

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5. Lease Serial No.  
~~NM04208~~ **NMSF077123**

6. If Indian, Allottee or Tribe Name

1a. Type of work: ☒ DRILL ☐ REENTER

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

2. Name of Operator  
**West Largo Corp.**

3a. Address  
**8801 S. Yale, Suite 240 Tulsa, OK 74137-3535**

3b. Phone No. (include area code)  
**918-492-3239**

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

8. Lease Name and Well No.  
**Warren Gas Com A No. 2**

9. API Well No.  
**3004531901**

4. Location of Well (Report location clearly and in accordance with any State requirements.)  
At surface **1260' FNL-1980' FWL**  
At proposed prod. zone **Same**

10. Field and Pool, or Exploratory  
**Basin Fruitland Coal**

11. Sec., T. R. M. or Blk. and Survey or Area  
**Section 13, T28N, R9W, NMPM**

14. Distance in miles and direction from nearest town or post office\*  
**7 miles southeast of Blanco, NM**

12. County or Parish  
**San Juan**

13. State  
**NM**

15. Distance from proposed\* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)  
**666**

16. No. of acres in lease  
**320**

17. Spacing Unit dedicated to this well  
**W/2 - 320.0 acs.**

18. Distance from proposed location\* to nearest well, drilling, completed, applied for, on this lease, ft.  
**150**

19. Proposed Depth  
**2391'**

20. BLM/BIA Bond No. on file  
**NM2283**

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
**5834' GL**

22. Approximate date work will start\*  
**10/15/2003**

23. Estimated duration  
**3 weeks**

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.
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  
**Robert E. Fielder**  
Title  
**Agent**

Name (Printed/Typed)  
**Robert E. Fielder**

Date  
**09/18/2003**

Approved by **David J. Mankiewicz**

Name (Printed/Typed)

Date  
**NOV 10 2003**

Title  
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.

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 page 2)

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE  
SUBJECT TO COMPLIANCE WITH ATTACHED  
"GENERAL REQUIREMENTS".

NMOCD

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-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-045-31901</b>		*Pool Code <b>71629</b>	*Pool Name <b>BASIN FRUITLAND COAL</b>
*Property Code <b>14169</b>	*Property Name <b>WARREN GAS COM A</b>		*Well Number <b>2</b>
*GRID No. <b>37197</b>	*Operator Name <b>WEST LARGO CORPORATION</b>		*Elevation <b>5834'</b>

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	13	28N	9W		1260	NORTH	1980	WEST	SAN JUAN

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres <b>320.0 Acres - (W/2)</b>	<sup>13</sup> Joint or Infill <b>Y</b>	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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>16</p> <p>5292.54'</p> <p>1260'</p> <p>1980'</p> <p>LAT 36°39.9522' N LONG 107°44.5013' W DATUM: NAD27</p> <p>NM04208</p> <p>13</p> <p>5280.00'</p> <p>Warren Gas Com A No. 1</p> <p>5283.30'</p> <p>070 Farmington, NM</p> <p>SEP 23 AM 11:50</p>	<p><sup>17</sup> OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Robert E. Fielder</i></p> <p>Signature</p> <p><b>Robert E. Fielder</b></p> <p>Printed Name</p> <p><b>Agent</b></p> <p>Title</p> <p><b>September 18, 2003</b></p> <p>Date</p>
	<p><sup>18</sup> 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>Survey Date: <b>AUGUST 28, 2003</b></p> <p>Signature and Seal of Professional Surveyor</p> <p><p><b>JASON C. EDWARDS</b></p><p>Certificate Number 15269</p></p>

RECEIVED

West Largo Corp.  
Warren A Com No. 2  
1260' FNL & 1980' FWL  
Section 13, T28N, R9W, NMPM  
San Juan County, New Mexico

TEN POINT DRILLING PROGRAM

1. Surface Formation: Nacimientto
2. Surface Elevation: 5834' GL.
3. Estimated Formation Tops:

<u>Formation</u>	<u>Top - feet</u>	<u>Expected Production</u>
Nacimientto	surface	
Ojo Alamo	1071	
Kirtland	1301	
Fruitland	1895	
Fruitland Coal	2164	GAS
Pictured Cliffs	2191	GAS
Lewis	2384	
TOTAL DEPTH	2391	

