

BURLINGTON RESOURCES

SAN JUAN DIVISION

September 24, 1996

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

Re: Culpepper Martin SRC #4 *u*
990'FSL, 1650'FWL Section 28, T-32-N, R-12-W, San Juan County, NM
API #30-045-12204

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;
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,


Peggy Bradfield
Regulatory/Compliance Administrator

encs.

RECEIVED
SEP 25 1996
OIL CON. DIV.
DIST. 3

DISTRICT I
P.O. Box 1880, 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 87505-6429

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 SRC

4

N-28-32N-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 18505 API NO. 30-045-12204 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)	4724-4828'		6960-7056'
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. 533 psi (see attachment) (Original) b. 1147 psi (see attachment)	a. b.	a. 823 psi (see attachment) b. 2222 psi (see attachment)
6. Oil Gravity (°API) or Gas BTU Content	BTU 1200		BTU 1185
7. Producing or Shut-In?	producing		producing
Production Marginal? (yes or no)	no		yes
* 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 water of recent test (within 60 days)	Date: 8/96 Rates: 79 MCF/D 1.10 BOPD	Date: Rates:	Date: 8/96 Rates: 13 MCF/D .15 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 9-24-96

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

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102
Supersedes C-128
Effective 1-1-65

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

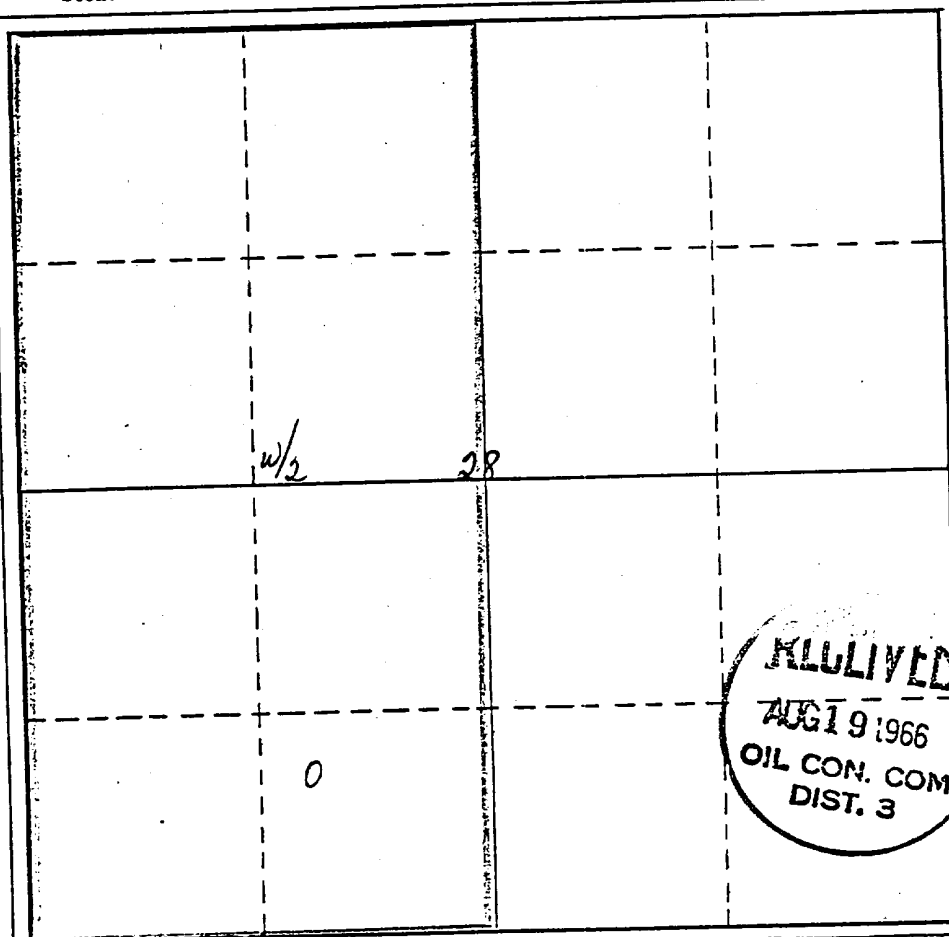
Operator Aztec Oil and Gas Company			Lease Culpepper Martin SPR		Well No. 4
Unit Letter N	Section 28	Township 32N	Range 12W	County San Juan	
Actual Footage Location of Well: 990 feet from the South line and 1650 feet from the West line					
Ground Level Elev: 990	Producing Formation Dakota		Pool Basin	Dedicated Acreage: 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.



