

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

OIL CONSERVATION DIVISION

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

APPROVAL PROCESS :

Administrative Hearing

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

APPLICATION FOR DOWNHOLE COMMINGLING

EXISTING WELLBORE
 YES NO

Burlington Resources Oil & Gas Company

PO Box 4289, Farmington, NM 87499

Operator Address
SAN JUAN 28-6 UNIT 143M C 20-28N-6W Rio Arriba

Lease Well No. Unit Ltr. - Sec - Twp - Rge County
OGRID NO. 14538 Property Code 7462 API NO. 30-039- 25727 Federal State (and/or) Fee

Table with 4 columns: The following facts are submitted in support of downhole commingling, Upper Zone, Intermediate Zone, Lower Zone. Rows include Pool Name, Pay Section, Type of production, Method of Production, Bottomhole Pressure, Oil Gravity, Producing or Shut-In, Production Marginal?, and Fixed Percentage Allocation.

- 9. If allocation formula is based upon something other than current or past production...
10. Are all working, overriding, and royalty interests identical in all commingled zones?
11. Will cross-flow occur?
12. Are all produced fluids from all commingled zones compatible with each other?
13. Will the value of production be decreased by commingling?
14. If this well is on, or communitized with, state or federal lands...
15. NMOCD Reference Cases for Rule 303(D) Exceptions:
16. ATTACHMENTS:

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

SIGNATURE Sean Woolverton TITLE Production Engineer DATE 10/02/97

TYPE OR PRINT NAME Sean C. Woolverton TELEPHONE NO. (505) 326-9700

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer 00, Arcoma, NM 88211-0719
District III
1000 Nite Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

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

For
Revised February
Instruction
Submit to Appropriate Distr
State Lease -
Fee Lease -

AMENDED

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-039-		Foot Code 72319/71599		Foot Name Blanco Mesaverde/Basin Dakota	
Property Code 7462		Property Name San Juan 28-6 Unit			Well No. 143M
OGRID No. 14538		Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY			Elm. 6533

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	Cont.
C	20	28-N	6-W		525	North	2070	West	R.A

11 Bottom Hole Location if Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	Cont.

12 Dedication Acres: 13 Joint or Infill: 14 Commutation Code: 15 Order No.
MV-W/320
DK-W/320

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>16</p>	<p>17 OPERATOR CERTIFIC. I hereby certify that the information contained here and complete to the best of my knowledge.</p> <p><i>Peggy Bradfield</i> Signature Peggy Bradfield Printed Name Regulatory Administrator Title Date 7-3-97</p>
	<p>18 SURVEYOR CERTIFIC. I hereby certify that the well location shown on was plotted from field notes of actual surveys or under my supervision, and that the same is correct to the best of my belief.</p> <p>5/27/97 Date of Survey Signature and Seal of Professional Surveyor <i>NEALE C. EDWARDS</i> NEALE C. EDWARDS NEW MEXICO 6857 6857 Certification Number</p>	

