

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

1301 W. Grand Avenue
Artesia, NM 88210

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM - 67102	
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	
2. Name of Operator St Mary Land an & Exploration Company		7. If Unit or CA Agreement, Name and No. Parkway Delaware Unit	
3a. Address 580 Westlake Park Blvd., #600, Houston, TX 77079		8. Lease Name and Well No. PDU 307	
3b. Phone No. (include area code) 281-677-2800		9. API Well No. 30-015-33712	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1560 FNL & 2060 FEL, UL: G At proposed prod. zone <i>Unorthodox Location</i>		10. Field and Pool, or Exploratory Parkway Delaware	
14. Distance in miles and direction from nearest town or post office* 17 Miles NE of Carlsbad		11. Sec., T., R., M., or Blk. and Survey or Area SEC. 35, T19S, R29E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1560'		12. County or Parish Eddy	13. State NM
16. No. of Acres in lease 920	17. Spacing Unit dedicated to this well 20		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 460'	19. Proposed Depth 4600'	20. BLM/BIA Bond No. on file 6041872	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3315 GL	22. Approximate date work will start* Early October	23. Estimated duration 15 Days	
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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Dennis L. Goins</i>	Name (Printed/Typed) Dennis L. Goins	Date 9-09-04
Title Operations Engineer		
Approved by (Signature) <i>IS/ JANICE L. GAMBY</i>	Name (Printed/Typed) IS/ JANICE L. GAMBY	Date OCT 2 2 2004
Title FOR STATE DIRECTOR		
Office NM STATE 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 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)

Capitan Controlled Water Basin

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

RECEIVED
OCT 29 2004
OCD-ARTESIA

UNSUBC
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-144
June 1, 2004

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

For drilling and production facilities, submit to
appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe
office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☐

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: St. Mary Land & Exploration Company Telephone: 281-677-2800 e-mail address: dgoins@stmaryland.com

Address: 580 Westlake Park Blvd., Suite 600, Houston, TX 77079

Facility or well name: PDU #307 API #: _____ U/L or Qtr/Qtr G Sec 35 T 19-S R 29-E

County: Eddy Latitude 32°37'11.78"N Longitude 104°02'35.46"W NAD: 1927 ☒ 1983 ☐ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

Pit Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness <u>12 mil</u> Clay <input type="checkbox"/> Pit Volume <u>3500 bbl</u>	Below-grade tank Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not: _____
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet (20 points) 50 feet or more, but less than 100 feet (10 points) <input checked="" type="checkbox"/> 100 feet or more (0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes (20 points) <input checked="" type="checkbox"/> No (0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet (20 points) 200 feet or more, but less than 1000 feet (10 points) <u>1000</u> feet or more (0 points)
	Ranking Score (Total Points) <u>0</u>

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☐ If offsite, name of facility NA. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface _____ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations. NA

Additional Comments:

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described 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 ☐.

Date: 10/25/04

Printed Name/Title Dennis L. Goins / Production Engineer

Signature [Signature]

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Printed Name/Title [Signature]

Signature [Signature]

Date:

OCT 29 2004

RECEIVED

OCT 29 2004

QPP-ARTESIA

State of New Mexico

Energy, Minerals and Natural Resources Department

DISTRICT I

1625 N. FREYCH 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

OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102

Revised JUNE 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number		Pool Code	Pool Name
Property Code	Property Name PARKWAY		Well Number 307
OGRID No.	Operator Name ST. MARY LAND & EXPLORATION COMPANY		Elevation 3315'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	35	19-S	29-E		1560	NORTH	2060	EAST	EDDY

