

DATE IN 4/07/2014	SUSPENSE	ENGINEER MAM	LOGGED IN 4/08/2014	TYPE DHC	APP NO. PMAAM/40 9839824
----------------------	----------	-----------------	------------------------	-------------	-----------------------------

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:

Record Clean up
[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.

KRISTEN D. BABCOCK
 Print or Type Name

Kristen D. Babcock
 Signature

REGULATORY ANALYST
 Title

4/2/2014
 Date

Kristen.Babcock@xtoenergy.com
 e-mail Address



382 CR 3100 Aztec, NM 87410
(505) 333-3100 FAX: (505) 333-3280

April 2, 2014

NMOCD
Phillip Goetze
1220 South St. Francis Dr.
Santa Fe, NM 87505

RE: Record Clean Up for Downhole Commingle
Harper Hill Fruitland Sand- Pictured Cliffs (78160) & Basin Fruitland Coal (71629) Pools
Area of T30N, R14W
San Juan County, NM

RECEIVED NMOCD
2014 APR 7 PM 3:12

Dear Mr. Goetze,

XTO Energy Inc. and the NMOCD Aztec District Office reviewed all of the XTO operated wells within the Harper Hill Fruitland Sand / PC Pool – located predominately within T30N, R14W, San Juan County NM – that had downhole comingling permits filed and approved through the NMOCD Aztec District Office by previous operators. These wells should have been filed and approved through the Santa Fe NMOCD, due to the fact that they are not pre-approved pools. XTO Energy Inc will be submitting these 12 wells to the Santa Fe NMOCD office for the appropriate approval. Allocations will remain as they were before.

WELL NAME	API	DHC #	Year Approved	Operator that Submitted
1. WF Federal 11 #1	30-045-32268	DHC-1923AZ	"2005"	Lance Oil and Gas
2. WF Federal 25 #1	30-045-30681	DHC-2416AZ	"2007"	Lance Oil and Gas
3. WF Federal 25 #2	30-045-30713	DHC-1209AZ	"2003"	Richardson Operating
4. WF Federal 27 #3	30-045-30393	DHC-2138AZ	"2006"	Lance Oil and Gas
5. WF Federal 03 #1	30-045-30202	DHC-3214AZ	"2009"	XTO Energy
6. WF State 2 #3	30-045-30759	DHC-1896AZ	"2005"	Lance Oil and Gas
7. Coolidge #2	30-045-31221	DHC-1076AZ	"2003"	Calpine Operating
8. Coolidge Com #1	30-045-26184	DHC-1005AZ	"2002"	Calpine Operating
9. Morton #2	30-045-25766	DHC-1003AZ	"2002"	Calpine Operating
10. Morton #3	30-045-31215	DHC-1075AZ	"2003"	Calpine Operating
11. Mr Nona 15 #1	30-045-30318	DHC-2573AZ	"2007"	Lance Oil and Gas
12. Roosevelt #2	30-045-31222	DHC-1028AZ	"2003"	Calpine Operating

Sincerely,

Kristen D. Babcock
Regulatory Analyst
xc: Jackson Dean, Ft. Worth Land

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

District II
811 S. First St., 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

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

Form C-107A
Revised August 1, 2011

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

APPLICATION FOR DOWNHOLE COMMINGLING

XTO Energy, Inc.

382 CR 3100, Aztec, NM 87410

Operator
MORTON

#2

Address
UNIT LETTER I, Sec 23, T30N, R14W

SAN JUAN

Lease

Well No.

Unit Letter-Section-Township-Range

County

OGRID No. 5380 Property Code 304997 API No. 30-045-25766 Lease Type: ☒ Federal ☐ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	BASIN FRUITLAND COAL		HARPER HILL FRUITLAND SAND PICTURED CLIFFS
Pool Code	(71629)		(78160)
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	1282'-1400'		1409'-1412'
Method of Production (Flowing or Artificial Lift)	ROD/PUMP		ROD/PUMP
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	PRODUCING		PRODUCING
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: <u>1/1/14</u> Rates: O:0/G:1992MCF/ W:3088	Date: Rates:	Date: <u>1/1/14</u> Rates: O:0/G:595MCF/W:922
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil 77 % Gas 77 %	Oil % Gas %	Oil 23 % Gas 23 %

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones?
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail?

