

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

2002 OCT -1 AM 11:31

070 FARMINGTON, NM

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

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 805' FNL and 935' FEL

At proposed prod. Zone

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

4 miles west of Farmington, NM

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

805'

16. No. of Acres in lease

160

17. Spacing Unit dedicated to this well

NE/4 160 acres

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

NA

19. Proposed Depth

1415'

20. BLM/BIA Bond No. on file

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

5662' GL

22. Approximate date work will start*

October 2002

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

Name (Printed/Typed)

Date

Title

Paul C. Thompson, P.E.

9/23/02

Agent

Approved by (Signature)

Name (Printed/Typed)

Date

Title

/s/ David J. Mankiewicz

Office

NOV --1 2002

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)

NMCCD

State of New Mexico
Energy, Minerals & Mining Resources Department
OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C - 102

WELL LOCATION AND ACREAGE DEDICATION PLAT

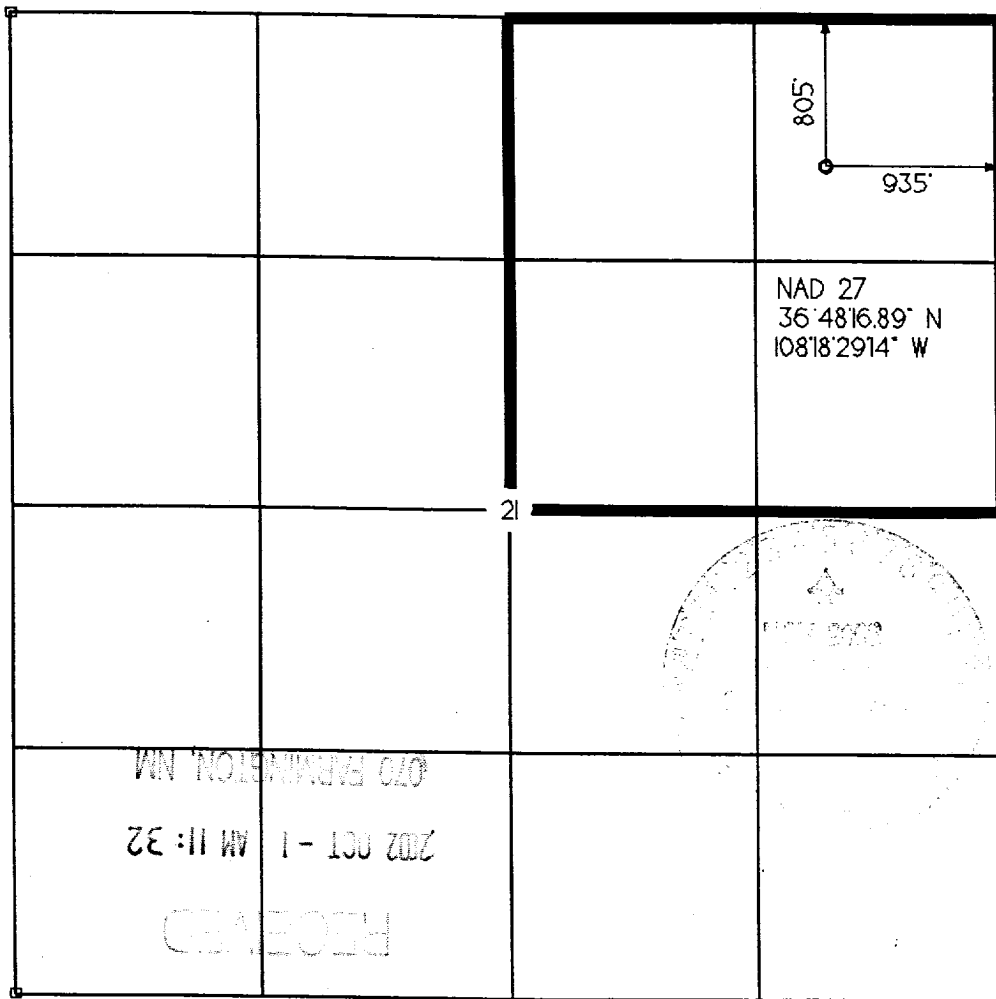
☒ AMENDED REPORT

APA Number 30-045-31220	Pool Code 98160	Pool Name Harper Hill	Pool Name F51
Property Code 28109	Property Name HOOVER		Well Number 2
OGRD No. 194807	Operator Name CALPINE NATURAL GAS		Elevation 5662'