CERTIFICATION

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

Howard J. Speer
Name

Howard J. Speer

Position

District Geologist

Company

Aztec Oil and Gas

Date

August 18, 1966

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

Registered Professional Engineer and/or Land Surveyor

Certificate No.

0 230 660 190 1320 1650 1980 2310 2640 2000 1500 1000 500 0

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

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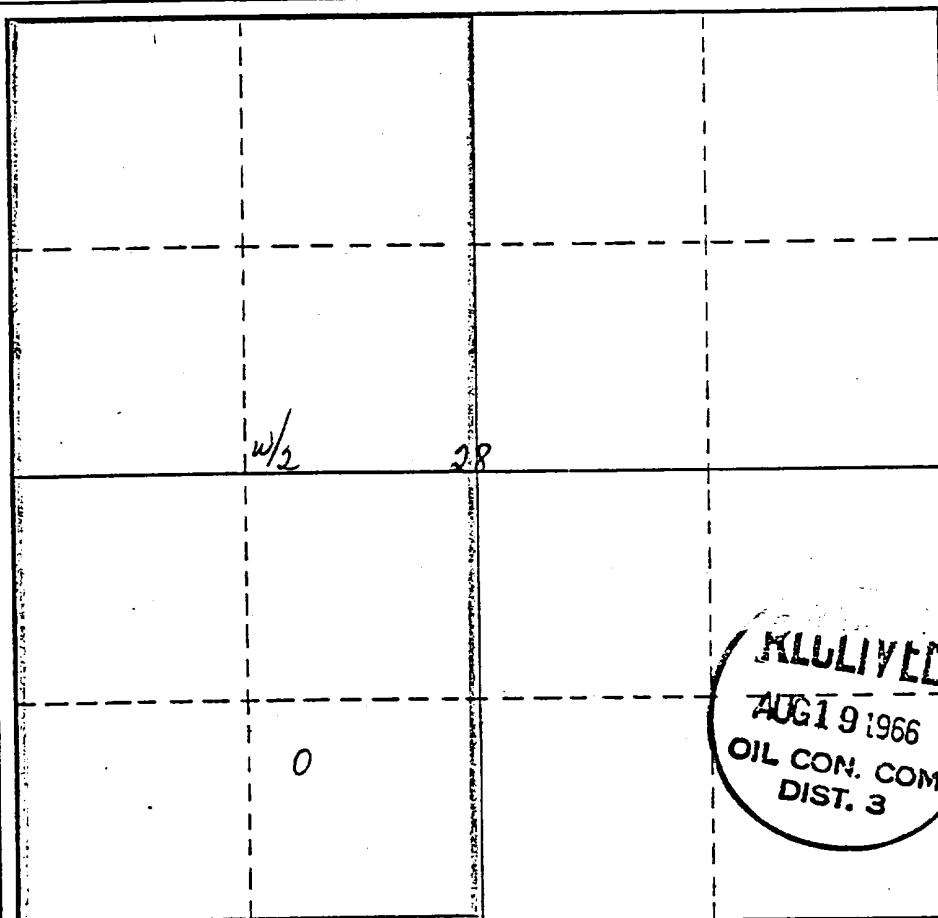
Operator Aztec Oil and Gas Company			Lease Culpepper Martin		Well No. 4
Unit Letter N	Section 28	Township 32N	Range 12W	County San Juan	
Actual Footage Location of Well:					
990 feet from the South line and 1650 feet from the West line					
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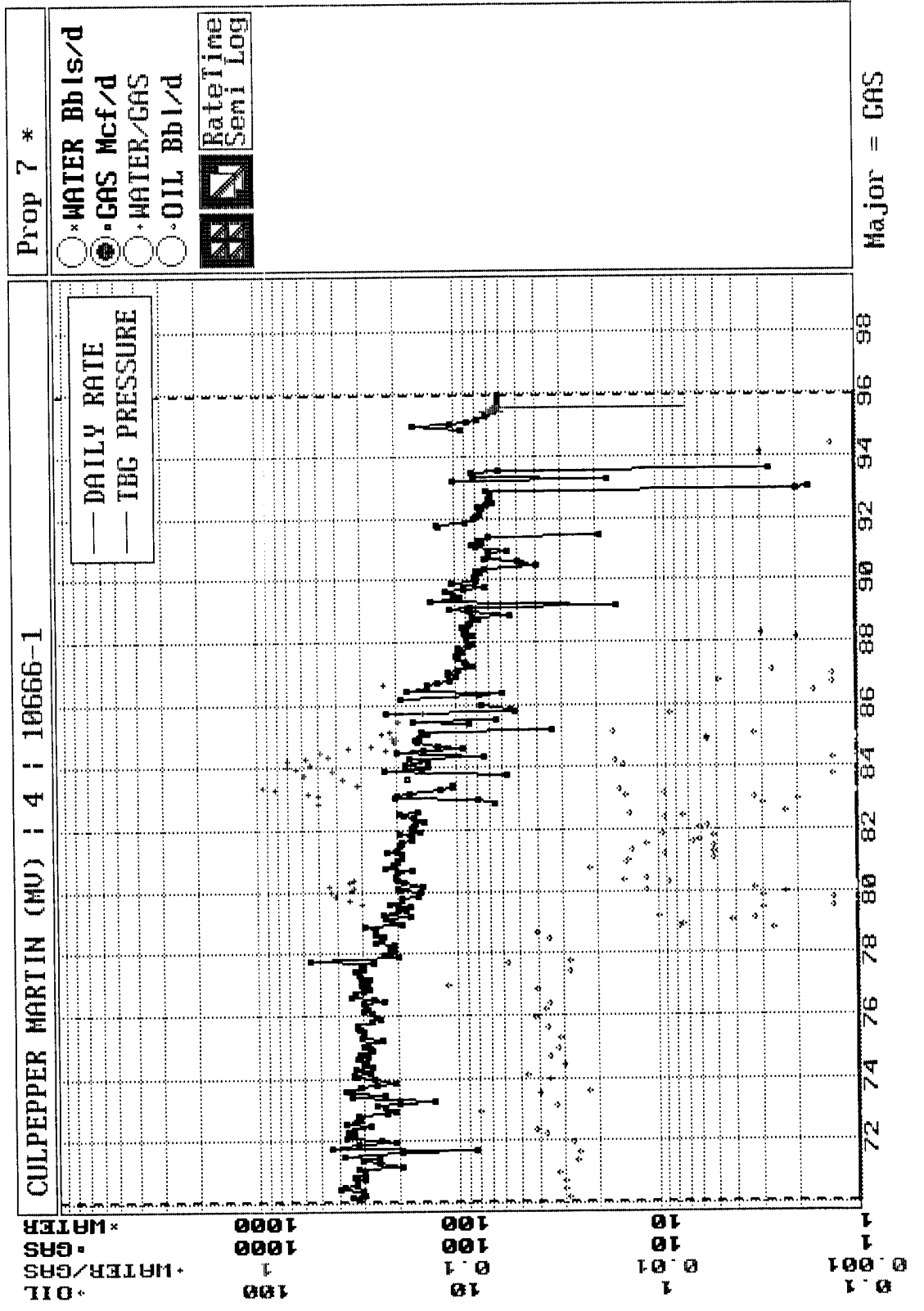
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

