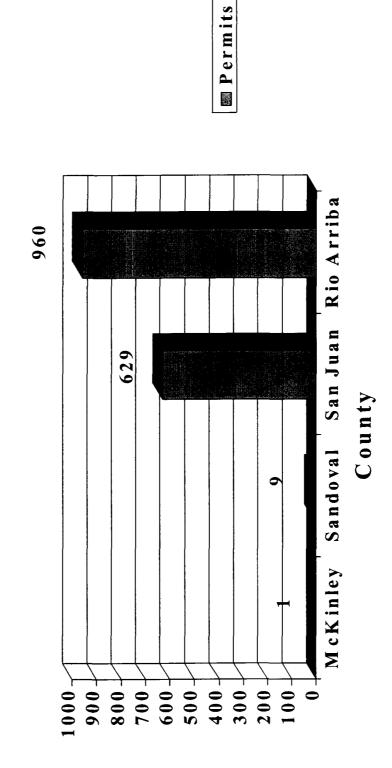
DOWNHOLE COMMINGLING PERMIT SUMMARY

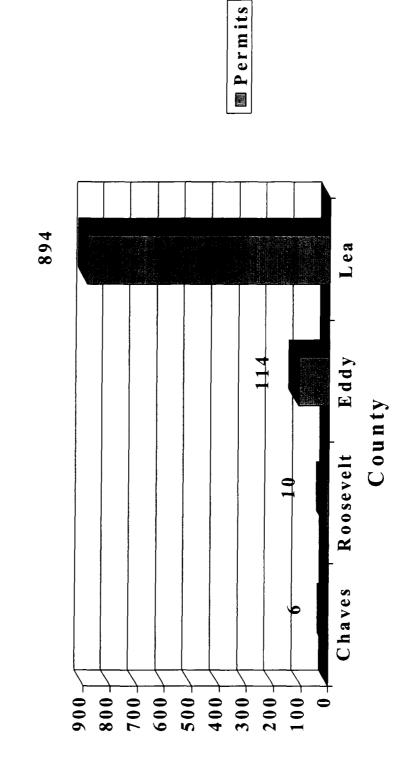
	Chaves	Roosevelt	Eddy	Lea	McKinley	Sandoval	San Juan	Rio	TOTAL
Administrative DHC Permits	9	10	114	894	_	6	629	096	2,623
Hearing DHC Permits	0	-	38	74	-	-	83	66	297
TOTAL	9	11	152	896	2	10	712	1059	2,920

(Note: Administrative DHC permits are generally single well permits, while DHC hearing permits may approve on or more wells for downhole commingling.)

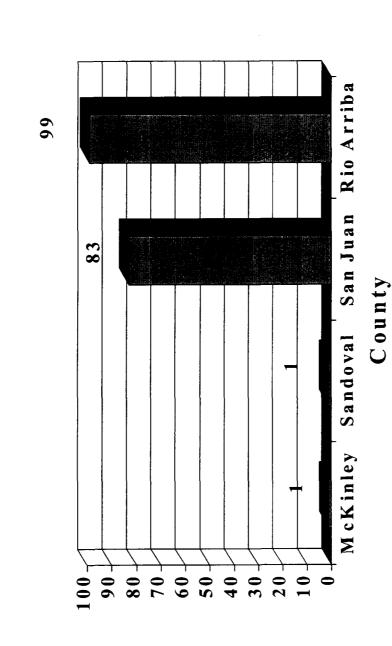
Administrative Downhole Commingling Permits San Juan Basin, NW New Mexico



