

DATE IN 11/22/02	SUSPENSE NA	ENGINEER	LOGGED IN KU	TYPE DHC	APP NO. 23293 0780
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

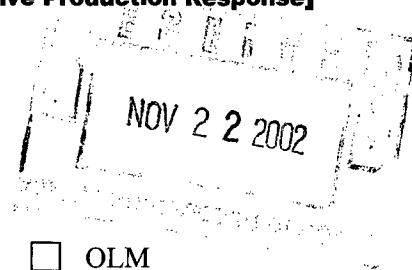
- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
 [A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement
☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

- [D] Other: Specify _____



- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply
- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
- [B] ☐ Offset Operators, Leaseholders or Surface Owner
- [C] ☐ Application is One Which Requires Published Legal Notice
- [D] ☒ Notification and/or Concurrent Approval by BLM or SLO
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] ☐ Waivers are Attached

- [3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

- [4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Hugo Cartaya

Print or Type Name

Hugo Cartaya
 Signature

Production Manager

Title

11/19/02

Date

hcartaya@calpine.com
 e-mail Address



CALPINE

CALPINE NATURAL GAS COMPANY

TABOR CENTER

1200 17th STREET, SUITE 770

DENVER, COLORADO 80202

720.359.9144

720.359.9140 (FAX)

RECEIVED

NOV 22 2002

**OIL CONSERVATION
DIVISION**

November 19, 2002

State of New Mexico
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

State of New Mexico
Oil Conservation Division
1000 Rio Brazos Drive
Aztec, New Mexico 87410

Dear Sir or Madam:

Enclosed please find an application for downhole commingle for the Morton #4 well (API No. 30-045-31214). The well has been drilled and was permitted as a Basin Fruitland Coal well.

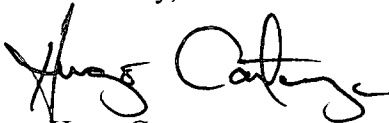
Due to recent changes in the spacing, Calpine Natural Gas Company, L.P. wishes to complete the well into the Basin Fruitland Coal and the Harper Hill – PC formations and commingle both formations. Working, royalty and overriding royalty interests are identical in both formations and we are proposing that the production be allocated equally.

Enclosed please find:

- 1.) Administrative Application Checklist
- 2.) Form C-107A
- 3.) C-102 for the acreage dedication of the Basin Fruitland Coal
- 4.) C-102 for the acreage dedication of Twin Mounds – PC
- 5.) Statement for the proposed allocation formula
- 6.) Copy of submitted sundry notice to the BLM for recompletion and commingling approval

Please let me know if you need anything else.

Sincerely,


Hugo Cartaya

District I
1625 N. French Drive, Hobbs, NM 88240

District II
1301 W. Grand Avenue, Artesia, NM 88210

District III
1000 Rio Brazos Road, Aztec, NM 87410

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-107A
Revised May 15, 2000

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

APPLICATION TYPE
☒ Single Well
☐ Establish Pre-Approved Pools
EXISTING WELLBORE
☒ Yes ☐ No

APPLICATION FOR DOWNHOLE COMMINGLING

Calpine Natural Gas Company, L.P.

1200 17th Street, Suite 770, Denver, Colorado 80202

Operator Address
Morton **#4** **K-23-30N-14W** **San Juan**

Lease Well No. Unit Letter-Section-Township-Range County

OGRID No. 214274 Property Code 28111 API No. 30-045-31214 Lease Type: ☒ Federal ☐ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Basin Fruitland Coal		UNDES. FRUITLAND Sand Harper Hill/PC
Pool Code	71629		
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	1337-1352		1357-1364
Method of Production (Flowing or Artificial Lift)	Artificial Lift		Artificial Lift
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)			
Oil Gravity or Gas BTU (Degree API or Gas BTU)			
Producing, Shut-In or New Zone	New Zone		New Zone
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)	Date: Rates:	Date: Rates:	Date: Rates:
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil Gas 50 % 50 %	Oil Gas % %	Oil Gas 50 % 50 %

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes ☒ No ☐
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes ☐ No ☐

Are all produced fluids from all commingled zones compatible with each other? Yes ☒ No ☐

Will commingling decrease the value of production? Yes ☐ No ☒

If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application? Yes ☒ No ☐

NMOCD Reference Case No. applicable to this well: _____

Attachments:
C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
Production curve for each zone for at least one year. (If not available, attach explanation.)
For zones with no production history, estimated production rates and supporting data.
Data to support allocation method or formula.
Notification list of working, royalty and overriding royalty interests for uncommon interest cases.
Any additional statements, data or documents required to support commingling.

PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

List of other orders approving downhole commingling within the proposed Pre-Approved Pools
List of all operators within the proposed Pre-Approved Pools
Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.
Bottomhole pressure data.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Hugo Cartaya TITLE Operations Manager DATE 11/19/02
TYPE OR PRINT NAME Hugo Cartaya TELEPHONE NO. (720) 946-1302

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reenter a different reservoir.

Use "APPLICATION FOR PERMIT -" for such proposals

5. Lease Designation and Serial No.
NM 26357

6. If Indian, Allottee or Tribe Name
N/A

7. If Unit or CA, Agreement Designation

8. Well Name and No.
Morton #4

9. API Well No.
30- 045-31214

10. Field and Pool, or Exploratory Area
Basin Fruitland Coal Gas

11. County or Parish, State
San Juan County, New Mexico

SUBMIT IN TRIPLICATE

1. Type of Well

Oil Gas
☐ Well ☒ Well ☐ Other

2. Name of Operator

Calpine Natural Gas

3. Address and Telephone No.

720-359-9144

1200 17th Street, Suite 770, Denver, CO 80202

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

1650' FSL & 1695' FWL

Sec. 23-T30N-R14W

12. CHECK APPROPRIATE BOX(es) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☒ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

- | | |
|---|--|
| <input type="checkbox"/> Abandonment | <input type="checkbox"/> Change of Plans |
| <input type="checkbox"/> Recompletion | <input type="checkbox"/> New Construction |
| <input type="checkbox"/> Plugging Back | <input type="checkbox"/> Non-Routine Fracturing |
| <input type="checkbox"/> Casing Repair | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Altering Casing | <input type="checkbox"/> Conversion to Injection |
| <input checked="" type="checkbox"/> Other | <input type="checkbox"/> Dispose Water |

(Note: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state pertinent details, and give pertinent dates including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The well was permitted as a Basin Fruitland Coal well. As a result of changes in the spacing orders, Calpine proposes to complete the well in the Harper Hill-PC and the Basin Fruitland Coal.

The gas will be commingled downhole.

Attached is the proposed procedure to abandon the existing zone and recomplete into the Harper Hill - PC and Basin Fruitland Coal formations.

14. I hereby certify that the foregoing is true and correct

Signed Hugo Cartaya Hugo Cartaya

Title Production Manager

Date 11/18/02

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes 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.

***See Instructions on Reverse Side**

District I
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1000 Rio Brazos Rd., Aztec, NM 87410

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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 15, 2000
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-31214	² Pool Code 71629	³ Pool Name BASIN FRUITLAND COAL
⁴ Property Code 28111	⁵ Property Name MORTON	⁶ Well Number #4
⁷ OGRID No. 214274	⁸ Operator Name CALPINE NATURAL GAS COMPANY, L.P.	⁹ Elevation 5710'

¹⁰ Surface Location

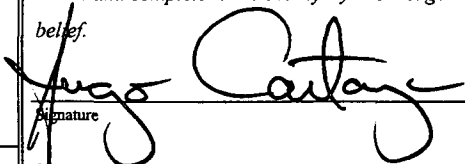
UL or lot no. K	Section 23	Township 30N	Range 14W	Lot Idn	Feet from the 1650'	North/South line South	Feet from the 1695'	East/West line West	County San Juan
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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¹² Dedicated Acres 320	¹³ Joint or Infill	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

¹⁶					¹⁷ OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i>  Signature Hugo Cartaya Printed Name Production Manager Title 11/19/02 Date
					¹⁸ SURVEYOR CERTIFICATION <i>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.</i>
					Date of Survey Signature and Seal of Professional Surveyor:
					Certificate Number

District I

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State of New Mexico

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised August 15, 2000

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-31214		² Pool Code	³ Pool Name HARPER HILLS PICTURED CLIFFS
⁴ Property Code 28111	⁵ Property Name MORTON		⁶ Well Number #4
⁷ OGRID No. 214274	⁸ Operator Name CALPINE NATURAL GAS COMPANY, L.P.		⁹ Elevation 5710'

