



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

Bill Richardson
Governor
Joanna Prukop
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

April 29, 2003

Office of the Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426
Attn: Marilyn Rand

RE: **BP America Production Company**
Hubbard A No. 1E
Jacquez Gas Com F No. 1
Lopez Gas Com No. 1E
Schneider Gas Com C No. 1
Sullivan Gas Com No. 1A

Dugan Production Corporation
Garret Federal Com No. 1E (Basin Dakota)
Mae Gale Com No. 1E
Rainbow Seeker No. 1
Sly Slav No. 3

Ms. Rand:

Enclosed are your copies of the approved NGPA applications for the above applicants.

Sincerely,


Kathy Valdes

Enclosures

State of New Mexico

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

2040 Pacheco St.

Santa Fe, NM 87505-5472

1220 S. St. Francis Dr.

TF-03-007

FOR DIVISION

USE ONLY:

APPLICATION FOR WELLHEAD PRICE CEILING CATEGORY DETERMINATION

APPROPRIATE FILING FEE(S) ENCLOSED? YES ☒ NO ☐DATE COMPLETE APPLICATION FILED March 10, 2003DATE DETERMINATION MADE April 28, 2003WAS APPLICATION CONTESTED? YES ☐ NO ☒NAME(S) OF INTERVENORS(S), IF ANY: na

- FILING FEE(S) -

Effective October 1, 1986,
a non-refundable filing fee of
\$25.00 per category for each
application is mandatory. (Rule
2, Order No. R-5878-8-3)

5A. Indicate Type of Lease

STATE ☐ FEE ☒

5. State Oil & Gas Lease No.

7. Unit Agreement Name

8. Farm or Lease Name

Jacquez Gas Com F

9. Well No.

1

10. Field and Pool, or Wildcat

Basin Dakota

12. County

San Juan

2. Name of Operator

BP America Production Company

3. Address of Operator

P.O. Box 3092 Houston, TX 77253

4. Location of Well

UNIT LETTER CLOCATED 1120FEET FROM THE North LINEAND 1450 FEET FROM THE West LINE OF SEC. 34 TWS. 32N RGE. 10W NMPM

11. Name and Address of Purchaser(s)

El Paso Field Services

Check appropriate box for category sought and information submitted. Enter required information on lines 1 and 2, below.

1. Category(ies) sought (By NGPA Section No.)

2. Filing Fee(s) Amount Enclosed: \$ 25.00

API No. 30-045-25884

3. All applications must contain:

- a. C-101 APPLICATION FOR PERMIT TO DRILL, DEEPEN OR PLUG BACK
- b. C-105 WELL COMPLETION OR RECOMPLETION REPORT
- c. DIRECTIONAL DRILLING SURVEY, IF REQUIRED UNDER RULE 111
- d. AFFIDAVITS OF MAILING OR DELIVERY

4. In addition to the above, all applications must contain the items required by the applicable rule of the Division's "Special Rules of Applications for Wellhead Price Ceiling Category Determinations" as follows:

A. NEW NATURAL GAS UNDER SEC. 102 (c) (1) (B) (using 2.5 Mile or 1000 Feet Deeper Test)

☐ All items required by Rule 14 (1) and/or Rule 14 (2)

B. NEW NATURAL GAS UNDER SEC. 102 (c) (1) (C) (new onshore reservoir)

☐ All items required by Rule 15

C. NEW ONSHORE PRODUCTION WELL UNDER SEC. 103

☐ All items required by Rule 16a OR Rule 16B

D. SEC. 107 HIGH COST NATURAL GAS (TIGHT FORMATION, DEEP, COAL SEAM, AND PRODUCTION ENHANCEMENT) UNDER SEC. 103

☒ All items required by Rule 17 (1), Rule 17 (2), Rule 17 (4), or Rule 17 (5)

E. STRIPPER WELL NATURAL GAS UNDER SEC. 108

☐ All items required by Rule 18

I, HEREBY CERTIFY THAT THE INFORMATION CONTAINED
HEREIN IS TRUE AND COMPLETE TO THE BEST OF MY
KNOWLEDGE AND BELIEF.

Mary Corley

NAME OF APPLICANT (TYPE OR PRINT)

SIGNATURE OF APPLICANT

Title Senior Regulatory AnalystDate February 13, 2003

FOR DIVISION USE ONLY

☒ Approved☐ Disapproved

The information contained herein includes all of the information required
to be filed by the applicant under Subpart B of Part 274 of the FERC
regulation

EXAMINER

A. THE NGPA WELL CATEGORY DETERMINATION IS BEING SOUGHT FOR A WELL PRODUCING:

- A1 ☐ occluded natural gas from coal seams.
A2 ☐ natural gas from Devonian shale.
A3 ☒ natural gas from a designated tight formation.

B. FOR ALL APPLICATIONS FOR DETERMINATION PROVIDE THE FOLLOWING:

1. Well Name and No.* **Jacquez Gas Com F # 1**
2. Completed in (Name of Reservoir) * **Dakota**
3. Field * **Basin Dakota**
4. County * **San Juan**
5. State * **New Mexico**
6. API Well No. (14 digits maximum. If not assigned, leave blank.) ~~38-045-28195~~ **38-045-25884**
9. Measured Depth of the Completed Interval (in feet)
TOP **7166'** BASE **7339'**

C. APPLICANT'S MAILING ADDRESS AND THE IDENTITY OF THE PERSON WHO IS RESPONSIBLE FOR APPLICATION:

1. Applicant's Name * **BP America Production Company**
2. Street * **501 Westlake Park BLVD**
3. City * **Houston**
4. State* **Texas** 5. Zip Code **77079**
6. Name of Person Responsible * **Mary Corley**
7. Title of Such Person * **Senior Regulatory Analyst**
8. Signature *Mary Corley* and Phone No. (281) **366 - 4491**

* SIGNIFIES THAT LINE ENTRY MAY CONTAIN UP TO 35 LETTERS AND/OR NUMBERS.

APPLICATION FOR WELL CATEGORY DETERMINATION
PUSUANT TO SECTION 270 OF
THE FEDERAL ENERGY REGULATORY COMMISSION 'S
REGULATIONS IMPLEMENTING
THE NATURAL GAS POLICY ACT OF 1978 (NGPA)

AFFIDAVIT
TIGHT FORMATION GAS

STATE OF TEXAS
COUNTY OF HARRIS

BEFORE ME, the undersigned authority, duly commissioned and qualified within and for the State and County aforesaid, personally came and appeared Mary Corley, who being by me first duly sworn, deposed and said:

That she is the Senior Regulatory Analyst for BP America Production Company, the applicant for the well hereinafter described, and that capacity, she is requesting the appropriate Authorized Officer to make a determine that this well is producing from a tight formation pursuant to the rules and regulations of the Bureau of Land Management and the Federal Energy Regulatory Commission (FERC), as such rules relate to NGPA.

That production from the Jacquez Gas Com F well # 1, API No. ~~30-045-20195~~ ³⁰⁻⁰⁴⁵⁻²⁵⁸⁸⁴ is natural gas produced from a FERC designated tight formation, assigned State No. NM - 09 through:

- X a well the surface drilling of which began after December 31, 1979, but before January 1, 1993;
- a recompletion commenced after January 1, 1993, the surface drilling of which began after December 31, 1979, but before January 1, 1993; or
- a recompletion commenced after December 31, 1979 but before January 1, 1993, where such gas could not have been produced from any completion location in existence in the well bore before January 1, 1980; and

Said applicant has no knowledge of any information not described in the application that is inconsistent with her conclusion.

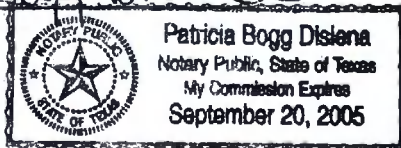
Mary Corley

Mary Corley
Senior Regulatory Analyst

Subscribed in my presence and duly sworn to before me, this 13 day of February, 2003.

Patricia Bogg Dislena

Notary Public



BLM Affidavit

My Commission Expires:



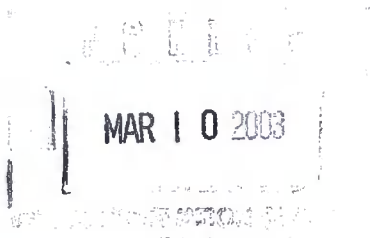
San Juan Performance Unit

Mary Corley
WL1-19.171
281-366-4491 (direct)
281-366-0700 (FAX)
corleym1@bp.com

P. O. Box 3092
Houston, Texas 77253-3092
501 Westlake Park Boulevard
Houston, Texas 77079

February 12, 2003

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



Application For Well Category Determination

NGPA Section 107 - Dakota

Jacquez Gas Com F Well No. 1 3D-045-25884

San Juan County, New Mexico

BP America Production Company is enclosing, for review and approval by the Oil Conservation Division, the original and one copy of an Application for Well Category Determination for the referenced well. Please hold the information in the filing confidential to the maximum extent allowed by law.

A copy of this letter and the FERC Form 121 has been mailed to each working interest owner entitled to receive Notice of this Application.

Please indicate receipt of this filing by date stamping the attached copy of this letter and returning the copy for our records.

Very truly yours,

A handwritten signature in cursive script that reads "Mary Corley".

Mary Corley
Sr. Regulatory Analyst

Enclosures

Cc: Working Interest Owners

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

Form C-105
Revised 11-1-84

5a. Indicate Type of Lease	
State <input type="checkbox"/>	Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.	

19. TYPE OF WELL

OIL WELL ☐ GAS WELL ☒ DRY ☐ OTHER _____

b. TYPE OF COMPLETION

NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER _____

7. Unit Agreement Name
8. Farm or Lease Name
Jacquez Gas Com "F"
9. Well No.
1
10. Field and Pool, or Wildcat
Basin Dakota

2. Name of Operator

Amoco Production Company

3. Address of Operator

501 Airport Drive, Farmington, New Mexico 87401

11. County
San Juan

4. Location of Well

UNIT LETTER C LOCATED 1120 FEET FROM THE North LINE AND 1450 FEET FROM

THE West LINE OF SEC. 34 TWP. 32N RGE. 10W NMPM

12. County
San Juan

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Casinghead
5-5-84	5-31-84	7-18-84	5898' KB	5885' GR
20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools
7426'	7380'	single	→	O-TD
24. Producing Interval(s), of this completion - Top, Bottom, Name				25. Was Directional Survey Made
7339'-7166'				YES

26. Type Electric and Other Logs Run	27. Was Well Cored
DIL-SP-GR from TD to 6000'; FDC-CNL from TD to 4200'	NO

28. CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
11-3/4"	42#, H-40	323'	14-3/4"	531 cu. ft. Class B Neat & 2% C ₂ Cl ₂	
8-5/8"	24#, K-55	3125'	10-5/8"	1078 cu. ft. Class B 50:50 poz. 6% gel, 2# med tuf plug & tailed in w/ 118 cu. ft. Class B Neat (continued on next sheet)	

29. LINER RECORD					30. TUBING RECORD		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2-3/8"	7329'	

31. Perforation Record (Interval, size and number)	32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.
7194'-7166', 7222'-7217', 7262'-7255', 7285'-7279', 7316'-7301', 7339'-7320', 2 jspf, .38", total of 160 holes.	DEPTH INTERVAL
	7166-7339'
	AMOUNT AND KIND MATERIAL USED
	2% KCL 2800#/400 BBL, hi temp. stab. 1600#, gelling agent
	5280#, surf 153 gal, breaker
	175# (continued on next sheet)

33. PRODUCTION							
Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)				Well Status (Prod. or Shut-in)	
8-5-84		Flowing				Shut-in	
Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas-Oil Ratio
8-6-84	3	.75"	→		143		
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)	
87 psig	437 psig	→		1146			
Disposition of Gas (Sold, used for fuel, vented, etc.)						Test Witnessed By	
To be sold						J. Barnett	

34. List of Attachments

None

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

Original Signed By
D.D. Lawson

SIGNED _____ TITLE District Adm. Supervisor DATE 8-21-84

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I OIL CONSERVATION DIVISION
P.O. Box 1980, Hobbs, NM 88240
RECEIVED
P.O. Box 2088.