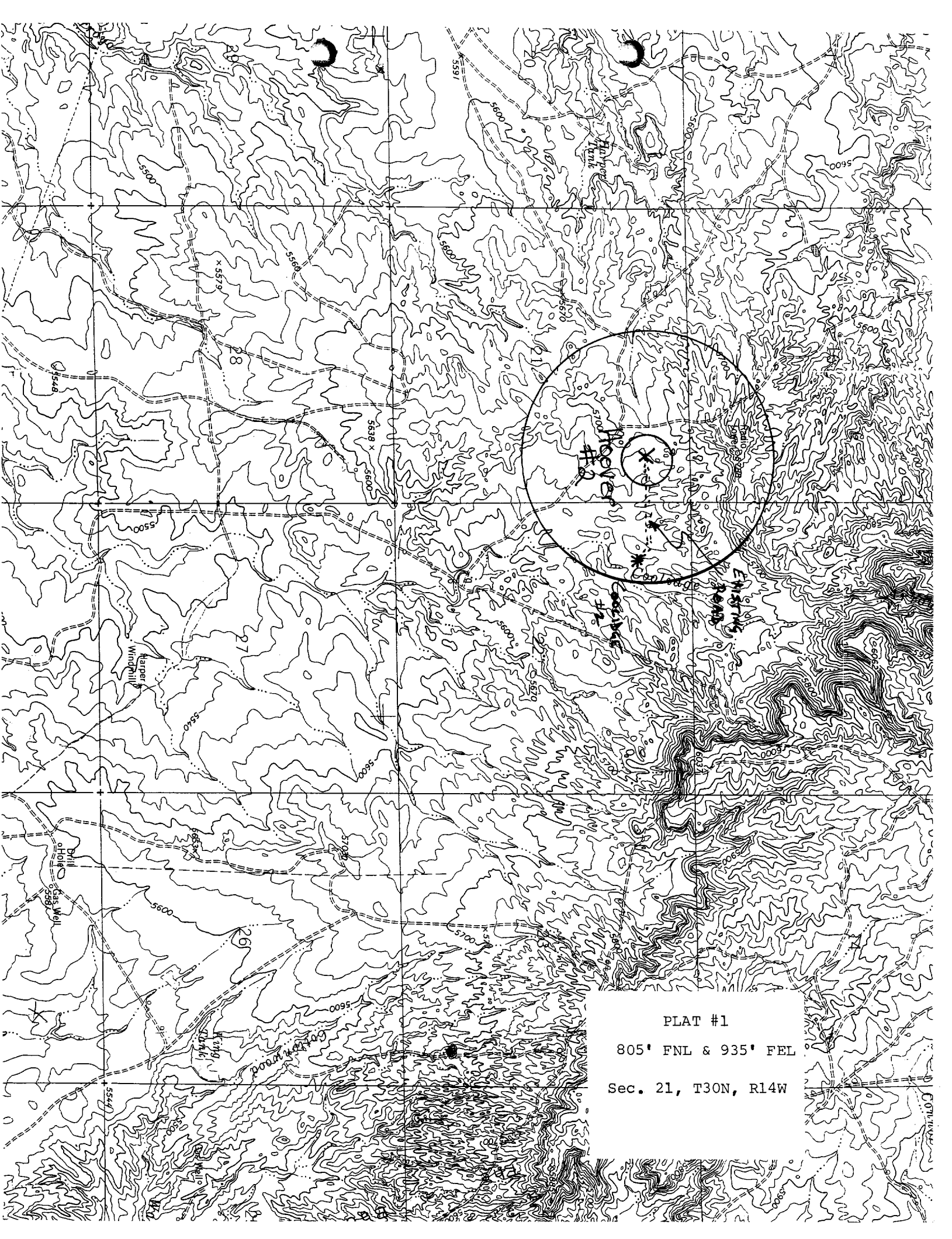
Surface Location									
UL or Lot A	Sec. 21	Twp. 30 N.	Rge. 14 W.	Lot Lk.	Feet from >	North/South NORTH	Feet from >	East/West EAST	County SAN JUAN

Bottom Hole Location if Different From Surface									
UL or Lot	Sec.	Twp.	Rge.	Lot Lk.	Feet from >	North/South	Feet from >	East/West	County
Dedication 160	Joint ? No	Consolidation		Order No.					

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



OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature <i>Paul C. Thompson</i> Printed Name Paul C. Thompson Title Agent Date 9/24/02	
SURVEYOR CERTIFICATION I hereby certify that the well location 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. Date of Survey 9/24/02 Signature and Seal of Professional Surveyor 	



PLAT #1
805' FNL & 935' FEL
Sec. 21, T30N, R14W

CALPINE NATURAL GAS CORP.
OPERATIONS PLAN
Hoover #2

I. Location: 805' FNL & 935' FEL Date: September 23, 2002
 Sec 21 T30N R14W
 San Juan County, NM

Field: Twin Mounds Pictured Cliffs Elev: GL 5636'
Surface: Bureau of Land Management
Minerals: Federal NM 25857

II. Geology: Surface formation _ Ojo Alamo

A. Formation Tops	Depths
Fruitland	605'
Pictured Cliffs	1265'
Total Depth	1415'

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

Water and gas - 605 and 1265'.

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"	1415'	4-1/2"	10.5# K-55

B. Float Equipment:

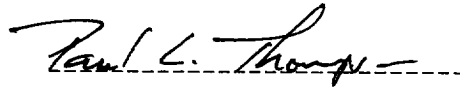
a) Surface Casing: None

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 115 sx (237 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 296 cu.ft. (100% excess to circulate cement to surface).


Paul C. Thompson, P.E.