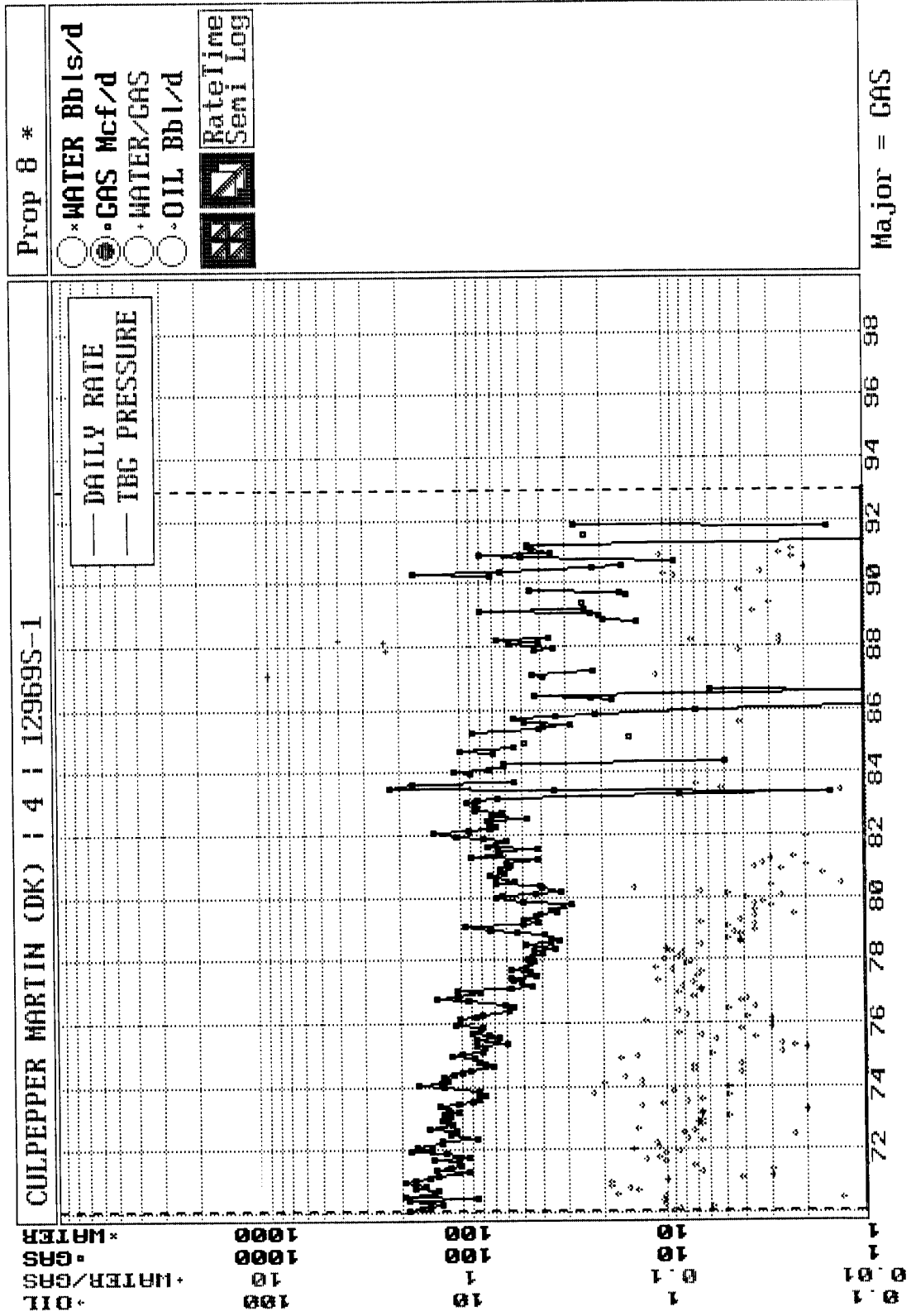
Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0





