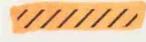


Exhibits 1 through 18  
Complete Set



T 26 N

R-7-W

-  Proposed Non-Standard Spacing Units (SE/4 & SW/4)
-  Proposed Compulsory Pooling Spacing Unit (S/2)
-  Established 320 A MV and/or DK Spacing Units

NMOCD Case Nos. 11897 & 11899  
 January 8, 1998  
 Dugan Production Corp.  
 Exhibit No.   1

January 8, 1998

Dugan Production Corp.

Exhibit No. 2

Mona Lisa #2  
S/2 14-26N-7W  
Rio Arriba County, New Mexico

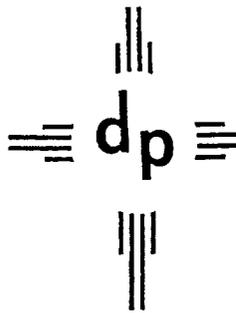
<u>DATE</u>	<u>PARTY CALLED</u>	<u>DESCRIPTION OF DISCUSSION</u>
10/16	Steve Daniels-Marathon Oil	Called regarding Marathon's ownership
10/17	Steve Daniels-Marathon Oil	Discussed ownership.
10/31	Pat Robinson-Caulkins	Discussed-same story-they want to operate. 2. He called-who are we using to tie-in this well? EPNG-They will only use Williams. 3. He stated that they were discussing w/Partners and also reviewed AFE, they use only 5-1/2" casing where we propose 4-1/2" I told him we wanted to amiably work this out.
10/31	Rusty Waters-Louis Dreyfuss	Followup on Exhibits. Rusty said they had been contacted by Caulkins for support as Operator (Caulkins).
10/31	Steve Daniels-Marathon Oil	Followup on Exhibits.
10/31	Ernie Busch-NMOCD	I called to discuss the NMOCD requirements for Force Pooling- he said Bobby Verquer (Caulkins) had called asking same questions.
10/31	Florine Davidson-NMOCD	No Pooling Application filed yet by Caulkins.
10/31	Steve Mason-BLM	No Notice of Staking (NOS) has been filed by Caulkins for S14-26-7.
11/7	Rusty Waters-Louis Dreyfuss	Still working on review of well proposal..
11/7	Steve Daniels-Marathon Oil	Sending it around, no decision yet, as to joinder.
11/7	Bobby Verquer-Caulkins	Phone cutting out, will call back in 1/2 hour, around 9:00 am.
11/7	Pat Robinson-Caulkins	Do not want to pursue commingling at this time. Will consider going to hearing on a NSP.

Mona Lisa #2  
S/2 14-26N-7W  
Rio Arriba County, New Mexico  
Page 2 of 2

<b><u>DATE</u></b>	<b><u>PARTY CALLED</u></b>	<b><u>DESCRIPTION OF DISCUSSION</u></b>
12/5	Steve Daniels-Marathon Oil	Called regarding potential farmout of Marathon's ownership.
12/9	Pat Robinson-Caulkins	Notified Continuing of Hearing January 8, 1998.
12/11	Steve Daniels-Marathon	Notified Continuing of Hearing January 8, 1998.
12/12	Rusty Waters-Louis Dreyfuss	Notified Continuing of Hearing January 8, 1998.

**Notes:**

12/5	Letter, AFE and Operating Agreement from Caulkins.
12/18	Date initial hearing on Force Pooling scheduled. Filed on 11/25/97.



# dugan production corp.

October 6, 1997

Caulkins Oil Company  
P.O. Box 340  
Bloomfield, NM 87413

Attention: Mr. Bobby Berquer

RE: Well Proposal  
Mona Lisa # 2  
Township 26 North, Range 7 West  
Section 14: S $\frac{1}{2}$   
Rio Arriba County, New Mexico

Gentlemen:

Dugan Production Corp. (DPC) is proposing to drill a Mesaverde- Dakota Well to an estimated depth of 7,000 feet, located 1,620' FSL and 1,850' FEL of Section 14, Township 26 North, Range 7 West, Rio Arriba County, New Mexico.

The acreage falls within the Mesaverde and Dakota Pools which require 320.00 acre spacing units per well. Our proposed spacing will be the S $\frac{1}{2}$  of Section 14, in which you own 50.00% interest by virtue of Federal lease NM-03381.

As a working interest owner in the proposed spacing unit, we invite you to participate with DPC in drilling said well and request you execute and return one copy of the signature pages to the enclosed Operating Agreement, along with the AFE totaling \$420,500 to drill, complete and equip the captioned well for production. It is our understanding that a rig will be available in approximately 30 days so your earliest attention to this request is appreciated.

Thank you for your early attention to this matter. If there should be any questions, please feel free to contact me.

Sincerely,

David M. Poage  
Land Manager

NMOCD Case Nos. 11897 & 11899  
January 8, 1998  
Dugan Production Corp.  
Exhibit No. 3

