

**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

**San Juan 28-5 Unit****61E****E 18-28N-05W****Rio Arriba**

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 7460 API NO. 30-039-23837 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	Wildcat Munoz Canyon Gallup - 96767		Basin Dakota - 71599
2. Top and Bottom of Pay Section (Perforations)	7325' - 7570'		7879' - 8070'
3. Type of production (Oil or Gas)	gas		gas
4. Method of Production (Flowing or Artificial Lift)	flowing		flowing
5. Bottomhole Pressure	(Current) a. 2885		a. 1580
Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original	(Original) b. 2885		b. 3347
6. Oil Gravity ( <sup>o</sup> API) or Gas BTU Content	BTU 1136		BTU 1050
7. Producing or Shut-In?	producing		Shut-in
Production Marginal? (yes or no)	yes		no
* If Shut-In and oil/gas/water rates of last production	Date: n/a Rates:	Date: Rates:	Date: n/a Rates: 0/1112/0
Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data			
* If Producing, give data and	Date: n/a	Date:	Date: n/a

**RECEIVED**  
**SEP 23 1998**  
**OIL CON. DIV.**  
**DIST. 3**

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

ST DEC - 2 PM 1:38  
SANTA FE, NM

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-039-23837		Pool Code 96767/71599	Pool Name WC:Munoz Canyon Gallup/Basin Dakota
Property Code 7460	Property Name SAN JUAN 28-5 UNIT		Well Number 61E
OGRID No. 14538	Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY		Elevation 6713'

<sup>10</sup> Surface Location

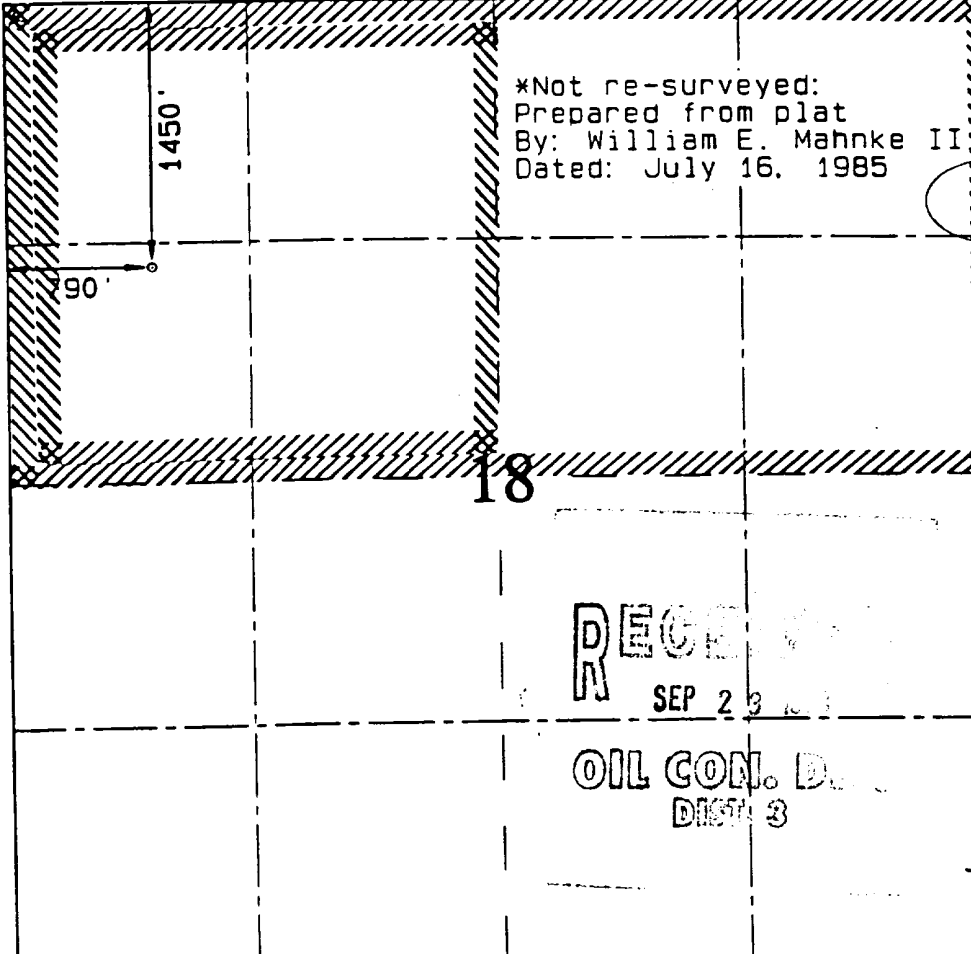


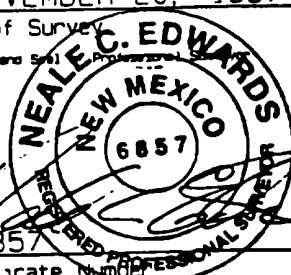
UL or lot no.	Section	Township	Range	Lot 10n	Feet from the	North/South line	Feet from the	East/West line	County
E	18	28N	5W		1450	North	790	West	RIO ARriba

