

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

RECEIVED

28 APR 28 AM 11:28

070 Farmington, NM

5. Lease Serial No. NMSF-080238-A
6. If Indian, Allottee or Tribe Name N/A
7. If Unit or CA Agreement, Name and No. N/A
8. Lease Name and Well No. <i>Gallegos Fed</i> VOLDEMORT #12-11-13-12#15
9. API Well No. 30-045- 31657
10. Field and Pool, or Exploratory BASIN FRUITLAND COAL
11. Sec., T., R., M., or Blk. and Survey or Area C 12-26n-13w NMPM
12. County or Parish SAN JUAN
13. State NM
17. Spacing Unit dedicated to this well <i>North</i> SOUTH HALF (320 ACRES)
20. BLM/BIA Bond No. on file BLM NMB000019 (STATE WIDE)
23. Estimated duration 2 WEEKS

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER
1b. 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
2. Name of Operator CALPINE NATURAL GAS L. P.
3a. Address 7415 EAST MAIN STREET FARMINGTON, NM 87401
3b. Phone No. (include area code) (505) 327-4892
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1000' FNL & 1980' FWL At proposed prod. zone SAME
14. Distance in miles and direction from nearest town or post office* 16 AIR MILES SOUTH OF FARMINGTON
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1,640'
16. No. of Acres in lease 2,373.98
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 810'
19. Proposed Depth 1,460'
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,017' GL
22. Approximate date work will start* UPON APPROVAL
24. Attachments

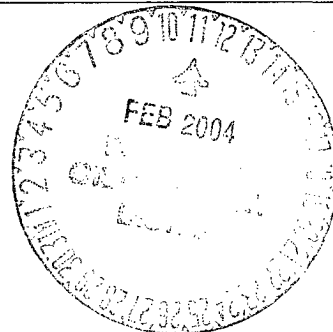
The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- | | |
|---|--|
| 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 officer. |

Comments

THIS ACTION IS SUBJECT TO TECHNICAL AND PROCEDURAL REVIEW PURSUANT TO 43 CFR 3165.3 AND APPEAL PURSUANT TO 43 CFR 3165.4

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



cc:BIA, BLM (& OCD), Cartaya, NAPI, Thompson, Tribe

25. Signature <i>Brian Wood</i>	Name (Printed/Typed) BRIAN WOOD	Date 4-19-03
Title CONSULTANT	PHONE: 505 466-8120 FAX: 505 466-9682	
Approved by (Signature) <i>David J. Marklew</i>	Name (Printed/Typed) David J. Marklew	Date FEB - 9 2004
Title	Office	

Application approval does not warrant or certify the 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.

NMOCD

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer 00, 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 30-045-31657		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 29395	*Property Name <i>Grallagos Federal 21-13-12</i>		*Well Number # 15
*GRID No. 194807	*Operator Name CALPINE NATURAL GAS		*Elevation 6017

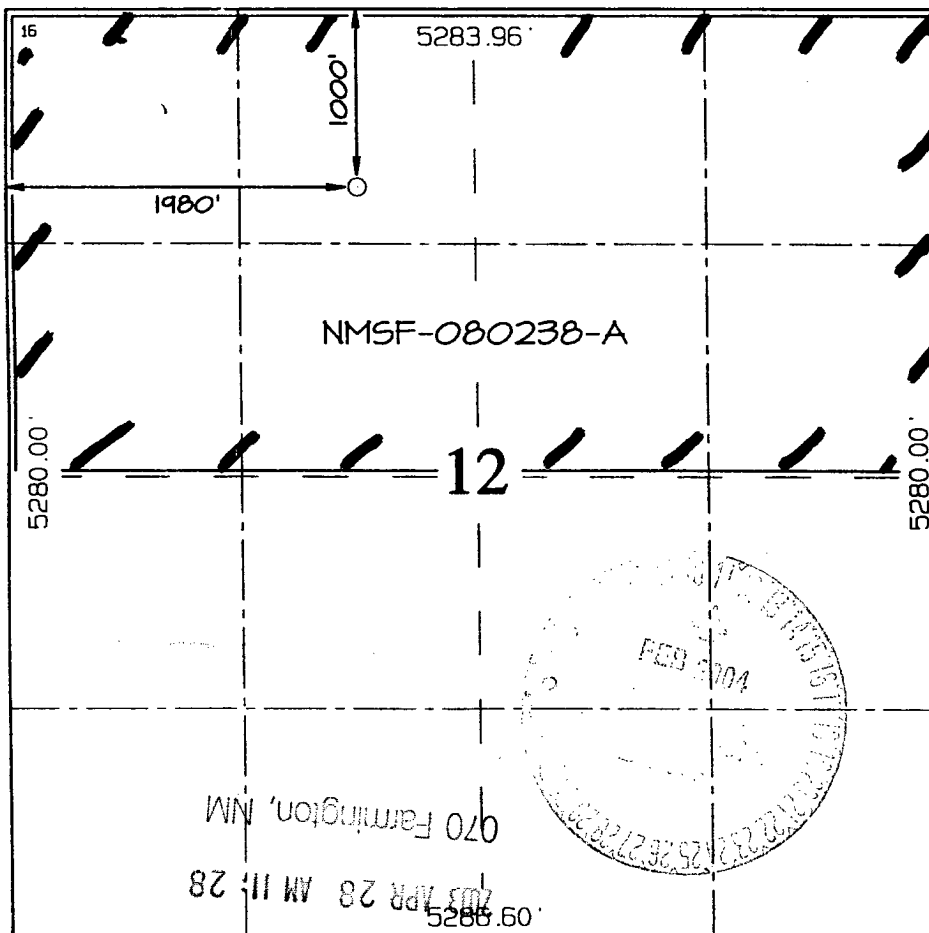
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	12	26N	13W		1000	NORTH	1980	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	¹⁴ Consolidation Code	¹⁵ Order No.		

