



**Southern**

**Rockies**

**Business**

**Unit**

August 20, 1996

Mr. William J. LeMay, Director  
New Mexico Oil Conservation Division  
2040 S. Pacheco Street  
P. O. Box 6429  
Santa Fe, NM 87505

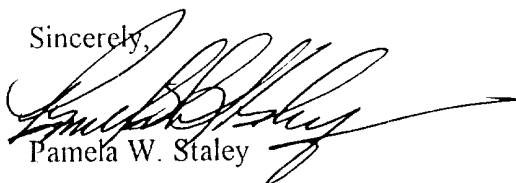
**Application for Exception to Rule 303-A**  
**Downhole Commingling**  
**GCU #312 Well**  
**Unit B Section 16-T28N-R12W**  
**Pinon Fruitland and West Kutz Pictured Cliffs Pools**  
**San Juan County, New Mexico**

**RECEIVED**  
AUG 26 1996  
**OIL CON. DIV.**  
**DIST. 3**

Enclosed please find an administrative application form (C-107-A) and attachments for downhole commingling for the captioned well. Amoco is the only offset operator in both formations and interests are common between those formations so no notice is being made other than to the BLM and the Aztec District Office.

Should there be questions concerning this matter, please contact me at (303) 830-5344.

Sincerely,



Pamela W. Staley

Enclosures

cc: Mark Yamasaki  
Irina Mitselmakher  
Patty Haefele  
Wellfile & Proration File

Frank Chavez, Supervisor  
NMOCD District III  
1000 Rio Brazos Road  
Aztec, NM 87410

Duane Spencer  
Bureau of Land Management  
1235 La Plata Hwy.  
Farmington, NM 87401

DISTRICT I  
P.O. Box 1980, Hobbs NM 88241-1980

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-107-A  
New 3-12-96

DISTRICT II  
811 South First St., Artesia, NM 88210-2835

2040 S. Pacheco  
Santa Fe, New Mexico 87505-6429

DISTRICT III  
1000 Rio Brazos Rd. Aztec, NM 87410-1693

## OIL CONSERVATION DIVISION

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE  
☒ YES ☐ NO

### APPLICATION FOR DOWNHOLE COMMINGLING

Amoco Production Company

P.O. Box 800 Denver, CO 80201

Operator  
Gallegos Canyon Unit

312

Address  
B-16-28N-12W

San Juan

Lease

Well No.

Unit Ltr. - Sec Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 000778 Property Code 0 00570 API NO. 3004524798 Federal ☒ State ☐ (and/or) Fee ☐

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	PINON FRUITLAND 82880		WEST KUTZ PICTURED CLIFFS 79680
2. Top and Bottom of Pay Section (Perforations)	977' - 1017'		1278' - 1291'
3. Type of production (Oil or Gas)	GAS		GAS
4. Method of Production (Flowing or Artificial Lift)	FLOWING		FLOWING
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original	a. (Current) 280 PSI b. (Original) 579 PSI	a. <b>RECEIVED</b> AUG 26 1996 <b>OIL CON. DIV.</b> DIST. 3 b.	a. 277 PSI b. 506 PSI
6. Oil Gravity (" API) or Gas BTU Content	1000 BTU		1000 BTU
7. Producing or Shut-In?	PRODUCING		SHUT-IN
Production Marginal? (yes or no)	YES		YES

OIL CONSERVATION DIVISION

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Amoco Production Company

P.O. Box 800 Denver, CO 80201

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Gallegos Canyon Unit

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B-16-28N-12W

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6. Oil Gravity (° API) or Gas BTU Content	1000 BTU		1000 BTU
7. Producing or Shut-In?	PRODUCING		SHUT-IN
Production Marginal? (yes or no)	YES		YES
• If Shut-In, give data and oil/gas/water rates of last production Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data	Date: Rates: See attached for gas production. No water or oil production expected	Date: Rates:	Date: Rates:
• If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: Rates:	Date: Rates:	4/93 17 MCFD 0 BCPD <1 BWPD
8. Fixed Percentage Allocation Formula -% for each zone	Oil: % Gas %	Oil: % Gas %	Oil: % Gas %

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.