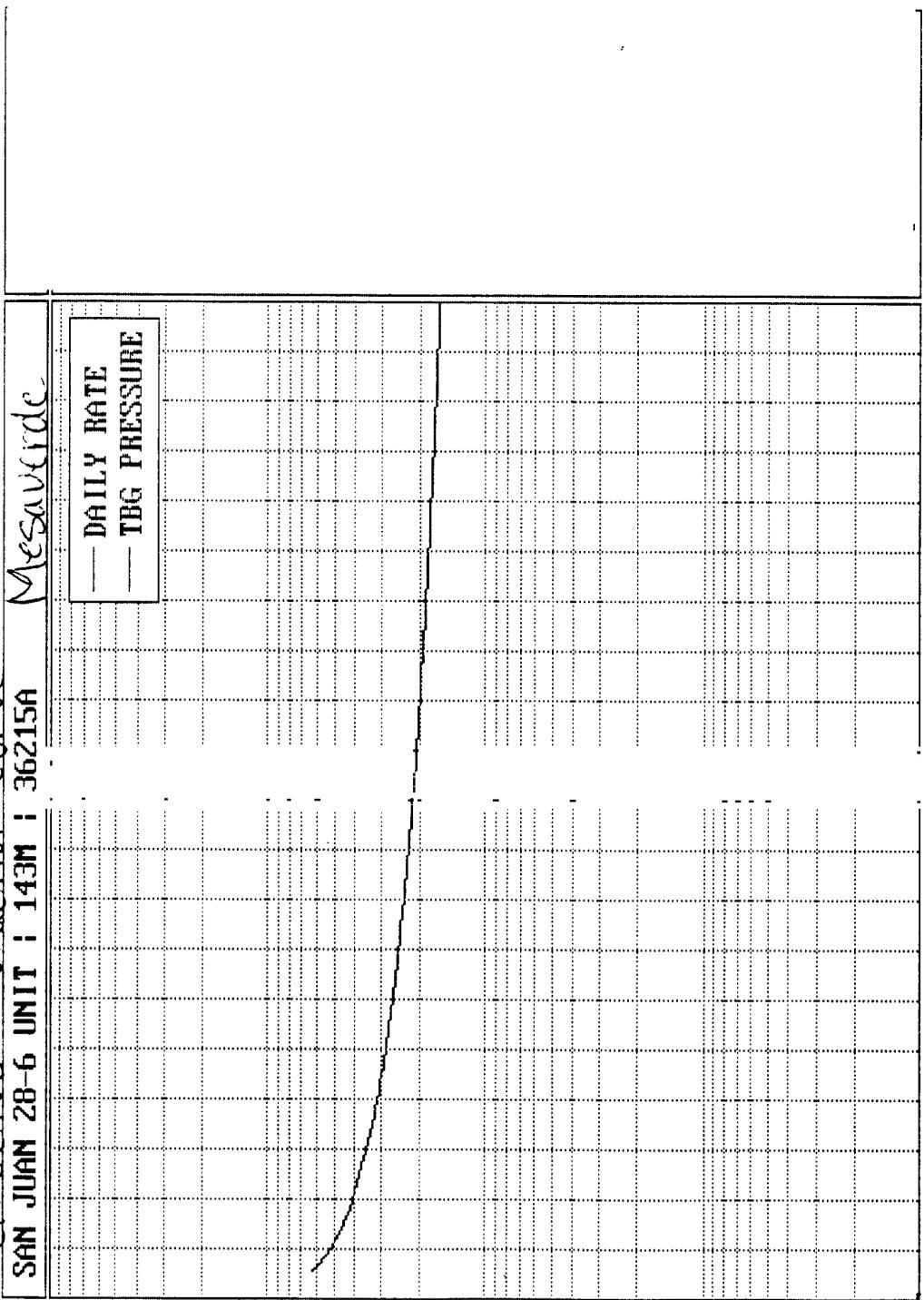
EXPECTED PRODUCTION CURVE

SAN JUAN 2B-6 UNIT : 143M : 36215A

Mesa Verde

• OIL
• WATER/GPS
• GAS
• WATER

— DAILY RATE
— TBG PRESSURE



Major = GAS

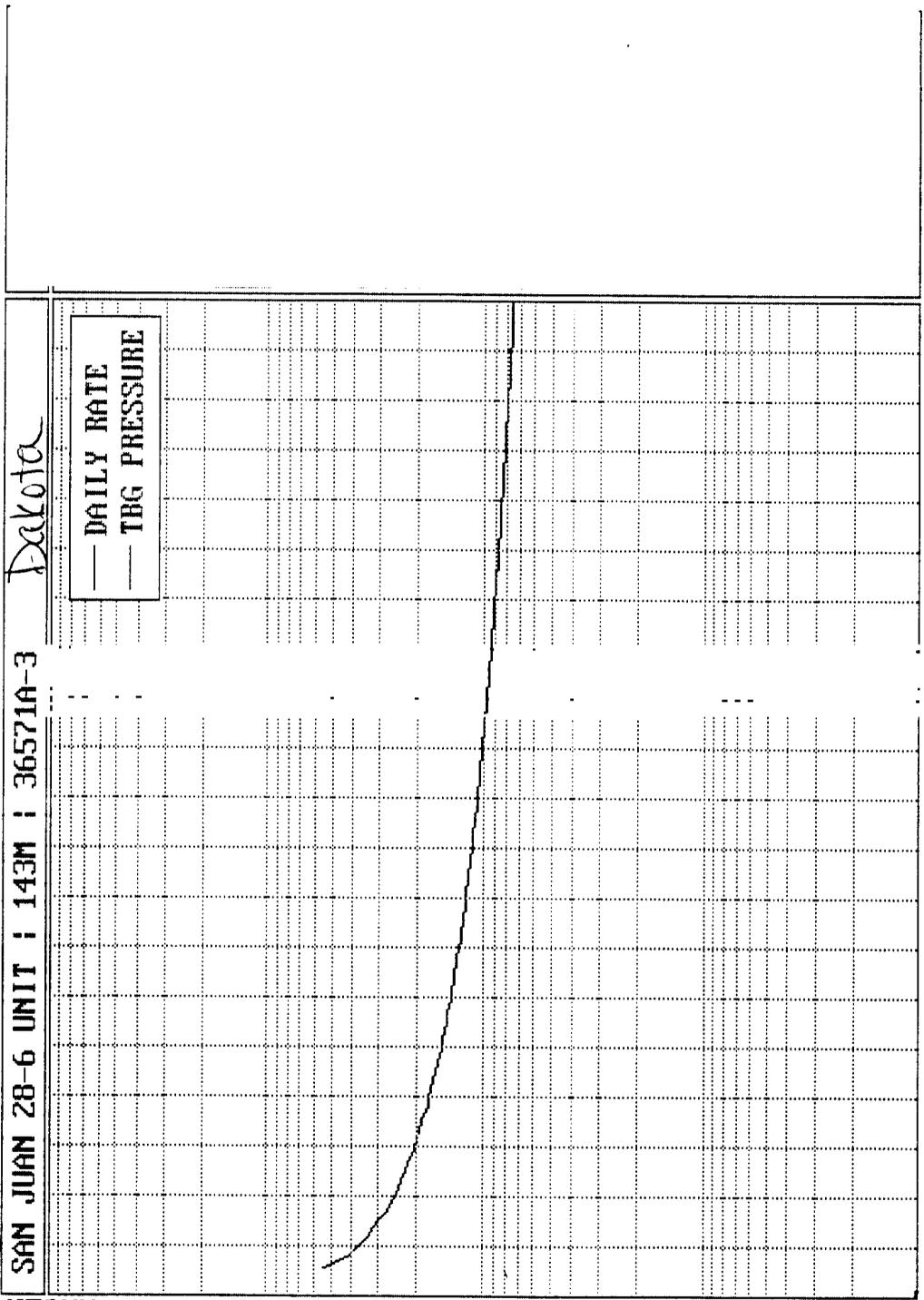
EXPECTED PRODUCTION CURVE

SAN JUAN 28-6 UNIT : 143M : 36571A-3

Dakota

• OIL
• WATER/GAS
• GAS
• WATER

— DAILY RATE
— TBG PRESSURE



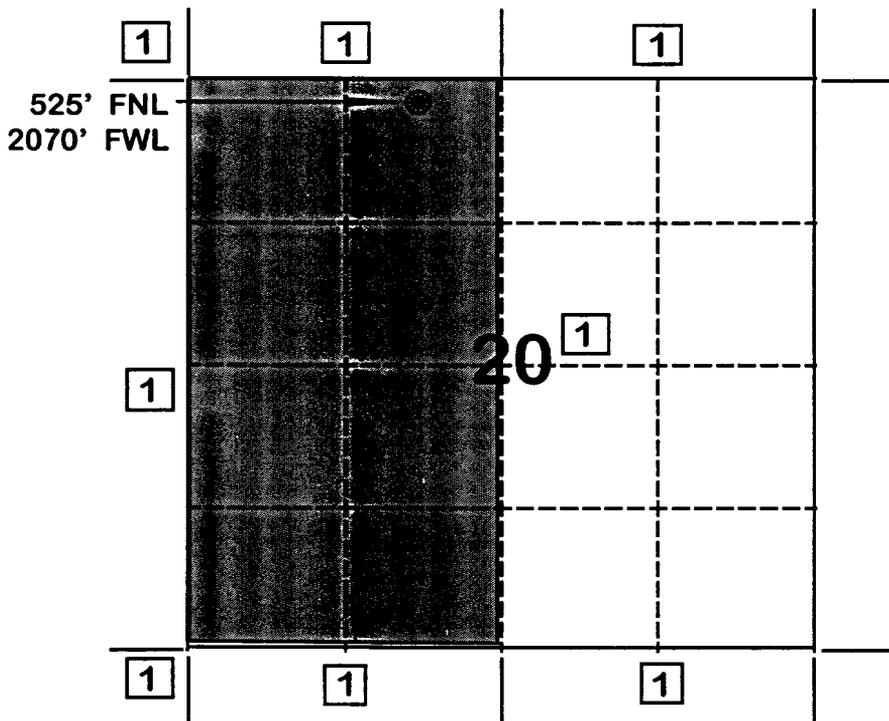
Major = GAS

BURLINGTON RESOURCES OIL AND GAS COMPANY

**San Juan 28-6 Unit #143M
OFFSET OPERATOR \ OWNER PLAT**

Mesaverde / Dakota Formations Commingle Well

Township 28 North, Range 6 West



1) Burlington Resources Oil and Gas Company

SJ 28-6 Unit #143M

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	0.692	GAS GRAVITY	0.613
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.65	%N2	0.44