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210
Santa Fe, New Mexico 87504-2088

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL API NO. 3004525844
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Jaquez Gas Com /F/
8. Well No. 1
9. Pool name or Wildcat Basin Dakota
10. Elevation (Show whether DF, RKB, RT, GR, etc.) 5898' KB

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 <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER	2. Name of Operator Amoco Production Company	Attention: Ed Hadlock
3. Address of Operator P.O. Box 800 Denver Colorado 80201	4. Well Location Unit Letter C : 1120 Feet From The North Line and 1450 Feet From The West Line Section 34 Township 32N Range 10W NMPM San Juan County	
10. Elevation (Show whether DF, RKB, RT, GR, etc.) 5898' KB		

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"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
OTHER: <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
	CASING TEST AND CEMENT JOB <input type="checkbox"/>
	OTHER: Bradenhead repair <input checked="" 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.
Please see attached.

RECEIVED
APR 26 1993
OIL CON. DIV.,
DIST. 3

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

SIGNATURE Ed Hadlock TITLE Business Analyst DATE 04-21-1993
TYPE OR PRINT NAME Ed Hadlock TELEPHONE NO. (303) 830-9982

(This space for State Use)

APPROVED BY Charles G. Hulson TITLE DEPUTY OIL & GAS INSPECTOR, DIST. #3 DATE APR 26 1993

CONDITIONS OF APPROVAL, IF ANY:

Bradenhead pressure- 60 psi. Bled off well. PMP 30 BBLS 2% KCL water down TBG. TIH and tag fill @ 7318'. TOH w/ 224 joints. Bled off gas. PMP 20 BBLS 2% KCL to kill well. TIH and set 4-1/2" ret. plug @ 6922'. PMP 78 BBLS to fill & circ. hole. Pressure test plug and CSG to 1000 psi for 10 minutes, ok. TOH. TIH & set 8-5/8" plug @ 1310'. Fill hole & circulate. Pressure test CSG to 500 psi. Ok. Ran CBL-VDL-GR-CCL from 1280' to surface. 0-550' no CMT, 550'-630' 60-80% bond, 630'-1120' excellent bond. TIH w/ perf gun. Shot 2 holes @ 450'. PMP 52 BBLS w/ dye to obtain circulation. Circ. @ 4 BPM, 1000 psi.

PMP 10 BBLS 2% KCL water ahead of CMT. Mix & pump 225 sx CMT (49 BBLS slurry). 15.6 PPG. APR 2 BPM. Obtained 11 BBLS good CMT returns up bradenhead. Install 8 5/8" wooden plug and displace to 250'. Rig down Halliburton. TIH and Tag CMT @ 238'. Drill CMT from 238' to 460'. Circ hole clean. Pressure test CSG to 500 psi. Bled to 400 in 10 minutes. Repressure to 500, bled down to 450 and stabilized. TIH and release 8-5/8" plug.

Ran 39 joints 4-1/2" CSG. Pressure tested to 1000 psi. Ok. Inject plastic into surface CSG spool & pressure tested to 1000 psi. Ok. TIH and tag fill @ 7318'. Clean out to 7358'. TOH. TIH w/ TBG & landed @ 7316'. Swab well and rig down. Final bradenhead pressure 0 psi.

If there are any questions, please contact Ed Hadlock @ (303) 830-4982.

2771237
APR 8 1983
OFF COV RM
8 1210

277 8 5 4982

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

RECEIVED
DIVISION NO.
30-045-25844

93 FEB 23

5. Indicate Type of Lease

STATE ☒

FEE ☐

6. State Oil & Gas Lease No.

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

Amoco Production Company Attn: Ed Hadlock

3. Address of Operator

P.O. Box 800, Denver, CO. 80201

7. Lease Name or Unit Agreement Name

Jaquez Gas Com /F/

8. Well No.

1

9. Pool name or Wildcat

Basin Dakota

4. Well Location

Unit Letter C : 1120 Feet From The North Line and 1450 Feet From The West Line

Section 34 Township 32N Range 10W NMPM San Juan County

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

5898 KB

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐

OTHER: Bradenhead repair ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

OTHER: ☐

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.

To ensure zonal isolation behind the casing. Perform Bradenhead repair per attached procedures.

RECEIVED

FEB 16 1993

CON. DIV.
DIST. 3

If there are any questions please contact Ed Hadlock at (303) 830-4982.

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

SIGNATURE Ed Hadlock TITLE Business Analyst DATE 2/11/93

TYPE OR PRINT NAME Ed Hadlock TELEPHONE NO.

(This space for State Use)

APPROVED BY Sianna Daurhust TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 3 DATE 2/16/93

CONDITIONS OF APPROVAL, IF ANY:

JAQUEZ GAS COM F #1
 LOCATION - 34C 32N 10W
 SINGLE DK
 ORIG. COMPLETION - 7/84
 LAST FILE UPDATE - 4/92 BY CSW

PUMPED SO SK
 Down BRADEN HEDS

GA ~ 1745

PC - 3515

CH 4555

MN 4625

PL 4972

DAK 7215

GH 7082

MANCOS 5086

BOT OF 11.75 IN OD CSA 323
 42 LB/FT. H-40 CASING
 CIR TO SURFACE
 MESA VERDE 4555
 DAKOTA 7215

BOT OF 8.625 IN OD CSA 3125
 28 LB/FT. H-40 CASING

24 - K-55 AND 28# S-80

RECEIVED

RECEIVED

DK-2JSPF PERF 7166-7194

7217-7222

7255-7262

7279-7285

7301-7316

DK-2JSPD PERF 7320-7330

7339

PBTD AT 7380 FT.

7360

TOTAL DEPTH 7426 FT.

BOT OF 2.375 IN OD TBG AT 7329

CMT RET DA 7360' x 542'0 w/ 59
 CF CLASS B NEDT (ROOT COLLAR)

BOT OF 4.5 IN OD CSA 7426
 11.6 LB/FT. K-55 CASING

CMT w/ 983 CF BUROE CNT x
 1010 CF EZONOLITE CNT. TAPPED
 IN w/ 118 CF CLASS B NEDT

FILENAME:
 04525884

CA T213 NOTED BY CSW & JG YLW

#2

WELL: JAUQUEZ GC F#1LOCATION: Sec 34C-32N -10W

1. Contact Federal or State agency prior to starting repair work.
2. Catch gas and ~~or~~ water sample off of bradenhead and ~~casing~~, and have analyzed.
3. Install and, or test anchors.
4. M.I.R.U.S.U. check and record tubing, casing ^{INTERMEDIATE} and bradenhead pressures.
5. Blow well down, kill well if necessary with 2% KCL.
6. Nipple down well head, nipple up and pressure test B.O.P.'s.
7. Trip in the hole and tag P.B.T.D., check for fill, trip and tally out of hole with tubing checking condition of tubing.
8. Trip in the hole with bit and scraper to the top to the perforations. A seating nipple and standing valve may be run in order to pressure test the tubing.
9. Trip in the hole with R.B.P. and PKR. set R.B.P. 50-100 ft. above perforations. Trip out of hole one joint and set PKR. and pressure test R.B.P. to 1500 psi. Release PKR. and pressure test csg. to 1000 psi. 1500 psi.
10. Trip out of hole isolating leak in casing. NOTE: Once leak is located contact SANDI BRAUN in Denver (303-830-5245). If no leak is found, spot sand on R.B.P. and trip out of hole with PKR.
11. ~~Determine from well file and history if a C.B.L. needs to be run from the top of R.B.P. to bottom of intermediate casing shoe. If this is needed run C.B.L. under 1000 psi. and report results to Denver.~~
12. Bleed off any intermediate casing pressure and check for flow, fill annulus with 2% KCL. water. Nipple down B.O.P.'s and tubing head, spear casing and remove slips, nipple up B.O.P.'s.

13. Run freepoint and back off casing above intermediate casing shoe. Trip out of hole laying down and checking condition of casing.
14. Trip in the hole with bit and scraper to top of casing back off, circulate hole clean and trip out with scraper.
15. Trip in the hole with R.B.P. and PKR. and set R.B.P. above casing backoff, trip out of hole one joint and set PKR. and pressure test R.B.P. to 1000#. *Pressure test BACKSIDE to 1000#.*
16. Release packer and trip out of hole isolating leak in casing.
NOTE: IF this can not be accomplished contact *SAUNDERS* in Denver (303-830-~~5451~~). ~~If no leak is found, perforate casing and circulate cement to surface.~~
17. If a leak is found, release PKR. and spot sand on R.B.P. and trip out of hole.
18. Run, ~~if necessary~~ a C.B.L. & C.C.L. ^{From RBP TO SURFACE} to determine cement top on the intermediate casing. Run first pass with no pressure. Run 2nd pass UNDER 1000#. ~~IF NO LEAK IS FOUND~~
19. Perforate casing, if necessary with 4JSPF. and circulate dye to determine cement volume. Depending on the depth of the hole and circulating pressure, a PKR. or a cement retainer may be needed.
20. Mix and pump sufficient cement (class B or equivalent with two hour setting time) to surface. Shut bradenhead valve and attempt to obtain a squeeze pressure and W.O.C.
21. Trip in the hole with bit and scraper and drill out cement and pressure test casing. Re-squeeze leaks if necessary until a desirable squeeze pressure can be obtained.
22. Trip in the hole with retrieving head for R.B.P., circulate sand off of R.B.P. and trip out of hole with plug.
23. Trip in the hole with casing and tag casing backoff. Circulate the top of the back off clean with 2% KCL. water with or without PKR. fluid (depending if production casing is to be cemented to isolate lower production zones). This will be determined from previous CBL. run. Tie back onto production casing and pressure test casing.
24. Nipple down B.O.P.'s and tubing head, and set slips and make cut off. Install tubing head and B.O.P.'s and pressure test.
25. Trip in the hole with retrieving head for R.B.P. circulate sand off of R.B.P. with 2% KCL and trip out of hole with plug.

26. Trip in hole with a sawtooth collar and or bailer and clean out to P.B.T.D. and trip out of hole.

27. Trip in the hole with the production string (1/2 mule shoe on bottom and a seating nipple one joint off bottom), land tubing at 7339'. Nipple down B.O.P.'s, nipple up well head.

28. Swab well in and put well on production.

29. Rig down move off service unit.



STATE OF NEW MEXICO
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

95955

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

BRADENHEAD TEST REPORT
(Submit 2 copies to above address)

Date of Test 10/20/92 Operator Amoco Production, 200 Amoco Court, Farmington, NM
Lease Name Jaguarz GCF Well No. 1 Location: Unit Section Township N Range W
Pressure (Shut-in or Flowing) Tubing 320 Intermediate 50 Casing 455 Bradenhead 70

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

TIME	PRESSURES:		BRADENHEAD FLOWED	INTERMEDIATE FLOWED
	INTERMEDIATE	CASING		
5 min.			Steady Flow <input checked="" type="checkbox"/>	
10 min.			Surges <input type="checkbox"/>	
15 min.	<u>50</u>	<u>455</u>	Down to Nothing <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20 min.			Nothing <input type="checkbox"/>	
25 min.			Gas <input type="checkbox"/>	
30 min.			Gas & Water <input type="checkbox"/>	
			Water <input type="checkbox"/>	

If Bradenhead flowed water, check description below:

CLEAR ☐ FRESH ☐ SALTY ☒ SULFUR ☐ BLACK ☐

REMARKS:

Bradenhead had 70psi. Blow down to nothing in 3 sec. But is Flowing water
Intermediate had 50psi Blow down to nothing in 60 sec.