10. Are all working, overriding, and royalty interests identical in all commingled zones? ☒ Yes ☐ No  
If not, have all working, overriding, and royalty interests been notified by certified mail? ☐ Yes ☐ No  
Have all offset operators been given written notice of the proposed downhole commingling? ☒ Yes ☐ No

11. Will cross-flow occur? ☐ Yes ☒ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☐ Yes ☐ No (If No, attach explanation)

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

13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)

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

16. ATTACHMENTS:

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

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

SIGNATURE Pamela W. Staley TITLE REGULATORY AFFAIRS ENGR DATE 8/20/96

TYPE OR PRINT NAME PAMELA W. STALEY TELEPHONE NO. ( 303 ) 830-5344

AUG 3 1981

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLATForm C-102  
Supersedes C-128  
Effective 1-1-65

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

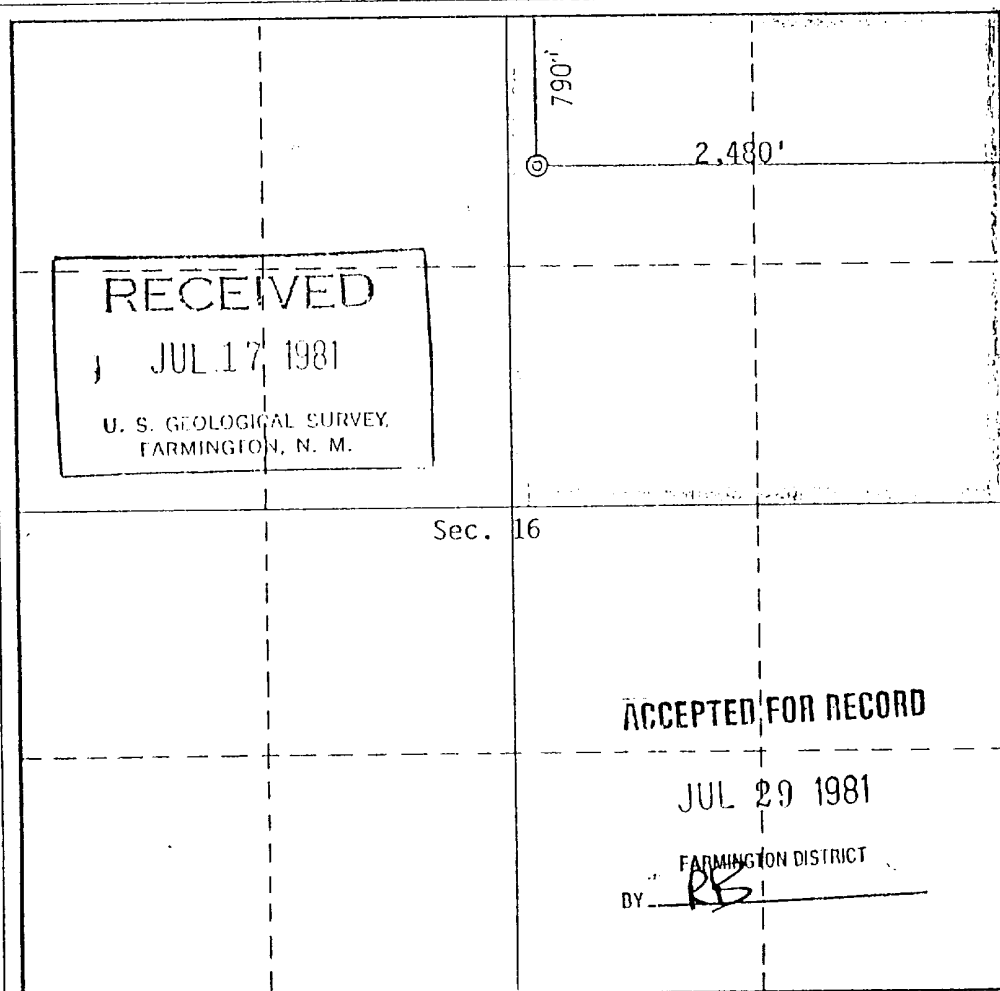
Operator Energy Reserves Group, Inc.			Lease Gallegos Canyon Unit		Well No. 312
Unit Letter B	Section 16	Township 28N	Range 12W	County San Juan	
Actual Footage Location of Well: 790 feet from the North line and 2,480 feet from the East line					
Ground Level Elev. 5,427'	Producing Formation Fruitland		Pool Pinon Fruitland	Dedicated Acreage: 160 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 \_\_\_\_\_

