

# BURLINGTON RESOURCES

SAN JUAN DIVISION

February 12, 1997

SENT FEDERAL EXPRESS

Mr. William LeMay  
New Mexico Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505

Re: Allison Unit #57 <sup>K</sup>  
1780'FSL, 1780'FWL Section 13, T-32-N, R-7-W, San Juan County, NM  
API #30-045-24412

Dear Mr. LeMay:

This is a request for administrative approval for downhole commingling the Blanco Mesa Verde and Basin Dakota in the subject well. This well was drilled and completed as a Mesa Verde/Dakota dual.

To comply with the New Mexico Oil Conservation Division rules, Burlington Resources Oil & Gas is submitting the following for your approval of this commingling:

1. Form C107A - Application for Downhole Commingling;
2. C-102 plat for each zone showing its spacing unit and acreage dedication;
3. Production curve for both the Mesa Verde and Dakota for at least one year;
4. Notification list of offset operators - Burlington is the offsetting operator;
5. Shut in wellhead pressure and calculated down hole pressure;
6. Nine-section plats for the Dakota and Mesa Verde

Notification of Mesa Verde and Dakota interest owners is covered under Order #R-9918 issued July 6, 1996 attached.

The allocation formula is attached and is requested at 23.55% for the Mesa Verde and 76.45% for the Dakota.

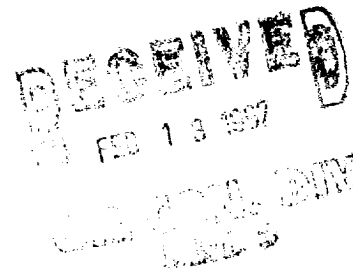
Please let me know if you require additional data.

Sincerely,



Peggy Bradfield  
Regulatory/Compliance Administrator  
encs.

xc: Bureau of Land Management



**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**  
**87499****PO Box 4289, Farmington, NM**

Operator	Address	
<b>Allison Unit</b>	<b>57 K 13-32-7</b>	<b>San Juan</b>
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. 30-045-24412 Federal <input checked="" type="checkbox"/> , 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	Blanco Mesaverde - 72319		Basin Dakota - 71599
2. Top and Bottom of Pay Section (Perforations)	5248-6122'		7969-8115'
3. Type of production (Oil or Gas)	gas		gas
4. Method of Production (Flowing or Artificial Lift)	flowing		flowing
5. Bottomhole Pressure	569 psia as of 7-93	a.	a. 599 psia @ 8042'
Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original	(Original) b. 1328 psia (calc)	b.	b. 3418 psia (calc)
6. Oil Gravity (°API) or Gas BTU Content	970 BTU		960 BTU
7. Producing or Shut-In?	shut in		producing
Production Marginal? (yes or no)	yes		yes
* If Shut-In and oil/gas/water rates of last production	Date: 8-96 Rates: 83 mcf/d	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

All distances must be from the outer boundaries of the Section.

