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OIL CONS. DIV.
DIST. 3

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Form 3160-3
(August 1999)

FEB 03 2012

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Farmington Field Office
Bureau of Land Management

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. Jicarilla Apache Lease #424
b. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name Jicarilla Apache Nation
2. Name of Operator Logos Capital Management, LLC		7. If Unit or CA Agreement, Name and No
3A. Address c/o Walsh Engineering 7415 E. Main, Farmington, NM 87402		8. Lease Name and Well No Logos #1
3b. Phone No. (include area code) (505) 327-4892		9. API Well No. 30-043-21119
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1640' FNL and 1710' FWL At proposed prod. Zone Same		10. Field and Pool, or Exploratory Basin Dakota
14. Distance in miles and direction from nearest town or post office* 4 miles southwest of Counselors, NM		11. Sec., T, R., M., or Blk. and Survey or Area Sec. 5, T22N, R5W
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1640'	16. No. of Acres in lease 2561.60 2560 +/-	17. Spacing Unit dedicated to this well W/2 321.13 acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 7,000'	19. Proposed Depth 6,600' +/-	20. BLM/BIA Bond No. on file Bond #1062070
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,901' GL	22. Approximate date work will start* March 15, 2012	23. Estimated duration 2 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. | 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 office. |

25. Signature <i>Paul C. Thompson</i>	Name (Printed/Typed) Paul C. Thompson, P.E.	Date 2/2/2012
Title Agent/Engineer		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed) AFM	Date 5/21/12
Title AFM		
Office FEO		

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 reverse)

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

NMOCD
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MAY 23 2012 ca

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".

District I
1625 N. French Drive, Hobbs, NM 88241
Phone: (575) 393-6161 Fax: (575) 393-0720

District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

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OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505
FARMINGTON FIELD OFFICE
Bureau of Land Management

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-043-21119	² Pool Code 71599	³ Pool Name BASIN DAKOTA
⁴ Property Code 39236	⁵ Property Name LOGOS	⁶ Well Number 1
⁷ GRID No. 287123	⁸ Operator Name LOGOS CAPITAL MANAGEMENT, LLC	⁹ Elevation 6907'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	5	22N	5W		1640	NORTH	1710	WEST	SANDOVAL

¹¹ 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
¹² Dedicated Acres 321.13 Acres - (W/2)					¹³ Joint or Infill N	¹⁴ Consolidation Code	¹⁵ 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

<div><p>¹⁶</p><p>LAT: 36.16922°N LONG: 107.38707°W DATUM: NAD1927</p><p>LAT: 36.16923°N LONG: 107.38767°W DATUM: NAD1983</p><p>5</p></div>	<div><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 a working interest or unleased mineral interest 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p><p><u>Paul C. Thompson</u> 2/2/12 Signature Date <u>PAUL C. THOMPSON</u> Printed Name <u>PAUL C. WALSHENK, NET</u> E-mail Address</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>Survey Date: JANUARY 11, 2012</p><p>Signature and Seal of Professional Surveyor</p><div><p>JASON C. EDWARDS Certificate Number 15269</p></div></div>
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LOGOS CAPITAL MANAGEMENT, LLC.
OPERATIONS PLAN
LOGOS #1

I. Location: 1640' FNL & 1710' FWL
Sec 5, T22N, R5W
Sandoval County, NM

Date: February 2, 2010

Field: Basin Dakota
Surface: Jicarilla Apache
Minerals: Jicarilla Lease #424

Elev: GL 6,907'

II. Geology: Surface formation _ Nacimiento

A. Formation Tops	Depths
Ojo Alamo	1,396'
Kirtland	1,673'
Pictured Cliffs	1,905'
Lewis	1,996'
Chacra	2,338'
Cliff House	3,384'
Menefee	3,465'
Point Lookout	4,144'
Mancos	4,336'
Niobrara A	5,079'
Niobrara B	5,299'
Niobrara C	5,299'
Greenhorn	6,145'
Graneros	6,191'
Dakota	6,211'
Morrison	6,592'
Total Depth	6,600'

Estimated depths of anticipated water, oil, gas, and other mineral bearing formations which are expected to be encountered:

Water and gas - 1,905', 2,338', 3,384', 4,144'.

Water, gas, and oil - 4,336', 5,079', 5,299', 5,299', and 6,211'.