¹⁰ Surface Location

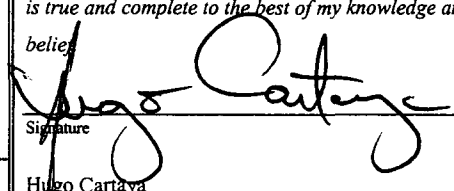
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	23	30N	14W		1650'	SOUTH	1695'	WEST	San Juan

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 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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¹⁶				¹⁷ OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i>  Signature Hugo Carraya Printed Name Production Manager Title 11/19/02 Date
				¹⁸ SURVEYOR CERTIFICATION <i>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.</i> Date of Survey Signature and Seal of Professional Surveyor: Certificate Number

Recompletion Procedure for
Calpine Natural Gas Company
Morton #4

Location: SW/4 Sec 23 T30N R14W
San Juan County, NM

Date: November 18, 2002

Field: Basin Fruitland Coal	Elev: GL 5710'
Recomplete in Harper Hills PC and Fruitland Coal	KB 5715'
Surface: BLM	4-1/2" @ 1519'
Minerals: BLM NM-26357	FC @ 1501' KB

Complete Pictured Cliffs

1. Set and fill 2 frac tanks with city water and heat to 80 degrees. Check for anchors.
2. Set 5000# frac valve directly on 4 1/2" casing. Pressure test casing to 3800#.
3. Rig up Wireline truck and run GR/CCL from TD' to 1000'. Perforate 4 spf (0.38" holes) from 1357' to 1364'. Total of 28 holes. Depths refer to the open-hole logs.
4. Rig up frac equipment and pressure test surface lines.
5. Fracture with 50,000# of 20/40 Brady sand in a 25#/1000 gal cross-linked gel fluid. Pump rate at 50 BPM and expected treating pressure is 2000 psig. Max treating pressure is 3500 psig. Treat with the following schedule if pressure permits: (would prefer to ramp sand)

Stage	Gel Vol. (Gals.)	Sand Vol. (Lbs.)
Pad	7,000	0
1.0 ppg 20/40	3,000	3,000
2.0 ppg 20/40	5,000	5,000
3.0 ppg 20/40	5,000	10,000
4.0 ppg 20/40	5,000	20,000
4.0 ppg 20/40 Resin	3,000	12,000
Flush	997	0
Total	28,997	50,000

6. Close BOPs. RD frac company and install flow line with 1/4" ceramic choke. Flow well back to pit overnight.
7. When well dies, RU completion rig. Hold safety meeting. PU and RIH with sand bailer on 2-3/8" EUE tubing and clean out to PBTD. TOH and lay down bailer and tubing. Release completion rig.

Complete Fruitland Coal

8. Rig up Wireline truck and run drillable bridge plug. Set at 1355'. Perforate 4 spf (0.38" holes) from 1337'-1344' and 1347'- 1352'. Total of 48 holes. Depths refer to the open-hole logs.
9. Rig up frac equipment and pressure test surface lines.

10. Fracture with 50,000# of 20/40 Brady sand in a 25#/1000 gal cross-linked gel fluid. Pump rate at 50 BPM and expected treating pressure is 2000 psig. Max treating pressure is 3500 psig. Treat with the following schedule if pressure permits: (would prefer to ramp sand)

Stage	Gel Vol. (Gals.)	Sand Vol. (Lbs.)
Pad	7,000	0
1.0 ppg 20/40	3,000	3,000
2.0 ppg 20/40	5,000	5,000
3.0 ppg 20/40	5,000	10,000
4.0 ppg 20/40	5,000	20,000
4.0 ppg 20/40 Resin	3,000	12,000
Flush	997	0
Total	28,997	50,000

11. Close BOPs. RD frac company and install flow line with 1/4" ceramic choke. Flow well back to pit overnight.
12. When well dies, RU completion rig. Hold safety meeting. PU and RIH with sand bailer on 2-3/8" EUE tubing and clean out to RBP. TOH and lay down bailer.
13. TIH and drill out bridge plug. Clean out to PBTD.
14. TIH with tail joint, 4' perforated sub, and seating nipple, on 2-3/8", 4.7#, J-55, EUE 8rd tubing and set the seating nipple below the deepest perforation. ND BOP and NU tubing head.
15. Run a 2" X 1-1/2" X 12' RWAC pump on 3/4" rods. Space out the pump and hang off the rods. Start the pump jack and check for pump action.
16. Rig down and release rig. First deliver well.