

DATE IN 12/16/98	SUSPENSE 11/5/99	ENGINEER DC	LOGGED BY KW	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

2040 South Pacheco, Santa Fe, NM 87505



2/68

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATION FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

- [NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]**
[DD-Directional Drilling] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Directional Drilling

☐ NSL ☐ NSP ☐ DD ☐ SD

DEC 16 1998

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement

☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☒ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO

U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] INFORMATION / DATA SUBMITTED IS COMPLETE - Certification

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data (including API numbers, pool codes, etc.), pertinent information and any required notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Print or Type Name

Signature

Title

Date

DISTRICT I

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

DISTRICT II

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

DISTRICT III

1000 Rio Brazos Rd, Aztec, NM 87410-1693

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429Form C-107-A
New 3-12-96

APPROVAL PROCESS :

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

BURLINGTON RESOURCES OIL & GAS COMPANY
OperatorPO Box 4289, Farmington, NM 87499
Address

Grenier A

3M D, Sec. 34, T30N, R10W

San Juan

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 18531 API NO. 30-045-2583300 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 Mesa Verde-72319		Basin Dakota - 71599
2. Top and Bottom of Pay Section (Perforations)	4220'-4902'		6888'-7185'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure	(Current) a. 363 psia @ 4561'	a.	a. 690 psia @ 7037'
Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured	(Original) b. 1162 psia @ 4561'	b.	b. 2501 psia @ 7037'
6. Oil Gravity (API) or Gas BTU Content	1214 Btu		1081 Btu
7. Producing or Shut-In?	Producing		Shut-In
Production Marginal? (yes or no)	Yes		Yes
* If Shut-In 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:	Date: Rates:	Date: 01/01/97 Rates: 15 MCFD, 0 BOD, 0 BWD
* If Producing, give data and oil/gas/water of recent test (within 60 days)	Date: 10/31/98 Rates: 67 MCFD, 0 BOD, 0 BWD	Date: Rates:	Date: Rates:
8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)	Oil: Gas: Will supply after commingling	Oil: Gas: Will supply after commingling	Oil: Gas: Will supply after commingling

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 ☐ No11. 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 ☐ No13. 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. NMOC 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 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 Kevin L. Midkiff TITLE Operations Engineer DATE 12-14-98TYPE OR PRINT NAME Kevin L. Midkiff TELEPHONE NO. (505) 326-9700

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

Operator SOUTHLAND ROYALTY COMPANY			Lease GRENIER "A"		Well No. 3M
Unit Letter D	Section 34	Township 30N	Range 10W	County San Juan	
Actual Footage Location of Well: 1110 feet from the North line and 930 feet from the West line					
Ground Level Elev. 6049' GL	Producing Formation Dakota		Pool Basin	Dedicated Acreage: 320 Acres	

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

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

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.

		SF-077282	
Sec.		34	
		RECEIVED AUG 31 1983 BUREAU OF LAND MANAGEMENT FARMINGTON RESOURCE AREA	

Scale: 1"=1000'

CERTIFICATION

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

R. E. Fielder

Name
R. E. Fielder
Position
District Engineer
Company
Southland Royalty Company
Date
August 29, 1983

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 **Re-issued**
August 24, 1983
Registered Professional Engineer
and Land Surveyor
Fred B. Kerr Jr.
Fred B. Kerr Jr.
Certificate No. **3950**

Page No.: 1

Print Time: Tue Dec 01 10:43:35 1998

Property ID: 63

Property Name: GRENIER A | 3M | 25687-1 *Mesa Verde*

Table Name: S:\JSMITH\ARIES\99WORK\TEST.DBF

<u>--DATE--</u>	<u>---CUM GAS--</u>	<u>M SIWHP</u>
	<u>Mcf</u>	<u>Psi</u>

04/30/83	0	1007.0
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Initial

10/03/84	39348	761.0
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12/04/85	123745	589.0
----------	--------	-------

03/12/86	137271	496.0
----------	--------	-------

05/10/89	236405	441.0
----------	--------	-------

06/17/91	279281	400.0
----------	--------	-------

07/10/91	281651	412.0
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07/30/93	334209	356.0
----------	--------	-------

9/30/98	453883	312.0
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Based on Pressure vs Cum Gas Curve

