

DHC 7/29/98

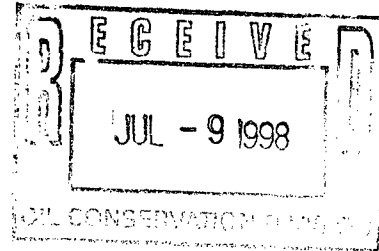
CAULKINS OIL COMPANY

P. O. BOX 340
BLOOMFIELD, NEW MEXICO 87413
PHONE: 505-632-1544
FAX 505-632-1471

2069

July 8, 1998

State of New Mexico
Oil Conservation Division
ATTN: Mr. David Catanach
2040 S. Pacheco
Santa Fe, NM 87505



Re: Administrative Approval to Commingle
Breech "E" 50-E, Section 5, Township 26N, Range 6W, Unit Letter D
Basin Dakota and Blanco Mesa Verde Formations

Dear Mr. Catanach:

Caulkins Oil Company seeks administrative approval to downhole commingle this well in the Dakota - Mesa Verde formations. The Mesa Verde zone in this well has become uneconomical to produce due to low gas volumes and the frequency required to clean well to the atmosphere. Commingling this well should substantially reduce wasted gas to the atmosphere by allowing Dakota zone to aid in lifting fluid Mesa Verde is producing.

If commingling is approved, Caulkins Oil Company intends to pull and salvage 2 1/16" Mesa Verde tubing set at 5503'. Pull 2 1/16" Dakota string set at 7400' with packer now set at 5615'. Remove packer and re-run 2 1/16" tubing for commingled production string. Well will be cleaned out with air to TD at 7475'. Tubing will be landed at approximately 7400' for commingled production.

Dakota perforations (7262' to 7452') Mesa Verde perforations (4573' to 5426')

Allocation percentages were calculated from test run July 2, 1998.

Please find the enclosed documents:

- A. Form C-107-A
- B. Form C-102 for each zone
- C. Gas Analysis
- D. Bottom hole pressure measurements
- E. Monthly production history for months well produced
- F. Vicinity map
- G. Notification list of offset operators
- H. Sundry notice notifying BLM of intentions to commingle.

If you have any questions or need more information, please contact Robert L. Verquer at (505) 632-1544.

Sincerely,

A handwritten signature in cursive script that reads "Robert L. Verquer".

Robert L. Verquer,
Superintendent

EXHIBIT "B" - CASE NO. 11353, ORDER NO. R-10470-A

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

817 South First St., Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd, Aztec, NM 87410

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

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Caulkins Oil Company P.O. Box 340, Bloomfield, NM 87413
 Operator Address
 Breech "E" 50-E D - 5 - 26N - 6W Rio Arriba
 Lease Well No. Unit Ltr. - Sec - Twp - Rge County

OGRID NO. 003824 Property Code 02459 API NO. 30-039-22908 Spacing Unit Lease Types: (check 1 or more)
 Federal ☒ State ☐ (and/or) Fee ☐

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zones	Lower Zone
1. Pool Name and Pool Code	Blanco Mesa Verde		Basin Dakota
2. Top and Bottom of Pay Section (Perforations)	4573' to 5426'		7262' to 7452'
3. Type of production (Oil or Gas)	Gas and Condensate		Gas and Condensate
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure Zones - Artificial Lift: Estimated Current & Oil - Flowing: Measured Current All Gas Zones: Estimated Or Measured Original	a. (Current) 6-24-98 493 psia b. (Original)	a. b.	a. 6-24-98 446 psia b.
6. Oil Gravity (°API) or Gas BTU Content	1253 BTU		1162 BTU
7. Producing or Shut-In?	Producing		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: 7-2-98 Rates: 25 MCFD + .14 BCPD	Date: Rates: Date: Rates:	Date: Rates: Date: 7-2-98 Rates: 122 MCFD + .19 BCPD
8. Fixed Percentage Allocation Formula - % for each zone	Oil: 43 % Gas: 17 %	Oil: % Gas: %	Oil: 57 % Gas: 83 %