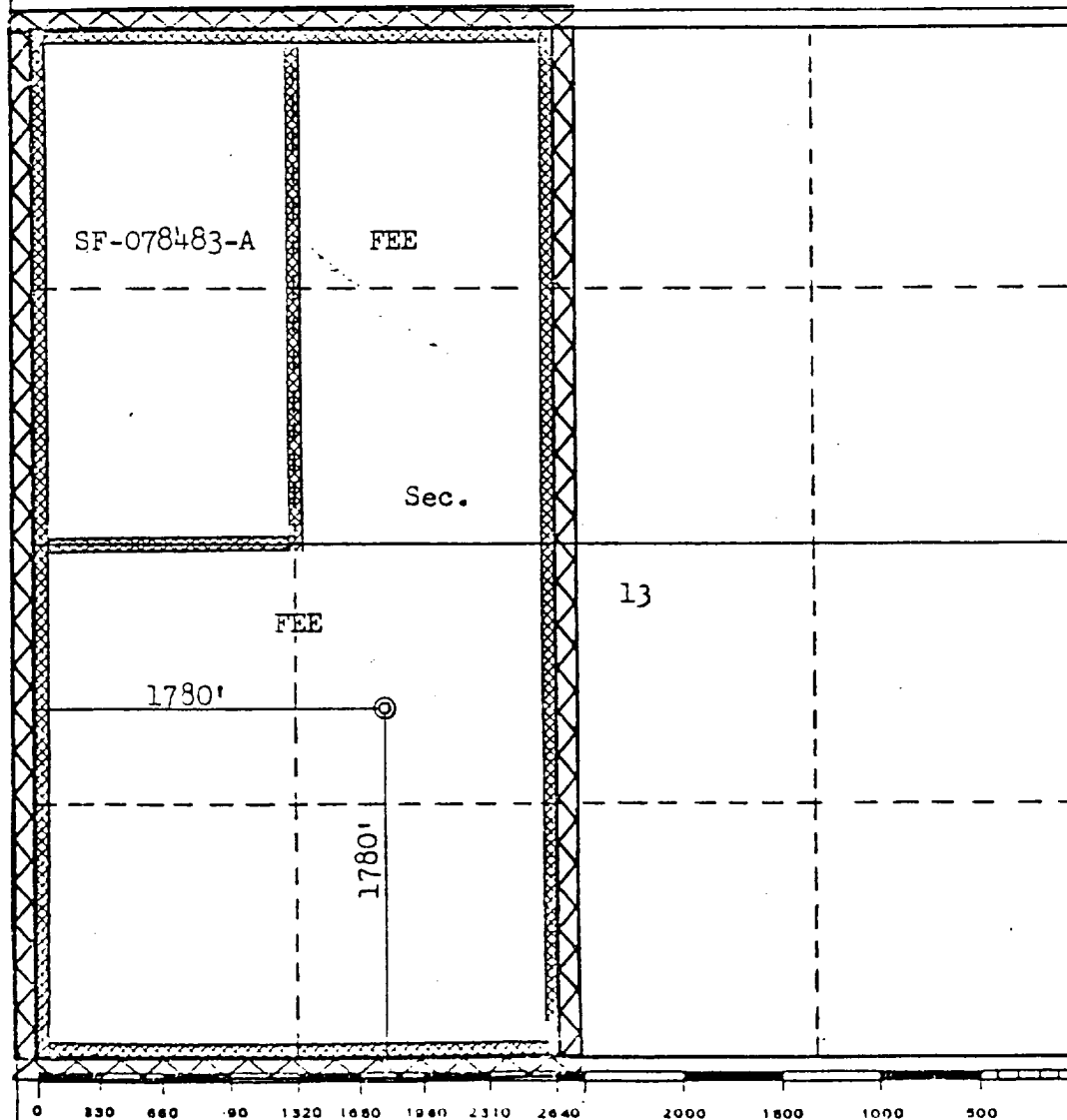
Operator EL PASO NATURAL GAS COMPANY		Lease ALLISON UNIT (FEE)		Well No. 57
Unit Letter K	Section 13	Township 32N	Range 7W	County San Juan
Actual Footage Location of Well: 1730 feet from the South line and 1780 feet from the West line				
Ground Level Elev. 6555	Producing Formation MESA VERDE - DAKOTA	Pool BLANCO MESA VERDE BASIN DAKOTA	Dedicated Acreage: 314.76 & 314.76 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation Unitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



## - CERTIFICATION

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

*A. G. Quisco*

Name

Drilling Clerk

Position

El Paso Natural Gas

Company

June 17, 1980

Date

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 knowledge and belief.

