



GREYSTONE ENERGY, INC.

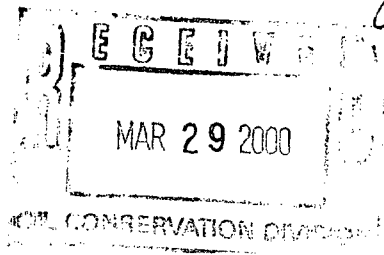
9155 E. Nichols Ave., Suite 350 • Englewood, CO 80112

Bus: 303-925-0542 • Fax: 303-925-0543

DHC 4/18/00

March 28, 2000

Ms. Lori Wrotenberry  
New Mexico Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505



RE: Administrative Approval to Downhole Commingle  
Greystone Energy, Inc.  
Arnstein No. 1 MV/DK  
1,750' FWL, 1,750' FSL, Sec.18K, T31N, R12W, N.M.P.M.  
San Juan County, New Mexico

Dear Ms. Wrotenberry:

Greystone Energy, Inc. requests approval to downhole commingle the Blanco Mesaverde and Basin Dakota pools in the subject well. The well is currently producing as a Mesaverde completion. The Dakota is currently isolated below a plug. The Mesaverde is marginal and downhole commingling will allow the energy from the Dakota to assist in lifting liquids which should increase overall gas production.

To comply with the New Mexico Oil Conservation Rules, Greystone Energy, Inc. is submitting the following data for your approval of the proposed commingling:

1. Form C-107A – Application for Downhole Commingling
2. Form C-102 – Location Plat showing each spacing unit and dedicated acreage
3. Production Curves for both zones
4. Bottom hole pressure data

The working, overriding and royalty interests are identical in both zones.

If you need any additional information please contact me at 303-925-0542 ext. 222.

Sincerely,

Brian H. Ary, P.E.  
Vice President

CC: NMOCD-Aztec, BLM – Farmington, Interest Holders

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240  
DISTRICT II  
811 South First St., Artesia, NM 88210  
DISTRICT III  
1000 Rio Brazos Rd, Aztec, NM 87410  
DISTRICT IV  
2040 S. Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department  
**OIL CONSERVATION DIVISION**  
2040 S. Pacheco  
Santa Fe, New Mexico 87505-6429

Form C-107-A  
Revised August 1999

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Greystone Energy, Inc.

5802 Highway 64, Farmington, NM 87401

Operator

Address

Arnstein

1

K - 18 - 31N - 12W

San Juan

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 173252 Property Code 24019 API NO. 30-045-1072500 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	BLANCO MESAVERDE / 72319		BASIN DAKOTA / 71599
2. Top and Bottom of Pay Section (Perforations)	4,435' - 4,880'		6,470' - 6,844'
3. Type of production (Oil or Gas)	GAS		GAS
4. Method of Production (Flowing or Artificial Lift)	FLOWING		FLOWING
5. Bottomhole Pressure	a. (Current) 550 PSI		a. 660 PSI
Oil Zones - Artificial Lift: Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated Or Measured Original	b. (Original) 600 PSI		b. 1700 PSI
6. Oil Gravity (EAPI) or Gas BTU Content	1190		1191
7. Producing or Shut-In?	PRODUCING		SHUT-IN
Production Marginal? (yes or no)	YES		YES
* If Shut-In, give date and oil/gas/water rates of last production	Date: Rates:	Date: Rates:	Date: 9/99 Rates: 0.26 BOPD / 165 MCFD
Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data	Date: 3/00 Rates: 0 BOPD / 27 MCFD	Date: Rates:	Date: Rates:
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)			
8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)	Oil: SEE ATTACHED 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

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)

14. 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

15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). \_\_\_\_\_

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.
- \* 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 Brian H. Ary TITLE VICE PRESIDENT DATE 3-28-00

TYPE OR PRINT NAME BRIAN H. ARY TELEPHONE NO. (505) 632 - 8056

### **Arnstein No. 1 MV / DK – Recommended Allocation Method**

The Mesaverde in the subject well was completed in November 1999. The Dakota zone was originally completed in 1960. The Dakota is currently isolated under a plug and is not producing.

Prior to the completion of the Mesaverde, the Dakota zone was producing against low line pressure and had a stabilized gas decline rate of 1.2% and an oil decline rate of 3.3%.

