

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 87410-1893

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:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Phillips Petroleum Company
Operator

5525 Hw. 64, Farmington, NM 87401
Address

San Juan 30-5 Unit
Lease

20A
Well No.

P, 28 30N, 5W
Unit Ltr. - Sec - Twp - Rge

Rio Arriba
County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 017654 Property Code 009258 API NO. 30-039-26040 Federal ☐ 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	72319 Blanco Mesaverde		71599 Basin Dakota
2. Top and Bottom of Pay Section (Perforations)			
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: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	a. (Current) 1030 (est.) b. (Original) 1294 (est.)	a. b.	a. 993 b. 3412
6. Oil Gravity (°API) or Gas BTU Content	1030		990
7. Producing or Shut-In?			Producing
Production Marginal? (yes or no)	Yes		Yes
• If Shut-In, give date and oil/gas/water rates of last production Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data	Date: Rates:	Date: Rates:	Date: Rates:
• If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: estimate Rates: 435 mcf/d	Date: Rates:	Date: 8/31/99 Rates: 139 mcf/d
8. Fixed Percentage Allocation Formula - % for each zone	Oil: % Gas: %	Oil: % Gas: %	Oil: % Gas: %

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 ☐ No

11. 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 ☐ No

13. 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). R-10770

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 Clinton L. Hutchinson TITLE Reservoir Engr. DATE 9/23/99

TYPE OR PRINT NAME Clint Hutchinson TELEPHONE NO. (505) 599-3423

• 'Hijab'!

ALL South First, Artesia, NM 87210

District III

1000 Rio Nuevo Rd., Aztec, NM 87410

Distrikt IV

2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION

2040 South Pacheco

Santa Fe, NM 87505

Submit to Appropriate District Office

State Lease - 4 Copies

Free Lease - 3 Copies

RECEIVED

200



AMENDED REPORT

CONF-3 PM 2:46

WELL LOCATION AND ACREAGE DEDICATION PLAT

'Alt Number 30139-2640		'Pool Code 72319	'Pool Name Blanco Mesav	'Well Number 20A
'Property Code 009258	'Property Name SAN JUAN 30-5 UNIT			'Well Number 20A
'GRID No. 017654	'Operator Name PHILLIPS PETROLEUM COMPANY			'Elevation 6287'

¹⁰ Surface Location

Ul. or lot no.	Section	Township	Range	Lot 1dn	Feet from the	North/South line	Feet from the	East/West line	County
P	8	30N	5W		1115'	SOUTH	790'	EAST	RIO ARRIBA

¹¹ Bottom Hole Location If Different From Surface •

Ul. or lot no. P	Section	Township	Range	1st 1/4	Feet from the	North/South line	Feet from the	East/West line	County
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" Dedicated Acres 320 E/2	" Joint or Infill Y	" Consolidation Code	" Order No.
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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

16	5279.34'	<div style="border: 1px solid black; padding: 10px; margin-bottom: 10px;"> <p style="text-align: center; font-weight: bold; font-size: 1.2em;">RECEIVED</p> <p style="text-align: center;">SEP 27 1999</p> <p style="text-align: center; font-weight: bold;">OIL CON. DIV.</p> <p style="text-align: center;">DIST. 3</p> </div> <div style="border: 1px solid black; padding: 10px;"> <p style="text-align: center;">#20 (P&A'd)</p> </div>
5280.0'	8 FEE	5280.0'
5280.0'	790'	1115'

17 OPERATOR CERTIFICATION

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

Signature

R Allred

Printed Name

Richard Allred

Title

Drilling Superintendent

Date

11-23-98

by PC

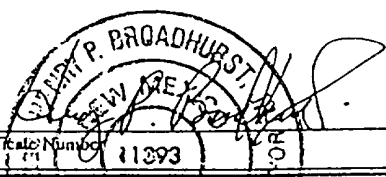
18 SURVEYOR CERTIFICATION

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.