Date Surveyed

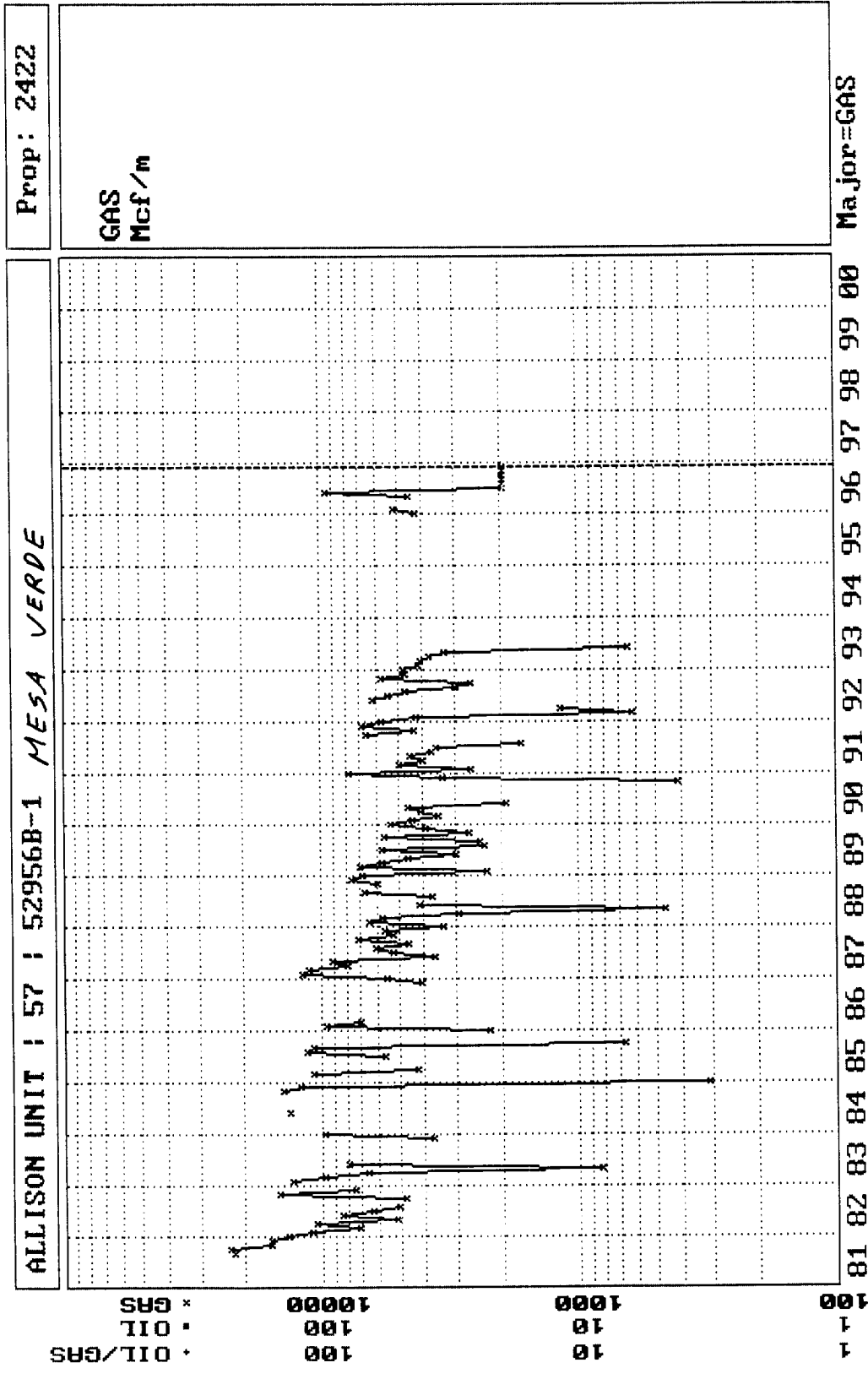
September 1980

