

Oil Cons.
N.M. DIV-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER

SECRETARY'S POTASH PARKWAY DELAWARE UNIT Nm88491x

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator

RECEIVED

ST. MARY LAND & EXPLORATION

3a. Address

PO BOX 7168, BILLINGS, MT 59103

3b. Phone No. (include area code)
(406) 245-6248

4. Location of Well (Report location clearly and in accordance with any State requirements.)

At surface 2520' FNL & 990' FEL, UL: H

At proposed prod. zone SAME

SUBJECT TO LIKE
APPROVAL BY STATE

7. If Unit or CA Agreement, Name and No.

30-015-33136

8. Lease Name and Well No.
PDU # 705

10. Field and Pool, or Exploratory
PARKWAY DELAWARE

11. Sec., T., R., M., or Blk. and Survey or Area
SEC. 35, T19S, R29E

14. Distance in miles and direction from nearest town or post office*

17 MILES NE OF CARLSBAD

12. County or Parish

EDDY

13. State

NM

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

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.

19. Proposed Depth

4550'

20. BLM/BIA Bond No. on file

6041872

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

3341' GL

22. Approximate date work will start*

MID NOVEMBER

23. Estimated duration

11-12 DAYS

24. Attachments

CAPITAN CONTROLLED WATER BASIN

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

Herb Thackeray

Name (Printed/Typed)

HERB THACKERAY

Date

10/14/03

Title

OPERATIONS ENGINEER

Approved by (Signature) /s/ Carsten F. Goff

Name (Printed/Typed) /s/ Carsten F. Goff

Date

4 DEC 2003

Title

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)

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

RECEIVED
DEC 11 2003
OCD-ARTESIA

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

☒ AMENDED REPORT

API Number	Pool Code 49625	Pool Name Parkway Delaware
Property Code 19265	Property Name PDU	Well Number 705
OGRID No. 154903	Operator Name ST. MARY LAND & EXPLORATION COMPANY	Elevation 3341'

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	19-S	29-E		2520'	NORTH	990'	EAST	EDDY

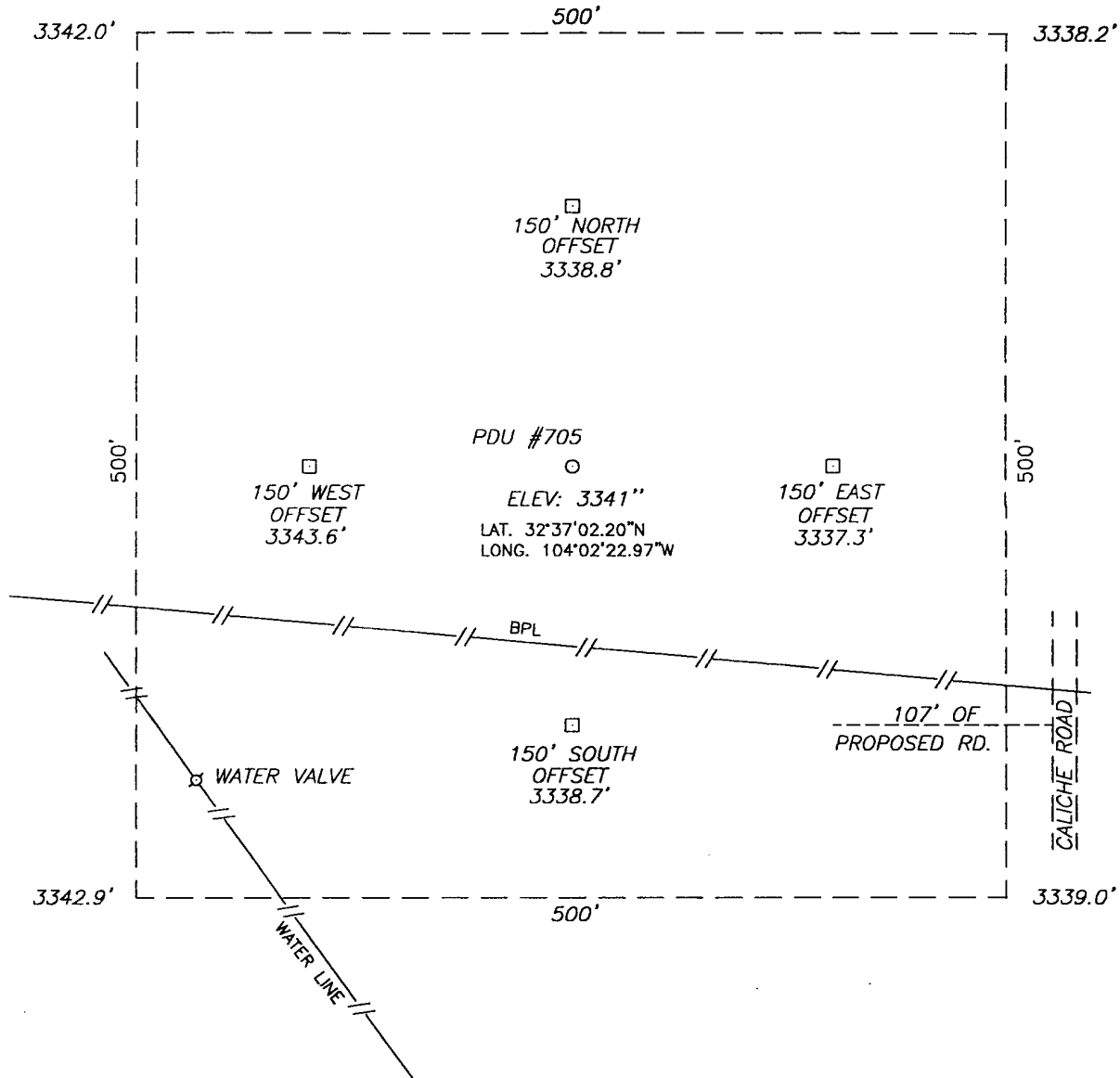
Bottom Hole Location If Different From Surface