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

VERSION 1.0 3/13/94

GAS GRAVITY	<u>0.7</u>
COND. OR MISC. (C/M)	<u>C</u>
%N2	<u>0.32</u>
%CO2	<u>0.72</u>
%H2S	<u>0</u>
DIAMETER (IN)	<u>2.5</u>
DEPTH (FT)	<u>4848</u>
SURFACE TEMPERATURE (DEG F)	<u>60</u>
BOTTOMHOLE TEMPERATURE (DEG F)	<u>150</u>
FLOWRATE (MCFPD)	<u>0</u>
SURFACE PRESSURE (PSIA)	<u>1003</u>
BOTTOMHOLE PRESSURE (PSIA)	<u>1147.3</u>

CULPEPPER MARTIN SRC #4 MESAVERDE - (ORIGINAL)

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

VERSION 1.0 3/13/94

GAS GRAVITY	0.7
COND. OR MISC. (C/M)	C
%N2	0.32
%CO2	0.72
%H2S	0
DIAMETER (IN)	2.5
DEPTH (FT)	4848
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	472
BOTTOMHOLE PRESSURE (PSIA)	533.5

CULPEPPER MARTIN SRC #4 MESAVERDE - (CURRENT)

State: 30 Lease Name: CULPEPPER MARTIN
 Prod: 2 County Name: SAN JUAN
 Ident: 32N12W28N00MV Reservoir Name: MESAVERDE
 District: 4 Operator Name: SOUTHLAND ROYALTY CO
 Location: 28N 32N 12W Field Name: BLANCO (MESAVERDE)
 Retrieval code: 251,045,32N12W28N00MV Well: 000004 Total Depth: 7140
 Gas Gath: SUG Status: INA Upper Perf: 4724
 API No: 1220400 Comp Date: 195011 Lower Perf: 4848

Date	Cum to Test	WHSIP	BHP	P/Z	BDWtr	BDCnd	WHFlw	Poten	MC	Pt	Z	FA
19501105	0	1003	1139	1299	0	0	0	1800	C	4	77.00	
19660925	1,577,581	0	0	0	0	0	0	4861		2	0.00	
19700618	1,623,619	564	635	684	0	0	465	240	C	2	28.00	
19710317	1,711,382	662	747	816	0	0	422	290	C	2	16.00	
19720625	1,846,192	638	720	783	0	0	481	422	C	2	19.00	
19730617	1,941,664	659	744	811	0	0	385	453	C	2	17.00	
19740025	1,998,808	514	578	619	0	0	341	281	C	2	34.00	
19741025	2,090,561	514	578	619	0	0	341	281	C	2	34.00	
F1=HELP	F2=SPLIT	F3=END		F4=RETURN		F5=RFIND		F6=RCHANGE				
F7=UP	F8=DOWN	F9=SWAP		F10=LEFT		F11=RIGHT		F12=RETRIEVE				
B MY JOB				LU #13								

State: 30 Lease Name: CULPEPPER MARTIN
 Prod: 2 County Name: SAN JUAN
 Ident: 32N12W28N00MV Reservoir Name: MESAVERDE
 District: 4 Operator Name: SOUTHLAND ROYALTY CO
 Location: 28N 32N 12W Field Name: BLANCO (MESAVERDE)
 Retrieval code: 251,045,32N12W28N00MV Well: 000004 Total Depth: 7140
 Gas Gath: SUG Status: INA Upper Perf: 4724
 API No: 1220400 Comp Date: 195011 Lower Perf: 4848

Date	Cum to Test	WHSIP	BHP	P/Z	BDWtr	BDCnd	WHFlw	Poten	MC	Pt	Z	FA
19800908	2,634,155	542	610	655	0	0	447	187	C	2	31.00	
19820401	2,742,179	493	554	591	0	0	405	150	C	2	37.00	
19840808	2,852,385	511	575	615	0	0	408	133	C	2	35.00	
19860402	2,910,784	521	586	628	0	0	436	189	C	2	33.00	
19891026	3,035,611	494	556	593	0	0	315	106	C	2	37.00	
19910910	3,079,438	500	562	600	0	0	383	78	C	2	36.00	
19930329	3,118,466	472	531	565	0	0	396	102	C	2	0.93	
***** BOTTOM OF DATA *****												
F1=HELP	F2=SPLIT	F3=END		F4=RETURN		F5=RFIND		F6=RCHANGE				
F7=UP	F8=DOWN	F9=SWAP		F10=LEFT		F11=RIGHT		F12=RETRIEVE				
B MY JOB				LU #13								