B. Logging Program: Induction/GR and density/neutron logs from TD to the surface casing point. Mud logs will be run from below the surface casing to TD. No DST's or cores are planned for this well. Cased hole GR/CCl and CBL logs will be run from PBSD to surface.

C. No over pressured zones are expected in this well. No H₂S zones will be penetrated in this well. Max. BHP = 2,850 psig. Lost circulation zones may be encountered in the Mesa Verde group and Niobrara sections.

III. Drilling

A. Contractor:

B. Mud Program:

The surface hole will be drilled with a fresh water mud.

The production hole will be drilled with a fresh water mud and will use bentonite to increase the viscosity. The weighting material will be drill solids or if conditions dictate, barite. The maximum mud weight expected is 9.2 ppg. The water loss will be controlled to a 6 - 8 cc/30 min. and loss circulation will be controlled with cedar fiber, paper, ect.

The Charca, Cliff House, Menefee, and Point Lookout, Mancos, Niobrara, and Dakota formations will all be considered for completion in this well. A completion procedure will be developed after evaluating the wireline and mud logs.

C. Minimum Blowout Control Specifications:

Double ram type 2000 psi working pressure BOP with a rotating head. See the attached Exhibit #1 for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up to 250 psi (Low) for 5 minutes and 1,500 psi (High) for 10 minutes. All tests and inspections will be recorded in the daily drilling tour book.

The blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

IV. Materials

A. Casing Program:

Hole Size	Depth	Casing Size	Wt. & Grade
12-1/4"	320'	8-5/8"	32# J-55
7-7/8"	6,600'	5-1/5"	15.5# J-55

B. Float Equipment:

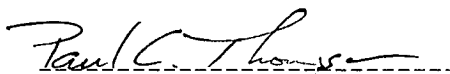
a) Surface Casing: Notched collar, aluminum insert float in the first collar, and 3 centralizers on the bottom 3 joints.

b) Production Casing: Production Casing: 5-1/2" cement float shoe and self-fill insert float collar. Place float one joint above shoe. **Place DV tool at 4300'**. Place ten centralizers spaced every other joint above the shoe, two turbolizers on the collars below the DV tool and two turbolizers above the DV tool. Place five turbolizers every third joint from the top of the well.

V. Cementing:

Surface casing: 8-5/8" - Use 225 sx (266 cu. ft.) of Type V with 2% CaCl_2 and $\frac{1}{4}$ #/sk celloflake (Yield = 1.18 cu. ft./sk; slurry weight = 15.6 PPG). 100% excess to circulate cement to surface. WOC 12 hours. Pressure test surface casing to 1500 psi.

Production Casing: 5-1/2" - Before cementing circulate hole with at least 1-1/2 hole volumes of mud. Precede cement with 30 bbls of fresh water. **1st Stage:** Lead with 260 sx (458 cu.ft.) of Cl "B" 65/35 poz with 6% gel, 1% CaCl_2 , 4% phenoseal, and $\frac{1}{4}$ #/sx celloflake (Yield = 1.76 cu. ft./sk; slurry weight = 12.8 PPG). Tail with 100 sx (146 cu.ft.) of Cl "B" 50/50 poz with 0.15% dispersant, 1% CaCl_2 and $\frac{1}{4}$ #/sk. celloflake. (Yield = 1.46 cu. ft./sk; slurry weight = 13.0 PPG). **2nd Stage:** Precede cement with 20 bbls of water. Lead with 600 sx (1056 cu.ft) Cl "B" 65/35 poz with 6% gel, 1% CaCl_2 , and $\frac{1}{4}$ #/sx celloflake (Yield = 1.76 cu. ft./sk; slurry weight = 12.8 PPG). Tail with 100 sx (146 cu.ft.) of Cl "B" 50/50 poz with 0.15% dispersant, 1% CaCl_2 and $\frac{1}{4}$ #/sk. celloflake. (Yield = 1.46 cu. ft./sk; slurry weight = 13.0 PPG). Total cement volume is 1806 cu.ft. (50% excess to hole volume to circulate cement to surface).


Paul C. Thompson, P.E.

Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

Exhibit #1 Typical BOP setup

Location: San Juan Basin, New Mexico

Date: August 20, 2001

By: John Thompson (Walsh E&P)