In order to allocate the production from the proposed commingle, Greystone Energy, Inc. recommends fixing the DK's contribution based on the attached decline curve analysis for a period of 12 months. The DK's fixed contribution from the decline curve analysis is shown below.

#### **Arnstein No. 1 – Dakota Fixed Production Allocation**

Year	Monthly Oil Allocation (bbls)	Monthly Gas Allocation (mcf)
2000	9	4213
2001	9	4163

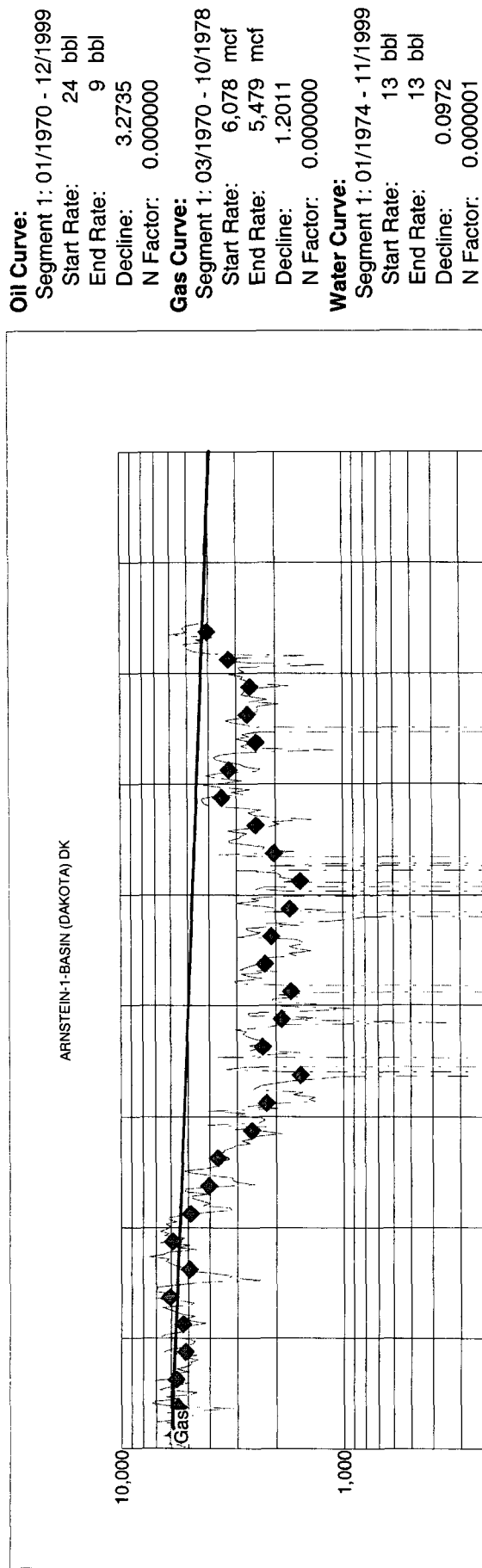
During this period, the production attributable to the Mesaverde zone will be calculated by taking the well's total monthly metered production and subtracting the DK's fixed contribution.

After the initial 12 months, Greystone proposes to review the well's production and set a fixed percentage allocation for each zone for the remainder of the well's life. The fixed allocation percentage will be based on the DK production from the attached decline curve analysis and the total well performance for the previous 12 months.

Lease Name: ARNSTEIN (1)  
County, ST: SAN JUAN, NM  
Location: 31N-12W-18

Field Name:  
Operator:

BASIN (DAKOTA) DK  
GREYSTONE ENERGY INC



Pressure/Time Graph

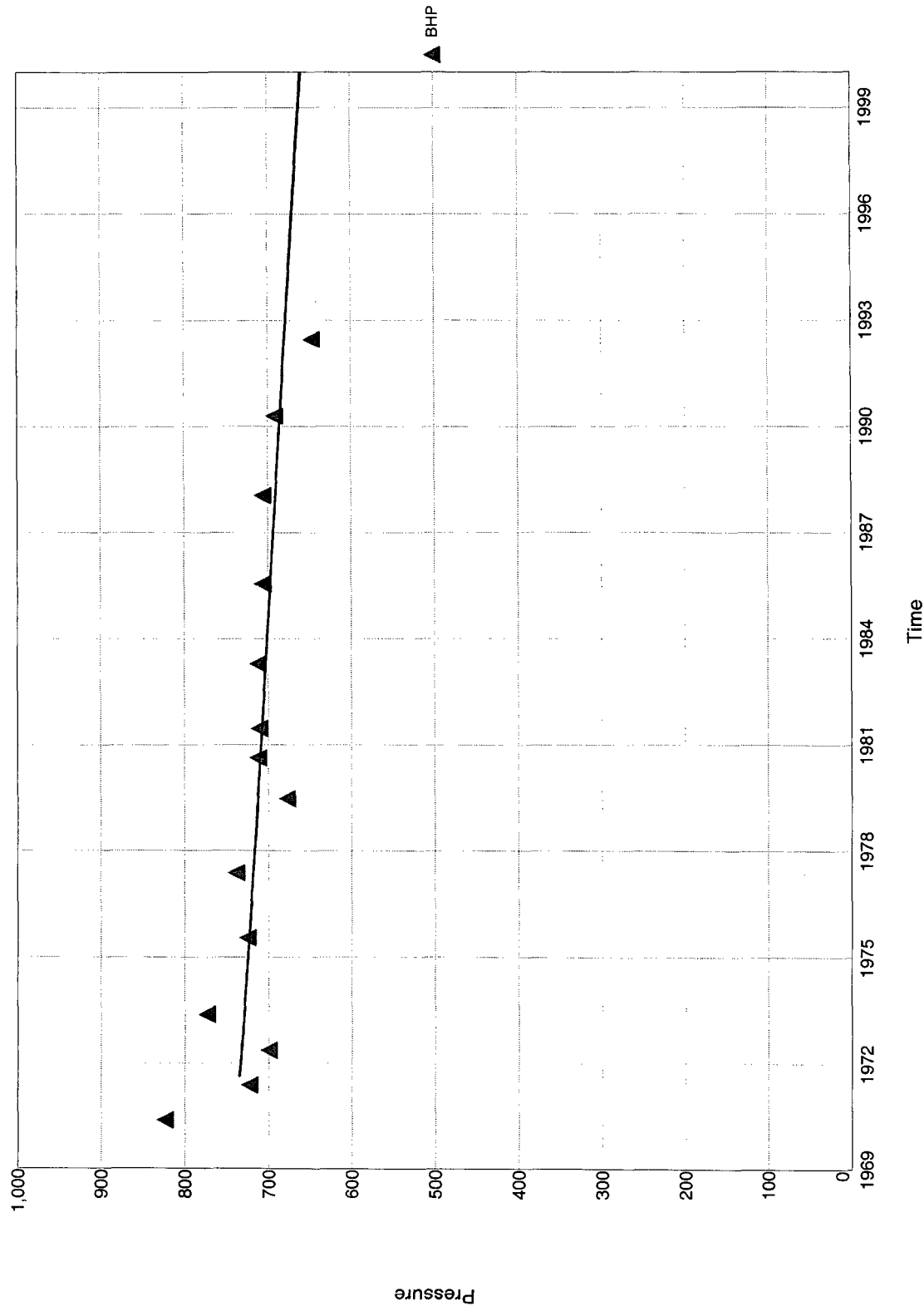
Project: C:\WINDOWS\Desktop\Greystone\GREYSTON\APRIL 2000 REDET\Bamar10.MDB

