# N.M. Oil Cons. DIV-Dist. 2 1301 W. Grand Avenue

Form 3160-3 (April 2004)	Artesia, NM 8	38210	FORM AI OMB No. Expires Ma	PPROVED 1004-0137 arch 31, 2007
DEPARTMENT O	O STATES OF THE INTERIOR AND MANAGEMENT		5. Lease Serial No. NM 07306	
APPLICATION FOR PER	MIT TO DRILL OR REENTER		6. If Indian, Allotee of N/A	r Tribe Name
la. Type of work:  DRILL	REENTER		7. If Unit or CA Agrees N/A	,
1b. Type of Well: ☐Oil Well  Gas Well ☐	Other Single Zone Mu	ltiple Zone	<ol> <li>Lease Name and W</li> <li>Aztec 35 Federa</li> </ol>	
2. Name of Operator  Cabal Energy Corporation			9. API Well No.	5-63732
3a. Address 415 West Wall Street, Suite 1700 Midland, Texas 79701	3b. Phone No. (include area code) 432-682-0440		10. Field and Pool, or Ex Pecos Slope Ab	xploratory
Location of Well (Report location clearly and in accordant At surface  At proposed prod. zone	• •	-	11. Sec., T. R. M. or Blk Section 35, T10	•
14. Distance in miles and direction from nearest town or po 7 miles East of Roswell, New Mexico	ost office*		12. County or Parish Chaves	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	17. Spacin	g Unit dedicated to this we	RECEIVED
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.  2130'	19. Proposed Depth 5000'	20. BLM/F	BIA Bond No. on file	JAN 1 3 2005
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3740'	22. Approximate date work will 12/26/2004	start*	23. Estimated duration 20 Days	
	24. Attachments	4 1 2 4		
<ol> <li>The following, completed in accordance with the requirement.</li> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National For SUPO shall be filed with the appropriate Forest Service)</li> </ol>	4. Bond to cove item 20 above orest System Lands, the 5. Operator cert	er the operation e). ification ite specific info	ns unless covered by an e	· ·
25. Signature Jan WK Day	Name (Printed/Typed) Randell K. Ford		I	Date 12/03/2004
Title President				
Approved by (Signature)  /S/LAPRY D, BF	Name (Printed/Typed)	S/LARR	Y D. BRAY	Dat JAN 1 2 200:
Title Assistant Field Ma	anager, Office ROSWELL	FIELD OF	FICE API	PROVED FOR 1 YEAR

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)

CEMENT TO COVER ALL OIL, GAS AND WATER BEARING ZONES L. e. Glerieta

#### State of New Mexico

DISTRICT I 1625 N. FRENCH DR., HOBBS, NM 88240

Energy, Minerals and Natural Resources Department

DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 68210

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

# OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

Revised JUNE 10, 2003 Submit to Appropriate District Office State Lease — 4 Copies Fee Lease — 3 Copies

Form C-102

DISTRICT IV WELL LOCATION AND ACREAGE DEDICATION PLAT ☐ AMENDED REPORT 1220 S. ST. FRANCIS DR., SANTA FR, NM 67505 Pool Code Pool Name API Number Property Code Property Name Well Number AZTEC 35 FEDERAL 4 OGRID No. Operator Name Elevation CABAL ENERGY CORPORATION 194930 3740

