

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980
DISTRICT II
811 South First St., Artesa, 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 87505-6429

Form C-107-A
New 3-12-96

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Phillips Petroleum Company 5525 Hwy. 64, Farmington, NM 87401
Operator Address

San Juan 30-5 Unit 71M D, Sec. 22 30N, 5W Rio Arriba
Lease Well No. Unit Ltr. - Sec - Twp - Rge County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 017654 Property Code 009258 API NO. 30-039-26029 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	SEP 30 1999	Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing	OIL CON. DIV. DIST. 3	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. 1264 b. 3142
6. Oil Gravity ($^{\circ}$ 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 * If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: Rates: Date: estimated Rates: 300 mcf/d	Date: Rates: Date: Rates:	Date: Rates: Date: 8/31/99 Rates: 554 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 9/28/99

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

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, N.M. 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Artec, N.M. 87410

DISTRICT IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Encl Minerals & Natural Resources Department

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

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

SEP-3 P: 2:46 ☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number	*Pool Code 71599	*Pool Name Basin Dakota
*Property Code 009258	*Property Name SAN JUAN 30-5 UNIT	*Well Number 71M
*OGRD No. 017654	*Operator Name PHILLIPS PETROLEUM COMPANY	*Elevation 6493'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	22	30-N	5-W		824	NORTH	795	WEST	RIO ARRIBA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D									
*Dedicated Acres 320 W/2		*Joint or Infill I		*Consolidation Code U		*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	N 89-45 E	5266.80'
824'		
795'		
SF-078739		
5280.0'		
N 00-02 E	22	

RECEIVED
SEP 30 1999
OIL CON. DIV.
DIST. 3

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

Signature
Richard Allred
Printed Name
Drilling Superintendent
Title
11-23-98
Date

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
Signature
Seal of Professional Surveyor
8894
Certificate Number

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DISTRICT IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Ex. Minerals & Natural Resources Department

Form C-102
Revised February 21, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION RECEIVED

P.O. Box 2088
Santa Fe, NM 87504-2088

98 DEC -3 PM 2:46

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number	*Pool Code 72319	*Pool Name Blanco Mesaverde
*Property Code 009258	*Property Name SAN JUAN 30-5 UNIT	*Well Number 71M
*OGRID No. 017654	*Operator Name PHILLIPS PETROLEUM COMPANY	*Elevation 6493'

¹⁰ Surface Location

UL or lot no. D	Section 22	Township 30-N	Range 5-W	Lot Idn	Feet from the 824	North/South line NORTH	Feet from the 795	East/West line WEST	County RIO ARRIBA
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. D	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
*Dedicated Acres 320 W/2	*Joint or Infill I	*Consolidation Code U		*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 N 89-45 E 5266.80' 795' 824' 5280.0' N 00-02 E	22	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature Richard Allred Printed Name Drilling Superintendent Title 11-23-98 Date
22	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 Signature Professional Land Surveyor 8894 Certificate Number	



PHILLIPS PETROLEUM COMPANY

FARMINGTON, NEW MEXICO 87401
5525 HWY. 64 NBU 3004

September 28, 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 #71 M

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	17056	November 1999	16283
December 1999	16600	January 2000	16374
February 2000	15117	March 2000	15949
April 2000	15231	May 2000	15532
June 2000	14834	July 2000	15129
August 2000	14930	September 2000	14262

For example, if the total volume for November 1999 were 26,083, then the Dakota would be allocated 16,283 mcf and the Mesaverde 9,800 mcf. And subsequently, the Dakota would be allocated $(16,283/26,083)$ or 62.43 % and the Mesaverde would be allocated $(9,800/26,083)$ or 37.57%.