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

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



## CERTIFICATION

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

*P. Wagner*

Name

Phil Wagner

Position

Production Engineer

Company

Energy Reserves Group, Inc.

Date

July 15, 1981

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Registered Professional Engineer  
and/or Land Surveyor

Certificate No.

OPERATOR

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

Operator <b>ENERGY RESERVES GROUP</b>			Lease <b>GALLEGOS CANYON UNIT</b>		Well No. <b>312</b>
Unit Letter <b>B</b>	Section <b>16</b>	Township <b>28N</b>	Range <b>12W</b>	County <b>San Juan</b>	
Actual Footage Location of Well: <b>790</b> feet from the <b>North</b> line and <b>2480</b> feet from the <b>East</b> line					
Ground Level Elev. <b>5427</b>	Producing Formation <b>Pictured Cliffs</b>		Pool <b>West Kutz Pictured Cliffs</b>		Dedicated Acreage: <b>160</b> 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 \_\_\_\_\_

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

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

		790'	2480'	
Sec.			16	

Scale: 1"=1000'

CERTIFICATION

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

Name William J. Evans  
Position Field Services Administrator  
Company Energy Reserves Group, Inc.  
Date 9-18-80

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed August 20, 1980  
Registered Professional Engineer and Land Surveyor  
Fred H. Kelt, Jr.  
Certificate No. 3950