%CO2	0.73	%CO2	1.27
%H2S	0	%H2S	0
DIAMETER (IN)	1.25	DIAMETER (IN)	2.375
DEPTH (FT)	5612	DEPTH (FT)	7569
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	137	BOTTOMHOLE TEMPERATURE (DEG F)	198
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	474	SURFACE PRESSURE (PSIA)	932
BOTTOMHOLE PRESSURE (PSIA)	546.3	BOTTOMHOLE PRESSURE (PSIA)	1100.0
<u>MV-Original</u>		<u>DK-Original</u>	
GAS GRAVITY	0.692	GAS GRAVITY	0.613
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.65	%N2	0.66
%CO2	0.73	%CO2	0.73
%H2S	0	%H2S	0
DIAMETER (IN)	1.25	DIAMETER (IN)	2.375
DEPTH (FT)	5612	DEPTH (FT)	7569
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	137	BOTTOMHOLE TEMPERATURE (DEG F)	198
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1116	SURFACE PRESSURE (PSIA)	2743
BOTTOMHOLE PRESSURE (PSIA)	1308.1	BOTTOMHOLE PRESSURE (PSIA)	3267.9

San Juan 286 Unit

#143M

Mesaverde Offset

--DATE--	---CUM GAS--	M	SIWHP
.....Mcf.....Psi.....
03/18/58		0	1116.0 - original
05/05/58		0	1115.0
11/22/58	67000		871.0
08/22/59	121000		715.0
09/06/60	195000		661.0
03/28/61	227000		705.0
04/23/62	289000		670.0
02/22/63	331000		677.0
02/24/64	367000		748.0
09/22/65	460000		663.0
01/04/66	481000		662.0
01/23/67	557000		631.0
01/02/68	625000		624.0
06/05/69	737000		612.0
04/21/70	828670		608.0
03/23/71	925124		574.0
08/08/72	1089395		529.0
09/04/73	1219291		484.0
04/16/74	1277731		489.0
06/08/76	1512875		490.0
05/03/78	1701081		482.0
06/20/80	1885916		499.0
05/27/82	2063203		514.0
07/27/84	2211455		552.0
04/02/87	2391496		639.0
10/08/89	2601265		522.0
04/15/91	2704800		560.0
08/01/91	2725197		572.0
03/29/93	2814011		474.0 - current

