

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

APPLICATION FOR DOWNHOLE COMMINGLING

EXISTING WELLBORE

☒ YES ☐ NO

Burlington Resources Oil & Gas Company

PO Box 4289, Farmington, NM 87499

Operator

Address

FEUILLE A

5E

K 4-T29N-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 7015 API NO. 30-45-2624900 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	MESA VERDE - 72319		DAKOTA - 71599
2. Top and Bottom of Pay Section (Perforations)	4028' - 4524', 4583'-4785'		6679'-6773'
3. Type of production (Oil or Gas)	gas		Gas
4. Method of Production (Flowing or Artificial Lift)	flowing		Flowing
5. Bottomhole Pressure	(Current) Est. a. 424.2	a.	a. 432.2
Oil Zones - Artificial Lift: Estimated Current			
Gas & Oil - Flowing: Measured Current	(Original) Est. b. 1323.8	b.	b. 1347.8
All Gas Zones: Estimated or Measured Original			
6. Oil Gravity (°API) or Gas BTU Content	BTU 1230		BTU 1106
7. Producing or Shut-In?	Not yet completed		Producing
Production Marginal? (yes or no)	Yes		Yes
* If Shut-In and oil/gas/water rates of last production	Date: n/a Rates:	Date: Rates:	Date: n/a Rates:
Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data			
* If Producing, give data and oil/gas/water water of recent test (within 60 days)	Date: n/a Rates: n/a	Date: Rates:	Date: n/a Rates: 102 MCF/D
8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)	Oil: % Gas: % will be supplied upon completion	Oil: % Gas: %	Oil: % Gas: % will be supplied upon completion

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?

If not, have all working, overriding, and royalty interests been notified by certified mail?

Have all offset operators been given written notice of the proposed downhole commingling?

☒ Yes ☐ No
☐ Yes ☒ No
☐ 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 Mike Pippin TITLE Production Engineer DATE 07-28-99TYPE OR PRINT NAME Mike Pippin TELEPHONE NO. (505) 326-9700

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

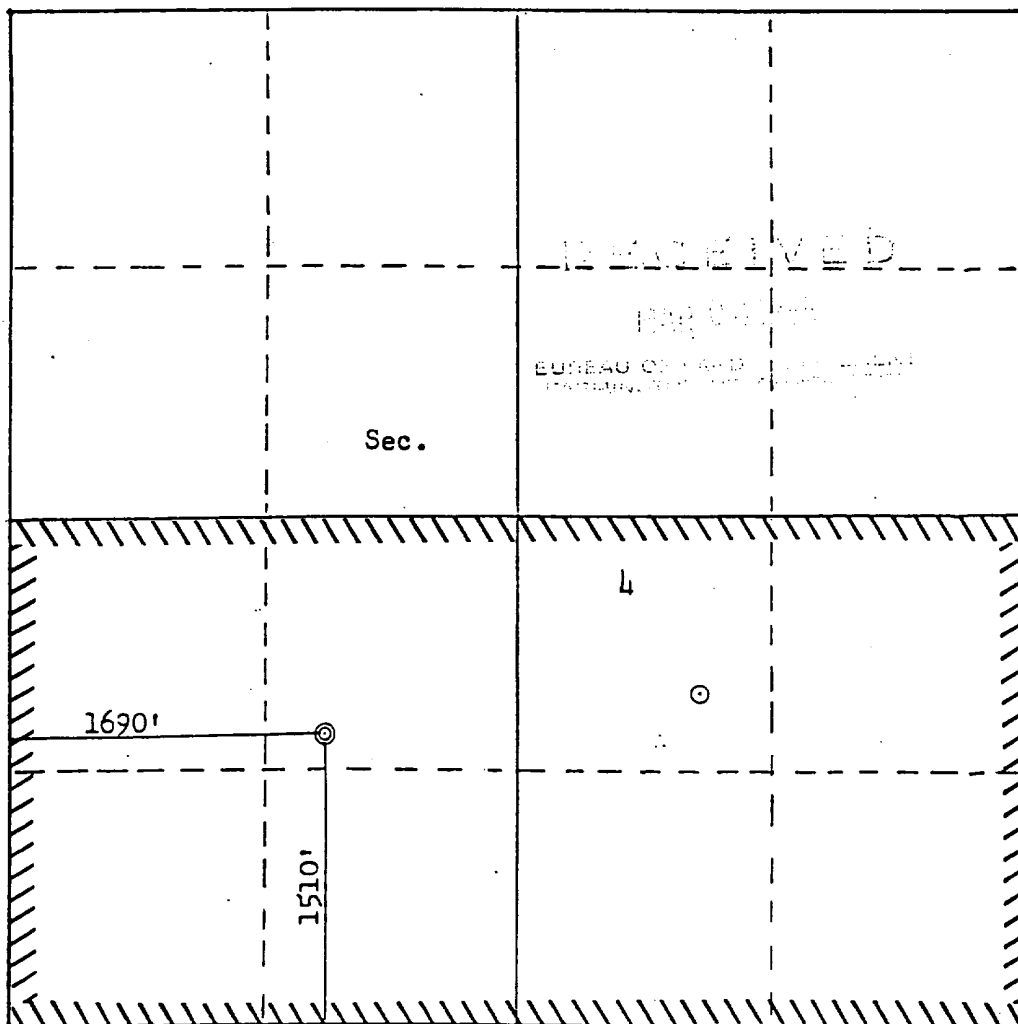
Operator EL PASO NATURAL GAS COMPANY			Lease FEUILLE "A" (SF 078197)		Well No. 5E
Unit Letter K	Section 4	Township 29N	Range 10W	County San Juan	
Actual Footage Location of Well: 1510 feet from the South line and 1690 feet from the West line					
Ground Level Elev: 5892	Producing Formation Dakota		Pool Basin	Dedicated Acreage: 292.04 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.