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.						

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

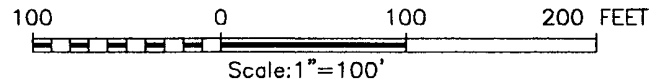
<p>GEOGRAPHIC COORDINATES NAD 1927 NME Y = 588401.9 N X = 590405.5 E LAT. 32°37'02.20"N LONG. 104°02'22.97"W</p>	<p>3342.2'</p> <p>3338.2'</p> <p>3342.9'</p> <p>3339.0'</p> <p>500'</p> <p>500'</p> <p>990'</p> <p>2520'</p>	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Herb Thackeray</i> Signature</p> <p>Herb Thackeray Printed Name</p> <p>Operations Engineer Title</p> <p>10/14/03 Date</p> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>September 26, 2003</p> <p>Date Surveyed AWB</p> <p>Signature & Seal of Professional Surveyor</p> <p><i>Ronald J. Gibson</i> 10/3/03</p> <p>03.11.1064</p> <p>Certificate No. RONALD J. GIBSON 3239 GARY KIBSON 12641</p>
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SECTION 35, TOWNSHIP 19 SOUTH, RANGE 29 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO.



DIRECTIONS TO LOCATION:

FROM US 62-180 TURN RIGHT ONTO BURTON FLATS RD. (EDDY CO. 238). GO 2.2 MILES NORTH TO THE END OF PAVEMENT. CONTINUE NORTH-NORTHWEST 3.8 MILES. TURN RIGHT AND GO 0.8 MILES NORTHEAST. ROAD BENDS TO EAST. GO 0.3 MILES EAST. TURN LEFT AND GO NORTH 0.1 MILES. LOCATION IS 300' TO THE LEFT.



ST. MARY LAND & EXPLORATION CO.

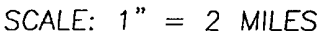
PDU #705 WELL LOCATED
 2520' FROM THE NORTH LINE AND 990'
 FROM THE EAST LINE OF SECTION 35,
 TOWNSHIP 19 SOUTH, RANGE 29 EAST,
 N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 09/26/03	Sheet 1 of 1 Sheets
W.O. Number: 03.11.1064	DRAWN BY: A.W.B
Date: 09/29/03	DISK: CD#9
ST. #1064	Scale: 1"=100'