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(C) Exceptions: ORDER NO(S). DHC-659, R-10476-B
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 Robert L. Verquer TITLE Superintendent DATE July 7, 1998TYPE OR PRINT NAME Robert L. Verquer TELEPHONE NO. (505) 632-1544

District I
PO Box 1980, Hobbs, NM 88241-1980
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

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised October 18, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-22908		² Pool Code 71599	³ Pool Name BASIN DAKOTA
⁴ Property Code 2459	⁵ Property Name BREECH "E"		⁶ Well Number 50-E
⁷ OGRID No. 003824	⁸ Operator Name Caulkins Oil Company		⁹ Elevation 6572 GR

¹⁰ Surface Location

UL or lot no. D	Section 5	Township 36N	Range 6W	Lot Idn	Feet from the 990'	North/South line North	Feet from the 1120'	East/West line West	County Rio Arriba
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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
¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code		¹⁵ 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 					¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief Signature Printed Name Robert L. Verquer Title Superintendent Date July 7, 1998
					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 knowledge and belief. Date of Survey Signature and Seal of Professional Surveyor: Certificate Number

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
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Santa Fe, NM 87505

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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-22908		² Pool Code 72319	³ Pool Name MESA VERDE
⁴ Property Code 2459	⁵ Property Name BREECH "E"		⁶ Well Number 50-E
⁷ OGRID No. 003824	⁸ Operator Name Caulkins Oil Company		⁹ Elevation 6572 GR

¹⁰ Surface Location

UL or lot no. D	Section 5	Township 36N	Range 6W	Lot Idn	Feet from the 990'	North/South line North	Feet from the 1120'	East/West line West	County Rio Arriba
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					Certificate Number	



2030 1st ton Place
Farmington, N.M. 87401
(505) 325-6622

Analysis No. CAU80008
Cust. No. 17000-10050

WELL/LEASE INFORMATION

Company	: CAULKINS OIL COMPANY	Source	:
Well Name	: BREECH E 50-E	Pressure	: 88 PSIG
County	:	Sample Temp.	: N/A DEG.F
State	:	Well Flowing	: YES
Location	:	Date Sampled	: 02/03/98
Fld/Formation	: DAKOTA	Sampled By	: RG
Cust.Stn.No.	:	Foreman/Engr	:

Remarks:

ANALYSIS

COMPONENT	MOLE %	GPM**	B.T.U.*	SP.GR.*
NITROGEN	0.248	0.0000	0.00	0.0024
CO2	1.244	0.0000	0.00	0.0189
METHANE	85.949	0.0000	870.06	0.4761
ETHANE	7.559	2.0220	134.07	0.0785
PROPANE	2.651	0.7306	66.86	0.0404
I-BUTANE	0.508	0.1662	16.56	0.0102
N-BUTANE	0.763	0.2406	24.95	0.0153
I-PENTANE	0.323	0.1182	12.95	0.0080
N-PENTANE	0.227	0.0822	9.12	0.0057
HEXANES	0.528	0.2303	27.15	0.0170
TOTAL	100.000	3.5901	1161.72	0.6725

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

** @ 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR	(1/Z)	1.0030
BTU/CU.FT. (DRY) CORRECTED FOR	(1/Z)	1165.2
BTU/CU.FT. (WET) CORRECTED FOR	(1/Z)	1144.9
REAL SPECIFIC GRAVITY		0.6742

ANALYSIS RUN AT 14.730 PSIA & 60 DEGREES F

CYLINDER #	: AO37
CYLINDER PRESSURE	: 86 PSIG
DATE RUN	: 02/04/98
ANALYSIS RUN BY	: DAVE MARTIN



2030 Sten Place
Farmington, N.M. 87401
(505) 325-6622

Analysis No. CAU80009
Cust. No. 17000-10055

WELL/LEASE INFORMATION

Company	: CAULKINS OIL COMPANY	Source	:
Well Name	: BREECH E 50-E	Pressure	: 262 PSIG
County	:	Sample Temp.	: N/A DEG.F
State	:	Well Flowing	: NO
Location	:	Date Sampled	: 02/03/98
Fld/Formation	: MESA VERDE	Sampled By	: RG
Cust.Stn.No.	:	Foreman/Engr	:

Remarks:

ANALYSIS

COMPONENT	MOLE %	GPM**	B.T.U.*	SP.GR.*
NITROGEN	0.513	0.0000	0.00	0.0050
CO2	0.493	0.0000	0.00	0.0075
METHANE	79.469	0.0000	804.47	0.4402
ETHANE	10.335	2.7646	183.31	0.1073
PROPANE	5.932	1.6349	149.60	0.0903
I-BUTANE	0.981	0.3209	31.98	0.0197
N-BUTANE	1.411	0.4449	46.14	0.0283
I-PENTANE	0.353	0.1292	14.16	0.0088
N-PENTANE	0.235	0.0851	9.44	0.0059
HEXANES	0.278	0.1213	14.29	0.0089
TOTAL	100.000	5.5009	1253.38	0.7218

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

** @ 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR	(1/Z)	1.0036
BTU/CU.FT. (DRY) CORRECTED FOR	(1/Z)	1257.9
BTU/CU.FT. (WET) CORRECTED FOR	(1/Z)	1236.0
REAL SPECIFIC GRAVITY		0.7241

ANALYSIS RUN AT 14.730 PSIA & 60 DEGREES F

CYLINDER #	: AZT-014
CYLINDER PRESSURE	: 268 PSIG
DATE RUN	: 02/04/98
ANALYSIS RUN BY	: DAVE MARTIN

Company: CAULKINS OIL CO.
Well: BREECH #50-E
Field: DAKOTA FORMATION
Engineer:
Gauge Type: AMERADA
Gauge Range: 0-3000
Gauge Depth: 7350 ft
Serial No.: 44537

County: RIO ARRIBA
State: NEW MEXICO
Date: 06/24/1998
Well Type:
Test Type: STATIC GRADIENT
Status: SHUT-IN
File Name: 32090-1

Tubing: 2 1/16" TO 7400
Tubing: TO
Casing: TO
Perfs.: 7266-7452
Shut-in Time 216 hrs

Oil Level
H2O Level

Shut-in BHP 446 @ 7350 ft Shut-in BHT 0 F @ 0 ft
Shut-in WHP 373 Shut-in WHT 0 F

[Tefteller Incorporated]

#	MD	TVD	PRESSURE	PSI/ft
1	0	0	373.00	
2	2000	2000	391.00	0.009
3	4000	4000	411.00	0.010
4	6000	6000	432.00	0.010
5	6950	6950	441.00	0.009
6	7150	7150	443.00	0.010
7	7350	7350	446.00	0.015

[Tefteller Incorporated]

Company: CAULKINS OIL CO.

Well: BREECH #50-E

Field: DAKOTA FORMATION

Date: 06/24/1998

[STATIC GRADIENT SURVEY]

2000

4000

6000

DEPTH (feet)

PRESSURE (psia)