4. Surface Hole Program:

**Bit:** Drill an 8 3/4" hole to 200' using a retip mill tooth, IADC Class 115 or 116, bit. WOB: all. RPM: 70 - 100.

**Mud:** Use a fresh water base spud mud with the following properties:

<u>Interval (ft)</u>	<u>Weight (ppg)</u>	<u>Ph</u>	<u>Vis(sec/qt)</u>	<u>Water Loss</u>
0 - 200	8.6 or less	9.0-9.5	40 - 50	No Control

**Casing and Cementing:** A string of 7" 20 ppf J-55 or K-55 ST&C casing will be set and cemented to the surface in a single stage with 55 sacks of Class "B" cement (yield = 1.18 cf/sk) containing 3% CaCl<sub>2</sub> and 1/4 lb/sack celloflake. Slurry volume assumes 100% excess over calculated hole volume. If cement does not circulate to surface, cement will be topped off using 1" pipe down the 8 3/4" by 7" annulus. Minimum clearance between couplings and hole is 0.5470". Prior to drilling out the shoe, casing and BOPE will be tested to a minimum of 600 psig. Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8 or 100,000 lb overpull, whichever is greater.

WOC 12 HOURS. Nipple up 7 1/16" 2000# BOPE. Pressure test surface casing and BOPE to 600 psi for 15 minutes.

**Centralizers:** Run two (2) 7" X 8 3/4" regular bowspring centralizers. Install first one on stop ring in middle of shoe joint.

**Float Equipment:** Cement nose guide shoe thread locked. Also thread lock connection between first and second joint run.

**Drilling Program**  
**West Largo Corp.**  
**Warren Gas Com A No. 2**  
Page Two

**5. Production Hole Program:**

**Bit:** Drill an 6 1/4" hole to 2391' using a TCI, IADC Class 447 bit. WOB: 30-35K. RPM: 60 - 75. Reduce RPM to 55 - 65 through Ojo Alamo.

**Mud:** Use a fresh water base polymer and water system to drill this section. If hole conditions dictate, mud up with a fresh water base LSND mud with the following properties:

<u>Interval (ft)</u>	<u>Weight (ppg)</u>	<u>Ph</u>	<u>Vis(sec/qt)</u>	<u>Water Loss</u>
200 - 2391	8.6 - 8.8	9.0-9.5	28 - 35	10 - 12

Fresh water will be used for dilution and building volume. Sufficient materials will be on location at all times to maintain mud properties and to control any lost circulation problem or unforeseen abnormal pressures. The mud volume in the surface pit will be visually monitored and recorded on a routine basis.

Note: If mud up is required, raise **viscosity** to 55 - 60 for logging. Thin to 40 - 45 viscosity to run casing.

**pH** is to be maintained with lime or caustic soda at the recommended levels to assure drill pipe corrosion protection.

Driscpac will be used for control of fluid loss.

Lost Circulation can occur in the Fruitland Coal and Pictured Cliffs formation. Mud weights should be controlled as low as possible with solids control equipment then as low as practical with water dilution.

**Pressure Control:** A 2M psi BOP well control system will be utilized. BOP's and choke manifold will be installed and pressure tested to a minimum of 600 psig before drilling out from under surface casing. Mechanical operation of pipe rams will be checked daily and blind rams will be checked on each trip out of hole. 4 1/2" rams will be installed before running production casing. A full opening internal blowout preventor or drill pipe safety valve will be on the drill floor at all times and will be capable of fitting all connections.

**Logging Program:** Dual Induction and Compensated Neutron/Formation Density logs will be run from TD to the surface casing shoe.

**Casing and Cementing Program:** Run 4 1/2" 10.5 ppg J-55 production casing from surface to TD and cement in a single stage with 115 sacks (293.3 cf) of Class B containing 3% sodium metasilicate extender, 5 pps Gilsonite and 1/4 pps celloflake. Lead slurry mixed at 11.8 PPG to yield 2.55 cf/sk. Tail in with 65 sacks (77.4 cf) of Class B with 0.25 pps celloflake, 0.3% FLA and 5 pps gilsonite mixed at 15.6 PPG to yield 1.19 cf/sk.

**Drilling Program**  
**West Largo Corp.**  
**Warren Gas Com A No. 2**  
Page Three

**5. Production Hole Program: -continued**

Slurry volumes assume a 50% excess over gauge hole volume to circulate to surface. Minimum clearance between couplings and hole is 0.6250". Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8 or 100,000 lb over pull, whichever is greater.