Yes ☒ No ☐
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 Kristen D. Babcock TITLE REGULATORY ANALYST DATE 4/2/14

TYPE OR PRINT NAME KRISTEN D. BABCOCK TELEPHONE NO. (505) 333-3206

E-MAIL ADDRESS kristen_babcock@xtoenergy.com

Submit 3 Copies To Appropriate District Office

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

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

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised March 25, 1999

WELL API NO. 30-045-25766	
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No. NM 26357	
7. Lease Name or Unit Agreement Name: Morton	
8. Well No. #2	
Pool name or Wildcat	

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

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

2. Name of Operator Calpine Natural Gas Company, L.P.

3. Address of Operator 1200 17th Street, STE 770, Denver, CO 80202

4. Well Location
Unit Letter I : 1850 feet from the South line and 1100 feet from the East line
Section 23 Township 30N Range 14W NMPM County San Juan

10. Elevation (Show whether DR, RKB, RT, GR, etc.)

11. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPLETION <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	
OTHER: Recomplete and downhole commingle <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompilation.

Calpine is proposing to abandon the Dakota formation and recomplete into the Harper Hills and Basin Fruitland Coal Gas formation. The formations will be commingled down hole.

Division Order : 11363

Names of Commingled Pools : Basin Fruitland Coal Gas and Harper Hills

Perforated Intervals: Harper Hills 1405-1415 (proposed) Basin Fruitland Coal 1380-1390 (proposed)

Allocation Method : We will submit historical averages of of production from Pictured Cliffs wells from surrounding sections and compare that with the historical average production of commingled Pictured Cliffs and Fruitland Coal production and propose an allocation formula based on the average differences.

Commingling of the two formations will not reduce the total value of the total remaining production.

Calpine has sent a sundry notice to the BLM of the proposed action.

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

SIGNATURE Hugo Cartaya TITLE Production Manager DATE 12/3/02

Type or print name Hugo Cartaya Telephone No. (720) 946-1302

(This space for State use) Original signed by STEVEN N. HAYDEN

APPROVED BY DEPUTY OIL & GAS INSPECTOR, DIST. 10 TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 10 DATE DEC - 5 2002

Conditions of approval, if any:

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

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 30-045-25766	² Pool Code 86620	³ Pool Name TWIN MOUNDS PICTURED CLIFFS
⁴ Property Code 030454	⁵ Property Name MORTON	⁶ Well Number #2
⁷ OGRID No. 214274	⁸ Operator Name CALPINE NATURAL GAS COMPANY, L.P.	⁹ Elevation 5716'

¹⁰ Surface Location

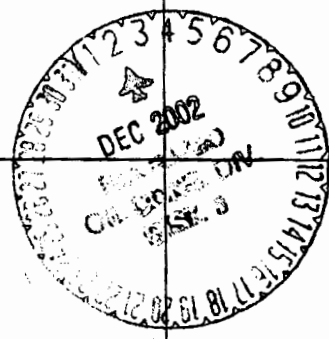
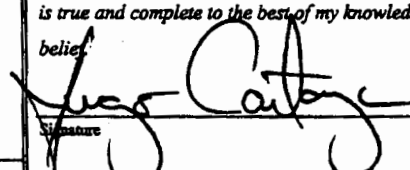
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	23	30N	14W		1850'	FSL	1100'	FEL	San Juan

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.
---	-------------------------------	----------------------------------	-------------------------

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.  Signature Hugo Caraya Printed Name Production Manager Title 11/1/02 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. Date of Survey Signature and Seal of Professional Surveyor:	
	Certificate Number	