Sincerely,

PHILLIPS PETROLEUM COMPANY

Clint Hutchinson
Reservoir Engineer

CH/pc

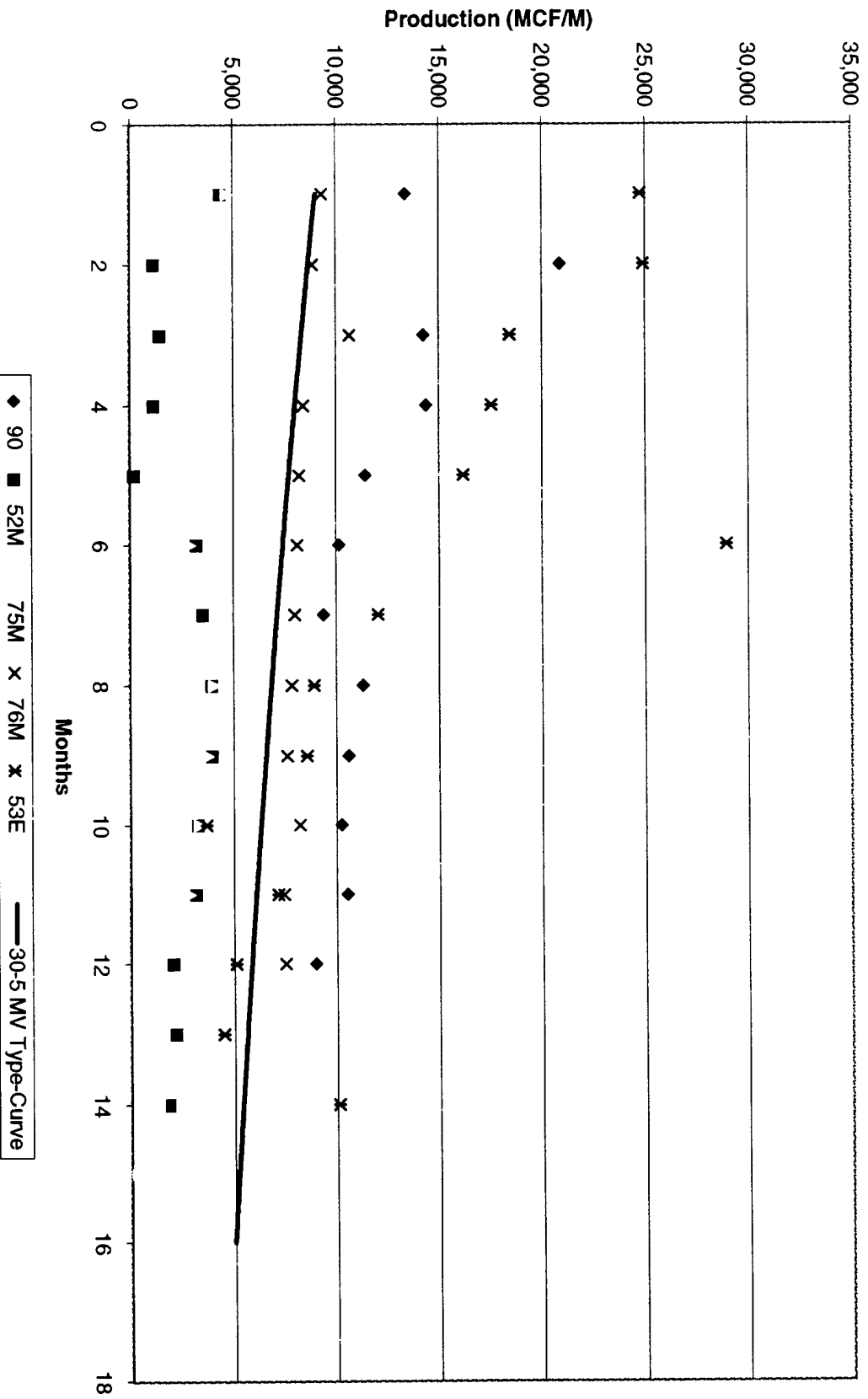
cc: OCD - Aztec
BLM - Farmington
NM Commissioner of Public Lands - Santa Fe

Dakota Production Forecast for 30-5 Unit
Well #71M

Year	Month	Gas (MCF)
Oct-99	1	17056
Nov-99	2	16283
Dec-99	3	16600
Jan-00	4	16374
Feb-00	5	15117
Mar-00	6	15949
Apr-00	7	15231
May-00	8	15532
Jun-00	9	14834
Jul-00	10	15129
Aug-00	11	14930
Sep-00	12	14262
Oct-00	13	14548
Nov-00	14	13898
Dec-00	15	14178
Jan-01	16	13995
Feb-01	17	12486
Mar-01	18	13656

Initial Rate 554 MCF/D

30-5 Unit Mesaverde



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

DATE: SEPTEMBER 21, 1999

WELL NAME: SAN JUAN 30-5 # 71M
FORMATION: DAKOTA

TYPE TEST: STATIC GRADIENT

COUNTY: RIO ARRIBA
STATE: NEW MEXICO

TOTAL DEPTH: 7959'
PERFS: M.P. @ 7862'
TUBING SIZE: 2 3/8 TO 7874'
CASING SIZE:
PACKER:
OTHER: 1.81 FN @ 7843'
RAN PRESSURE @ 11:00

CASING PRESSURE: 1100
TUBING PRESSURE: 1040
OIL LEVEL:
WATER LEVEL: 7694'
TEMPERATURE:
ELEMENT NO.
ELEMENT RANGE 0 TO 3000