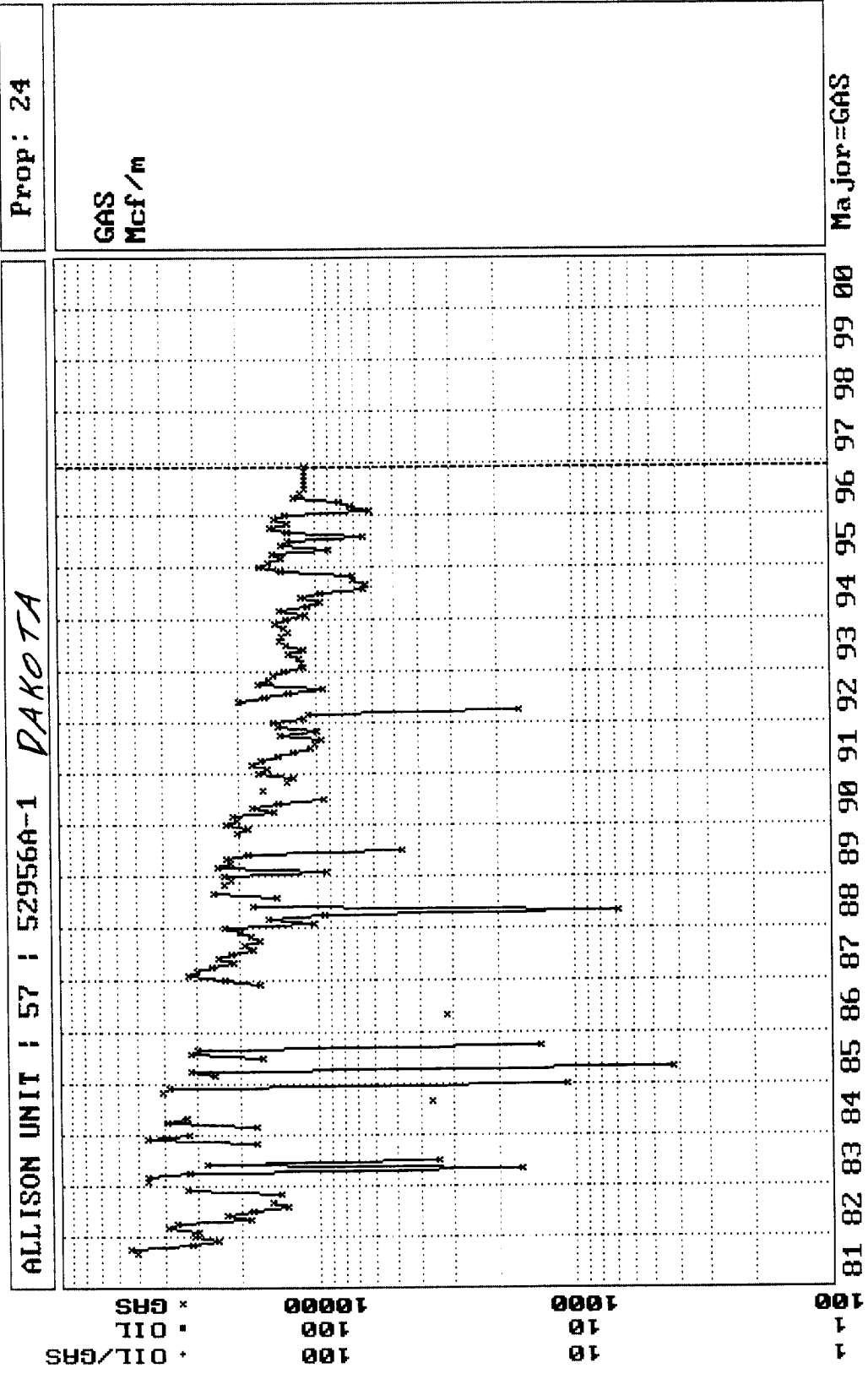
Registered Professional Surveyor  
and/or Land Surveyor