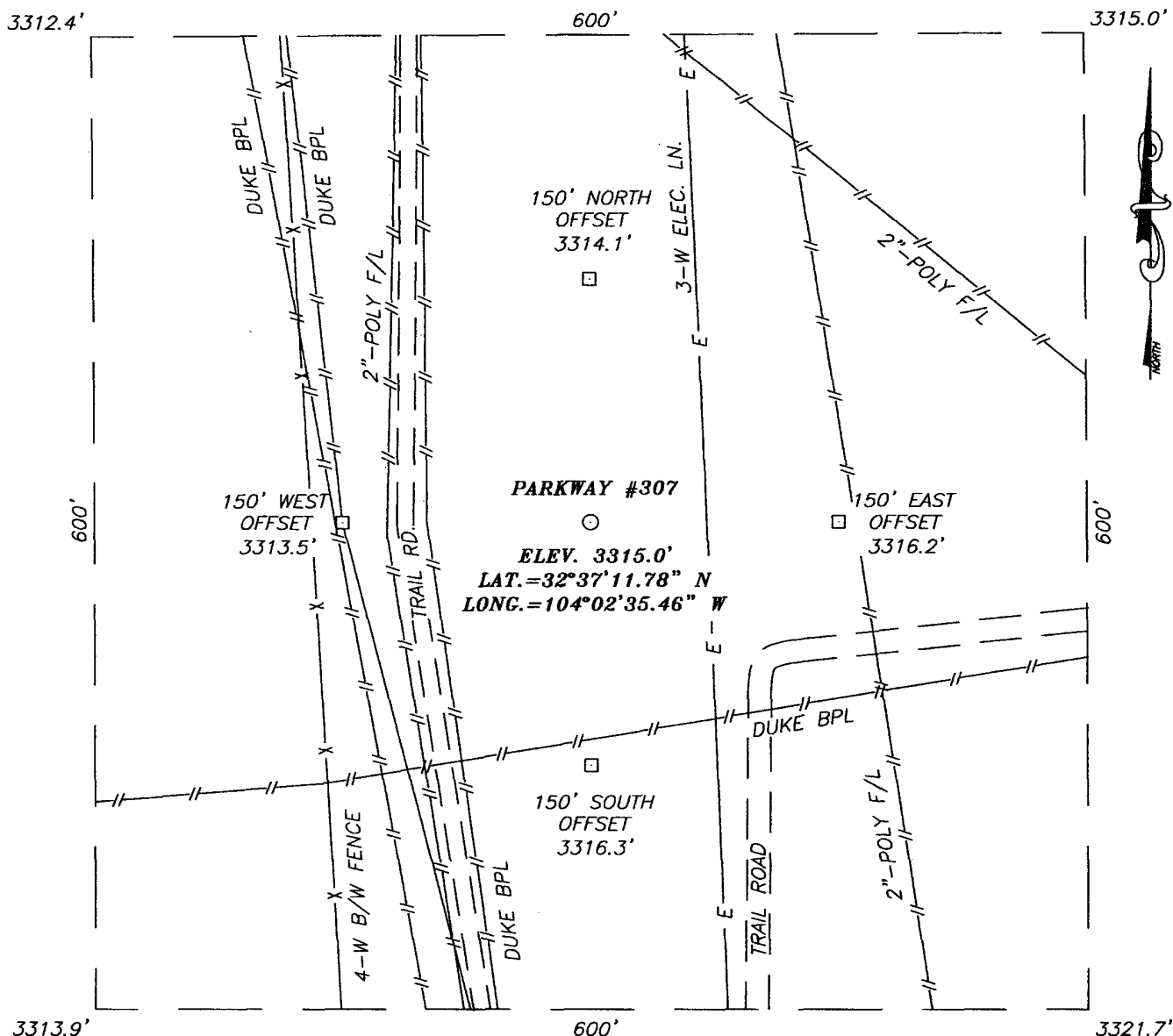
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40	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

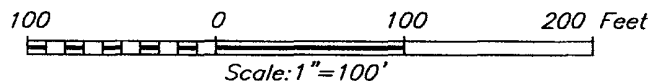
	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. <i>Dennis L. Goins</i> Signature DENNIS L. GOINS Printed Name OPERATIONS ENGINEER Title 9-9-04 Date
	SURVEYOR CERTIFICATION I hereby certify that the well location 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. AUGUST 12, 2004 Date Surveyed Signature & Seal of Professional Surveyor <i>GARY EIDSON</i> Date 04.11.0992 Certificate No. GARY EIDSON 12641
	GEODETTIC COORDINATES NAD 27 NME Y=589367.2 N X=589334.7 E LAT.=32°37'11.78" N LONG.=104°02'35.46" W