By Billy Moten Witness

Submit 5 Copies
Appropriate District Office
DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-104
Revised 1-1-89
See Instructions
at Bottom of Page

RECEIVED

90 AUG 22 AM 10 28

REQUEST FOR ALLOWABLE AND AUTHORIZATION
TO TRANSPORT OIL AND NATURAL GAS

Operator AMOCO PRODUCTION COMPANY		Well API No. 300452588400
Address P.O. BOX 800, DENVER, COLORADO 80201		
Reason(s) for Filing (Check proper box) <input type="checkbox"/> Other (Please explain)		
New Well <input type="checkbox"/>	Change in Transporter of:	
Recompletion <input type="checkbox"/>	Oil <input type="checkbox"/> Dry Gas <input type="checkbox"/>	
Change in Operator <input type="checkbox"/>	Casinghead Gas <input type="checkbox"/> Condensate <input checked="" type="checkbox"/>	
If change of operator give name and address of previous operator		

II. DESCRIPTION OF WELL AND LEASE

Lease Name JAQUEZ GAS COM F	Well No. 1	Pool Name, Including Formation BASIN DAKOTA (PRORATED GAS)	Kind of Lease State, Federal or <input checked="" type="radio"/> Fed	Lease No.
Location				
Unit Letter C	1120	Feet From The FNL	Line and 1450	Feet From The FWL
Section 34	Township 32N	Range 10W	SAN JUAN County	

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
MERIDIAN OIL INC.	3535 EAST 30TH STREET, FARMINGTON, CO 87401
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
EL PASO NATURAL GAS COMPANY	P.O. BOX 1492, EL PASO, TX 79978
If well produces oil or liquids, give location of tanks.	Unit Sec. Twp. Rge. Is gas actually connected? When ?

If this production is commingled with that from any other lease or pool, give commingling order number:

IV. COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v	Diff Res'v
Date Spudded	Date Compl. Ready to Prod.		Total Depth			P.B.T.D.		
Elevations (DF, RKB, RT, GR, etc.)	Name of Producing Formation		Top Oil/Gas Pay			Tubing Depth		
Perforations						Depth Casing Shoe		
TUBING, CASING AND CEMENTING RECORD								
HOLE SIZE	CASING & TUBING SIZE		DEPTH SET			SACKS CEMENT		

V. TEST DATA AND REQUEST FOR ALLOWABLE

OIL WELL (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours.)

Date First New Oil Run To Tank	Date of Test	Producing Method (Flow, pump, gas lift, etc.)
Length of Test	Tubing Pressure	Casing Pressure
Actual Prod. During Test	Oil - Bbls.	Water - Bbls.

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JUL 2 1990

GAS WELL

Actual Prod. Test - MCF/D	Length of Test	Bbls. Condensate/MMCF	GAS CON. DIV
Testing Method (pitot, back pr.)	Tubing Pressure (Shut-in)	Casing Pressure (Shut-in)	DIST. 3

VI. OPERATOR CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature
Doug W. Whaley, Staff Admin. Supervisor
Printed Name
June 25, 1990
Date
303-830-4280
Telephone No.

OIL CONSERVATION DIVISION

Date Approved JUL 2 1990

By [Signature]
Title SUPERVISOR DISTRICT #3

INSTRUCTIONS: This form is to be filed in compliance with Rule 1104

- 1) Request for allowable for newly drilled or deepened well must be accompanied by tabulation of deviation tests taken in accordance with Rule 111.
- 2) All sections of this form must be filled out for allowable on new and recompleted wells.
- 3) Fill out only Sections I, II, III, and VI for changes of operator, well name or number, transporter, or other such changes.

EL PASO NATURAL GAS COMPANY
POST OFFICE BOX 990
FARMINGTON, NEW MEXICO

NOTICE OF GAS CONNECTION

DATE NOVEMBER 25, 1986

THIS IS TO NOTIFY THE OIL CONSERVATION COMMISSION THAT CONNECTION FOR PURCHASE OF

GAS FROM AMOCO PRODUCTION
OperatorJAQUEZ GAS COM F #1
Well Name95-955-01
Meter Code40791-01
Site CodeC
Well Unit34-32-10
S-T-RBASIN DAKOTA
PoolEL PASO NATURAL GAS
Name of PurchaserWAS MADE ON OCTOBER 6, 1986,
DateFIRST DELIVERY NOVEMBER 6, 1986
DateAOF -CHOKE 1146EL PASO NATURAL GAS
PurchaserShirley L. Anderson
RepresentativeClerk, Technical Support
Title

CC: OPERATOR
OIL CONSERVATION COMMISSION (2)
PRODUCTION CONTROL - El Paso
LEASE DEVELOPMENT - El Paso
CONTRACT ADMINISTRATION - El Paso
FILE

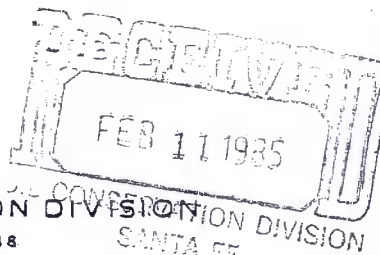
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DIST. 3

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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OPERATOR	
PROMOTION OFFICE	

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501



Form C-104
Revised 10-01-78
Format 08-01-83
Page 1

REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Operator Amoco Production Company	
Address 501 Airport Drive Farmington, NM 87401	
Reason(s) for filing (Check proper box)	Other (Please explain)
<input type="checkbox"/> New Well <input type="checkbox"/> Recompletion <input type="checkbox"/> Change in Ownership	Change in Transporter of: <input type="checkbox"/> Oil <input type="checkbox"/> Gashead Gas <input type="checkbox"/> Dry Gas <input checked="" type="checkbox"/> Condensate

If change of ownership give name
and address of previous owner

II. DESCRIPTION OF WELL AND LEASE

Lease Name Jaquez Gas Com F	Well No. 1	Pool Name, including Formation Basin Dakota	Kind of Lease State, Federal or Fee Fee	Lease No.
Location Unit Letter C : 1120 Feet From The North Line and 1450 Feet From The West Line of Section 34 Township 32N Range 10W, NMPM, San Juan County				

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
Permian Corp.	P. O. Box 1702 Farmington, NM 87499
Name of Authorized Transporter of Gashead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
El Paso Natural Gas Company	P. O. Box 990 Farmington, NM 87401
If well produces oil or liquids, give location of tanks.	Unit Sec. Twp. Rge. Is gas actually connected? When
C 34 32N 10W	

If this production is commingled with that from any other lease or pool, give commingling order number

NOTE: Complete Parts IV and V on reverse side if necessary.

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given is true and complete to the best of my knowledge and belief.

Admin. Supervisor

1-2-85

(Signature)

(Title)

(Date)

OIL CONSERVATION DIVISION

APPROVED

JAN 25 1985

BY

TITLE

DEPUTY OIL & GAS INSPECTOR, DIST. #3

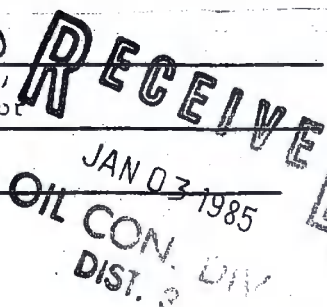
This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply completed wells.



NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK-PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input checked="" type="checkbox"/> Special						Test Date 8-6-84		<div style="font-size: 2em; font-weight: bold; transform: rotate(-5deg); display: inline-block;">RECEIVED</div> <div style="font-size: 1.2em; font-weight: bold;">AUG 27 1984</div> <div style="font-size: 1.2em; font-weight: bold;">OIL CON. DIV.</div> <div style="font-size: 1.2em; font-weight: bold;">DIST. 3</div>			
Company Amoco Production Company				Connection El Paso Natural Gas Company							
Pool Basin				Formation Dakota							
Completion Date 7-19-84		Total Depth 7426		Plug Back TD 7380		Elevation 5885 GL		Farm or Lease Name Jaquez Gas Com "F"			
Csg. Size 4.500	Wt. 11.6	d 4.000	Set At 7426	Perforations: From 7166 To 7339				Well No. 1			
Tbg. Size 2.375	Wt. 4.7	d 1.995	Set At 7329	Perforations: From Open To ended				Unit Sec. Twp. Rge. C 34 32 10			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At None		County San Juan			
Producing Thru tubing		Reservoir Temp. °F @		Mean Annual Temp. °F		Baro. Press. - P _a		State New Mexico			
L	H	G _g	% CO ₂	% N ₂	% H ₂ S	Prover		Meter Run		Taps	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	
SI	12 Days						2130		2240	
1.	2.375	.750					87		437	3hrs.
2.										
3.										
4.										
5.										

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	12.365		99	1.000	.9258	1.011	1146
2.							
3.							
4.							
5.							

NO.	P _t	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.					Specific Gravity Separator Gas _____ XXXXXXXXXX
3.					Specific Gravity Flowing Fluid _____ XXXXXX
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ R _____ R

P_c 2252 P_c² 5071504

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1		449	201601	4869903
2				
3				
4				
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.0414$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0309$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1181$

AUG 31 1984

OIL CONSERVATION DIVISION

Absolute Open Flow 1181 Mcfd @ 15.025		Angle of Slope @ _____	Slope, n .75
Remarks: flared Med H₂O Spary			
Approved By Commission:	Conducted By: J.J. Barnett	Calculated By: J.J. Barnett	Checked By:

O+4MCCD, Aztec

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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OPERATOR	GAS
PRODUCTION OFFICE	

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-104
Revised 10-01-78
Format 06-01-83
Page 1

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AUG 31 1984

REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

OIL CONSERVATION DIVISION

Operator
Amoco Production Co.Address
501 Airport Dr., Farmington, N M 87401

Reason(s) for filing (Check proper box)

<input checked="" type="checkbox"/> New Well	Change in transporter of:
<input type="checkbox"/> Recompletion	<input type="checkbox"/> Oil
<input type="checkbox"/> Change in Ownership	<input type="checkbox"/> Casinghead Gas
	<input type="checkbox"/> Dry Gas
	<input type="checkbox"/> Condensate

Other (Please explain)

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AUG 24 1984

OIL CON. DIV

DIST. 3

change of ownership give name
and address of previous owner

DESCRIPTION OF WELL AND LEASE

Lease Name Jaquez Gas Com "F"	Well No. 1	Pool Name, including Formation Basin Dakota	Kind of Lease State, Federal or Fee Fee	Lease No.
Location Unit Letter C Section 34 Township 32N Range 10W NMPM San Juan County				

I. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
Plateau, Inc.	P. O. Box 489, Bloomfield, N M 87413
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
El Paso Natural Gas Co.	P. O. Box 489, Farmington, N M 87401
Is well produces oil or liquids, give location of tanks.	Is gas actually connected? When
Unit C Sec. 34 Twp. 32N Rge. 10W	No

If this production is commingled with that from any other lease or pool, give commingling order number:

NOTE: Complete Parts IV and V on reverse side if necessary.

CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given is true and complete to the best of my knowledge and belief.

BDS Shaw

(Signature)

Adm. Supervisor

(Title)

8-21-84

(Date)

OIL CONSERVATION DIVISION

AUG 24 1984

APPROVED

BY

TITLE

SUPERVISOR DISTRICT # 3

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply completed wells.

