

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

EXISTING WELLBORE

YES ☐ NO ☒

APPLICATION FOR DOWNHOLE COMMINGLING

Burlington Resources Oil & Gas Company

PO Box 4289, Farmington, NM 87499

Operator

Address

Allison Unit

20M

F 18-32N-06W

San Juan

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 6784 API NO. 30-045-29608 Federal State (and/or) Fee X

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		Basin Dakota - 71599
2. 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		gas
4. Method of Production (Flowing or Artificial Lift)	flowing		flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original	(Current) a. 480 psi (see attachment) (Original) b. 1230 psi (see attachment)	a. b.	a. 839 psi (see attachment) b. 3225 psi (see attachment)
6. Oil Gravity (API) or Gas BTU Content	BTU 995		BTU 956
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 <small>Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data</small>	Date: n/a Rates:	Date: Rates:	Date: n/a Rates:
* If Producing, give data and oil/gas/water of recent test (within 60 days)	Date: n/a Rates:	Date: Rates:	Date: n/a Rates:
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? ☐ Yes ☒ No
If not, have all working, overriding, and royalty interests been notified by certified mail? ☐ Yes ☒ No
Have all offset operators been given written notice of the proposed downhole commingling? ☐ 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. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). Reference Order R-9918 attached

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 Sean Woolverton TITLE: Reservoir Engineer DATE: 06-23-98TYPE OR PRINT NAME Sean Woolverton TELEPHONE NO. (505) 326-9700

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer DD, Artesia, NM 88211-0719

District III
1000 Rio 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

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-045-		2 Pool Code 72319/71599		3 Pool Name Blanco Mesaverde/Basin Dakota		
4 Property Code 6784		5 Property Name ALLISON UNIT			6 Well Number 20M	
7 OGRID No. 14538		8 Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY			9 Elevation 6546'	

10 Surface Location

11 Lot or lot no. F	12 Section 18	13 Township 32N	14 Range 6W	15 Lot ID#	16 Feet from the 1800	17 North/South line NORTH	18 Feet from the 1480	19 East/West line WEST	20 County SAN JUAN
------------------------	------------------	--------------------	----------------	------------	--------------------------	------------------------------	--------------------------	---------------------------	-----------------------