CERTIFICATION

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

Peggy Cook
Name

Drilling Clerk

Position

El Paso Natural Gas C

Company

March 1, 1985

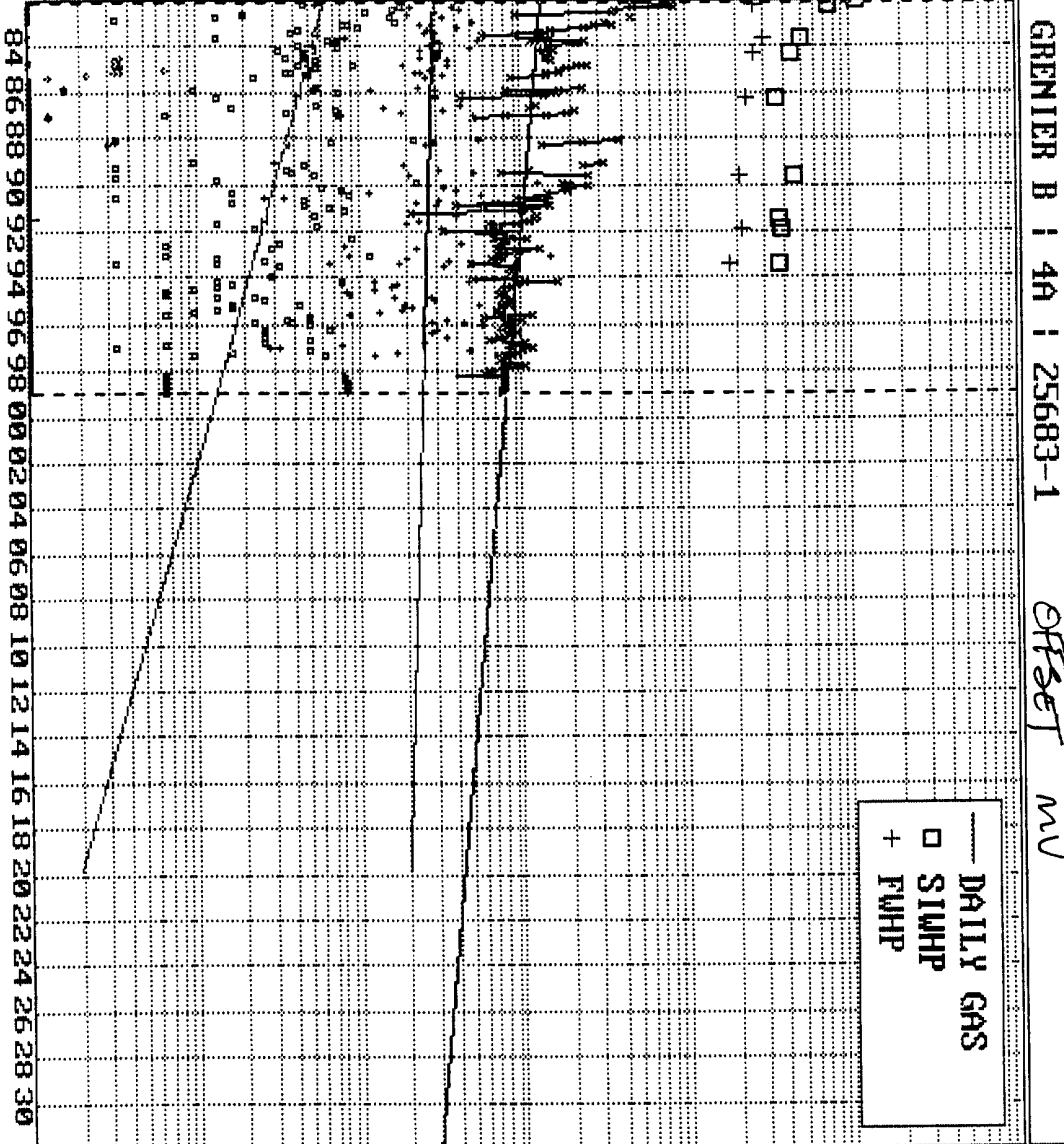
Date