IV. COMPLETION DATA

Designate Type of Completion - (X)		Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.
			X	X					
Date Spudded 5-5-84	Date Compl. Ready to Prod. 7-18-84			Total Depth 7426'			P.B.T.D. 7380'		
Elevations (DF, RKB, RT, GR, etc.) 5885' GR	Name of Producing Formation Basin Dakota			Top Oil/Gas Pay 766'			Tubing Depth 7329'		
Perforations: 7194'-7166', 7222'-7217', 7262'-7255', 7285'-7279', 7316'-7301', 7389'-7320'							Depth Casing Shoe		

TUBING, CASING, AND CEMENTING RECORD

HOSE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT
14-3/8"	11-3/4", 42#	323'	531 cu. ft.
10-5/8"	8-5/8", 24#	3125'	1196 cu. ft.
7-7/8"	4-1/2", 11.6#	7426'	1993 cu. ft.
	2-3/8"	7329'	

TEST DATA AND REQUEST FOR ALLOWABLE (Test must be after recovery of test volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil/Bbls.	Water/Bbls.	Gas/MCF

GAS WELL

Actual Prod. Test MCF/D 1146	Length of Test 3 Hours	Bbls. Condensate/MCF	Gravity of Condensate
Testing Method (Flow, back pr.) back pressure	Tubing Pressure (Shut-In) 2400 psig	Casing Pressure (Shut-In) 2240 psig	Choke Size .75"

074 NMOC D, Aztec

Form C-105
Revised 11-1-83

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OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

RECEIVED
AUG 24 1984
OIL CON. DIV.
DIST. 8

5a. Indicate Type of Lease State <input type="checkbox"/> Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.
7. Unit Agreement Name
8. Farm or Lease Name Saguer Gas Com "F"
9. Well No.
10. Field and Pool, or Wildcat Basin Dakota
12. County San Juan

1. TYPE OF WELL

OIL WELL ☐

GAS WELL ☒

DRY ☐

OTHER ☐

2. TYPE OF COMPLETION

NEW WELL ☒

WORK OVER ☐

DEEPEN ☐

PLUG BACK ☐

DIFF. RESVR. ☐

Name of Operator

Amoco Production Company

Address of Operator

501 Airport Drive, Farmington, New Mexico 87401

Location of Well

IT LETTER C LOCATED 1120 FEET FROM THE North LINE AND 1450 FEET FROM

West LINE OF SEC. 34 TWP. 32N RGE. 10W NMPM

3. Date Spudded 5-5-84	16. Date T.D. Reached 5-31-84	17. Date Compl. (Ready to Prod.) 7-18-84	18. Elevations (DF, RKB, RT, GR, etc.) 5898' KB	19. Elev. Casinghead 5885' GR
20. Total Depth 7426'	21. Plug Back T.D. 7380'	22. If Multiple Completions Many single	23. Intervals 24. Rotary Tools 25. Cable Tools	26. Was Directional Survey Made YES
27. Producing Interval(s), of this completion - Top, Bottom, Name 7339'-7166'				27. Was Well Cored NO
28. Type Electric and Other Logs Run DIL-SP-GR from TD to 6000'; FDC-CNL from TD to 4200'				

CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
11-3/4"	42#, H-40	323'	14-3/4"	531 cu. ft. Class B Neat & 2% C ₂ Cl ₂	
8-5/8"	24#, K-55	3125'	10-5/8"	1078 cu. ft. Class B 50:50 poz. 6% gel. 2# med tuf plug & tailed in w/ 118 cu. ft. Class B Neat (continued on next sheet)	

LINER RECORD					TUBING RECORD		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2-3/8"	7329'	

29. Perforation Record (Interval, size and number) 7194'-7166', 7222'-7217', 7262'-7255', 7285'-7279', 7316'-7301', 7339'-7320', 2 jspf, .38", total of 160 holes.	32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. DEPTH INTERVAL 7166-7339' AMOUNT AND KIND MATERIAL USED 2% KCL 2800#/400 BBL, hi temp. stab. 1600#, gelling agent 5280#, surf 153 gal, breaker 175# (continued on next sheet)
---	---

33. PRODUCTION							
34. Date First Production 8-5-84		35. Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing				36. Well Status (Prod. or Shut-in) Shut-in	
37. Date of Test 8-6-84	38. Hours Tested 3	39. Choke Size .75"	40. Prod'n. For Test Period →	41. Oil - Bbl. 143	42. Gas - MCF 1146	43. Water - Bbl.	44. Gas-Oil Ratio
45. Flow Tubing Press. 87 psig	46. Casing Pressure 437 psig	47. Calculated 24-Hour Rate →	48. Oil - Bbl.	49. Gas - MCF	50. Water - Bbl.	51. Oil Gravity - API (Corr.)	
52. Disposition of Gas (Sold, used for fuel, vented, etc.) To be sold						53. Test Witnessed By J. Barnett	

54. List of Attachments None		
55. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.		
SIGNED <u>D.D. Law</u>	TITLE <u>District Adm. Supervisor</u>	DATE <u>8-21-84</u>

INSTRUCTIONS

This form is to be filled with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

Northwestern New Mexico

T. Anhy	T. Canyon	T. Ojo Alamo	T. Penn. "B"
T. Salt	T. Strawn	T. Kirtland-Fruitland	T. Penn. "C"
B. Salt	T. Atoka	T. Pictured Cliffs	T. Penn. "D"
T. Yates	T. Miss	T. Cliff House	T. Leadville
T. 7 Rivers	T. Devonian	T. Menefee	T. Madison
T. Queen	T. Silurian	T. Point Lookout	T. Elbert
T. Grayburg	T. Montoya	T. Mancos	T. McCracken
T. San Andres	T. Simpson	T. Gallup	T. Ignacio Qtzte
T. Glorieta	T. McKee	Base Greenhorn	T. Granite
T. Paddock	T. Ellenburger	T. Dakota	T.
T. Blinebry	T. Gr. Wash	T. Morrison	T.
T. Tubb	T. Granite	T. Todilto	T.
T. Drinkard	T. Delaware Sand	T. Entrada	T.
T. Abo	T. Bone Springs	T. Wingate	T.
T. Wolfcamp	T.	T. Chinle	T.
T. Penn.	T.	T. Permian	T.
T. Cisco (Bough C)	T.	T. Penn. "A"	T.

OIL OR GAS SANDS OR ZONES

No. 1, from	to	No. 4, from	to
No. 2, from	to	No. 5, from	to
No. 3, from	to	No. 6, from	to

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from	to	sect.
No. 2, from	to	sect.
No. 3, from	to	sect.
No. 4, from	to	sect.

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
7215	TD		Dakota				
7153	7215	62'	Graneros Dakota				
7082	7153	71'	Graneros Shale				
7026	7082	56'	Greenhorn				
5086	7026	1940'	Mancos				
4972	5086	114'	Pt. Lookout				
4625	4972	347'	Menefee				
4555	4625	70'	Cliffhouse				
No logs were run above 4200'							

28. 4- $\frac{1}{2}$ ", 11.6#, K-55, 7426', 7-7/8" hole: 983 cu. ft. of Bubble cement and 1010 cu. ft. Econolite cement. *Failed in w/118 cf class B neat*
32. crosslinked agent 290 gal., liquid activation 12 gal., delayed crosslinker 65 gal. and 307,000# Brady sand.

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

013 NIMC
Artec
Form C-103
Revised 10-1-78

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LAND OFFICE	
OPERATOR	

5a. Indicate Type of Lease	
State <input type="checkbox"/>	Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.	
7. Unit Agreement Name	
8. Farm or Lease Name	
Jacquez Gas Com "F"	
9. Well No.	
1	
10. Field and Pool, or Wildcat	
Basin Dakota	
12. County	
San Juan	

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.)

OIL WELL <input type="checkbox"/>	GAS WELL <input checked="" type="checkbox"/>	OTHER <input type="checkbox"/>
Name of Operator		
Amoco Production Company		
Address of Operator		
501 Airport Drive, Farmington, NM 87401		
Location of Well		
UNIT LETTER	C	1120 FEET FROM THE North LINE AND 1450 FEET FROM
THE	West	LINE, SECTION 34 TOWNSHIP 32N RANGE 10W NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)

5885' GR

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

FORM REMEDIAL WORK ☐
TEMPORARILY ABANDON ☐
L OR ALTER CASING ☐PLUG AND ABANDON ☐
CHANGE PLANS ☐OTHER ☐

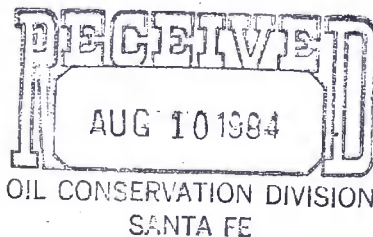
SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐
COMMENCE DRILLING OPNS. ☐
CASING TEST AND CEMENT JOB ☐
OTHER Completion ☐ALTERING CASING ☐
PLUG AND ABANDONMENT ☐

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.

1380
Landed in and rigged up service unit on 6/27/84. Total depth of the well is 7426' and plugback depth is 7360'. Pressure tested production casing to 4000 psi. Set a cement retainer at 7360' and stung in. Squeezed retainer at 7360' with 59 cu. ft. Class B Neat. Perforated the following intervals: 7194'-7166', 7222'-7217', 7262'-7255', 7285'-7279', 7316'-7301', 7339'-7320', 2jspf, .38" in diameter, for a total of 160 holes. Fraced interval 7166'-7339' with 2% KCL 2800#/400 BBL, hi temperature stabilizer 1600#, gelling agent 5280#, surfactant 153 gal, breaker 175#, crosslinked agent 290 gal, liquid activator 12 gal, delayed crosslinker 55 gal., activator 150#, lotemp antifoam 15 gal., and 307,000# Brady sand.

Landed 2-3/8" tubing at 7329' and released the rig on 7/18/84.



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AUG 02 1984
OIL CON. DIV.
DIST. 3

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

WITNESSED BY BDS ShawTITLE Administrative SupervisorDATE 7/30/84APPROVED BY Frank J. CherryTITLE SUPERVISOR DISTRICT # 3DATE AUG 02 1984

CONDITIONS OF APPROVAL, IF ANY:

CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

NMOC-D - Aztec

Form C-103
Revised 10-1-78

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JUL 17 1984

5a. Indicate Type of Lease	
State <input type="checkbox"/>	Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.	

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

OIL WELL <input type="checkbox"/>	GAS WELL <input checked="" type="checkbox"/>	OTHER <input type="checkbox"/>
Name of Operator Amoco Production Company		
Address of Operator 501 Airport Drive, Farmington, NM 87401		
Location of Well UNIT LETTER C 1120 FEET FROM THE North LINE AND 1450 FEET FROM THE West LINE, SECTION 34 TOWNSHIP 32N RANGE 10W NMPM.		

Unit Agreement Name	
8. Farm or Lease Name JAQUEZ Gas Com "F"	
9. Well No. 1	
10. Field and Pool, or WHdcat Basin Dakota	
12. County San Juan	

15. Elevation (Show whether DF, RT, GR, etc.)
5885' GRCheck 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"/>
REPAIR OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	
		OTHER Spud and Set Casing <input type="checkbox"/>	

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.

Spud a 14-3/4" hole on 5-5-84. Drilled to 323'. Set 11-3/4", 42#, H-40 casing at 323' and cemented with 531 cu. ft. of Class "B" Neat and 2% CaCl₂. Circulated cement to surface. Drilled a 10-5/8" hole to 3125'. Set 8-5/8", 24#, K-55 casing at 3125' on 5-14-84. Cemented with 1078 cu. ft. Class "B" 50:50 poz, 6% gel, 2# med tuf plug. Tailed in with 118 cu. ft. Class "B" Neat cement. Pressure tested casing to 1000 psi. Drilled a 7-7/8" hole to a TD of 7426'. Set 4-1/2", 11.6#, K-55 casing at 7426'. Cemented with 983 cu. ft. of Bubble cement and 1010 cu. ft. Econolite cement. Tailed in with 118 cu. ft. of Class "B" Neat cement. Circulated to surface. No DV tool was set and the rig was released on 6-1-84.