Page No.: 1

Print Time: Tue Dec 01 11:38:37 1998

Property ID: 615

Property Name: GRENIER A | 3 | 25652-1 DAKOTA offset Well

Table Name: K:\ARIES\RR99PDP\TEST.DBF

--DATE--	---CUM GAS--	M SIWHP
	Mcf	Psi

03/31/64	0	2011.0	Initial
----------	---	--------	---------

04/17/70	415768	740.0	
----------	--------	-------	--

04/18/71	468589	725.0	
----------	--------	-------	--

04/18/72	524736	612.0	
----------	--------	-------	--

09/26/73	591991	563.0	
----------	--------	-------	--

08/02/75	686183	591.0	
----------	--------	-------	--

04/17/77	747255	592.0	
----------	--------	-------	--

05/16/79	809314	464.0	
----------	--------	-------	--

09/01/81	890531	625.0	
----------	--------	-------	--

05/02/83	927719	755.0	
----------	--------	-------	--

10/03/84	970314	722.0	
----------	--------	-------	--

07/25/85	991848	740.0	
----------	--------	-------	--

01/13/88	1046856	747.0	
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06/08/90	1093708	648.0	
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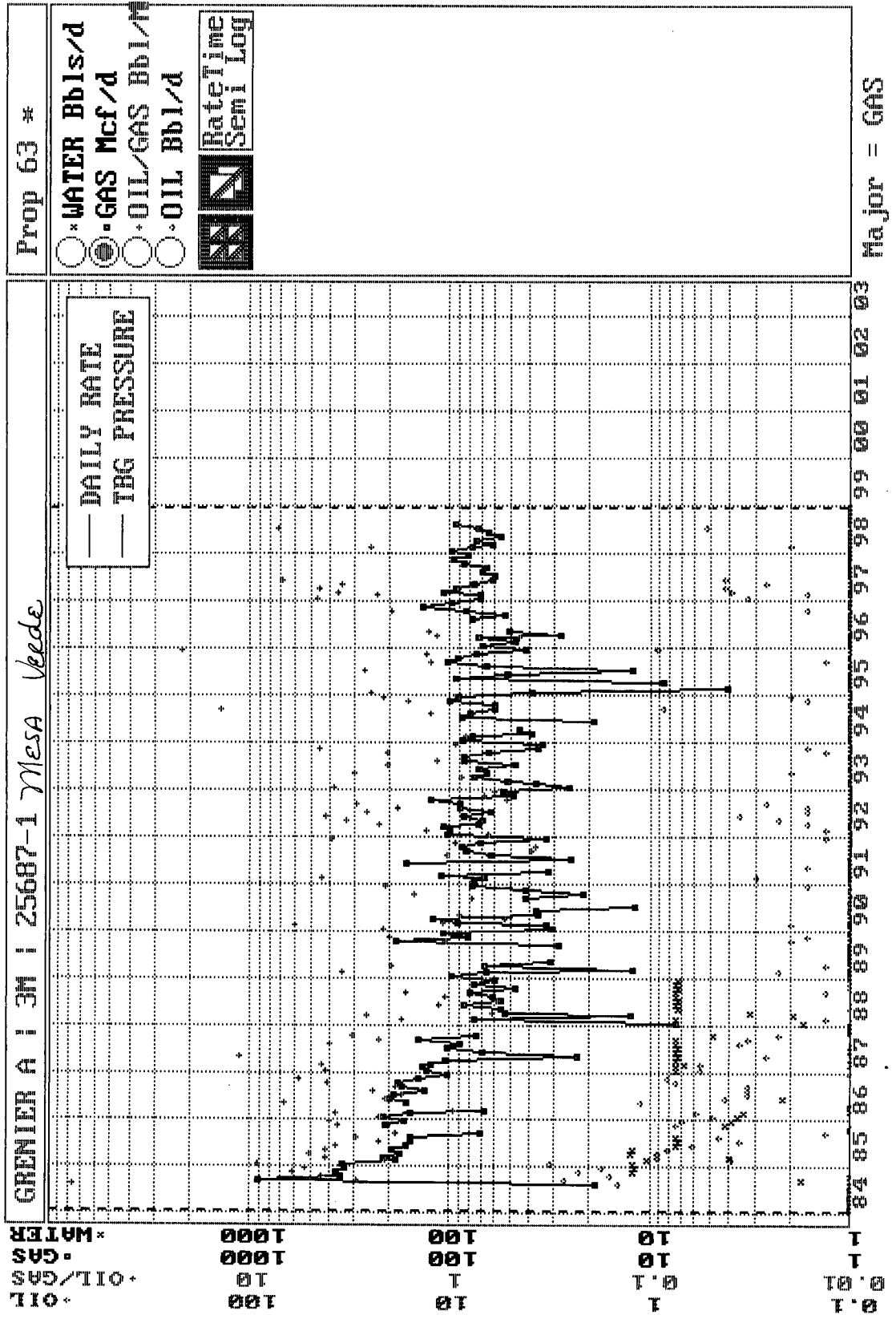
04/28/92	1119155	678.0	
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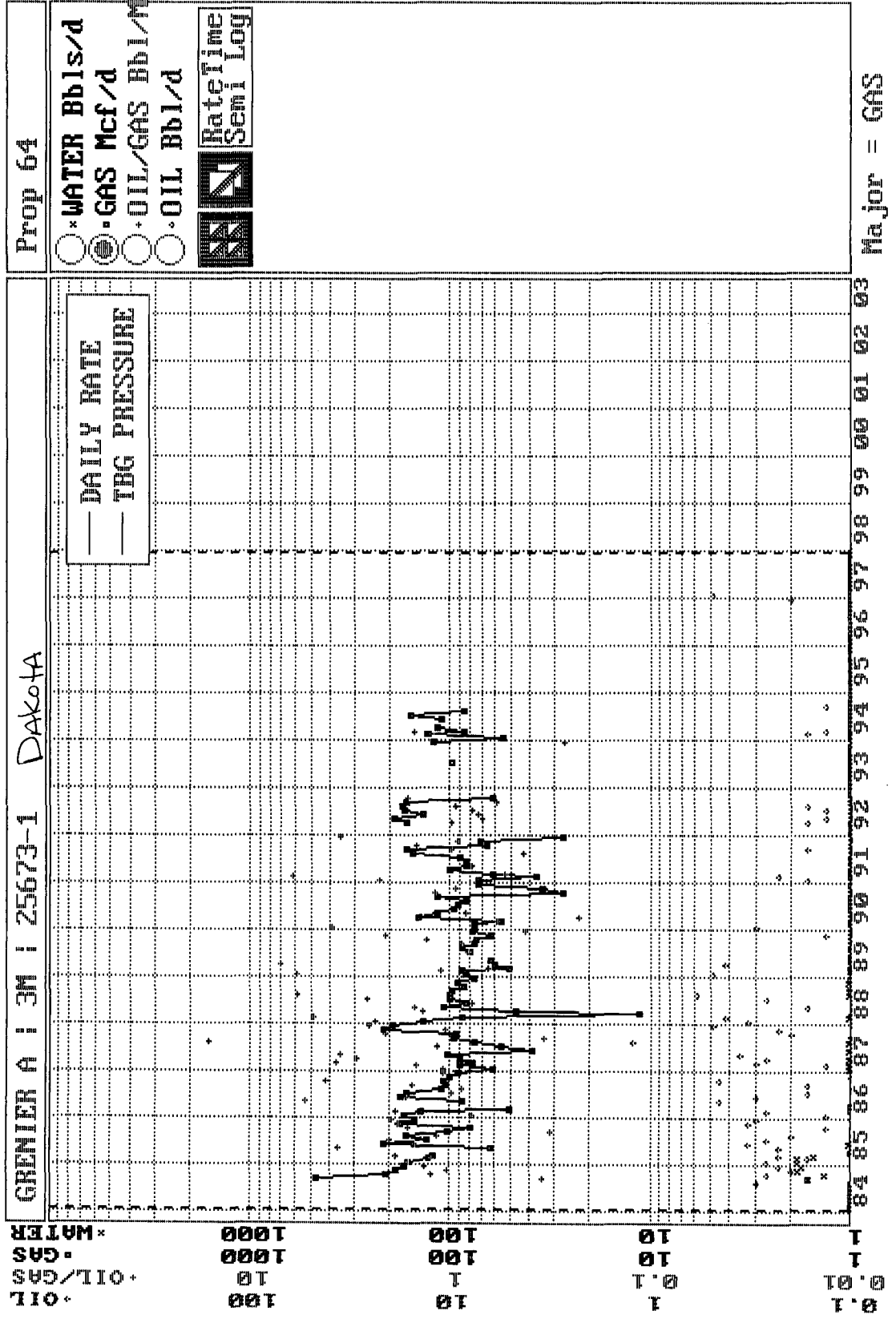
9/30/98	1209758	545.0	Based on Pressure vs Cum Gas Curve from offset Well
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Grenier A 3M
Bottom Hole Pressures
Flowing and Static BHP
Cullender and Smith Method