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

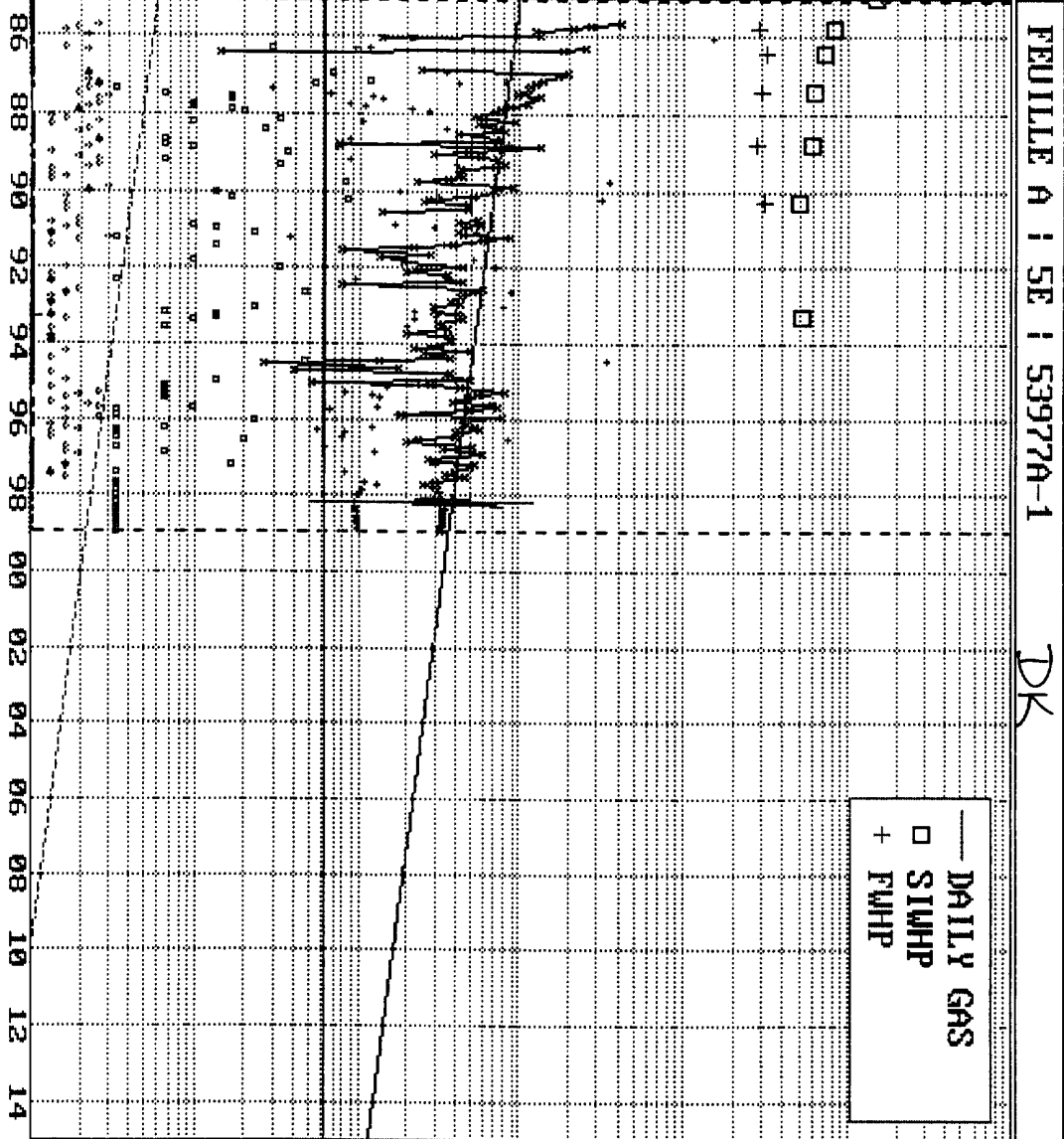
Fred B. Kerr
REGISTERED LAND SURVEYOR
1985
Registered Professional Engineer and Land Surveyor of New Mexico
Fred B. Kerr