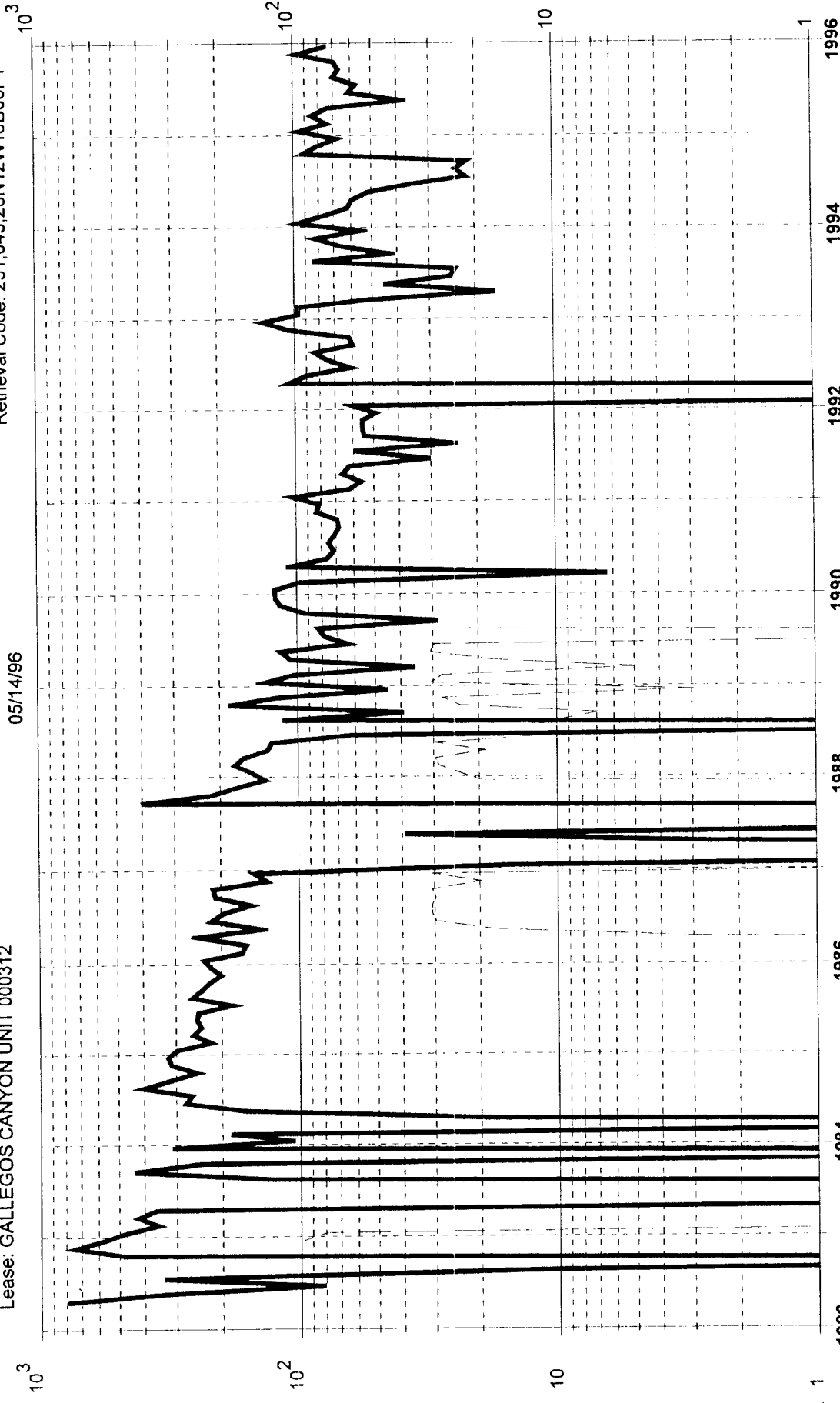
ESTIMATED BOTTOMHOLE PRESSURES									
GCU#312									
FT	PERFORATIONS	TOP	977	BOTTOM	1017	MIDPERF	997		
PC	PERFORATIONS	TOP	1278	BOTTOM	1304	MIDPERF	1291		
SHUT-IN PRESSURES									
	FT	=	250	PSIG					
	PC	=	238	PSIG					
	GRADIEN	= 0.8 PSI/FT							
	FT BHP =	250	PSIG +	997	X 0.08 PSIG				
	=	280	PSI						
	PC BHP =	238	PSIG +	1291	X 0.08 PSIG				
	=	277	PSI						

# Dwights

Lease: GALLEGOS CANYON UNIT 000312

Retrieval Code: 251,045,28N12W16B000FT

05/14/96



Water (bbl/day)

Gas (mcf/day)