Version 1.0 3/13/94

Mesaverde		Dakota	
<u>MV-Current</u>		<u>DK-Current</u>	
GAS GRAVITY	0.7	GAS GRAVITY	0.7
COND. OR MISC. (C/M)	M	COND. OR MISC. (C/M)	M
%N2	0.34	%N2	0.34
%CO2	0.86	%CO2	0.86
%H2S	0	%H2S	0
DIAMETER (IN)	4.408	DIAMETER (IN)	4.408
DEPTH (FT)	4561	DEPTH (FT)	7037
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	131	BOTTOMHOLE TEMPERATURE (DEG F)	169
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	324	SURFACE PRESSURE (PSIA)	577
BOTTOMHOLE PRESSURE (PSIA)	363.4	BOTTOMHOLE PRESSURE (PSIA)	689.8
<u>MV-Original</u>		<u>DK-Original</u>	
GAS GRAVITY	0.7	GAS GRAVITY	0.7
COND. OR MISC. (C/M)	M	COND. OR MISC. (C/M)	M
%N2	0.34	%N2	0.34
%CO2	0.86	%CO2	0.86
%H2S	0	%H2S	0
DIAMETER (IN)	4.408	DIAMETER (IN)	4.408
DEPTH (FT)	4561	DEPTH (FT)	7037
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	131	BOTTOMHOLE TEMPERATURE (DEG F)	169
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1019	SURFACE PRESSURE (PSIA)	2023
BOTTOMHOLE PRESSURE (PSIA)	1162.0	BOTTOMHOLE PRESSURE (PSIA)	2500.8





FARMINGTON

ANNUAL PRODUCTION FOR 25673 *Dakota*

PHS020M1

GRENIER A 3M

BASIN DAKOTA (PRORATED GAS) FIELD

DAKOTA ZONE

===== OIL CUM =====

===== GAS CUM =====

===== WATER CUM =====

PC DATE

BBLs

PC DATE

MCF

DATE

BBLs

```
=====
YEAR      OIL      OIL CUM      GAS      GAS CUM      WATER      WATER CUM
1994      13      471      22618     332594
1995      13      471      22618     332594
1996       6      477      22618     332594
1997      15      492      22618     332594
1998      15      492      22618     332594
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POSITION CURSOR BY YEAR AND PRESS ENTER TO DISPLAY MONTHLY PRODUCTION

ENTER - CONTINUES ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF6 - RETURN TO WELL-INFO DISPLAY

PF9 - ANNUAL INJECTION DISPLAY

PF10 - HELP INFORMATION

FARMINGTON

1998 MONTHLY PRODUCTION FOR 25673 *Dakota*

PHS030M1

GRENIER A 3M

BASIN DAKOTA (PRORATED GAS) FIELD

DAKOTA ZONE

DAYS =====			OIL =====		=====		GAS =====							
MO	T	S	ON	PC	PROD	GRV	PC	PROD	ON	BTU	PRESS	WATER	PROD	C
1	2	S		02			01				15.025			
2	2	S		02			01				15.025			
3	2	F	1	02			01		1		15.025			
4	2	F	30	02			01		30		15.025			
5	2	F	31	02			01		31		15.025			
6	2	S	12	02			01		12		15.025			
7	2	S		02			01				15.025			
8	2	S		02			01				15.025			
9	2	S		02			01				15.025			
10														
11														
12														

PF6 - RETURNS TO ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF10 - HELP INFORMATION

PF9 - DISPLAY MONTHLY INJECTION

00/00/00 00:00:00:0

PRS 11/04/98

FARMINGTON

ANNUAL PRODUCTION FOR 25687 *Mesa Verde* PHS020M1

GRENIER A 3M

BLANCO MESAVERDE (PRORATED GAS FIELD MESAVERDE ZONE

===== OIL CUM =====

===== GAS CUM =====

===== WATER CUM =====

PC DATE

BBLs

PC DATE

MCF

DATE

BBLs

```

=====
YEAR      OIL      OIL CUM      GAS      GAS CUM      WATER      WATER CUM
1991      24        891      24822     290306                8059
1992      51        942      30768     321074                8059
1993      27        969      20835     341909                8059
1994      42       1011      22834     364743                8059
1995      39       1050      17997     382740                8059
1996      9        1059      21887     404627                8059
1997     61       1120      28756     433383                8059
1998     22       1142      20500     453883                8059
=====