Date: 8/28/1999  
Time: 4:18 PM

Lease Name: ARNSTEIN (1)  
County, ST: SAN JUAN, NM  
Location: 31N-12W-18

Field Name: BASIN (DAKOTA) DK  
Operator: GREYSTONE ENERGY INC

Arnstein No. 1 Dakota - Pressure vs Time



Date: 8/28/1999

Time: 4:26 PM

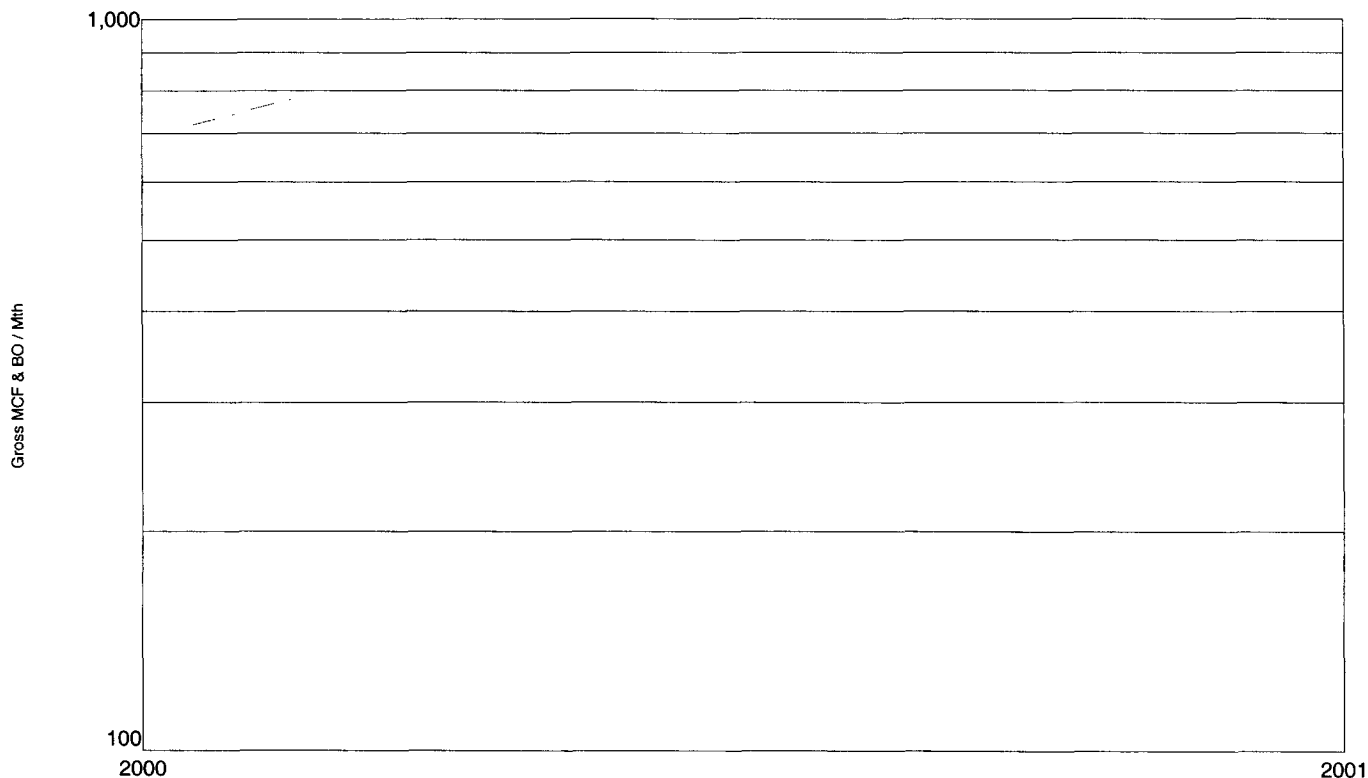
## Last Twelve Months Historic Production Report

