

District I
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-101
June 16, 2008

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

Submit to appropriate District Office

☐ AMENDED REPORT

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN,
PLUGBACK, OR ADD A ZONE**

¹ Operator Name and Address West Largo Corp 8801 S. Yale, Suite 240 Tulsa, OK 74137-3535		² OGRID Number 37197
³ Property Code 14175	⁵ Property Name State Com 32	³ API Number 30 - 045 - 34927
		⁶ Well No. 2
⁹ Proposed Pool 1 Basin Fruitland Coal		¹⁰ Proposed Pool 2

Surface Location

UL or lot no. D	Section 32	Township 29N	Range 9W	Lot Idn	Feet from the 785	North line	Feet from the 480	West line	County San Juan
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Proposed 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
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Additional Well Information

¹¹ Work Type Code N	¹² Well Type Code G	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 5770'
¹⁶ Multiple N	¹⁷ Proposed Depth 2290'	¹⁸ Formation Lewis	¹⁹ Contractor D & D Services	²⁰ Spud Date 03/30/2009

Proposed Casing and Cement Program

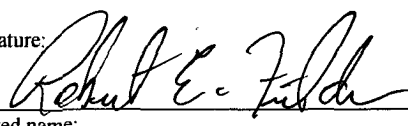
Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12.250"	8.625"	24	200	140	surface
7.875"	5.500"	15.5	2290	280	surface
				0	

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.
Drill 12 1/4" hole to 200' using fresh water based mud. Run and cement surface casing with cement returns to surface. WOC 12 hrs. Nipple up BOPE and test to full working pressure. Drill 7 7/8" hole to TD using polymer and fresh water. Log well. Run production casing to TD and cement to surface. Move out drilling rig and move in completion rig. Run cased hole logs. Pressure test production casing. Perforate select intervals of Fruitland Coal and stimulate using 2% KCl based fluid and sand. Details in attached drilling program and BOP schematic.

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOCD FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOCD PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

RCVD MAR 16 '09
OIL CONSV. DIV.
DIST. 3

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: 
Printed name:
Robert E. Fielder

Title:
Agent
E-mail Address:
pmci@advantas.net

Date:
03/13/2009

Phone:
505-320-1435

OIL CONSERVATION DIVISION

Approved by:

Title:

DEPUTY OIL & GAS INSPECTOR, DIST. 3

Approval Date:

MAR 19 2009

Expiration Date:

MAR 19 2011

Conditions of Approval Attached ☐

MAR 19 2009

<p>W.C. S 1° 38' W 0.60 Ch.</p> <p>785'</p> <p>480'</p> <p>Lat. 36.68733° N Long. 107.81203° W</p>	<p>79.36 Ch.</p> <p>Lease Numbers: NW/NW-B10405-89 NE/NW-E1203-10 SW/NW-B10405-84 SE/NW-B10405-87 NW/SW-B-10735-42 NE/SW-E1451-5 SW/SW-E2738-3 SE/SW-B10735-49</p>	<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns, working interest or patented mineral interests in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order.</p> <p>Authorized by the Division:</p> <p>Signature: <i>Robert E. Fielder</i> Date: 9/13/2009</p>
<p>77.36 Ch.</p>	<p>Sec.</p>	<p>77.88 Ch.</p> <p>Signature: Robert E. Fielder Printed Name: Robert E. Fielder</p>
<p>N 1° 58' E</p>	<p>32</p>	<p>18 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>Date of Survey: 9/13/2009</p> <p>Signature: <i>William H. Wabnitz II</i></p>
<p>N 89° 56' W</p>	<p>78.62 Ch.</p>	<p>N 2° 34' E</p> <p>William H. Wabnitz II</p> <p>Certificate Number: 8466</p>

**West Largo Corp.
State Com 32 No. 2
785' FNL & 480' FWL
Section 32, T29N, R9W, NMPM
San Juan County, New Mexico**

TEN POINT DRILLING PROGRAM

1. **Surface Formation:** Nacimientto
2. **Surface Elevation:** 5770' GL.
3. **Estimated Formation Tops:**

<u>Formation</u>	<u>Top - feet</u>	<u>Expected Production</u>
Ojo Alamo	993	WATER
Kirtland	1150	
Fruitland	1921	GAS
Fruitland Coal	1952	GAS
Pictured Cliffs	2118	GAS
Lewis	2281	
TOTAL DEPTH	2290	

4. **Surface Hole Program:**

Bit: Drill an 8 $\frac{3}{4}$ " or 9 $\frac{7}{8}$ " pilot hole to 60' to insure no boulders are present. Use a retip mill tooth, IADC Class 115 or 116 bit. Drill a 12 $\frac{1}{4}$ " 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 8 $\frac{3}{4}$ " 24 ppf J-55 or K-55 ST&C casing will be set and cemented to the surface in a single stage with 140 sacks (165.2 cf) of Class "B" cement containing 3% CaCl₂ and 0.25 pps celloflake. Mix slurry at 15.6 ppg to yield 1.18 cf/sk. Slurry volume assumes 100% excess over calculated gauge hole volume. If cement does not circulate to surface, cement will be topped off using 1" pipe down the 12 $\frac{1}{4}$ " by 8 $\frac{3}{4}$ " annulus. Minimum clearance between couplings and hole is 1.3125". Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8.