0.1	1	10	100	1000	10000	* WATER
0.01	0.1	1	10	100	1000	* OIL/GAS
0.01	0.1	1	10	100	1000	* OIL
0.1	1	10	100	1000	10000	* GAS



Prop 2811 *	
☒ * GAS Mcf/d	☒ RateTime
☐ * OIL Bbl/d	☒ Semi Log
☐ * OIL/GAS	
☐ * WATER Bbls/d	
EUR 1,463,226	
Cum 672,793	
Rem 790,433	
Rem% 54.0%	
Yrs 55.41	
Date 1/1/1999	
Act 0	
qmo 2,507	
q 81	
n 0	
De 3	
qab 15	
GetQual 99PDP	
Major = GAS	

0.1	1	10	100	1000	10000	* WATER
0.01	0.1	1	10	100	1000	* OIL/GAS
0.01	0.1	1	10	100	1000	* OIL
0.1	1	10	100	1000	10000	* GAS



FEUILLE A : SE : 53977A-1

DK

Prop 10095 *

— DAILY GAS
 □ SIWHP
 + FWHP

● * GAS Mcf/d
 ○ * OIL Bbl/d
 ○ * OIL/GAS
 ○ * WATER Bbls/d

RateTime
 Semi Log

EUR 402,981

Cum 266,108

Rem 136,873

Rem% 34.0%

Yrs 18.33

Date 1/1/1999

Act 0

Qmo 1,139

Q 36.9

n 0

De 6.947

Qab 10

GetQual 99PDP

Major = GAS

offset mv

Page No.: 1
Print Time: Tue Feb 09 10:57:13 1999
Property ID: 2811
Property Name: GRENIER B | 4A | 25683-1
Table Name: K:\ARIES\RR99PDP\TEST.DBF

--DATE--	PHA M FWHP-	M FBHP-	M SIWHP	M SIBHP
.....	 Psi	 Psi	 Psi	 Psi
07/05/81	0.0		1117.0	0.0
03/24/82	260.0		743.0	0.0
08/24/83	294.0		515.0	0.0
04/04/84	255.0		443.0	0.0
03/12/86	235.0		352.0	0.0
08/30/89	205.0		458.0	0.0
06/19/91			366.0	
11/12/91	213.0		378.0	0.0
05/31/93	178.0		366.0	0.0

Page No.: 1

Print Time: Tue Feb 09 10:58:27 1999

Property ID: 10095

Property Name: FEUILLE A | 5E | 53977A-1

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

DK

--DATE-- PHA M FWHP- M FBHP- M SIWHP M SIBHP
■■■■■■■■■■ ■■■■ ■■■Psi■■■ ■■■Psi■■■ ■■■Psi■■■ ■■■Psi■■■

07/05/84		1540.0	
10/11/85	283.0	840.0	0.0
06/03/86	320.0	726.0	0.0
06/02/87	300.0	637.0	0.0
10/14/88	278.0	605.0	0.0
04/09/90	310.0	504.0	0.0
04/15/93		516.0	

FDG055M4 3035

WELL PRODUCTION 8/8'S VOLUME

02/09/99 11:54:0

END OF DATA

BP NO: 25683_

DATE: 990103 (YYMMDD FORMAT)