<sup>11</sup> Bottom Hole Location If Different From Surface

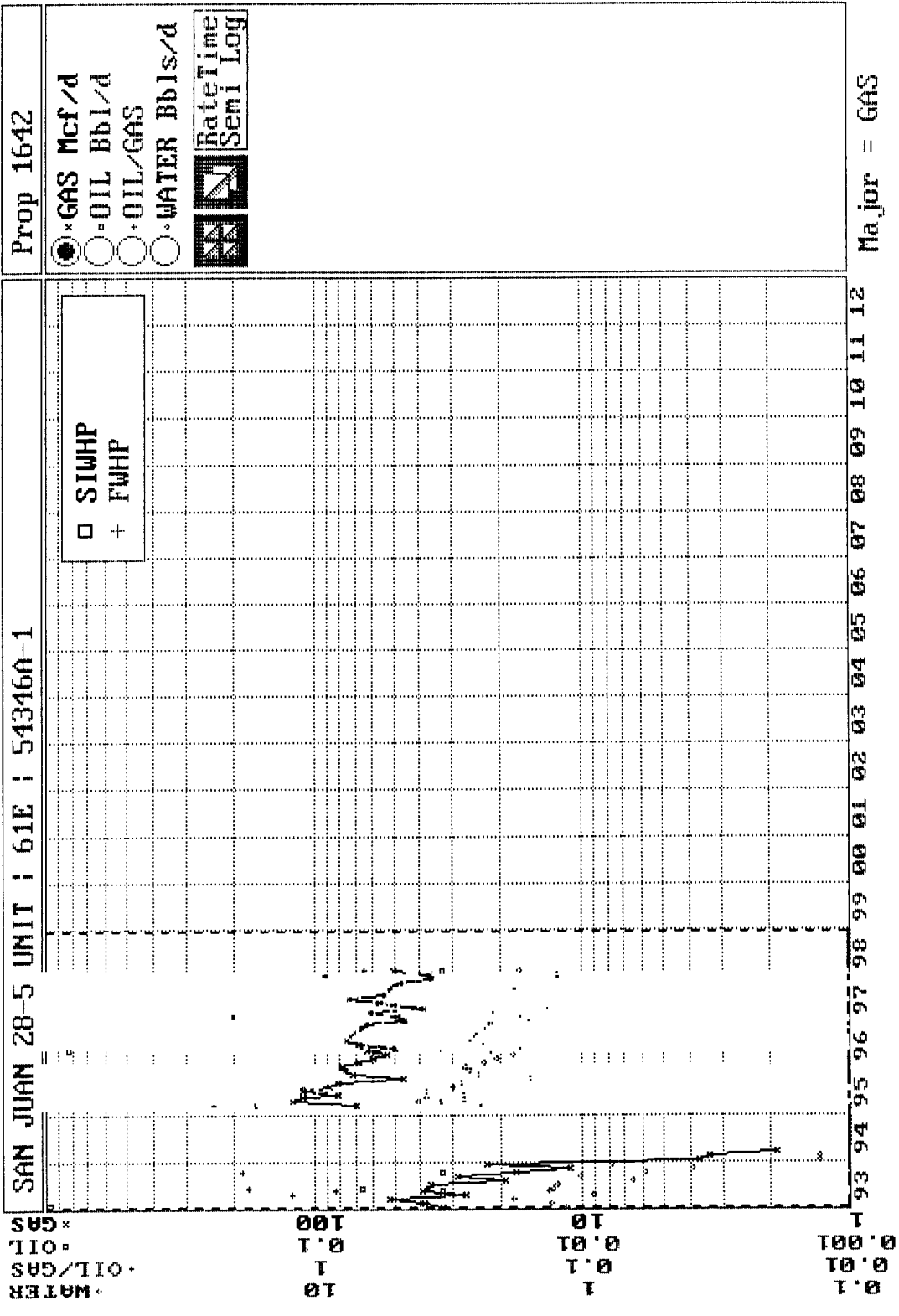
UL or lot no.	Section	Township	Range	Lot 10n	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres Gal - 160 DK - N/320	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
--	-------------------------------	----------------------------------	-------------------------

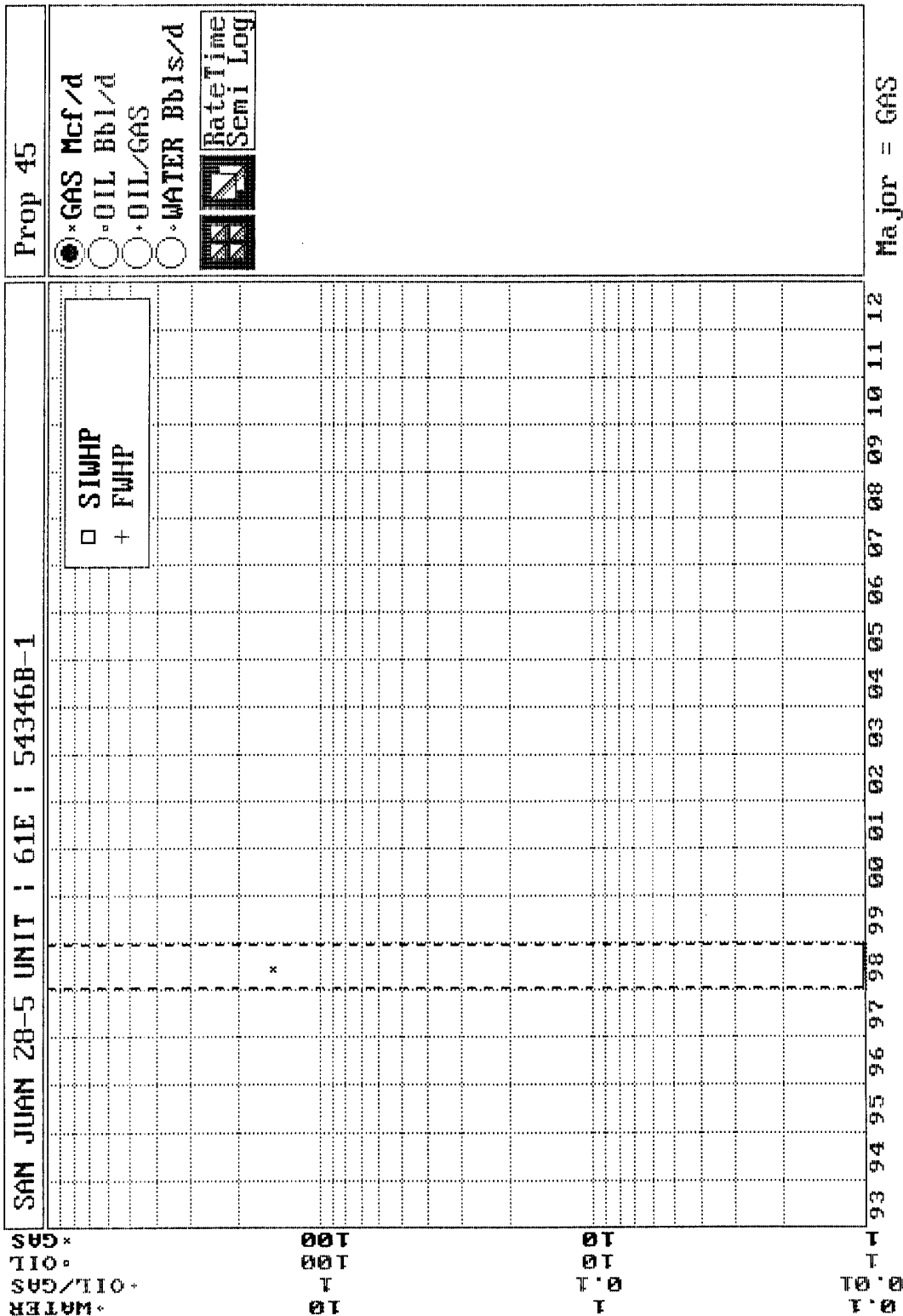
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p>*Not re-surveyed: Prepared from plat By: William E. Mahnke II Dated: July 16, 1985</p>	<p><sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p> (Signature) Peggy Bradfield Printed Name Regulatory Administrator Title 12-2-97 Date</p>
	<p>RECEIVED SEP 23 1997 OIL CON. DIV. DIST. 3</p>	<p><sup>18</sup> SURVEYOR CERTIFICATION 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 belief.</p> <p>NOVEMBER 20, 1997 Date of Survey  Signature and Seal of Professional Surveyor  6857 Certificate Number</p>