200

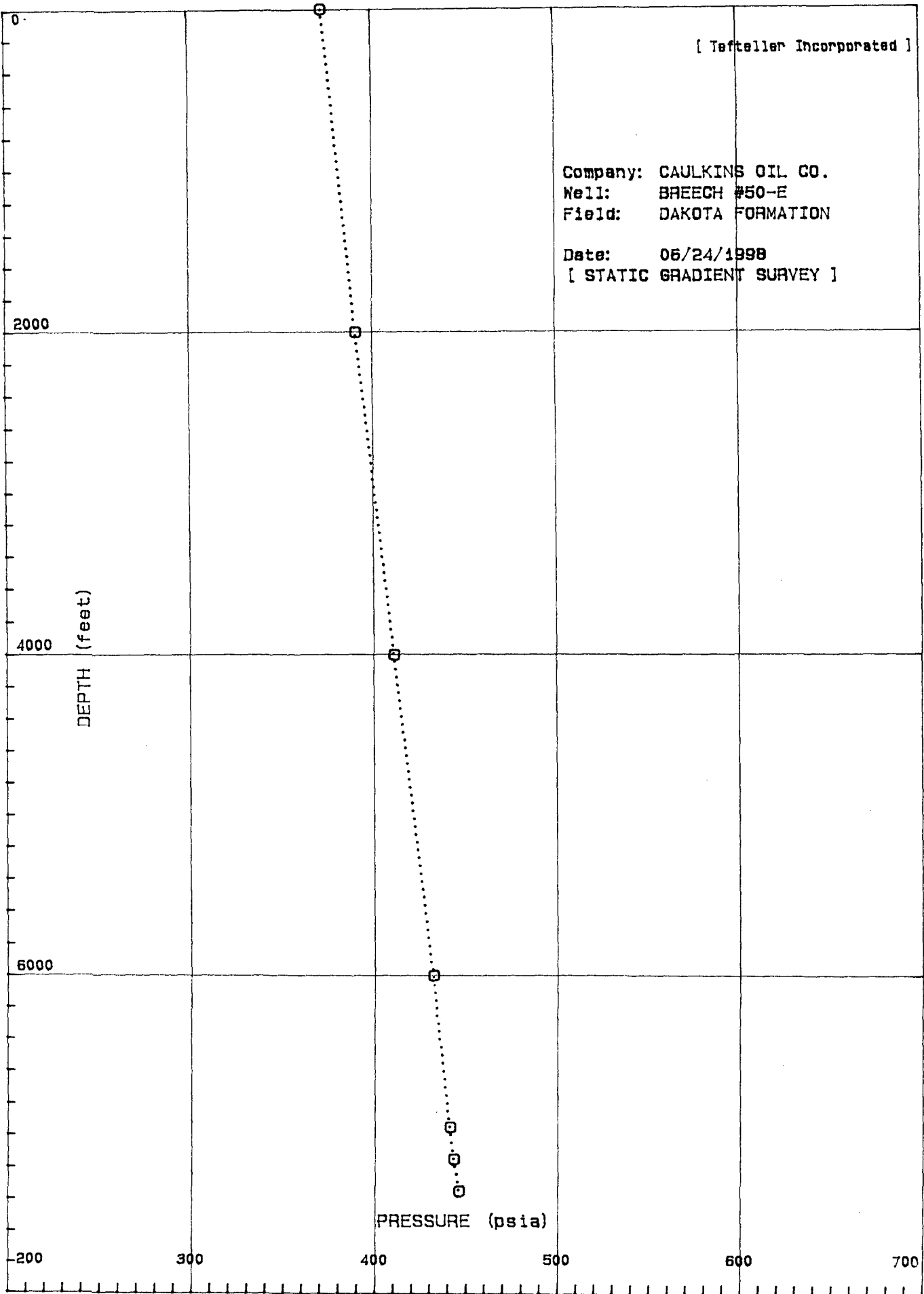
300

400

500

600

700



Company: CAULKINS OIL CO.
Well: BREECH #50-E
Field: MESA VERDE FORMATION
Engineer:
Gauge Type: AMERADA
Gauge Range: 0-3000
Gauge Depth: 5400 ft
Serial No.: 44537

County: RIO ARRIBA
State: NEW MEXICO
Date: 06/24/1998
Well Type:
Test Type: STATIC GRADIENT
Status: SHUT-IN
File Name: 32090-2

Tubing: 2 1/16" TO 5503
Tubing: TO
Casing: TO
Perfs.: 4573-5426
Shut-in Time 216 hrs