SECTION 35, TOWNSHIP 19 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

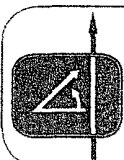
FROM THE INTERSECTION OF U.S. HWY. 62-180 AND CO. RD. #238 (BURTON FLAT) GO NORTH ON CO. RD. #238 FOR APPROX. 2.0 MILES ONTO A CALICHE RD. GOING NORTH. GO NW ON CALICHE ROAD APPROX. 4.1 MILES TO A CALICHE ROAD INTERSECTION. TURN RIGHT (EAST) AND GO APPROX. 1.0 MILES TO A CALICHE ROAD INTERSECTION. TURN LEFT (NORTH) AND GO APPROX. 0.3 MILES TO EXISTING PARKWAY #301 WELL. PROPOSED ROAD SURVEY IS ON THE NW CORNER OF EXIST PAD. FOLLOW PROPOSED ROAD SURVEY APPROX. 239' TO PROPOSED LOCATION.



ST. MARY LAND & EXPLORATION COMPANY

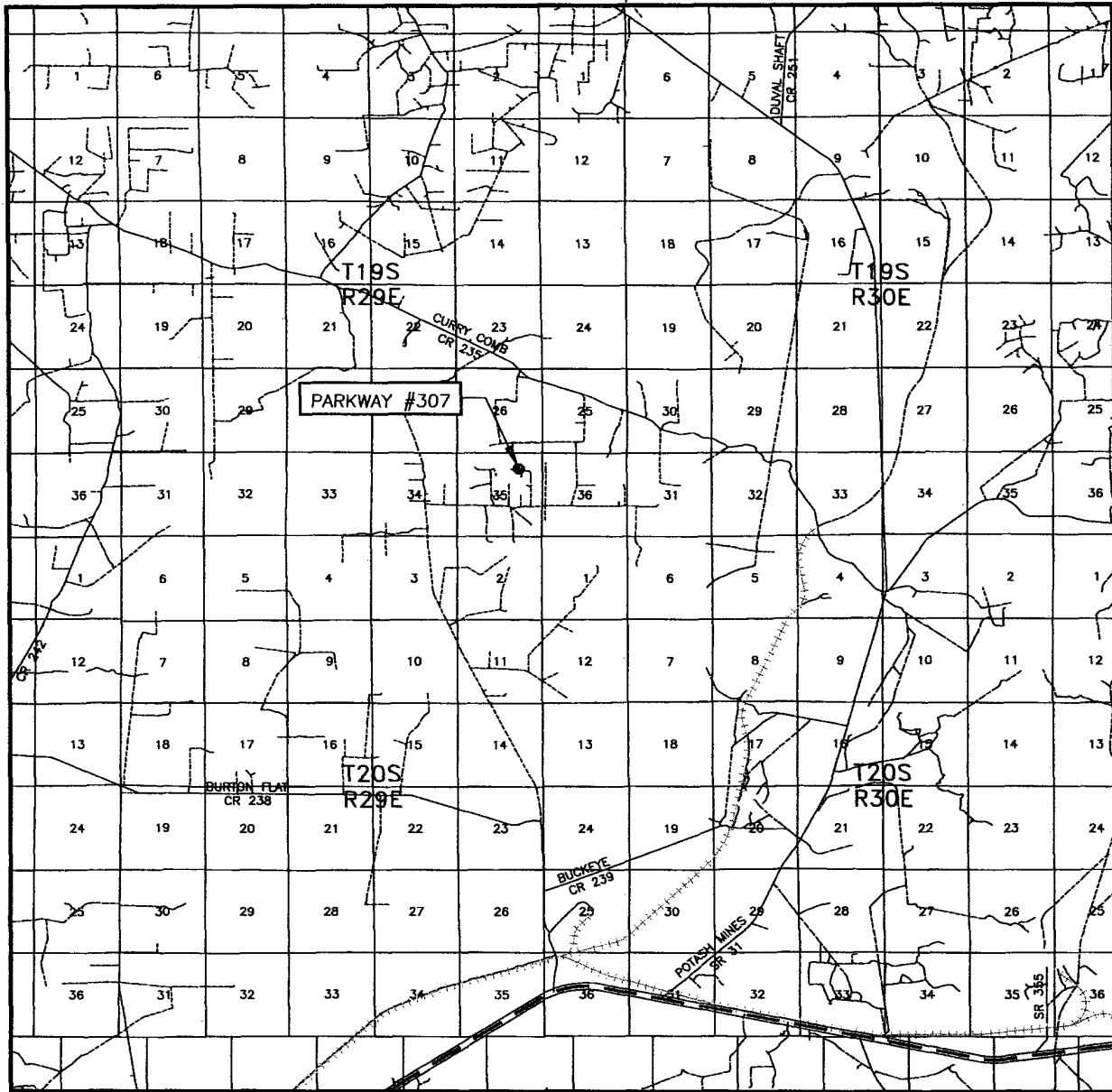
PARKWAY #307 WELL
 LOCATED 1560 FEET FROM THE NORTH LINE
 AND 2060 FEET FROM THE EAST LINE OF SECTION 35,
 TOWNSHIP 19 SOUTH, RANGE 29 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO.