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

VERSION 1.0 3/13/94

GAS GRAVITY	0.7
COND. OR MISC. (C/M)	C
%N2	0.29
%CO2	1.29
%H2S	0
DIAMETER (IN)	2.5
DEPTH (FT)	7056
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	200
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1822
BOTTOMHOLE PRESSURE (PSIA)	2221.8

CULPEPPER MARTIN SRC #4 DAKOTA - (ORIGINAL)

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

VERSION 1.0 3/13/94

GAS GRAVITY	0.7
COND. OR MISC. (C/M)	C
%N2	0.29
%CO2	1.29
%H2S	0
DIAMETER (IN)	2.5
DEPTH (FT)	7056
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	200
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	823
BOTTOMHOLE PRESSURE (PSIA)	984.1

CULPEPPER MARTIN SRC #4 DAKOTA - (CURRENT)

State: 30 Lease Name: CULPEPPER MARTIN
 Prod: 2 County Name: SAN JUAN
 Ident: 32N12W28N00DK Reservoir Name: DAKOTA
 District: 4 Operator Name: MERIDIAN OIL INC
 Location: 28N 32N 12W Field Name: BASIN (DAKOTA)
 Retrieval code: 251,045,32N12W28N00DK Well: 000004 Total Depth: 7140
 Gas Gath: SUG Status: ACT Upper Perf: 6960
 API No: 1220400 Comp Date: 196608 Lower Perf: 7056

Date	Cum to Test	WHSIP	BHP	P/Z	BDWtr	BDCnd	WHFlw	Poten	MC	Pt	Z	FA
19660825	0	1822	2221	2583	0	0	0	1880	C	4	60.00	
19660910	50,117	0	0	0	0	0	0	1880		2	0.00	
19700718	54,701	608	722	771	0	0	463	21	C	2	37.00	
19720718	64,864	608	722	771	0	0	463	21	C	2	37.00	
19730617	70,021	860	1028	1126	0	0	401	20	C	2	13.00	
19750417	79,250	763	910	987	0	0	301	14	C	2	22.00	
19770516	88,635	772	921	1000	0	0	314	13	C	2	21.00	
19790501	94,880	729	868	938	0	0	404	12	C	2	25.00	

F1=HELP F2=SPLIT F3=END F4=RETURN F5=RFIND F6=RCHANGE
 F7=UP F8=DOWN F9=SWAP F10=LEFT F11=RIGHT F12=RETRIEVE
 B MY JOB LU #13

State: 30 Lease Name: CULPEPPER MARTIN
 Prod: 2 County Name: SAN JUAN
 Ident: 32N12W28N00DK Reservoir Name: DAKOTA
 District: 4 Operator Name: MERIDIAN OIL INC
 Location: 28N 32N 12W Field Name: BASIN (DAKOTA)
 Retrieval code: 251,045,32N12W28N00DK Well: 000004 Total Depth: 7140
 Gas Gath: SUG Status: ACT Upper Perf: 6960
 API No: 1220400 Comp Date: 196608 Lower Perf: 7056

Date	Cum to Test	WHSIP	BHP	P/Z	BDWtr	BDCnd	WHFlw	Poten	MC	Pt	Z	FA
19750417	79,250	763	910	987	0	0	301	14	C	2	22.00	
19770516	88,635	772	921	1000	0	0	314	13	C	2	21.00	
19790501	94,880	729	868	938	0	0	404	12	C	2	25.00	
19810724	101,341	682	811	872	0	0	420	15	C	2	30.00	
19831123	108,403	640	761	815	0	0	453	11	C	2	34.00	
19850403	113,350	701	834	899	0	0	355	9	C	2	28.00	
19901003	127,788	823	983	1072	0	0	331	12	C	2	17.00	

***** BOTTOM OF DATA *****
 F1=HELP F2=SPLIT F3=END F4=RETURN F5=RFIND F6=RCHANGE
 F7=UP F8=DOWN F9=SWAP F10=LEFT F11=RIGHT F12=RETRIEVE
 B MY JOB LU #13