*Frank R. [Signature]*

Certificate No. 1000

3000 8. 1980





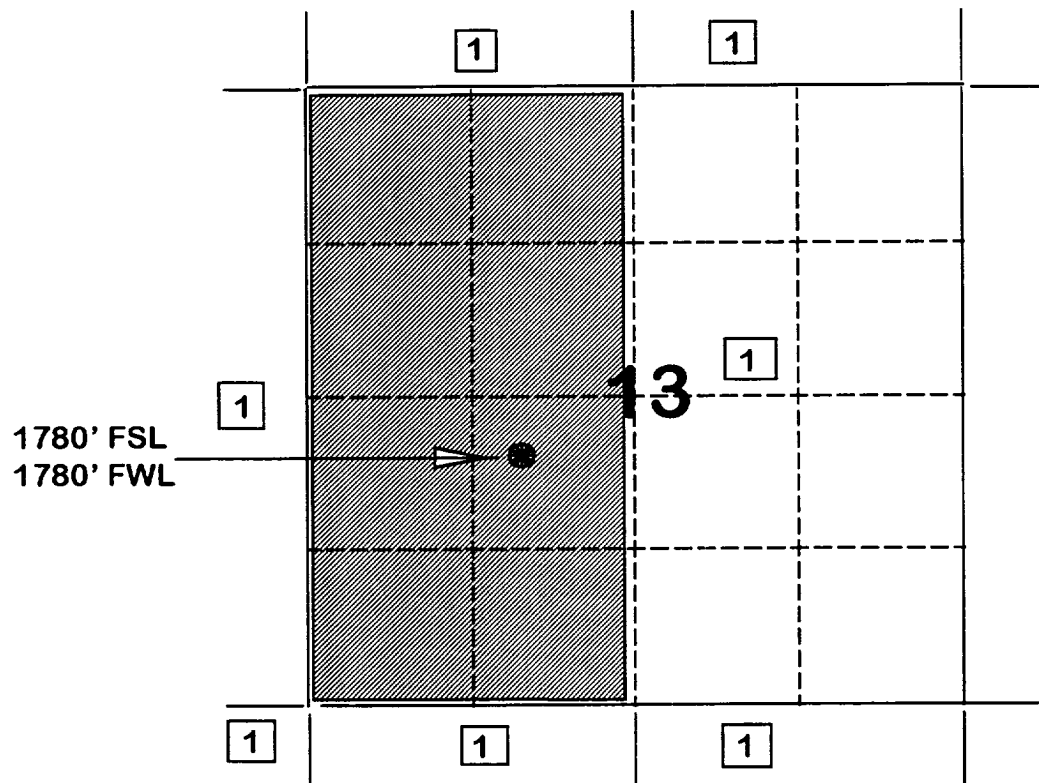
***BURLINGTON RESOURCES OIL AND GAS COMPANY***

**Allison Unit #57**

**OFFSET OPERATOR \ OWNER PLAT**

**Mesaverde/Dakota Formations Commingle Well**

**Township 32 North, Range 7 West**



**1) Burlington Resources Oil and Gas Company Successor to Meridian Oil Inc.**

Page No.: 1  
Print Time: Wed Feb 12 11:41:48 1997  
Property ID: 2422  
Property Name: ALLISON UNIT | 57 | 52956B-1 - *MESA VERDE*  
Table Name: K:\ARIES\RR97PDP\TEST.DBF

<u>--DATE--</u>	<u>---CUM GAS--</u>	<u>M SIWHP</u>
	Mcf	Psi

06/24/81	0	1155.0 - <i>Initial</i>
11/02/81	61891	707.0
05/18/82	125758	562.0
04/25/83	202328	506.0
07/02/84	238328	637.0
03/18/86	328170	535.0
09/31/89	504331	689.0
09/31/89	504331	689.0
09/31/89	504331	689.0
03/18/91	560239	501.0
08/23/91	577666	513.0
07/05/93	661198	493.0 - <i>Current</i>

**FLOWING AND STATIC BHP  
CULLENDER AND SMITH METHOD**

VERSION 1.0 3/13/94

GAS GRAVITY	0.592
COND. OR MISC. (C/M)	M
%N2	0.61
%CO2	2.95
%H2S	0
DIAMETER (IN)	2
DEPTH (FT)	5685
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	137
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1166
BOTTOMHOLE PRESSURE (PSIA)	1328.0