F.P. Date: 04/82

Oil Cum: 0 bbl

Gas Cum: 661.5 mmcf

Location: 16B 28N 12W

County: SAN JUAN, NM

Field: PINON NORTH (FRUITLAND) FT

Reservoir: FRUITLAND

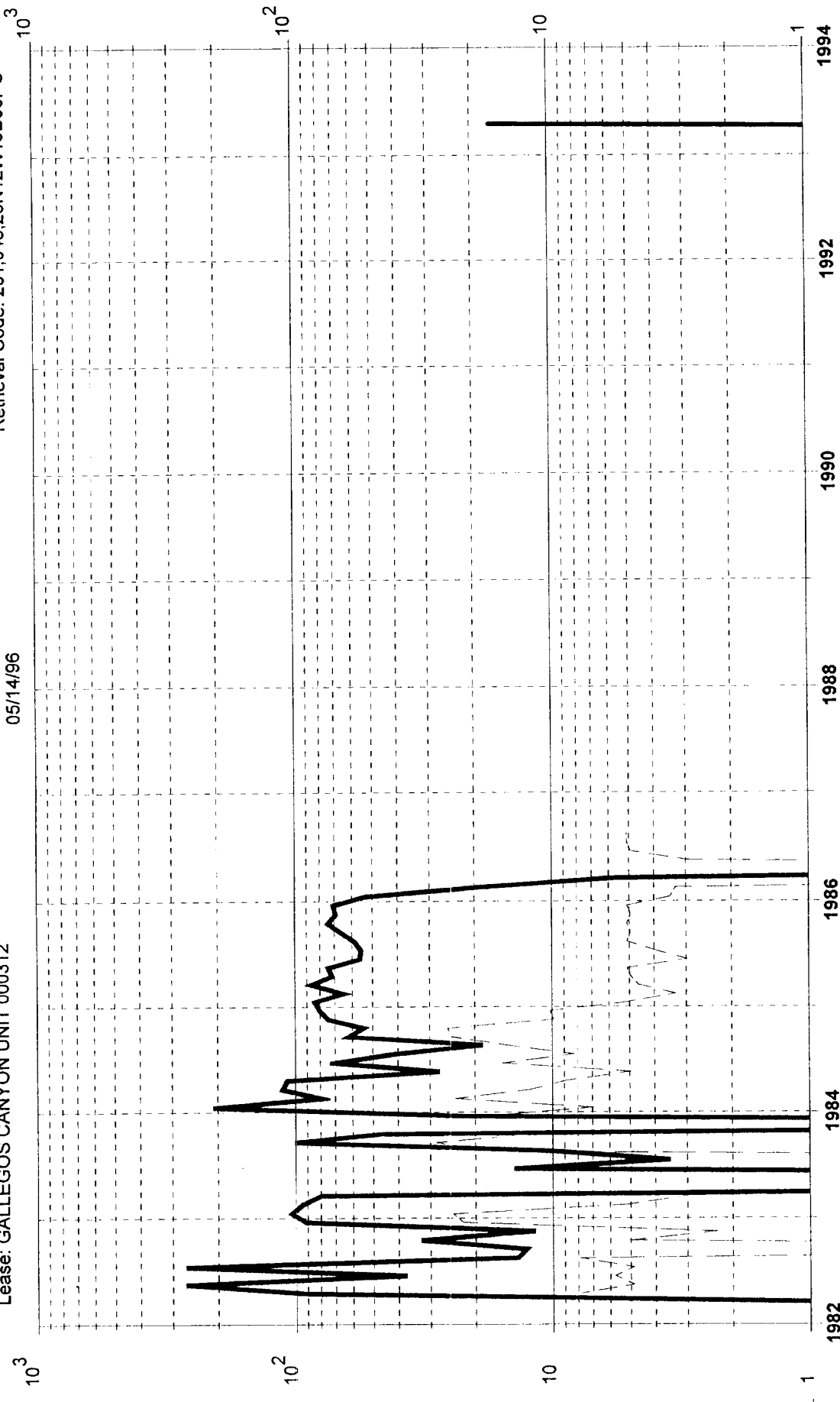
Operator: B H P PETR AMERICAS INC

# Dwights

Lease: GALLEGOS CANYON UNIT 000312

Retrieval Code: 251,045,28N12W16B000PC

05/14/96



Gas (mcf/day)

Water (bbl/day)