**Centralizers:** 5 - 4½" X 6¼" bowspring centralizers will be run across all prospective pays and 2 - 4½" X 6¼" turbolizers will be spaced such that one (1) is just below the base of the Ojo Alamo and one (1) in the Ojo Alamo.

**Float Equipment:** Cement nose guide shoe, 1 joint 4½" casing, and float collar.

**6. Auxiliary Equipment:**

An upper kelly cock will be utilized. The handle will be available on rig floor at all times

**7. Logging Program:**

Dual Induction and Compensated Neutron / Formation Density will be run from TD to surface casing shoe. Bulk density will be presented on a 5 " scale through the coals. Deep induction curve will be merged onto the porosity log.

**Coring and Testing Program:**

No cores or drill stem tests are planned.

**8. Abnormal Pressure:**

Although not expected, abnormal pressures are possible in the Fruitland formation.

**Estimated Bottom Hole Pressure:**

250 - 300 psig.

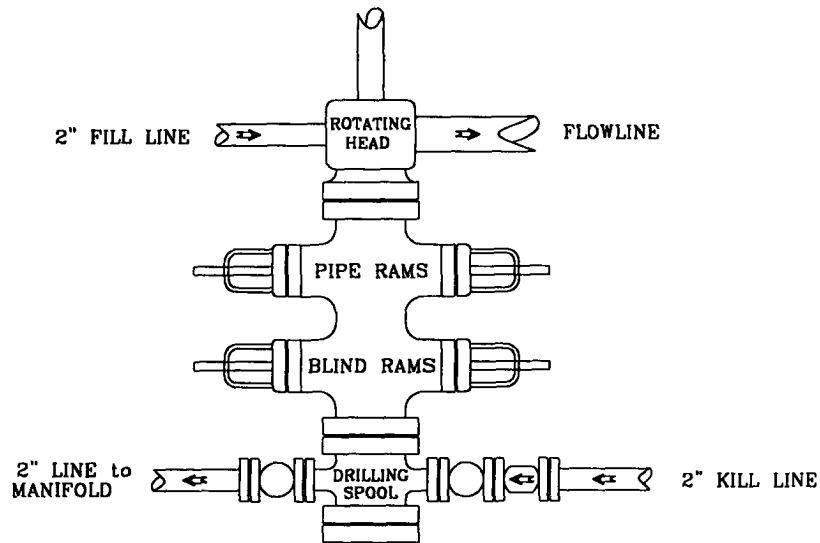
**9. Anticipated Starting Date:**

October 15, 2003.

**Duration of Operations:** It is estimated a total of 6 days will be required for drilling operations and 5 days for the completion operation.

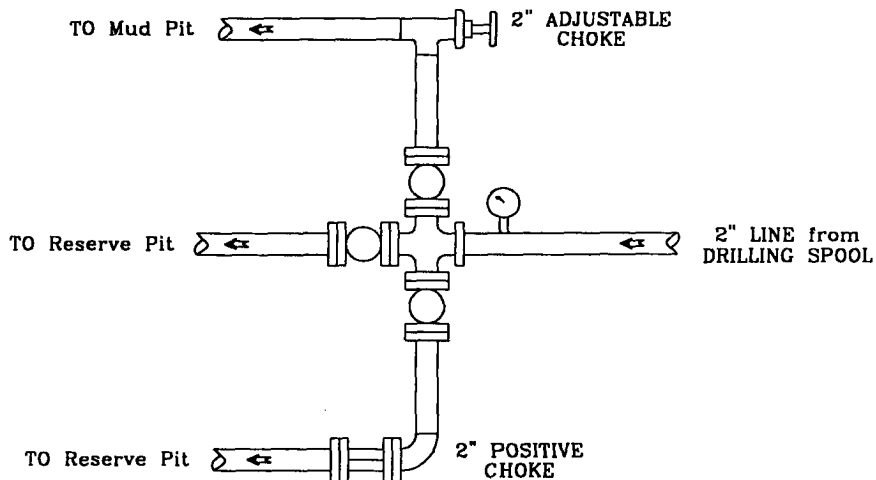
# PRESSURE CONTROL

## Wellhead Assembly



Preventer and Spools are to have a  
6" Bore or larger and a 2000 PSI  
or higher Pressure Rating

## Choke Manifold



*West Largo Corp*

Warren Gas Com A No.2  
1260'FNL - 1980'FWL  
Section 13, T228N, R9W, NMPM  
San Juan County, New Mexico