

State of New Mexico
Energy, Minerals, and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

TF-03-012

APPLICATION FOR NGPA WELL CATEGORY DETERMINATION

FOR DIVISION

USE ONLY:

APPROPRIATE FILING FEE ENCLOSED? YES ☒ NO ☐
DATE COMPLETE APPLICATION FILED March 21, 2003
DATE DETERMINATION MADE April 29, 2003
WAS APPLICATION CONTESTED? YES ☐ NO ☒
NAME (S) OF INTERVENOR (S), IF ANY: na

FILING FEE

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-B-3)

- | | |
|--|--|
| <p>1. Name of Operator:
Dugan Production Corp.</p> <p>2. Address of Operator:
P. O. Box 420
Farmington, NM 87499-0420</p> <p>3. Location of Well: Unit Letter <u>G</u>
Footage: 1510' FNL & 1450' FEL</p> <p>Sec. <u>29</u> Twp. <u>31N</u> Rng. <u>13W</u></p> <p>4. Lease Name:
Rainbow Seeker</p> <p>5. Well No: <u>1</u></p> | <p>6. County: San Juan</p> <p>7. API No: 30-04526406</p> <p>8. Indicate Type of Lease:
State <input type="checkbox"/> Fee <input checked="" type="checkbox"/> XX</p> <p>9. State Oil & Gas Lease No.:</p> <p>10. Unit Agreement Name:</p> <p>11. Pool or Formation:
Basin Dakota Gas Pool (#71599)</p> |
|--|--|

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

1. Category sought NGPA Section No. 107 ☐ A1 ☐ occluded natural gas from coal seam
☒ A3 ☒ natural gas from a designated tight formation
2. Filing Fee(s) amount enclosed: \$25.00
3. All application must contain:
- C-105 Well Completion or Recompletion Report
 - Affidavits of Mailing or Delivery

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

John D. Roe, Jr.
NAME OF APPLICANT (Type or Print)

John D. Roe, Jr.
SIGNATURE OF APPLICANT

TITLE: Engineering Manager

DATE: 03/20/03

FOR DIVISION USE ONLY

APPROVED: ☒

DISAPPROVED: ☐

The information contained herein includes all of the information required to be filed by the applicant under
Subpart C of Part 270 of the FERC regulations.

EXAMINER: *[Signature]*

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. NM14

B. FOR ALL APPLICATIONS FOR DETERMINATION PROVIDE THE FOLLOWING:

1. Well Name and No.* Rainbow Seeker #1
2. Completed in (Name of Reservoir) * Dakota
3. Field * Basin Dakota Prorated Gas Pool (71599)
4. County * San Juan
5. State * New Mexico
6. API Well No. (14 digits maximum. If not assigned, leave blank.)
30-045-26406
9. Measured Depth of the Completed Interval (in feet)
TOP 6336' BASE 6398'

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

1. Applicant's Name * Dugan Production Corp.
2. Street * P. O. Box 420
3. City * Farmington
4. State* NM 5. Zip Code 87499-0420
6. Name of Person Responsible * John D. Roe, Jr.
7. Title of Such Person * Engineering Manager
8. Signature *John D. Roe, Jr.* and Phone No. (505) 325-1821

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

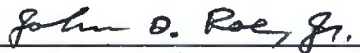
APPLICATION FOR DETERMINATION

GENERAL INSTRUCTIONS

- 1. Purpose:** This form is to be used to provide basic data on each application for a well category determination that is filed with a Jurisdictional Agency to qualify the natural gas produced from such well as (a) occluded natural gas produced from coal seams, under section 107(c)(3) of the Natural Gas Policy Act of 1978 [15 U.S.C. 3301] (NGPA), (b) natural gas produced from Devonian shale, under section 107(c)(4) of the NGPA, or (c) natural gas produced from a designated tight formation, under section 107(c)(5) of the NGPA, in order to substantiate the eligibility of such natural gas for a tax credit under Section 29 of the Internal Revenue Code. The Commission will use this data, together with the other information contained in the Jurisdictional Agency's notice of determination, to evaluate whether substantial evidence exists to support the determination.
- 2. Who must submit:** Anyone who files an application with a Jurisdictional Agency identified under Section 270.401 of the Commission's Regulations for a well category determination.
- 3. What and where to submit:** The original of this form, and all of the information required by Section 270.302, 270.303, 270.304, or 270.306 of the Commission's Regulations must be filed with the Jurisdictional Agency. The Jurisdictional Agency making a determination must file the original of this form, with all of the other information required under the applicable Commission Regulations, with the **Office of the Secretary, Federal Energy Regulatory Commission, 888 First Street, N.E., Washington D.C. 20426**. Applicants should retain one copy of each completed form for their files for 4 years.
- 4. These are mandatory filing requirements.**
- 5. The data on this form are not considered confidential and will not be treated as such.**
- 6. Where to send comments on the public reporting burden:** The public reporting burden for this collection of information is estimated to average 0.25 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate, or any aspect of this collection of information, including suggestions for reducing this burden, to the Federal Energy Regulatory Commission, 888 First Street, N.E., Washington D.C. 20426 (Attention: Mr. Michael Miller, CI-1) and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington D.C. 20503 (Attention: Desk Officer for the Federal Energy Regulatory Commission). Persons subject to providing this information will not be penalized for failing to respond to these collections of information unless the collection of information displays a valid OMB control number.

Statement by
John D. Roe, Jr.
Application for Section 107 Tight Formation Gas Determination
Dugan Production Corp.'s Rainbow Seeker No. 1 (API No. 30-045-26405)
Basin Dakota Prorated Gas Pool
SWNE Section 29, T31N, R13W
San Juan County, New Mexico


I make the following statement under oath. Natural gas produced from Dugan's Rainbow Seeker No. 1 is being produced from a designated tight formation through a well, the surface drilling of which began after December 31, 1979, but before January 1, 1993. In addition, I have no knowledge of any information which is inconsistent with this application.



John D. Roe, Jr., P. E.
March 20, 2003

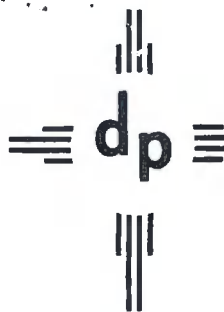
STATE OF NEW MEXICO)
) ss.
COUNTY OF SAN JUAN)

The foregoing instrument was acknowledged before me this 20th day of March, 2003 by John D. Roe, Jr., Engineering Manager of Dugan Production Corp., a New Mexico corporation, on behalf of said corporation.



Cynthia Sweetland
Notary Public

My Commission Expires
08/11/04



dugan production corp.

March 20, 2003

Mr. Michael Stogner
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87504



Re: NGPA Category Determination (107TF)
Dugan Production's Rainbow Seeker #1 (API No. 30-045-26406)
Basin Dakota Prorated Gas Pool
SWNE Sec. 29, T31N, R13W
San Juan County, New Mexico

Dear Mr. Stogner,

Enclosed for your consideration is Dugan's application, requesting a Section 107, tight formation, NGPA category determination for the captioned well.

Enclosed are the following items:

- a. Completed FERC Form 121.
- b. Completed NMOCD Form C-132.
- c. Dugan's check in the amount of \$25.00 for the NMOCD application fee.
- d. Copy of all well completion reports and NMOCD form C-104 dated 6-10-92 reflecting operator change from Jerome P. McHugh to Dugan Production Corp. effective 6-1-92.
- e. Copy of the well location plat (NMOCD Form C-102), which presents the surface location for the Rainbow Seeker #1, along with the N/2 317.25 acre spacing unit for the Basin Dakota completion. This location is within the tight sand area designated by NM14.
- f. Copy of the Dual Induction Log over the Dakota interval.
- g. My statement regarding spud date of the subject well.

Should you have questions or need additional information, please let me know.

Sincerely,

John D. Roe

John D. Roe
Engineering Manager

JDR/tmf

Enclosures

ENERGY, MINERALS AND NATURAL RESOURCES DEPT.

01-521 07

NO. 117317

Official Receipt

Received from: RC - Dugan Prod. Corp.

Date: 3/21

Dollar Amount

25.00

DR CR.	AMOUNT NUMBER	CENTER NUMBER	CREDIT AMOUNT	DEPOSIT NUMBER	WORK ORDER NO.
60	4290				
60	4291				
60	3450				
60	3451				
60	3410				
60	4210				
60	4240				
60	1893	0711			
60					
60					
60					
TOTAL			25.00		

NGPA Filing Fees

By

RN

API Well No : 30 45 26406 Eff Date : 08-01-1987 WC Status : A
Pool Idn : 71599 BASIN DAKOTA (PRORATED GAS)
OGRID Idn : 6515 DUGAN PRODUCTION CORP
Prop Idn : 3813 RAINBOW SEEKER

Well No : 001
GL Elevation: 5630

	U/L	Sec	Township	Range	North/South	East/West	Prop/Act (P/A)
	---	---	---	---	---	---	---
B.H. Locn : G	29	31N	13W	FTG 1510 F N	FTG 1450 F E		P
Lot Identifier:							
Dedicated Acre: 320.00							
Lease Type : P							
Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :							

```
PF01 HELP      PF02      PF03 EXIT      PF04 GoTo      PF05      PF06
PF07      PF08      PF09      PF10 NEXT-WC PF11 HISTORY PF12 NXTREC
```

CMD : ONGARD 04/29/03 07:56:45
OG6ACRE C102-DEDICATE ACREAGE OGOMES -TPQU
Page No : 1

API Well No : 30 45 26406 Eff Date : 04-30-1991
Pool Idn : 71599 BASIN DAKOTA (PRORATED GAS)
Prop Idn : 3813 RAINBOW SEEKER Well No : 001
Spacing Unit : 30168 OCD Order : Simultaneous Dedication:
Sect/Twp/Rng : 29 31N 13W Acreage : 320.00 Revised C102? (Y/N) :
Dedicated Land:

S	Base	U/L	Sec	Twp	Rng	Acreage	L/W	Ownership	Lot	Idn
	A		29	31N	13W	40.00	N	FE		
	B		29	31N	13W	40.00	N	FE		
	C		29	31N	13W	40.00	N	FE		
	E		29	31N	13W	40.00	N	FD		
	F		29	31N	13W	40.00	N	FE		
	G		29	31N	13W	40.00	N	FE		
	H		29	31N	13W	40.00	N	FD		
D	1		29	31N	13W	37.25	N	FD		

E0005: Enter data to modify or PF keys to scroll

PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06 CONFIRM
PF07 BKWD	PF08 FWD	PF09	PF10 LAND	PF11 NXTSEC	PF12 RECONF

CMD :
OG5SECT

ONGARD
INQUIRE LAND BY SECTION

04/29/03 07:56:12
OGOMES -TPQU
PAGE NO: 1

Sec : 29 Twp : 31N Rng : 13W Section Type : NORMAL

1 37.25	C 40.00	B 40.00	A 40.00
Federal owned	Fee owned	Fee owned	Fee owned
E 40.00	F 40.00	G 40.00	H 40.00
Federal owned	Fee owned	Fee owned A	Federal owned

PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06
PF07 BKWD	PF08 FWD	PF09 PRINT	PF10 SDIV	PF11	PF12

CMD :
OG5SECT

ONGARD
INQUIRE LAND BY SECTION

04/29/03 07:56:20
OGOMES -TPQU
PAGE NO: 2

Sec : 29 Twp : 31N Rng : 13W Section Type : NORMAL

L 40.00	K 40.00	J 40.00	I 40.00
Federal owned	Federal owned	Federal owned A A	Federal owned
M 40.00	N 40.00	O 40.00	P 40.00
Federal owned	Federal owned	Federal owned	Federal owned

PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06
PF07 BKWD	PF08 FWD	PF09 PRINT	PF10 SDIV	PF11	PF12

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

REQUEST FOR ALLOWABLE AND AUTHORIZATION
TO TRANSPORT OIL AND NATURAL GAS

Operator Dugan Production Corp.		Well API No.
Address P.O. Box 420, Farmington, NM 87499		
Reason(s) for Filing (Check proper box) <input type="checkbox"/> Other (Please explain)		
New Well <input type="checkbox"/>	Change in Transporter of: Oil <input type="checkbox"/> Dry Gas <input type="checkbox"/>	Change of Operator Effective 6-1-92
Recompletion <input type="checkbox"/>	Casinghead Gas <input type="checkbox"/> Condensate <input type="checkbox"/>	
Change in Operator <input checked="" type="checkbox"/>		
If change of operator give name and address of previous operator Jerome P. McHugh & Assoc., P.O. Box 809, Farmington, NM 87499		

II. DESCRIPTION OF WELL AND LEASE

Lease Name Rainbow Seeker	Well No. 1	Pool Name, including Formation Basin Dakota	Kind of Lease State, Federal or <u>Fee</u>	Lease No. ---
Location Unit Letter <u>G</u> : <u>1510</u> Feet From The <u>North</u> Line and <u>1450</u> Feet From The <u>East</u> Line Section <u>29</u> Township <u>31N</u> Range <u>13W</u> , <u>NMPM</u> 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"/> Giant Refining, Inc.	Address (Give address to which approved copy of this form is to be sent) P.O. Box 256, Farmington, NM 87499	
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/> El Paso Natural Gas Co.	Address (Give address to which approved copy of this form is to be sent) P.O. Box 4990, Farmington, NM 87499	
If well produces oil or liquids, give location of tanks.	Unit <u>G</u>	Sec. <u>29</u>
	Twp. <u>31N</u>	Rge. <u>13W</u>
	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.)

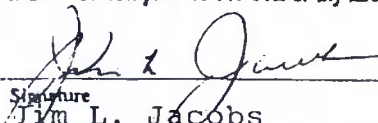
Date First New Oil Run To Tank	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil - Bbls.	Water - Bbls.	Gas- MCF

GAS WELL

Actual Prod. Test - MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method (pilot, back pr.)	Tubing Pressure (Shut-in)	Casing Pressure (Shut-in)	Choke Size

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
Jim L. Jacobs Vice-President
Printed Name Title
6-10-92 325-1821
Date Telephone No.

OIL CONSERVATION DIVISION

Date Approved JUN 11 1992

By 
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.
- 4) Separate Form C-104 must be filed for each pool in multiply completed wells.

5 NMOCD, 1988

1 File

1 Giant

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ENERGY AND MINERALS DEPARTMENT

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P. O. BOX 2088
SANTA FE, NEW MEXICO 87501Form C-104
Revised 10-01-78
Format 06-01-83
Page 1

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OIL CON. DIV
DIST. 3

REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

operator

JEROME P. McHUGH

address

P.O. BOX 809

Farmington, N.M. 87499

reason(s) for filing (Check proper box)

Other (Please explain)

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

change of ownership give name
address of previous owner

DESCRIPTION OF WELL AND LEASE

Well Name	Well No.	Pool Name, including Formation	Kind of Lease	Fee	Lease No.
Rainbow Seeker	1	Basin Dakota	State, Federal or Fee		
Location					
Unit Letter	G	1510	Feet From The	North	Line and
				1450	Feet From The
				East	
Line of Section	29	Township	31N	Range	13W
				NMPM,	San Juan
					County

DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

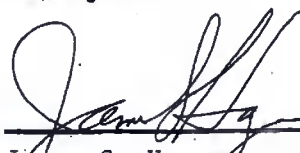
Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
Giant Refining, Inc.	P.O. Box 256, Farmington, NM 87499
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> 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. (No Change)	P.O. Box 4990, Farmington, NM 87499-4990
well produces oil or liquids, or location of tanks.	Unit Sec. Twp. Rge. Is gas actually connected? When
G 29 31N 13W	Yes

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.


James S. Hazen (Signature)

Field Supt. (Title)

2/5/88 (Date)

OIL CONSERVATION DIVISION

APPROVED

FEB 08 1988

BY

SUPERVISOR DISTRICT 11

TITLE

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.

5 NMOCD, Aztec

1 DE

1 File

1 EPNG

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OIL AND MINERALS DEPARTMENT

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SANTA FE, NEW MEXICO 87501

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

REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

NAME
ROME P. McHUGH

ADDRESS
O Box 809, Farmington, NM 87499

Reason(s) for filing (Check proper box)

New Well
Recompletion
Change in Ownership

Change in Transporter of:

☐ Oil
☐ Casinghead Gas
☒ Dry Gas
☐ Condensate

Other (Please explain)

Change of ownership give name
address of previous owner

DESCRIPTION OF WELL AND LEASE

Well Name Rainbow Seeker	Well No. 1	Pool Name, including Formation Basin Dakota	Kind of Lease State, Federal or Fee	Fee	Lease No. ---
Location Unit Letter <u>G</u> : <u>1510</u> Feet From The <u>North</u> Line and <u>1450</u> Feet From The <u>East</u> Line of Section <u>29</u> Township <u>31N</u> Range <u>13W</u> , NMPM, <u>San Juan</u> County					

DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/> Astro Source Corp. (No change)	Address (Give address to which approved copy of this form is to be sent) 8777 E Via de Ventura, Suite 100, Scottsdale, AZ 85258
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/> Paso Natural Gas Co.	Address (Give address to which approved copy of this form is to be sent) P O Box 4990, Farmington, NM 87499-4990
Well produces oil or liquids, or location of tanks.	Is gas actually connected? When
Unit <u>G</u> Sec. <u>29</u> Twp. <u>31N</u> Rge. <u>13W</u>	Yes

If its 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.

James S. Hazen
Field Supt.
(Signature)
(Title)
12/28/87
(Date)

OIL CONSERVATION DIVISION

AUG 31 1987

APPROVED _____
BY Frank J. [Signature]
TITLE SUPERVISOR DISTRICT # 1

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

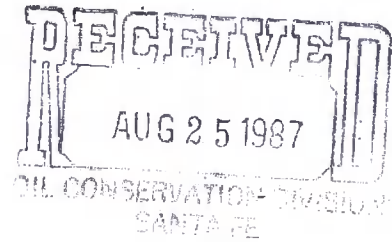
If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

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.

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



NOTICE OF GAS CONNECTION

DATE August 5, 1987

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

GAS FROM Jerome P. McHugh Rainbow Seeker #1
Operator Well Name

92-043-01 27331-01 G 29-31-13
Meter Code Site Code Well Unit S-T-R

Basin Dakota EL PASO NATURAL GAS
Pool Name of Purchaser

WAS MADE ON July 9, 1987, FIRST DELIVERY July 27, 1987
Date Date

AOF -

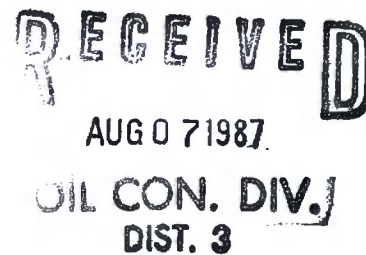
CHOKE -

EL PASO NATURAL GAS
Purchaser
Sheri Underwood
Representative

Clerk, Technical Support
Title

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

P
045
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OIL AND MINERALS DEPARTMENT

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P.O. BOX 2088
SANTA FE, NEW MEXICO 87501

REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GASForm C-104
Revised 10-01-78
Format 06-01-83

RECEIVED
JUN 24 1987
OIL CON. DIV.
DIST. 3

JEROME P. McHUGH

P O Box 809, Farmington, NM 87499

Reason(s) for filing (Check proper box)

New Well
Recompletion
Change in Ownership

Change in Transporter of:

☒ Oil
☐ Casinghead Gas
☒ Dry Gas
☐ Condensate

Other (Please explain)

Effective 7/1/87

Change of ownership give name
address of previous owner

DESCRIPTION OF WELL AND LEASE

Well Name	Well No.	Pool Name, including Formation	Kind of Lease	Lease No.
inbow Seeker	1	Basin Dakota	State, Federal or Fee Fee	
Location				
Unit Letter	G	1510 Feet From The North Line and 1450 Feet From The East		
Line of Section	29	Township	31N	Range
			13W	NMPM, San Juan County

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)
Petro Source Corp.	85258 8777 E Via de Ventura, Suite 100, Scottsdale, AZ
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)
Jerome P. McHugh	P.O. Box 809 Farmington, NM 87499
Well produces oil or liquids, or location of tanks.	Is gas actually connected? When
Unit G Sec. 29 Twp. 31N Rge. 13W	

If its 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.

James S. Hazen
James S. Hazen (Signature)
Field Supt. (Title)

7/22/87
(Date)

OIL CONSERVATION DIVISION

APPROVED

BY

SUPERVISOR DISTRICT #3

TITLE

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.

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

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OPERATOR	

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 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 JEROME P. McHUGH			8. Farm or Lease Name Rainbow Seeker
Address of Operator P O Box 809, Farmington, NM 87499			9. Well No. 1
Location of Well UNIT LETTER <u>G</u> <u>1510</u> FEET FROM THE <u>North</u> LINE AND <u>1450</u> FEET FROM THE <u>East</u> LINE, SECTION <u>29</u> TOWNSHIP <u>31 N</u> RANGE <u>13 W</u> NMPM.			10. Field and Pool, or Wildcat Basin Dakota
15. Elevation (Show whether DF, RT, GR, etc.) 5630' GL; 5645' KB			12. County San Juan

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

NOTICE OF INTENTION TO:

FOR REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>
REPAIR OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>

SUBSEQUENT REPORT OF:

REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
CASING TEST AND CEMENT JOBS <input checked="" type="checkbox"/> 4 1/2" csg.	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.

Reached TD of 6570' KB on 9/22/85.

Rigged up and ran 781' of 4 1/2" OD, 11.6#, K-55 & 5785' of 4 1/2" OD, 10.5#, K-55 csg. with DV tool at 4347'. Casing set at 6564' KB.