GRENIER B

4A SCROLL FORWARD BY DATE: _

S

E	DATE	HOURS	-OIL PRODN-	-GAS PRODN-	-WATER PRODN-
L PRODUCED	ON	(BOPD	BOPM)	(MCFD MCFM)	(BWPD BWPM)
_	01/03/99	0.0	0.24	0.72	77 231 0.00 0.00
_	01/04/99	0.0	0.24	0.96	77 308 0.00 0.00
_	01/05/99	0.0	0.24	1.20	77 385 0.00 0.00
_	01/06/99	0.0	0.24	1.44	77 462 0.00 0.00
_	01/07/99	0.0	0.24	1.68	77 539 0.00 0.00
_	01/08/99	0.0	0.24	1.92	77 616 0.00 0.00
_	01/09/99	0.0	0.24	2.16	77 693 0.00 0.00
_	01/10/99	0.0	0.24	2.40	77 770 0.00 0.00
_	01/11/99	0.0	0.24	2.64	77 847 0.00 0.00
_	01/12/99	0.0	0.24	2.88	77 924 0.00 0.00
_	01/13/99	0.0	0.24	3.12	77 1001 0.00 0.00

ENTER I UNDER SEL FOR MAINTENANCE

PF12=MAIN MENU

PF6=NRI PF10=BROWSE MENU
ENTER=BACKWARDSPF11=INQ/UPDATE MENU
PF24=HELP

FDG055M4 3029

WELL PRODUCTION 8/8'S VOLUME

02/09/99 12:00:48

END OF DATA

DP NO: 53977A

DATE: 990103 (YYMMDD FORMAT)

FEUILLE A

5E SCROLL FORWARD BY DATE: _

S

E	DATE	HOURS	-OIL PRODN-	-GAS PRODN-	-WATER PRODN-			
L PRODUCED	ON	(BOPD	BOPM)	(MCFD	MCFM)	(BWPD	BWPM)	
-	01/03/99	0.0	0.00	0.00	23	69	0.00	0.00
-	01/04/99	0.0	0.00	0.00	23	92	0.00	0.00
-	01/05/99	0.0	0.00	0.00	23	115	0.00	0.00
-	01/06/99	0.0	0.00	0.00	23	138	0.00	0.00
-	01/07/99	0.0	0.00	0.00	23	161	0.00	0.00
-	01/08/99	0.0	0.00	0.00	23	184	0.00	0.00
-	01/09/99	0.0	0.00	0.00	23	207	0.00	0.00
-	01/10/99	0.0	0.00	0.00	23	230	0.00	0.00
-	01/11/99	0.0	0.00	0.00	23	253	0.00	0.00
-	01/12/99	0.0	0.00	0.00	23	276	0.00	0.00
-	01/13/99	0.0	0.00	0.00	23	299	0.00	0.00

ENTER I UNDER SEL FOR MAINTENANCE

PF12=MAIN MENU	PF6=NRI	PF10=BROWSE MENU	PF11=INQ/UPDATE MENU
	ENTER=BACKWARDS		PF24=HELP

OPR008M2 3035

0008 CHROMATOGRAPH GAS SAMPLE DETAIL

11:55:03.8 02/09/9

OFFSEI M.V.

M. v.

		GPM	** DATA AT 14.730 PSIG UNLESS NOTED **
	MOL %	(AT 14.73)	
HYDROGEN	_____		MP NUMBER 39303
HELIUM	_____		EFFECTIVE DATE 19980101
NITROGEN	__0.31		
OXYGEN	_____		
HYDROGEN SULFIDE	_____		-- GASOLINE CONTENT (GPM) --
CARBON DIOXIDE	__0.59		26/70 GASOLINE _____
METHANE	__82.17		100% PROPANE _____
ETHANE	__9.89	2.6456	EXCESS BUTANES _____
PROPANE	__4.06	1.1189	TOTAL
ISO-BUTANE	__0.70	0.2290	
N-BUTANE	__1.01	0.3185	----- SPECIFIC GRAVITY -----
ISO-PENTANE	__0.37	0.1354	CALCULATED __0.7040
N-PENTANE	__0.28	0.1014	MEASURED _____
HEXANE	_____		
HEXANE PLUS	__0.62	0.2705	
HEPTANE PLUS	_____		SULPHUR GRAINS / 100 CU FT _____
TOTALS	100.00	4.8193	