OK



02



**SJ 28-5 #61E**  
**Bottom Hole Pressures**  
**Cullender and Smith Method**  
Version 1.0 3/13/94

**Dakota**

**DK-Current**

GAS GRAVITY	<u>0.586</u>
COND. OR MISC. (C/M)	<u>C</u>
%N2	<u>0.1</u>
%CO2	<u>1.56</u>
%H2S	<u>0</u>
DIAMETER (IN)	<u>1.5</u>
DEPTH (FT)	<u>8025</u>
SURFACE TEMPERATURE (DEG F)	<u>60</u>
BOTTOMHOLE TEMPERATURE (DEG F)	<u>148</u>
FLOWRATE (MCFPD)	<u>91</u>
SURFACE PRESSURE (PSIA)	<u>1314</u>
BOTTOMHOLE PRESSURE (PSIA)	<u>1579.8</u>

**DK-Original**

GAS GRAVITY	<u>0.586</u>
COND. OR MISC. (C/M)	<u>C</u>
%N2	<u>0.1</u>
%CO2	<u>1.56</u>
%H2S	<u>0</u>
DIAMETER (IN)	<u>1.5</u>
DEPTH (FT)	<u>8025</u>
SURFACE TEMPERATURE (DEG F)	<u>60</u>
BOTTOMHOLE TEMPERATURE (DEG F)	<u>148</u>
FLOWRATE (MCFPD)	<u>91</u>
SURFACE PRESSURE (PSIA)	<u>2775</u>
BOTTOMHOLE PRESSURE (PSIA)	<u>3347.3</u>

Parent DK  
will

Page No.: 1

Print Time: Thu Aug 20 16:40:52 1998

Property ID: 1641

Property Name: SAN JUAN 28-5 UNIT | 61 | 50690A-1

Table Name: Q:\PUBLIC\GENTITY\GDPNOS\TEST.DBF

--DATE-- ---CUM GAS-- M FWHP- M FBHP- M SIWHP M SIBHP  
Mcf Psi Psi Psi Psi

12/02/62	0	0.0	<i>orig</i> 2775.0	3275.0
03/01/63	0		2774.0	
05/05/63	31000		1896.0	
01/24/64	65000		1735.0	
06/21/65	220000		1293.0	
03/05/66	308000		1293.0	
05/23/66	326000		1143.0	
05/26/67	422000		1041.0	
05/20/68	514000		983.0	
08/19/69	608102		1139.0	
06/19/70	694492	463.0	817.0	955.0
06/22/71	765117	567.0	1024.0	1200.0
06/07/72	831033	377.0	1177.0	1382.0
07/23/73	894511	527.0	1141.0	1339.0
04/15/75	1005119	253.0	1010.0	1183.0
06/15/77	1135349	390.0	1002.0	1174.0
10/04/79	1262425	332.0	916.0	1072.0
08/12/81	1357805	322.0	885.0	1035.0
09/28/83	1447829	340.0	1024.0	1200.0
09/05/85	1541516	323.0	948.0	1110.0
10/04/88	1637548	361.0	952.0	1114.0
04/22/90	1683664	385.0	1042.0	1221.0
09/28/92	1742674	311.0	<i>Current</i> 1314.0	1545.0

REQUESTED RECORD NOT FOUND (NEXT RECORD DISPLAYED)

*Robert DK*

.. OPR008M1 0092 0008 CHROMATOGRAPH TEST MAIN SCREEN

17:38:31.7 08/20/98

FUNCTION (A,C,D,I) I \*\* DATA AT TEST PRESSURE UNLESS NOTED \*\*  
MP NUMBER 73511 SAN JUAN 28-5 UNIT 61  
EFFECTIVE DATE 19960701  
REGION CD 42 SAN JUAN  
MP TYPE CODE 10 GAS METER - WELLHEAD SALES

-----  
SAMPLE TYPE CODE (GAS,LIQ,BTU) GAS ----- BTU/CF -----  
SAMPLE DATE 19960605 --- (AT 14.73 PSIG) --  
SAMPLE LINE PRESSURE (PSIG) \_\_\_\_\_ WET 1005.214 DRY 1023.000  
SAMPLE LINE TEMPERATURE (DEG F) \_\_\_\_\_  
TEST DATE \_\_\_\_\_ ----- BTU/CF -----  
TEST PRESSURE (PSIG) \_14.730 WET \_1005.214 DRY \_1023.000  
TEST TEMPERATURE (DEG F) 60 VAPOR FACTOR \_\_\_\_\_  
TEST LIFE (MONTHS) \_6  
TESTER SOURCE BA NUMBER 098795 EL PASO FIELD SERVICES  
TEST PURPOSE CODE \_\_\_\_\_

-----  
03=DETAIL SCR 04=MP-NM BRWS 06=MP/DS LST 07=MP/WN LST  
11=PREV SCR 12=MAIN MENU 20=NEXT REC  
21=REFRESH SCR 22=PREV MENU 24=HELP PA1=TERMINATE \_\_\_\_\_