11 Bottom Hole Location If Different From Surface

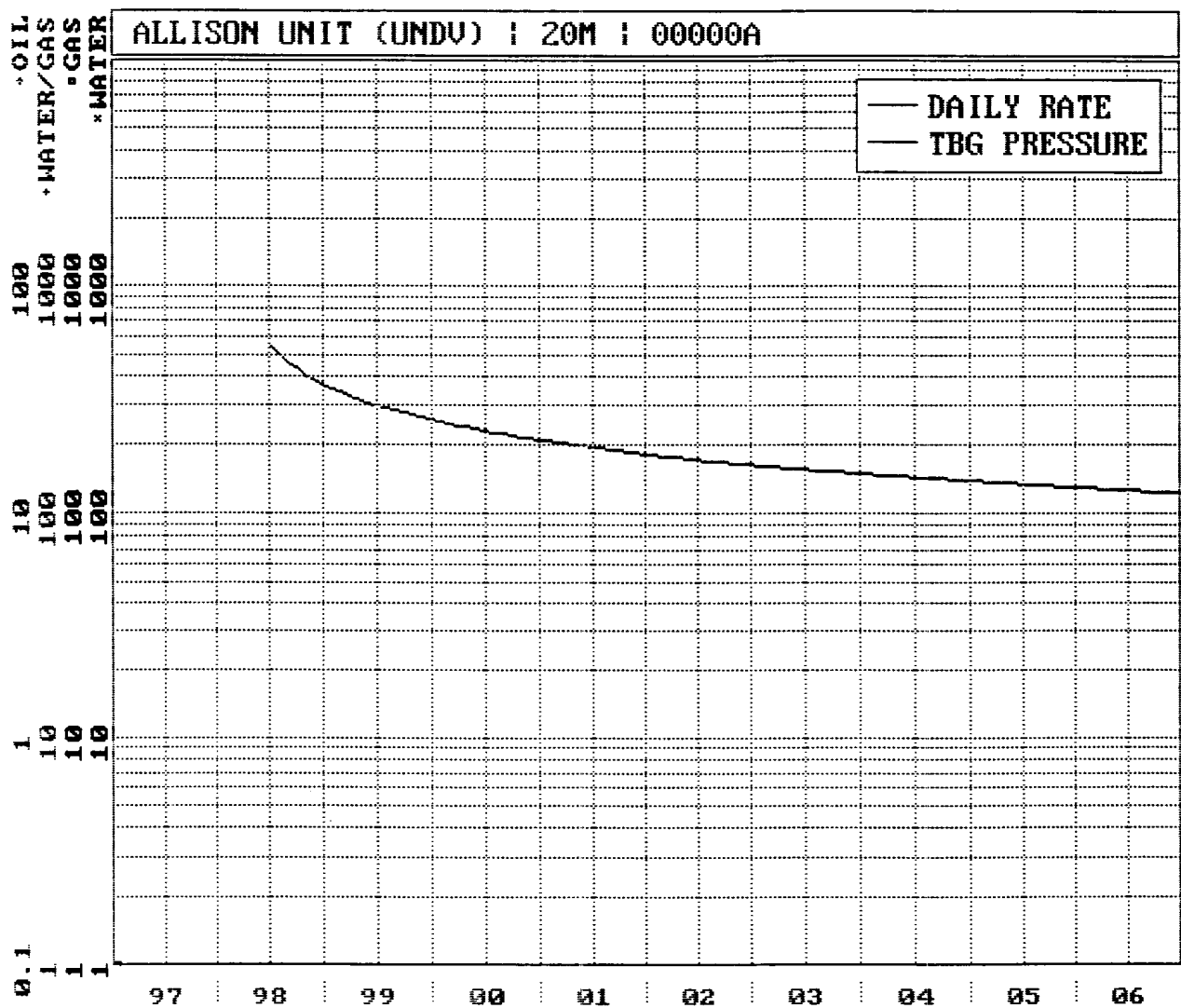
11 Lot or lot no.	12 Section	13 Township	14 Range	15 Lot ID#	16 Feet from the	17 North/South line	18 Feet from the	19 East/West line	20 County
-------------------	------------	-------------	----------	------------	------------------	---------------------	------------------	-------------------	-----------

21 Dedicated Acres MV-W/320 DK-W/320	22 Joint or Infill	23 Consolidation Code	24 Order No.
--	--------------------	-----------------------	--------------