JOHN WEST SURVEYING COMPANY

412 N. DAL PASO - HOBBS, NEW MEXICO - 505-393-3117

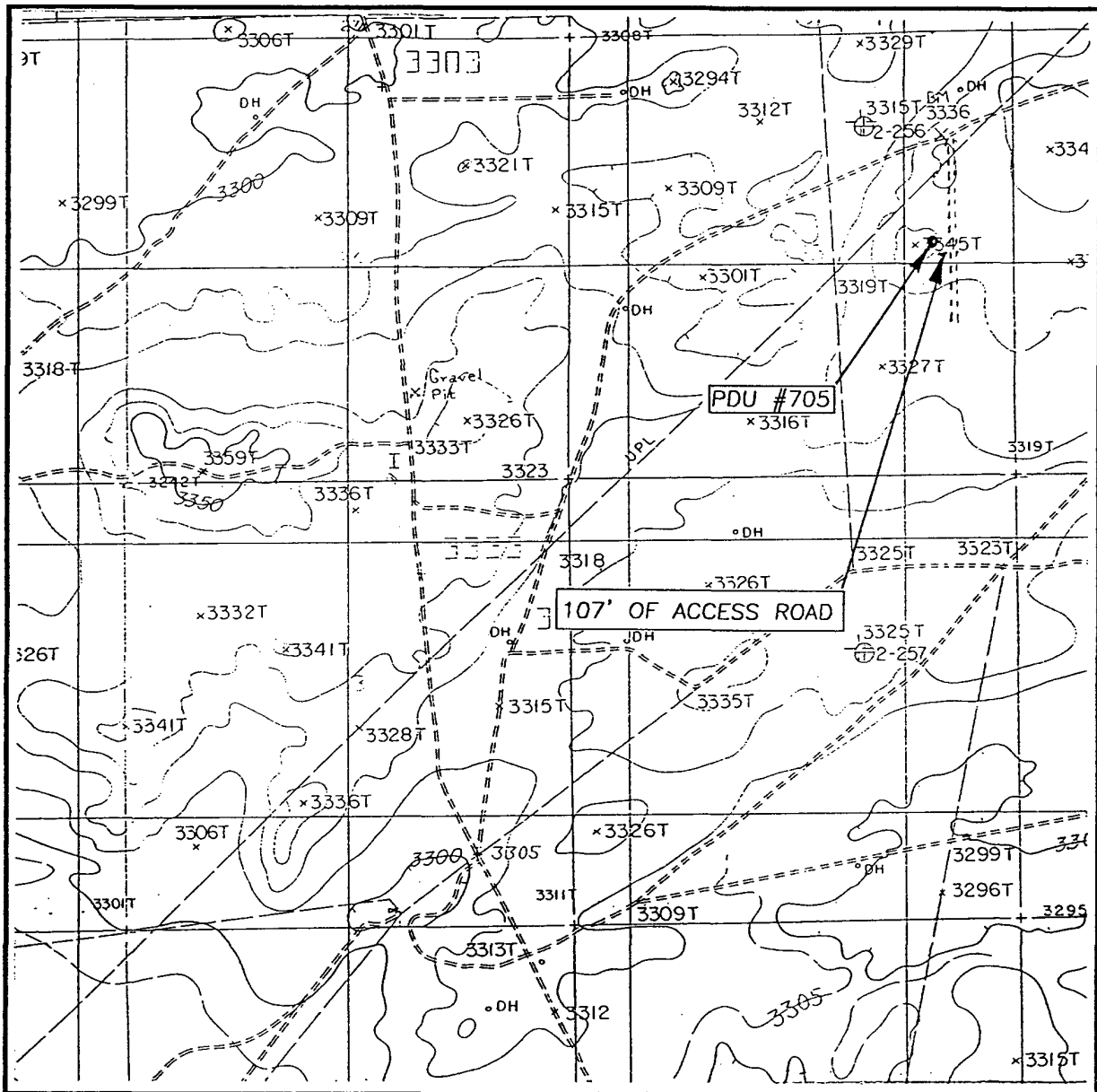
NORTH



LEASE PDU

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
COMPANY (505) 393-3117

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'

ILLINOIS CAMP SE, N.M.
SUP 5'

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

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 2520' FNL & 990' FEL

ELEVATION 3341'

OPERATOR ST. MARY LAND & EXPLORATION COMPANY (505) 393-3117

LEASE PDU

U.S.G.S. TOPOGRAPHIC MAP
ILLINOIS CAMP SE, N.M.