Rigged up Halliburton and cemented 1st stage with 10 bbls. mud flush followed by 450 sx 50/50 poz with 2% gel, 6 1/2#/sk gilsonite & 1#/sk flocele (626 cf). Plug down at 9:30 AM. Opened DV tool at 4347' and circulated with rig pump for 3 hrs. Cemented 2nd stage with 10 bbls. mud flush followed by 700 sx 65/35 poz with 12% gel & 1#/sk flocele (1834 cf). Plug down at 1:30 PM 9/26/85. Float checked good. Full returns through both stages w/ 10 bbls. of cement circulated to surface on 2nd stage. Nipped down BOP, set slips and cut-off casing. Released rig at 3:00 PM, 9/26/85.

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SEP 30 1985

OIL CON. DIV.

DIST. 3

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

ED James S. Hazen TITLE Field Supt.DATE 9/27/85OVER BY [Signature] TITLE SUPERVISOR DISTRICT #3DATE SEP 30 1985

CONDITIONS OF APPROVAL, IF ANY:

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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	GAS
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P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

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Form C-104
Revised 10-01-78
Format 06-01-83
Page 1REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS
OIL CON. DIV.
DIST. 3

Operator

JEROME P. McHUGH

Address

P O Box 809, Farmington, NM 87499

Reason(s) for filing (Check proper box)

- ☒ New Well
- ☐ Recompletion
- ☐ Change in Ownership

Change in Transporter of:

- ☐ Oil ☐ Dry Gas
- ☐ Casinghead Gas ☐ Condensate

Other (Please explain)

change of ownership give name
and address of previous owner

I. DESCRIPTION OF WELL AND LEASE

Lease Name	Well No.	Pool Name, including Formation	Kind of Lease	Lease No.
Rainbow Seeker	1	Basin Dakota	State, Federal or Fee	Fee
Location				
Unit Letter	G	: 1510 Feet From The	North Line and	1450 Feet From The
Line of Section	29	Township	31N	Range
			13W	, NMPM, San Juan County

II. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

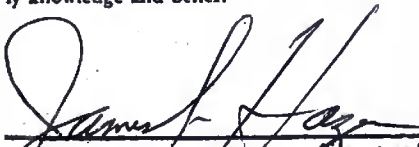
Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
Giant Refining, Inc.	P O Box 256, Farmington, NM 87499
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
Gas Company of New Mexico	P O Box 1899, Bloomfield, NM 87413
If well produces oil or liquids, give location of tanks.	Unit Sec. Twp. Rge. Is gas actually connected? When
G 29 31N 13W	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.

VI. CERTIFICATE OF COMPLIANCE

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.


James S. Hazen
Field Supt.

(Title)

2/14/86

(Date)

OIL CONSERVATION DIVISION

APPROVED

FEB 18 1986

BY

SUPERVISOR DISTRICT # 3

TITLE

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.
			XX	XX					
Date Spudded 9-13-85	Date Compl. Ready to Prod. 12-7-85	Total Depth 6570'			P.B.T.D. 6515'				
Elevations (DF, RKB, RT, GR, etc.) 5630' GL	Name of Producing Formation Dakota	Top Oil/Gas Pay 6336'			Tubing Depth 6391'				
Perforations 6336-6398', 16 holes						Depth Casing Shoe 6564' KB			
TUBING, CASING, AND CEMENTING RECORD									
HOLE SIZE	CASING & TUBING SIZE		DEPTH SET		SACKS CEMENT				
12-1/4"	9-5/8"		272' KB		177 cf				
7-7/8"	4-1/2"		6564' KB		2460 cf in 2 stages				
	2-3/8"		6391' KB						

V. TEST DATA AND REQUEST FOR ALLOWABLE (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 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 1072 MCF/D	Length of Test 3 hrs.	Bbls. Condensate/MMCF 3.73 bbl./MMCF	Gravity of Condensate 65°
Testing Method (pilot, back pr.) Back pressure	Tubing Pressure (Shut-in) 1630 psi SI	Casing Pressure (Shut-in) 1650 psi SI	Choke Size 5/8"

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

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5a. Indicate Type of Lease
State ☐ Fee ☒
5. State Oil & Gas Lease No.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER <input type="checkbox"/>				7. Unit Agreement Name											
2. TYPE OF COMPLETION NEW WELL <input checked="" type="checkbox"/> WORK OVER <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESER. <input type="checkbox"/>				8. Farm or Lease Name Rainbow Seeker											
3. Name of Operator JEROME P. McHUGH				9. Well No. 1											
4. Address of Operator P O Box 809, Farmington, NM 87499				10. Field and Pool, or Willam Basin Dakota											
6. Location of Well UNIT LETTER <u>G</u> LOCATED <u>1510</u> FEET FROM THE <u>North</u> LINE AND <u>1450</u> FEET FROM THE <u>East</u> LINE OF SEC. <u>29</u> TWP. <u>31N</u> SEC. <u>13W</u> MPM				12. County San Juan											
15. Date Spudded 9-13-85		16. Date T.D. Reached 9-22-85		17. Date Compl. (Ready to Prod.) 12-7-85		18. Elevations (DF, RKD, RT, GR, etc.) 5630' GL; 5645' KB		19. Elev. Casinghead 5630' GL							
20. Total Depth 6570' KB		21. Plug Back T.D. 6515' KB		22. If Multiple Compl., How Many NA		23. Intervals Drilled By Rotary Tools TD		24. Cable Tools ---							
24. Producing Interval(s), of this completion - Top, Bottom, Name 6336-6398', Dakota								25. Was Directional Survey Made No							
26. Type Electric and Other Logs Run Dual Ind. SFL-GR; FDC Neutron, GR-CCL								27. Was Well Cored No							
28. CASING RECORD (Report all strings set in well)															
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED					
9-5/8"		36		272' KB		12-1/4"		177 cf class B w/ 2% CaCl ₂		---					
4-1/2"		10.5 & 11.6		6564' KB		7-7/8"		See reverse.		---					
29. LINER RECORD										30. TUBING RECORD					
SIZE		TOP		BOTTOM		SACKS CEMENT		SCREEN		SIZE		DEPTH SET		PACKER SET	
None										2-3/8"		6391'		---	
31. Perforation Record (Interval, size and number) 6336, 38, 51, 55, 57, 59, 61, 63, 65, 67, 69, 71, 87, 89, 97 & 98. Total of 16 holes.										32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.					
										DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED			
										6336-6398		500 gal. 7 1/2% KCl; 46,400#			
												20/40 sand; 75,450 gal. 40#			
												cross-link gel.			
33. PRODUCTION															
Date First Production 1-28-86		Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing						Well Status (Prod. or Shut-in) SI							
Date of Test 1-28-86		Hours Tested 3		Choke Size 5/8"		Prod'n. For Test Period 4 BOPD		Oil - Bbl. 1/2		Gas - MCF 134		Water - Bbl. 1 *		Gas - Oil Ratio 268,000	
Flowing Press. 87		Casing Pressure 1650 psi SI		Calculated 24-Hour Rate 4 BOPD		Jerome P. McHugh Farmington, N.M.		Gas - MCF 1072		Water - Bbl. *		Oil Gravity - API (Corr.) 65°			
34. Disposition of Gas (Sold, used for fuel, vented, etc.) Vented during test; to be sold.										Test Witnessed By Hazen					
35. List of Attachments *Frac water only										FEB 24 1986					
36. I hereby certify that the information shown on both sides of this form is true and correct to the best of my knowledge and belief.															
SIGNED <u>James S. Hazen</u>										TITLE <u>Field Supt.</u>		DATE <u>2/14/86</u>			

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division 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 _____ 1200	T. Penn. "B" _____
T. Salt _____	T. Strawn _____	T. Kirtland-Fruitland _____ 1346/1450	T. Penn. "C" _____
B. Salt _____	T. Atoka _____	T. Pictured Cliffs _____ 1560	T. Penn. "D" _____
T. Yates _____	T. Miss _____	T. Cliff House _____ 3257	T. Leadville _____
T. 7 Rivers _____	T. Devonian _____	T. Menefee _____ 3393	T. Madison _____
T. Queen _____	T. Silurian _____	T. Point Lookout _____ 4264	T. Elbert _____
T. Grayburg _____	T. Montoya _____	T. Mancos _____ 4455	T. McCracken _____
T. San Andres _____	T. Simpson _____	T. Gallup _____ 5275	T. Ignacio Qtzite _____
T. Glorieta _____	T. McKee _____	Base Greenhorn _____ 6222	T. Granite _____
T. Paddock _____	T. Ellenburger _____	T. Dakota _____ 6281	T. _____
T. Blinebry _____	T. Gr. Wash _____	T. Morrison _____	T. _____
T. Tubb _____	T. Granite _____	T. Todilto _____	T. * Lewis 1645
T. Drinkard _____	T. Delaware Sand _____	T. Entrada _____	T. **Sanosree 5792
T. Abo _____	T. Bone Springs _____	T. Wingate _____	T. Carlile 5930
T. Wolfcamp _____	T. _____	T. Chinle _____	T. T. of Greenhorn 6
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 _____	feet _____
No. 2, from _____ to _____	feet _____
No. 3, from _____ to _____	feet _____
No. 4, from _____ to _____	feet _____

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
			ITEM #28 - CEMENT				
			1st stg: 626 cf (450 sx 50/50 poz w/ 2% gel, 6 1/4#/sk gilsonite & 1/4#/sk flocele)				
			2nd stg: 1834 cf (700 sx 65/35 poz w/ 12% gel & 1/4#/sk flocele)				
			Total of 2460 cf.				

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special		Test Date 1-28-86	
Company JEROME P. McHUGH		Connection	
Pool Basin Dakota		Formation Dakota	
Completion Date 12-7-85		Total Depth 6570' KB	Plug Back TD 6515' KB
		Elevation 5630' GL	Farm or Lease Name Rainbow Seeker
Csq. Size 4-1/2"	Wt. 10.5#	d 4.052	Set At 6564'
Perforations: From 6336 To 6398		Well No. 1	
Tbg. Size 2-3/8"	Wt. 4.7#	d 1.995	Set At 6391
Perforations: From open ended To		Unit G 29 31N 12W	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single		Packer Set At ---	County San Juan
Producing Thru tubing	Reservoir Temp. °F P	Mean Annual Temp. °F	Baro. Press. - P _a
L		H	G _g .65 est.
		% CO ₂	% N ₂
		% H ₂ S	P _{water}
		Meter Run	Taps
		State New Mexico	

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.	Temp. °F	
SI			5/8"				1630		1650		
1.			Pos. choke			58°	87		310		3 hrs.
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	8.762		99	0.9962	1.240	1.000	1072
2.							
3.							
4.							
5.							

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

$P_c = 1.662$ $P_c^2 = 2.762,244$					$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.039$		$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0291$	
NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$				
1		322	103,684	2,658,560				
2								
3								
4								
5								

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1103$

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Absolute Open Flow 1103 Mcfd @ 15.025		Angle of Slope @ _____	
Remarks:			
Approved By Division		Conducted By: Hazen	
		Calculated By: Hazen	
		Checked By:	

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SANTA FE, N.M.