F.P. Date: 03/82

Oil Cum: 0 bbl

Gas Cum: 96.14 mmcf

Location: 16B 28N 12W

County: SAN JUAN, NM

Field: KUTZ WEST (PICTURED CLIFFS) PC

Reservoir: PICTURED CLIFFS

Operator: B H P PETR AMERICAS INC

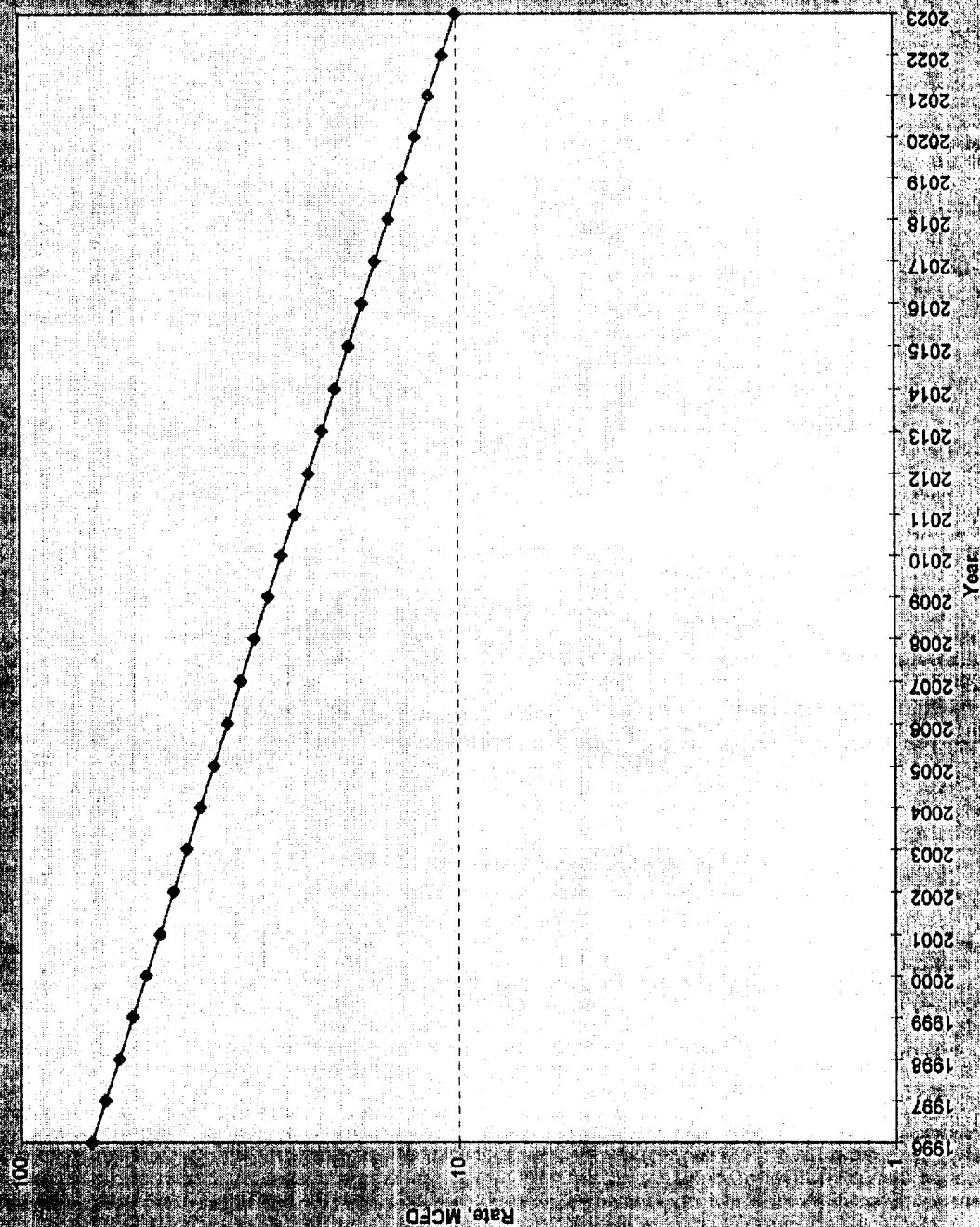


## ALLOCATION METHOD

GCU #312

The preferred allocation method for this well is to use the subtraction method. The Fruitland Sand has been on production since 1982 and provided herein is a future production profile for gas production from that formation. Production would be allocated using this schedule for the Fruitland Sand with the remaining production being attributed to the Pictured Cliffs formation. The Fruitland has historically recorded only dry gas so no forecast is being made for condensate.