JOHN WEST SURVEYING
HOBBS, NEW MEXICO

APD

Operator: St. Mary Land and Exploration Co.
Lease name: Parkway Delaware Unit
Well number: **PDU # 705**
Location: 2520' FNL, 990' FEL; Sec 35, T19S, R29E
Field name: Parkway (Delaware)
County: Eddy, New Mexico
Lease No: NM-54865

Nine Point Drilling Plan (supplement to BLM 3160-3)

1. Name and estimated tops of geologic horizons

Rustler	150'
Salado	250'
Tansill	1250'
Yates	1500'
Capitan Reef	1720'
Delaware	3600'

2. Protection of possible useable water will be achieved by setting 13 3/8" surface casing 25' into the Rustler anhydrite @ ~250-350' and cementing it to surface. Protection/isolation of potential oil or gas producing horizons (Delaware @ 3600') will be achieved by setting 5 1/2" casing @ 4550', 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, and a choke manifold of comparable pressure rating. Equipment will be rated for 2000 psi, and will be tested to 80% of that pressure rating prior to drilling out the 13 3/8" surface casing. A hydraulic closing unit will be a part of this equipment, and it 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 @ ~250 - 350' in 17 1/2" hole	WITNESS
Intermediate	8 5/8" OD, 24&32#/ft J55, STC new pipe @ 3200' in 12 1/4" hole	WITNESS
Production:	5 1/2" OD, 15.5&17#/ft, J55, LTC, used pipe @ 4550' in 7 7/8" hole	

5. Cementing programs for the above casing strings are:
(NOTE: Products listed are from Schlumberger quote where D44 = salt, D20 = bentonite gel, D46 = antifoamer, D29 = celloflake. It's possible we would use another contractor with equivalent products)

Surface: 335 sx Class C w/2% S1 +.25#/sk D29 mixed at 14.8 ppg, and having a yield of 1.34 cu ft/sk

The above volumes represent 100% excess over calculated hole volume at 300' 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 w/5% D44, 10% D20, .25#/sk D29 + 0.2 % D46 mixed @ 11.6 ppg and having a yield of 2.47 cu ft/sk
 (b) 200 sx Class C neat mixed @ 14.8 ppg, and having a yield of 1.32 cu ft/sk
 Stage 2 (w/DV @ ~1400')
 (a) 310 sx 50/50 Poz:Class C w/5% D44, 10% D20, .25#/sk D29 + 0.2 % D46 mixed @ 11.6 ppg and having a yield of 2.47 cu ft/sk
 (b) 55 sx Class C neat mixed @ 14.8 ppg, and having a yield of 1.32 cu ft/sk

The above volumes represent 50% excess over calculated hole volume

Production: (a) 320 sx 35/65 Poz:Class H w/ 5% D44 + 6% D20 +0.2% D46 +.25#/sk D29 mixed @ 12.4 ppg and having a yield of 2.03 cu ft/sk
 (b) 160 sx 50/50 Poz:Class H w/5% D44, 2% D20, .25#/sk D29 + 0.2 % D46 mixed @ 14.2 ppg and having a yield of 1.33 cu ft/sk

The above volumes represent 25% excess over calculated hole volume

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

0~300'	FW "spud mud"	8.6-9.0 ppg	
~300~1800'	Brine	9.7-10.0 ppg	<i>brine to be used to minimize hole wash out in the salt we anticipate loss of circulation in reef, requiring switch to FW and dry drilling to casing point</i>
~1800-3200'	FW	8.3 – 8.5 ppg	
3200-3800'	Cut brine	8.5 – 8.9 ppg	
3800-4550'	Cut brine/Starch	8.7 – 8.9 ppg	maintaining water loss @ 10-15 cc

7. No drill stem testing or mud logging is planned for this wellbore. Electric logs to be run @ TD will be; Platform Express Triple Combo, CMR –Plus. RFT's may be taken to determine pressures in individual Delaware stringers.
8. The expected BHP at TD is not expected to exceed 600 psi, and a BHT of 110 is anticipated. There is very little H₂S present in the hydrocarbons being produced from the other wells in this field. Should 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 is expected to be a problem in the Capitan Reef. If / when this occurs we plan to switch from brine to fresh water and dry drill to the intermediate casing point.
9. It is estimated that this well will be drilled, cored, logged, and cased in 11-12 days. This estimate is based on previous programs. The well will be drilled by a contractor having experience in the area, and will be monitored/directed by an on-site drilling consultant at all times.