Administrative Downhole Commingling Permits Permian Basin, SE New Mexico

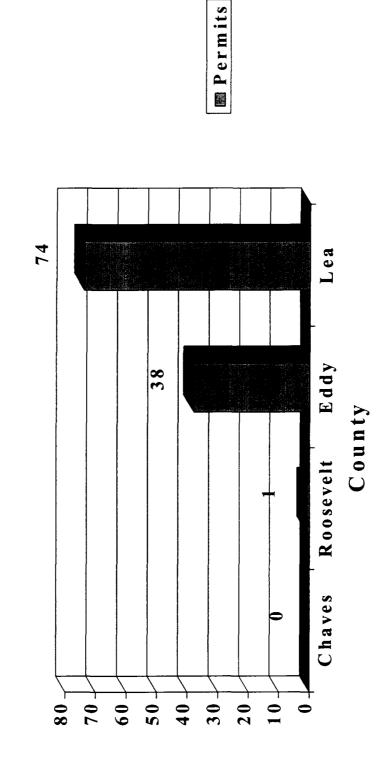


Downhole Commingling Permits-Hearing Process San Juan Basin, NW New Mexico

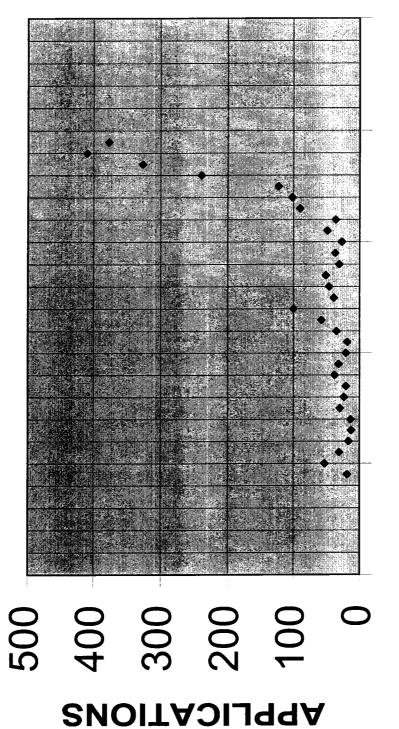


Permits

Downhole Commingling Permits-Hearing Process Permian Basin, SE New Mexico



ADMINISTRATIVE WORKLOAD



1960 1970 1980 1990 2000 2010

YEAR

Current Approval Process for Downhole Commingling

- * Each application for downhole commingling must be filed on Division Form C-107-A. In order to qualify for administrative approval, the well must meet all the criteria for approval contained within Rule 303.C.(1)(a) and 303.C.(1)(b).
- * OCD Engineering Bureau personnel review the application for completeness and compliance with the criteria described above. Downhole commingling permits are generally issued within 20-25 days after receipt of the application. Each application has a unique permit number (i.e. DHC-2600). All downhole commingling permits are currently issued by the Santa Fe Office of the Division.
- * If the interest ownership between the zones being commingled is different, the applicant, except in the case of a "Reference Case" exception, must notify all interest owners of the application. Form C-107-A is held for twenty days in order to provide interest owners the opportunity to object. If an objection to an application is received, or if the application does not meet the criteria for administrative approval, the application is set for hearing before a Division examiner.
- * A Form C-107-A may be approved after notice and hearing when it is determined that such approval will not result in waste or violation of correlative rights. A hearing order, approving the application, is issued soon after the case is heard. Each case is issued a unique hearing order number (i.e. R-10000).
- * "Reference Cases": If an operator has extensive data within a pool or geographic area which is repeatedly submitted as supporting data on Form C-107-A (i.e. pressure data), the applicant may request an exception to provide this data on subsequently filed Form C-107-A's. Reference cases are generally heard by a Division examiner. Hearing orders are issued in these "Reference Cases" soon after the hearing. (See Example).

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 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

303.C. DOWNHOLE COMMINGLING

(1) The Director of the Division shall have the authority to grant an exception to Rule 303-A to permit the downhole commingling of multiple producing zones in existing or proposed wells when the following facts exist and the following conditions are met:

(a) For Wells Involving Oil Zones:

- i) The total combined daily oil or casinghead gas production from the zones before commingling does not exceed the top allowable rate for the shallowest producing horizon;
- ii) The operator utilizes a method of production which results in the efficient recovery of oil and gas reserves from the respective producing formations;
- iii) Total water production from all commingled zones does not exceed twice the oil limit as described in (i) above;
- iv) The fluids from each zone are compatible with the fluids from the other(s), and combining the fluids will not result in the formation of precipitates which might damage any of the reservoirs;
- v) The commingling will not jeopardize the efficiency of present or future secondary recovery operations in any of the zones to be commingled.

