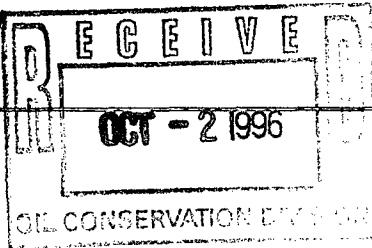


DHC 393 10/22/96

BURLINGTON RESOURCES

SAN JUAN DIVISION



September 30, 1996

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

Re: Culpepper Martin #1E
1110'FSL, 830'FEL Section 31, T-32-N, R-12-W, San Juan County, NM
API #30-045-25114

Dear Mr. LeMay:

This is a request for administrative approval for downhole commingling the Blanco Mesa Verde and Basin Dakota pools in the subject well. This is currently a dual Mesa Verde/Dakota well.

To comply with the New Mexico Oil Conservation Division rules, Burlington Resources Oil & Gas Company 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 Dakota and Mesa Verde for at least one year;
4. Notification list of offset operators - Burlington is the offset operator;
5. Shut in wellhead pressure and calculated down hole pressure;
6. Nine-section plats for the Mesa Verde and Dakota.

The ownership for both the Mesa Verde and Dakota are common in this well. No notification to interest owners is required.

The allocation formula will be based off actual flow rates from the Mesa Verde and Dakota formations.

Please let me know if you require additional data.

Sincerely,

A handwritten signature in cursive script, appearing to read "Peggy Bradfield".

Peggy Bradfield
Regulatory/Compliance Administrator

encs.

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 87505-8429

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

APPROVAL PROCESS :

☒ Administrative
☐ Hearing

APPLICATION FOR DOWNHOLE COMMINGLING

EXISTING WELLBORE

☒ YES ☐ NO

Burlington Resources Oil & Gas Company

PO Box 4289, Farmington, NM 87499

Operator

Address

Culpepper Martin

1E

P-31-32N-12W

San Juan

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 6935 API NO. 30-045-25114 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	Blanco Mesaverde - 72319		Basin Dakota - 71599
2. Top and Bottom of Pay Section (Perforations)	4559-4823'		6777-6998'
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. 682 psi (see attachment) (Original) b. 661 psi (see attachment)	a. b.	a. 655 psi (see attachment) b. 965 psi (see attachment)
6. Oil Gravity (°API) or Gas BTU Content	BTU 1198		BTU 1188
7. Producing or Shut-In?	producing		producing
Production Marginal? (yes or no)	yes		no
* If Shut-In 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: N/A Rates:	Date: Rates:	Date: N/A Rates:
* If Producing, give data and oil/gas/water of recent test (within 60 days)	Date: 8/96 Rates: 69 MCF/D 0.60 BOPD	Date: Rates:	Date: 8/96 Rates: 137 MCF/D 1.61 BOPD
8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)	Will be supplied when completed		Will be supplied when completed

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).

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 Peggy Bradfield TITLE Regulatory Administrator DATE 9-25-96