WITNESS

Twelve Point Plan for Surface Use & Certification
(additional data for form 3160-3)

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 highway 62-180 for 13.5 miles.
 - b) Turn north on County Road 238 and proceed for 2.1 miles.
 - c) Where CR 238 turns to west, turn north on caliche road for 4.1 miles.
 - d) Turn east and proceed for 1 mile to PDU Tract #1 battery.
 - e) Continue east past battery and proposed #510 location and well #701 (.3 miles)
 - f) Turn north for .1 miles to location.
2. PLANNED ACCESS ROADS – approximately 107' of new road will be built from existing road to the location.
 3. LOCATION OF EXISTING WELLS – EXHIBIT B shows the location of other wells within a mile radius of the proposed location. (NOTE: actual staked new well locations had to shifted slightly to avoid buried and overhead lines)
 4. LOCATION OF EXISTING OR PROPOSED FACILITIES – The 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 in T20S-R29E. 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.
 - 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 shows the anticipated orientation of the drilling rig. The pad however will be *smaller* and built as shown on EXHIBIT D. To fit the area it may have to be rotated to avoid buried lines. (For #705, the location will have the pits constructed on the *north* side.) A "double horseshoe" pit design will allow us to use fresh water or brine water in anticipation of having lost circulation in the Capitan Reef. 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
620 E. Greene St.
Carlsbad, New Mexico 88220
505-234-5972

The BLM representative for this area is Barry Hunt who can be reached at the above number.

The site was archaeologically surveyed by Mesa Field Services. A copy of that report was submitted to the BLM. The staked location was moved north subsequent to this survey to avoid buried lines but the section had previously been extensively reviewed prior to a 3D seismic shoot.

12. OPERATORS REPRESENTATIVE - St. Mary Land and Exploration is covered by Nationwide Bond No. 6041872. Nance Petroleum Corporation, a wholly owned subsidiary, will operate the well for St. Mary and is represented by:

Robert L. Nance, President
Gary Evertz, VP Operations
Terry Holzwarth, VP Acquisitions
Herb Thackeray, Operations Engineer
550 North 31st Street, Suite 500
P.O. Box 7168
Billings, MT 59103
406-255-8627 (o)
406-861-7372 (m)
406-656-7250 (h)

Jackie Herron, Contract Pumper
Lake Arthur, NM
505-746-7601 (m)
505-365-3067 (h)

OPERATORS CERTIFICATION

I hereby certify that I, Herb Thackeray-Operations Engineer, or persons under my direct supervision, 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 L&E/NANCE PETROLEUM CORP 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.