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

SIGNED <u>Don Lawson</u>	TITLE <u>Dist. Adm. Supervisor</u>	DATE <u>6-25-84</u>
PROVED BY <u>John W. Day</u>	TITLE <u>SUPERVISOR DISTRICT # 3</u>	DATE <u>JUN 28 1984</u>
CONDITIONS OF APPROVAL, IF ANY:		

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OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501Form C-103
Revised 10-1-78**RECEIVED**
MAY 21 1984
OIL CONSERVATION DIVISION
SANTA FE5. Indicate Type of Lease
State ☐ Fee ☒
6. State Oil & Gas Lease No.

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 - I" (FORM C-101) FOR SUCH PROPOSALS.)OIL WELL ☐ GAS WELL ☒ OTHER ☐

Name of Operator

Amoco Production Company

Address of Operator

501 Airport Drive, Farmington, New Mexico 87401

Location of Well

UNIT LETTER C 1120 FEET FROM THE North LINE AND 1450 FEET FROM

THE West LINE, SECTION 34 TOWNSHIP 32N RANGE 10W NMPM.

7. Unit Agreement Name

8. Farm or Lease Name

Jaquez Gas Com "F"

9. Well No.

1

10. Field and Pool, or Wildcat
Basin Dakota

11. Elevation (Show whether DF, RT, GR, etc.)

5885' FR

12. County

San Juan

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO:PERFORM REMEDIAL WORK ☐TEMPORARILY ABANDON ☐WELL OR ALTER CASING ☐OTHER ☐PLUG AND ABANDON ☐CHANGE PLANS ☒☐☒☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐COMMENCE DRILLING OPNS. ☐CASING TEST AND CEMENT JOBS ☐OTHER ☐ALTERING CASING ☐PLUG AND ABANDONMENT ☐☐☐☐

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.

Amoco Production Company request approval to revise our drilling procedure of our previously approved drilling permit. The hole from the bottom of the intermediate casing to total depth will be drilled using gas.

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MAY 07 1984
OIL CON. DIV.
DIST. 3

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

SIGNED

BDS Shaw

TITLE Administrative Supervisor

DATE 5-4-84

APPROVED BY

[Signature]

TITLE

SUPERVISOR DISTRICT # 3

DATE

MAY 07 1984

CONDITIONS OF APPROVAL, IF ANY:

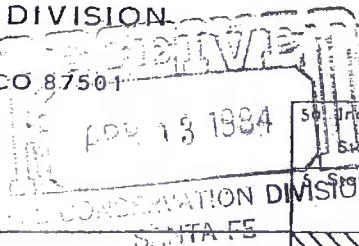
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P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

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5. Indicate Type of Lease
State <input type="checkbox"/> Fee <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.

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.)

OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	7. Unit Agreement Name
Name of Operator Amoco Production Company	8. Farm or Lease Name Jaquez Gas Com "F"
Address of Operator 501 Airport Drive, Farmington, NM 87401	9. Well No. 1
Location of Well UNIT LETTER C 1120 FEET FROM THE North LINE AND 1450 FEET FROM THE West LINE, SECTION 34 TOWNSHIP 32N RANGE 10W NMPM.	10. Field and Pool, or Wildcat Basin Dakota
15. Elevation (Show whether DF, RT, GR, etc.) 5885' GR	12. County San Juan

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

FORM 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 checked="" type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
WORK OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	OTHER <input type="checkbox"/>

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.

Please correct the well name of the above referenced well from the Jaquez
Gas Com F No. 1 to Jaquez Gas Com F No. 1.**RECEIVED**
APR 06 1984
OIL CON. DIV.
DIST. 3

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

SIGNED BY <u>BDS Hair</u>	TITLE <u>Administrative Supervisor</u>	DATE <u>4-4-84</u>
SIGNED BY <u>Frank J. [Signature]</u>	TITLE <u>SUPERVISOR DISTRICT # 3</u>	DATE <u>APR 06 1984</u>
CONDITIONS OF APPROVAL, IF ANY:		



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

TONEY ANAYA
GOVERNOR

February 6, 1984

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

Amoco Production Co.
501 Airport Drive
Farmington NM 87401

NWU 3- 1032

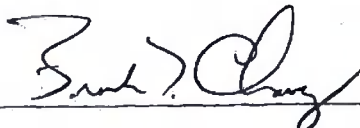
SUBJECT: NON-STANDARD GAS PRORATION UNIT CONSISTING OF S/309.02
ACRES IN THE Basin Dakota GAS

POOL DESCRIBED AS FOLLOWS:

TOWNSHIP 32 NORTH, RANGE 10 WEST, NMPM

SECTION: 34

By authority granted me by Rule 5 (B) of Order R-1670, as amended, the above-
described acreage has been approved as a non-standard gas proration unit to
be dedicated to the Jacquez Gas Com F
well-no. 1, located 1120'FNL and 1450'FWL of said
Section 34.


Supervisor, District #3

sc: Oil Conservation Division
Santa Fe, New Mexico

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SANTA FE, NEW MEXICO 87501

1. Indicate Type of Lease
LEASE ☐ FREE ☒

2. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		7. Unit Agreement Name	
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		8. Name of Lease Name Jacquez Gas Com F	
2. Name of Operator Amoco Production Company		9. Well No. 1	
3. Address of Operator 501 Airport Drive, Farmington, New Mexico 87401		10. Field and Pool, or Wildcat Basin Dakota	
4. Location of Well UNIT LETTER C LOCATED 1120 FEET FROM THE North LINE		11. Field and Pool, or Wildcat W 309 02	
1450 FEET FROM THE West LINE OF SEC. 34 TWP. 32N RGE. 10W		12. County San Juan	
13. Proposed Depth 7430'		14a. Formation Dakota	
15. Kind & Status Plug. Bond Statewide		22. Approx. Date Work will start As soon as permitted.	
21. Elevations (Show whether D.F., K.I., etc.) 5885' GR		21B. Drilling Contractor Unknown	

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
14-3/4"	11-3/4"	42#, H-40	300'	350	Circ. to Surface
10-5/8"	8-5/8"	24x28#, S-80	3115'	550	Circ. to Surface
7-7/8"	4-1/2"	11.6#, K-55	2915-7430'	1000	3200'
	Liner				

Amoco proposes to drill the above well to further develop the Basin Dakota reservoir. The well will be drilled to the surface casing point using native mud. The well will then be drilled to TD with a low solids nondispersed mud system. Completion design will be based on open hole logs. Copy of all logs will be filed upon completion. Amoco's standard blowout prevention will be employed; see attached drawing for blowout prevention design. Upon completion the well site will be cleaned and the reserve pit filled and leveled.

The gas from this well is not dedicated at this time.

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FEB 01 1984

OIL CON. DIV.
DIST. 3

APPROVAL EXPIRES 7-1-84
UNLESS DRILLING IS COMMENCED
SPUD NOTICE MUST BE SUBMITTED
WITHIN 10 DAYS

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM. IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODU-
TIVE ZONE. GIVE BL BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Original Signed By
D.D. Lawson

Title District Adm. Supervisor

Date January 30, 1984

(This space for State Use)

SUPERVISOR DISTRICT # 3

FEB 01 1984

APPROVED BY
CONDITIONS OF APPROVAL, IF ANY:

White run.

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-107
Revised 10-1-78STATE OF NEW MEXICO
OIL AND MINERALS DEPARTMENT

All distances must be from the outer boundaries of the Section.

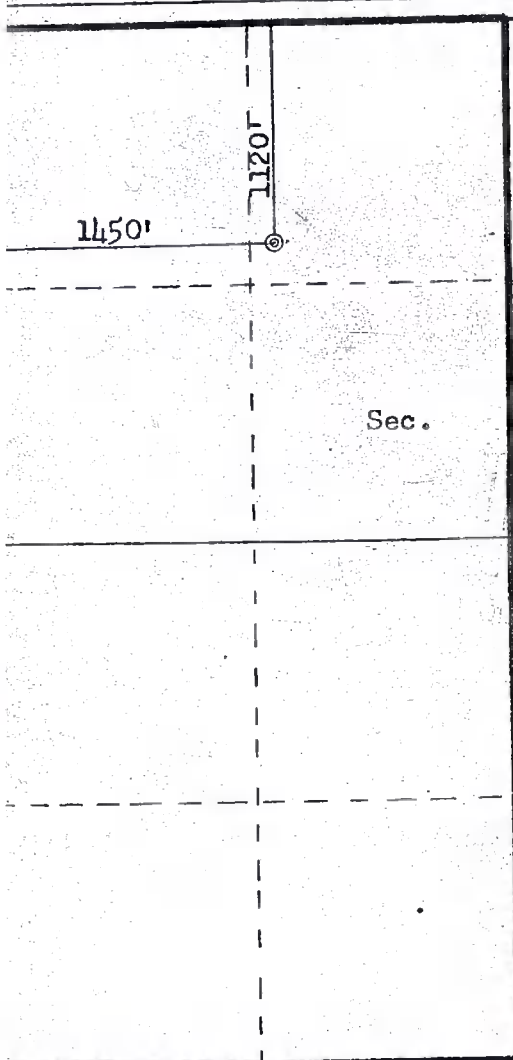
Operator AMOCO PRODUCTION COMPANY		Lease JACQUEZ GAS COM "F"		Well No. 1	
Well Letter C	Section 34	Township 32N	Range 10W	County San Juan	
Actual Footage Location of Well: 1120 feet from the North line and 1450 feet from the West line					
Ground Level Elev: 5885	Producing Formation Dakota		Pool Basin Dakota		Dedicated Acreage: 320.70902 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation Communitized

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

		RECEIVED JAN 30 1984 OIL CON. DIV. DIST. 3	

CERTIFICATION

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

Original Signed By
D.D. Lawson

Name

Darrell D. Lawson

Position

District Adm. Supervisor

Company

Amoco Production Company

Date

January 24, 1984

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 knowledge and belief.

Date Surveyed

January 18, 1984Registered Professional Engineer
and Land Surveyor**Fred B. Kerr Jr.**Certificate No. **3950**

Scale: 1"=1000'



San Juan Performance Unit

Mary Corley
WL1-19.171
281-366-4491 (direct)
281-366-0700 (FAX)
corleym1@bp.com

P. O. Box 3092
Houston, Texas 77253-3092
501 Westlake Park Boulevard
Houston, Texas 77079

February 12, 2003

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

**Application For Well Category Determination
NGPA Section 107
San Juan County, New Mexico**

Attached please find a check in the amount of \$125.00 payable to the State of New Mexico for NGPA Section 107 Well Category Determinations for the below listed BP America Production Company wells.

Lopez Gas Com 1E	Dakota Pool	NM - 34
Schneider Gas Com C 1	Dakota Pool	NM - 09
Jacquez Gas Com F 1	Dakota Pool	NM - 09
Sullivan Gas Com 1A	Mesaverde	NM - 48
Hubbard A 1E	Mesaverde	NM - 48

Also enclosed, for review and approval by the Oil Conservation Division, are the original and one copy of an Application for Well Category Determination for each of the referenced wells.

Very truly yours,

Mary Corley
Sr. Regulatory Analyst

Enclosures



BP America Production Company
509 South Boston
Tulsa, OK 74103

62-20
311

No. 0800552148

02/19/03

PAY TO THE
ORDER OF

STATE OF NEW MEXICO
2040 PACHEO ST
SANTA FE NM 87505

\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$125.00

NOT VALID AFTER 6 MONTHS

One Hundred Twenty Five and 00/100 Dollars

TRACE NO.: 2000040813

CITIBANK DELAWARE, A SUBSIDIARY OF CITICORP
ONE PENN'S WAY, NEW CASTLE, DE 19720


AUTHORIZED SIGNATURE

⑈0800552148⑈ ⑆031100209⑆

39116481⑈

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 7361
Order No. R-6884

APPLICATION OF SOUTHLAND ROYALTY
COMPANY FOR DESIGNATION OF A TIGHT
FORMATION, SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on September 29, 1981, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 12th day of January, 1982, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That, pursuant to Section 107 of the Natural Gas Policy Act of 1978, and CFR Section 271.703, applicant Southland Royalty Company requested the designation as a "tight formation" of the Dakota formation underlying the following described lands:

SAN JUAN COUNTY, NEW MEXICO

TOWNSHIP 31 NORTH, RANGE 10 WEST, NMPM
Sections 1 through 36: All

TOWNSHIP 31 NORTH, RANGE 11 WEST, NMPM
Section 1: All
Sections 12 and 13: All
Sections 22 through 27: All
Sections 34 through 36: All

TOWNSHIP 32 NORTH, RANGE 10 WEST, NMPM
Sections 7 through 36: All

TOWNSHIP 32 NORTH, RANGE 11 WEST, NMPM
Sections 7 through 27: All
Sections 34 through 36: All

TOWNSHIP 32 NORTH, RANGE 12 WEST, NMPM
Sections 7 through 33: All

TOWNSHIP 32 NORTH, RANGE 13 WEST, NMPM
Sections 7 through 33: All

containing a total of 92,871 acres, more or less.