TYPE OR PRINT NAME Peggy Bradfield TELEPHONE NO. (505) 326-9700

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

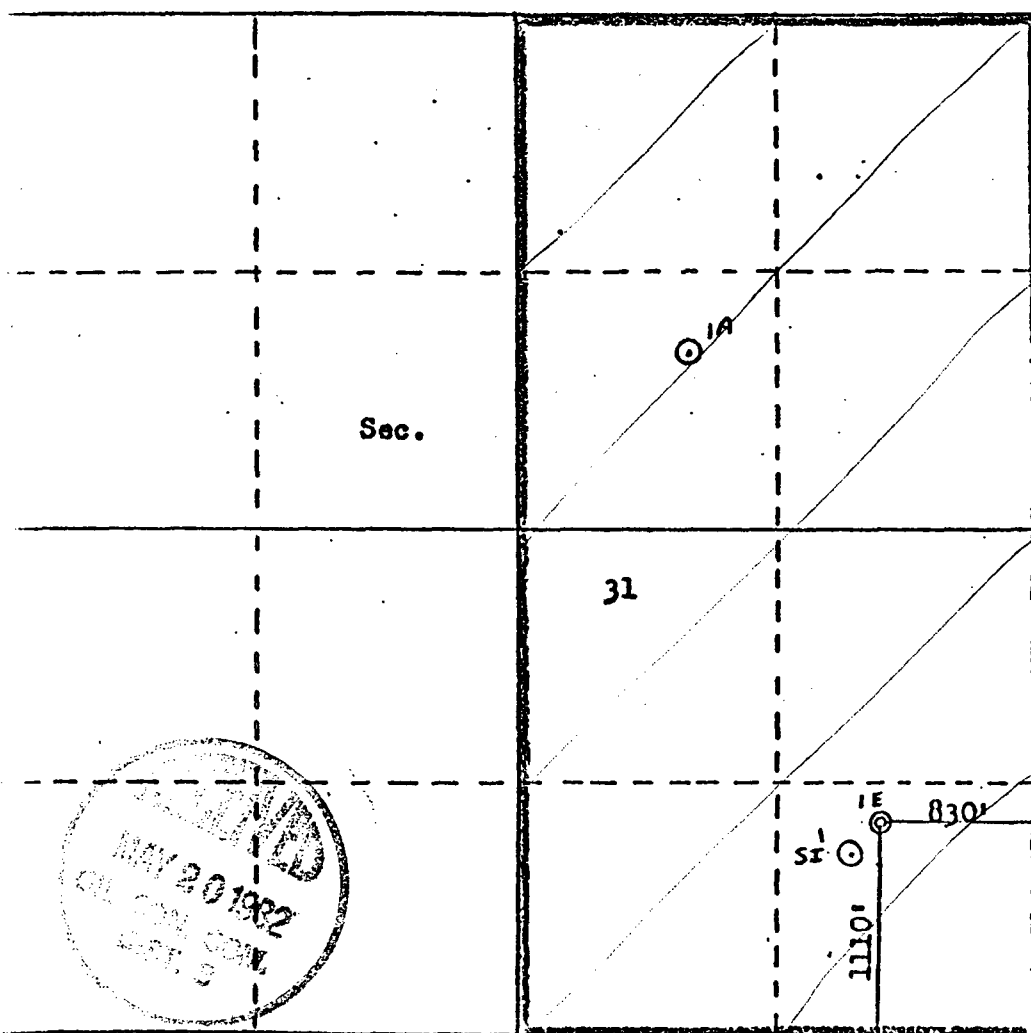
Operator UNION TEXAS PETROLEUM COMPANY			Lease CULPEPPER-MARTIN		Well No. 1E
Well Letter P	Section 31	Township 32N	Range 12W	County San Juan	
Actual Footage Location of Well: 1110 feet from the South line and 830 feet from the East line					
Ground Level Elev: 5841	Producing Formation Dakota, Mesaverde		Pool Basin Dakota, Blanco Mesaverde		Dedicated Acreage E 320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure 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 _____

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.



Scale: 1"=1000'