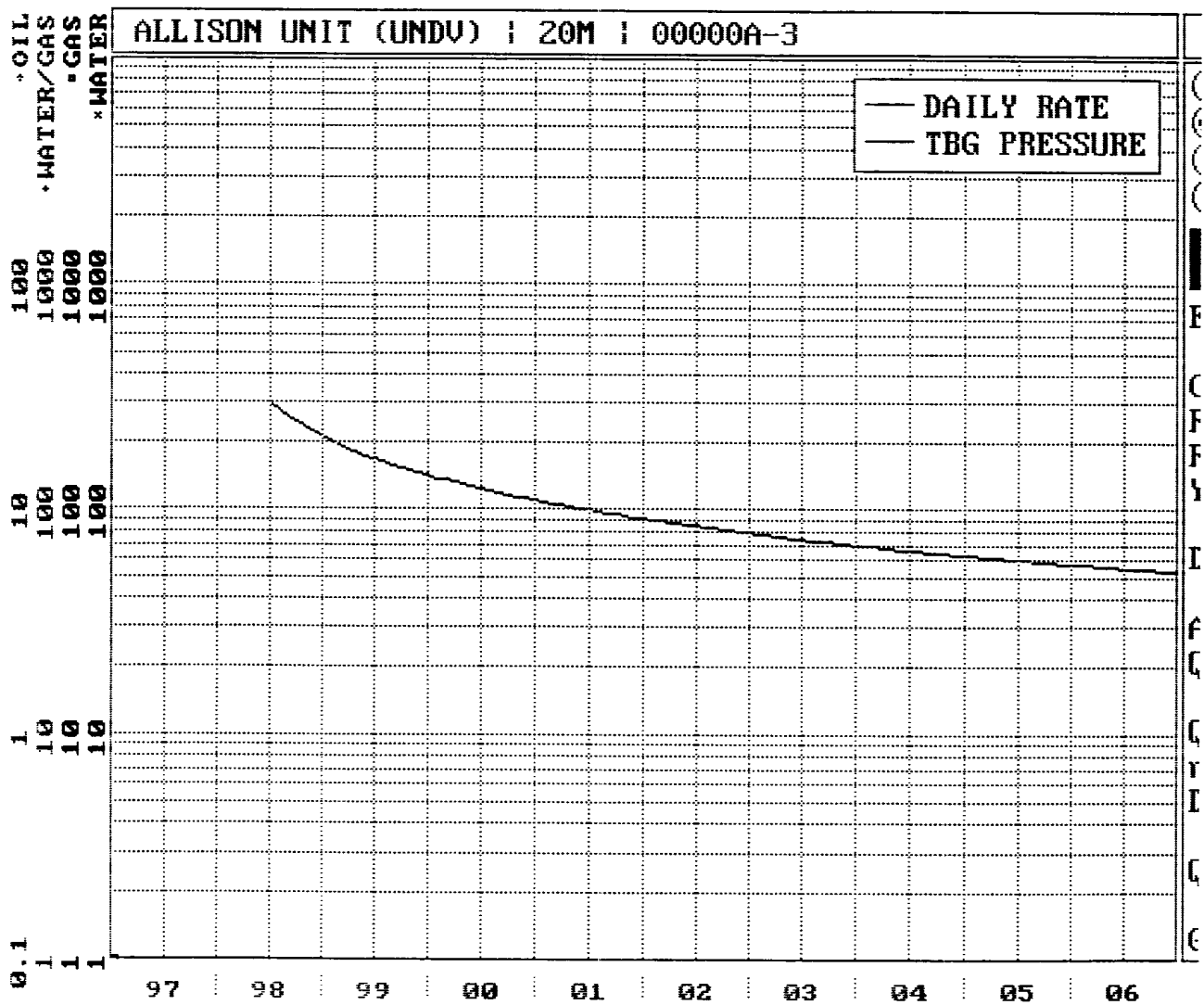
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

1316.70'		1339.14'		2669.70'		17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief	
FEE		1800'		RECEIVED JUN 24 1998 OIL CON. DIV. DIST. 3		Signature Peggy Bradfield Printed Name Regulatory Administrator Title	
1480'		FEE		2676.96'		Date	
2		18		2566.74'		18 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.	
1312.08'		1325.28'		2650.56'		APRIL 23, 1998 Date of Survey Signature and Seal of Professional Surveyor NEALE C. EDWARDS NEW MEXICO 6857 Certification Number	

Allison Unit #20M
Expected Production Curve
Blanco Mesaverde



Allison Unit #20M
Expected Production Curve
Basin Dakota



Allison Unit #20M
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	0.59	GAS GRAVITY	0.6
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.24	%N2	0.49
%CO2	2.05	%CO2	4.12
%H2S	0	%H2S	0
DIAMETER (IN)	2.375	DIAMETER (IN)	2.375
DEPTH (FT)	6059	DEPTH (FT)	8097
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)	423	SURFACE PRESSURE (PSIA)	709
BOTTOMHOLE PRESSURE (PSIA)	480.4	BOTTOMHOLE PRESSURE (PSIA)	838.7
<u>MV-Original</u>		<u>DK-Original</u>	
GAS GRAVITY	0.59	GAS GRAVITY	0.6
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.24	%N2	0.49
%CO2	2.05	%CO2	4.12
%H2S	0	%H2S	0
DIAMETER (IN)	2.375	DIAMETER (IN)	2.375
DEPTH (FT)	6059	DEPTH (FT)	8097
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)	1072	SURFACE PRESSURE (PSIA)	2691
BOTTOMHOLE PRESSURE (PSIA)	1230.2	BOTTOMHOLE PRESSURE (PSIA)	3225.4