Allison Unit No. 57 - Initial BHP (Mesa Verde)



**FLOWING AND STATIC BHP**  
**CULLENDER AND SMITH METHOD**

VERSION 1.0 3/13/94

GAS GRAVITY	0.592
COND. OR MISC. (C/M)	M
%N2	0.61
%CO2	2.96
%H2S	0
DIAMETER (IN)	2
DEPTH (FT)	5685
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	137
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	504
BOTTOMHOLE PRESSURE (PSIA)	568.6

The Mesaverde tubing is plugged so a measured bottom hole pressure cannot be obtained. Therefore the shut in pressure from July, 1993 will be utilized to calculate a BHP.

Page No.: 1

Print Time: Wed Feb 12 11:47:30 1997

Property ID: 28

Property Name: ALLISON UNIT | 9 | 49128A-1 - DAKOTA

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

--DATE--	---CUM GAS--	M SIWHP
	Mcf	Psi

02/09/56	0	2867.0
07/23/56	110000	1924.0
06/07/57	356000	1601.0
11/14/58	744000	1522.0
07/29/59	870000	1722.0
02/22/60	1034000	1369.0
07/28/61	1304000	1367.0
11/20/62	1439000	1632.0
05/06/63	1474000	1659.0
04/22/64	1582000	1456.0
05/03/65	1746000	1560.0
02/23/66	1852000	1289.0
03/06/67	1999000	1287.0
08/15/68	2282000	1147.0
05/26/69	2396310	1210.0
10/31/69	2465222	1187.0
06/02/70	2577185	1070.0
07/19/71	2738315	1112.0
08/10/72	2888307	1079.0
06/18/73	3002310	983.0
04/29/75	3234941	1026.0
08/08/77	3503647	924.0
06/04/79	3684609	953.0
05/15/81	3846039	1012.0
04/25/83	3969644	1044.0
05/02/85	4073181	974.0
08/16/88	4223308	1175.0
04/22/90	4337933	969.0
03/29/92	4451973	842.0

-Initial

*The Allison Unit No. 9  
is a parent well located  
in the same section as  
the Allison Unit No. 57.*

**FLOWING AND STATIC BHP  
CULLENDER AND SMITH METHOD**

VERSION 1.0 3/13/94

GAS GRAVITY	<u>0.604</u>
COND. OR MISC. (C/M)	<u>M</u>
%N2	<u>0.13</u>
%CO2	<u>4.86</u>
%H2S	<u>0</u>
DIAMETER (IN)	<u>2</u>
DEPTH (FT)	<u>8042</u>
SURFACE TEMPERATURE (DEG F)	<u>60</u>
BOTTOMHOLE TEMPERATURE (DEG F)	<u>228</u>
FLOWRATE (MCFPD)	<u>0</u>
SURFACE PRESSURE (PSIA)	<u>2878</u>
BOTTOMHOLE PRESSURE (PSIA)	<u>3418.0</u>

The Allison Unit #57 was an infill well drilled in 1981. At completion the reservoir was partially depleted. To determine the initial bottom hole pressure, the Allison Unit # 9 (located in the same section) pressure data was utilized.

Page No.: 1

Print Time: Wed Feb 12 11:41:33 1997

Property ID: 24

Property Name: ALLISON UNIT | 57 | 52956A-1 - *Dakota*

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

<u>--DATE--</u>	<u>---CUM_GAS--</u>	<u>M SIWHP</u>
	Mcf	Psi

06/16/81	0	1532.0
06/24/81	0	1533.0
11/02/81	138123	1352.0
05/18/82	317869	1012.0
04/25/83	561390	868.0
05/02/85	921607	853.0
08/16/88	1386862	808.0
04/22/90	1702456	851.0
03/29/92	1986942	627.0
03/01/94	2288355	500.0 - <i>Current</i>