Oil Level
H2O Level 4936 ft

Shut-in BHP 493 @ 5400 ft Shut-in BHT 0 F @ 0 ft
Shut-in WHP 263 Shut-in WHT 0 F

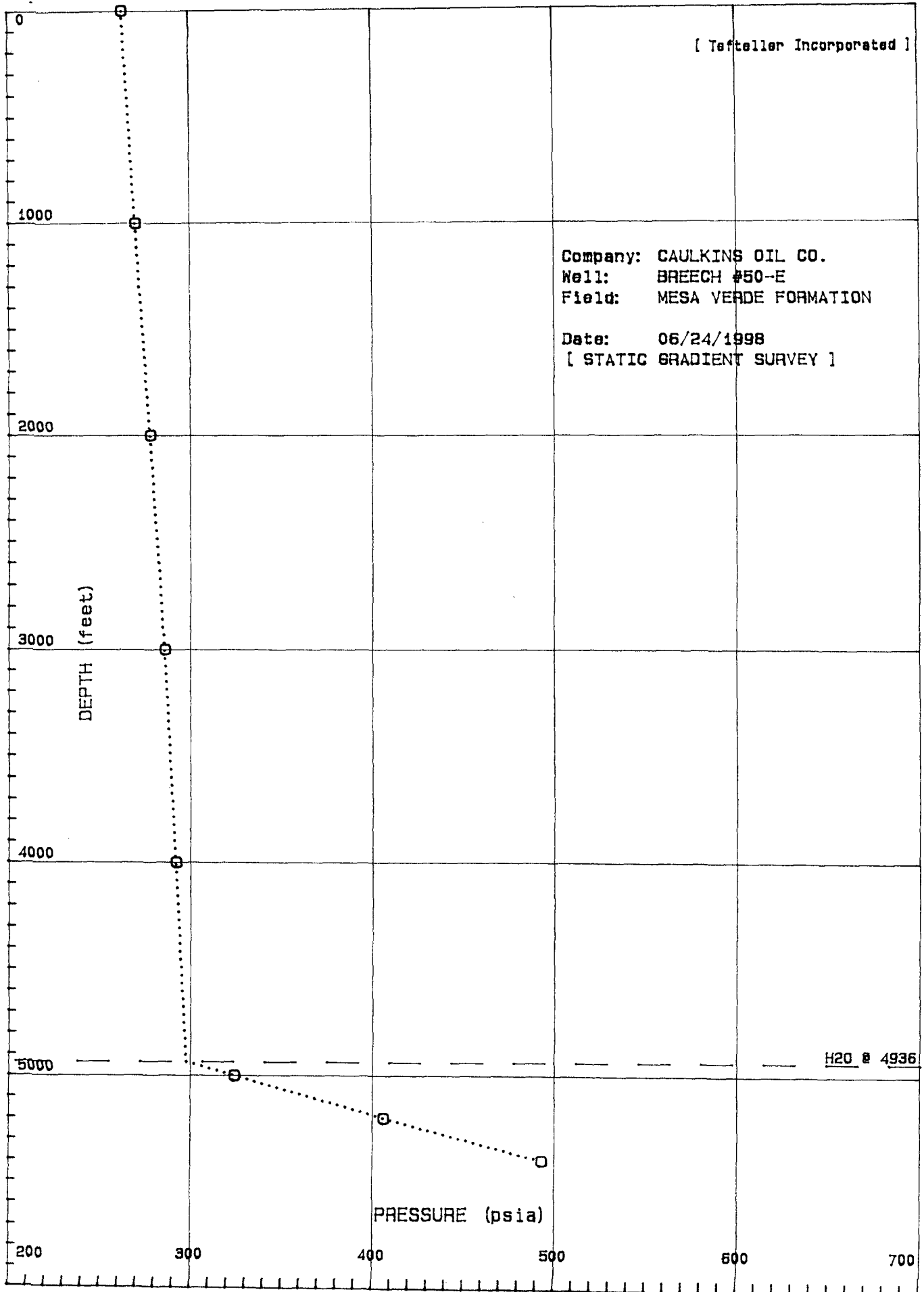
[Tefteller Incorporated]

#	MD	TVD	PRESSURE	PSI/ft
1	0	0	263.00	
2	1000	1000	270.00	0.007
3	2000	2000	278.00	0.008
4	3000	3000	286.00	0.008
5	4000	4000	292.00	0.006
6	5000	5000	324.00	0.032
7	5200	5200	406.00	0.410
8	5400	5400	493.00	0.435