Page No.: 3

Print Time: Tue Dec 30 09:03:15 1997

Property ID: 2398

Property Name: ALLISON UNIT | 10A | 49553A-1

Table Name: K:\ARIES\RR98PDP\TEST.DBF

--DATE-- M SIWHP

■■■■■■■■■■ ■■■Psi■■■

Allison Unit #20M

Mesaverde offset

11/12/79	1072.0	- original
03/10/80	712.0	
05/15/81	437.0	
05/03/82	402.0	
11/01/84	505.0	
03/17/86	440.0	
09/31/89	463.0	
09/31/89	463.0	
09/31/89	463.0	
02/18/91	450.0	
07/14/91	462.0	
05/04/93	423.0	- current

Page No.: 1
Print Time: Tue Dec 30 09:03:14 1997
Property ID: 18
Property Name: ALLISON UNIT | 20 | 52930B-1
Table Name: K:\ARIES\RR98PDP\TEST.DBF

--DATE-- M SIWHP
■■■■■■■■■■ ■■■■Psi■■■■

Allison Unit #20M

Dakota Offset

05/23/59	2691.0	-original
06/01/59	2690.0	
02/22/60	2121.0	
07/28/61	1868.0	
04/25/62	1777.0	
05/06/63	1948.0	
04/22/64	1936.0	
05/03/65	1788.0	
02/23/66	1722.0	
03/06/67	1643.0	
03/08/68	1585.0	
04/16/69	1521.0	
06/20/70	1477.0	
07/19/71	1882.0	
02/15/72	1404.0	
00/04/73	860.0	
00/04/73	860.0	
00/04/73	860.0	
10/04/73	860.0	
04/29/75	1277.0	
08/08/77	1257.0	
06/04/79	1172.0	
05/15/81	1167.0	
04/25/83	1139.0	
05/02/85	1337.0	
08/16/88	1306.0	
04/22/90	1147.0	
03/29/92	1050.0	
03/01/94	709.0	-current

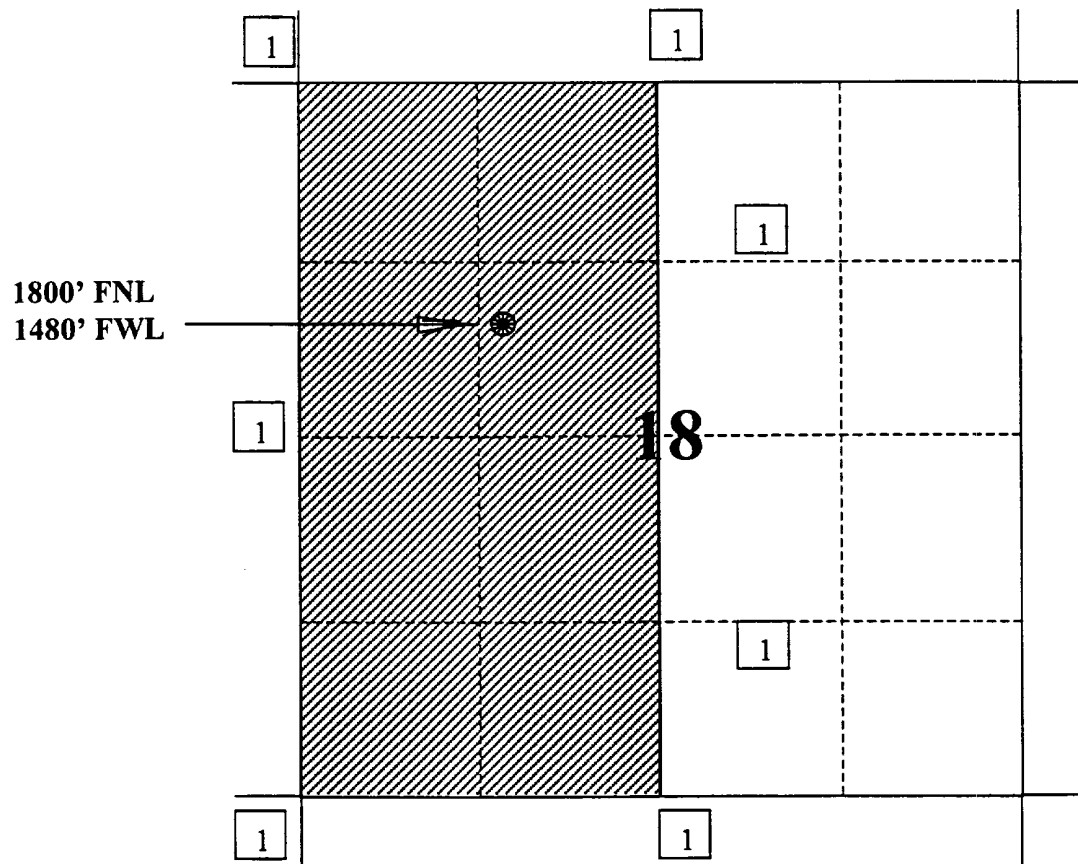
BURLINGTON RESOURCES OIL AND GAS COMPANY