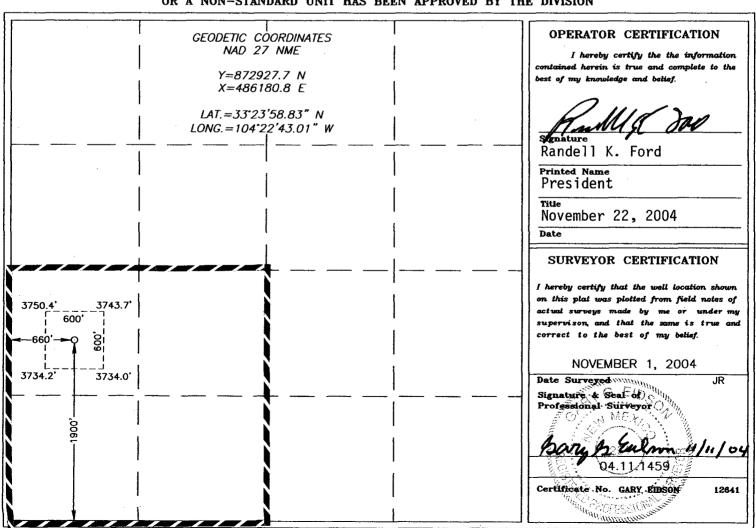
#### Surface Location

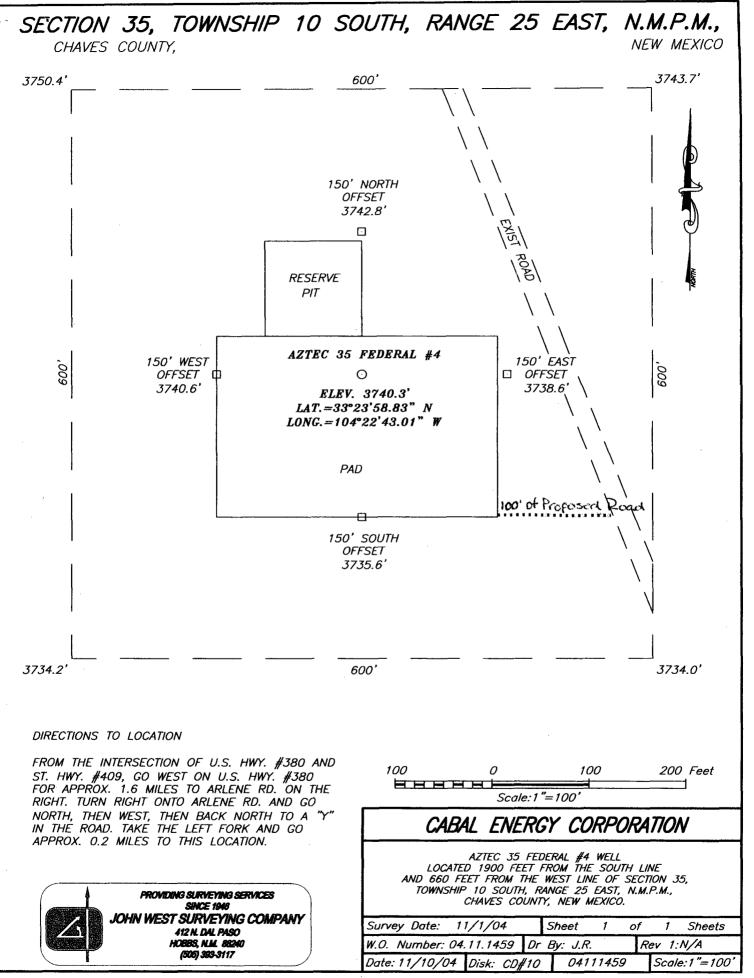
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	35	10-S	25-E		1900	SOUTH	660	WEST	CHAVES

#### 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
· 1					<u> </u>				
Dedicated Acres	Joint o	r Infill (	Consolidation	Code 0r	der No.				
160		-							

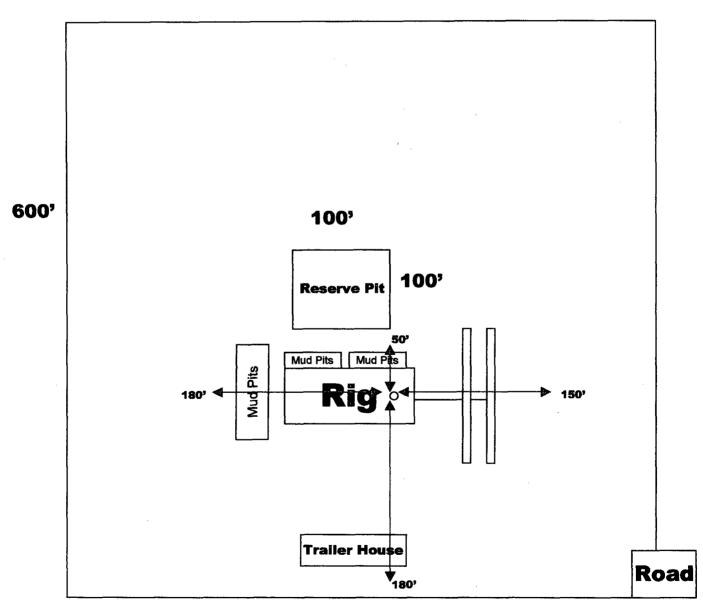
# NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION





# DRILLING RIG LAYOUT Cabal Energy Corporation Aztec 35 Federal #4





600'

Exhibit D Surface Use & Operations Plan

# **DRILLING PROGRAM**

# **Cabal Energy Corporation**

Aztec 35 Federal # 4 Section 35, T-10-S, R-25-E Chaves County, New Mexico

The following items supplement Form 3160-3 in accordance with instructions contained in Onshore Oil and Gas Orders #1 and #2, and all other applicable federal and state regulations.