Project: C:\WINDOWS\Desktop\Greystone\GREYSTON\APRIL 2000 REDET\BAmar10.MDB

Lease Name: ARNSTEIN (1)  
 County, ST: SAN JUAN, NM  
 Location: 0-0-0

Field Name: BLANCO (MESAVERDE) MV  
 Operator: GREYSTONE ENERGY INC

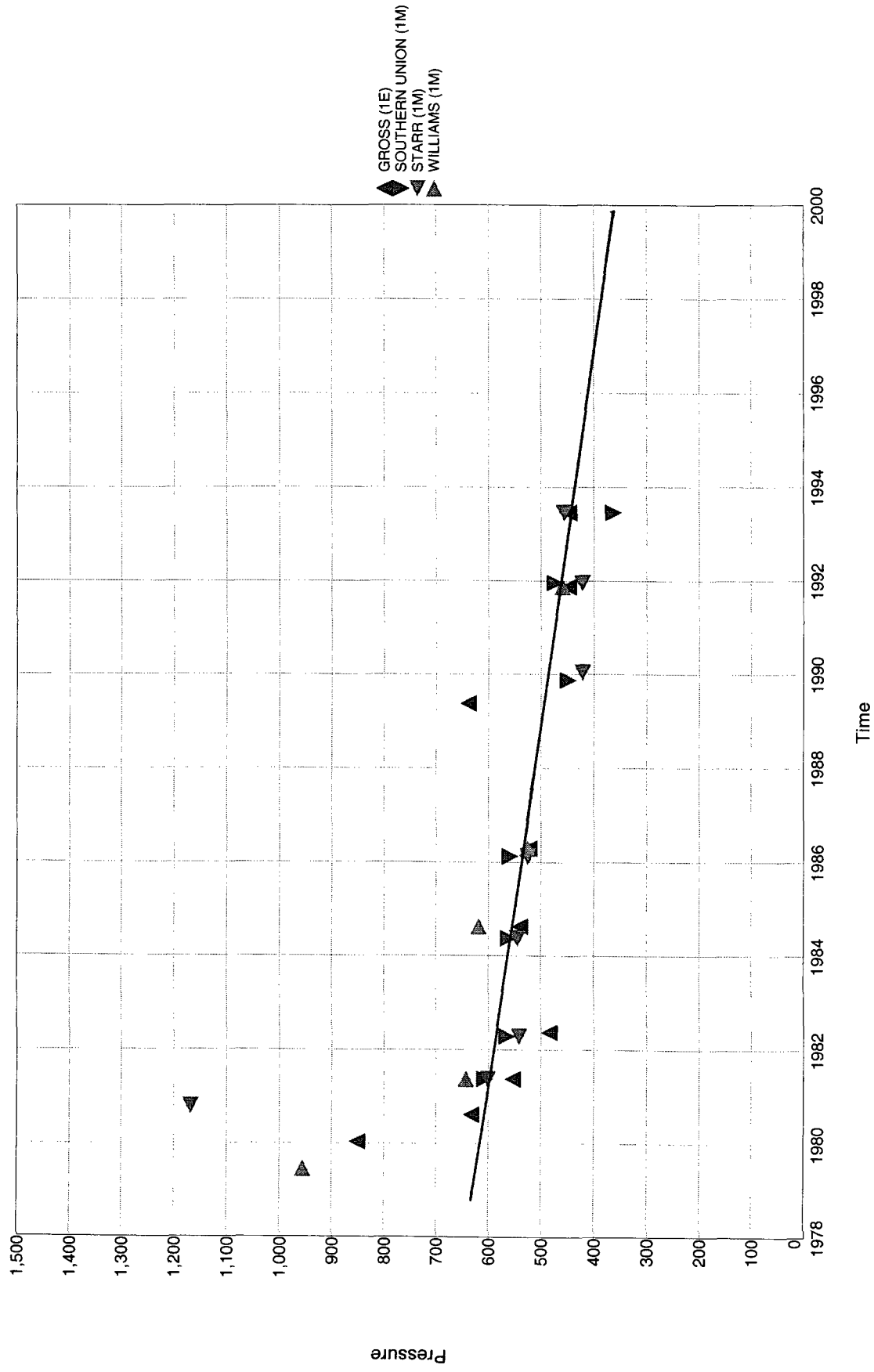
ARNSTEIN-1-BLANCO (MESAVERDE) MV



Date	Well Count	Oil (bbl)	Gas (mcf)	Water (bbl)	Injection (bbl)
Previous		0	0	0	0
03/1999	0	0	0	0	0
04/1999	0	0	0	0	0
05/1999	0	0	0	0	0
06/1999	0	0	0	0	0
07/1999	0	0	0	0	0
08/1999	0	0	0	0	0
09/1999	0	0	0	0	0
10/1999	0	0	0	0	0
11/1999	0	0	0	0	0
12/1999	0	0	0	0	0
01/2000	1	0	718	0	0
02/2000	1	0	780	0	0
Total:		0	1,498	0	0