320 LOWABLE 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.

Brian Wood
Signature

BRIAN WOOD

Printed Name
CONSULTANT

Title
APR. 19, 2003

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: FEBRUARY 10, 2003

Signature and Seal of Professional Surveyor



Jason C. Edwards
Certificate Number 15269

RECEIVED

Calpine Natural Gas L. P.
Voldemort #12
1000' FNL & 1980' FWL
Sec. 12, T. 26 N., R. 13 W.
San Juan County, New Mexico

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Drilling Program

1. ESTIMATED FORMATION TOPS

<u>Formation</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
Nacimiento	000'	5'	+6,017'
Ojo Alamo Sandstone	50'	55'	+5,967'
Kirtland Shale	100'	105'	+5,917'
Top Fruitland	876'	881'	+5,141'
Lower Fruitland Coal	1,159'	1,164'	+4,858'
Pictured Cliffs Sandstone	1,193'	1,198'	+4,824'
Total Depth (TD)*	1,460'	1,465'	+4,557'

* all elevations reflect the ungraded ground level of 6,017'

2. NOTABLE ZONES

<u>Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zones</u>
Fruitland	Ojo Alamo	Fruitland
Pictured Cliffs	Fruitland	

Water zones will be protected with casing, cement, and weighted mud. Fresh water encountered during drilling will be recorded by depth, cased, and cemented. Oil and gas shows will be tested for commercial potential based on the well site geologist's recommendations.

3. PRESSURE CONTROL

The drilling contract has not yet been awarded, thus the exact BOP model to be used is not yet known. (A typical 2,000 psi model is on PAGE 3.) Double ram or annular 2,000 psi system with a rotating head will be used. All ram

Calpine Natural Gas L. P.
Voldemort #12
1000' FNL & 1980' FWL
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preventers and related equipment will be hydraulically tested at nipple up and after any use under pressure to 1,000 psi.

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. BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2,000 psi. Maximum expected pressure is \approx 585 psi.

4. CASING & CEMENT

<u>Hole Size</u>	<u>O. D.</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Age</u>	<u>GL Setting Depth</u>
8-3/4"	7"	20	K-55	New	120'
6-1/4"	4-1/2"	10.5	K-55	New	1,460'

Surface casing will be cemented to surface with \approx 59 cubic feet (\approx 50 sacks) Class B + 2% CaCl_2 . Volume is based on 100% excess, yield of 1.18 cubic feet per sack, and slurry weight of 15.6 pounds per gallon. W. O. C. = 12 hours. Pressure test surface casing to 600 psi for 30 minutes.

Production casing hole will be cleaned of rock chips by circulating \geq 150% of hole volume with mud. Thirty barrels of fresh water will next be circulated. Lead with \approx 247 cubic feet (\approx 120 sacks) of Class B with 2% metasilicate (yield = 2.06 cubic feet per sack, slurry weight = 12.5 pounds per gallon). Tail with \approx 59 cubic feet (\approx 50 sacks) of Class B with 2% CaCl_2 (yield = 1.18 cubic feet per sack, slurry weight = 15.6 pounds per gallon). Total cement volume = 306 cubic feet @ 100% excess and circulating to surface.

Production casing will have 4-1/2" cement guide shoe and self fill float collar. Float will be placed one joint above the shoe. Five centralizers will be spaced on every other joint starting above the shoe. Five turbolizers will be placed on every other joint starting from the top of the well.