[1-1-69...3-30-96]

(b) For Wells Involving A Gas Zone:

i) That the commingling is necessary in order to allow the recovery of gas reserves from marginal producing zones. (In determining whether a zone or zones should be classified as marginal for the purpose of this rule, the Division may consider economic factors such as drilling and operating costs, and engineering and geologic factors such as producing rates,

reserve calculations, decline rates, proration status, geologic data, etc.);

- ii) The bottomhole pressure of the highest pressured commingled zone does not exceed the original reservoir pressure of any other commingled zone in the wellbore, adjusted to a common datum. Such bottomhole pressure shall be determined by downhole measurement for each zone capable of flowing;
- iii) The commingling will not result in the permanent loss of reserves due to crossflow in the wellbore;
- iv) That any zone which is producing from fluid-sensitive formations, which may be subject to damage from water or other produced liquids, is protected from contact from such liquids produced from other zones in the well;
- v) The fluids from each zone are compatible with the fluids from the other(s), and combining the fluids will not result in the formation of precipitates which might damage any of the reservoirs.

[1-1-69...3-30-96]

DISTRICT I

DISTRICT III

P.O. Bex 1980, Heabs, NM 88241-1980

DISTRICT II 811 South First St., Arteus, NM 88210-2835

1000 Res Brains Rd, Aziac, NM 87410-1693

State of New Mexico
Energy, Minerals and Natural Resources Department OIL CONSERVATION DIVISION

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

Form C-107-A New 3-12-96 APPROVAL PROCESS: X Administrative __Hearing EXISTING WELLBORE

APPLICATION FOR DOWNHOLE COMMINGLING

X YES

Phillips Petroleum	Company 55	25 Hwy 64, Farming	ton, NM 87401
San Juan 29-6 Unit	#53 Well No. Unit Eu	B, Sec. 31, T29N,	R6W Rio Arriba
GRID NO. 017654 Property Col		Specing t	Init Lease Types: (check 1 or more) X , State, tandler! Fee
The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
Pool Name and Pool Code	72439 S. Blanco PC		72319 Blanco Mesaverde
2. Top and Bottom of Pay Section (Perforations)	3254' - 3380'		4020' - 5514'
3. Type of production (Oil or Gas)	gas		gas
4. Method of Production (Flowing or Artificial Lift)	flowing		flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Ges & Oil - Flowlog:	a. (Current) 919 psi	a.	a. 372 psi (est.)
Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated Or Measured Original	b. (Original) 1200 psi (est.)	b.	b. 1280 psi (est.)
6. Oil Gravity (*API) or Gas BTU Content	1100 btu/scf		1200 btu/scf
7. Producing or Shut-In?	Producing		shut-in
Production Marginal? (yes or no)	yes		yes
* If Shut-in, give date and oli/gas/ water rates of last production	Oate: Raise:	Date: Actos:	Date: 10/30/99 Rates:
Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data			163 mcfd, 0 bw
 If Producing, give date andoil/gas/ water rates of recent test (within 60 days) 	Dete: 1/9/00 Rates: 250 mcfd, 0 bop	Date: Rates:	Date: Rates:
8. Fixed Percentage Allocation Formula -% for each zone	Oil: % Guis: %	OR: Ges: %	OH: % Gas: %
O. Are all working, overriding, if not, have all working, over Have all offset operators been all. Will cross-flow occur?	riding, and royalty interests be n given written notice of the pro Yes X No If yes, are fluids red, and will the allocation form all commingled zones compatit be decreased by commingling?	n all commingled zones? ten notified by certified mail? ten notified zone in the commissioner of the certified by certified in writing of this application	Yes X No Yes No No X Yes No No No (If No, attach explanation) Yes No Yes explanation) Public Lands or the Yes No
Production curve For zones with no Data to support a Notification list of	or Rule 303(D) Exceptions: one to be commingled showing for each zone for at least one to production history, estimated flocation method or formula. f all offset operators. working, overriding, and royal atements, data, or documents i	year. (If not available, attach e production rates and supportin	edication. xplanation.) g data.
I hereby certify that the informa	1/	e to the best of my knowledge TITLE <u>Reservoir Eng</u>	
TYPE OR PRINT NAMEM	ark Stodola	TELEPHONE NO.	(505) 599-3455