CERTIFICATION

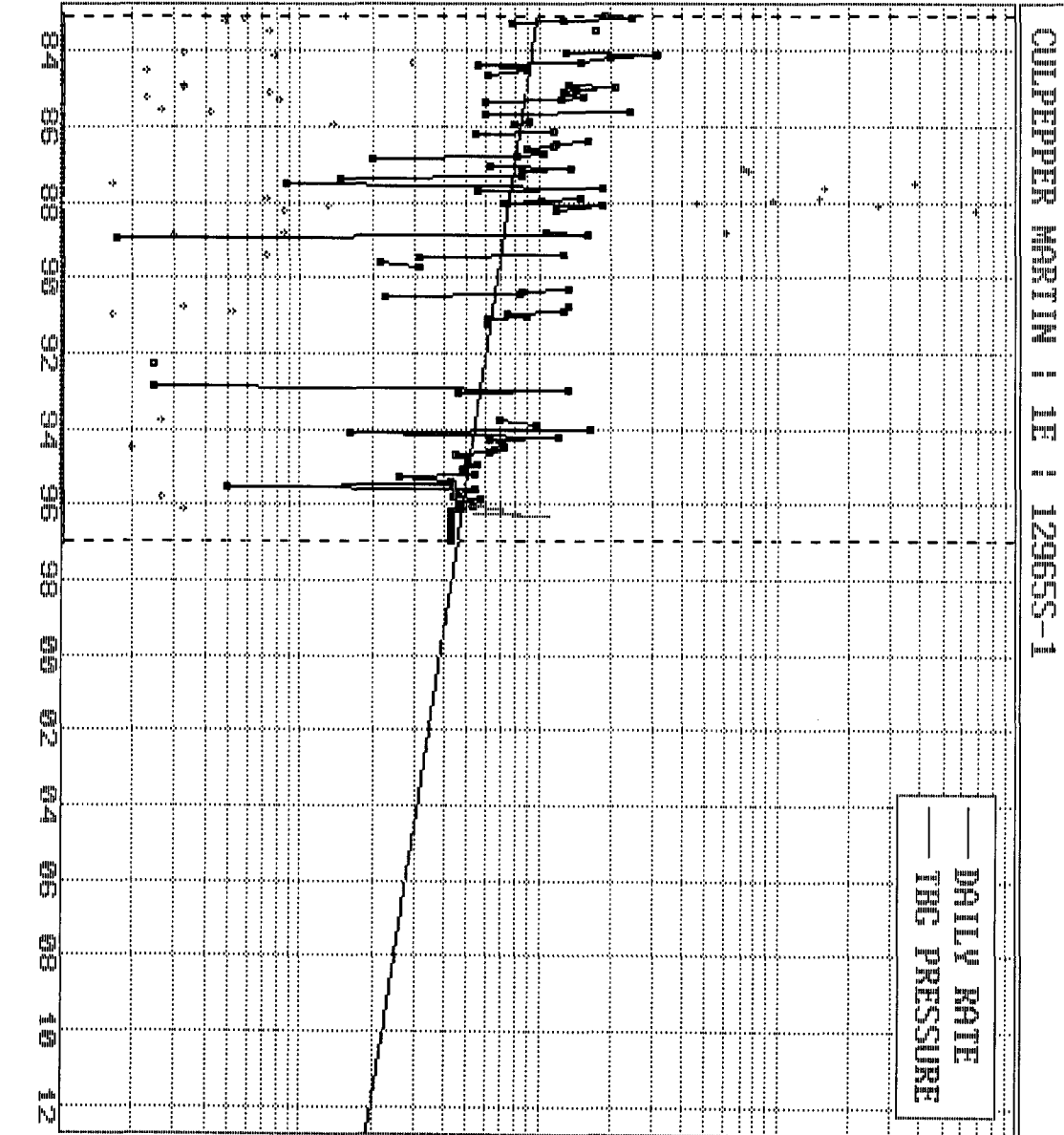
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name: Thomas C. Bohm
Position: District Petroleum Engineer
Company: Union Texas Petroleum Corp
Date: July 6, 1981

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: June 16, 1981
Registered Professional Engineer and Land Surveyor
Fred B. Kerr, Jr.
Certificate No. 3950