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

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 30-045-25766	² Pool Code 71629	³ Pool Name BASIN FRUITLAND COAL
⁴ Property Code 030454	⁵ Property Name MORTON	⁶ Well Number #2
⁷ OGRID No. 214274	⁸ Operator Name CALPINE NATURAL GAS COMPANY, L.P.	⁹ Elevation 5716'

¹⁰ Surface Location

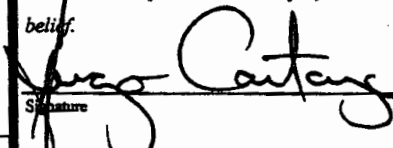
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	23	30N	14W		1850'	FSL	1100'	FEL	San Juan

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	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>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i>  Signature Hugo Caraway Printed Name Production Manager Title 11/1/02 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 #2**

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

Date: October 25, 2002

Field: Basin Dakota	Elev: GL 5703'
Recomplete in Twin Mounds PC and Basin Fruitland Coal	KB 5716'
Surface: BLM	4-1/2" @ 6241'
Minerals: BLM NM-26357	DV Tool @ 4278'
	DK Perfs 5984' - 6125'

Plug Dakota Procedure:

1. Dig workover pit. Set and fill 2 frac tanks with city water and heat to 80 degrees. Check for anchors. Set pump jack. MOL and RU completion rig. Hold safety meeting.
2. NU 2-3/8" relief line. Blow well down and kill with water if necessary.
3. ND tubing head and pull tubing slips. NU BOP. Pick up additional joints (198' - 6 jts) of 1-1/2" EUE tubing and TIH to approximately 6148' KB. The 1-1/2" tubing is currently landed at 5950' KB.
4. Pump Plug #1 - Dakota. Spot 50 sx (59 cu.ft.) of Cl "B" neat cement from 6148' to approximately 5826'. Cement is designed to cover from the base of the Dakota perfs to 100' above the top Dakota perf with 100% excess.
5. TOH (standing back) 1-1/2" EUE tubing to approximately 5300' KB and WOC 4 hrs. TIH and verify cement top.
6. Load hole with water. TOH (laying down) to approximately 5220' KB.
7. Pump Plug #2 - Gallup Spot 15 sx (18 cu.ft.) of Cl "B" neat cement from approximately 5221' KB to approximately 5071'. Cement is designed to cover 100' above and below the Gallup top.
8. TOH (laying down) to approximately 3892' KB.
9. Pump Plug #3 - Mesa Verde. Spot 100 sx (118 cu.ft.) of Cl "B" neat cement from approximately 3892' KB to approximately 2525'. Cement is designed to cover 100' below the Point Lookout top and 100' above the Cliff House top.
10. TOH (laying down) the 1-1/2" tubing to approximately 2000'. Load hole with fresh water and pressure test the casing to 1500 psi. Finish TOH. Should have a total of 190 jts of 1-1/2".

Complete Pictured Cliffs

11. Rig up Wireline truck and run GR/CCL from 1700' to 1000'. Perforate 4 spf (0.38" holes) from 1405' to 1415'. Total of 40 holes. Depths refer to the open-hole logs.
12. Rig up frac equipment and pressure test surface lines.

13. 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	60,000

14. Close BOPs. RD frac company and install flow line with 1/4" ceramic choke. Flow well back to pit overnight.
15. When well dies, TIH with sand bailer on 2-3/8" EUE tubing and clean out to PBTD or 300' below the lowest perf. TOH and lay down bailer.

Complete Fruitland Coal

16. Rig up Wireline truck and run drillable bridge plug. Set at 1402'. Perforate 4 spf (0.38" holes) from 1380'-1390' and 1393'-1398'. Total of 60 holes. Depths refer to the open-hole logs.
17. Rig up frac equipment and pressure test surface lines.
18. 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	60,000

19. Close BOPs. RD frac company and install flow line with 1/4" ceramic choke. Flow well back to pit overnight.
20. When well dies, TIH with sand bailer on 2-3/8" EUE tubing and clean out to RBP. TOH and lay down bailer.
21. TIH and drill out bridge plug.

22. 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.
23. 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.
24. Rig down and release rig. First deliver well.