Date of Survey

09/17/98

Signature and Seal of Professional Surveyor:



0.0870

5280 0'

1st Reg. 1980, Hobbs, NM 88241-1700
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

RECEIVED
BLM

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

APL Number 30-039-26040	Pool Code 71599	Basin Dakota	Pool Name 670 P. BROADHURST, NM
Property Code 009258	Property Name SAN JUAN 30-5 UNIT		Well Number 20A
UGRID No. 017654	Operator Name PHILLIPS PETROLEUM COMPANY		Elevation 6287'

10 Surface Location

UI, or lot no.	Section	Township	Range	Lot 1dn	Feet from the	North/South line	Feet from the	East/West line	County
P	8	30N	5W		1115'	SOUTH	790'	EAST	RIO ARriba

11 Bottom Hole Location If Different From Surface

UI, or lot no.	Section	Township	Range	Lot 1dn	Feet from the	North/South line	Feet from the	East/West line	County
P									
Dedicated Acres 320 E/2		Joint or Infill N		Consolidation Code		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

16	5279.34'		17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief Signature <i>Richard Allred</i> by PC Printed Name Richard Allred Title Drilling Superintendent Date 11-23-98	
	Fee			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. Date of Survey 09/17/98 Signature and Seal of Professional Surveyor: Certificate Number 11293
	790'			
	1115'			
5280.0'		5280.0'		



PHILLIPS PETROLEUM COMPANY

FARMINGTON, NEW MEXICO 87401
5525 HWY. 64 NBU 3004

September 23, 1999

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

Downhole Commingling Allocation Method
On the San Juan 30-5 Unit #20A

Dear Sirs:

Phillips Petroleum is proposing to utilize the subtraction method on the subject well for approximately twelve months after actual commingling occurs. After the 12th 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 the Dakota interval has been producing for months and that the production will not be stabilized on the Mesaverde for several months.

Dakota Production Forecast

October 1999	3269	November 1999	2913
December 1999	2778	January 2000	2566
February 2000	2227	March 2000	2213
April 2000	1992	May 2000	1917
June 2000	1731	July 2000	1672
August 2000	1563	September 2000	1418

For example, if the total volume for November 1999 were 4473 mcf, then the Dakota would be allocated 2913 mcf and the Mesaverde 1560 mcf. And subsequently, the Dakota would be allocated $(2913/4473)$ or 65.2% and the Mesaverde would be allocated $(1560 / 4473)$ or 34.8%.

Sincerely,

PHILLIPS PETROLEUM COMPANY

Clint Hutchinson
Reservoir Engineer

CH/pc

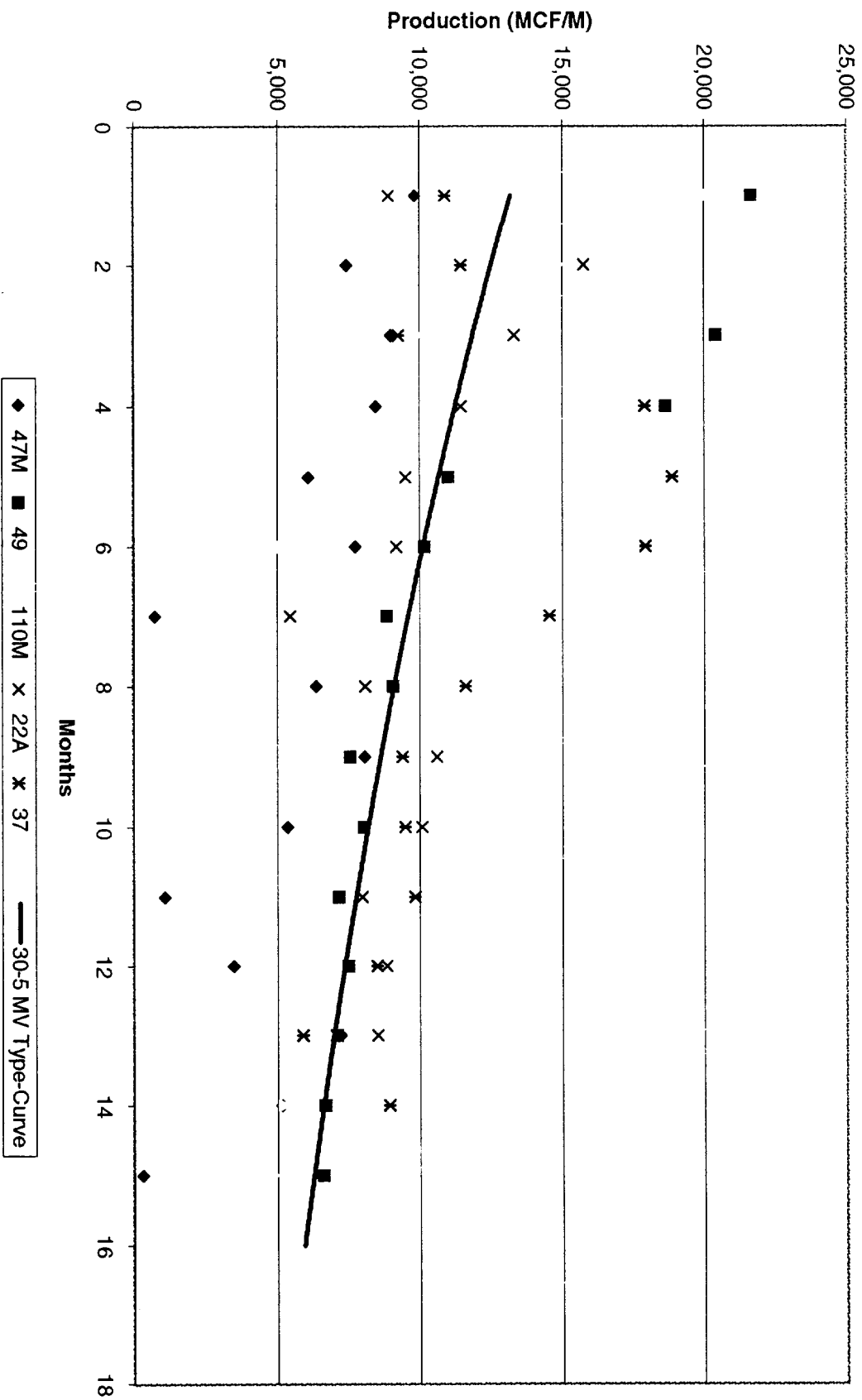
cc: OCD - Aztec
BLM - Farmington
NM Commissioner of Public Lands - Santa Fe