Survey Date: 08/12/04	Sheet 1 of 1 Sheets
W.O. Number: 04.11.0992	Dr By: J.R.
Date: 08/23/04	Disk: CD#10
04110992	Scale: 1"=100'



PROVIDING SURVEYING SERVICES
 SINCE 1946
JOHN WEST SURVEYING COMPANY
 412 N. DAL PASO
 HOBBS, N.M. 88240
 (505) 393-3117

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 35 TWP. 19-S RGE. 29-E

SURVEY N.M.P.M.

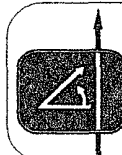
COUNTY EDDY

DESCRIPTION 1560' FNL & 2060' FEL

ELEVATION 3415'

ST. MARY LAND &
OPERATOR EXPLORATION COMPANY

LEASE PARKWAY



PROVIDING SURVEYING SERVICES
SINCE 1948
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 383-3117

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

St. Mary Land and Exploration Co.

PDU #307

1560' FNL, 2060' FEL; Sec 35, T19S, R29E

Parkway Delaware Unit

Parkway (Delaware) Field

Eddy Co., NM

NM-24160

1. Name and estimated tops of geologic horizons

Rustler	124'
Slado	329'
Tansill	1239'
Yates	1491'
Capitan Reef	1718'
Delaware	3712'

2. Protection of possible useable water will be achieved by setting 13.375" surface casing @ 379'+/- 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 @ 379'+/- in 17 1/2" hole.
Intermediate:	8.625" OD, 24 & 32#/ft, J55, STC, new pipe @ 3200'+/- in 12.25" hole.
Production:	5.50" OD, 15.5#/ft, J55, LTC, new pipe @ 4600'+/- in 7.875" hole

5. Cementing programs for the above casing strings are:

Surface: 360 sx Premium Plus w/ 2% CaCl₂, .25#/sk celloflake mixed at 14.8 ppg, and having a yield of 1.34 cu ft/sk

The above volume represents 100% 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: Stage 1

- (a) 500 sx 50/50 Poz: Class C mixed @ 11.6 PPG and having a yield of 2.47 cuft/sx. Additives will be 5% D44(salt), 10% D20(gel), 0.25#/sx D29 (celloflake) and 0.2% D46(antifoamer).
- (b) 200 sx Class C neat mixed @ 14.8 PPG w/ a yield of 1.32 cuft/sx

Stage 2(w/Stage Tool @ 1500+/-)

- (a) 350 sx 50/50 Poz: Class C cement w/ 5% D44, 10% D20, 0.2% D46 and 0.25#/sx D29 mixed @ 11.6 PPG, and having a yield of 2.47 cuft/sx
- (b) 55 sx Class C neat mixed @ 14.8 PPG and having a yield of 1.32 cuft/sx.

The above are Schlumberger products with 50% excess 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 Schlumberger depending on price/availability.

- Production:**
- (a) 345 sx 35/65 Poz: Class H w/ 5% D44 +6% D20 +0.25#/D29 + 0.2% D46 mixed @ 12.4 PPG and having a yield of 2.03 cuft/sx .
 - (b) 160 sx 50/50 Poz: Class H w/55 D44 + 2% D20 + 0.25#/sx D29 + 0.2%D46 mixed @ 14.2 PPG and having a yield of 1.33 cuft/sx.