January 11, 2000

New Mexico Oil & Gas Conservation Div. 2040 South Pacheco Santa Fe, New Mexico 87505-6429

Downhole Commingling Allocation Method on the San Juan 29-6 Unit #53

Dear Sirs:

Phillips is proposing to utilize the subtraction method on the subject well for approximately twelve months after actual commingling occurs. After the twelve month period we will convert to the ratio method as indicated in our commingling application. We believe this will be a more accurate method of allocating production considering that the Mesaverde interval has been producing for years and that the production will not be stabilized on the Pictured Cliffs for several months.

Pictured Cliffs Forecast

February 2000	7,278	March 2000	7,885
April 2000	7,463	May 2000	7,544
June 2000	7,241	July 2000	7,220
August 2000	7,063	September 2000	6,783
October 2000	6,766	November 2000	6,499
December 2000	6,486	January 2001	6,350

For example, if the total volume for March 2000 were 12,938 mcf, then the Pictured Cliffs would be allocated 7,885 mcf and the Mesaverde 5,053 mcf. And subsequently, the Pictured Cliffs would be allocated (7,885/ 12,938) or 60.94%, and Mesaverde would be allocated (5,053/12,938) or 39.06%.

Sincerely,

PHILLIPS PETROLEUM COMPANY

Mark W. Stodola Reservoir Engineer

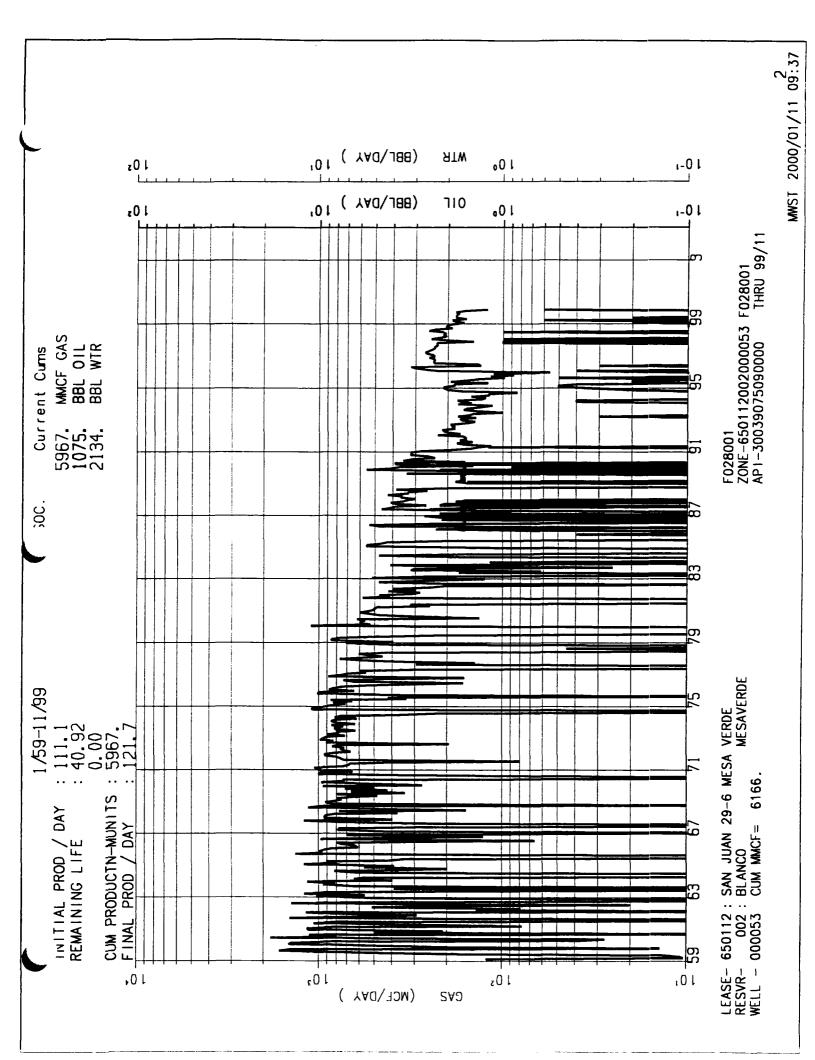
MS/pc

cc: OCD - Aztec

BLM-Farmington

NM Commissioner of Public Lands - Santa Fe

PHILLIPS PETROLEUM SAN JUAN 29-6 # 53 DATE: DECEMBER 14, 1999 THOUSANDS WATER LEVEL: NONE PRESSURE IN PSIG



San Juan 29-6 #53 Pictured Cliffs Forecast

Initial Production Rate	=	275 MCFD
Hyperbolic Exponent	=	0.33
Decline Rate	=	27.360 %

Month	Days	Cum. Days	Initial q MCFD	Final q MCFD	Average q MCFD	Cum. MCF	Monthly MCF
Dec-99	31	31	275	269	272	8,427	8,427
Jan-00	31	62	269	263	266	16,662	8,235
Feb-00	28	90	263	257	260	23,939	7,278
Mar-00	31	121	257	251	254	31,824	7,885
Apr-00	30	151	251	246	249	39,288	7,463
May-00	31	182	246	241	243	46,831	7,544
Jun-00	30	212	241	235	238	54,072	7,241