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POSITION CURSOR BY YEAR AND PRESS ENTER TO DISPLAY MONTHLY PRODUCTION

ENTER - CONTINUES ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF6 - RETURN TO WELL-INFO DISPLAY

PF9 - ANNUAL INJECTION DISPLAY

PF10 - HELP INFORMATION

FARMINGTON

1998 MONTHLY PRODUCTION FOR 25687 *Mesa Verde* PHS030M1

GRENIER A 3M

BLANCO MESAVERDE (PRORATED GAS FIELD

MESAVERDE ZONE

DAYS =====					OIL =====		=====		GAS =====					
MO	T	S	ON	PC	PROD	GRV	PC	PROD	ON	BTU	PRESS	WATER	PROD	C
1	2	F	31	02			01	2973	31	1195	15.025			
2	2	F	28	02	6		01	2398	28	1195	15.025			
3	2	F	31	02			01	1876	31	1195	15.025			
4	2	F	27	02			01	2266	27	1192	15.025			
5	2	F	31	02			01	1705	31	1192	15.025			
6	2	F	30	02		42.5	01	1982	30	1192	15.025			
7	2	F	31	02	16		01	2194	31	1192	15.025			
8	2	F	31	02			01	2894	31	1192	15.025			
9	2	F	30	02			01	2212	30	1192	15.025			