The above are Schlumberger products with 25% excess volume - actual volumes will be adjusted to the open hole caliper of this wellbore. Equivalent products from another vendor may be substituted for Schlumberger 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 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 #307

1560' FNL, 2060' FEL; Sec 35, T19S, R29E

Parkway Delaware Unit

Parkway (Delaware)

Eddy Co., NM

NM-24160

1. EXISTING ROADS - A "VICINITY MAP" and a "LOCATION VERIFICATION 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 Pecos River bridge in Carlsbad, proceed East on US Highway 62-180 for 13.5 miles.
 - b) Turn north on County Road 238 and proceed for 2.0 miles onto a caliche road going north.
 - c) Go northwest on caliche road for 4.1 miles to a caliche road intersection.
 - d) Turn east and proceed for 1.0 mile to a caliche road intersection.
 - e) Turn north and go approx. 0.3 miles to existing Parkway #301 well.
 - d) Proposed road survey is on the NW corner of existing pad. Follow proposed road survey approx. 239' to proposed location..
2. PLANNED ACCESS ROAD —Approximately 239' of new access road will be built.
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 #307 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 September 2004. 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

Jackie Herron, Contract Pumper
Hagerman, NM

505-746-7601 Cell

505-752-2701 Home

13. OPERATORS CERTIFICATION

I hereby certify that I, Dennis L. Goins-Operations 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: Dennis L Goins, Operations Engineer for St. Mary Land & Exploration
Company

Signature:



Date:

9-9-04

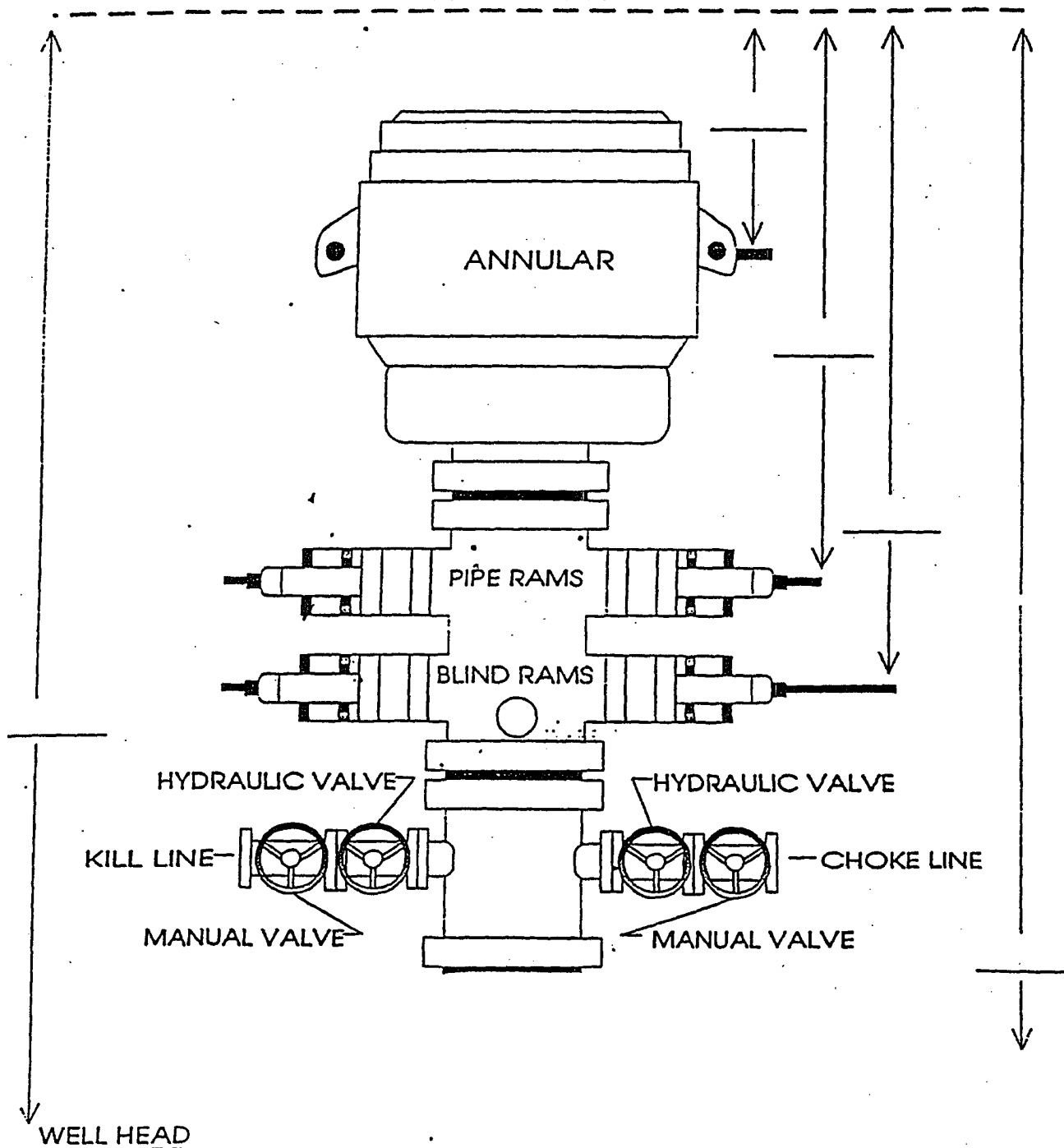
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EXHIBIT A