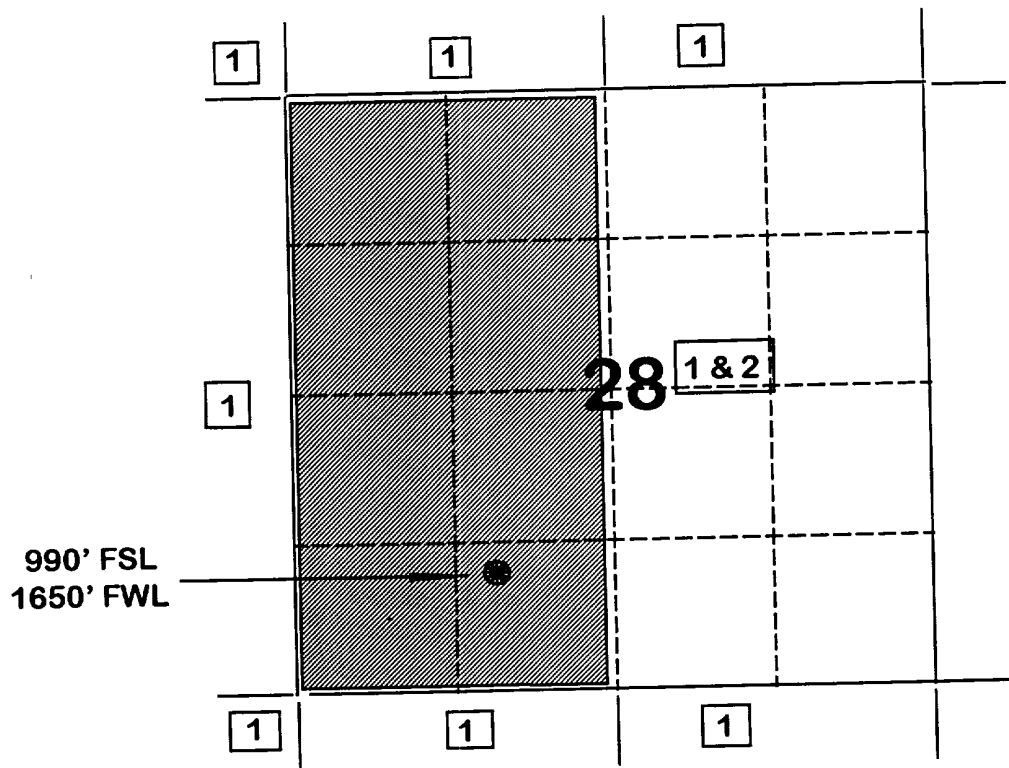
BURLINGTON RESOURCES OIL AND GAS COMPANY