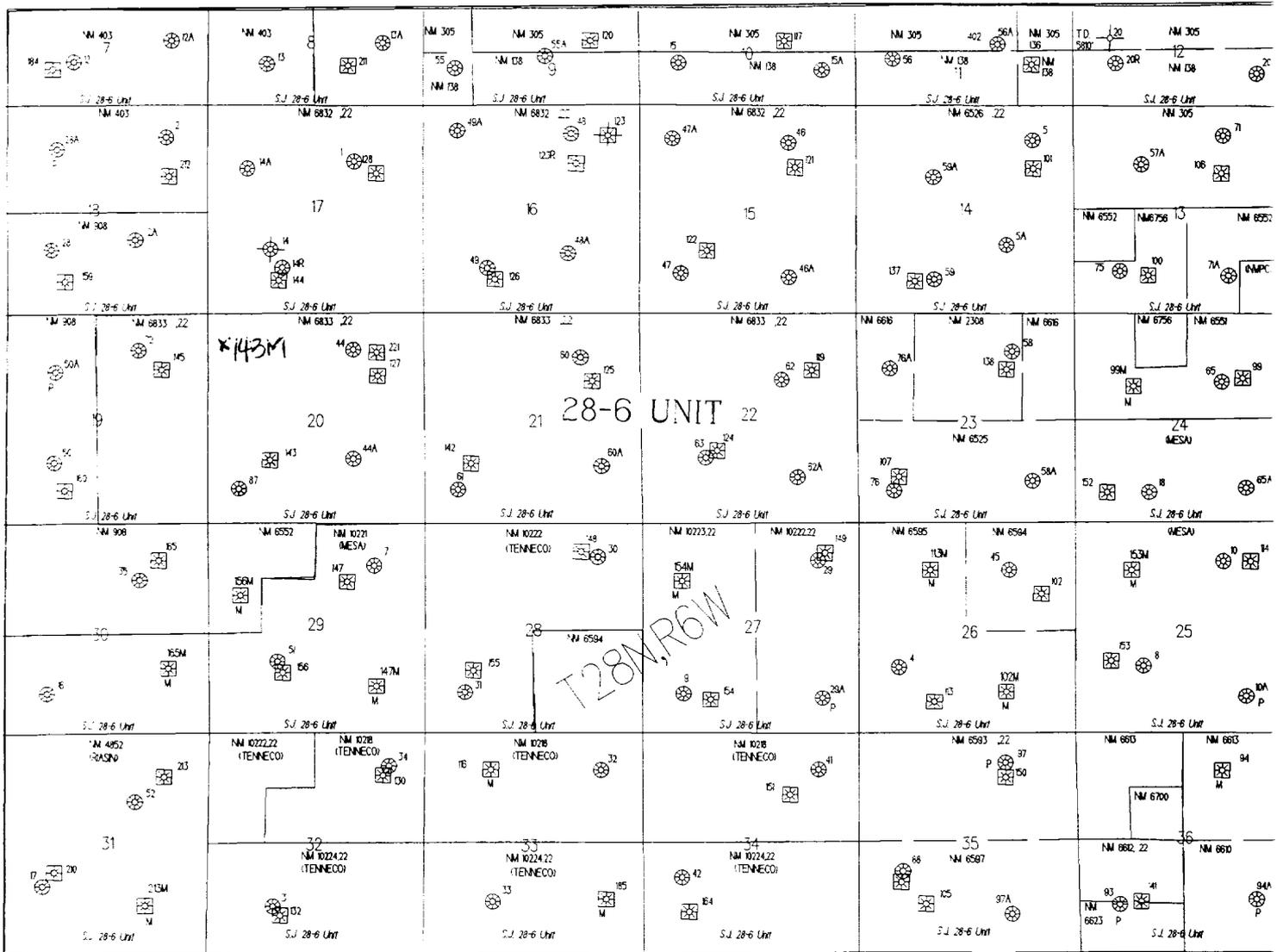
San Juan 28-6 Unit

#143M

Dakota Offset

--DATE--	---CUM_GAS--	M SIWHP	
.....Mcf.....Psi.....	
11/19/68	0	2743.0	-original
04/29/69	87000	1271.0	
04/21/70	215730	1084.0	
03/23/71	302275	987.0	
08/08/72	418249	654.0	
09/04/73	493753	574.0	
05/05/75	581829	754.0	
07/05/77	679034	782.0	
10/04/79	764405	892.0	
07/13/81	826881	840.0	
10/12/83	912573	795.0	
06/27/85	955376	859.0	
10/04/88	1027677	912.0	
05/08/90	1072135	892.0	
05/28/92	1122390	932.0	-current

San Juan 28-6 Unit #143M
Mesaverde / Dakota
28N-06W-20C



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. 11628
ORDER NO. R-10696

APPLICATION OF BURLINGTON RESOURCES
OIL & GAS COMPANY FOR THE ESTABLISHMENT
OF A DOWNHOLE COMMINGLING "REFERENCE
CASE" FOR ITS SAN JUAN 28-6 UNIT PURSUANT
TO DIVISION RULE 303.E. AND THE ADOPTION
OF SPECIAL ADMINISTRATIVE RULES THEREFOR.
SAN JUAN COUNTY, NEW MEXICO..

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 28-6 Unit, San Juan County, New Mexico.
- (3) Division Rule No. 303.E., amended by Order No. R-10470-A, currently states:

- 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 28-6 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 28-6 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 28-6 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 449 MMCFG and 186 MMCFG, respectively;
- c) the average initial producing rate for a newly drilled or recompleted Dakota and Pictured Cliffs gas well is approximately 254 MCFGD and 216 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 28-6 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 28-6 Unit, the applicant presented engineering evidence and testimony which indicates that:

- c) providing notice to each interest owner within the San Juan 28-6 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 28-6 Unit Area will benefit working, royalty, and overriding royalty interest owners. In addition, the downhole commingling of wells within the San Juan 28-6 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 28-6 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 28-6 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 28-6 Unit, San Juan County, New Mexico, is hereby approved.