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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 DEVELOPMENT OF OIL AND GAS RESERVOIR.
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO RE-DRILL OR TO RE-ENTER TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

OIL WELL ☐ GAS WELL ☒ OTHER ☐

Name of Operator

JEROME P. McHUGH

Address of Operator

P O Box 809, Farmington, NM 87499

Location of Well

UNIT LETTER G 1510 FEET FROM THE North LINE AND 1450 FEET FROMTHE East LINE, SECTION 29 TOWNSHIP 31 N RANGE 13 W NMPM.

7. Unit Agreement Name

8. Farm or Lease Name

Rainbow Seeker

9. Well No.

1

10. Field and Pool, or Wildcat
Basin Dakota

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

5630' GL; 5645' KB

12. County

San Juan

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 ☐OTHER ☐PLUG AND ABANDON ☐CHANGE PLANS ☐REMEDIAL WORK ☐COMMENCE DRILLING OPNS. ☒CASING TEST AND CEMENT JOB ☐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 1503.

Moved in and rigged up LLL Drilling Co. rig.

Spudded 12 1/4" hole at 9:13 PM, 9-13-85.

Drilled to 280' and ran 6 jts. 9-5/8", 36#, J-55 casing set at 272' KB.

Cemented with 150 sx class "B" with 2% CaCl₂ + 1/4# Floseal per sk (177 cu.ft.)

Plug down at 8:30 AM, 9-14-85. Cement circulated to surface.

W.O.C. 6 hrs. Pressure tested surface casing to 1000 psi for 1/2 hr. Held OK.

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SEP 18 1985
OIL CON. DIV.
DIST. 3

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

BY James S. Hazen James S. HazenTITLE Field Supt.DATE 9-16-85APPROVED BY James S. HazenTITLE SUPERVISOR DISTRICT #3DATE SEP 18 1985

CONDITIONS OF APPROVAL, IF ANY:

30-045-26406

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LAND OFFICE	
OPERATOR	

Form C-101
Revised 1-1-65

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

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work		7. Unit Agreement Name	
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		8. Farm or Lease Name Rainbow Seeker	
2. Name of Operator Jerome P. McHugh		9. Well No. 1	
3. Address of Operator P O Box 809, Farmington, NM 87499		10. Field and Pool, or Wildcat Basin Dakota	
4. Location of Well UNIT LETTER <u>G</u> LOCATED <u>1510</u> FEET FROM THE <u>North</u> LINE AND <u>1450</u> FEET FROM THE <u>East</u> LINE OF SEC. <u>29</u> TWP. <u>31 N</u> RGE. <u>13 W</u> NMPM		12. County San Juan	
19. Proposed Depth 6700'		19A. Formation Dakota	
20. Rotary or C.T. Rotary		21. Elevations (Show whether DF, RT, etc.) 5630' GL; 5645' RKB	
21A. Kind & Status Plug. Bond Statewide		21B. Drilling Contractor LLL Drilling Co.	
22. Approx. Date Work will start 6-20-85			

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12-1/4"	9-5/8"	36#	250'	200 cf circulated	to surface
7-7/8"	4-1/2"	11.6 & 10.5#	6700'	2290 cf circ.	in 2 stages

Plan to drill with spud mud to set surface casing at 250'. Will then drill with water-mud-gel mixture to test the Dakota formation sufficiently. Plan to run IES, CDL, and CNL logs. If well appears productive, will run 4 1/2" casing, cementing in 2 stages; will selectively perforate, frac, clean out after frac and complete the well using 2-3/8" O.D. tubing.

Gas is not dedicated.

APPROVAL EXPIRES 12-10-85
UNLESS DRILLING IS COMMENCED.
SPUD NOTICE MUST BE SUBMITTED
WITHIN 10 DAYS.

RECEIVED
JUN 10 1985
OIL CON. DIV.
DIST. 3

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE SLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed James S. Hazen Title Field Supt. Date 6-10-85

(This space for State Use)

APPROVED BY Frank D. Day TITLE SUPERVISOR DISTRICT #3 DATE JUN 10 1985

CONDITIONS OF APPROVAL, IF ANY:

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

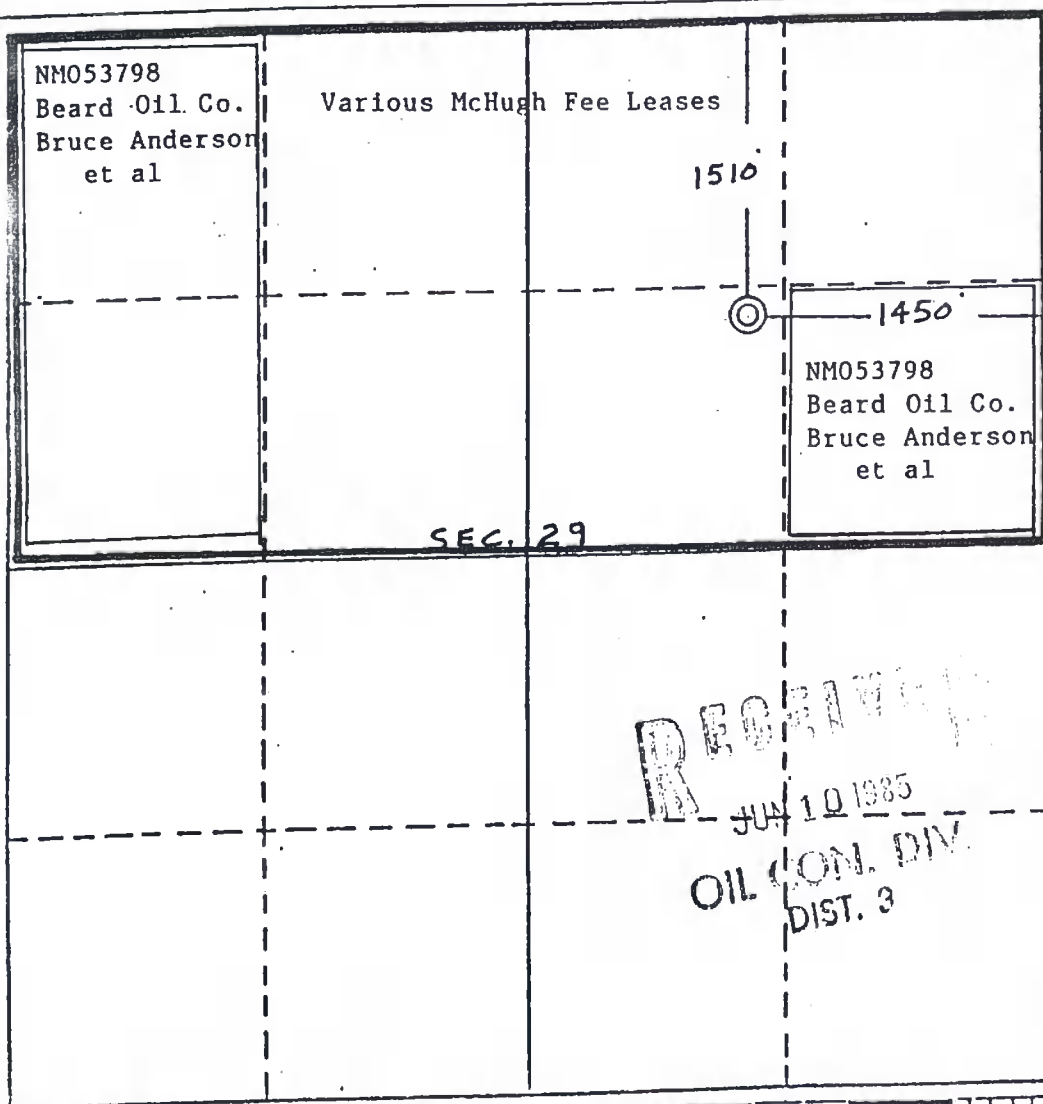
Operator Jerome P. McHugh		Lease Rainbow Seeker		Well No. 1
Unit Letter G	Section 29	Township 31 North	Range 13 West	County San Juan
Actual Footage Location of Well: 1510 feet from the North line and 1450 feet from the East line				
Ground Level Elev. 5630	Producing Formation Dakota	Pool Basin Dakota	Dedicated Acreage: 317.25 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 Will be 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 Division.



CERTIFICATION

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

Name
James Hazen

Position
Field Supt.

Company
Jerome P. McHugh

Date
5-23-85

I hereby certify that the location shown on this plat was obtained from notes of actual survey 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
May 3, 1985

Registered Professional Engineer and/or Land Surveyor

Edgar L. Risenhoover

Certificate No. **5979**

Edgar L. Risenhoover, L.S.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7116
Order No. R-6747

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

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on December 30, 1980, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 7th day of August, 1981, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division 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 36: All

containing a total of 93,860.00 acres, more or less.

(3) That at the hearing, applicant requested dismissal of that portion of the application pertaining to Sections 30 and 31, Township 32 North, Range 13 West, NMPM, containing some 989.32 acres, more or less, leaving for consideration some 92,871 acres, more or less.

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

(5) That at the hearing, Consolidated Oil and Gas, Incorporated, appeared and requested expansion of the area applied for by applicant Southland Royalty to also include the following described lands for consideration as a "tight formation":

SAN JUAN COUNTY, NEW MEXICO

TOWNSHIP 31 NORTH, RANGE 12 WEST, NMPM
Sections 5 through 8: All
Sections 17 through 20: All
Sections 29 through 32: All

TOWNSHIP 31 NORTH, RANGE 13 WEST, NMPM
Sections 1 through 36: All

containing a total of 29,645 acres, more or less.

(6) That although the aforesaid 29,645 acres, combined with the 92,871 acres remaining in the Southland application, exceeds the 93,860 acres stated in the legal notice for this case as being up for consideration, the 29,645 acres do lie within the area described in said legal notice, it having been advertised that consideration would be given to "the designation of the Dakota formation underlying portions of Townships 31 and 32 North, Ranges 10, 11, 12, and 13 West."

(7) That consideration for designation as a tight formation should be given to the Dakota formation underlying the lands described in Finding No. (5) above, as requested by Consolidated.

(8) That subsequent to the hearing on December 30, 1980, certain parties requested further additions to the lands being considered in this case for designation as a tight formation.

(9) That no evidence appears in the record to support such additional lands and they should not be considered further.

(10) That the lands with which this order will hereinafter be concerned are described as follows:

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 31 NORTH, RANGE 12 WEST, NMPM
Sections 5 through 8: All
Sections 17 through 20: All
Sections 29 through 32: All

TOWNSHIP 31 NORTH, RANGE 13 WEST, NMPM
Sections 1 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 29: All
Sections 32 through 36: All

containing 122,516 acres, more or less, and hereinafter referred to as the "area."

(11) 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.

(12) 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.

(13) 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).

(14) 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 6603 feet beneath the surface.