**DUGAN PRODUCTION CORP.**

P.O. Box 420, Farmington, NM 87499  
Phone #(505) 325-1821

**AUTHORIZATION FOR EXPENDITURE**

Drill and complete Mesa Verde - Dakota

<b>WELL NAME AND NUMBER: Mona Lisa 2</b>		<b>Date: 9/30/97</b>
<b>LOCATION: 1620' fsl &amp; 1850' fel, S14-T26N-R7W, Rio Arriba Co. NM</b>		
<b>298 - TANGIBLES</b>		
01 Surface Casing - 390 ft. of 8-5/8" 24 lb.		3,400
02 Prod. Casing - 6300 ft. of 4-1/2" 10.5 lb. & 700 ft. of 11.6 lb.		28,400
04 Tubing - 7000 ft. of 2-3/8" 4.7 lb.		17,500
06 Packer and Tubing Equipment		0
07 Wellhead Equipment		5,000
08 Valves & Fittings		1,500
09 Production Unit & Treaters		7,000
10 Tank Battery		4,000
11 Pumping Unit & Prime Mover		0
12 Rods, Bottom-hole Pump, Aux. Equipment		0
13 Misc. Tangible Equipment		0
14 Well Hookup		5,000
15 Gas Lines & Installation		2,000
16 Pipeline Installation		13,000
<b>TOTAL TANGIBLES</b>		<b>\$86,800</b>
<b>299 - INTANGIBLES</b>		
30 Survey Archeologist		1,500
31 Location Damages		0
32 Road & Location Construction		3,500
33 Water & Gas Lines		0
40 Contract Drilling		115,500
41 Daywork		0
43 Drill Stem Test & Cores		0
44 Mud Logging		3,000
45 Open Hole Logging		10,000
46 Rental Tools		0
47 Casing Float Equipment & Centralizer		5,000
48 Trucking		5,000
49 Mud		0
50 Water- Drilling Oper.		0
51 Casing Crew & Power Tongs		2,000
52 Miscellaneous		0
53 Testing Tubular Goods		0
54 Tool & Equipment Repair		0
55 Company & Contract Labor, Roustabouts		0
56 Supplies		0
60 Cementing Surface Casing		3,500
61 Cementing Production Casing		18,000
70 Completion Rig		15,000
71 Perf. & Cased Hole Logging		5,000
72 Acidizing		0
73 Fracturing		90,000
74 Tank Rental		2,000
75 Trucking - Completion		3,000
76 Water - Completion		7,000
77 Rental Tools - Completion		0
78 Clean-up Location		1,500
79 Power Swivel, Pump & Pit Rental		0
80 Contract Service & Labor - Completion		0
90 Supervision - Administrative		1,000
91 Supervision - Legal		0
92 Supervision - Field		4,200
<b>TOTAL INTANGIBLES</b>		<b>\$295,700</b>
10 % Contingency and Taxes		38,000
<b>TOTAL WELL COST</b>		<b>\$420,500</b>

APPROVALS:

*John Alexander*

Date:

*9/30/97*

NMOCD Case Nos. 11897 & 11899  
January 8, 1998  
Dugan Production Corp.

Date:

Exhibit No. 4

A.A.P.L. FORM 610-1982

MODEL FORM OPERATING AGREEMENT

MONA LISA #2

OPERATING AGREEMENT

DATED

October 3, 19 97,

OPERATOR DUGAN PRODUCTION CORP.

CONTRACT AREA Township 26 North, Range 7 West, N.M.P.M.

Section 14: S/2

Top of the Mesaverde Formation to the base of the Dakota  
Formation.

COUNTY OR PARISH OF Rio Arriba STATE OF New Mexico

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AMERICAN ASSOCIATION OF PETROLEUM  
LANDMEN, 2408 CONTINENTAL LIFE BUILDING,  
FORT WORTH, TEXAS, 76102, APPROVED FORM.  
A.A.P.L. NO. 610 - 1982 REVISED

NMOCD Case Nos. 11897 & 11899  
January 8, 1998  
Dugan Production Corp.

Exhibit No. 5

GUIDANCE IN THE PREPARATION OF THIS AGREEMENT:

1. Title Page - Fill in blanks as applicable.
2. Preamble, Page 1 - Enter name of Operator.
3. Article II - Exhibits:
  - (a) Indicate Exhibits to be attached.
  - (b) If it is desired that no reference be made to non-discrimination, the reference to Exhibit "F" should be deleted.
4. Article III.B. - Interests of Parties in Costs and Production - Enter royalty fraction as agreed to by parties.
5. Article IV.A. - Title Examination - Select option as agreed to by the parties.
6. Article IV.B. - Loss of Title - If "Joint Loss" of Title is desired, the following changes should be made:
  - (a) Delete Articles IV.B.1 and IV.B.2.
  - (b) Article IV.B.3 - Delete phrase "other than those set forth in Articles IV.B.1 and IV.B.2 above."
  - (c) Article VII.E. - Change reference at end of the first grammatical paragraph from "Article IV.B.2" to "Article IV.B.3."
  - (d) Article X. - Add as the concluding sentence - "All claims or suits involving title to any interest subject to this agreement shall be treated as a claim or a suit against all parties hereto."
7. Article V - Operator - Enter name of Operator.
8. Article VI.A - Initial Well:
  - (a) Date of commencement of drilling.
  - (b) Location of well.
  - (c) Obligation depth.
9. Article VI.B.2(b) - Subsequent Operations - Enter penalty percentage as agreed to by parties.
10. Article VI.C. - Taking Production in Kind - If a Gas Balancing Agreement is not in existence nor attached hereto as Exhibit "E", then use Alternate Page 8.
11. Article VII.D.1. - Limitation of Expenditures - Select option as agreed to by parties.
12. Article VII.D.3. - Limitation of Expenditures - Enter limitation of expenditure of Operator for single project and amount above which Operator may furnish information AFE.
13. Article IX. - Internal Revenue Code Election - Delete this article in the event the agreement is a Tax Partnership and Exhibit "G" is attached.
14. Article X. - Claims and Lawsuits - Enter claim limit as agreed to by parties.
15. Article XIII. - Term of Agreement:
  - (a) Select Option as agreed to by parties.
  - (b) If Option No. 2 is selected, enter agreed number of days in two (2) blanks.
16. Article XIV.B - Governing Law - Enter state as agreed to by parties.
17. Signature Page - Enter effective date.

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OPERATING AGREEMENT

THIS AGREEMENT, entered into by and between Dugan Production Corp., hereinafter designated and referred to as "Operator", and the signatory party or parties other than Operator, sometimes hereinafter referred to individually herein as "Non-Operator", and collectively as "Non-Operators".

WITNESSETH:

WHEREAS, the parties to this agreement are owners of oil and gas leases and/or oil and gas interests in the land identified in Exhibit "A", and the parties hereto have reached an agreement to explore and develop these leases and/or oil and gas interests for the production of oil and gas to the extent and as hereinafter provided,

NOW, THEREFORE, it is agreed as follows:

ARTICLE I.
DEFINITIONS

As used in this agreement, the following words and terms shall have the meanings here ascribed to them:

A. The term "oil and gas" shall mean oil, gas, casinghead gas, gas condensate, and all other liquid or gaseous hydrocarbons and other marketable substances produced therewith, unless an intent to limit the inclusiveness of this term is specifically stated.

B. The terms "oil and gas lease", "lease" and "leasehold" shall mean the oil and gas leases covering tracts of land lying within the Contract Area which are owned by the parties to this agreement.

C. The term "oil and gas interests" shall mean unleased fee and mineral interests in tracts of land lying within the Contract Area which are owned by parties to this agreement.