WOC 12 HOURS. Nipple up 11" 2000# BOPE. Pressure test BOPE to full working pressure using test plug. Prior to drilling out the surface casing shoe test the surface casing and BOPE to a minimum of 600 psi for 15 minutes.

Centralizers: Run two (2) 9 $\frac{5}{8}$ " X 12 $\frac{1}{4}$ " regular bowspring centralizers. Install first one on stop ring in middle of shoe joint and second around collar at midpoint of string.

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

Drilling Program
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State Com 32 No. 2
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5. Production Hole Program:

Bit: Drill an 7 $\frac{1}{8}$ " hole to 2290' using TCI, IADC Class 447 bit. WOB: 35-45K. RPM: 60 - 75. Reduce RPM to 55 - 65 through Ojo Alamo.

Mud: This interval will be drilled using a fresh water and polymer fluid. 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>
? - TD	8.8 - 9.2	9.0-9.5	35 - 50	8 - 10

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 rig pits 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.

Driscap will be used for control of fluid loss.

Lost Circulation is expected and 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 full working pressure after nipple up is complete. The surface casing and BOPE will be 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. 5 $\frac{1}{2}$ " rams will be installed before running intermediate 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 density/Epithermal neutron logs will be run from TD to the surface casing shoe.

Drilling Program
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5. Production Hole Program: - continued

Casing and Cementing Program: Run 5½" 15.5 ppf J-55 production casing from surface to TD and cement in a single stage with 200 sacks (510.0 cf) of Class "B" with 3% sodium metasilicate extender, 5 pps gilsonite and 0.25 pps celloflake. Lead slurry mixed at 11.8 ppg to yield 2.55 cf/sk. Tail in with 80 sacks (95.2 cf) of Class "B" with 0.25 pps celloflake, 5 pps gilsonite and 0.3% FLA mixed at 15.6 ppg to yield 1.19 cf/sk.

Slurry volumes assume a 50% excess over gauge hole volume. Minimum clearance between couplings and hole is 0.9125". Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8.

Centralizers: 5 - 5½" X 7⅞" bowspring centralizers will be run across all prospective pays and 2 - 5½" X 7⅞" 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 5½" 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 Epithermal 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.

9. Abnormal Pressure:

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

Estimated Bottom Hole Pressure:

250 - 300 psig.

Drilling Program
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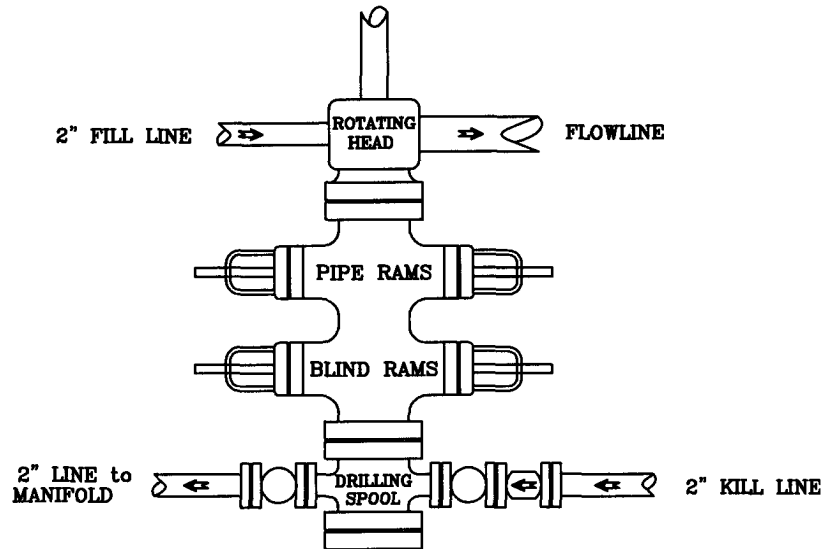
10. **Anticipated Starting Date:**

April 1, 2009.

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

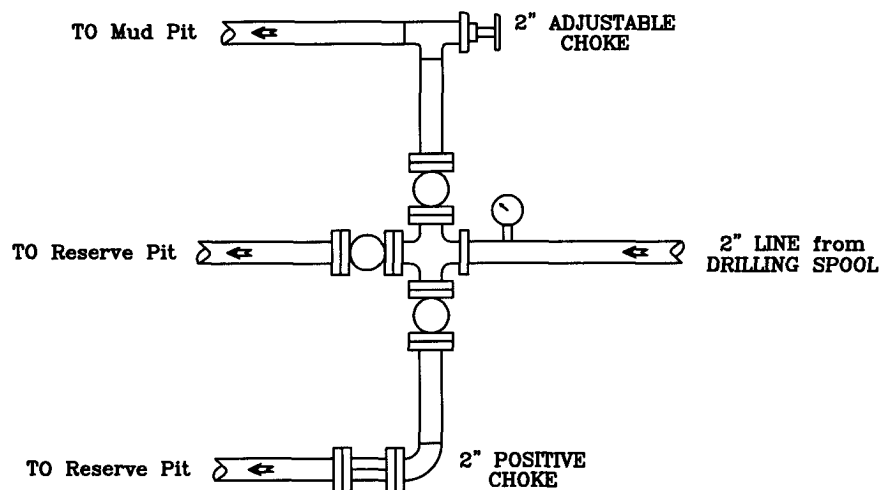
PRESSURE CONTROL

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

State Com 32 No. 2

785' FNL - 480' FWL

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San Juan County, New Mexico