PLANT DR

OPR008M2 0092

0008 CHROMATOGRAPH GAS SAMPLE DETAIL

17:38:44.2 08/20/98

	MOL %	GPM (AT 14.73)
HYDROGEN	_____	
HELIUM	_____	
NITROGEN	__0.10	
OXYGEN	_____	
HYDROGEN SULFIDE	_____	
CARBON DIOXIDE	__1.56	
METHANE	__95.91	
ETHANE	__1.94	0.5190
PROPANE	__0.26	0.0717
ISO-BUTANE	__0.08	0.0262
N-BUTANE	__0.05	0.0158
ISO-PENTANE	__0.03	0.0110
N-PENTANE	__0.01	0.0036
HEXANE	_____	
HEXANE PLUS	__0.06	0.0262
HEPTANE PLUS	_____	
TOTALS	100.00	0.6735

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

MP NUMBER 73511

EFFECTIVE DATE 19960701

-- GASOLINE CONTENT (GPM) --

26/70 GASOLINE \_\_\_\_\_

100% PROPANE \_\_\_\_\_

EXCESS BUTANES \_\_\_\_\_

TOTAL

----- SPECIFIC GRAVITY -----

CALCULATED \_0.5860

MEASURED \_\_\_\_\_

SULPHUR GRAINS / 100 CU FT \_\_\_\_\_

03=MAIN SCREEN

24=HELP

PA1=TERMINATE



08/05/98

LAND WELL REPORT

APPROVED 03/04/98

LWR210NL

INQUIRY

COMPANY OWNERSHIP

<WELLSTAT>

WELL: 54346A

SAN JUAN 28-5 UNI

61E

DK

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OWNER	PROD	INTEREST %	I-TYPE	TRUST	EVENT	AUTH	INIT	REVISED
-----	----	-----	-----	-----	-----	----	----	-----
21 BROG	ALL	49.460484	NWI		CUR	DOU	WMB	06/23/98
21 BROG	ALL	70.276500	GW		CUR	DOU	WMB	06/23/98
21 BROG	ALL	0.031030	ORI		CUR	DOU		
21 BROG	ALL	9.985493	NPI		CUR	DOU		

TOTAL COMPANY NET/GROSS REVENUE INTEREST:      NET: OIL    59.477007 GAS    59.477007  
GROSS: OIL    70.276500 GAS    70.276500

\*\* CONTAINS OWNERSHIP REMARKS \*\*

BLOCK POSTING:


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PF17=PRIOR   PF18=REASON   PF20=TOP   PF21=RMKS   PF11=BACK   PF12=MENU   PF24=HELP

08/05/98

GENERAL INFORMATION -1-

LWM211NL  
<LANDWELL>

DP NUMBER: 54346A  RECORD TYPE: W PUD XREF:  
PROPERTY : 007970400  
WELL NAME: SAN JUAN 28-5 UNIT 61E  
FORMATION: 0115 DAKOTA  
OPERATOR : 999021 04 BURLINGTON RESOURCES O&G CO  
WELL TYPE: 2 GAS WELL STATUS: 78 TEMPORARILY ABANDONED STATUS DATE: 980513

COMPANY : 21 DIST: 42 FARMINGTON ST/CNTY: NM 039 RIO ARRIBA  
SECTION : 18 TWN : C28N RNG: 005W UNIT LTR: E SW/4 NW/4  
SPACING : 320.0 TRACT: BLK:  
LOCATION : 1450'FNL, 790'FWL

SPUD DATE: 09/19/85 TOTAL DEPTH: 8094  
DRLG COMP: 09/27/85 TOP PERF : 7879  
WELL COMP: 10/23/85 BOTTOM PERF: 8070

1ST OIL PROD: 11/06/85 OIL NET REV: 59.477007  
1ST GAS PROD: 11/06/85 OIL WELL WI: 70.276500  
GAS NET REV: 59.477007  
GAS WELL WI: 70.276500

PFXX=DETAILS

PF12=MENU

PF24=HELP

08/05/98

COMPANY OWNERSHIP

LWM220NL  
<LANDWELL>

WELL: 54346A      SAN JUAN 28-5 UNI      61E      FORM: DAKOTA

=====

OWNER	PROD	INTEREST %	I-TYPE	TRUST	EVENT	AUTH	INIT	REVISED
-----	----	-----	-----	-----	-----	----	----	-----
21 BROG	ALL	49.460484	NWI		CUR	DOU	WMB	06/23/98
21 BROG	ALL	70.276500	GW		CUR	DOU	WMB	06/23/98
21 BROG	ALL	0.031030	ORI		CUR	DOU		
21 BROG	ALL	9.985493	NPI		CUR	DOU		

ENTER= NEXT    PF12=MENU    PF15=ACQ MENU    PF17=PRIOR    PF18=REASON    PF19=SOLD YR

08/05/98

INQUIRY

WELL: 54346B

GL

SAN JUAN 28-5 UNI

61E

LAND WELL REPORT  
COMPANY OWNERSHIP

APPROVED 03/04/98

LWR210NL  
<WELLSTAT>

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OWNER	PROD	INTEREST %	I-TYPE	TRUST	EVENT	AUTH	INIT	REVISED
-----	----	-----	-----	-----	-----	----	----	-----
21 BROG	ALL	20.625000	NPI		CUR	FW	LKD	03/03/98
21 BROG	ALL	61.875000	NWI		CUR	FW	LKD	03/03/98
21 BROG	ALL	100.000000	GWI		CUR	FW	LKD	03/03/98

TOTAL COMPANY NET/GROSS REVENUE INTEREST:      NET: OIL    82.500000    GAS    82.500000  
GROSS: OIL 100.000000    GAS 100.000000

\*\* NO OWNERSHIP REMARKS \*\*

BLOCK POSTING:

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PF17=PRIOR   PF18=REASON   PF20=TOP   PF21=RMKS   PF11=BACK   PF12=MENU   PF24=HELP

08/05/98

GENERAL INFORMATION -1-

LWM211NL  
<LANDWELL>

DP NUMBER: 54346B *Cal* RECORD TYPE: W PUD XREF:

PROPERTY : 071854301

WELL NAME: SAN JUAN 28-5 UNIT 61E

FORMATION: 0230 GALLUP

OPERATOR : 999021 04 BURLINGTON RESOURCES O&G CO

WELL TYPE: 2 GAS WELL STATUS: 00 FLOWING STATUS DATE: 980601

COMPANY : 20 DIST: 42 FARMINGTON ST/CNTY: NM 039 RIO ARRIBA

SECTION : 18 TWN : 028N RNG: 005W UNIT LTR: E SW/4 NW/4

SPACING : TRACT: BLK:

LOCATION : 1450' FNL, 790' FWL

TOTAL DEPTH: 8094

SPUD DATE: 09/19/85 TOP PERF : 7325

DRLG COMP: 09/27/85 BOTTOM PERF: 7570

WELL COMP: 05/18/98

OIL NET REV: 82.500000

1ST OIL PROD: 00/00/00 OIL WELL WI: 100.000000

1ST GAS PROD: 06/01/98 GAS NET REV: 82.500000

GAS WELL WI: 100.000000

PFXX=DETAILS

PF12=MENU

PF24=HELP



OPR008M2 3006

0008 CHROMATOGRAPH GAS SAMPLE DETAIL

12:25:49.6 08/05/98

	MOL %	GPM (AT 14.73)
HYDROGEN	_____	
HELIUM	_____	
NITROGEN	___0.13	
OXYGEN	_____	
HYDROGEN SULFIDE	_____	
CARBON DIOXIDE	___1.68	
METHANE	___93.84	
ETHANE	___2.97	0.7945
PROPANE	___0.67	0.1847
ISO-BUTANE	___0.20	0.0654
N-BUTANE	___0.15	0.0473
ISO-PENTANE	___0.09	0.0329
N-PENTANE	___0.05	0.0181
HEXANE	_____	
HEXANE PLUS	___0.22	0.0960
HEPTANE PLUS	_____	
TOTALS	100.00	1.2389

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

MP NUMBER 95509

EFFECTIVE DATE 19970101

-- GASOLINE CONTENT (GPM) --

26/70 GASOLINE \_\_\_\_\_

100% PROPANE \_\_\_\_\_

EXCESS BUTANES \_\_\_\_\_

TOTAL

----- SPECIFIC GRAVITY -----

CALCULATED \_0.6060

MEASURED \_\_\_\_\_

SULPHUR GRAINS / 100 CU FT \_\_\_\_\_

03=MAIN SCREEN

24=HELP

PA1=TERMINATE

*Gallop*

FDG055M4 1153

WELL PRODUCTION 8/8'S VOLUME

07/22/98 17:18:31

START OF DATA

DP NO: 54346B

DATE: 980720 (YYMMDD FORMAT)

SAN JUAN 28-5 UNIT

61E SCROLL FORWARD BY DATE: \_

S

E	DATE	HOURS	-OIL PRODN-	-GAS PRODN-	-WATER PRODN-		
L PRODUCED	ON	(BOPD	BOPM)	(MCFD	MCFM)	(BWPD	BWPM)
—	07/20/98	24.0	0.00	0.00	100	2252	0.00 0.00
—	07/19/98	24.0	0.00	0.00	97	2152	0.00 0.00
—	07/18/98	24.0	0.00	0.00	114	2055	0.00 0.00
—	07/17/98	24.0	0.00	0.00	112	1941	0.00 0.00
—	07/16/98	24.0	0.00	0.00	233	1829	0.00 0.00
—	07/15/98	24.0	0.00	0.00	0	1596	0.00 0.00
—	07/14/98	24.0	0.00	0.00	23	1596	0.00 0.00
—	07/13/98	24.0	0.00	0.00	114	1573	0.00 0.00
—	07/12/98	24.0	0.00	0.00	108	1459	0.00 0.00
—	07/11/98	24.0	0.00	0.00	108	1351	0.00 0.00
—	07/10/98	24.0	0.00	0.00	114	1243	0.00 0.00

ENTER I UNDER SEL FOR MAINTENANCE

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



FDG055M4 1153

WELL PRODUCTION 8/8'S VOLUME

07/22/98 17:18:42

DP NO: 54346B

DATE: 980709 (YYMMDD FORMAT)

SAN JUAN 28-5 UNIT

61E

SCROLL FORWARD BY DATE: \_

S

E	DATE	HOURS	-OIL PRODN-	-GAS PRODN-	-WATER PRODN-
L PRODUCED	ON	(BOPD	BOPM)	(MCFD MCFM)	(BWPD BWPM)
—	07/09/98	24.0	0.00	0.00	123 1129 0.00 0.00
—	07/08/98	24.0	0.00	0.00	106 1006 0.00 0.00
—	07/07/98	24.0	0.00	0.00	132 900 0.00 0.00
—	07/06/98	24.0	0.00	0.00	128 768 0.00 0.00
—	07/05/98	24.0	0.00	0.00	116 640 0.00 0.00
—	07/04/98	24.0	0.00	0.00	122 524 0.00 0.00
—	07/03/98	24.0	0.00	0.00	131 402 0.00 0.00
—	07/02/98	24.0	0.00	0.00	136 271 0.00 0.00
—	07/01/98	24.0	0.00	0.00	135 135 0.00 0.00
—	06/30/98	24.0	0.00	0.00	136 4750 0.00 0.00
—	06/29/98	24.0	0.00	0.00	132 4614 0.00 0.00

ENTER I UNDER SEL FOR MAINTENANCE

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

FDG055M4 1153

WELL PRODUCTION 8/8'S VOLUME

07/22/98 17:18:07

DP NO: 54346A

DATE: 980526 (YYMMDD FORMAT)

SAN JUAN 28-5 UNIT

61E

SCROLL FORWARD BY DATE: \_

S

E	DATE	HOURS	-OIL PRODN-	-GAS PRODN-	-WATER PRODN-
L PRODUCED	ON	(BOPD	BOPM)	(MCFD MCFM)	(BWPD BWPM)
-	05/26/98	0.0	0.00	0.00	0 13173 0.00 0.00
-	05/25/98	0.0	0.00	0.00	0 13173 0.00 0.00
-	05/24/98	0.0	0.00	0.00	0 13173 0.00 0.00
-	05/23/98	0.0	0.00	0.00	0 13173 0.00 0.00
-	05/22/98	0.0	0.00	0.00	278 13173 0.00 0.00
-	05/21/98	0.0	0.00	0.00	1073 12895 0.00 0.00
-	05/20/98	0.0	0.00	0.00	1081 11822 0.00 0.00
-	05/19/98	0.0	0.00	0.00	1096 10741 0.00 0.00
-	05/18/98	0.0	0.00	0.00	1112 9645 0.00 0.00
-	05/17/98	0.0	0.00	0.00	1134 8533 0.00 0.00
-	05/16/98	0.0	0.00	0.00	1159 7399 0.00 0.00