# 1. ESTIMATED TOPS OF GEOLOGIC MARKERS:

		GL = 3,740' Estimated KB = 3,749'
San Andres	+701' MD	(+3,023')
San Andres Porosity	+1,242' MD	(+2,482')
Glorietta	+2,338' MD	(+1,386')
Glorietta Sand	+2,508' MD	(+1,216')
Yeso	+2,694' MD	(+1,030')
Abo Clastic	4,087' MD	(-363')
Zu Upper Abo Sd	4,216' MD	(-492')
Zu Massive Abo Sd	4,344' MD	(-620')
Lower Abo Sd #2	4,444' MD	(-720')
Lower Abo Sd #1	4,494' MD	(-770')
Total Depth	5,000'	

# 2. ESTIMATED DEPTHS TO WATER, OIL OR GAS FORMATIONS:

Fresh Water Above 200'
Gas ABO

3. Pressure control equipment: The blow out preventer equipment (BOP) shown in Exhibit #1 will consist of a 3,000 psi double ram type preventer for drilling the intermediate hole. The blowout preventer stack for the production hole will consist of at least a double-ram blowout preventer and annular preventer rated to 3,000 psi working pressure. All BOPs and accessory equipment will be tested according to Onshore Order #2 before drilling out.

# 4. PROPOSED CASING PROGRAM:

Hole Size	Interval	Casing Size	Weight	Grade, Joint	
12-1/4"	0 – 850'	8-5/8"	24#	K-55 ST&C	
7-7/8"	0 - 5,000	5-1/2"	15.5#	J-55 ST&C	

Equivalent or adequate grades and weights of casing may be substituted at time casing is run, depending on availability. Changes will be relayed to BLM prior to running.

# 5. PROPOSED CEMENTING PROGRAM

14" conductor cemented with ready mix to surface

8-5/8" surface 300 sxs Premium Plus cement, 2% calcium chloride

5-1/2" production 150 sxs Light Cement

150 sxs Super "H" cement .5% Halad, .4% CFR-3,

3# per sx Gilsonite

# **6.** PROPOSED MUD SYSTEM:

<u>DEPTH</u>	DESCRIPTION	MUD WEIGHT	<b>VISCOSITY</b>	WATER LOSS
0 – 850'	fresh water	8.6 – 8.8 ppg	28 - 30	NC
850 – 5,000'	brine/mud	10.0 - 10.2  ppg	28 - 34	12 cc

# 7. TESTING, LOGGING AND CORING PROGRAM:

Samples From 850' DST's N/A

Logging Dual Lateral, Gamma Ray, Caliper, Density Neutron,

PE Factor

Coring Possible sidewall core: San Andres, Glorietta, Yeso, Abo Sd

# 8. ABNORMAL PRESSURES, TEMPERATURES AND Hydrogen Sulfide:

None anticipated. Maximum bottom hole pressure should not exceed 1,800psi. Although we do not anticipate encountering H<sub>2</sub>S in amounts significant enough to require an H<sub>2</sub>S contingency plan in accordance with Rule 118 of the OCD, we have prepared an H<sub>2</sub>S drilling plan, which follows.

# ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

It is planned that operations will commence on December 26, 2004. Drilling should be completed within 20 days followed by completion operations.

# **HYDROGEN SULFIDE DRILLING OPERATIONS PLAN**

# Cabal Energy Corporation Aztec 35 Federal #4

### I. HYDROGEN SULFIDE TRAINING

- A. All regularly assigned personnel, contracted or employed by Cabal Energy Corporation, will receive training from a qualified instructor in the following areas prior to commencing drilling potential hydrogen sulfide bearing formations in this well:
  - 1. The hazards and characteristics of hydrogen sulfide  $(H_2S)$ .
  - 2. The proper use and maintenance of personal protective equipment and life support systems.
  - 3. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures and prevailing winds.
  - 4. The proper techniques for first aid and rescue procedures.
- B. In addition, supervisory personnel will be trained in the following areas:
  - 1. The effects of H<sub>2</sub>S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
  - 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
  - 3. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan.
- C. There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

# II. H<sub>2</sub>S SAFETY EQUIPMENT AND SYSTEMS

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H<sub>2</sub>S.

- A. Well Control Equipment.
  - 1. Flare line with continuous pilot.
  - 2. Choke manifold with a minimum of one remote choke.
  - 3. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
  - 4. Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head and flare.
- **B.** Protective Equipment for Essential Personnel:

Mark II Surviveair 30-minute units located in the dog house and at briefing areas, as indicated on well site diagram.

- C. H<sub>2</sub>S Detection and Monitoring Equipment:
  - 1. Two portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H<sub>2</sub>S levels of 20 ppm are reached.
  - 2. One portable SO<sub>2</sub> monitor positioned near flare line.
- D. Visual Warning Systems
  - 1. Wind direction indicators are shown on well site diagram.
  - 2. Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance form the immediate location. Bilingual signs will be used when appropriate.

# E. Mud Program

- 1. The Mud Program has been designed to minimize the volume of H<sub>2</sub>S circulated to the surface. Proper mud weights, safe drilling practices and the use of H<sub>2</sub>S scavengers will minimize hazards when penetrating H<sub>2</sub>S bearing zones.
- 2. A mud-gas separator will be utilized as needed.

# F. Metallurgy:

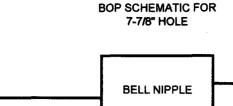
All drill strings, casing, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and line and valves shall be suitable for H<sub>2</sub>S service.

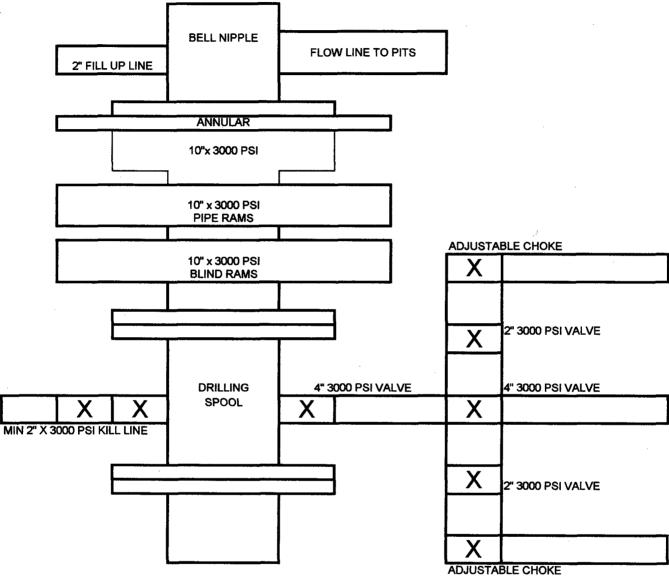
# G. Communication:

Cellular telephone communications in company vehicles, rig floor and mud logging trailer.

# H. Well Testing:

Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. The drill stem testing and an  $H_2S$  environment will be conducted during the daylight hours.





**Cabal Energy Corporation** Aztec 35 Federal #4 **Chaves County, New Mexico** 

Exhibit 1

# United States Department of the Interior Bureau of Land Management Roswell Field Office 2909 Second Street Roswell, New Mexico 88201-1287

# Statement Accepting Responsibility for Operations

Operator Name:

Cabal Energy Corporation

Street or Box:

415 W. Wall St. Ste 1700

City, State:

Midland, Texas

Zip Code:

79701

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Lease No: NM 07306

# **Legal Description of Land:**

960 Acres

Section 26: S/2 SW/4 and NW/4 SW/4

Section 27: S/2 NE/4, NW/4 NE/4 and E/2 SE/4

Section 34: E/2 E/2

Section 35: E/2 and W/2 W/2

Township 10 South, Range 25 East, Chaves, New Mexico

# **Bond Coverage:**

Statewide Oil and Gas Surety Bond, Cabal Energy Corporation (Principal)

**BLM Bond File No.: NM 2860** 

Randell K. Ford

President

December 3, 2004