(15) That the only test data for flow holes prior to stimulation for wells within the area indicates that 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.

(16) 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 (6603 feet), and it is not expected that the average well in the area will exceed such rate.

(17) That in situ permeability calculations are available for only four wells in the area, being the Southland Pierce Well No. 2 and Moore No. 8, and the Consolidated Kline No. 1M and Senter No. 1M; that the in situ permeabilities calculated for said wells are .0609 md, .0151 md, .0049 md, and .0146 md, respectively, and average .0239 md.

(18) 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).

(19) 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).

(20) 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."

(21) 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.

(22) 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).

(23) That Consolidated in this hearing indicated that under current Section 103 prices of the NGPA of 1978, reserves of 650,000 MCF of gas are necessary to provide it with the economics necessary to justify drilling a Dakota well at its current drilling costs, while 335,000 MCF of reserves will justify a well at Section 107(c)(5) prices (tight formations).

(24) That the wide discrepancy of reserves required to justify drilling according to these two companies' economic analyses probably results primarily from the following three factors:

- (A) Southland is content with a 15 percent rate of return (ROR) on its investment while Consolidated requires a 20 percent ROR.
- (B) Southland estimates that it can drill and complete a Dakota well in the area for approximately \$378,560.00, while Consolidated estimates that it would cost \$475,400.00.
- (C) Southland, in its economic analysis, calculates an 86.5 percent working interest share of well proceeds with 13.5 percent going to royalty, while Consolidated calculates a 75.5 percent working interest share of well proceeds with 24.5 percent going to royalty and overriding royalty.

(25) That while the Consolidated desire for a 20 percent ROR is understandable, the Division believes that the 15 percent ROR sought by Southland is more reasonable.

(26) That it would appear that some items in the Consolidated estimate of well costs are excessive, and that the \$378,560.00 estimate for a completed Dakota well is more realistic than the \$475,400.00 estimate.

(27) That the standard royalty for most leases in the area is 12.5 percent, leaving an 87.5 percent share of well proceeds to the working interest.

(28) That there are an infinite number of overriding royalty arrangements, farm-in arrangements, and other deals by which drilling rights are obtained, and it would be impracticable, if not impossible, for the Division to accommodate each of these carved-out interests when calculating pricing and reserves requirements and determining necessary economic incentives.

(29) That the Southland working interest of 86.5 percent is essentially the same as a standard 87.5 working interest and should be used in this case rather than the Consolidated 75.5 percent working interest.

(30) 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.

(31) 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.

(32) 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.

(33) 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.

(34) 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).

(35) 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.

(36) That the assumptions in Findings Nos. (34) B. and (35) A. and B. above may reasonably be based on offsetting wells in a given area.

(37) That primary drilling and some infill drilling has occurred on the following lands, and cumulative recoveries and/or estimates of remaining reserves indicate that more than 350,000 MCF of gas can be recovered by an average well therein, and therefore said lands can be developed absent the incentive price established in 18 C.F.R. Section 271.703(a) and should not be considered for recommendation for designation as a tight formation:

TOWNSHIP 31 NORTH, RANGE 12 WEST, NMPM

Sections 5 through 8: All

Sections 17 through 20: All

Sections 29 through 32: All

TOWNSHIP 31 NORTH, RANGE 13 WEST, NMPM

Sections 12 through 14: All

Sections 22 through 28: All

Sections 33 through 36: All

TOWNSHIP 32 NORTH, RANGE 12 WEST, NMPM

Sections 25 through 27: All

Sections 32 and 33: All

containing 19,602 acres, more or less.

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

(39) That there is a vertical distance of some 5400 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.

(40) 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 31 NORTH, RANGE 13 WEST, NMPM
Sections 1 through 11: All
Sections 15 through 21: All
Sections 29 through 32: 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 102,914 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 31 NORTH, RANGE 13 WEST, NMPM
Sections 1 through 11: All
Sections 15 through 21: All
Sections 29 through 32: 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 approximately 102,914 acres, more or less.

(2) That no recommendation is made as to those lands described in Finding No. (10) of this order which are not included in Order No. (1) above.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L
fd/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION COMMISSION

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

CASE NO. 7116 De Novo
Order No. R-6747-A

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 de novo at 9:00 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 11th day of March, 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 this case originally came on for hearing on December 30, 1980, before Division Examiner Daniel S. Nutter.

(3) That at the original hearing of this case, Consolidated Oil & Gas, Inc., hereinafter referred to as Consolidated, asked for and was granted permission to intervene in the case, and the area considered for designation as a tight formation was broadened beyond the original lands applied for by Southland Royalty Company, hereinafter referred to as Southland, to include additional lands requested for designation as a tight formation by Consolidated.

(4) That Order No. R-6747 was entered in Case No. 7116 on August 7, 1981, and said order recommended for designation as a tight formation, pursuant to Section 107 of the Natural Gas Policy Act of 1978 and 18 C.F.R. Section 271.703, certain of the lands requested by Southland and certain of the lands requested

by Consolidated, and made no recommendation for designation of the remaining lands requested by Southland and Consolidated.

(5) That on August 24, 1981, Consolidated, pursuant to Section 70-2-13, NMSA 1978 Comp., filed timely application for hearing de novo of Case No. 7116, and the case came on for hearing as noted above, on September 29, 1981.

(6) That Southland, having filed a new and separate application for designation of its area as a tight formation, withdrew from Case No. 7116 at the hearing de novo and asked that the original Southland lands be deleted from the hearing de novo and that that portion of the case relating to such lands be dismissed.

(7) That in accordance with the above, all of those lands covered by the Southland application in the original hearing of this case should be deleted and dismissed from further consideration.

(8) That henceforth in this case, this order shall be concerned with the application of Consolidated Oil & Gas, Inc., for designation of the Dakota formation as a tight formation, underlying the following described lands in San Juan County, New Mexico:

TOWNSHIP 31 SOUTH, RANGE 12 WEST, NMPM
Sections 5 through 8: All
Sections 17 through 20: All
Sections 29 through 32: All

TOWNSHIP 31 NORTH, RANGE 13 WEST, NMPM
Sections 1 through 36: All

containing 29,645 acres, more or less.

(9) 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 portion of the Morrison formation.

(10) 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.

(11) That the Dakota Producing Interval, hereinafter referred to as the "Dakota," is comprised of sediments formed during late Cretaceous time. These sediments contain light to dark mottled gray fine to very fine-grained quartz sands in a silt and clay-sized matrix material of very low permeability.

(12) That from the logs available at the hearing, the top of the Dakota in the area ranges from a depth of 6103 feet to 6820 feet and averages some 6544 feet beneath the surface.

(13) That the only test data for calculated stabilized flow rates prior to stimulation for wells within the area indicates that in Township 31 North, Range 13 West, the Consolidated Wilmerding Well No. 1 in the NE/4 NW/4 of Section 10 had a flow rate "too small to measure," the Consolidated Kline Well No. 1 in the NE/4 SE/4 of Section 10 had a flow rate of 12.5 MCF of gas per day, and the Consolidated Senter Well No. 1 in the NE/4 SE/4 of Section 24 had a combined flow rate from two zones of 55 MCF of gas per day. Further, that two Southland wells in the immediate area to the east but just outside the area under consideration, being in Sections 14 and 2, Township 31 North, Range 12 West, had flow rates of 22 and 224 MCF of gas per day, respectively.

(14) 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 (6544 feet), and it is not expected that the average well in the area will exceed such rate.

(15) That the calculated in situ permeability of the Dakota formation in the five wells cited in Finding No. (13) above is as follows: Wilmerding No. 1, less than 0.1 md; Kline No. 1, 0.0049 md; Senter No. 1, 0.0146 md in the Upper Dakota and 0.00068 md in the Lower Dakota; and the two Southland wells in the immediate area to the east, 0.0011 md and 0.0877 md, respectively.

(16) 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).

(17) 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).

(18) 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."

(19) 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.

(20) 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.

(21) 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.

(22) That according to Consolidated's Exhibit No. 8A, the average cost of a Dakota well completed in the area under consideration, hereinafter referred to as the area, "is \$475,400, and according to its Exhibit No. 12, operating costs may be expected to total some \$61,740 during the first 20 years of a well's life and approximately \$3600 per year thereafter.

(23) That according to Consolidated's Exhibit No. 12, under Section 103 prices, a Dakota gas well in the area, with reserves recoverable over a 20-year period as indicated in Column 1 below, may be expected to yield a net income above well costs and operating costs, but before federal income taxes, as shown in Column 2 below and yield a rate of return on investment as shown in Column 3.

<u>COLUMN 1</u> <u>Reserves, MMCF</u>	<u>COLUMN 2</u> <u>Net Income</u>	<u>COLUMN 3</u> <u>Rates of Return</u>
180	\$ 120,297	3.18%
270	\$ 479,860	9.54%
350	\$ 837,754	15.78%
435	\$1,200,854	22.12%
555	\$1,778,604	30.32%

(24) That according to Consolidated's Exhibit No. 12, under Section 107 incentive prices, a Dakota gas well in the area, with 20-year reserves as indicated in Column 1 below may be expected to yield a net income above well costs and operating costs, but before federal income taxes, as shown in Column 2 below and yield a rate of return on investment as shown in Column 3.

<u>COLUMN 1</u> <u>Reserves, MMCF</u>	<u>COLUMN 2</u> <u>Net Income</u>	<u>COLUMN 3</u> <u>Rates of Return</u>
180	\$ 550,345	14.47%
270	\$1,107,833	27.29%
350	\$1,679,273	38.16%
435	\$2,255,196	49.52%
555	\$3,110,619	65.71%

(25) That according to Consolidated's Exhibit No. 13, under Section 103 prices, a Dakota gas well in the area with 20-year reserves as indicated in Column 1 below may be expected to yield a rate of return on investment plus operating expenses and after taxes as shown in Column 2 and obtain a payout as shown in Column 3.

<u>COLUMN 1</u> <u>Reserves, MMCF</u>	<u>COLUMN 2</u> <u>Rate of Return, %</u>	<u>COLUMN 3</u> <u>Payout In Years</u>
180	2.25	17.37
270	6.65	9.33
350	10.47	6.57
435	14.44	5.14
555	19.72	4.09

(26) That according to the aforementioned Exhibit No. 13, under Section 107 incentive prices, a Dakota gas well in the area with 20-year reserves as indicated in Column 1 below may be expected to yield a rate of return on investment plus operating expenses and after taxes as shown in Column 2 and obtain a payout as shown in Column 3.

<u>COLUMN 1</u> <u>Reserves, MMCF</u>	<u>COLUMN 2</u> <u>Rate of Return, %</u>	<u>COLUMN 3</u> <u>Payout In Years</u>
180	9.27	6.69
270	17.41	4.37
350	24.39	3.47
435	31.80	2.89
555	42.13	2.42

(27) That from the data shown in Finding No. (23) above, 20-year recoverable reserves in the range of 435 million cubic feet will yield a rate of return before taxes of 22.12 percent under Section 103 gas prices.