Allison Unit #20M

OFFSET OPERATOR/OWNER PLAT

Mesaverde / Dakota Formations Commingle Well

Township 32 North, Range 6 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. 10743
Order No. R-9918

APPLICATION OF MERIDIAN OIL INC.
FOR DOWNHOLE COMMINGLING AND FOR
AN ADMINISTRATIVE DOWNHOLE COMMINGLING
PROCEDURE WITHIN THE ALLISON UNIT
AREA, SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on June 17, 1993, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 6th day of July, 1993, 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, Meridian Oil Inc., seeks approval to commingle gas production from the Blanco-Mesaverde and Basin-Dakota Pools within the Allison Unit. Well No. 9R located 1720 feet from the North line and 1655 feet from the East line (Unit G) of Section 13, Township 32 North, Range 7 West, NMPM, San Juan County New Mexico.

(3) The applicant further seeks the adoption of an administrative procedure for authorizing the downhole commingling of Blanco-Mesaverde and Basin-Dakota Pool production within certain existing and subsequently drilled wells in its Allison Unit Area. San Juan County, New Mexico, without additional notice to each affected interest owner within the Unit Area.

(4) The Allison Unit Well No. 9R is to be drilled as a replacement well for the Allison Unit Well No. 9 which is located 1765 feet from the North line and 1500 feet from the East line (Unit G) of Section 13 and which is currently completed in and producing from the Basin-Dakota Pool.

(5) The Allison Unit Well No. 9 was drilled in 1955 and has cumulatively recovered some 4.4 BCF of gas from the Basin-Dakota Pool.

(6) Due to the age and mechanical condition of the Allison Unit Well No. 9, the applicant has estimated that it will not recover some 1.7 BCF of gas in the Basin-Dakota Pool underlying the E/2 of Section 13.

(7) Applicant's testimony indicates that due to economics, the Allison Unit Well No. 9R cannot be drilled solely to recover gas reserves in the Basin-Dakota Pool.

(8) The applicant expects to encounter marginal production only from the Blanco-Mesaverde Pool.

(9) The proposed downhole commingling is necessary in order for the applicant to economically recover Basin-Dakota and Blanco-Mesaverde Pool reserves underlying the E/2 of Section 13.

(10) The Allison Unit is a Federal exploratory unit initially comprising some 11,705 acres in New Mexico and some 2,069 acres in Colorado. Within New Mexico, the unit comprises portions of Township 32 North, Ranges 6 and 7 West, NMPM, San Juan County. The unit was formed in 1950 and is currently operated by Meridian Oil Inc.

(11) The evidence and testimony presented indicates that the Basin-Dakota and Blanco-Mesaverde Pools have both been substantially developed within the Allison Unit.

(12) The applicant has identified numerous Mesaverde and Dakota well locations within the Allison Unit which by virtue of marginal gas reserves and resulting poor economics cannot be economically drilled and produced as stand alone units.

(13) The current well economics and projected Dakota and Mesaverde gas reserves underlying these respective tracts virtually assure that these wells must be downhole commingled in order to meet the economic criteria for drilling.

(14) The applicant expects initial producing rates from both the Mesaverde and Dakota formations to be fairly marginal in nature.

(15) The applicant further demonstrated through its evidence and testimony that within the wells it proposes or will propose to commingle within the Unit Area:

- a) there will be no crossflow between the two commingled pools;
- b) neither commingled zone exposes the other to damage by produced liquids;
- c) the fluids from each zone are compatible with the other;
- d) the bottomhole pressure of the lower pressure zone should not be less than 50 percent of the bottomhole pressure of the higher pressure zone adjusted to a common datum; and,
- e) the value of the commingled production is not less than the sum of the values of the individual production.