D. The term "Contract Area" shall mean all of the lands, oil and gas leasehold interests and oil and gas interests intended to be developed and operated for oil and gas purposes under this agreement. Such lands, oil and gas leasehold interests and oil and gas interests are described in Exhibit "A".

E. The term "drilling unit" shall mean the area fixed for the drilling of one well by order or rule of any state or federal body having authority. If a drilling unit is not fixed by any such rule or order, a drilling unit shall be the drilling unit as established by the pattern of drilling in the Contract Area or as fixed by express agreement of the Drilling Parties.

F. The term "drillsite" shall mean the oil and gas lease or interest on which a proposed well is to be located.

G. The terms "Drilling Party" and "Consenting Party" shall mean a party who agrees to join in and pay its share of the cost of any operation conducted under the provisions of this agreement.

H. The terms "Non-Drilling Party" and "Non-Consenting Party" shall mean a party who elects not to participate in a proposed operation.

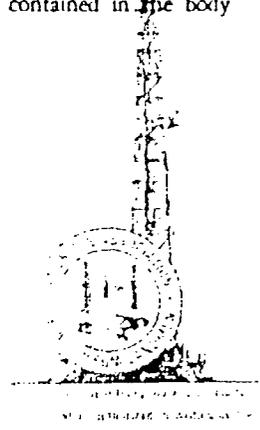
Unless the context otherwise clearly indicates, words used in the singular include the plural, the plural includes the singular, and the neuter gender includes the masculine and the feminine.

ARTICLE II.
EXHIBITS

The following exhibits, as indicated below and attached hereto, are incorporated in and made a part hereof:

- X A. Exhibit "A", shall include the following information:
(1) Identification of lands subject to this agreement,
(2) Restrictions, if any, as to depths, formations, or substances,
(3) Percentages or fractional interests of parties to this agreement,
(4) Oil and gas leases and/or oil and gas interests subject to this agreement,
(5) Addresses of parties for notice purposes.
B. Exhibit "B", Form of Lease.
X C. Exhibit "C", Accounting Procedure.
X D. Exhibit "D", Insurance.
X E. Exhibit "E", Gas Balancing Agreement.
X F. Exhibit "F", Non-Discrimination and Certification of Non-Segregated Facilities.
G. Exhibit "G", Tax Partnership.

If any provision of any exhibit, except Exhibits "E" and "G", is inconsistent with any provision contained in the body of this agreement, the provisions in the body of this agreement shall prevail.



ARTICLE III.  
INTERESTS OF PARTIES

A. Oil and Gas Interests:

If any party owns an oil and gas interest in the Contract Area, that interest shall be treated for all purposes of this agreement and during the term hereof as if it were covered by the form of oil and gas lease attached hereto as Exhibit "B", and the owner thereof shall be deemed to own both the royalty interest reserved in such lease and the interest of the lessee thereunder.

B. Interests of Parties in Costs and Production:

Unless changed by other provisions, all costs and liabilities incurred in operations under this agreement shall be borne and paid, and all equipment and materials acquired in operations on the Contract Area shall be owned, by the parties as their interests are set forth in Exhibit "A". In the same manner, the parties shall also own all production of oil and gas from the Contract Area subject to the payment of royalties to the extent of one-eighth (1/8) which shall be borne as hereinafter set forth.

Regardless of which party has contributed the lease(s) and/or oil and gas interest(s) hereto on which royalty is due and payable, each party entitled to receive a share of production of oil and gas from the Contract Area shall bear and shall pay or deliver, or cause to be paid or delivered, to the extent of its interest in such production, the royalty amount stipulated hereinabove and shall hold the other parties free from any liability therefor. No party shall ever be responsible, however, on a price basis higher than the price received by such party, to any other party's lessor or royalty owner, and if any such other party's lessor or royalty owner should demand and receive settlement on a higher price basis, the party contributing the affected lease shall bear the additional royalty burden attributable to such higher price.

Nothing contained in this Article III.B. shall be deemed an assignment or cross-assignment of interests covered hereby.

C. Excess Royalties, Overriding Royalties and Other Payments:

Unless changed by other provisions, if the interest of any party in any lease covered hereby is subject to any royalty, overriding royalty, production payment or other burden on production in excess of the amount stipulated in Article III.B., such party so burdened shall assume and alone bear all such excess obligations and shall indemnify and hold the other parties hereto harmless from any and all claims and demands for payment asserted by owners of such excess burden.

D. Subsequently Created Interests:

If any party should hereafter create an overriding royalty, production payment or other burden payable out of production attributable to its working interest hereunder, ~~or if such a burden existed prior to this agreement and is not set forth in Exhibit "A" or was not disclosed in writing to all other parties prior to the execution of this agreement by all parties, or is not a jointly acknowledged and accepted obligation of all parties~~ (any such interest being hereinafter referred to as "subsequently created interest" irrespective of the timing of its creation and the party out of whose working interest the subsequently created interest is derived being hereinafter referred to as "burdened party"), and:

1. If the burdened party is required under this agreement to assign or relinquish to any other party, or parties, all or a portion of its working interest and/or the production attributable thereto, said other party, or parties, shall receive said assignment and/or production free and clear of said subsequently created interest and the burdened party shall indemnify and save said other party, or parties, harmless from any and all claims and demands for payment asserted by owners of the subsequently created interest; and,
2. If the burdened party fails to pay, when due, its share of expenses chargeable hereunder, all provisions of Article VII.B. shall be enforceable against the subsequently created interest in the same manner as they are enforceable against the working interest of the burdened party.

ARTICLE IV.  
TITLES

A. Title Examination:

~~if requested~~  
Title examination shall be made on the drillsite of any proposed well prior to commencement of drilling operations or, if the Drilling Parties so request, title examination shall be made on the leases and/or oil and gas interests included, or planned to be included, in the drilling unit around such well. The opinion will include the ownership of the working interest, minerals, royalty, overriding royalty and production payments under the applicable leases. At the time a well is proposed, each party contributing leases and/or oil and gas interests to the drillsite, or to be included in such drilling unit, shall furnish to Operator all abstracts (including federal lease status reports), title opinions, title papers and curative material in its possession free of charge. All such information not in the possession of or made available to Operator by the parties, but necessary for the examination of the title, shall be obtained by Operator. Operator shall cause title to be examined by attorneys on its staff or by outside attorneys. Copies of all title opinions shall be furnished to each party hereto. The cost incurred by Operator in this title program shall be borne as follows:

- Option No. 1: Costs incurred by Operator in procuring abstracts and title examination (including preliminary, supplemental, shut-in gas royalty opinions and division order title opinions) shall be a part of the administrative overhead as provided in Exhibit "C" and shall not be a direct charge, whether performed by Operator's staff attorneys or by outside attorneys.