CULPEPPER MARTIN SRC #4

OFFSET OPERATOR \ OWNER PLAT

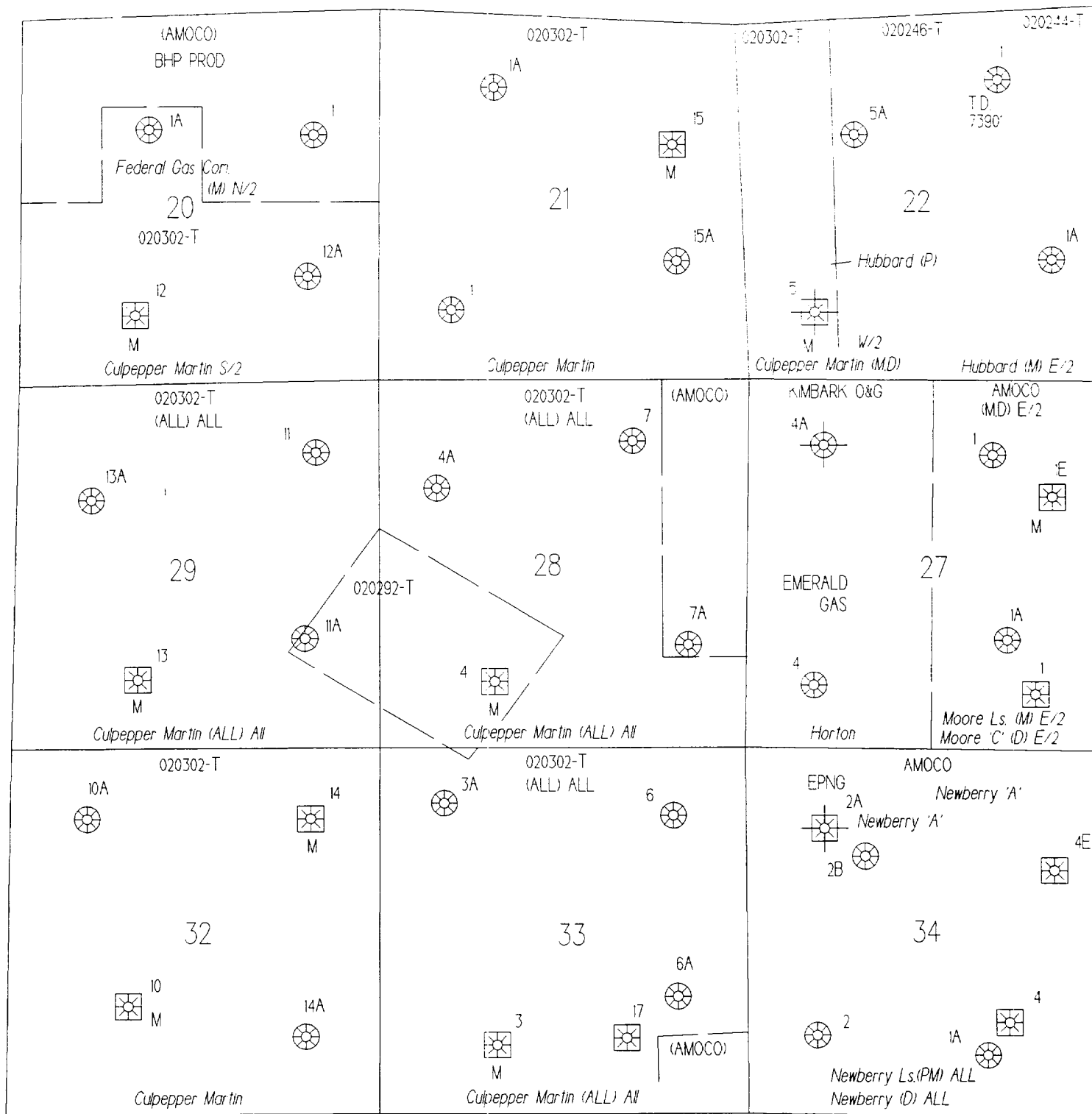
Mesaverde/Dakota Formations Commingle Well

Township 32 North, Range 12 West



- 1) Burlington Resources Oil and Gas Company Successor to Meridian Oil Inc.
- 2) Amoco Production Company
Bruce Zimney
P.O. Box 800
Denver, CO 80201

CULPEPPER MARTIN #4 BLANCO MESAVERDE/BASIN DAKOTA SECTION 28, T32N, R12W



PRODUCTION ALLOCATION FORMULA METHOD

Culpepper Martin #3
(Mesaverde/Dakota) Commingle
Unit N, SW/4, 28-T32N-R12W
San Juan County, New Mexico

Allocation Formula Method:

Current Production from Mesaverde formation = 60 MCFD

Current Production from Dakota formation = 12 MCFD

$$\frac{[(MV \& DK) 72 \text{ MCFD} - (MV) 60 \text{ MCFD}]}{(MV \& DK) 72 \text{ MCFD}} = (DK) \% \text{ Dakota 17\%}$$

$$\frac{[(MV \& DK) 72 \text{ MCFD} - (DK) 12 \text{ MCFD}]}{(MV \& DK) 72 \text{ MCFD}} = (MV) \% \text{ Mesaverde 83\%}$$