GCU #312 Fruitland Sand Production Forecast



GCU # 312 Fruitland Sand Production Forecast - Monthly												
Initial Rate = 69 MCFD												
Annual Decline = 6.9 % (Monthly Decline = 0.594 %)												
Year	Jan	Feb	March	April	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1996								69.0	68.6	68.2	67.8	67.4
1997	67.0	66.6	66.2	65.8	65.4	65.0	64.6	64.2	63.9	63.5	63.1	62.7
1998	62.4	62.0	61.6	61.2	60.9	60.5	60.2	59.8	59.5	59.1	58.7	58.4
1999	58.1	57.7	57.4	57.0	56.7	56.3	56.0	55.7	55.3	55.0	54.7	54.4
2000	54.0	53.7	53.4	53.1	52.8	52.5	52.1	51.8	51.5	51.2	50.9	50.6
2001	50.3	50.0	49.7	49.4	49.1	48.8	48.6	48.3	48.0	47.7	47.4	47.1
2002	46.8	46.6	46.3	46.0	45.7	45.5	45.2	44.9	44.7	44.4	44.1	43.9
2003	43.6	43.4	43.1	42.8	42.6	42.3	42.1	41.8	41.6	41.3	41.1	40.8
2004	40.6	40.4	40.1	39.9	39.6	39.4	39.2	38.9	38.7	38.5	38.3	38.0
2005	37.8	37.6	37.4	37.1	36.9	36.7	36.5	36.3	36.0	35.8	35.6	35.4
2006	35.2	35.0	34.8	34.6	34.4	34.2	34.0	33.8	33.6	33.4	33.2	33.0
2007	32.8	32.6	32.4	32.2	32.0	31.8	31.6	31.4	31.2	31.1	30.9	30.7
2008	30.5	30.3	30.1	30.0	29.8	29.6	29.4	29.3	29.1	28.9	28.7	28.6
2009	28.4	28.2	28.1	27.9	27.7	27.6	27.4	27.2	27.1	26.9	26.8	26.6
2010	26.4	26.3	26.1	26.0	25.8	25.7	25.5	25.4	25.2	25.1	24.9	24.8
2011	24.6	24.5	24.3	24.2	24.0	23.9	23.8	23.6	23.5	23.3	23.2	23.1
2012	22.9	22.8	22.6	22.5	22.4	22.2	22.1	22.0	21.9	21.7	21.6	21.5
2013	21.3	21.2	21.1	21.0	20.8	20.7	20.6	20.5	20.3	20.2	20.1	20.0
2014	19.9	19.7	19.6	19.5	19.4	19.3	19.2	19.1	18.9	18.8	18.7	18.6
2015	18.5	18.4	18.3	18.2	18.1	18.0	17.8	17.7	17.6	17.5	17.4	17.3
2016	17.2	17.1	17.0	16.9	16.8	16.7	16.6	16.5	16.4	16.3	16.2	16.1
2017	16.0	15.9	15.8	15.7	15.7	15.6	15.5	15.4	15.3	15.2	15.1	15.0
2018	14.9	14.8	14.7	14.7	14.6	14.5	14.4	14.3	14.2	14.1	14.1	14.0
2019	13.9	13.8	13.7	13.6	13.6	13.5	13.4	13.3	13.2	13.2	13.1	13.0
2020	12.9	12.9	12.8	12.7	12.6	12.6	12.5	12.4	12.3	12.3	12.2	12.1
2021	12.0	12.0	11.9	11.8	11.8	11.7	11.6	11.6	11.5	11.4	11.3	11.3
2022	11.2	11.1	11.1	11.0	10.9	10.9	10.8	10.8	10.7	10.6	10.6	10.5
2023	10.4	10.4	10.3	10.3	10.2	10.1	10.1	10.0				