ARTICLE IV  
continued

1 ~~XX~~ Option No. 2: Costs incurred by Operator in procuring abstracts and fees paid outside attorneys for title examination  
 2 (including preliminary, supplemental, shut-in gas royalty opinions and division order title opinions) shall be borne by the Drilling Parties  
 3 in the proportion that the interest of each Drilling Party bears to the total interest of all Drilling Parties as such interests appear in Ex-  
 4 hibit "A". Operator shall make no charge for services rendered by its staff attorneys or other personnel in the performance of the above  
 5 functions.

6  
 7 Each party shall be responsible for securing curative matter and pooling amendments or agreements required in connection  
 8 with leases or oil and gas interests contributed by such party. Operator shall be responsible for the preparation and recording of pooling  
 9 designations or declarations as well as the conduct of hearings before governmental agencies for the securing of spacing or pooling orders.  
 10 This shall not prevent any party from appearing on its own behalf at any such hearing.

11  
 12 No well shall be drilled on the Contract Area until after (1) the title to the drillsite or drilling unit has been examined as above  
 13 provided, and (2) the title has been approved by the examining attorney or title has been accepted by all of the parties who are to par-  
 14 ticipate in the drilling of the well.

## B. Loss of Title:

15  
 16  
 17  
 18 1. Failure of Title: Should any oil and gas interest or lease, or interest therein, be lost through failure of title, which loss results in a  
 19 reduction of interest from that shown on Exhibit "A", the party contributing the affected lease or interest shall have ninety (90) days  
 20 from final determination of title failure to acquire a new lease or other instrument curing the entirety of the title failure, which acquisi-  
 21 tion will not be subject to Article VIII.B., and failing to do so, this agreement, nevertheless, shall continue in force as to all remaining oil  
 22 and gas leases and interests: and,

23 (a) The party whose oil and gas lease or interest is affected by the title failure shall bear alone the entire loss and it shall not be  
 24 entitled to recover from Operator or the other parties any development or operating costs which it may have theretofore paid or incurred,  
 25 but there shall be no additional liability on its part to the other parties hereto by reason of such title failure;

26 (b) There shall be no retroactive adjustment of expenses incurred or revenues received from the operation of the interest which has  
 27 been lost, but the interests of the parties shall be revised on an acreage basis, as of the time it is determined finally that title failure has oc-  
 28 curred, so that the interest of the party whose lease or interest is affected by the title failure will thereafter be reduced in the Contract  
 29 Area by the amount of the interest lost;

30 (c) If the proportionate interest of the other parties hereto in any producing well theretofore drilled on the Contract Area is  
 31 increased by reason of the title failure, the party whose title has failed shall receive the proceeds attributable to the increase in such in-  
 32 terest (less costs and burdens attributable thereto) until it has been reimbursed for unrecovered costs paid by it in connection with such  
 33 well;

34 (d) Should any person not a party to this agreement, who is determined to be the owner of any interest in the title which has  
 35 failed, pay in any manner any part of the cost of operation, development, or equipment, such amount shall be paid to the party or parties  
 36 who bore the costs which are so refunded;

37 (e) Any liability to account to a third party for prior production of oil and gas which arises by reason of title failure shall be  
 38 borne by the party or parties whose title failed in the same proportions in which they shared in such prior production: and,

39 (f) No charge shall be made to the joint account for legal expenses, fees or salaries, in connection with the defense of the interest  
 40 claimed by any party hereto, it being the intention of the parties hereto that each shall defend title to its interest and bear all expenses in  
 41 connection therewith.

42  
 43 2. Loss by Non-Payment or Erroneous Payment of Amount Due: If, through mistake or oversight, any rental, shut-in well  
 44 payment, minimum royalty or royalty payment, is not paid or is erroneously paid, and as a result a lease or interest therein terminates,  
 45 there shall be no monetary liability against the party who failed to make such payment. Unless the party who failed to make the required  
 46 payment secures a new lease covering the same interest within ninety (90) days from the discovery of the failure to make proper payment,  
 47 which acquisition will not be subject to Article VIII.B., the interests of the parties shall be revised on an acreage basis, effective as of the  
 48 date of termination of the lease involved, and the party who failed to make proper payment will no longer be credited with an interest in  
 49 the Contract Area on account of ownership of the lease or interest which has terminated. In the event the party who failed to make the  
 50 required payment shall not have been fully reimbursed, at the time of the loss, from the proceeds of the sale of oil and gas attributable to  
 51 the lost interest, calculated on an acreage basis, for the development and operating costs theretofore paid on account of such interest, it  
 52 shall be reimbursed for unrecovered actual costs theretofore paid by it (but not for its share of the cost of any dry hole previously drilled  
 53 or wells previously abandoned) from so much of the following as is necessary to effect reimbursement:

54 (a) Proceeds of oil and gas, less operating expenses, theretofore accrued to the credit of the lost interest, on an acreage basis,  
 55 up to the amount of unrecovered costs;

56 (b) Proceeds, less operating expenses, thereafter accrued attributable to the lost interest on an acreage basis, of that portion of  
 57 oil and gas thereafter produced and marketed (excluding production from any wells thereafter drilled) which, in the absence of such lease  
 58 termination, would be attributable to the lost interest on an acreage basis, up to the amount of unrecovered costs, the proceeds of said  
 59 portion of the oil and gas to be contributed by the other parties in proportion to their respective interests; and,

60 (c) Any monies, up to the amount of unrecovered costs, that may be paid by any party who is, or becomes, the owner of the interest  
 61 lost, for the privilege of participating in the Contract Area or becoming a party to this agreement.

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 63 3. Other Losses: All losses incurred, other than those set forth in Articles IV.B.1. and IV.B.2. above, shall be joint losses  
 64 and shall be borne by all parties in proportion to their interests. There shall be no readjustment of interests in the remaining portion of  
 65 the Contract Area.