ENTER I UNDER SEL FOR MAINTENANCE

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

Company: BURLINGTON RESOURCES  
Well: SAN JUAN 28-5 #61-E  
Field: GALLUP FORMATION  
Engineer:  
Gauge Type: AMERADA  
Gauge Range: 0-3000  
Gauge Depth: 7500 ft  
Serial No.: 44537

County: RIO ARRIBA  
State: NEW MEXICO  
Date: 05/28/1998  
Well Type:  
Test Type: STATIC GRADIENT  
Status: SHUT-IN  
File Name: 31928-2

Tubing: 1 1/2" TO 7578  
Tubing: TO  
Casing: TO  
Perfs.: 7325-7570  
Shut-in Time 192 hrs

Oil Level  
H2O Level 6919 ft

Shut-in BHP 2885 @ 7500 ft Shut-in BHT 0 F @ 0 ft  
Shut-in WHP 2165 Shut-in WHT 0 F

[ Tefteller Incorporated ]

#	MD	TVD	PRESSURE	PSI/ft
1	0	0	2165.00	
2	2000	2000	2313.00	0.074
3	4000	4000	2457.00	0.072
4	6000	6000	2594.00	0.068
5	7100	7100	2728.00	0.122
6	7300	7300	2807.00	0.395
7	7500	7500	2885.00	0.390



2030 AFTON PLACE  
FARMINGTON, N.M. 87401  
(505) 325-6622

ANALYSIS NO. BUR80752  
CUST. NO. 52100- 15730

### WELL/LEASE INFORMATION

CUSTOMER NAME BURLINGTON RESOURCES  
WELL NAME SAN JUAN 28-5 #61E  
COUNTY/ STATE  
LOCATION  
FIELD  
FORMATION GALLUP  
CUST.STN.NO.

SOURCE  
PRESSURE 285 PSIG  
SAMPLE TEMP 70.6 DEG.F  
WELL FLOWING N/A  
DATE SAMPLED 6/16/98  
SAMPLED BY STEVE ADAMS  
FOREMAN/ENGR. LARY BYARS

### REMARKS

### ANALYSIS

COMPONENT	MOLE %	GPM**	B.T.U.*	SP.GR *
NITROGEN	4.292	0.0000	0.00	0.0415
CO2	0.786	0.0000	0.00	0.0119
METHANE	81.256	0.0000	822.55	0.4501
ETHANE	8.523	2.2799	151.17	0.0885
PROPANE	2.804	0.7728	70.71	0.0427
I-BUTANE	0.680	0.2224	22.16	0.0136
N-BUTANE	0.703	0.2217	22.99	0.0141
I-PENTANE	0.366	0.1339	14.68	0.0091
N-PENTANE	0.177	0.0641	7.11	0.0044
HEXANE PLUS	0.413	0.1802	21.23	0.0133
TOTAL	100.000	3.8750	1,132.60	0.6893

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

\*\* @ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z) 1.0029  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z) 1,135.9  
BTU/CU.FT (WET) CORRECTED FOR (1/Z) 1,116.1  
REAL SPECIFIC GRAVITY 0.6912

ANALYSIS RUN AT 14.730 PSIA & 60 DEGREES F

DRY BTU @ 14.650 1,129.7  
DRY BTU @ 14.696 1,133.3  
DRY BTU @ 14.730 1,135.9  
DRY BTU @ 15.025 1,158.6

CYLINDER # 335-5  
CYLINDER PRESSURE 255 PSIG  
DATE RUN 6/17/98  
ANALYSIS RUN BY DAVE MARTIN

DATE: August 03, 1998

NAME: SAN JUAN 28-5 UNIT 61E

FORM: DAKOTA

LOCATION

UNIT: E  
SEC: 18  
TWN: 28N  
RNG: 5W

[12]		[7]		[8]	
8/67 * San Juan 28-6 Unit 106 129/2004 (97) [13] 0/0		11/85 * San Juan 28-5 Unit 61E 52/256 (97) 0/0		12/62 * San Juan 28-5 Unit 61 91/1973 (97) 0/0	
11/61 * San Juan 28-6 Unit 100 145/3367 (97) 0/1		7/59 * San Juan 28-5 Unit 34 83/2690 (97) 0/4		11/85 * San Juan 28-5 Unit 33 0/2298 (98) 0/0	
1/95 * San Juan 28-6 Unit 99M 125/153 (97) [24] 0/0		9/65 * San Juan 28-6 Unit 99 106/2103 (97) 0/0		P&A 12/62 * San Juan 28-5 Unit 57 0/1822 (97) 0/0	
6/71 * San Juan 28-6 Unit 152 131/1700 (97) 0/0		7/82 * San Juan 28-5 Unit 57M 119/829 (97) 0/1 [19] 1/97 * San Juan 28-5 Unit 35M 131/40 (97) 0/0		11/85 * San Juan 28-5 Unit 54E 140/966 (97) 0/0	
				11/62 * San Juan 28-5 Unit 63 247/4876 (97) 0/1	
				[20] 11/85 * San Juan 28-5 Unit 63E 95/327 (97) 0/0	
				12/62 * San Juan 28-5 Unit 54 113/1598 (97) 0/0	

T  
28  
N

LEGEND

COMPLETION DATE

WELL NAME  
MCFID-CUM(MMF)  
BOP/D-CUM(MBO)

R-6-W

R-5-W

DATE: August 03,1998

NAME: SAN JUAN 28-5 UNIT 61E

FORM: GALLUP

LOCATION

UNIT: E  
SEC: 18  
TWN: 28N  
RNG: 5W

T  
28  
N

[12]	[7]	[8]
	San Juan 28-5 Unit 61E 5/98 *	
[13]	[18]	[17]
[24]	[19]	[20]