Dakota Production Forecast for 30-5 Unit
Well #20A

Year	Month	Gas (MCF)
Oct-99	1	3269
Nov-99	2	2913
Dec-99	3	2778
Jan-00	4	2566
Feb-00	5	2227
Mar-00	6	2213
Apr-00	7	1992
May-00	8	1917
Jun-00	9	1731
Jul-00	10	1672
Aug-00	11	1563
Sep-00	12	1418
Oct-00	13	1375
Nov-00	14	1251
Dec-00	15	1216
Jan-01	16	1144
Feb-01	17	977
Mar-01	18	1023

Initial Rate 110 MCF/D

30-5 Unit Mesaverde



Date: 09/23/99 Time: 09:16:14 AM

PHILLIPS PETROLEUM COMPANY
5525 HWY 64 NBU 3004
FARMINGTON, NEW MEXICO 87401

DATE: SEPTEMBER 1, 1999

WELL NAME: SAN JUAN 30-5 # 20A
FORMATION: DAKOTA

TYPE TEST: STATIC GRADIENT

COUNTY: RIO ARRIBA
STATE: NEW MEXICO

TOTAL DEPTH: PBTD 7815'
PERFS: MP @ 7702'
TUBING SIZE: 2 3/8 TO 7767'
CASING SIZE: TO
PACKER:
OTHER: 1.81 SN @ 7734'
ENGAGED @ 12:00