ARTICLE V.  
OPERATOR

A. Designation and Responsibilities of Operator:

Dugan Production Corp. shall be the Operator of the Contract Area, and shall conduct and direct and have full control of all operations on the Contract Area as permitted and required by, and within the limits of this agreement. It shall conduct all such operations in a good and workmanlike manner, but it shall have no liability as Operator to the other parties for losses sustained or liabilities incurred, except such as may result from gross negligence or willful misconduct.

B. Resignation or Removal of Operator and Selection of Successor:

1. Resignation or Removal of Operator: Operator may resign at any time by giving written notice thereof to Non Operators. If Operator terminates its legal existence, no longer owns an interest hereunder in the Contract Area, or is no longer capable of serving as Operator, Operator shall be deemed to have resigned without any action by Non Operators, except the selection of a successor. Operator may be removed if it fails or refuses to carry out its duties hereunder, or becomes insolvent, bankrupt or is placed in receivership, by the affirmative vote of two (2) or more Non-Operators owning a majority interest based on ownership as shown on Exhibit "A" remaining after excluding the voting interest of Operator. Such resignation or removal shall not become effective until 7:00 o'clock A.M. on the first day of the calendar month following the expiration of ninety (90) days after the giving of notice of resignation by Operator or action by the Non-Operators to remove Operator, unless a successor Operator has been selected and assumes the duties of Operator at an earlier date. Operator, after effective date of resignation or removal, shall be bound by the terms hereof as a Non Operator. A change of a corporate name or structure of Operator or transfer of Operator's interest to any single subsidiary, parent or successor corporation shall not be the basis for removal of Operator.

2. Selection of Successor Operator: Upon the resignation or removal of Operator, a successor Operator shall be selected by the parties. The successor Operator shall be selected from the parties owning an interest in the Contract Area at the time such successor Operator is selected. The successor Operator shall be selected by the affirmative vote of two (2) or more parties owning a majority interest based on ownership as shown on Exhibit "A"; provided, however, if an Operator which has been removed fails to vote or votes only to succeed itself, the successor Operator shall be selected by the affirmative vote of two (2) or more parties owning a majority interest based on ownership as shown on Exhibit "A" remaining after excluding the voting interest of the Operator that was removed.

C. Employees:

The number of employees used by Operator in conducting operations hereunder, their selection, and the hours of labor and the compensation for services performed shall be determined by Operator, and all such employees shall be the employees of Operator.

D. Drilling Contracts:

All wells drilled on the Contract Area shall be drilled on a competitive contract basis at the usual rates prevailing in the area. If it so desires, Operator may employ its own tools and equipment in the drilling of wells, but its charges therefor shall not exceed the prevailing rates in the area and the rate of such charges shall be agreed upon by the parties in writing before drilling operations are commenced, and such work shall be performed by Operator under the same terms and conditions as are customary and usual in the area in contracts of independent contractors who are doing work of a similar nature.

ARTICLE VI.  
DRILLING AND DEVELOPMENT

A. Initial Well:

On or before the 1st day of March, 1998, Operator shall commence the drilling of a well for oil and gas at the following location:  
Township 26 North, Range 7 West, N.M.P.M.  
Section 14: S/2

and shall thereafter continue the drilling of the well with due diligence to a depth of 7,000 feet or a depth sufficient to test the Dakota formation, whichever is the lessor.

unless granite or other practically impenetrable substance or condition in the hole, which renders further drilling impractical, is encountered at a lesser depth, or unless all parties agree to complete or abandon the well at a lesser depth.

Operator shall make reasonable tests of all formations encountered during drilling which give indication of containing oil and gas in quantities sufficient to test, unless this agreement shall be limited in its application to a specific formation or formations, in which event Operator shall be required to test only the formation or formations to which this agreement may apply.

ARTICLE VI  
continued

1 If, in Operator's judgment, the well will not produce oil or gas in paying quantities, and it wishes to plug and abandon the  
2 well as a dry hole, the provisions of Article VI.E.1. shall thereafter apply.

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6 **B. Subsequent Operations:**

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8 1. Proposed Operations: Should any party hereto desire to drill any well on the Contract Area other than the well provided  
9 for in Article VI.A., or to rework, deepen or plug back a dry hole drilled at the joint expense of all parties or a well jointly owned by all  
10 the parties and not then producing in paying quantities, the party desiring to drill, rework, deepen or plug back such a well shall give the  
11 other parties written notice of the proposed operation, specifying the work to be performed, the location, proposed depth, objective forma-  
12 tion and the estimated cost of the operation. The parties receiving such a notice shall have thirty (30) days after receipt of the notice  
13 within which to notify the party wishing to do the work whether they elect to participate in the cost of the proposed operation. If a drill-  
14 ing rig is on location, notice of a proposal to rework, plug back or drill deeper may be given by telephone and the response period shall be  
15 limited to forty-eight (48) hours, exclusive of Saturday, Sunday and legal holidays. Failure of a party receiving such notice to reply within  
16 the period above fixed shall constitute an election by that party not to participate in the cost of the proposed operation. Any notice or  
17 response given by telephone shall be promptly confirmed in writing.

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21 If all parties elect to participate in such a proposed operation, Operator shall, within ninety (90) days after expiration of the notice  
22 period of thirty (30) days (or as promptly as possible after the expiration of the forty-eight (48) hour period when a drilling rig is on loca-  
23 tion, as the case may be), actually commence the proposed operation and complete it with due diligence at the risk and expense of all par-  
24 ties hereto; provided, however, said commencement date may be extended upon written notice of same by Operator to the other parties,  
25 for a period of up to thirty (30) additional days if, in the sole opinion of Operator, such additional time is reasonably necessary to obtain  
26 permits from governmental authorities, surface rights (including rights-of-way) or appropriate drilling equipment, or to complete title ex-  
27 amination or curative matter required for title approval or acceptance. Notwithstanding the force majeure provisions of Article XI, if the  
28 actual operation has not been commenced within the time provided (including any extension thereof as specifically permitted herein) and  
29 if any party hereto still desires to conduct said operation, written notice proposing same must be resubmitted to the other parties in accor-  
30 dance with the provisions hereof as if no prior proposal had been made.