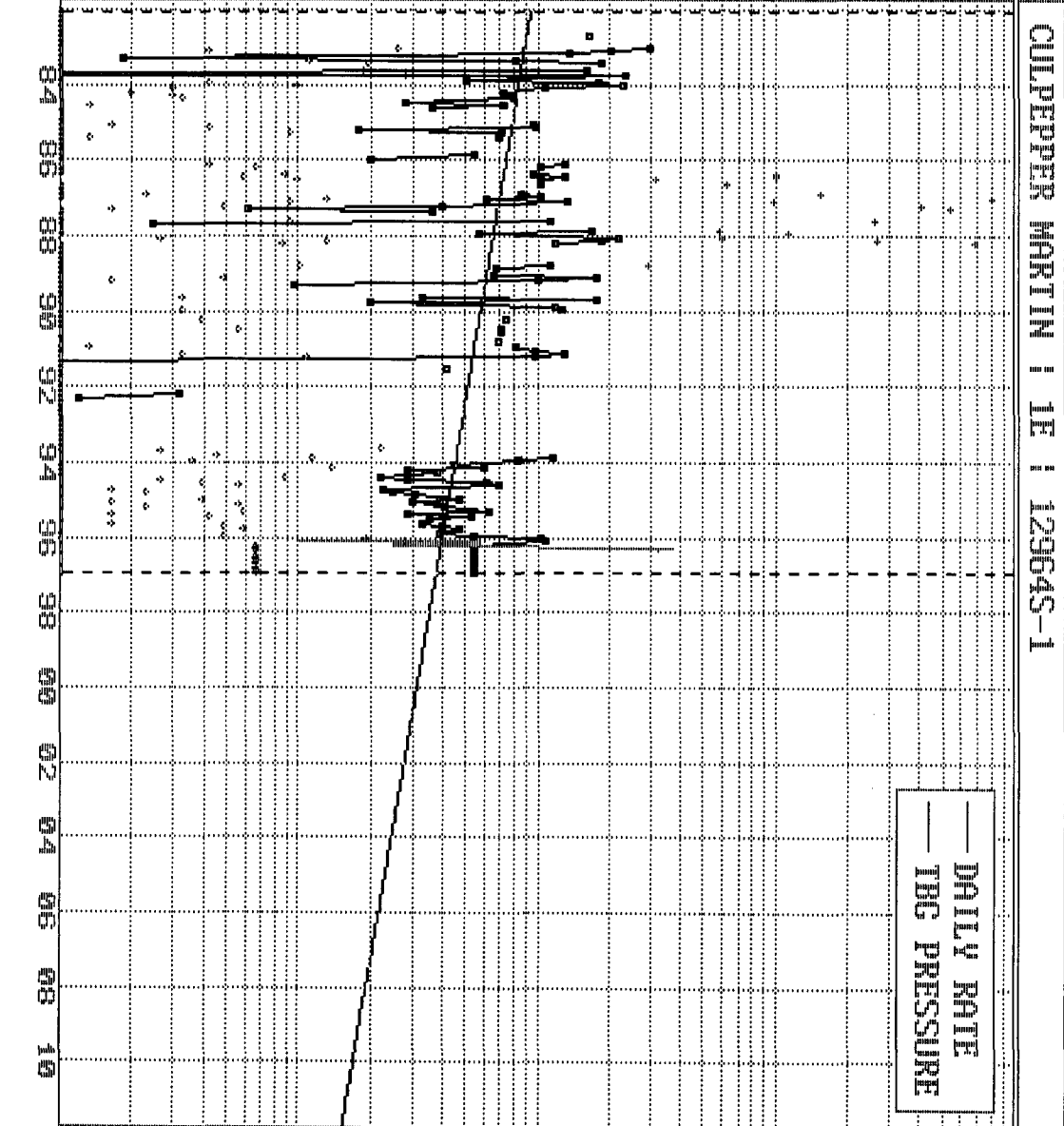
0.1 1 10 100 OIL
 0.001 0.01 0.1 1 WATER/GAS
 1 10 100 1000 GAS
 1 10 100 1000 WATER



Prop 40 *	☐ *WATER Bbls/d ☒ *GAS Mcf/d ☐ *WATER/GAS ☐ *OIL Bbl/d
EUR	481,290
Cum	276,925
Ren	284,365
Ren%	42.5%
Yrs	20.25
Date	1/1/1997
Act	0
Qmo	1,423
Q	46
n	0
De	5.386
Qab	15
GetQual	97PDP

Major = GAS

0.1 1 10 100 1000
 0.001 0.01 0.1 1 10 100 1000
 1 10 100 1000
 *OIL
 *WATER/GAS
 *GAS
 *WATER



CULPEPPER MARTIN 1E 12964S-1		Prop 39 *	
EUR	427,552	☐ *WATER Bbls/d	
Cum	260,738	☒ *GAS Mcf/d	
Ren	166,814	☐ *WATER/GAS	
Ren%	39.0%	☐ *OIL Bbl/d	
Yrs	21.83		
Date	1/1/1997		
Act	0		
Qmo	1,172		
Q	37.9		
n	0		
De	5.926		
Qab	10		
GetQual	97PDP		