10

11

12

PF6 - RETURNS TO ANNUAL DISPLAY

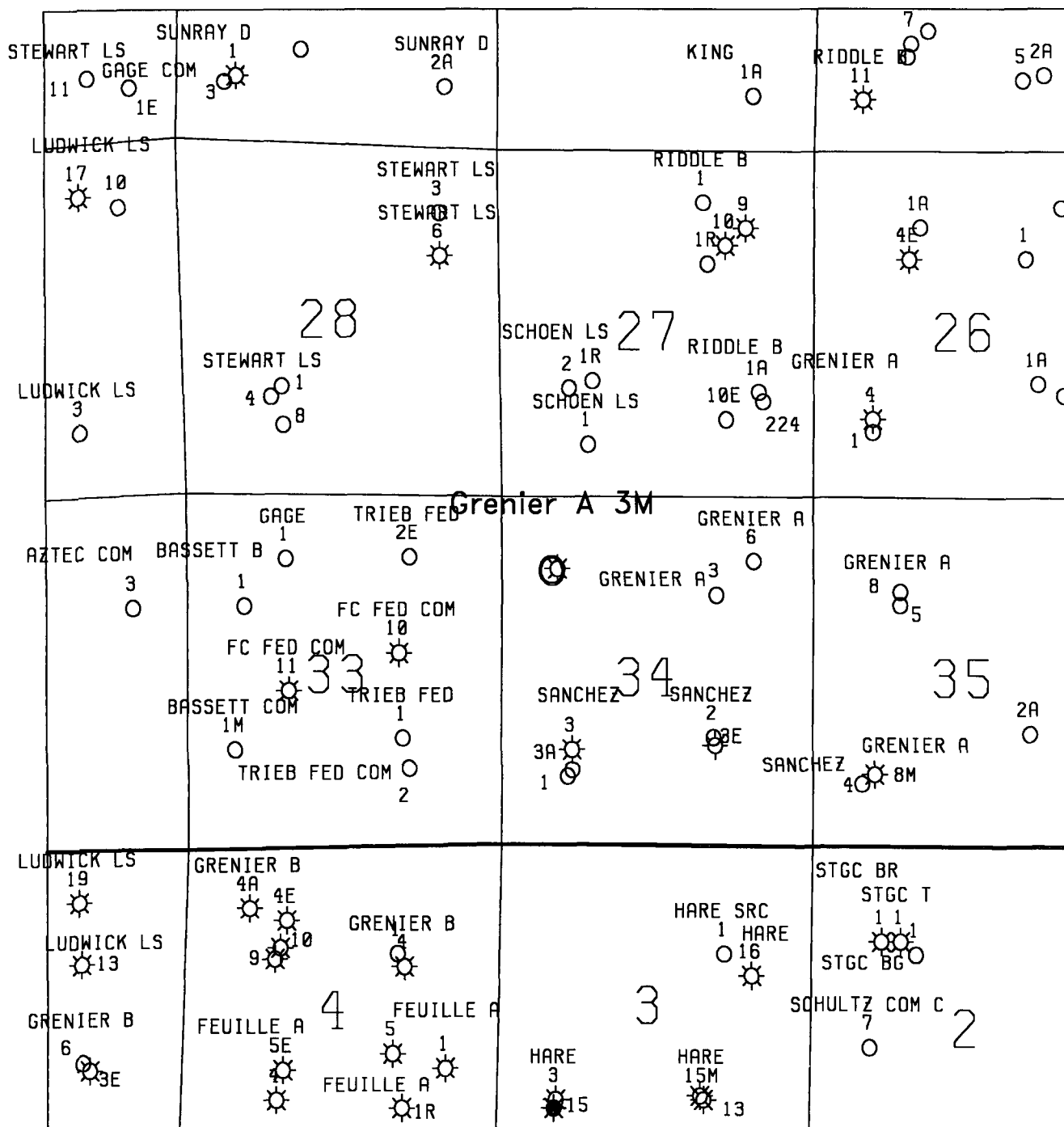
PF3 - TRANSFER TO UPDATE

PF10 - HELP INFORMATION

PF9 - DISPLAY MONTHLY INJECTION

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PRS 11/04/98



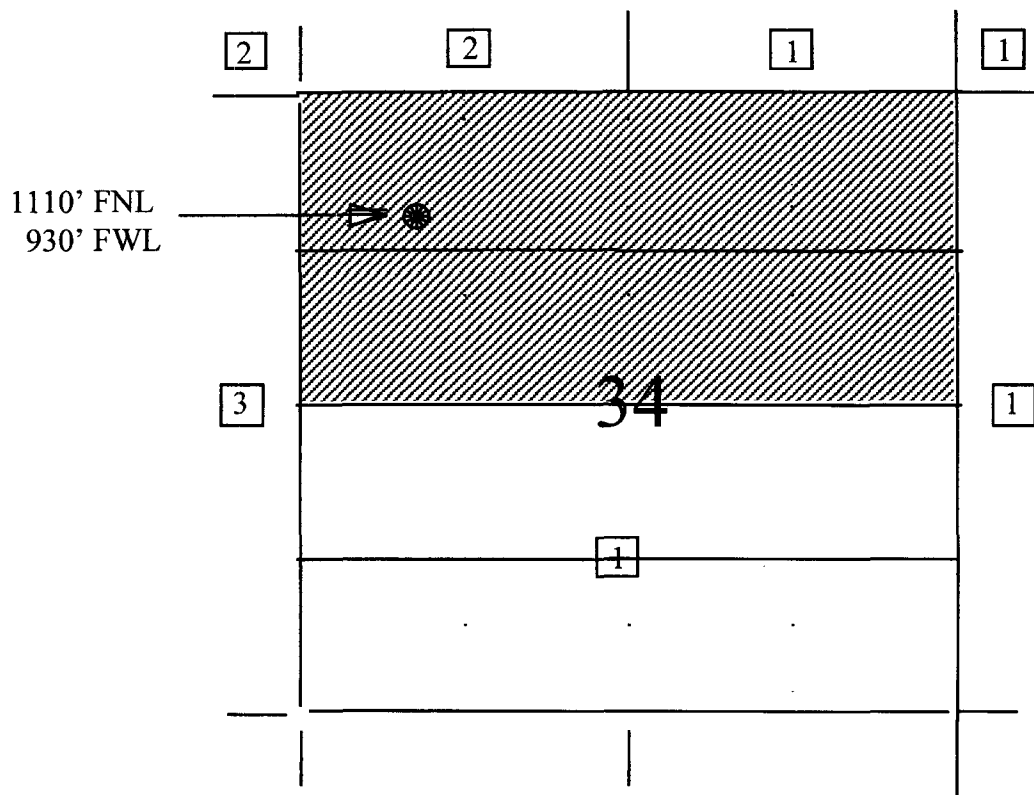
Grenier A 3M
Sec 34 T30N R10W
Mesa Verde/Dakota

BURLINGTON RESOURCES OIL AND GAS COMPANY

**Grenier A #3M
OFFSET OPERATOR \ OWNER PLAT
Downhole Commingle**

Mesaverde / Dakota Formations Well

Township 30 North, Range 10 West



- 1) Burlington Resources
- 2) Amoco Production Company - Land Dept.
Attn: Steve Trefz
P.O. Box 800
1670 Broadway
Denver, CO 80201
- 3) Conoco Inc.
Attn: Lori Thorpe
10 Desta Drive, Suite 100W
Midland, TX 79705