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34 2. Operations by Less than All Parties: If any party receiving such notice as provided in Article VI.B.1. or VII.D.1. (Option  
35 No. 2) elects not to participate in the proposed operation, then, in order to be entitled to the benefits of this Article, the party or parties  
36 giving the notice and such other parties as shall elect to participate in the operation shall, within ninety (90) days after the expiration of  
37 the notice period of thirty (30) days (or as promptly as possible after the expiration of the forty-eight (48) hour period when a drilling rig is  
38 on location, as the case may be) actually commence the proposed operation and complete it with due diligence. Operator shall perform all  
39 work for the account of the Consenting Parties; provided, however, if no drilling rig or other equipment is on location, and if Operator is  
40 a Non-Consenting Party, the Consenting Parties shall either: (a) request Operator to perform the work required by such proposed opera-  
41 tion for the account of the Consenting Parties, or (b) designate one (1) of the Consenting Parties as Operator to perform such work. Con-  
42 senting Parties, when conducting operations on the Contract Area pursuant to this Article VI.B.2., shall comply with all terms and con-  
43 ditions of this agreement.

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47 If less than all parties approve any proposed operation, the proposing party, immediately after the expiration of the applicable  
48 notice period, shall advise the Consenting Parties of the total interest of the parties approving such operation and its recommendation as  
49 to whether the Consenting Parties should proceed with the operation as proposed. Each Consenting Party, within forty-eight (48) hours  
50 (exclusive of Saturday, Sunday and legal holidays) after receipt of such notice, shall advise the proposing party of its desire to (a) limit par-  
51 ticipation to such party's interest as shown on Exhibit "A" or (b) carry its proportionate part of Non-Consenting Parties' interests, and  
52 failure to advise the proposing party shall be deemed an election under (a). In the event a drilling rig is on location, the time permitted for  
53 such a response shall not exceed a total of forty-eight (48) hours (inclusive of Saturday, Sunday and legal holidays). The proposing party,  
54 at its election, may withdraw such proposal if there is insufficient participation and shall promptly notify all parties of such decision.

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58 The entire cost and risk of conducting such operations shall be borne by the Consenting Parties in the proportions they have  
59 elected to bear same under the terms of the preceding paragraph. Consenting Parties shall keep the leasehold estates involved in such  
60 operations free and clear of all liens and encumbrances of every kind created by or arising from the operations of the Consenting Parties.  
61 If such an operation results in a dry hole, the Consenting Parties shall plug and abandon the well and restore the surface location at their  
62 sole cost, risk and expense. If any well drilled, reworked, deepened or plugged back under the provisions of this Article results in a pro-  
63 ducer of oil and/or gas in paying quantities, the Consenting Parties shall complete and equip the well to produce at their sole cost and risk,

## ARTICLE VI

## continued

1 and the well shall then be turned over to Operator and shall be operated by it at the expense and for the account of the Consenting Parties. Upon commencement of operations for the drilling, reworking, deepening or plugging back of any such well by Consenting Parties in accordance with the provisions of this Article, each Non-Consenting Party shall be deemed to have relinquished to Consenting Parties, and the Consenting Parties shall own and be entitled to receive, in proportion to their respective interests, all of such Non-Consenting Party's interest in the well and share of production therefrom until the proceeds of the sale of such share, calculated at the well, or market value thereof if such share is not sold, (after deducting production taxes, excise taxes, royalty, overriding royalty and other interests not excepted by Article III.D. payable out of or measured by the production from such well accruing with respect to such interest until it reverts) shall equal the total of the following:

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12 (a) 100% of each such Non-Consenting Party's share of the cost of any newly acquired surface equipment beyond the wellhead connections (including, but not limited to, stock tanks, separators, treaters, pumping equipment and piping), plus 100% of each such Non-Consenting Party's share of the cost of operation of the well commencing with first production and continuing until each such Non-Consenting Party's relinquished interest shall revert to it under other provisions of this Article, it being agreed that each Non-Consenting Party's share of such costs and equipment will be that interest which would have been chargeable to such Non-Consenting Party had it participated in the well from the beginning of the operations; and

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21 (b) 300 % of that portion of the costs and expenses of drilling, reworking, deepening, plugging back, testing and completing, after deducting any cash contributions received under Article VIII.C., and 300 % of that portion of the cost of newly acquired equipment in the well (to and including the wellhead connections), which would have been chargeable to such Non-Consenting Party if it had participated therein.

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28 An election not to participate in the drilling or the deepening of a well shall be deemed an election not to participate in any reworking or plugging back operation proposed in such a well, or portion thereof, to which the initial Non-Consent election applied that is conducted at any time prior to full recovery by the Consenting Parties of the Non-Consenting Party's recoupment account. Any such reworking or plugging back operation conducted during the recoupment period shall be deemed part of the cost of operation of said well and there shall be added to the sums to be recouped by the Consenting Parties one hundred percent (100%) of that portion of the costs of the reworking or plugging back operation which would have been chargeable to such Non-Consenting Party had it participated therein. If such a reworking or plugging back operation is proposed during such recoupment period, the provisions of this Article VI.B. shall be applicable as between said Consenting Parties in said well.

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39 During the period of time Consenting Parties are entitled to receive Non-Consenting Party's share of production, or the proceeds therefrom, Consenting Parties shall be responsible for the payment of all production, severance, excise, gathering and other taxes, and all royalty, overriding royalty and other burdens applicable to Non-Consenting Party's share of production not excepted by Article III.D.

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46 In the case of any reworking, plugging back or deeper drilling operation, the Consenting Parties shall be permitted to use, free of cost, all casing, tubing and other equipment in the well, but the ownership of all such equipment shall remain unchanged; and upon abandonment of a well after such reworking, plugging back or deeper drilling, the Consenting Parties shall account for all such equipment to the owners thereof, with each party receiving its proportionate part in kind or in value, less cost of salvage.

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53 Within sixty (60) days after the completion of any operation under this Article, the party conducting the operations for the Consenting Parties shall furnish each Non-Consenting Party with an inventory of the equipment in and connected to the well, and an itemized statement of the cost of drilling, deepening, plugging back, testing, completing, and equipping the well for production; or, at its option, the operating party, in lieu of an itemized statement of such costs of operation, may submit a detailed statement of monthly billings. Each month thereafter, during the time the Consenting Parties are being reimbursed as provided above, the party conducting the operations for the Consenting Parties shall furnish the Non-Consenting Parties with an itemized statement of all costs and liabilities incurred in the operation of the well, together with a statement of the quantity of oil and gas produced from it and the amount of proceeds realized from the sale of the well's working interest production during the preceding month. In determining the quantity of oil and gas produced during any month, Consenting Parties shall use industry accepted methods such as, but not limited to, metering or periodic well tests. Any amount realized from the sale or other disposition of equipment newly acquired in connection with any such operation which would have been owned by a Non-Consenting Party had it participated therein shall be credited against the total unrecovered costs of the work done and of the equipment purchased in determining when the interest of such Non-Consenting Party shall revert to it as above provided; and if there is a credit balance, it shall be paid to such Non-Consenting Party.