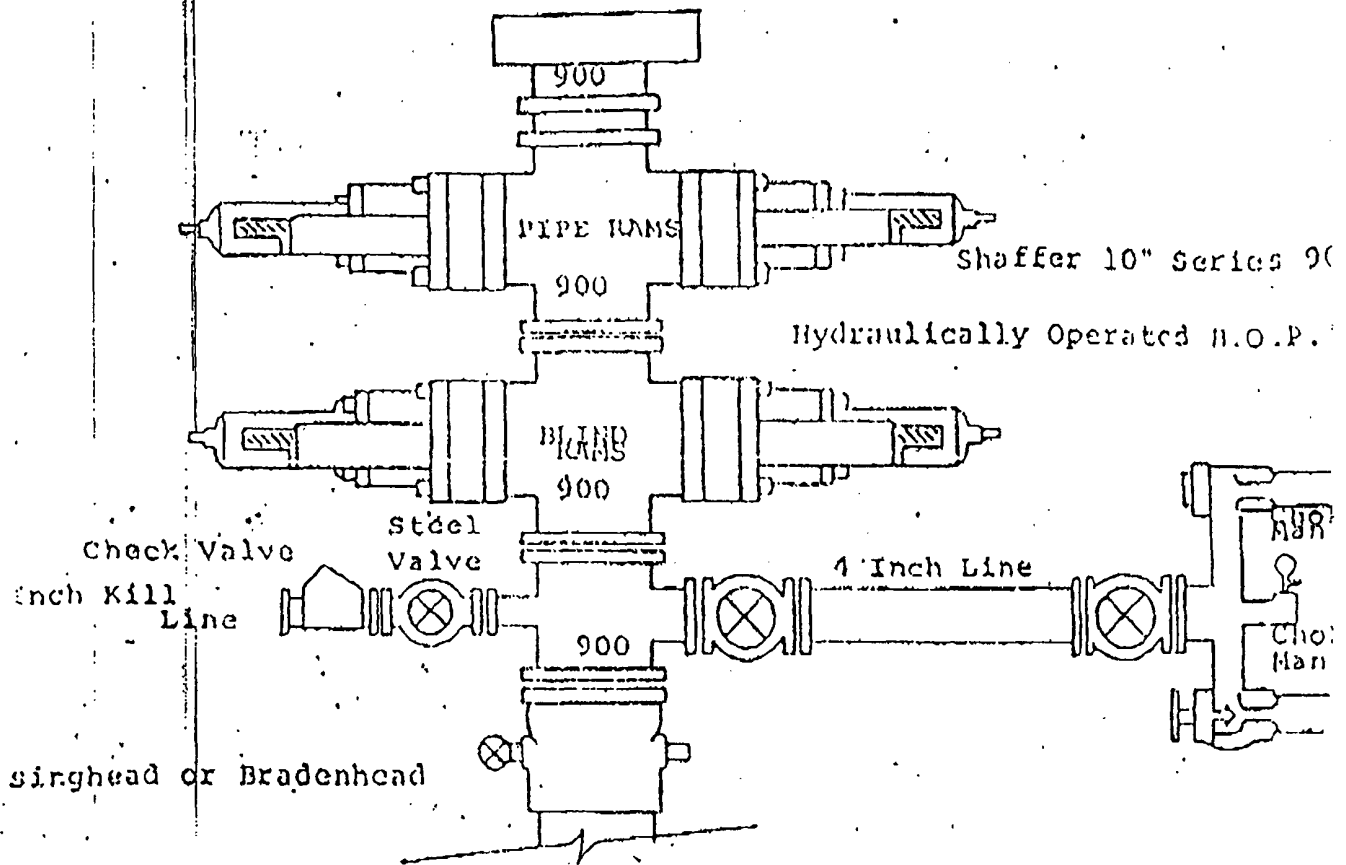
Name and title: Herb Thackeray, Operations Engineer for Nance Petroleum Corp.
A wholly owned subsidiary of St. Mary Land & Exploration Co.

Signature:

Herb R Thackeray

Date:

10/14/03

EXHIBIT A**FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS**

All preventers to be hydraulically operated with secondary manual control installed prior to drilling out from under casing.

Choke outlet to be a minimum of 4" diameter.

Kill line to be of all steel construction of 2" minimum diameter.

All connections from operating manifolds to preventers to be all steel pipe or tube a minimum of one inch in diameter.

The available closing pressure shall be at least 15% in excess of the required with sufficient volume to operate the B.O.P.'s.

All connections to and from preventer to have a pressure rating equivalent to that of the B.O.P.'s.

Inside blowout preventer to be available on rig floor.

Operating controls located a safe distance from the rig floor.

Hole must be kept filled on trips below intermediate casing. Operator not responsible for blowouts resulting from not keeping hole full.

B.O.P. float must be installed and used below zone of first gas intrusion.



A Subsidiary of
St. Mary Land & Exploration Co.