(16) The Dakota and Mesaverde Participating Areas within the Allison Unit are not common.

(17) By virtue of different Participating Areas, the interest ownership between the Dakota and Mesaverde formations within any given wellbore is not common.

(18) Applicant's Exhibit No. 2 in this case is a list of three hundred and fifty-four (354) interest owners in the Dakota and Mesaverde Participating Areas within the Allison Unit. All such interest owners were notified of the application in this case.

(19) Rule No. 303(C) of the Division Rules and Regulations provides that administrative approval for downhole commingling may be granted provided that the interest ownership, including working, royalty and overriding royalty interest, is common among the commingled zones.

(20) Applicant's proposed administrative procedure would provide for Division approval to downhole commingle wells in the Allison Unit Area without hearing, and without the requirement that each interest owner in the Dakota and Mesaverde Participating Areas be notified of such commingling.

(21) The downhole commingling of wells within the Allison Unit Area will benefit working, royalty and overriding royalty interest owners. In addition, the downhole commingling of wells within the Allison Unit Area should not violate the correlative rights of any interest owner.

(22) Evidence in this case indicates that . . . to each interest owner within the Dakota and Mesaverde Participating Areas of subsequent downhole comminglings within the Allison Unit is unnecessary and is an excessive burden on the applicant.

(23) No interest owner and/or offset operator appeared at the hearing in opposition to the application.

(24) An administrative procedure should be established within the Allison Unit for obtaining approval for subsequently downhole commingled wells without notice to Unit interest owners and hearing, provided however that, all provisions contained within Rule No. 303(C) of the Division Rules and Regulations, with the exception of Part 1 (b)(v), are fully complied with.

(25) The proposed administrative procedure for obtaining approval for downhole commingling will allow the applicant the opportunity to recover additional gas reserves from the Allison Unit Area which may otherwise not be recovered, thereby preventing waste, and will not violate correlative rights.

(26) In the interest of prevention of waste and protection of correlative rights, the proposed downhole commingling within the Allison Unit Well No. 9R should be approved.

(27) The applicant should consult with the supervisor of the Aztec District Office of the Division subsequent to the completion of the subject well in order to determine a proper allocation of production.

(28) The operator should immediately notify the supervisor of the Aztec district office of the Division any time the subject well has been shut-in for seven consecutive days and shall concurrently present, to the Division, a plan for remedial action.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Meridian Oil Inc., is hereby authorized to commingle gas production from the Blanco-Mesaverde and Basin-Dakota Pools within the Allison Unit Well No. 9R located 1720 feet from the North line and 1655 feet from the East line (Unit G) of Section 13, Township 32 North, Range 7 West, NMPM, San Juan County, New Mexico.

(2) The applicant shall consult with the supervisor of the Aztec district office of the Division subsequent to the completion of the subject well in order to determine a proper allocation of production.

JUL - 7 - 93 WED 12:47 OIL CONSERVATION DIV

P.

(3) The operator shall immediately notify the supervisor of the Aztec district office of the Division any time the subject well has been shut-in for seven consecutive days and shall concurrently present, to the Division, a plan for remedial action.

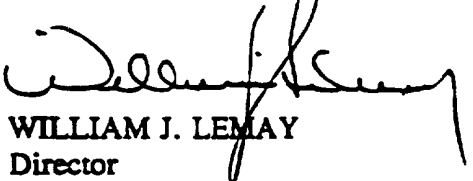
(4) An administrative procedure for obtaining approval to downhole commingle wells within the Allison Unit, located in portions of Township 32 North, Ranges 6 and 7 West, NMPM, San Juan County, New Mexico, is hereby established.

(5) In order to obtain Division authorization to downhole commingle wells within the Allison Unit, the applicant shall file an application with the Santa Fe and Aztec Offices of the Division. Such application shall contain all of 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 Dakota and Mesaverde Participating Areas in the Allison Unit of such proposed commingling. In addition, the application shall contain evidence that all offset operators and the United States Bureau of Land Management (BLM) have been notified of the proposed commingling.

(6) Jurisdiction is hereby 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