ARTICLE VI  
continued

If and when the Consenting Parties recover from a Non-Consenting Party's relinquished interest the amounts provided for above, the relinquished interests of such Non-Consenting Party shall automatically revert to it, and, from and after such reversion, such Non-Consenting Party shall own the same interest in such well, the material and equipment in or pertaining thereto, and the production therefrom as such Non-Consenting Party would have been entitled to had it participated in the drilling, reworking, deepening or plugging back of said well. Thereafter, such Non-Consenting Party shall be charged with and shall pay its proportionate part of the further costs of the operation of said well in accordance with the terms of this agreement and the Accounting Procedure attached hereto.

Notwithstanding the provisions of this Article VI.B.2., it is agreed that without the mutual consent of all parties, no wells shall be completed in or produced from a source of supply from which a well located elsewhere on the Contract Area is producing, unless such well conforms to the then-existing well spacing pattern for such source of supply.

The provisions of this Article shall have no application whatsoever to the drilling of the initial well described in Article VI.A. except (a) as to Article VII.D.1. (Option No. 2), if selected, or (b) as to the reworking, deepening and plugging back of such initial well after it has been drilled to the depth specified in Article VI.A. if it shall thereafter prove to be a dry hole or, if initially completed for production, ceases to be

\*capable of producing

3. Stand-By Time: When a well which has been drilled or deepened has reached its authorized depth and all tests have been completed, and the results thereof furnished to the parties, stand-by costs incurred pending response to a party's notice proposing a reworking, deepening, plugging back or completing operation in such a well shall be charged and borne as part of the drilling or deepening operation just completed. Stand-by costs subsequent to all parties responding, or expiration of the response time permitted, whichever first occurs, and prior to agreement as to the participating interests of all Consenting Parties pursuant to the terms of the second grammatical paragraph of Article VI.B.2, shall be charged to and borne as part of the proposed operation, but if the proposal is subsequently withdrawn because of insufficient participation, such stand-by costs shall be allocated between the Consenting Parties in the proportion each Consenting Party's interest as shown on Exhibit "A" bears to the total interest as shown on Exhibit "A" of all Consenting Parties.

4. Sidetracking: Except as hereinafter provided, those provisions of this agreement applicable to a "deepening" operation shall also be applicable to any proposal to directionally control and intentionally deviate a well from vertical so as to change the bottom hole location (herein called "sidetracking"), unless done to straighten the hole or to drill around junk in the hole or because of other mechanical difficulties. Any party having the right to participate in a proposed sidetracking operation that does not own an interest in the affected well bore at the time of the notice shall, upon electing to participate, tender to the well bore owners its proportionate share (equal to its interest in the sidetracking operation) of the value of that portion of the existing well bore to be utilized as follows:

(a) If the proposal is for sidetracking an existing dry hole, reimbursement shall be on the basis of the actual costs incurred in the initial drilling of the well down to the depth at which the sidetracking operation is initiated.

(b) If the proposal is for sidetracking a well which has previously produced, reimbursement shall be on the basis of the well's salvable materials and equipment down to the depth at which the sidetracking operation is initiated, determined in accordance with the provisions of Exhibit "C", less the estimated cost of salvaging and the estimated cost of plugging and abandoning.

In the event that notice for a sidetracking operation is given while the drilling rig to be utilized is on location, the response period shall be limited to forty-eight (48) hours, exclusive of Saturday, Sunday and legal holidays; provided, however, any party may request and receive up to eight (8) additional days after expiration of the forty-eight (48) hours within which to respond by paying for all stand-by time incurred during such extended response period. If more than one party elects to take such additional time to respond to the notice, stand-by costs shall be allocated between the parties taking additional time to respond on a day-to-day basis in the proportion each electing party's interest as shown on Exhibit "A" bears to the total interest as shown on Exhibit "A" of all the electing parties. In all other instances the response period to a proposal for sidetracking shall be limited to thirty (30) days.

C. TAKING PRODUCTION IN KIND:

Each party shall take in kind or separately dispose of its proportionate share of all oil and gas produced from the Contract Area, exclusive of production which may be used in development and producing operations and in preparing and treating oil and gas for marketing purposes and production unavoidably lost. Any extra expenditure incurred in the taking in kind or separate disposition by any party of its proportionate share of the production shall be borne by such party. Any party taking its share of production in kind shall be

ARTICLE VI  
continued

1 required to pay for only its proportionate share of such part of Operator's surface facilities which it uses.

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3 Each party shall execute such division orders and contracts as may be necessary for the sale of its interest in production from  
4 the Contract Area, and, except as provided in Article VII.B., shall be entitled to receive payment directly from the purchaser thereof for  
5 its share of all production.

6  
7 In the event any party shall fail to make the arrangements necessary to take in kind or separately dispose of its proportionate share of  
8 the oil produced from the Contract Area, Operator shall have the right, subject to the revocation at will by the party owning it, but not  
9 the obligation, to purchase such oil or sell it to others at any time and from time to time, for the account of the non-taking party at the  
10 best price obtainable in the area for such production. Any such purchase or sale by Operator shall be subject always to the right of the  
11 owner of the production to exercise at any time its right to take in kind, or separately dispose of, its share of all oil not previously  
12 delivered to a purchaser. Any purchase or sale by Operator of any other party's share of oil shall be only for such reasonable periods of  
13 time as are consistent with the minimum needs of the industry under the particular circumstances, but in no event for a period in excess  
14 of one (1) year.

15  
16 In the event one or more parties' separate disposition of its share of the gas causes split-stream deliveries to separate pipelines and/or  
17 deliveries which on a day-to-day basis for any reason are not exactly equal to a party's respective proportionate share of total gas sales to  
18 be allocated to it, the balancing or accounting between the respective accounts of the parties shall be in accordance with any gas balancing  
19 agreement between the parties hereto, whether such an agreement is attached as Exhibit "E", or is a separate agreement.