EXHIBIT B

2003 PDU

Infill Drilling Program

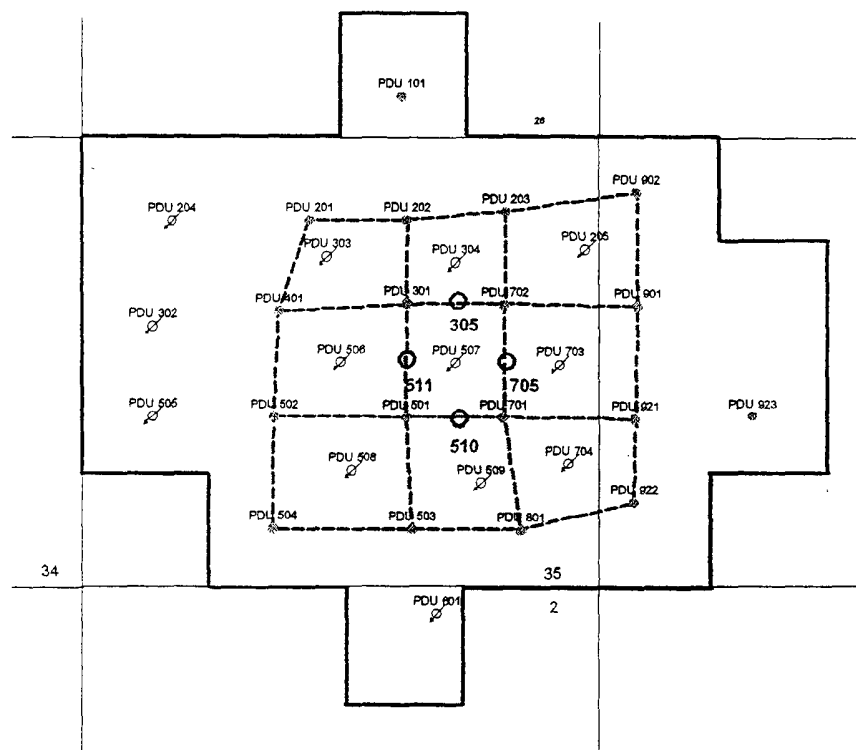
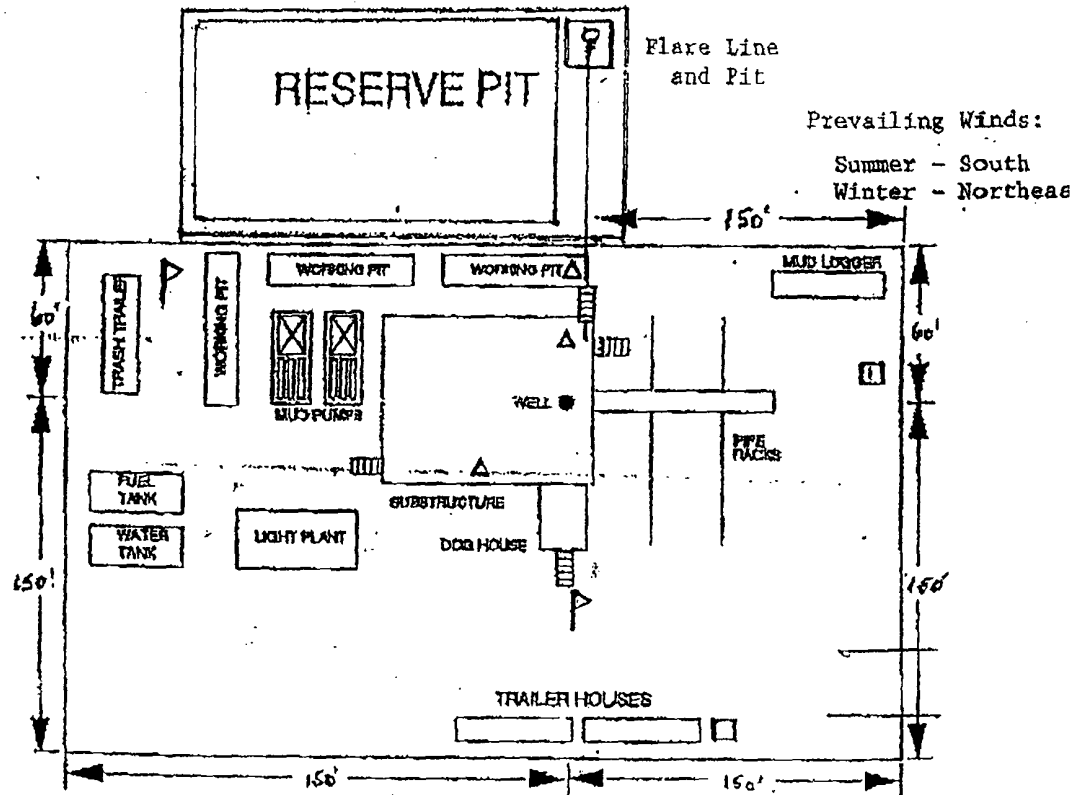