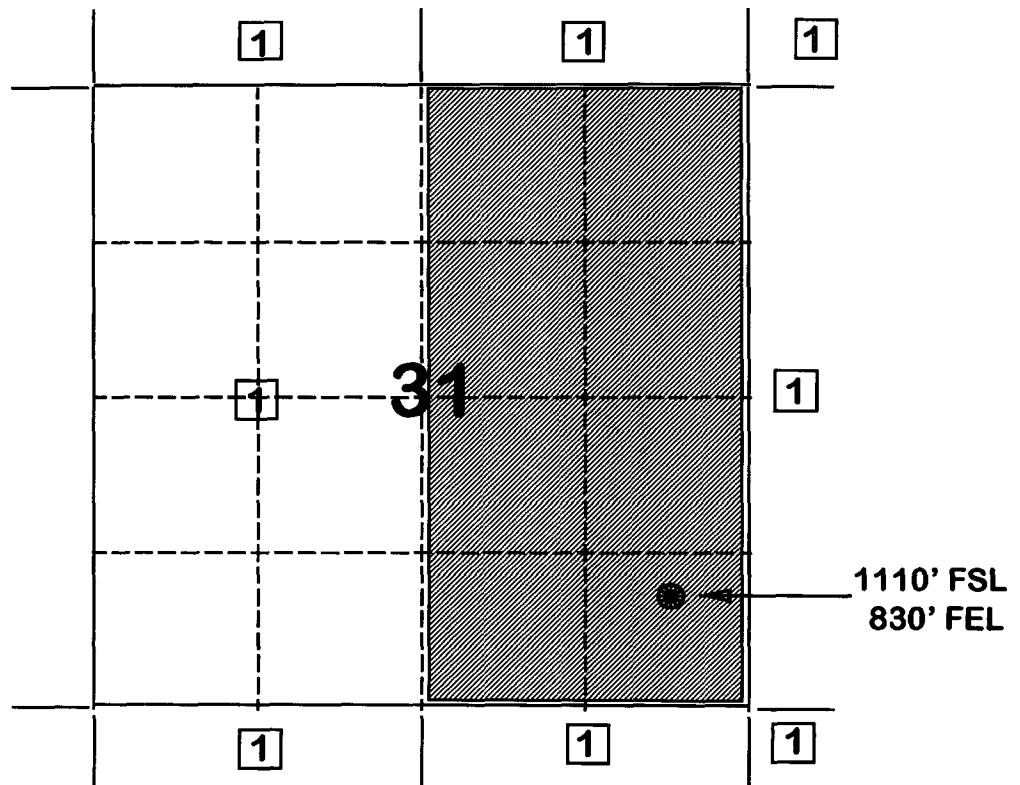
Major = GAS

BURLINGTON RESOURCES OIL AND GAS COMPANY

**CULPEPPER MARTIN #1E
OFFSET OPERATOR \ OWNER PLAT**

Mesaverde/Dakota Formations Commingle Well

Township 32 North, Range 12 West



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

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

VERSION 1.0 3/13/94

GAS GRAVITY	<u>0.698</u>
COND. OR MISC. (C/M)	<u>C</u>
%N2	<u>0.07</u>
%CO2	<u>0.75</u>
%H2S	<u>0</u>
DIAMETER (IN)	<u>2.5</u>
DEPTH (FT)	<u>4823</u>
SURFACE TEMPERATURE (DEG F)	<u>60</u>
BOTTOMHOLE TEMPERATURE (DEG F)	<u>150</u>
FLOWRATE (MCFPD)	<u>0</u>
SURFACE PRESSURE (PSIA)	<u>602</u>
BOTTOMHOLE PRESSURE (PSIA)	<u>681.7</u>

CULPEPPER MARTIN #1E MESAVERDE - (CURRENT)

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

VERSION 1.0 3/13/94

GAS GRAVITY	0.698
COND. OR MISC. (C/M)	C
%N2	0.07
%CO2	0.75
%H2S	0
DIAMETER (IN)	2.5
DEPTH (FT)	4823
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	584
BOTTOMHOLE PRESSURE (PSIA)	661.0