**FLOWING AND STATIC BHP  
CULLENDER AND SMITH METHOD**

VERSION 1.0 3/13/94

GAS GRAVITY	0.604
COND. OR MISC. (C/M)	M
%N2	0.13
%CO2	4.86
%H2S	0
DIAMETER (IN)	2
DEPTH (FT)	8042
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	228
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	511
BOTTOMHOLE PRESSURE (PSIA)	599.4

Allison Unit No. 57 - Current (3/94) BHP (Dakota)

FARMINGTON ANNUAL PRODUCTION FOR 52956A PHS020M1  
 ALLISON UNIT 57  
 BASIN DAKOTA (PRORATED GAS) FIELD DAKOTA ZONE  
 ===== OIL CUM ===== GAS CUM ===== WATER CUM =====  
 PC DATE BBLs PC DATE MCF DATE BBLs

```
=====
YEAR      OIL      OIL CUM      GAS      GAS CUM      WATER      WATER CUM
1991      163781    1949838      83      915
1992      145045    2094883      77      992
1993      155058    2249941      81     1073
1994      121484    2371425      63     1136
1995      158932    2530357      84     1220
1996      98034     2628391      51     1271
```

POSITION CURSOR BY YEAR AND PRESS ENTER TO DISPLAY MONTHLY PRODUCTION  
 ENTER - CONTINUES ANNUAL DISPLAY PF3 - TRANSFER TO UPDATE  
 PF6 - RETURN TO WELL-INFO DISPLAY PF9 - ANNUAL INJECTION DISPLAY  
 PF10 - HELP INFORMATION