CASING PRESSURE: 870
TUBING PRESSURE: 640
OIL LEVEL:
WATER LEVEL: 6726'
TEMPERATURE:
ELEMENT NO.
ELEMENT RANGE 0 TO 3000

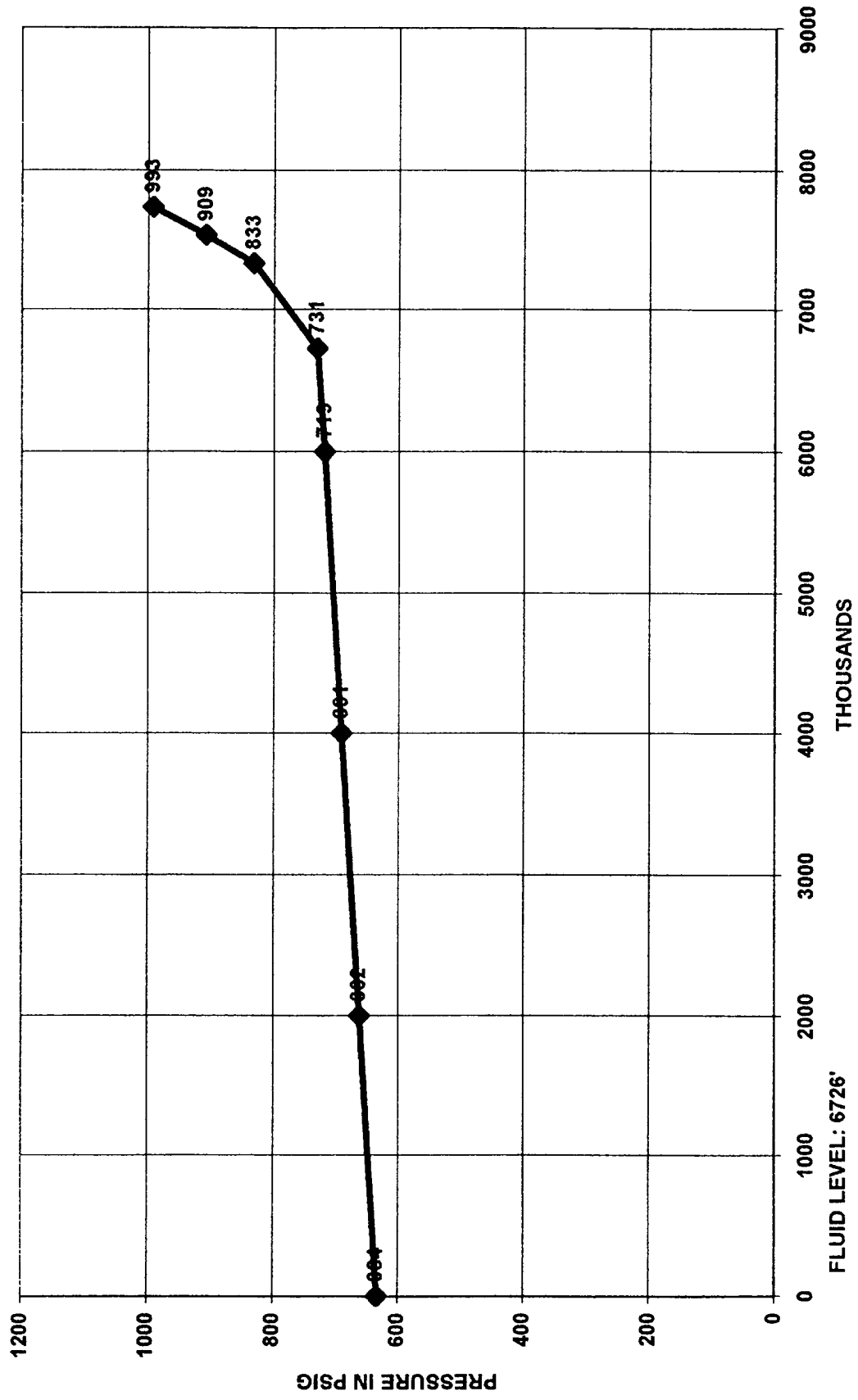
WELL STATUS: SHUT IN

DEPTH IN FEET	PRESSURE PSIG	GRADIENT PSI/FOOT
0	634	
2000	662	0.014
4000	691	0.014
6000	719	0.014
7334	833	0.085
7534	909	0.380
7734	993	0.420

RAN TD @ 7809'

H & H WIRELINE SERVICE INC.
P. O. BOX 899
FLORA VISTA, NEW MEXICO 87415
OPERATOR: CHARLES HUGHES
UNIT NO. T-11

PHILLIPS PETROLEUM SAN JUAN 30-5 # 20A
DATE: SEPTEMBER 1, 1999



Production Allocation Methodology

◆ Adding New Zone to Existing Zone - Initially Subtraction Method followed by Fixed Allocation Method

- Subtraction Method (+/- 1st 12 months)
 - Forecast production rate by month for existing zone utilizing established decline curve for zone
 - Subtract forecasted rate from commingled rate to define new zone rate
 - Utilize subtraction method for +/- 12 months until new zone rate stabilizes, then utilize fixed allocation method with current rates
- Fixed Allocation Method (after Subtraction Method)
 - Utilize forecasted rate from established decline curve for lower zone
 - Calculate upper zone rate by subtracting lower zone rate from commingled rate
 - Lower zone allocation = $\frac{\text{Lower zone rate}}{\text{Commingled rate}}$
 - Upper zone allocation = $\frac{(\text{Commingled rate} - \text{Lower zone rate})}{\text{Commingled rate}}$