[Tefteller Incorporated]

Company: CAULKINS OIL CO.
Well: BREECH #50-E
Field: MESA VERDE FORMATION

Date: 06/24/1998
[STATIC GRADIENT SURVEY]



**LAST 12-MONTHS PRODUCTION
FOR
BREECH E 50-E**

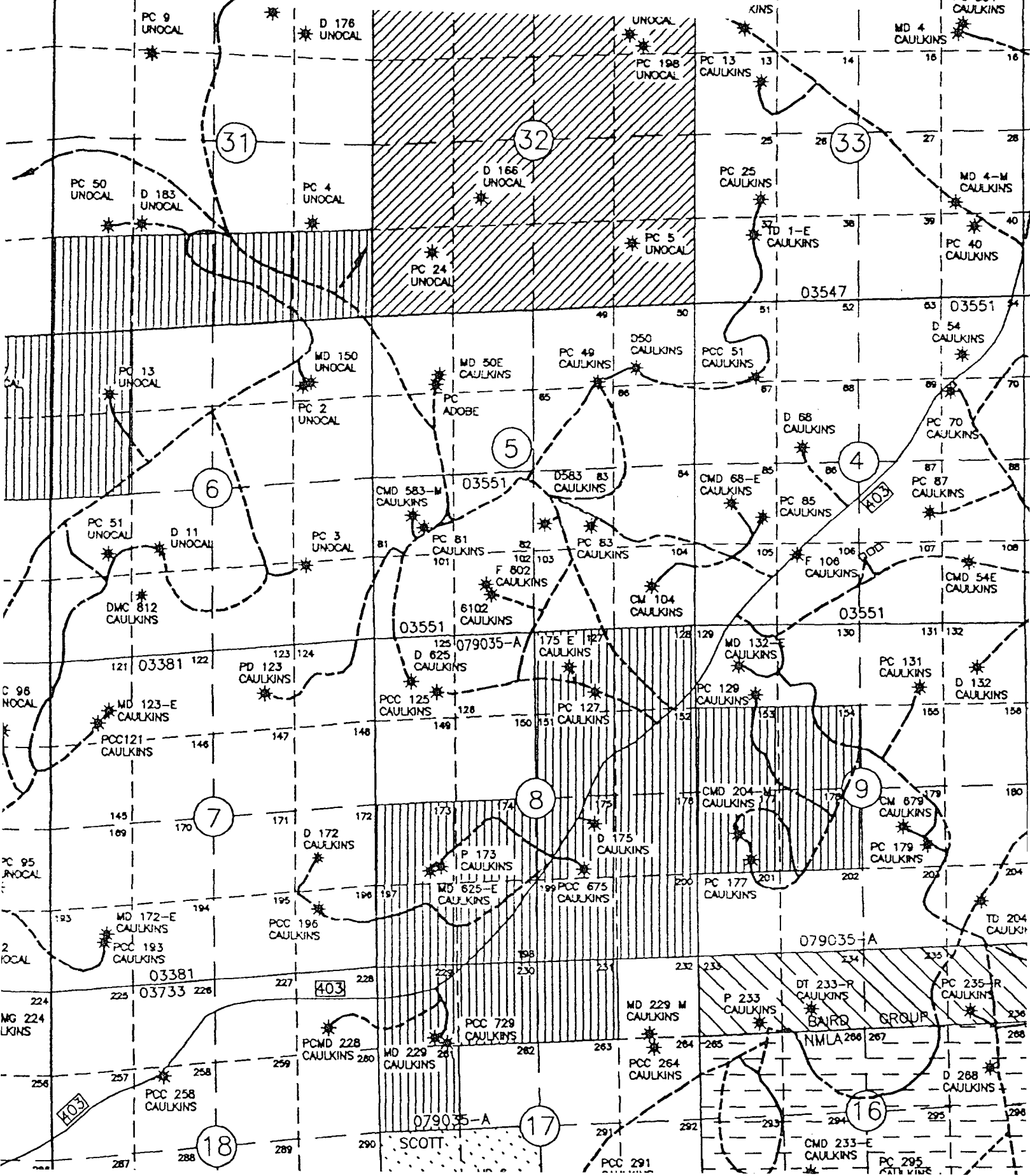
BASIN DAKOTA

MONTH	GAS	OIL	WATER	DAYS	GAS DPA	OIL DPA
02/97	3,862	4	1	25	154	0.160
03/97	3,604	6	1	31	116	0.194
04/97	2,904	4	1	23	126	0.174
05/97	4,004	8	1	31	129	0.258
06/97	4,048	11	2	30	135	0.367
07/97	3,462	6	1	26	133	0.231
08/97	2,470	2	0	31	80	0.065
09/97	2,382	5	1	30	79	0.167
10/97	2,694	5	1	31	87	0.161
11/97	4,265	7	1	30	142	0.233
12/97	3,945	5	1	31	127	0.161
01/98	4,731	2	0	31	153	0.065
	42,371	65	11		122	0.186

MESA VERDE

MONTH	GAS	OIL	WATER	DAYS	GAS DPA	OIL DPA
04/96	731	7	1	30	24	0.233
05/96	739	8	1	31	24	0.258
10/96	737	4	1	29	25	0.138
11/96	597	4	1	30	20	0.133
12/96	645	5	1	31	21	0.161
01/97	718	2	0	25	29	0.080
02/97	324	2	0	22	15	0.091
03/97	469	5	1	31	15	0.161
04/97	437	2	0	24	18	0.083
05/97	681	4	1	31	22	0.129
06/97	586	5	1	30	20	0.167
07/97	307	0	0	26	12	0.000
	6,971	48	8		20	0.136

PC 187 UNOCAL		PC 82 UNOCAL
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CAULKINS OIL COMPANY

P. O. BOX 340

BLOOMFIELD, NEW MEXICO 87413

PHONE: 505-632-1544

FAX 505-632-1471

July 7, 1998

The following list is all the offset operators that Caulkins Oil Company has notified by certified mail of the application to downhole commingle of Breech "E" 50-E, section 5, township 26N, range 6W.

Little Oil & Gas, Inc.
P.O. Box 1258
Farmington, NM 87499