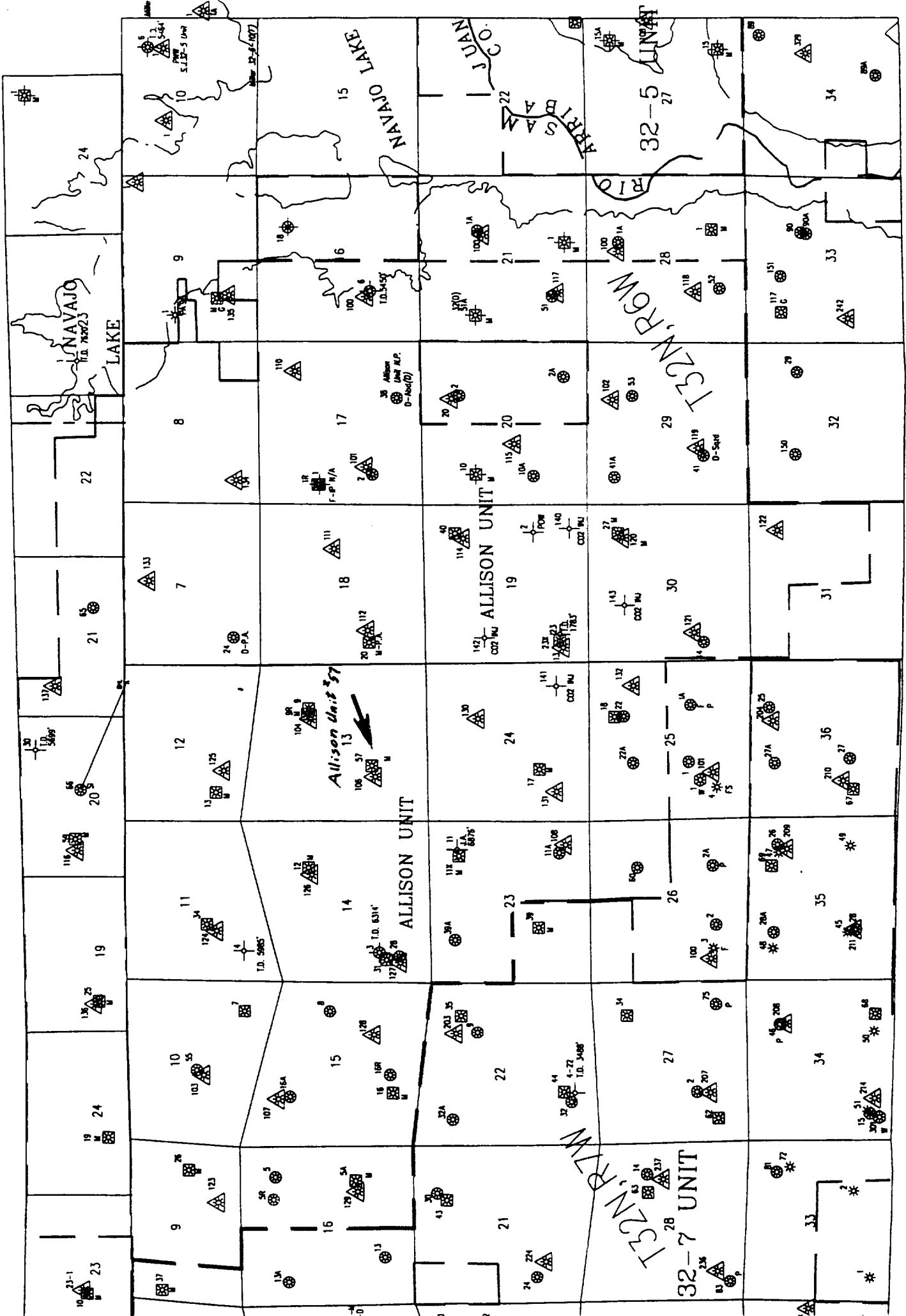
B MY JOB LU #2

FARMINGTON ANNUAL PRODUCTION FOR 52956B PHS020M1  
 ALLISON UNIT 57  
 BLANCO MESAVERDE (PRORATED GAS FIELD MESAVERDE ZONE  
 ===== OIL CUM ===== GAS CUM ===== WATER CUM =====  
 PC DATE BBLs PC DATE MCF DATE BBLs

```
=====
YEAR      OIL      OIL CUM      GAS      GAS CUM      WATER      WATER CUM
1991      50987     595819
1992      44684     640503
1993      20916     661419
1994      661419
1995      661419
1996      30506     691925
```

POSITION CURSOR BY YEAR AND PRESS ENTER TO DISPLAY MONTHLY PRODUCTION  
 ENTER - CONTINUES ANNUAL DISPLAY PF3 - TRANSFER TO UPDATE  
 PF6 - RETURN TO WELL-INFO DISPLAY PF9 - ANNUAL INJECTION DISPLAY  
 PF10 - HELP INFORMATION

B MY JOB LU #2



BURLINGTON RESOURCES  
ALLISON UNIT

(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.



**Allison Unit #57**  
**Production Allocation**

Due to a suspected tubing hole (MV) which occurred approximately 1/93, use 1992 Production for allocation:

1992 Dakota Production:	145,045 Mcf	76.45%
1992 Mesaverde Production:	<u>44,684 Mcf</u>	<u>23.55%</u>
Total	189,729 Mcf	100.00%

(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) The evidence in this case indicates that notice 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.

(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.

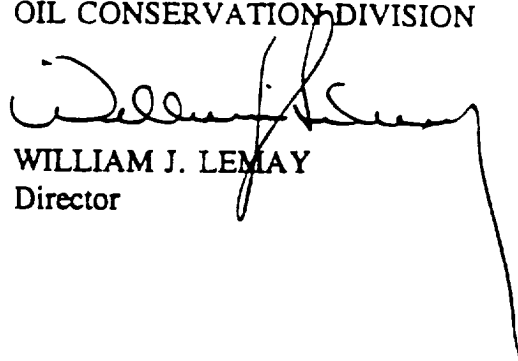
(4) An administrative procedure for obtaining approval to downhole commingle wells within the Allison Unit, located in portions of Township 32 North, Ranges 6 and 7 West, NMPM, San Juan County, New Mexico, is hereby established.

(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

**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.