using Lime. Brine water will minimize

hole wash out in the salt.

1800-3200': Fresh Water 8.3 - 8.5 PPG Loss of circulation is anticipated in the

Capitan Reef which will require switching to fresh water and dry drilling

to casing point.

3200-3800': Cut Brine 8.5 – 8.9 PPG Pump high-vis sweeps to clean hole.

**3800-4600':** Cut Brine/Starch 8.7 – 8.9 PPG Maintain water loss @ 10-15 cc.

Sweep with high-vis pill to clean hole for logging operations.

7. Auxiliary equipment will include an upper kelly cock valve, safety valve to fit drill pipe and pressure gauges.

- 8. No drill stem testing, mud logging or coring is planned for this wellbore. A Platform Express Triple Combo electric log suite will be run at TD.
- 9. The estimated BHP at TD is not expected to exceed 1500 psi, and a BHT of 105 F is anticipated. There is no H2S present in the hydrocarbons being produced from the other wells in this section. Should such unexpected circumstances be encountered the operator and drilling contractor are prepared to take necessary steps to ensure safety of all personnel, and environment. Lost circulation could occur but is not expected to be a serious problem in this area, and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid.

It is estimated that this well will be drilled and cased in 10-11 days. Drilling will commence as soon after approval is received and services can be contracted.

## Thirteen Point Plan for Surface Use (Additional data for form 3160-3)

St. Mary Land and Exploration Company

PDU #706

1980' FNL, 430' FEL; Sec 35, TI9S, R29E

Parkway Delaware Unit

Parkway (Delaware)

Eddy Co., NM

NM-24160

EXISTING ROADS - A "VICINITY MAP" and a "LOCATION VERIFCATION
 MAP" by John West Surveying are attached which show the location of existing roads
 and the area topography.

The road log to the location is as follows:

- a) From the intersection of U.S. Hwy 62-180 and Co. Rd. #238 (Burton Flat).
- b) Go north on Co. Rd. #238 for approx 6 miles.
- c) Turn right (east) and go approx 1.2 miles.
- d) Turn left (north) and go approx .2 miles to a proposed road survey.
- e) Follow proposed road survey for approx 132' to this location.
- 2. PLANNED ACCESS ROAD —Approximately 130' of new E-W access road will be built from the existing N-S main caliche road to the east.
- 3. LOCATION OF EXISTING WELLS EXHIBIT B shows the location of other wells within a mile radius of the proposed location.
- 4. LOCATION OF EXISTING OR PROPOSED FACILITIES This production well will be tied into existing PDU facilities.
- 5. LOCATION AND TYPE OF WATER SUPPLY All water (fresh or otherwise) needed for the drilling and completion of this well will be purchased from a commercial source and trucked to the location via the existing and proposed access road. No water source wells will be drilled, and no surface water will be utilized.
- 6. SOURCE OF CONSTRUCTION MATERIALS Construction material (caliche) required for the preparation of the drill site is available from a local source 3 ½ miles away. It is not anticipated that a significant amount of material will be required as the terrain is relatively flat. Transportation will be over the existing roads.

#### 7. METHODS FOR HANDLING WASTE DISPOSAL -

- Drill cuttings will be disposed into drilling pits after fluids have evaporated.
- The drilling pits will be lined with a biodegradable plastic liner, and buried as per regulatory requirements. The pits will be located on the #512 drill site.
- Receptacles for solid wastes (paper, plastic, etc) will be provided and equipped to prevent scattering by wind, animals, etc. This waste will be hauled to an approved landfill site.
- Any other waste generated by the drilling, completion, testing of this well will be removed from the site within 30 days of the completion of drilling or testing operations.
- A Porta-John will be provided for the crews. This will be properly maintained during the drilling operations and removed upon completion of the well.
- 8. ANCILLARY FACILITIES The drilling, completion, and/or testing of this well will require no ancillary facilities.
- 9. WELLSITE LAYOUT Attached, as EXHIBITS C & D are plats showing the anticipated orientation of the drilling rig and the pad. A similar rig may have to be substituted for United Drilling Rig #24 if it is no longer available when approval is granted for this application. Material moved to create the drilling pits will be utilized in the dike around the pits so as to facilitate restoration of the area when operations are completed.
- 10. PLANS FOR SURFACE RESTORATION Reclamation of the surface location will be in accordance with the requirements set forth by the BLM. As stated earlier all waste generated by this operation will be disposed of in an approved manner, and the site restored as closely as possible to its pre-operation appearance. Due to the topography of the area no problems are anticipated in achieving this status and no erosion or other detrimental effects are expected as a result of this operation.
- 11. OTHER INFORMATION The surface ownership of the drill site and the access routes are under the control/ownership of:

Bureau of Land Management

P. O. Box 1778

Carlsbad, New Mexico 88221-1778

505-234-5972

The BLM representative for this area is Barry Hunt who can be reached at the above number, or 505-361-4078.

The site was archaeologically surveyed in Aug 2005. Danny Boone, the registered archeological surveyor, should forward a copy of that report to the BLM.

12. OPERATORS REPRESENTATIVE - St. Mary Land and Exploration is covered by Nationwide Bond No. 6041872. St. Mary Land and Exploration is represented by:

Charles M. Jones, Operations Manager

Dennis Goins, Operations Engineer

580 Westlake Park Blvd., Suite 600

Houston, Texas 77079

281-677-2800 Office

281-677-2774 Direct

918-408-8025 Cell

Alan D. Means, Contract Drilling Engineer

Midland, Tx

432-620-9181 Office

432/664-7052 Cell

432-687-3117 Home

Jackie Herron, Contract Pumper Hagerman, NM

505-746-7601 Cell

505-752-2701 Home

#### 13. OPERATORS CERTIFICATION

I hereby certify that I, Alan D. Means-Contract Drilling Engineer, have inspected the proposed drill site and access route and that I am familiar with the conditions that currently exist; that the statements made in the APD package are to the best of my knowledge true and correct; and that the work associated with operations herein will be performed by ST. MARY LAND & EXPLORATION COMPANY and it's contractors and subcontractors in conformity with the terms and conditions of this APD package. I also certify responsibility for the operations conducted on that portion of the leased lands associated with this application with bond coverage being provided under a BLM nationwide bond.

This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Name and title: Alan D. Means, Consulting Operations Engineer for St. Mary Land &

A for alan Means

Explanation Company

Signature:

Date: