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

070 Farmington, NM

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. SF-078214
b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" 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
2. Name of Operator Calpine Natural Gas Company		7. If Unit or CA Agreement, Name and No. 33593 33577
3A. Address c/o Walsh Engineering, 7415 E. Main, Farmington, NM 87402	3b. Phone No. (include area code) 505.327.4892	8. Lease Name and Well No. Elmo #1
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1535' FNL and 1315' FWL At proposed prod. Zone		9. API Well No. 30045 32156
14. Distance in miles and direction from nearest town or post office* one-half mile west of Farmington, NM		10. Field and Pool, or Exploratory Basin Fruitland Coal
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1315'	16. No. of Acres in lease 2440	11. Sec., T., R., M., or Blk. and Survey or Area E Section 33, T30N, R13W
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 250'	19. Proposed Depth 1790' +/-	12. County or Parish San Juan
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5742' GL	22. Approximate date work will start* April 2004	13. State NM
17. Spacing Unit dedicated to this well N/2 320 acres		
20. BLM/BIA Bond No. on file		
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 1/28/2004
Title Agent		
Approved by (Signature) <i>David J. Markiewicz</i>	Name (Printed/Typed)	Date MAR - 3 2004
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 reverse)

HOLD G104 FOR *Name change to Arnie #?*

This application 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 30045-32156	*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 33577	*Property Name ELMO	*Well Number 1
*GRID No. 194807	*Operator Name CALPINE NATURAL GAS L.P.	*Elevation 5742'

¹⁰ Surface Location

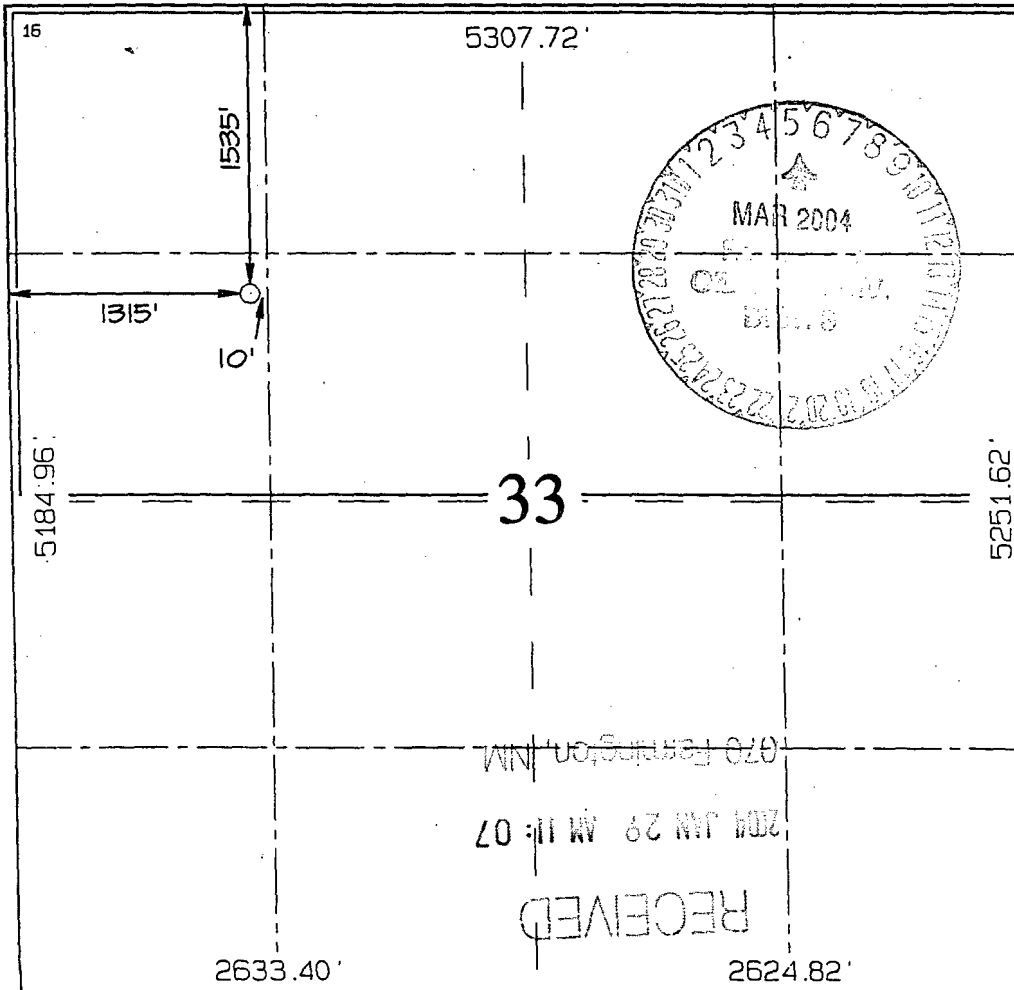
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	33	30N	13W		1535	NORTH	1315	WEST	SAN JUAN