(28) That from the data shown in Finding No. (25) above, 20-year recoverable reserves in the range of 435 million cubic feet may be expected to pay out all drilling and operating costs, after taxes, in approximately 5.14 years under Section 103 gas prices.

(29) That in the judgment of the Commission, lands indicating 435 or more million cubic feet of gas reserves recoverable over a 20-year period can be developed absent the incentive price of Section 107 of the Natural Gas Pricing Act of 1978.

(30) That in the judgment of the Commission, land indicating less than 435 million cubic feet of gas reserves recoverable over a 20-year period are less likely to be developed without the incentive price of Section 107 of the Natural Gas Pricing Act of 1978 and therefore should be recommended for designation as a tight formation eligible for the incentive price.

(31) That Consolidated's Exhibit 1 shows the location of Dakota wells in the area, their 1980 production, and their cumulative production since completion, and the cumulative production (over a period of approximately 20 years or less) ranges from very low obviously non-commercial wells to almost three billion cubic feet of gas.

(32) That in accordance with the Commission's previous findings that the Dakota is of low permeability and the original wells on 320-acre tracts were not draining more than the 160-acre tract upon which they were located, and that the reserves under the 160-acre upon which the original 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, it is reasonable to assume that the infill wells in the area should recover gas reserves similar to, if not equal to, the cumulative reserves indicated on Consolidated's Exhibit 1.

Case No. 7116 De Novo
Order No. R-6747-A

(33) That pursuant to previous Findings Nos. (20) and (21), and to Findings Nos. (31) and (32) above, and to Consolidated's Exhibit 1, it is reasonable to assume that the average infill well drilled in the following described area will encounter recoverable reserves of 435 million or more cubic feet of gas:

TOWNSHIP 31 NORTH, RANGE 12 WEST, NMPM

Sections 5 through 8: All
Sections 17 through 20: All
Sections 29 through 32: All

TOWNSHIP 31 NORTH, RANGE 13 WEST, NMPM

Section 13: All
Sections 22 through 27: All
Sections 33 through 36: All

containing 14,482 acres, more or less.

(34) That it is the judgment of the Commission that the above-described lands can be developed absent the incentive price established in 18 C.F.R. Section 271.703(a) and should not be further considered for recommendation for designation as a tight formation.

(35) That there are fresh water aquifers underlying the lands being considered, and these aquifers extend to a depth of approximately 1000 feet.

(36) 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.

(37) 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 13 WEST, NMPM

Sections 1 through 12: All
Sections 14 through 21: All
Sections 28 through 32: All

containing some 15,163 acres, more or less, all in San Juan County, New Mexico.

Case No. 7116 De Novo
Order No. R-6747-A

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 13 WEST, NMPM.
Sections 1 through 12: All
Sections 14 through 21: All
Sections 28 through 32: All

containing approximately 15,163 acres, more or less.

(2) That no recommendation is made as to those lands described in Finding No. (8) of this order which are not included in Order No. (1) above.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Division 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

submitted in equal amounts with each payment up to the date upon which such charges become due and payable. After giving the borrower notice of such deficiency and of the additional deposits required to make up the deficiency, the association may deduct the necessary amounts from the borrower's regularly-scheduled installment payments if the borrower fails to make the additional deposits.

11. Amend § 545.8-5 by revising paragraph (b) thereof, to read as follows:

§ 545.8-5 Loan payments.

(b) *Loan payments and repayments.* Payments on the principal indebtedness of all loans on real estate shall be applied directly to reduction of such indebtedness, but prepayments made on an installment loan may be reapplied from time to time wholly or partly to offset payments which subsequently accrue under the loan contract. A borrower on a loan secured by a home or combination of home and business property may prepay the loan without penalty unless the loan contract expressly provides for all of the following: (1) a prepayment penalty, (2) a fixed interest rate, and (3) only such increases in the loan balance as result from the deferral and capitalization of interest. The prepayment penalty for a loan secured by a home or combination of home business property shall not be more than six months' advance interest on that part of the aggregate amount of all prepayments made on such loan in any 12-month period which exceeds 20 percent of the original principal amount of the loan.

12. Amend § 545.8-8 by adding a second sentence thereto, to read as follows:

§ 545.8-8 Appraisal.

* * * The association shall pay the cost of any appraisal of the security property obtained by the association after loan closing but prior to maturity of a loan unless the borrower specifically requested the appraisal or the appraisal is made pursuant to the borrower's request to modify or refinance the loan.

PART 555—BOARD RULINGS

§ 555.3 [Amended]

13. Amend paragraph (b) of § 555.3 by removing "80" and inserting in its place "90".

14. Remove § 555.6, to read as follows:

§ 555.6 Refinancing unsecured loans. [Removed eff.]

§ 555.11 [Amended]

15. Amend § 555.11 by removing the term "§ 545.6-6" and inserting in its place the term "§ 545.8-2(c)".

PART 561—DEFINITIONS

16. Remove § 561.14, to read as follows:

§ 561.14 Adjusted net worth. [Removed eff.]

PART 570—BOARD RULINGS

17. Remove § 570.9 to read as follows:

§ 570.9 Lending territory; relocation of principal office. [Removed eff.]

(Sec. 5, 48 Stat. 132, as amended (12 U.S.C. 1484); Secs. 402, 403, 407, 48 Stat. 1256, 1257, 1260, as amended (12 U.S.C. 1725, 1726, 1730); Reorg. Plan No. 3 of 1947; 3 C.F.R., 1943-1948 Comp., p. 1071)

By the Federal Home Loan Bank Board.

James J. McCarthy,
Acting Secretary.

[FR Doc. 82-12863 Filed 5-6-82; 8:45 am]

BILLING CODE 6720-01-6

SECURITIES AND EXCHANGE COMMISSION

17 CFR Part 210

[Release Nos. 33-6400; 34-18701; IC-12413]

Financial Statement Requirements for Registered Investment Companies; Proposed Revision of Rules

AGENCY: Securities and Exchange Commission.

ACTION: Extension of time for comment.

SUMMARY: The Commission announces that it is extending for 30 days the date by which comments should be received on a proposed revision of financial statement requirements for registered investment companies. The Commission has received requests that the comment period be extended and believes that a 30-day extension will be beneficial since it will result in the receipt of additional useful comments.

DATE: Comments should be received by the Commission on or before May 30, 1982.

ADDRESSES: Comments should be submitted in triplicate to George A. Fitzsimmons, Secretary, Securities and Exchange Commission, Washington, D.C. 20549. Comment letters should refer to File No. S7-918. All comments will be available for public inspection at the Commission's Public Reference Room,

1100 L Street, NW., Washington, D.C. 20549.

FOR FURTHER INFORMATION CONTACT: Clarence M. Staubs, or John W. Albert, Office of the Chief Accountant, Securities and Exchange Commission, Washington, D.C. 20549 (202-272-2133).

SUPPLEMENTARY INFORMATION: On January 11, 1982, the Commission proposed for public comment Release No. 33-6374 (46 FR 2776) which would revise requirements for financial statements of registered investment companies. In order to receive the benefit of the comments of a greater number of interested parties, and in view of the requests received by the Commission for additional time in which to comment, the Commission has extended the comment period on this release by 30 days, until May 30, 1982.

By the Commission.

George A. Fitzsimmons,
Secretary.

April 30, 1982.

[FR Doc. 82-12832 Filed 5-6-82; 8:45 am]

BILLING CODE 8010-01-2

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

18 CFR Part 271

[Docket No. RM79-76 (New Mexico-14)]

High-Cost Gas Produced From Tight Formations; New Mexico

AGENCY: Federal Energy Regulatory Commission, DOE.

ACTION: Notice of proposed rulemaking.

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 Notice of Proposed Rulemaking by the Director of the Office of Pipeline and Producer Regulation contains the recommendation of the State of New Mexico that the Dakota Formation be

designated as a tight formation under § 271.703(d).

DATE: Comments on the proposed rule are due on June 2, 1982.

PUBLIC HEARING: No public hearing is scheduled in this docket as yet. Written requests for a public hearing are due on May 18, 1982.

ADDRESS: Comments and requests for hearing must be filed with the Office of the Secretary, 825 North Capitol Street, NE., Washington, D.C. 20426.

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

SUPPLEMENTARY INFORMATION:

Issued: May 3, 1982.

I. Background

On April 19, 1982, the State of New Mexico Energy and Minerals Department Oil Conservation Division (New Mexico) submitted to the Commission a recommendation, in accordance with § 271.703 of the Commission's regulations (45 FR 58034, August 22, 1980), that the Dakota Formation located in San Juan County, New Mexico, be designated as a tight formation. Pursuant to § 271.703(c)(4) of the regulations, this Notice of Proposed Rulemaking is hereby issued to determine whether New Mexico's recommendation that the Dakota Formation be designated a tight formation should be adopted. The United States Department of the Interior, Minerals Management Service (formerly the U.S. Geological Survey) concurs with New Mexico's recommendation. New Mexico's recommendation and supporting data are on file with the Commission and are available for public inspection.

II. Description of Recommendation

The Dakota Formation is located in San Juan County, New Mexico, in a portion of Township 31 North, Range 13 West, NMPM, in the Basin Dakota Gas Pool, in the northwestern portion of the San Juan Basin near Hogback Monocline. The average depth to the top of the Dakota Formation is 6,544 feet. The gross thickness of the formation is approximately 400 feet.

The recommended area is subject to New Mexico Order No. R-1670-V, issued on May 22, 1979, which authorizes infill drilling in the Basin-Dakota Gas Pool. Accordingly, certain portions within the proposed area may be subject to exclusion pursuant to § 271.703(c)(2)(i)(D) of the regulations.

III. Discussion of Recommendation

New Mexico claims in its submission that evidence gathered through information and testimony presented at a public hearing in Case No. 7116 De Novo convened by New Mexico on this matter demonstrates that:

(1) The average *in situ* gas permeability throughout the pay section of the proposed area is not expected to exceed 0.1 millidarcy;

(2) The stabilized production rate, against atmospheric pressure, of wells completed for production from the recommended formation, without stimulation, is not expected to exceed the maximum allowable production rate set out in § 271.703(c)(2)(i)(B); and

(3) No well drilled into the recommended formation is expected to produce more than five (5) barrels of oil per day.

New Mexico further asserts that existing State and Federal Regulations assure that development of this formation will not adversely affect any fresh water aquifers.

Accordingly, pursuant to the authority delegated to the Director of the Office of Pipeline and Producer Regulation by Commission Order No. 97, issued in Docket No. RM80-88 (45 FR 53456, August 12, 1980), notice is hereby given of the proposal submitted by New Mexico that the Dakota Formation, as described and delineated in New Mexico's recommendation as filed with the Commission, be designated as a tight formation pursuant to § 271.703.

