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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL

☐ REENTER

b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other

☒ Single Zone ☐ Multiple Zone

2. Name of Operator

Calpine Natural Gas Company

3a. Address

c/o Walsh Engineering, 7415 E. Main, Farmington, NM 87402

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 1830' FSL and 780 FEL

At proposed prod. Zone

14. Distance in miles and direction from nearest town or post office*

2.5 mile west of Farmington, NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)

780'

16. No. of Acres in lease

480 acres

17. Spacing Unit dedicated to this well

~~5/2-220 acres~~

NA

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.

15'

19. Proposed Depth

4000'

20. BLM/BIA Bond No. on file

On File

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

5657' GL

22. Approximate date work will start*

March 22, 2003

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.

2. A Drilling Plan.

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.

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).

5. Operator certification.

6. Such other site specific information and/or plans as may be required by the authorized office.

25. Signature

Paul C. Thompson

Name (Printed/Typed)

Paul C. Thompson, P.E.

Date

3/12/03

Title

Agent

Approved by (Signature)

David J. Mandewicz

Name (Printed/Typed)

Date

MAR 19 2003

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)

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".

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 30-045-31448	*Pool Code 96160	*Pool Name SWD Mesaverde
*Property Code 32178	*Property Name ROOSEVELT SWD	*Well Number 1
*GRID No. 194807	*Operator Name CALPINE NATURAL GAS COMPANY	*Elevation 5657'

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
I	22	30N	14W		1830	SOUTH	780	EAST	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 (E/2)					13 Joint or Infill	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

16		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 3/12/03 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 19, 2003 Signature and Seal of Professional Surveyor JASON C. EDWARDS Certificate Number 15269

CALPINE NATURAL GAS CORP.
OPERATIONS PLAN
Roosevelt SWD #1R

I. Location: 1830' FSL & 780' FEL Date: March 12, 2003
 Sec 22 T30N R14W
 San Juan County, NM

Field: Blanco Mesa Verde Elev: GL 5657'
Surface: Bureau of Land Management
Minerals: Federal NM 20314

II. Geology: Surface formation _ Ojo Alamo

A. Formation Tops	Depths
Fruitland	648'
Pictured Cliffs	1272'
Cliff House	2799'
Point Lookout	3672'
Total Depth	4000'

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

Water and gas - 648' and 1272'.

B. Logging Program: None.

C. No over pressured zones are expected in this well. No H₂S zones will be penetrated in this well. Max. BHP = 1000 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 Exhibit #1 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
12-1/4"	250'	8-5/8"	32# J-55
7-7/8"	4000'	5-1/2"	15.5# J-55

B. Float Equipment:

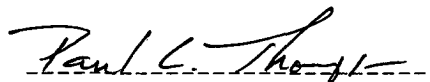
a) Surface Casing: Notched collar and 3 centralizers.

b) Production Casing: 5-1/2" cement guide shoe and self fill insert float collar. Place float one joint above the shoe. Five centralizers spaced every other joint above shoe and five turbolizers every other joint across the Pictured Cliffs and Fruitland (1300' - 650').

V. Cementing:

Surface casing: 8-5/8" - Use 175 sx (207 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: 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. **Lead** with 285 sx (829 cu.ft) of Cl "B" with 3% metasilicate, 10#/sk. Gilsonite, 1/2#/sk cello flake. (Yield = 2.91 cu.ft./sk; slurry weight = 11.4 PPG). **Tail** with 300 sx (399 cu.ft.) of Cl "B" 50:50 poz with 5#/sk. Gilsonite, 1/4#/sk cello flake 2% CaCl_2 (Yield = 1.33 cu. ft./sk; slurry weight = 13.5 PPG) Total cement volume is 1228 cu.ft. (75% excess to circulate cement to surface).



Paul C. Thompson, P.E.