CULPEPPER MARTIN #1E MESAVERDE - (ORIGINAL)

MV

Organize Data ScreenGraph Economics Report Plot Utility Quit

Browsing: CULPEPPER MARTIN | 1E | 12965S-1 Property No.: 40

Table(T): TEST/M,P,H,E,T,Z,C,A,O,D,N,1,2,3,B,U,S Rec: 1/6/467

Item: 12/32/33 Name: GAS_RATE Type: Numeric Len: 8/197/203 Dec: 0

GAS RATE	WTR RATE	WHT	M FWHP-	M FBHP-	M SIWHP	M SIBHP	C FWHP-	C FBHP-
██████████	██████████	██	██Psi██	██Psi██	██Psi██	██Psi██	██████████	██████████
«		0	444.0		584.0	0.0		»
«		0	454.0		538.0	0.0		»
«		0	460.0		507.0	0.0		»
«		0	433.0		525.0	0.0		»
«		0	344.0		512.0	0.0		»
«					602.0			»

F1=Help F3=PrvPro F5=PrvTbl F7=Calcu F9=Utils Alt+TableLtr=Change Table
 F2=Jump F4=NxtPro F6=NxtTbl F8=Print F10=Exit Shift+<- ->=Fast Tbl R & L

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

VERSION 1.0 3/13/94

GAS GRAVITY	0.694
COND. OR MISC. (C/M)	C
%N2	0.19
%CO2	0.75
%H2S	0
DIAMETER (IN)	2.5
DEPTH (FT)	6998
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	200
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	810
BOTTOMHOLE PRESSURE (PSIA)	965.3

CULPEPPER MARTIN #1E DAKOTA - (ORIGINAL)

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

VERSION 1.0 3/13/94

GAS GRAVITY	0.694
COND. OR MISC. (C/M)	C
%N2	0.19
%CO2	0.75
%H2S	0
DIAMETER (IN)	2.5
DEPTH (FT)	6998
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	200
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	553
BOTTOMHOLE PRESSURE (PSIA)	654.6