IV. Public Comment Procedures

Interested persons may comment on this proposed rulemaking by submitting written data, views or arguments to the Office of the Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, D.C. 20426, on or before June 2, 1982. Each person submitting a comment should indicate that the comment is being submitted in Docket No. RM79-76 (New Mexico-14), and should give reasons including supporting data for any recommendations. Comments should include the name, title, mailing address, and telephone number of one person to whom communications concerning the proposal may be addressed. An original and 14 conformed copies should be filed with the Secretary of the Commission. Written comments will be available for public inspection at the Commission's Division of Public Information, Room 1000, 825 North Capitol Street, NE., Washington, D.C., during business hours.

Any person wishing to present testimony, views, data, or otherwise participate at a public hearing should notify the Commission in writing that they wish to make an oral presentation and therefore request a public hearing. Such request shall specify the amount of time requested at the hearing. Requests should be filed with the Secretary of the Commission no later than May 18, 1982.

List of Subjects in 18 CFR Part 271

Natural gas, Incentive price, Tight formations.

(Natural Gas Policy Act of 1978, 15 U.S.C. 3301-3432.)

Accordingly, the Commission proposes to amend the regulations in Part 271, Subchapter H, Chapter I, Title 18, *Code of Federal Regulations*, as set forth below, in the event New Mexico's recommendation is adopted.

Kenneth A. Williams,

Director, Office of Pipeline and Producer Regulation.

PART 271—CEILING PRICES

Section 271.703 is revised by adding new paragraph (d)(117) to read as follows:

§ 271.703 Tight formations.

(d) *Designated tight formations.* * * *
(78) through (116) [Reserved]
(117) *Dakota Formation in New Mexico.* RM79-76 (New Mexico-14).

(i) *Delineation of formation.* The Dakota Formation is located in Township 31 North, Range 13 West, Sections 1 through 12, Sections 14 through 21, Sections 28 through 32, NMPM, San Juan County, New Mexico. The formation is within the Basin-Dakota Gas Pool, in the northwestern portion of the San Juan Basin near the Hogback Monocline.

(ii) *Depth.* The Dakota Formation delineates the "Dakota Producing Interval" which includes the Graneros Shale Formation and the productive upper portion of the Morrison Formation as well as the Dakota Formation. The average depth to the top of the Dakota Formation is 6,544 feet. Gross thickness of the formation is approximately 400 feet.

[FR Doc. 82-12475 Filed 5-6-82; 8:45 am]

BILLING CODE 6717-01-M

¶ 32,220 High-Cost Gas Produced From Tight Formations (New Mexico-14)

47 F.R. 19719 (May 7, 1982).

18 CFR Part 271

[Docket No. RM79-76 (New Mexico-14)]

High-Cost Gas Produced From Tight Formations; New Mexico

AGENCY: Federal Energy Regulatory Commission, DOE.

ACTION: Notice of proposed rulemaking.

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 Notice of Proposed Rulemaking by the Director of the Office of Pipeline and Producer Regulation contains the recommendation of the State of New Mexico that the Dakota Formation be designated as a tight formation under § 271.703(d).

DATE: Comments on the proposed rule are due on June 2, 1982.

PUBLIC HEARING: No public hearing is scheduled in this docket as yet. Written requests for a public hearing are due on May 18, 1982.

ADDRESS: Comments and requests for hearing must be filed with the Office of the Secretary, 825 North Capitol Street, NE., Washington, D.C. 20426.

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

**S U P P L E M E N T A R Y
I N F O R M A T I O N:**

Issued: May 3, 1982.

¶ 32,220

I. Background

On April 19, 1982, the State of New Mexico Energy and Minerals Department Oil Conservation Division (New Mexico) submitted to the Commission a recommendation, in accordance with § 271.703 of the Commission's regulations (45 FR 56034, August 22, 1980), that the Dakota Formation located in San Juan County, New Mexico, be designated as a tight formation. Pursuant to § 271.703(c)(4) of the regulations, this Notice of Proposed Rulemaking is hereby issued to determine whether New Mexico's recommendation that the Dakota Formation be designated a tight formation should be adopted. The United States Department of the Interior, Minerals Management Service (formerly the U.S. Geological Survey) concurs with New Mexico's recommendation. New Mexico's recommendation and supporting data are on file with the Commission and are available for public inspection.

II. Description of Recommendation

The Dakota Formation is located in San Juan County, New Mexico, in a portion of Township 31 North, Range 13 West, NMPM, in the Basin Dakota Gas Pool, in the northwestern portion of the San Juan Basin near Hogback Monocline. The average depth to the top of the Dakota Formation is 6,544 feet. The gross thickness of the formation is approximately 400 feet.

The recommended area is subject to New Mexico Order No. R-1670-V, issued on May 22, 1979, which authorizes infill drilling in the Basin-Dakota Gas Pool. Accordingly, certain portions within the proposed area may be subject to exclusion pursuant to § 271.703(c)(2)(i)(D) of the regulations.

III. Discussion of Recommendation

New Mexico claims in its submission that evidence gathered through information and testimony presented at a public hearing in Case No. 7116 De Novo convened by New Mexico on this matter demonstrates that:

(1) The average *in situ* gas permeability throughout the pay section of the proposed area is not expected to exceed 0.1 millidarcy;

(2) The stabilized production rate, against atmospheric pressure, of wells completed for production from the recommended formation, without stimulation, is not expected to exceed the maximum allowable production rate set out in § 271.703(c)(2)(i)(B); and

(3) No well drilled in the recommended formation is expected to produce more than five (5) barrels of oil per day.

New Mexico further asserts that existing State and Federal Regulations assure that development of this formation will not adversely affect any fresh water aquifers.

Accordingly, pursuant to the authority delegated to the Director of the Office of Pipeline and Producer Regulation by Commission Order No. 97, issued in Docket No. RM80-68 (45 FR 53456, August 12, 1980), notice is hereby given of the proposal submitted by New Mexico that the Dakota Formation, as described and delineated in New Mexico's recommendation as filed with the Commission, be designated as a tight formation pursuant to § 271.703.

IV. Public Comment Procedures

Interested persons may comment on this proposed rulemaking by submitting written data, views or arguments to the office of the Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, D.C. 20426, on or before June 2, 1982. Each person submitting a comment should indicate that the comment is being submitted in Docket No. RM79-76 (New Mexico-14), and should give reasons including supporting data for any recommendations. Comments should include the name, title, mailing address, and telephone number of one person to whom communications concerning the proposal may be addressed. An original and 14 conformed copies should be filed with the Secretary of the Commission. Written comments will be available for public inspection at the Commission's Division of Public Information, Room 1000, 825 North Capitol Street, NE., Washington, D.C., during business hours.

Any person wishing to present testimony, views, data, or otherwise

participate at a public hearing should notify the Commission in writing that they wish to make an oral presentation and therefore request a public hearing. Such request shall specify the amount of time requested at the hearing. Requests should be filed with the Secretary of the Commission no later than May 18, 1982.

List of Subjects in 18 CFR Part 271

Natural gas, Incentive price, Tight formations.

(Natural Gas Policy Act of 1978, 15 U.S.C. 3301-3432.)

Accordingly, the Commission proposes to amend the regulations in Part 271, Subchapter H, Chapter I, Title 18, *Code of Federal Regulations*, as set forth below, in the event New Mexico's recommendation is adopted.

Kenneth A. Williams,

Director, Office of Pipeline and Producer Regulation.

PART 271—CEILING PRICES

Section 271.703 is revised by adding new paragraph (d)(117) to read as follows:

§ 271.703 Tight formations.

* * * * *

(d) *Designated tight formations.* * * *

(78) through (116) [Reserved]

(117) *Dakota Formation in New Mexico.* RM79-76 (New Mexico-14).

(i) *Delineation of formation.* The Dakota Formation is located in Township 31 North, Range 13 West, Sections 1 through 12, Sections 14 through 21, Sections 28 through 32, NMPM, San Juan County, New Mexico. The formation is within the Basin-Dakota Gas Pool, in the northwestern portion of the San Juan Basin near the Hogback Monocline.

(ii) *Depth.* The Dakota Formation delineates the "Dakota Producing Interval" which includes the Graneros Shale Formation and the productive upper portion of the Morrison Formation as well as the Dakota Formation. The average depth to the top of the Dakota Formation is 6,544 feet. Gross thickness of the formation is approximately 400 feet.

SUMMARY: This action establishes the Rangeley, Maine, 700 Foot Transition Area so as to provide protected airspace for aircraft executing a new Nondirectional Radio Beacon Airport (NDB-A) Standard Instrument Approach Procedure (SIAP) to the Rangeley Municipal Airport, Rangeley, Maine.

EFFECTIVE DATE: 0901 GMT, October 23, 1986.

FOR FURTHER INFORMATION CONTACT: Stanley E. Matthews, Manager, Operations, Procedures and Airspace Branch, ANE-530, Federal Aviation Administration, Air Traffic Division, 12 New England Executive Park, Burlington, Massachusetts 01803. Telephone (617) 273-7139.

SUPPLEMENTARY INFORMATION:

History

On May 12, 1986, the FAA proposed to amend § 71.181 of Part 71 of the Federal Aviation Regulations (14 CFR Part 71) to establish the Rangeley, Maine, 700 Foot Transition Area so as to provide protected airspace for aircraft executing a new Nondirectional Radio Beacon Airport (NDB-A) Standard Instrument Approach Procedure (SIAP) to the Rangeley Municipal Airport, Rangeley, Maine. [51 FR 17365]

Interested parties were invited to participate in this Rulemaking Proceeding by submitting written comments on the proposal to the FAA. No comments objecting to the proposal were received. Except for editorial changes, this amendment is the same as that proposed in the Notice. Section 71.181 of Part 71 of the Federal Aviation Regulations was republished in Handbook 7400.8B dated January 2, 1986.

The Rule

This amendment to Part 71 of the Federal Aviation Regulations establishes the Rangeley, Maine, 700 Foot Transition Area so as to provide protected airspace for Instrument Flight Rule aircraft executing a new Nondirectional Radio Beacon Airport (NDB-A) Standard Instrument Approach Procedure (SIAP) to the Rangeley Municipal Airport, Rangeley, Maine.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore, (1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated

impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 71
Aviation safety, Transition areas.

Adoption of the Amendment

PART 71—(AMENDED)

Accordingly, pursuant to the authority delegated to me, the Federal Aviation Administration (FAA) amends Part 71 of the FAR (14 CFR Part 71) as follows:

1. The authority citation for Part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; Executive Order 10854; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

§ 71.181 (Amended)

2. By amending Section 71.181 as follows:

Rangeley, Maine, Transition Area

That airspace extending upward from 700 feet above the surface within a 6.5 mile radius of the center of the Rangeley Municipal Airport, latitude 44 59'00" N., longitude 70 39'45" W., Rangeley, Maine, and within 3.5 miles each side of the Rangeley NDB, latitude 44 56'02" N., longitude 70 45'03" W., 294 Magnetic (286 True) bearing from the Rangeley NDB, extending from the 6.5 mile radius to 10 miles southwest of the Rangeley NDB.

Issued in Burlington, Massachusetts, on July 23, 1986.

James I. Lucas,

Manager, Air Traffic Division, ANE-500.

[FR Doc. 86-17510 Filed 8-4-86; 8:45 am]

BILLING CODE 4910-13-2

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

18 CFR Part 271

(Docket No. RM79-76-115 (New Mexico-14); Order No. 456)

High-Cost Gas Produced From Tight Formations; New Mexico

Issued: July 31, 1986.

AGENCY: Federal Energy Regulatory Commission, DOE.

ACTION: Final rule.

SUMMARY: Section 107(c)(5) of the Natural Gas Policy Act of 1978 authorizes the Federal Energy

Regulatory Commission to designate certain types of 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 rule designating natural gas produced from tight formations as high-cost gas which may receive an incentive price. 18 CFR 271.703 (1986). That rule established procedures for jurisdictional agencies to submit recommendations of areas for designation as tight formations. This order adopts the recommendation of the State of New Mexico Energy and Mineral Department Oil Conservation Division that portions of the Dakota Producing Interval located in the Basin-Dakota Gas Pool, San Juan County, New Mexico, be designated as a tight formation under § 271.703(d) of the Commission's regulations.

EFFECTIVE DATE: This rule is effective September 2, 1986.

FOR FURTHER INFORMATION CONTACT: Mitchell L. Cohen, (202) 357-5491; Victor H. Zabel, (202) 357-8618; or Michael J. Boyle, (202) 357-5689.

SUPPLEMENTARY INFORMATION:

Before Commissioners: Anthony C. Souza, Acting Chairman; Charles C. Stalon, Charles A. Trabandt and C.M. Neeve.

Based on the recommendations made by the State of New Mexico Energy and Minerals Department Oil Conservation Division (New Mexico), the Federal Energy Regulatory Commission (Commission) amends its regulations¹ to include a portion of the Dakota Producing Interval in the Basin-Dakota Gas Pool, San Juan County, New Mexico, as a designated tight formation eligible for incentive pricing.

Background

On April 19, 1982, the Commission received a recommendation pursuant to § 271.703(d) of the Commission's regulations² from New Mexico that a specified area of the Dakota Producing Interval located in the Basin-Dakota Gas Pool, San Juan County, New Mexico, be designated as a tight formation. A notice proposing the designation was issued on May 3, 1982.³ Southern California Gas

¹ 18 CFR 271.703(d) (1986).

² *Id.*

³ 47 FR 19719 (May 7, 1982). The Commission received three comments on the proposed rule: one in support of New Mexico's recommendation from Husky Oil Company and two in opposition, one jointly from Southern California Gas Company and Pacific Lighting Gas Supply Company and one from Pacific Gas and Electric Company. No party requested a public hearing.

Company, Pacific Lighting Gas Supply Company (SoCal/PLGS), and Pacific Gas and Electric Company filed comments stating that certain acreage could be subject to exclusion pursuant to § 271.703(c)(2)(i)(D) of the Commission's regulations since, in their view, the area was previously authorized for infill drilling by New Mexico and could be developed without incentive pricing. SoCal/PLGS also claimed that the royalty rate and average well cost data used by Consolidated Oil and Gas, Inc. (Consolidated) to support its original application to New Mexico were not representative and should not be relied upon. They further argue that producers will have little incentive to keep costs down if they know that they can rely on such costs to show the need for incentive pricing.

On June 24, 1982, the Commission requested additional information, specifically the apud dates for the wells drilled into the Dakota Formation within the application area. The Commission received that information on January 23, 1985.

Discussion

The evidence submitted by New Mexico supports the assertion that certain acreage in the Dakota Producing Interval in the Basin-Dakota Gas Pool, San Juan County, New Mexico, meets the guidelines contained in § 271.703(c)(2)(i). The evidence is based on economic data, geologic data from eighteen wells, and engineering and production data from three wells located within the application area and two wells located just east of the application area.

The original application filed by Consolidated with New Mexico sought tight formation designation only for the Dakota Formation underlying 29,645 acres. New Mexico had sufficient data to consider a larger stratigraphic area and made its recommendation for the Dakota Producing Interval (comprised of the Graneros Shale Formation, the Dakota Formation, and the productive upper portion of the Morrison Formation). Based upon economic data provided by Consolidated, however, New Mexico excluded 14,482 acres from the original application area. New Mexico states that in its judgment the excluded acreage can be developed absent the incentive price established in 18 CFR 271.703(a) (1986). Thus, New Mexico's recommendation to the Commission is for some 15,163 acres of the Dakota Producing Interval in the

Basin-Dakota Gas Pool, San Juan County, New Mexico.

Analysis of the data submitted indicates that the guidelines contained in § 271.703(c)(2)(i) are satisfied.⁴ The average *in situ* gas permeability throughout the Dakota Producing Interval is expected to be 0.0296 millidarcy⁵ which is less than the maximum allowable 0.1 millidarcy. The average observed flow rate prior to stimulation is sixty-three Mcf per day⁶ which is less than the maximum allowable rate of 251 Mcf per day. None of the wells drilled into the Dakota Producing Interval within the recommended area are expected to produce, prior to stimulation, more than five barrels of crude oil per day. Finally, even though the Basin-Dakota Gas Pool in San Juan County is authorized for infill drilling,⁷ the record supports New Mexico's holding that incentive prices are necessary for the development of the recommended area. The assertion by SoCal/PLGS that New Mexico's consideration are unrepresentative in the area. New Mexico's reliance on the royalty rates provided by Consolidated was unreasonable is unsupported. SoCal/PLGS have provided no evidence that such rates, which are legitimate expenses for New Mexico's reliance on the average well cost data provided by Consolidated also appears reasonable and no contrary information has been provided by opposing commenters. New Mexico, applying the standard set forth in § 271.703(c)(2)(i)(D) of the Commission's regulations, excluded nearly half of the acreage originally applied for by Consolidated because that area could be economically developed without additional incentives. This Commission will not disturb the findings by New Mexico that incentive pricing is necessary for development of the recommended area, since New Mexico's recommendation is supported by evidence in the record which is uncontradicted by opposing commenters. Accordingly, the Commission adopts New Mexico's recommendation.

The Commission orders

The Commission adopts the

⁴ The analysis included the data from the two wells outside the original application area.

⁵ The average *in situ* gas permeability of those wells within the original application area is 0.0234 millidarcy.

⁶ The average flow rate for those wells within the original application area is twenty-two Mcf per day.

⁷ New Mexico Order No. R-1670-V, effective July 1, 1979.

recommendation made by the State of New Mexico Energy and Minerals Department Oil Conservation Division that a portion of the Dakota Producing Interval within the Basin-Dakota Gas Pool, San Juan County, New Mexico, be designated as a tight formation under § 271.703(d).

This amendment shall become effective September 2, 1986.

List of Subjects in 18 CFR Part 271

Natural gas, Incentive price, Tight formations.

In consideration of the foregoing, Part 271 of Subchapter H, Chapter I, Title 18, Code of Federal Regulations, is amended as set forth below.

By the Commission.

Kenneth F. Plumb,

Secretary.

PART 271—(AMENDED)

1. The authority citation for Part 271 continues to read as follows:

Authority: 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.

2. Section 271.703 is amended by adding paragraph (d) (197) to read as follows:

§ 271.703 Tight formations.

(d) Designated tight formations.

(197) Dakota Producing Interval in New Mexico. RM79-76 (New Mexico-14).

(i) *Delineation of formation.* The Dakota Producing Interval is located in Township 31 North, Range 13 West, Sections 1 through 12, Sections 14 through 21, Sections 28 through 32, NMPM, San Juan County, New Mexico. The interval is within the Basin-Dakota Gas Pool, in the northwestern portion of the San Juan Basin near the Hogback Monocline.

(ii) *Depth.* The Dakota Producing Interval is composed of the Graneros Shale Formation, the Dakota Formation, and the productive upper portion of the Morrison Formation. The average depth to the top of the Dakota Formation is 8,544 feet. Gross thickness of the interval is approximately 400 feet.

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feet and 7,444 feet on the well log of the Mitchell Energy Corporation C. W. Slay No. 1 well.

(195) *Upper Marchand Sand of the Hoxbar Group in Oklahoma.* RM79-76-246 (Oklahoma-7).

(i) *Delineation of formation.* The Upper Marchand Sand of the Hoxbar Group is found in Section 11, Township 3 North, Range 9 West, in Comanche County, Oklahoma.

(ii) *Depth.* The depth to the top of the Upper Marchand Sand is 9,976 feet. The average net thickness of the recommended zone is 50 feet. The recommended zone consists of the upper half of the Marchand Sand. The Marchand Sand is overlain by the Medrano Sandstone and underlain by the Culp-Melton Zone.

(196) *Hosston Formation in Louisiana.* RM79-76 (Louisiana-7).

(i) *Delineation of formation.* The Hosston Formation is located in Township 12 North, Ranges 7, 8, and 9 West; Township 13 North, Ranges 7, 8, and 9 West; and Township 14 North, Ranges 7, 8, and 9 West; comprising approximately 324 square miles of portions of Bienville, Natchitoches, and Red River Parishes, Louisiana.

(ii) *Depth.* The Hosston Formation is defined as being that gas and condensate bearing sand encountered between the measured depths of 7,320 feet and 10,090 feet on the induction electrical log of the Amerada Hess Corporation—Placid Oil Company—Charles Beach Jr. No. 1 well, located in section 34, Township 12 North, Range 8 West, Red River Parish, Louisiana.

(197) *Dakota Producing Interval in New Mexico.* RM79-76 (New Mexico-14).

(i) *Delineation of formation.* The Dakota Producing Interval is located in Township 31 North, Range 13 West, Sections 1 through 12, Sections 14 through 21, Sections 28 through 32, NMPM, San Juan County, New Mexico. The interval is within the Basin—Dakota Gas Pool, in the northwestern portion of the San Juan Basin near the Hogback Monocline.

(ii) *Depth.* The Dakota Producing Interval is composed of the Graneros Shale Formation, the Dakota Formation, and the productive upper portion of the Morrison Formation. The average depth to the top of the Dakota Formation is 6,544 feet. Gross thickness of the interval is approximately 400 feet.

(198) The Maxton, Little Lime, and Blue Monday zones of the Mauch Chunk Group; the Big Lime and Keener zones of the Greenbrier Group; and the Big Injun and Squaw zones of the Pocono Group underlying portions of Braxton and Clay Counties, West Virginia. RM79-76-233 (West Virginia-5).

(i) *Delineation of formation.* The Maxton zone underlies the Salt Sands zone of the Pottsville Group of Pennsylvania age and overlies the Little Lime zone of the Mauch Chunk Group. The Little Lime zone underlies the Maxton zone and overlies the Blue Monday zone of the Mauch Chunk Group. The Blue Monday zone underlies the Little Lime zone and overlies the Big Lime zone of the Greenbrier Group. The Big Lime zone underlies the Blue Monday zone