R-6-W

R-5-W

LEGEND

COMPLETION DATE

WELL NAME

MCF/D-CUM(MMF)

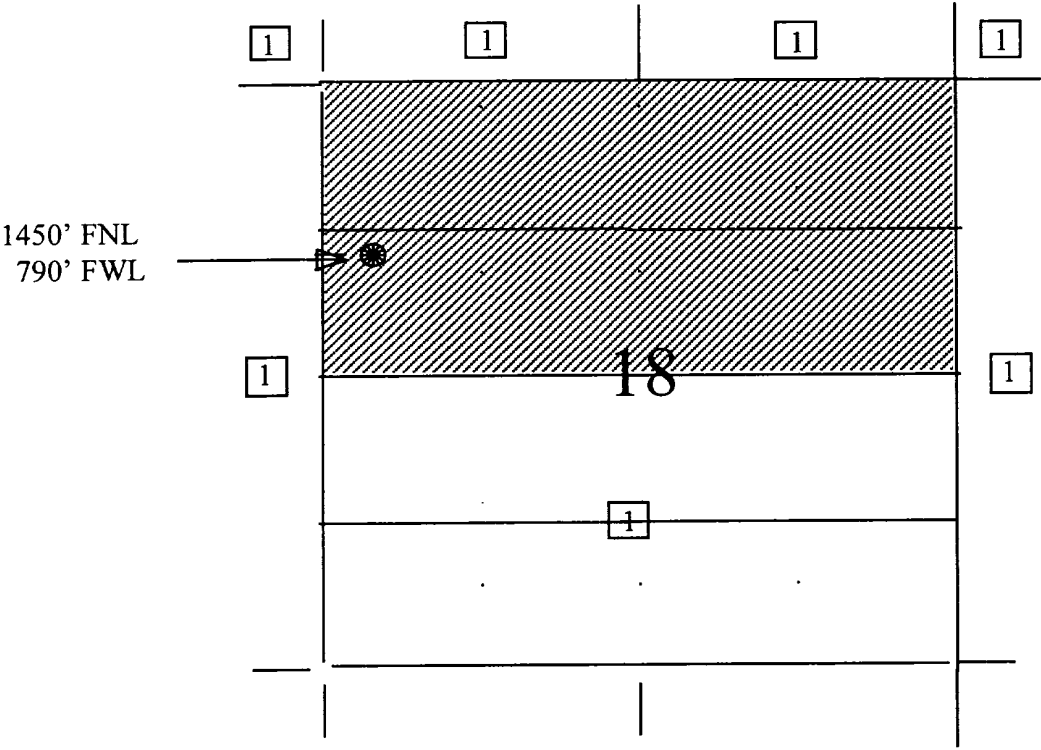
BOP/D-CUM(MBO)

***BURLINGTON RESOURCES OIL AND GAS COMPANY***

**San Juan 28-5 Unit #61E  
OFFSET OPERATOR \ OWNER PLAT  
Downhole Commingle**

**Dakota (N/2) / Gallup (NW/4) Formations Well**

**Township 28 North, Range 5 West**



1) Burlington Resources

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

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

CASE NO. 11627  
ORDER NO. R-10695

APPLICATION OF BURLINGTON RESOURCES  
OIL & GAS COMPANY FOR THE ESTABLISHMENT  
OF A DOWNHOLE COMMINGLING "REFERENCE  
CASE" FOR ITS SAN JUAN 28-5 UNIT PURSUANT  
TO DIVISION RULE 303.E. AND THE ADOPTION  
OF SPECIAL ADMINISTRATIVE RULES THEREFOR,  
~~SAN JUAN~~ COUNTY, NEW MEXICO.

*Rio ARRIBA*

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on October 17 and November 7, 1996, at Santa Fe, New Mexico, before Examiners David R. Catanach and Michael E. Stogner, respectively.

NOW, on this 12th day of November, 1996, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Burlington Resources Oil & Gas Company (Burlington), pursuant to the provisions of Division Rule 303.E., seeks to establish a downhole commingling "reference case" to provide exceptions for (a) marginal economic criteria, (b) pressure criteria, (c) allocation formulas and (d) modification of notification rules on a unit-wide basis for downhole commingling of Dakota, Mesaverde, Fruitland Coal and Pictured Cliffs gas production within existing or future drilled wells within the San Juan 28-5 Unit, San Juan County, New Mexico.



(3) Division Rule No. 303.E., amended by Order No. R-10470-A, currently states:

"If sufficient data exists on a lease, pool, formation, geographic area, etc., so as to render it unnecessary to repeatedly provide such data on Form C-107-A, an operator may except any of the various criteria required under Paragraph 303.D. of this rule by establishing a "reference case". The Division, upon its own motion, or by application from an operator, may establish "reference cases" either administratively or by hearing. Upon Division approval of such "reference cases" for specific criteria, subsequent applications to downhole commingle (Form C-107-A) will be required only to cite the Division order number which established such exceptions and shall not be required to submit data for those criteria."

(4) The applicant is the current operator of the San Juan 28-5 Unit which encompasses some 17,399 acres in Township 28 North, Range 5 West, NMPM, San Juan County, New Mexico.

(5) Within the San Juan 28-5 Unit, the applicant currently operates sixty-seven (67) Basin-Dakota Gas Pool wells, seventy-one (71) Blanco-Mesaverde Gas Pool wells, sixteen (16) Gobernador-Pictured Cliffs, Oso-Pictured Cliffs and Tapacito-Pictured Cliffs Gas Pool wells, and nineteen (19) Basin-Fruitland Coal Gas Pool wells.