Summary Lease Report

MV Completions Offsetting the Arnstein No. 1 MV in Section 18



NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-1-65

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

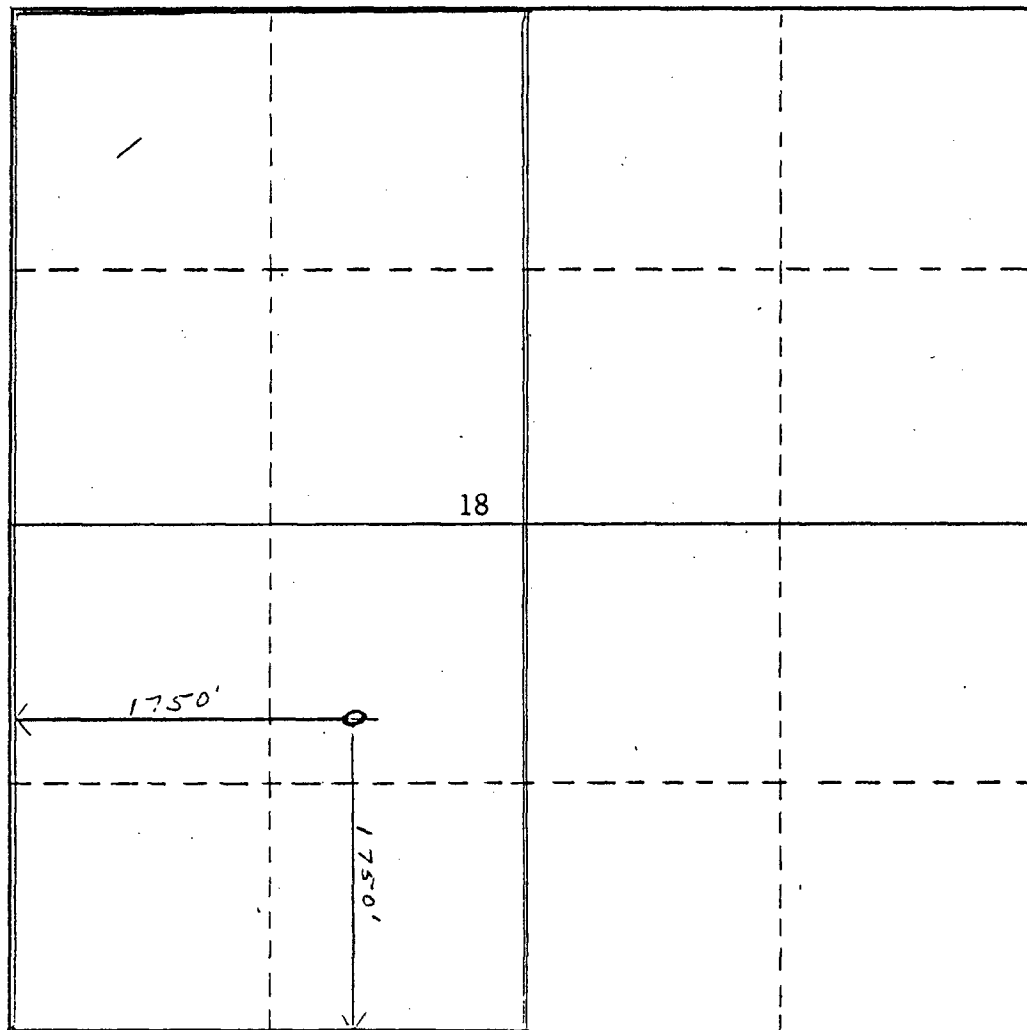
Operator <b>Consolidated Oil &amp; Gas, Inc.</b>			Lease <b>Arnstein</b>		Well No. <b>1</b>
Unit Letter <b>K</b>	Section <b>18</b>	Township <b>31 North</b>	Range <b>12 West</b>	County <b>San Juan</b>	
Actual Footage Location of Well: <b>1750</b> feet from the <b>West</b> line and <b>1750</b> feet from the <b>South</b> line					
Ground Level Elev. <b>5852.6</b>	Producing Formation <b>Dakota</b>		Pool <b>Basin-Dakota</b>	Dedicated Acreage <b>314.48</b> Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- 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.

*Wayne Rogers*  
Name

**E. Wayne Rogers**

Position

**Production Manager**

Company

**Consolidated Oil & Gas, Inc.**

Date

**March 13, 1968**

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.