03=MAIN SCREEN

24=HELP

PA1=TERMINATE

BTu 1230

*** DATA AT 14.730 PSIG UNLESS NOTED ***

	MOL %	GPM (AT 14.73)	
HYDROGEN	_____		MP NUMBER 95349
HELIUM	_____		EFFECTIVE DATE 19930401
NITROGEN	__0.51		
OXYGEN	_____		
HYDROGEN SULFIDE	_____		-- GASOLINE CONTENT (GPM) --
CARBON DIOXIDE	__0.77		26/70 GASOLINE _____
METHANE	__86.16		100% PROPANE _____
ETHANE	__7.10	1.8993	EXCESS BUTANES _____
PROPANE	__3.08	0.8488	TOTAL _____
ISO-BUTANE	__0.59	0.1930	
N-BUTANE	__0.79	0.2491	
ISO-PENTANE	__0.31	0.1134	----- SPECIFIC GRAVITY -----
N-PENTANE	__0.22	0.0797	CALCULATED __0.6730
HEXANE	_____		MEASURED _____
HEXANE PLUS	__0.47	0.2051	
HEPTANE PLUS	_____		SULPHUR GRAINS / 100 CU FT _____
TOTALS	100.00	3.5884	

03=MAIN SCREEN

24=HELP

PA1=TERMINATE

BTu 1106.606

FEUILLE A #5E
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	0.704	GAS GRAVITY	0.673
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.31	%N2	0.51
%CO2	0.59	%CO2	0.77
%H2S	0	%H2S	0
DIAMETER (IN)	2	DIAMETER (IN)	2
DEPTH (FT)	5811	DEPTH (FT)	6975
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	134	BOTTOMHOLE TEMPERATURE (DEG F)	147
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	366	SURFACE PRESSURE (PSIA)	366
BOTTOMHOLE PRESSURE (PSIA)	424.2	BOTTOMHOLE PRESSURE (PSIA)	432.2
<u>MV-Original</u>		<u>DK-Original</u>	
GAS GRAVITY	0.704	GAS GRAVITY	0.673
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.31	%N2	0.51
%CO2	0.59	%CO2	0.77
%H2S	0	%H2S	0
DIAMETER (IN)	2	DIAMETER (IN)	2
DEPTH (FT)	5811	DEPTH (FT)	6975
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	134	BOTTOMHOLE TEMPERATURE (DEG F)	147
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1117	SURFACE PRESSURE (PSIA)	1117
BOTTOMHOLE PRESSURE (PSIA)	1323.8	BOTTOMHOLE PRESSURE (PSIA)	1347.8

DATE: February 04, 1999
 NAME: FEUILLE A NO. 5E
 FORM: MESAVERDE

LOCATION
 UNIT: K
 SEC: 4
 TWN: 29N
 RNG: 10W

LEGEND
 COMPLETION DATE
 WELL NAME
 MCF/D - CUM(MMF)
 BOP/D - CUM(MBO)

[32] Stewart A Com A LS2 0/462 (97) 0/0 INA 3/57 Ludwick LS 13 63/1256 (98) [5] 0/0 P&A (71) 3/62 Grenier B 3 Grenier B 3E 103/977 (98) 0/3 10/81 8/62	10/80 Trieb Federal 2E 34/361 (98) 0/1 [33] 10/80 Bassett B 1 164/764 (98) 0/2 12/82 Bassett B 1 M 104/509 (98) 0/1 1/98 Trieb Federal Com 2 147/17 (98) 0/0 8/84 Grenier A 3M 78/444 (98) 0/1 INA 10/70 Grenier A 3 0/112 (98) [34] 0/0 7/82 Sanchez 3E 282/738 (98) 1/1 9/87 Sanchez 3A 113/468 (98) 0/1	7/81 Grenier B 4A 65/653 (98) 0/1 4/73 Grenier B 4 108/569 (98) [4] 0/1 Feuille A 5E 9/71 Hare 16 42/493 (98) 1/4 [3] 10/81 INA 3/72 Hare 15M 69/504 (98) 0/3 10/81 Hare 15 0/98 (91) 0/0	4/98 Hare 14A 203/6 (98) 1/0 10/71 Hare 18 123/673 (98) 0/2 9/70 [10] Hare 14 67/1019 (98) 0/0 4/82 Hare 18M 137/649 (98) 0/2
12/96 Nye Federal 2 264/175 (98) [8] 0/0	3/62 Nye Federal Com 3 100/574 (98) 0/22 [9]	7/81 Grenier B 4A 65/653 (98) 0/1 4/73 Grenier B 4 108/569 (98) [4] 0/1 Feuille A 5E 9/71 Hare 16 42/493 (98) 1/4 [3] 10/81 INA 3/72 Hare 15M 69/504 (98) 0/3 10/81 Hare 15 0/98 (91) 0/0	4/98 Hare 14A 203/6 (98) 1/0 10/71 Hare 18 123/673 (98) 0/2 9/70 [10] Hare 14 67/1019 (98) 0/0 4/82 Hare 18M 137/649 (98) 0/2