(6) According to its evidence and testimony, Burlington seeks to:

- a) establish a "reference case" for marginal economic criteria in the Dakota and Pictured Cliffs formations whereby these formations and/or pools may be identified as "marginal" on Form C-107-A's subsequently filed for wells within the San Juan 28-5 Unit. The applicant further proposes that the data provided in the immediate case serve as supplemental data or confirmation that these formations and/or pools should be classified as "marginal";
- b) establish a "reference case" for pressure criteria in the Dakota and Pictured Cliffs formations whereby the Division may utilize data provided in the immediate case to verify the pressure data provided on Form C-107-A's subsequently filed for wells within the San Juan 28-5 Unit;

- c) establish a "reference case" whereby the Division utilizes the data presented in the immediate case to endorse or approve certain methods of allocating production whereby the applicant need not submit additional data or justification when proposing a certain method of allocating production on Form C-107-A's subsequently filed for wells within the San Juan 28-5 Unit; and,
- d) establish a "reference case" or an administrative procedure for authorizing the downhole commingling of existing or future drilled wells within the San Juan 28-5 Unit without additional notice to each affected interest owner as required by Division Rule No. 303.D.

(7) In support of its request to except marginal economic criteria, the applicant presented geologic and engineering evidence and testimony which indicates that within the San Juan 28-5 Unit:

- a) the structure and thickness of the Dakota and Pictured Cliffs formations are very consistent;
- b) the average recoverable Dakota and Pictured Cliffs gas reserves underlying an undeveloped drill block are approximately 1,258 MMCFG and 77 MMCFG, respectively;
- c) the average initial producing rate for a newly drilled or recompleted Dakota and Pictured Cliffs gas well is approximately 276 MCFGD and 136 MCFGD, respectively; and,
- d) the estimated ultimate gas recoveries and initial producing rates from the Dakota and Pictured Cliffs formations are insufficient to justify drilling stand alone wells and/or dually completed wells to recover such gas reserves.

(8) The evidence and testimony presented by the applicant indicates that the Dakota and Pictured Cliffs formations within the San Juan 28-5 Unit should be properly classified as "marginal".

(9) In support of its request to except pressure criteria within the Dakota and Pictured Cliffs formations within the San Juan 28-5 Unit, the applicant presented engineering evidence and testimony which indicates that:

- a) the average shut-in bottomhole pressure within the Dakota and Pictured Cliffs formations at the time of initial development were approximately 3,149 psi and 1,143 psi, respectively; and,
- b) the average current shut-in bottomhole pressure within the Dakota and Pictured Cliffs formations are approximately 1,059 psi and 714 psi, respectively.

(10) There is sufficient pressure data available within the San Juan 28-5 Unit so as to except pressure criteria as proposed by the applicant.

(11) The applicant testified that various allocation methods will be utilized for downhole commingled wells within the San Juan 28-5 Unit depending on the circumstances. Some of the methods and circumstances are described as follows:

- a) the subtraction method will likely be utilized in those instances involving the Basin-Fruitland Coal Gas Pool and in those instances where a zone with a well established decline rate is commingled with a newly completed zone;
- b) a fixed allocation formula will be utilized in those instances where production history for both zones is available, or in those instances where newly completed zones are tested and stabilized flow rates obtained.

(12) The allocation methods proposed by the applicant are routinely utilized by industry and approved by the Division and therefore, the proposal to except allocation formulas should be approved.

(13) In support of its request to establish a "reference case" or administrative procedure for providing notice within the San Juan 28-5 Unit the applicant presented evidence and testimony which indicates that:

- a) the interest ownership between two zones within a given wellbore in the San Juan 28-5 Unit is generally not common;
- b) pursuant to Division Rule No. 303.D., applicant is currently required to notify all interest owners within the San Juan 28-5 Unit every time a Form C-107-A is submitted to the Division. There are a considerable number of such interest owners within the unit;

- c) providing notice to each interest owner within the San Juan 28-5 Unit of subsequent downhole comminglings is unnecessary and is an excessive burden on the applicant;
- d) the downhole commingling of wells within the San Juan 28-5 Unit Area will benefit working, royalty, and overriding royalty interest owners. In addition, the downhole commingling of wells within the San Juan 28-5 Unit should not violate the correlative rights of any interest owner;
- e) no interest owner appeared at the hearing in opposition to the establishment of a "reference case" or administrative procedure for notice.

(14) An administrative procedure should be established within the San Juan 28-5 Unit for obtaining approval for subsequent downhole commingled wells without notice to Unit interest owners, provided however that, all other provisions contained within Division Rule No. 303.C. are complied with.

(15) Approval of the proposed "reference cases" for marginal economic criteria, pressure criteria, allocation formulas and notice will lessen the burden on the applicant insofar as providing the data required pursuant to Division Rule No. 303.D. and Form C-107-A, will provide the applicant a streamlined method for obtaining downhole commingling approvals within the San Juan 28-5 Unit, and will not violate correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Burlington Resources Oil & Gas Company to establish a "reference case" for (a) marginal economic criteria, (b) pressure criteria, (c) allocation formulas and (d) modification of notification rules on a unit-wide basis for downhole commingling of Dakota, Mesaverde, Fruitland Coal and Pictured Cliffs gas production within existing or future drilled wells within the San Juan 28-5 Unit, San Juan County, New Mexico, is hereby approved.

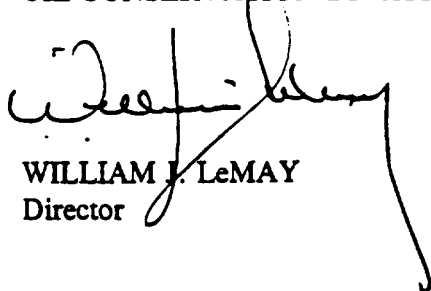
(2) Upon filing of Division Form No. C-107-A's for wells subsequently downhole commingled within the San Juan 28-5 Unit Area, the applicant shall not be required to submit supporting data to justify the classification of the Pictured Cliffs and Dakota formations as "marginal", supporting data to verify the Pictured Cliffs and Dakota pressure information provided, and support or justification for utilizing a given method or formula for allocation of production, provided however, in the event any of the data described above appearing on Form C-107-A appears to be beyond the data range provided in this case, the Division may require the submittal of additional supporting data.

(3) In order to obtain Division authorization to downhole commingle wells within the San Juan 28-5 Unit, the applicant shall file a Form C-107-A with the Santa Fe and Aztec Offices of the Division. Such application shall contain all the information required under Rule No. 303.C. of the Division Rules and Regulations, provided however that the applicant shall not be required to provide notice to all interest owners within the San Juan 28-5 Unit of such proposed commingling.

(4) 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



WILLIAM J. LeMAY  
Director

S E A L