J 31-28N-5W

DISTRICT |

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

APPROVAL PROCESS:

\_X\_ Administrative \_\_\_Hearing

**EXISTING WELLBORE** 

## APPLICATION FOR DOWNHOLE COMMINGLING

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

\_\_YES \_\_x\_NO

urlington Resources Oil & Ga	Addre		1289, Farmington, NM 8749
an Juan 28-5 Unit	42M 1 2-2	.7-5	Rio Arriba
110	Well No. Unit L	tr Sec - Twp - Rge Spacin	g Unit Lease Types: (check 1 or more)
GRID NO14538 Property Co	ode7460 API NO30-039-2	25630Federalx , State	X, (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	COBINED	Basin Dakota - 71599
Top and Bottom of Pay Section (Perforations)	will be supplied upon completion		will be supplied upon completion
3. Type of production (Oil or Gas)	gas	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	gas
Method of Production     (Flowing or Artificial Lift)	flowing	DIAL COINS DUVS	flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current	(Current) a. 558 psi (see attachment)	a.	a. 1058 psi (see attachment)
Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original	(Original) b. 1351 psi (see attachment)	b.	b. 3186 psi (see attachment)
6. Oil Gravity (°API) or Gas BTU Content	BTU 1178		BTU 1064
7. Producing or Shut-In?	shut in		shut in
Production Marginal? (yes or no)	no		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			Date: n/a
* If Producing, give data and oil/gas/water water of recent test (within 60 days)	Date: n/a Rates:	Date: Rates:	Rates:
8. Fixed Percentage Allocation	Oil: Gas: %	Oil: Gas:	Oil: Gas: %
Formula -% for each zone (total of %'s to equal 100%)	% % will be supplied upon completion		will be supplied upon completion
9. If allocation formula is based a attachments with supporting of 10. Are all working, overriding, and If not, have all working, overrid Have all offset operators been 11. Will cross-flow occur? _x_ production be recovered, and 12. Are all produced fluids from all 13. Will the value of production be 14. If this well is on, or communitized Land Management has been 15. NMOCD Reference Cases for Reference Cases.	d royalty interests identical in all ding, and royalty interests been regiven written notice of the property of the allocation formula be released by commingling?  Led with, state or federal lands, notified in writing of this applications: ORDER	commingled zones? notified by certified mail? osed downhole commingling? ompatible, will the formations no liablex YesNo (If No with each other?x_ Yes Yes _X_ No (If Yes, attach of either the Commissioner of PublitionX_ Yes No  NO(S) Reference Order R-2	Yes _x_NoYes _x_NoYes _x_No _x_YesNo  ot be damaged, will any cross-flo, attach explanation)No explanation) lic Lands or the United States B
16. ATTACHMENTS: * C-102 for each zone * Production curve for * For zones with no p	roduction history, estimated pro		
* C-102 for each zone * Production curve fo * For zones with no p * Data to support allo	ements, data, or documents requ	ired to support comminging.	

District f PO Bez 1989, Hubbs, NM 88241-1980 State of New Mexico

Form C-10 Reviseu February 21, 199

PO Drawer OD. Artenie. NM 88211-0719

OIL CONSERVATION DIVISION

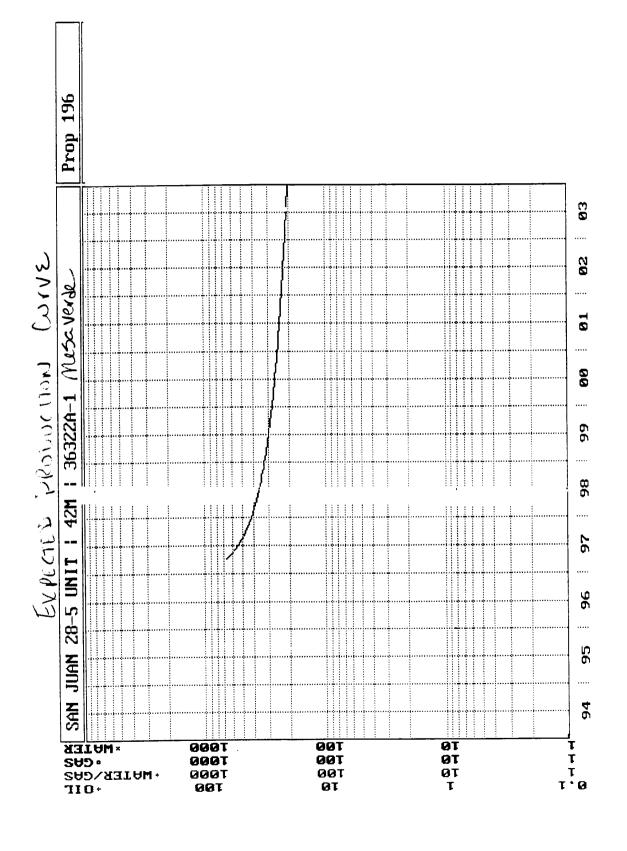
instructions on bac: Submit to Appropriate District Offic