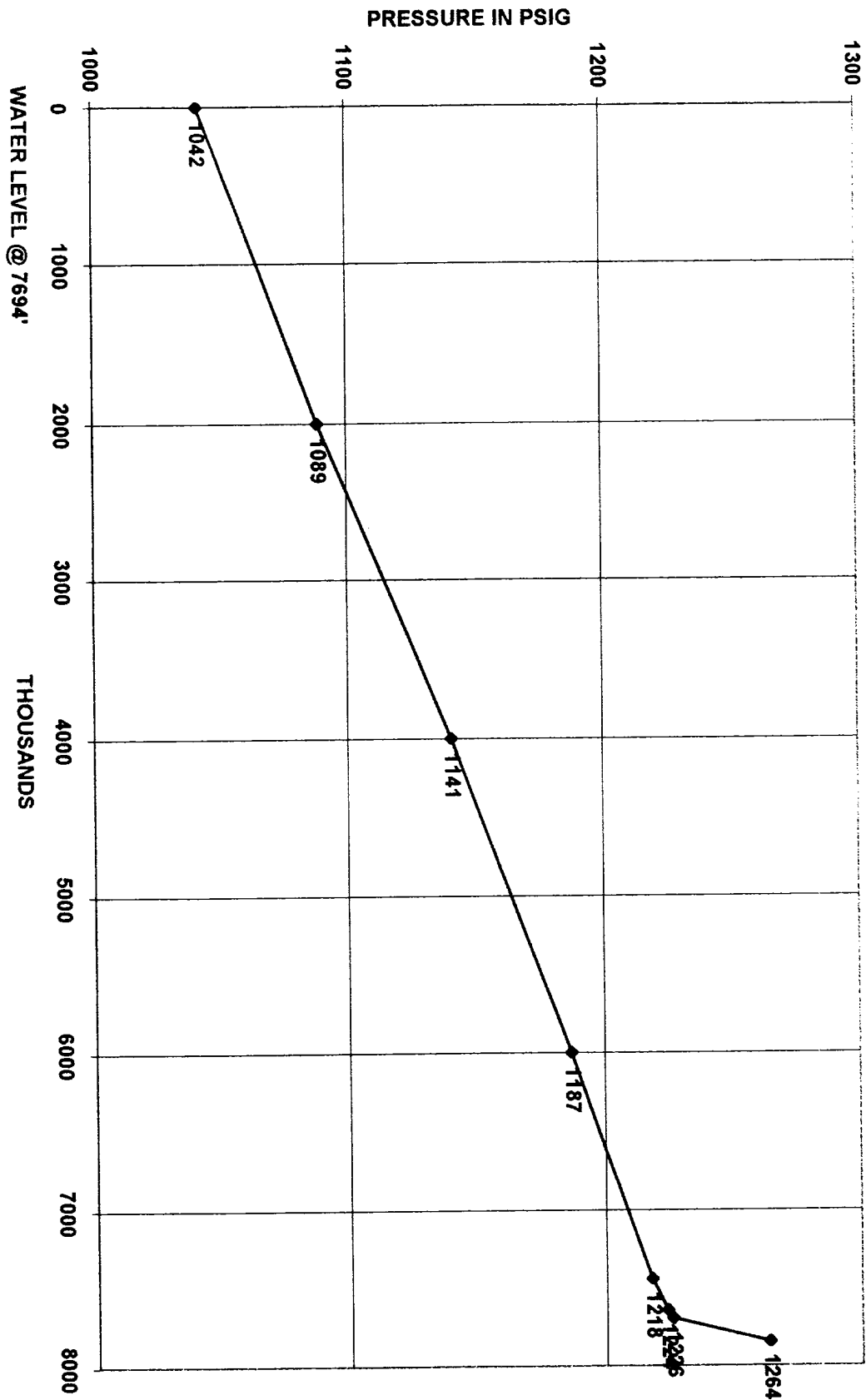
WELL STATUS: SHUT IN

DEPTH IN FEET	PRESSURE PSIG	GRADIENT PSI/FOOT
0	1042	
2000	1089	0.024
4000	1141	0.026
6000	1187	0.023
7443	1218	0.022
7643	1224	0.030
7843	1264	0.200

RAN SLM @

H & H WIRELINE SERVICE INC.
P. O. BOX 899
FLORA VISTA, NEW MEXICO 87415
OPERATOR: CHARLES HUGHES
UNIT NO. T-10

PHILLIPS PETROLEUM SAN JUAN 30-5 # 71M
DATE: SEPTEMBER 21, 1999



ADJ	PRODUCED			DAYS	WELL			
FLG DATE	OIL (BBL)	GAS (MCF)	WATER (BBL)	PROD	OP	ST	CL	TY
* 1999-06	0.00	15,108	118	29.00	28	11	03	2
* 1999-07	0.00	17,409	40	31.00	31	11	03	2

PA1=ICE PF1=Help PF3=End PF10=Next Well
 PF7=Backward PF8=Forward PF11=Prev Well

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 = $\frac{(\text{Commingled rate} - \text{Lower zone rate})}{\text{Commingled rate}}$