EXHIBIT C

Typical United Drilling Rig Layout



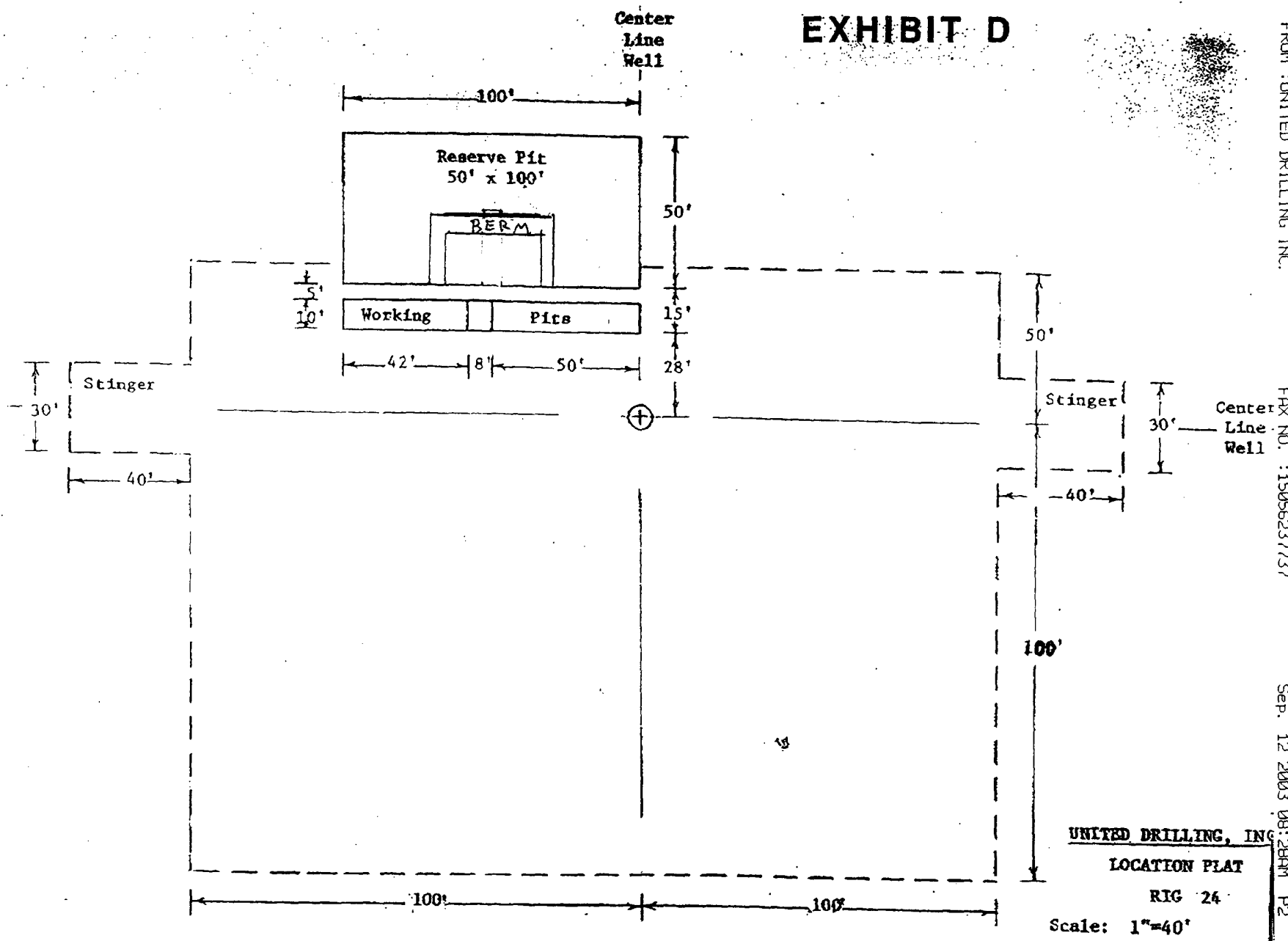
- △ - H2S Monitors with alarms at the bell nipple and shale shaker
- ⚡ - Wind Direction Indicators
- - Safe Briefing areas with caution signs and protective breathing equipment. Minimum 150 feet from wellhead. 1 designates primary area.

EXHIBIT D

FROM: UNITED DRILLING INC.

FOX NO.: 15056237737

Sep. 12 2003 08:28AM P2



UNITED DRILLING, INC.
LOCATION PLAT
RIG 24
Scale: 1"=40'