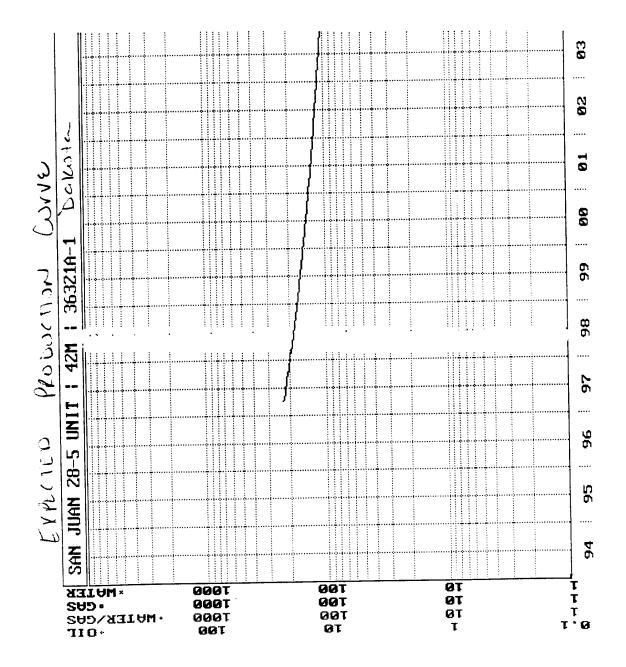
District III 1000 Rio Bruses Rd., Azter, NM 87410

PO Box 2088 Santa Fe. NM 87504-2088 State Lease - - Copre Fee Lease - 3 Cope

District IV

#### AMENDED REPORT PO Bus 2008, Santa Fe. NM 87504-2088 WELL LOCATION AND ACREAGE DEDICATION PLAT Peel Code API Number Blanco Mesaverde/Basin Dakotz 72319/71599 30-039-· Well Name 1 Property Name · Property Code 42M San Juan 28-5 Unit 7460 'Element Operator Name OGRID No. 6518' BURLINGTON RESOURCES OIL & GAS COMPANY 14538 10 Surface Location North/South line Feet from the Feet from the Township | Range | Lot ids TIT. or lot se. 910 R.A. East 1450 South 28-N 5-W 31 11 Bottom Hole Location If Different From Surface North/South time Feet from the East West has Canada Lot Ida Foot from the UL or lot se. on Code | 15 Order No. " Joint or Iniil i Dedicated Agree NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED 5/319.28 OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION 17 OPERATOR CERTIFICATION 5280.00 I having carefy that the informat ione to the best of my in Peggy Bradfield Printer Name Regulatory Administrator THE 2-20.91 Date "SURVEYOR CERTIFICATION به ما سر معند 910' SF- 079521A 450 7. 5280.00



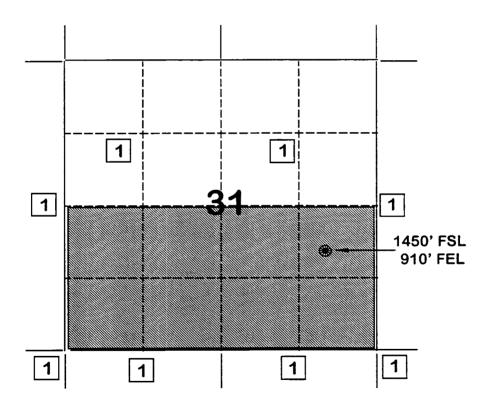


### BURLINGTON RESOURCES OIL AND GAS COMPANY

# San Juan 28-5 Unit #42M OFFSET OPERATOR \ OWNER PLAT

# Mesaverde/Dakota Formations Commingle Well

Township 28 North, Range 5 West



1) Burlington Resources Oil and Gas Company

# Messiverde

St, 25-5 # 42m1

Page No.: 1 Print Time: Mon Feb 10 10:40:56 1997 Property ID: 3954 Property Name: SAN JUAN 28-5 UNIT | 42 | 53420B-1 Table Name: K:\ARIES\RR97PDP\TEST.DBF --DATE-- ---CUM GAS-- M SIWHP Mcf.....Psi 1159.0€ ONGUN 06/14/60 1160.0 0 856.0 63000 872.0 123000 265000 860.0 814.0 370000 744.0 594000 712.0 659000 689.0 846000 680.0 967000 1096000 629.0

08/25/60 11/22/60 06/13/61 09/24/62 05/06/63 12/02/64 05/03/65 10/05/66 11/01/67 11/04/68 674.0 1165441 06/22/69 584.0 04/15/70 1254458 531.0 06/21/71 1405886 06/07/72 554.0 1506258 516.0 08/29/73 1630000 527.0 07/15/74 1704535 496.0 08/17/76 1877633 01/02/78 1951997 482.0 11/02/78 2004973 482.0 07/02/80 2138660 450.0 501.0 05/28/82 2198632 2299949 480.0 04/16/86 2382735 490.0 05/08/89 2418299 484.0 06/11/91 472.0 10/24/91 2425841 487.0 cullent 2477843 04/06/93