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 320.0 Acres - (N/2)	¹³ Joint or Infill Y	¹⁴ Consolidation Code	¹⁵ 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



¹⁷ OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Paul C. Thompson
Signature
PAUL C. THOMPSON
Printed Name
AGENT
Title
1/28/04
Date

¹⁸ SURVEYOR CERTIFICATION
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.

Survey Date: NOVEMBER 13, 2003

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

CALPINE NATURAL GAS CORP.
OPERATIONS PLAN
Elmo #1

I. Location: 1535' FNL & 1315' FWL Date: January 28, 2004
 Sec 33 T30N R13W
 San Juan County, NM

Field: Basin Fruitland Coal
Surface: Bureau of Land Management
Minerals: Federal SF 078214
Elev: GL 5742'

II. Geology: Surface formation _ Kirtland

A. Formation Tops	Depths
Fruitland	1160'
Pictured Cliffs	1590'
Total Depth	1790'

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

Water and gas - 1160 and 1590'.

B. Logging Program: Induction/GR and density logs at TD.

C. No over pressured zones are expected in this well. No H₂S zones will be penetrated in this well. Max. BHP = 600 psig.

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 polymer mud. The weighting material will be drill solids or if conditions dictate, barite. The maximum mud weight expected is 8.5 ppg.

C. Minimum Blowout Control Specifications:

Double ram type or annular type 2000 psi working pressure BOP with a rotating head. See the attached exhibits (#1 and #2) for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1000 psi.

C. Cont.

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
8-3/4"	120'	7"	20# K-55
6-1/4"	1790'	4-1/2"	10.5# K-55

B. Float Equipment:

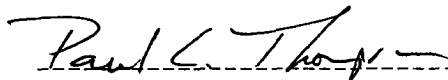
a) Surface Casing: None

b) Production Casing: 4-1/2" cement guide shoe and self fill insert float collar. Place float one joint above shoe. Five centralizers spaced every other joint above shoe and five turbolizers every other joint from the top of the well.

V. Cementing:

Surface casing: 7" - Use 50 sx (59 cu. ft.) of Cl "B" with 2% CaCl_2 (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 600 psi for 30 min.

Production Casing: 4-1/2" - Before cementing circulate hole with at least 1-1/2 hole volumes of mud. Precede cement with 30 bbls of fresh water. Lead with 150 sx (309 cu.ft) of Cl "B" with 2% metasilicate. (Yield = 2.06 cu.ft./sk; slurry weight = 12.5 PPG). Tail with 50 sx (59 cu.ft.) of Cl "B" with 2% CaCl_2 (Yield = 1.18 cu. ft./sk; slurry weight = 15.6 PPG) Total cement volume is 368 cu.ft. (100% excess to circulate cement to surface).



Paul C. Thompson, P.E.