Union Oil and Gas of CA
1004 Big Spring
Midland, TX 79702

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT--" for such proposals)

5. Lease

SW48

6. If Indian, Allottee or Tribe Name

7. Unit Agreement Name

1. Oil Well ☐ Gas Well ☐ Other ☐
GAS WELL

8. Well Name and No.

BREECH "E" 50-E

2. Name of Operator:

Caulkins Oil Company

9. API Well No.

30-039-22908-00-D1

3. Address of Operator:

(505) 632-1544

P.O. Box 340, Bloomfield, NM 87413

10. Field and Pool, Exploratory Area

BASIN DAKOTA, MESA VERDE

4. Location of Well (Footage, Sec., Twp., Rge.)

990' F/N 1120' F/W

SEC. 5-36N-6W

11. Country or Parish, State

Rio Arriba Co., New Mexico

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent

☐ Abandonment

☐ Change of Plans

☐ Subsequent Report

☐ Recompletion

☐ New Construction

☐ Plugging Back

☐ Non-Routine Fracturing

☐ Casing Repair

☐ Water Shut-Off

☐ Final Abandonment Notice

☐ Altering Casing

☐ Conversion to Injection

☒ Other Commingle well

☐ Dispose Water

17. Describe Proposed or Completed Operations:

7-7-98

It is our intention to seek administrative approval for downhole commingling of the Mesa Verde and Basin Dakota zones in this well from New Mexico Oil Conservation Division.

NOTE: The format is issued in lieu of U.S. BLM Form 3160-5

18. I HEREBY CERTIFY THE FOREGOING IS TRUE AND CORRECT

SIGNED:

Robert L. Verquer

TITLE: Superintendent

DATE: July 7, 1998

ROBERT L. VERQUER

APPROVED BY:

TITLE:

DATE:

CONDITIONS OF APPROVAL, IF ANY