(3) That at the hearing, applicant requested dismissal of that portion of the application pertaining to Sections 25 through 27, inclusive, and Sections 32 and 33, all in Township 32 North, Range 12 West, NMPM, containing some 3,200 acres, more or less, leaving for consideration some 89,671 acres, more or less.

(4) That said request for dismissal should be approved, and no further consideration given herein to said lands.

(5) That while the application was for designation of the Dakota formation as a tight formation, the Dakota formation constitutes but a portion of the "Dakota Producing Interval," which, as defined by the Division, comprises the vertical limits of the Basin-Dakota Gas Pool, being from the base of the Greenhorn Limestone to a point 400 feet below the base of said formation and consisting of the Graneros formation, the Dakota formation, and the productive upper limit of the Morrison formation.

(6) That inasmuch as practically all so-called "Dakota" wells drilled in the subject area are, or potentially are, tested in and/or completed in the entire Dakota Producing Interval, and the well data presented at the hearing of this case involves the entire Dakota Producing Interval, the application should be broadened to cover all of said producing interval throughout the area.

(7) That the Dakota Producing Interval, hereinafter referred to as the "Dakota," consists of a near blanket sandstone (probably an almost continuous series of northwest trending barrier beach sandstones composed of fine-grained quartzose sandstones and carbonaceous shales with occasional conglomerates and coals in the basal part).

(8) That from the logs available at the hearing, the top of the Dakota in the area ranges from a depth of 5234 feet to 7220 feet and averages some 6753 feet beneath the surface.

(9) That the only test data for flow rates prior to stimulation for wells within the area indicates that the Aztec Pierce Well No. 2 in Section 30, Township 31 North, Range 10 West, NMPM, had a stabilized production rate calculated at atmospheric pressure of 208.1 MCF of gas per day; that other wells in the immediate vicinity of the area but just outside had stabilized production rates calculated at atmospheric pressure prior to stimulation ranging from 21.7 MCF per/day to 224.1 MCF per day.

(10) That none of the stabilized production rates cited above exceeds the maximum stabilized production rate set forth in 18 C.F.R. Section 271.703(c)(2)(i)(B) of 251 MCF per day for wells at the average depth to the top of the formation for this area (6753 feet), and it is not expected that the average well in the area will exceed such rate.

(11) That in situ permeability calculations are available for only two wells in the general area, being the Southland Pierce Well No. 2 and the Southland Patterson "B" Com Well No. 1E; that the in situ permeabilities calculated for said wells are .0609 md and .0877 md, respectively, and average .0743 md.

(12) That the average in situ permeability for all wells in the area is not expected to exceed 0.1 md, the limit set forth in 18 C.F.R. Section 271.703(c)(2)(i)(A).

(13) That prior to stimulation, the average well in the area is expected to produce far less than the maximum five barrels of crude oil per day as set forth in 18 C.F.R. Section 271.703(c)(2)(i)(C).

(14) That 18 C.F.R. Section 271.703(c)(2)(i)(D) provides that "if the formation or any portion thereof was authorized to be developed by infill drilling prior to the date of recommendation and the jurisdictional agency has information which in its judgment indicates that such formation or portion subject to infill drilling can be developed absent the incentive price established in paragraph (a) of this section then the jurisdictional agency shall not include such formation or portion thereof in its recommendation."

(15) That the Division, by its Order No. R-1670-V, dated May 22, 1979, and effective July 1, 1979, approved infill drilling for the Basin-Dakota Gas Pool in San Juan and Rio Arriba Counties, New Mexico, and said pool includes the Dakota Producing Interval in the area under consideration here.

(16) That Southland in this hearing indicated that under current Section 103 prices of the NGPA of 1978, reserves of

350,000 MCF of gas are necessary to provide it with the economics necessary to justify drilling a Dakota well at its current drilling costs, while 150,000 MCF of reserves will justify a well at Section 107(c)(5) prices (tight formations).

(17) That the economics as presented by Southland in this case are reasonable, and lands which indicate recoverable reserves of 350,000 MCF or more of gas should be dismissed from further consideration, while lands indicating recoverable reserves of less than 350,000 MCF of gas should be considered for recommendation as a tight formation.

(18) That the Division, in approving infill drilling for the Basin-Dakota Gas Pool, based its approval on the premise that the reservoir was of low permeability and that 320-acre wells were not draining more than the 160-acre tract upon which they were located.

(19) That the remaining reserves under the 160-acre tract upon which the unit well is not located should be similar to, if not equal to, the original reserves under the 160-acre tract upon which the unit well is located.

(20) That cumulative production figures and estimates of ultimate recoverable reserves were presented at the hearing for some of the developed tracts within the area, while cumulative production figures only are available for the remainder of the developed tracts.

(21) That to determine that under certain lands insufficient reserves are available to justify drilling absent the Section 107 incentive price, it is reasonable to make the following assumptions:

- A. No primary drilling, i.e., no drilling on 320-acre spacing, is prima facie evidence that the lands are edge lands to the reservoir and drilling has not occurred because of the probable marginal nature of the reserves.
- B. Primary drilling has occurred but the calculated total ultimate reserves or the cumulative production for long-connected wells indicates low ultimate recovery (less than 350,000 MCF of gas).

(22) That to determine that under certain lands sufficient reserves may reasonably be expected to be recovered to justify drilling without the Section 107 incentive price, it is reasonable to make the following assumptions:

A. Calculated ultimate recoverable reserves are 350,000 MCF or more.

B. Calculated ultimate recoverable reserves are not available, but cumulative recoveries indicate that 350,000 MCF of gas already has been recovered.

(23) That the assumptions in Findings Nos. (21) B. and (22) A. and B. above may reasonably be based on offsetting wells in a given area.

(24) That the evidence indicates that it is unreasonable to expect that wells drilled in the area described in Finding No. (2) above less the area described in Finding No. (3) above will yield an average of 350,000 MCF or more of gas, but that it is reasonable to expect that such wells will yield an average of 150,000 MCF of gas, and that the incentive Section 107 (c) (5) price is necessary to justify drilling in said area.

(25) That there are fresh water aquifers underlying the lands being considered, and these aquifers extend to a depth of approximately 1200 feet.

(26) That there is a vertical distance of some 5500 feet between the base of the lowermost of said aquifers and the top of the Dakota, and this distance, combined with the required casing and cementing program for wells in the area, will assure that development of the Dakota will not adversely affect the fresh water aquifers (during both hydraulic fracturing and waste disposal operations) that are or are expected to be used as a domestic or agricultural water supply.

(27) That the Dakota Producing Interval underlying the following lands meets all of the guidelines set forth in 18 C.F.R. Section 271.703(c)(2)(i), subsections (A), (B), (C), and (D), and should be recommended for designation as a tight formation:

TOWNSHIP 31 NORTH, RANGE 10 WEST, NMPM
Sections 1 through 36: All

TOWNSHIP 31 NORTH, RANGE 11 WEST, NMPM
Section 1: All
Sections 12 and 13: All
Sections 22 through 27: All
Sections 34 through 36: All

TOWNSHIP 32 NORTH, RANGE 10 WEST, NMPM
Sections 7 through 36: All

TOWNSHIP 32 NORTH, RANGE 11 WEST, NMPM

Sections 7 through 27: All

Sections 34 through 36: All

TOWNSHIP 32 NORTH, RANGE 12 WEST, NMPM

Sections 7 through 24: All

Sections 28 through 31: All

TOWNSHIP 32 NORTH, RANGE 13 WEST, NMPM

Sections 7 through 29: All

Sections 32 through 36: All

containing some 89,671 acres, more or less, all in San Juan County, New Mexico.

IT IS THEREFORE ORDERED:

(1) That it be and hereby is recommended to the Federal Energy Regulatory Commission pursuant to Section 107 of the Natural Gas Policy Act of 1978, and 18 C.F.R. Section 271.703, that the Dakota Producing Interval, being from the base of the Greenhorn Limestone to a point 400 feet below the base of said formation and consisting of the Graneros formation, the Dakota formation and the productive upper portion of the Morrison formation, underlying the following described lands in San Juan County, New Mexico, be designated as a tight formation:

TOWNSHIP 31 NORTH, RANGE 10 WEST, NMPM

Sections 1 through 36: All

TOWNSHIP 31 NORTH, RANGE 11 WEST, NMPM

Section 1: All

Sections 12 and 13: All

Sections 22 through 27: All

Sections 34 through 36: All

TOWNSHIP 32 NORTH, RANGE 10 WEST, NMPM

Sections 7 through 36: All

TOWNSHIP 32 NORTH, RANGE 11 WEST, NMPM

Sections 7 through 27: All

Sections 34 through 36: All

TOWNSHIP 32 NORTH, RANGE 12 WEST, NMPM

Sections 7 through 24: All

Sections 28 through 31: All

TOWNSHIP 32 NORTH, RANGE 13 WEST, NMPM

Sections 7 through 29: All

Sections 32 through 36: All

-7-

Case No. 7361

Order No. R-6884

containing approximately 89,671 acres, more or less.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


EMERY C. ARNOLD, Chairman

ALEX J. ARMIJO, Member


JOE D. RAMEY, Member & Secretary

S E A L

(B) *Depth.* The Wattenberg J Sand Formation ranges in depth from 7,600 feet to 8,400 feet. The average depth is 8,000 feet.

(ii) *The J Sand Formation.*—(A) *Delineation of formation.* This formation underlies all or portions of Townships 1 and 2 South, Ranges 69 and 70 West; Townships 1 and 2 North, Range 70 West; Townships 3 and 4 North, Ranges 69 and 70 West; Township 5 North, Range 63 West; and Township 6 North, Ranges 63 through 69 West, 6th P. M.

(B) *Depth.* The J Sand Formation ranges from a depth of 7,600 feet to 8,400 feet. The average depth is approximately 8,000 feet.

[FR Doc. 82-27433 Filed 10-5-82; 8:45 am]

BILLING CODE 6717-01-M

18 CFR Part 271

[Docket No. RM79-76-103 (New Mexico—9); Order No. 262]

High-Cost Gas Produced From Tight Formations; New Mexico; Final Rule

AGENCY: Federal Energy Regulatory Commission, DOE.

ACTION: Final rule.

SUMMARY: The Federal Energy Regulatory Commission is authorized by section 107(c)(5) of the Natural Gas Policy Act of 1978 to designate certain types of natural gas as high-cost gas where the Commission determines that the gas is produced under conditions which present extraordinary risks or costs. Under section 107(c)(5), the Commission issued a final regulation designating natural gas produced from tight formations as high-cost gas which may receive an incentive price (18 CFR 271.703). This rule established procedures for jurisdictional agencies to submit to the Commission recommendations of areas for designation as tight formations. This final order adopts the recommendation of the State of New Mexico Energy and Minerals Department, Oil Conservation Division, that the Dakota Producing Interval be designated as a tight formation under § 271.703(d).