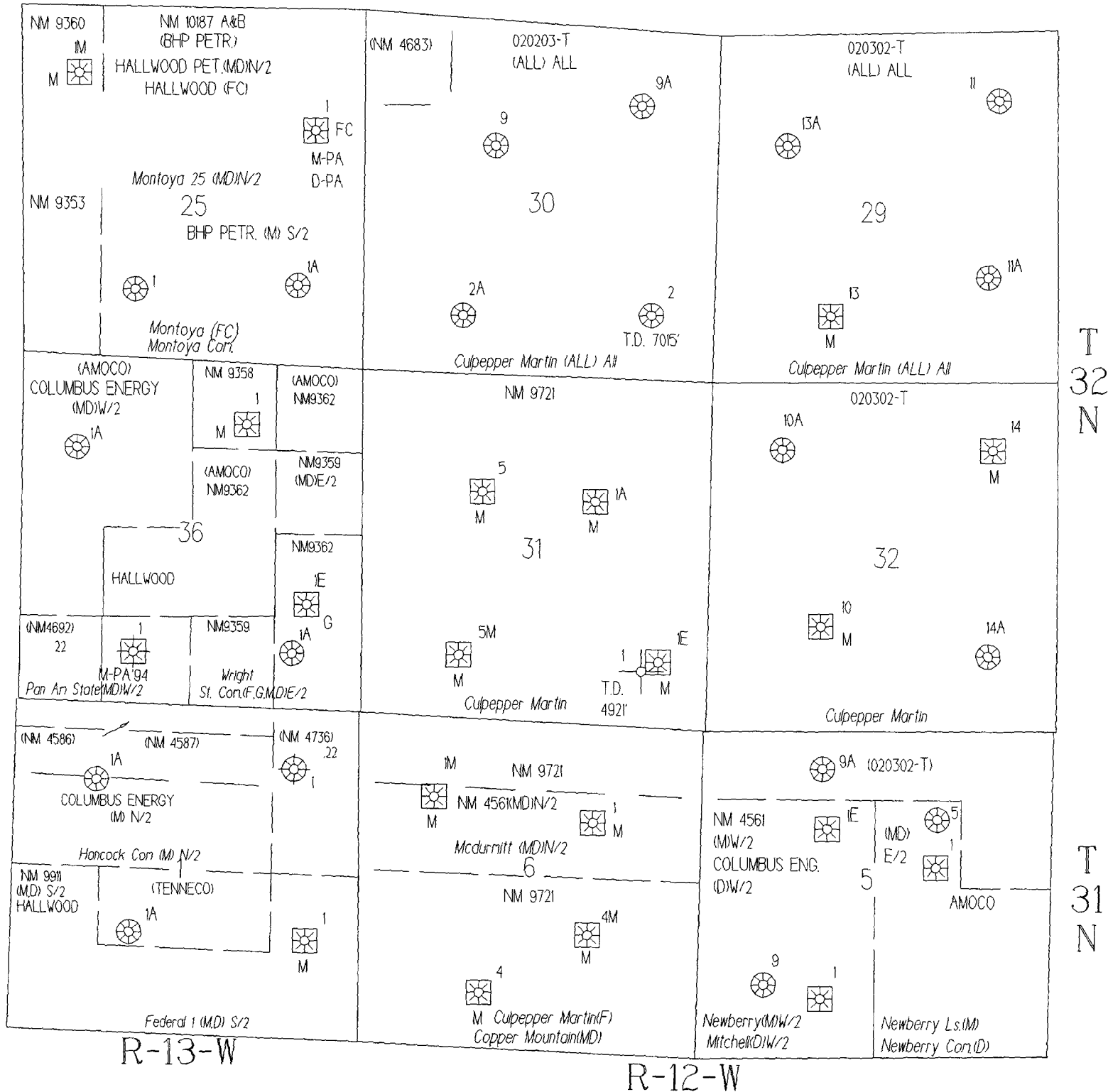
CULPEPPER MARTIN #1E DAKOTA - (CURRENT)

Organize Data ScreenGraph Economics Report Plot Utility Quit
 Browsing: CULPEPPER MARTIN | 1E | 12964S-1 Property No.: 39
 Table(T): TEST/M,P,H,E,T,Z,C,A,O,D,N,1,2,3,B,U,S Rec: 1/5/467
 Item: 12/32/33 Name: GAS_RATE Type: Numeric Len: 8/197/203 Dec: 0

GAS RATE	WTR RATE	WHT	M FWHP-	M FBHP-	M SIWHP	M SIBHP	C FWHP-	C FBHP-
██████████	██████████	████	██ Psi██	██ Psi██	██ Psi██	██ Psi██	██████████	██████████
«	0		0.0		810.0	0.0		»
«	0		460.0		760.0	0.0		»
«	0		456.0		774.0	0.0		»
«	0		317.0		677.0	0.0		»
«	0		360.0		553.0	0.0		»

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 F2=Jump F4=NxtPro F6=NxtTbl F8=Print F10=Exit Shift+<- ->=Fast Tbl R & L

CULPEPPER MARTIN #1E
BLANCO MESAVERDE/BASIN DAKOTA
SECTION 31, T32N, R12W



PRODUCTION ALLOCATION FORMULA METHOD

Culpepper Martin #1E
(Mesaverde/Dakota) Commingle
Unit P, NW/4, 31-T32N-R12W
San Juan County, New Mexico

Allocation Formula Method:

Current Production from Mesaverde formation = 45 MCFD

Current Production from Dakota formation = 55 MCFD

$$\frac{[(MV \& DK) 100 \text{ MCFD} - (MV) 45 \text{ MCFD}]}{(MV \& DK) 100 \text{ MCFD}} = (DK) \% \quad \text{Dakota } 55\%$$

$$\frac{[(MV \& DK) 100 \text{ MCFD} - (DK) 55 \text{ MCFD}]}{(MV \& DK) 100 \text{ MCFD}} = (MV) \% \quad \text{Mesaverde } 45\%$$