B.O.P. STACK SPACING

SIZE: 11" 3000#

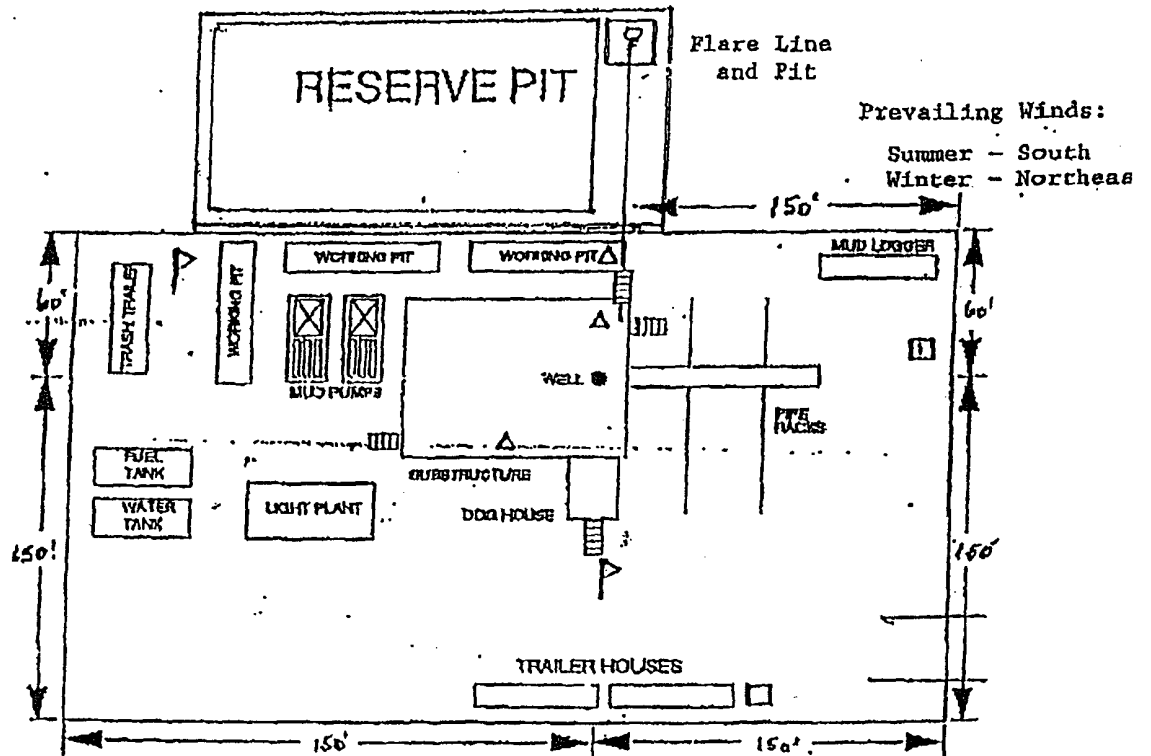
TOP OF ROTARY



WELL PDU 512 CONTRACTOR UNITED DRILLING

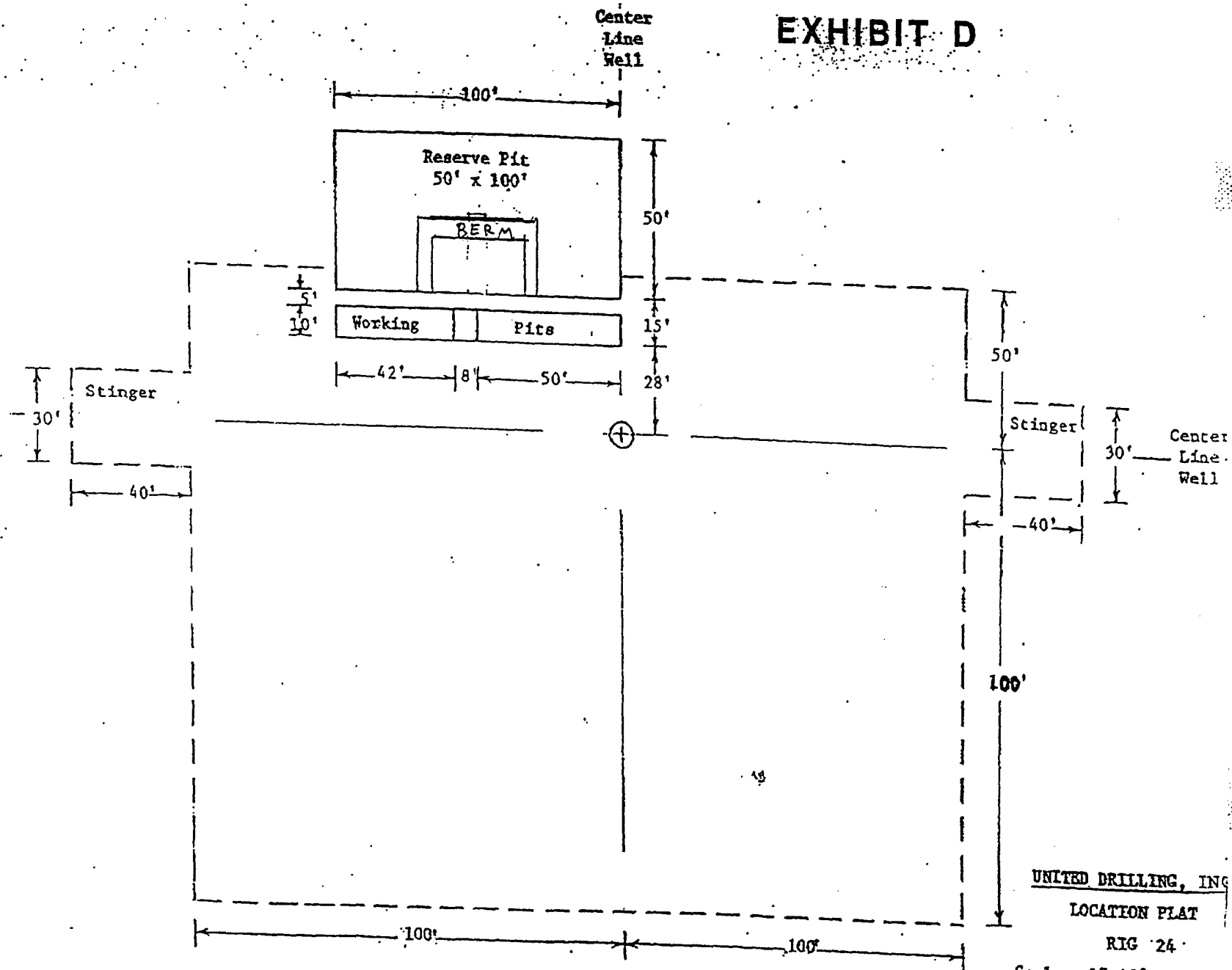
EXHIBIT C

Typical United Drilling Rig Layout



- △ - H2S Monitors with alarms at the bell nipple and shale shaker
- ▷ - Wind Direction Indicators
- - Safe Briefing areas with caution signs and protective breathing equipment. Minimum 150 feet from wellhead. 1 designates primary area.

EXHIBIT D



UNITED DRILLING, INC.

LOCATION PLAT

RIG 24

Scale: 1"=40'