EFFECTIVE DATE: This rule is effective September 30, 1982.

FOR FURTHER INFORMATION CONTACT: Leslie Lawner, (202) 357-8511 or Victor Zabel, (202) 357-8816.

SUPPLEMENTARY INFORMATION:

The Commission hereby amends § 271.703(d) of its regulations to include the Dakota Producing Interval in San Juan County, New Mexico, as a

designated tight formation eligible for incentive pricing under § 271.703. The amendment was proposed in a Notice of Proposed Rulemaking by the Director, Office of Pipeline and Producer Regulation, issued March 3, 1982 (47 FR 10241, March 10, 1982), based on a recommendation by the State of New Mexico Energy and Minerals Department, Oil Conservation Division (New Mexico) in accordance with § 271.703, that the Dakota Producing Interval be designated as a tight formation.

The Commission received two comments in response to the Notice of Proposed Rulemaking in this docket, one jointly filed by Southern California Gas Company and Pacific Lighting Gas Supply Company (SoCal) and one from Pacific Gas and Electric Company (PG&E).

Both commenters noted that New Mexico Order No. R-1670-V, issued May 22, 1979, authorized infill drilling in the Basin Dakota Gas Pool. The fact that the recommended area is subject to an infill drilling order, the commenters argue, indicates that certain areas within the recommended formation may be subject to exclusion from the tight formation designation under § 271.703(c)(2)(i)(D). Section 271.703(c)(2)(i)(D) provides that:

If the formation or any portion thereof was authorized to be developed by infill drilling prior to the date of recommendation and the jurisdictional agency has information which in its judgment indicates that such formation or portion subject to infill drilling can be developed absent the incentive price established in paragraph (a) of this section then the jurisdictional agency shall not include such formation or portion thereof in its recommendation.

Section 271.703(b)(6) defines infill drilling as any drilling in a substantially developed formation or portion thereof, subject to well spacing or proration unit requirements which were amended by the jurisdictional agency after the formation or portion thereof was substantially developed, and which were adopted for the purpose of more effective and efficient drainage of the reservoirs in such formation. Therefore, if the recommended formation was substantially developed at the time that Order No. R-1670-V was issued, then such area should be excluded from the tight formation designation.

The recommended area was governed by special rules and regulations promulgated by New Mexico in Order No. R-1670-C, issued November 4, 1960. This order consolidated all Dakota

¹ No party requested a hearing and no hearing was held.

Producing Interval production in San Juan and Rio Arriba Counties, created the Basin Dakota Gas Pool, and established 320 acre gas proration units. Order No. R-1670-V retained the 320 acre units, but allowed the drilling of an additional well on each unit. There are 304 drilling units contained in the recommended area. Prior to the issuance of Order No. R-1670-V, wells had been completed on 23 of these units, representing 7.6% of the available drilling sites. The Commission therefore finds that the recommended area does not fall within the infill drilling exclusion because the area was not substantially developed at the time the infill drilling order was issued.

SoCal also raised specific questions concerning the recommendation.² In Exhibit No. 6, the applicant before New Mexico presented pressure data for calculation of the permeability of the Patterson "B" well; however, a shut-in bottom hole pressure from a well 9,600 feet south of this well was used for this calculation. SoCal questions the accuracy of permeability figures based on data from more than one well. The Commission recognizes that it is an accepted procedure when working with formations of low permeability characteristics to use data from other wells, since the bottom hole pressure will not vary appreciably across the area, and the amount of time needed for the pressure to build back up in a recently drilled well is too long for practical measurement.

With respect to Exhibit No. 7, SoCal questioned the validity of using a calculated "shut-in bottom hole pressure at draining radius" (which measures wellhead pressure) in determining *in situ* permeability for the Southland Pierce No. 2 Well. The Commission finds that this is a standard petroleum engineering practice to calculate bottom hole pressure from a wellhead pressure by using a generally accepted formula.

SoCal further questioned Exhibit No. 13, which gives cumulative oil

² SoCal notes that a transcript of the New Mexico proceeding was not in the Commission's files, and that this made it impossible for SoCal to correctly evaluate the data submitted in support of the recommendation. The Commission staff had requested a copy of the transcript from New Mexico, but did not receive it until after SoCal's comments were filed. There is no affirmative requirement that a jurisdictional agency submit a transcript with its recommendation. However, SoCal was informed of the receipt of the transcript, and had an opportunity to examine it. SoCal has not filed any additional comments since the transcript was received. Moreover, the Commission's review of the transcript indicates that it does not contain any type of data that was not included in the recommendation as initially received by the Commission.

production data for several wells in the area, but which gives no rate of oil production, in light of

§ 271.703(c)(2)(i)(C), which provides that no well drilled in the tight formation is expected to produce, before stimulation, more than five barrels of crude oil per day. In response to an inquiry by Commission staff, a letter was submitted by the applicant to New Mexico, dated July 23, 1982, in which it clarified the evidence in this exhibit, by stating that (1) oil and condensate production is not distinguished by the producer when reporting to New Mexico, (2) the production listed in the exhibit is post-stimulation condensate production, and (3) there is no actual oil production from the wells listed in the exhibit.

Finally, PG&E maintained that since El Paso Natural Gas Company, which has an extensive infill drilling program in the San Juan Basin, is able to price gas produced through this program on a cost-of-service basis, it is guaranteed full recovery of its costs and expenses, plus a reasonable rate of return. PG&E argues therefore that an incentive price is not necessary or justified. The Commission has already addressed this issue in two prior tight formation orders, Order No. 235, Docket No. RM79-76-097 (New Mexico—8), issued June 4, 1982, and Order No. 244, Docket No. RM79-76-109 (New Mexico—12), issued August 4, 1982. The Commission stated in Order No. 244:

The issue in this docket is whether the recommended . . . [formation meets the standards prescribed in § 271.703(c). Moreover, there are or can be gas producers in the recommended formation other than El Paso, which do not receive cost-of-service pricing for gas produced therefrom. Finally, the tight formation incentive price is a ceiling price, and as such there is no guarantee that a producer, including a pipeline, will be able to charge and collect that price.¹

This rationale is equally applicable in this case.

Based upon the above discussion, the Commission finds that the evidence submitted by New Mexico supports the assertion that the Dakota Producing Interval meets the guidelines contained in § 271.703(c)(2)(i). The Commission adopts the New Mexico recommendation.

This amendment shall become effective immediately. The Commission has found that the public interest dictates that new natural gas supplies be developed on an expedited basis, and, therefore, incentive prices should be made available as soon as possible. The need to make incentive prices

immediately available establishes good cause to waive the thirty-day publication period.

List of Subjects in 18 CFR Part 271

Natural gas, Incentive price, Tight formations.

(Department of Energy Organization Act, 42 U.S.C. 7101 *et seq.*; Natural Gas Policy Act of 1978, 15 U.S.C. 3301-3432; Administrative Procedure Act, 5 U.S.C. 553)

In consideration of the foregoing, Part 271 of Subchapter H, Chapter I, Code of Federal Regulations, is amended as set forth below, effective September 30, 1982.

By the Commission.

Kenneth F. Plumb,

Secretary.

September 30, 1982.

PART 271 [AMENDED]

Section 271.703 is amended by adding new paragraph (d)(110) to read as follows:

§ 271.703 Tight formations.

(d) *Designated tight formations.* . . .
(110) *The Dakota Producing Interval in New Mexico.* RM79-76-103 (New Mexico—9). (i) *Delineation of formation.* The Dakota Producing Interval is found within the Basin-Dakota Gas Pool in the northwestern portion of the San Juan Basin near the Hogback Monocline. It is found in San Juan County, in Township 31 North, Range 10 West, NMPM, Sections 1 through 36; Township 31 North, Range 11 West, NMPM, Sections 1, 12, 13, 22 through 27 and 34, 35 and 36; Township 32 North, Range 10 West, NMPM, Sections 7 through 36; Township 32 North, Range 11 West, NMPM, Sections 7 through 27 and 34, 35 and 36; Township 32 North, Range 12 West, NMPM, Sections 7 through 24, 28 through 31; and Township 32 North, Range 13 West, NMPM, Sections 7 through 29 and 32 through 36.

(ii) *Depth.* The Dakota Producing Interval begins at the base of the Greenhorn Limestone and consists of the Graneros Formation, the Dakota Formation and the productive upper limit of the Morrison Formation. The average depth to the top of the Dakota Producing Interval is 6,753 feet. The gross thickness of the interval averages 400 feet.

[PR Doc. 82-2734 Filed 10-5-82; 8:45 am]

BILLING CODE 9717-01-M

18 CFR Part 271

[Docket No. RM79-76-080 (Texas—16); Order No. 263]

High-Cost Gas Produced From Tight Formations; Texas; Final Rule

AGENCY: Federal Energy Regulatory Commission, DOE.

ACTION: Final rule.

SUMMARY: The Federal Energy Regulatory Commission is authorized by section 107(c)(5) of the Natural Gas Policy Act of 1978 to designate certain types of natural gas as high-cost gas where the Commission determines that the gas is produced under conditions which present extraordinary risks or costs. Under section 107(c)(5), the Commission issued a final regulation designating natural gas produced from tight formations as high-cost gas which may receive an incentive price (18 CFR 271.703). This rule established procedures for jurisdictional agencies to submit to the Commission recommendations of areas for designation as tight formations. This final order adopts the recommendation of the Railroad Commission of Texas that the Olmos Formation be designated as a tight formation under § 271.703(d).

EFFECTIVE DATE: This rule is effective September 30, 1982.

FOR FURTHER INFORMATION CONTACT: Leslie Lawner, (202) 357-8511 or Walter Lawson, (202) 357-8556.

SUPPLEMENTARY INFORMATION:

The Commission hereby amends § 271.703(d) of its regulations to include the Olmos Formation in parts of Webb and Dimmit Counties, Texas as a designated tight formation eligible for incentive pricing under § 271.703. The amendment was proposed in a Notice of Proposed Rulemaking by the Director, Office of Pipeline and Producer Regulation, issued December 7, 1981 (46 FR 60467, December 10, 1981)¹ based on a recommendation by the Railroad Commission of Texas (Texas) in accordance with § 271.703, that the Olmos Formation be designated as a tight formation.

Evidence submitted by Texas² supports the assertion that the Olmos

¹ Comments were invited on the proposed rule and two comments supporting the recommendation were received. No party requested a hearing and no hearing was held.

² The calculations for permeability and flow rates submitted by Texas are based on median values, rather than average values. However, using supplemental data supplied by Texas in response to a request from the Commission, the Commission has determined that the arithmetic average values for permeability and flow rates for the subject formation also satisfy the Commission's guidelines in § 271.703(c)(2).

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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18 C.F.R. Part 271

High-Cost Gas Produced from Tight Formations; Final Rule

Docket No. RM79-76-103 (New Mexico - 9)

ORDER NO. 262

AGENCY : Federal Energy Regulatory Commission

ACTION : Final rule

SUMMARY : The Federal Energy Regulatory Commission is authorized by section 107(c)(5) of the Natural Gas Policy Act of 1978 to designate certain types of natural gas as high-cost gas where the Commission determines that the gas is produced under conditions which present extraordinary risks or costs. Under section 107(c)(5), the Commission issued a final regulation designating natural gas produced from tight formations as high-cost gas which may receive an incentive price (18 C.F.R. § 271.703). This rule established procedures for jurisdictional agencies to submit to the Commission recommendations of areas for designation as tight formations. This final order adopts the recommendation of the State of New Mexico Energy and Minerals Department, Oil Conservation Division, that the Dakota Producing Interval be designated as a tight formation under § 271.703(d).

EFFECTIVE DATE : This rule is effective September 30, 1982.

FOR FURTHER INFORMATION CONTACT : Leslie Lawner, (202)357-8511 or Victor Zabel, (202) 357-8616.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: C. M. Butler III, Chairman;
Georgiana Sheldon, J. David Hughes,
A. G. Sousa and Oliver G. Richard III.