DATE: February 08, 1999

NAME: FEUILLE A #5E

FORM: DAKOTA

LOCATION

UNIT: K

SEC: 4

TWN: 29N

RNG: 10W

10/63 Shelly Gas Com #1 74/3262 (98) 0/24 5/81 Keys Com #1E 107/525 (98) 0/4 [32] 4/63 Keys Com #1 Shelly Gas Com #1E 108/3950 (98) 0/21 1/81 9/61	9/81 Zachry #15E 63/429 (98) 0/4 [33] 12/61 Zachry #16 116/4339 (98) 0/30 10/81 Zachry #16E 63/309 (98) 0/1 12/61 Zachry #15 121/4178 (98) 0/23 2/97 Grenier B #4E 146/103 (98) 0/0 8/85 Feuille A #5E Feuille A #5 33/277 (98) 70/1762 (98) 0/0 0/2	1/60 Zachry Fed #1 57/4310 (98) 0/34 [34] 4/62 Hare #15 106/1893 (98) 0/18 5/62 Hare #16 82/950 (98) T 0/6 29 N [3]	6/62 Hare #18 22/1257 (98) 0/8 [10] 4/82 Hare #18M 31/212 (98) 0/2
1/61 Nye Fed #1 71/1824 (98) 0/15 [8] 1/61 Nye Fed #2 0/1579 (98) 0/12 9/61 Ludwick LS #19 53/720 (98) 0/4 12/90 Grenier B #3E 0/0 (98) 0/0 [5]	2/65 Rock Island Fed #1 72/1894 (98) 0/12 [9]		

LEGEND

COMPLETION DATE

WELL NAME

MCF/D-CUM(MMF)

BOP/D-CUM(MBO)



**NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

ADMINISTRATIVE ORDER DHC-2442

Burlington Resources Oil & Gas Company
P.O. Box 4289
Farmington, New Mexico 87499

Attention: Ms. Peggy Bradfield

RECEIVED
AUG 26 1999
OIL CON. DIV.
DIST. 3

*Feuille "A" No. 5E
API No. 30-045-26249
Unit K, Section 4, Township 29 North, Range 10 West, NMPM,
San Juan County, New Mexico.
Blanco-Mesaverde (Prorated Gas - 72319) and
Basin-Dakota (Prorated Gas - 71599) Pools*

Dear Ms. Bradfield:

Reference is made to your recent application for an exception to Rule 303.A. of the Division Rules and Regulations to permit the above described well to commingle production from the subject pools in the wellbore.

It appearing that the subject well qualifies for approval for such exception pursuant to the provisions of Rule 303.C., and that reservoir damage or waste will not result from such downhole commingling, and correlative rights will not be violated thereby, you are hereby authorized to commingle the production as described above and any Division Order which authorized the dual completion and required separation of the zones is hereby placed in abeyance.

The maximum amount of gas which may be produced daily from the well shall be determined by Division Rules and Regulations or by the gas allowable for each respective prorated pool as printed in the Division's San Juan Basin Gas Proration Schedule.

The applicant shall consult with the supervisor of the Aztec District Office of the Division upon completion and testing of the well in order to establish a fixed allocation of production from each of the commingled zones. Upon approval by the Division's Aztec District Office, the applicant shall submit the allocation formula to the Santa Fe Office of the Division.

REMARKS: The operator shall notify the Aztec District Office of the Division upon implementation of the commingling process.