Jul-00	31	243	235	230	233	61,292	7,220
Aug-00	31	274	230	225	228	68,355	7,063
Sep-00	30	305	225	221	223	75,138	6,783
Oct-00	31	336	221	216	218	81,904	6,766
Nov-00	30	366	216	212	214	88,403	6,499
Dec-00	31	397	212	207	209	94,889	6,486
Jan-01	31	428	207	203	205	101,239	6,350
Feb-01	28	456	203	199	201	106,860	5,622
Mar-01	31	487	199	195	197	112,962	6,102
Apr-01	30	518	195	191	193	118,827	5,865
May-01	31	549	191	187	189	124,684	5,857

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

ADMINISTRATIVE ORDER DHC-2624

Phillips Petroleum Company 5525 Hwy. 64 Farmington, New Mexico 87401

Attention: Mr. Mark Stodola

San Juan 29-6 Unit No. 53
API No. 30-039-07509
Unit B, Section 31, Township 29 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.
Blanco-Mesaverde (Prorated Gas - 72319), and
South Blanco-Pictured Cliffs (Prorated Gas - 72439) Pools

Dear Mr. Stodola:

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.

Production from the well shall be allocated as follows:

Oil and gas production from the South Blanco-Pictured Cliffs Gas Pool shall be determined by utilizing the production forecast submitted as an attachment to the downhole commingling application. Oil and gas production from the Blanco-Mesaverde Gas Pool shall be determined by subtracting South Blanco-Pictured Cliffs Gas Pool production from the well's total monthly oil and gas production.

The applicant shall submit a proposed fixed allocation of production formula for the well within one year of commencing downhole commingling operations.

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

Pursuant to Rule 303.H., the commingling authority granted herein may be rescinded by the Division Director if conservation is not being best served by such commingling.

Approved at Santa Fe, New Mexico on this 7th day of February, 2000.

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

LORI WROTENBERY

Director

SEAL

LW/DRC

cc: Oil Conservation Division - Aztec

Bureau of Land Management-Farmington