High-Cost Gas Produced) Docket No. RM79-76-103
from Tight Formations) (New Mexico - 9)

ORDER NO. 262

FINAL RULE

(Issued September 30, 1982)

The Commission hereby amends § 271.703(d) of its regulations to include the Dakota Producing Interval in San Juan County, New Mexico, as a designated tight formation eligible for incentive pricing under §271.703. The amendment was proposed in a Notice of Proposed Rulemaking by the Director, Office of Pipeline and Producer Regulation, issued March 3, 1982 (47 Fed. Reg. 10241, March 10, 1982), 1/ based on a recommendation by the State of New Mexico Energy and Minerals Department, Oil Conservation Division (New Mexico) in accordance with § 271.703, that the Dakota Producing Interval be designated as a tight formation.

The Commission received two comments in response to the Notice of Proposed Rulemaking in this docket, one jointly filed by Southern California Gas Company and Pacific Lighting Gas Supply Company (SoCal) and one from Pacific Gas and Electric Company (PG&E).

Both commenters noted that New Mexico Order No. R-1670-V, issued May 22, 1979, authorized infill drilling in the Basin Dakota Gas Pool. The fact that the recommended area is subject

DC-C-108

1/ No party requested a hearing and no hearing was held.

Docket No. RM79-76-103

- 2 -

to an infill drilling order, the commenters argue, indicates that certain areas within the recommended formation may be subject to exclusion from the tight formation designation under § 271.703(c)(2)(i)(D). Section 271.703(c)(2)(i)(D) provides that:

If the formation or any portion thereof was authorized to be developed by infill drilling prior to the date of recommendation and the jurisdictional agency has information which in its judgment indicates that such formation or portion subject to infill drilling can be developed absent the incentive price established in paragraph (a) of this section then the jurisdictional agency shall not include such formation or portion thereof in its recommendation.

Section 271.703(b)(6) defines infill drilling as any drilling in a substantially developed formation or portion thereof, subject to well spacing or proration unit requirements which were amended by the jurisdictional agency after the formation or portion thereof was substantially developed, and which were adopted for the purpose of more effective and efficient drainage of the reservoirs in such formation. Therefore, if the recommended formation was substantially developed at the time that Order No. R-1670-V was issued, then such area should be excluded from the tight formation designation.

The recommended area was governed by special rules and regulations promulgated by New Mexico in Order No. R-1670-C, issued November 4, 1960. This order consolidated all Dakota Producing Interval production in San Juan and Rio Arriba Counties, created the Basin Dakota Gas Pool, and established 320 acre gas proration units. Order No. R-1670-V retained the 320 acre units, but allowed the drilling of an additional well on each unit. There are 304 drilling units contained in the

Docket No. RM79-76-103

- 3 -

recommended area. Prior to the issuance of Order No. R-1670-V, wells had been completed on 23 of these units, representing 7.6% of the available drilling sites. The Commission therefore finds that the recommended area does not fall within the infill drilling exclusion because the area was not substantially developed at the time the infill drilling order was issued.

SoCal also raised specific questions concerning the recommendation. 2/ In Exhibit No. 6, the applicant before New Mexico presented pressure data for calculation of the permeability of the Patterson "B" well; however, a shut-in bottom hole pressure from a well 9,600 feet south of this well was used for this calculation. SoCal questions the accuracy of permeability figures based on data from more than one well. The Commission recognizes that it is an accepted procedure when working with formations of low permeability characteristics to use data from other wells, since the bottom hole pressure will not vary appreciably across the area, and the amount of time needed for the pressure to build back up in a recently drilled well is too long for practical measurement.

2/ SoCal notes that a transcript of the New Mexico proceeding was not in the Commission's files, and that this made it impossible for SoCal to correctly evaluate the data submitted in support of the recommendation. The Commission staff had requested a copy of the transcript from New Mexico, but did not receive it until after SoCal's comments were filed. There is no affirmative requirement that a jurisdictional agency submit a transcript with its recommendation. However, SoCal was informed of the receipt of the transcript, and had an opportunity to examine it. SoCal has not filed any additional comments since the transcript was received. Moreover, the Commission's review of the transcript indicates that it does not contain any type of data that was not included in the recommendation as initially received by the Commission.

With respect to Exhibit No. 7, SoCal questioned the validity of using a calculated "shut-in bottom hole pressure at drainage radius" (which measures wellhead pressure) in determining in situ permeability for the Southland Pierce No. 2 Well. The Commission finds that this is a standard petroleum engineering practice to calculate bottom hole pressure from a wellhead pressure by using a generally accepted formula.

SoCal further questioned Exhibit No. 13, which gives cumulative oil production data for several wells in the area, but which gives no rate of oil production, in light of § 271.703(c)(2)(i)(C), which provides that no well drilled in the tight formation is expected to produce, before stimulation, more than five barrels of crude oil per day. In response to an inquiry by Commission staff, a letter was submitted by the applicant to New Mexico, dated July 23, 1982, in which it clarified the evidence in this exhibit, by stating that (1) oil and condensate production is not distinguished by the producer when reporting to New Mexico, (2) the production listed in the exhibit is post-stimulation condensate production and (3) there is no actual oil production from the wells listed in the exhibit.

Finally, PG&E maintained that since El Paso Natural Gas Company, which has an extensive infill drilling program in the San Juan Basin, is able to price gas produced through this program on a cost-of-service basis, it is guaranteed full recovery of its costs and expenses, plus a reasonable rate of return. PG&E argues therefore that an incentive price is not necessary or justified. The Commission has already addressed this issue

in two prior tight formation orders, Order No. 235, Docket No. RM79-76-097 (New Mexico - 8), issued June 4, 1982, and Order No. 244, Docket No. RM79-76-109 (New Mexico - 12), issued August 4, 1982. The Commission stated, in Order No. 244:

The issue in this docket is whether the recommended . . . [f]ormation meets the standards prescribed in § 271.703(c). Moreover, there are or can be gas producers in the recommended formation other than El Paso, which do not receive cost-of-service pricing for gas produced therefrom. Finally, the tight formation incentive price is a ceiling price, and as such there is no guarantee that a producer, including a pipeline, will be able to charge and collect that price. 3/

This rationale is equally applicable in this case.

Based upon the above discussion, the Commission finds that the evidence submitted by New Mexico supports the assertion that the Dakota Producing Interval meets the guidelines contained in § 271.703(c)(2)(i). The Commission adopts the New Mexico recommendation.

This amendment shall become effective immediately. The Commission has found that the public interest dictates that new natural gas supplies be developed on an expedited basis, and, therefore, incentive prices should be made available as soon as possible. The need to make incentive prices immediately available establishes good cause to waive the thirty-day publication period.

3/ Mimeo at p. 2.

List of Subjects in 18 C.F.R. Part 271:

Natural gas, incentive price, Tight formations.

(Department of Energy Organization Act, 42 U.S.C. §§ 7101 et seq.; Natural Gas Policy Act of 1978, 15 U.S.C. §§ 3301 - 3432; Administrative Procedure Act, 5 U.S.C. § 553.)

In consideration of the foregoing, Part 271 of Subchapter H, Chapter I, Code of Federal Regulations, is amended as set forth below, effective September 30, 1982.

By the Commission.

(S E A L)

Kenneth F. Plumb
Kenneth F. Plumb,
Secretary.

Section 271.703(d) is revised by adding new subparagraph (110) to read as follows:

§ 271.703 Tight formations.

* * * * *

(d) Designated tight formations.

* * * * *

(110) The Dakota Producing Interval in New Mexico.

RM79-76-103 (New Mexico - 9).

(i) Delineation of formation. The Dakota Producing Interval is found within the Basin-Dakota Gas Pool in the northern portion of the San Juan Basin near the Hogback Monocline. It is found in San Juan County, in Township 31 North, Range 10 West, NMPM, Sections 1 through 36; Township 31 North Range 11 West, NMPM, Sections 1, 12, 13, 22 through 27 and 34, 35 and 36; Township 32 North, Range 10 West, NMPM, Sections 7 through 36; Township 32 North, Range 11 West, NMPM, Sections 7 through 27 and 34, 35 and 36; Township 32 North, Range 12 West, NMPM, Sections 7 through 24, 28 through 31; and Township 32 North, range 13 West, NMPM, Sections 7 through 29 and 32 through 36.

(ii) Depth. The Dakota Producing Interval begins at the base of the Greenhorn Limestone and consists of the Graneros Formation, the Dakota Formation and the productive upper limit of the Morrison Formation. The average depth to the top of the Dakota Producing Interval is 6,753 feet. The gross thickness of the interval averages 400 feet.

(ii) *Depth.* The producing interval of the Dakota-Lakota Formation is approximately 175 to 185 feet thick, and begins at the base of the Skull Creek Formation and extends to the top of the Morrison Formation. The average depth to the top of the Dakota-Lakota Formation is 9,100 feet.

(109) *Codell Formation in Colorado.* RM79-76-122 (Colorado—25).

(i) *Delineation of formation.* The Codell Formation underlies portions of Adams, Boulder, Jefferson, Larimer and Weld Counties, Colorado, and is located on the western flank of the Denver-Julesburg Basin a few miles north of Denver, Colorado. The Codell Formation is found in the following areas: Township 1 South, Ranges 64 through 70 West; Township 2 South, Ranges 69 and 70 West; Township 1 North, Ranges 64 through 70 West; Township 2 North, Ranges 64 through 69 West, all sections, Range 70 West, Sections 1 through 5, and 8 through 36; Township 3 North, Ranges 64 through 69 West, all sections, Range 70 West, Sections 1, 12, 13, 21 through 28, and 33 through 36; Township 4 North, Ranges 64 through 69 West; Township 5 North, Ranges 64 through 68 West, all sections, Range 69 West, Sections 1 through 4, 9 through 16, 20 through 29, and 31 through 36, Township 6 North, Ranges 64 through 68, all sections, Range 69 West, Sections 1 through 4, 9 through 16, 21 through 28, and 33 through 36.

(ii) *Depth.* The Codell Formation ranges in depth from 3,000 to 8,000 feet, and is generally found at a depth of 7,000 feet, and averages 15 feet in thickness.

(110) *The Dakota Producing Interval in New Mexico.* RM79-76-103 (New Mexico—9). (i) *Delineation of formation.* The Dakota Producing Interval is found within the Basin-Dakota Gas Pool in the northwestern portion of the San Juan Basin near the Hogback Monocline. It is found in San Juan County, in Township 31 North, Range 10 West, NMPM, Sections 1 through 36; Township 31 North Range 11 West, NMPM, Sections, 1, 12, 13, 22 through 27 and 34, 35 and 36; Township 32 North, Range 10 West, NMPM, Sections 7 through 36; Township 32 North, Range 11 West, NMPM, Sections 7 through 27 and 34, 35 and 36; Township 32 North, Range 12 West, NMPM, Sections 7 through 24, 28 through 31; and Township 32 North, Range 13 WEST, NMPM, Sections 7 through 29 and 32 through 36.

(ii) *Depth.* The Dakota Producing Interval begins at the base of the Greenhorn Limestone and consists of the Graneros Formation, the Dakota Formation and the productive upper limit of the Morrison Formation. The average depth to the top of the Dakota Producing Interval is 6,753 feet. The gross thickness of the interval averages 400 feet.

(111) *The Olmos Formation in Texas.* RM79-76 (Texas—16)—(i) *Dimmit and Webb Counties—(A) Delineation of formation.* The Olmos Formation is located in the northwest portion of Webb County and the southern portion of Dimmit County in Texas. The Formation includes all of that portion of Dimmit County extending approximately 14 miles north of the boundary of Webb County, and all of that portion of northwest Webb County west of a north-south line extending south from a point approximately 1.5 miles east of the southwest corner of La Salle County, and north of an east-