## Dakota

Page No.: 1

Print Time: Mon Feb 10 10:40:19 1997

Property ID: 1767

Property Name: SAN JUAN 28-5 UNIT | 42 | 53420A-1 55 28-5 # 47.17

Table Name: K:\ARIES\RR97PDP\TEST.DBF

Haren's well

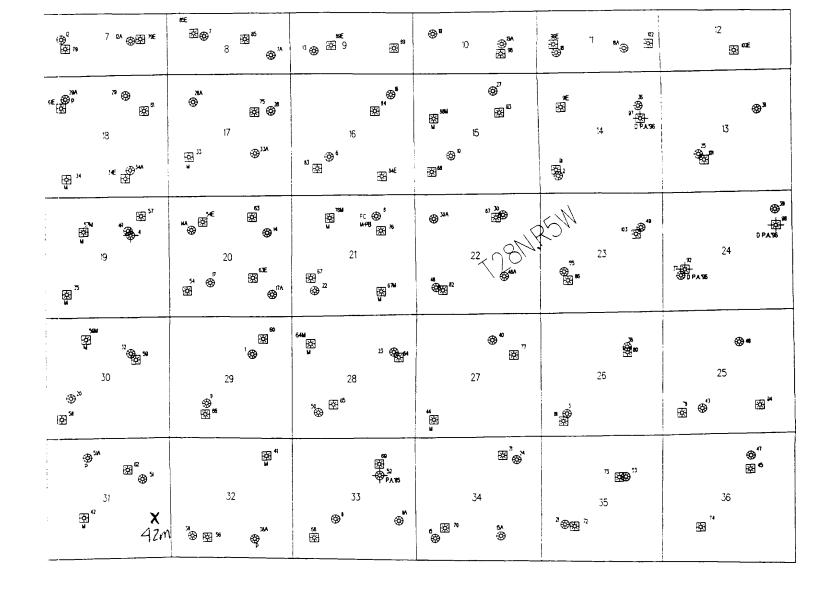
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--DATE-- ---CUM GAS-- M SIWHP
         Mcf.....Psi
                        2669.0 Trigital
06/14/60
08/04/60
                        2668.0
12/06/60
               137000
                        1785.0
06/13/61
               343000
                        1412.0
09/09/62
                        1542.0
               566000
05/06/63
               655000
                        1537.0
04/22/64
               767000
                        1502.0
10/18/65
              1152000
                        1143.0
10/05/66
              1337000
                       975.0
05/25/67
                        1074.0
              1454000
05/27/68
                        1035.0
              1608000
06/27/69
                        657.0
              1771000
07/28/70
                        1206.0
              1855086
06/21/71
                         831.0
              1966278
06/07/72
              2069532
                         886.0
08/29/73
               2177209
                         904.0
09/04/75
               2349005
                         862.0
                         808.0
06/01/77
               2485098
06/06/79
               2620949
                         882.0
                         919.0
05/01/81
               2712834
                         884.0
11/04/81
               2752286
02/17/84
               2834723
                        1065.0
05/17/85
               2890529
                        1030.0
10/13/88
               3017484
                        1152.0
04/24/90
                         954.0
               3102388
                         896.0 Willest
03/29/92
               3147068
```

GAS GRAVITY	0.691
COND. OR MISC. (C/M)	С
%N2	0.2
%CO2	0.97
%H2S	0
DIAMETER (IN)	2.375
DEPTH (FT)	5472
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1159
BOTTOMHOLE PRESSURE (PSIA)	1350.6

GAS GRAVITY	0.691
COND. OR MISC. (C/M)	С
%N2	0.2
%CO2	0.97
%H2S	0
DIAMETER (IN)	2.375
DEPTH (FT)	5472
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	487
BOTTOMHOLE PRESSURE (PSIA)	558.3

GAS GRAVITY	0.621
COND. OR MISC. (C/M)	С
%N2	0.17
%CO2	1.3
%H2S	- 0
DIAMETER (IN)	2.375
DEPTH (FT)	7504
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	200
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	2669
BOTTOMHOLE PRESSURE (PSIA)	3186.3

GAS GRAVITY	0.621
COND. OR MISC. (C/M)	С
%N2 —	0.17
%CO2 —	1.3
%H2S	0
DIAMETER (IN)	2.375
DEPTH (FT)	7504
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	200
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	896
BOTTOMHOLE PRESSURE (PSIA)	1057.7



### 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.

### 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 commingie (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 23-5 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, Buriington seeks to:
  - 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;

- 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 23-5 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 weils 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