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21 **D. Access to Contract Area and Information:**

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23 Each party shall have access to the Contract Area at all reasonable times, at its sole cost and risk to inspect or observe operations,  
24 and shall have access at reasonable times to information pertaining to the development or operation thereof, including Operator's books  
25 and records relating thereto. Operator, upon request, shall furnish each of the other parties with copies of all forms or reports filed with  
26 governmental agencies, daily drilling reports, well logs, tank tables, daily gauge and run tickets and reports of stock on hand at the first of  
27 each month, and shall make available samples of any cores or cuttings taken from any well drilled on the Contract Area. The cost of  
28 gathering and furnishing information to Non-Operator, other than that specified above, shall be charged to the Non-Operator that re-  
29 quests the information.

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31 **E. Abandonment of Wells:**

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33 1. Abandonment of Dry Holes: Except for any well drilled or deepened pursuant to Article VI.B.2., any well which has been  
34 drilled or deepened under the terms of this agreement and is proposed to be completed as a dry hole shall not be plugged and abandoned  
35 without the consent of all parties. Should Operator, after diligent effort, be unable to contact any party, or should any party fail to reply  
36 within forty-eight (48) hours (exclusive of Saturday, Sunday and legal holidays) after receipt of notice of the proposal to plug and abandon  
37 such well, such party shall be deemed to have consented to the proposed abandonment. All such wells shall be plugged and abandoned in  
38 accordance with applicable regulations and at the cost, risk and expense of the parties who participated in the cost of drilling or deepening  
39 such well. Any party who objects to plugging and abandoning such well shall have the right to take over the well and conduct further  
40 operations in search of oil and/or gas subject to the provisions of Article VI.B.

41  
42 2. Abandonment of Wells that have Produced: Except for any well in which a Non-Consent operation has been conducted  
43 hereunder for which the Consenting Parties have not been fully reimbursed as herein provided, any well which has been completed as a  
44 producer shall not be plugged and abandoned without the consent of all parties. If all parties consent to such abandonment, the well shall  
45 be plugged and abandoned in accordance with applicable regulations and at the cost, risk and expense of all the parties hereto. If, within  
46 thirty (30) days after receipt of notice of the proposed abandonment of any well, all parties do not agree to the abandonment of such well,  
47 those wishing to continue its operation from the interval(s) of the formation(s) then open to production shall tender to each of the other  
48 parties its proportionate share of the value of the well's salvable material and equipment, determined in accordance with the provisions of  
49 Exhibit "C", less the estimated cost of salvaging and the estimated cost of plugging and abandoning. Each abandoning party shall assign  
50 the non-abandoning parties, without warranty, express or implied, as to title or as to quantity, or fitness for use of the equipment and  
51 material, all of its interest in the well and related equipment, together with its interest in the leasehold estate as to, but only as to, the in-  
52 terval or intervals of the formation or formations then open to production. If the interest of the abandoning party is or includes an oil and  
53 gas interest, such party shall execute and deliver to the non-abandoning party or parties an oil and gas lease, limited to the interval or in-  
54 tervals of the formation or formations then open to production, for a term of one (1) year and so long thereafter as oil and/or gas is pro-  
55 duced from the interval or intervals of the formation or formations covered thereby, such lease to be on the form attached as Exhibit



## ARTICLE VI

continued

1 "B". The assignments or leases so limited shall encompass the "drilling unit" upon which the well is located. The payments by, and the  
 2 assignments or leases to, the assignees shall be in a ratio based upon the relationship of their respective percentage of participation in the  
 3 Contract Area to the aggregate of the percentages of participation in the Contract Area of all assignees. There shall be no readjustment of  
 4 interests in the remaining portion of the Contract Area.

5  
 6 Thereafter, abandoning parties shall have no further responsibility, liability, or interest in the operation of or production from  
 7 the well in the interval or intervals then open other than the royalties retained in any lease made under the terms of this Article. Upon re-  
 8 quest, Operator shall continue to operate the assigned well for the account of the non-abandoning parties at the rates and charges con-  
 9 templated by this agreement, plus any additional cost and charges which may arise as the result of the separate ownership of the assigned  
 10 well. Upon proposed abandonment of the producing interval(s) assigned or leased, the assignor or lessor shall then have the option to  
 11 repurchase its prior interest in the well (using the same valuation formula) and participate in further operations therein subject to the pro-  
 12 visions hereof.

13  
 14 3. Abandonment of Non-Consent Operations: The provisions of Article VI.E.1. or VI.E.2. above shall be applicable as between  
 15 Consenting Parties in the event of the proposed abandonment of any well excepted from said Articles; provided, however, no well shall be  
 16 permanently plugged and abandoned unless and until all parties having the right to conduct further operations therein have been notified  
 17 of the proposed abandonment and afforded the opportunity to elect to take over the well in accordance with the provisions of this Article  
 18 VI.E.

## ARTICLE VII.

## EXPENDITURES AND LIABILITY OF PARTIES

## A. Liability of Parties:

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 25 The liability of the parties shall be several, not joint or collective. Each party shall be responsible only for its obligations, and  
 26 shall be liable only for its proportionate share of the costs of developing and operating the Contract Area. Accordingly, the liens granted  
 27 among the parties in Article VII.B. are given to secure only the debts of each severally. It is not the intention of the parties to create, nor  
 28 shall this agreement be construed as creating, a mining or other partnership or association, or to render the parties liable as partners.

## B. Liens and Payment Defaults:

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 32 Each Non-Operator grants to Operator a lien upon its oil and gas rights in the Contract Area, and a security interest in its share  
 33 of oil and/or gas when extracted and its interest in all equipment, to secure payment of its share of expense, together with interest thereon  
 34 at the rate provided in Exhibit "C". To the extent that Operator has a security interest under the Uniform Commercial Code of the  
 35 state, Operator shall be entitled to exercise the rights and remedies of a secured party under the Code. The bringing of a suit and the ob-  
 36 taining of judgment by Operator for the secured indebtedness shall not be deemed an election of remedies or otherwise affect the lien  
 37 rights or security interest as security for the payment thereof. In addition, upon default by any Non-Operator in the payment of its share  
 38 of expense, Operator shall have the right, without prejudice to other rights or remedies, to collect from the purchaser the proceeds from  
 39 the sale of such Non-Operator's share of oil and/or gas until the amount owed by such Non-Operator, plus interest, has been paid. Each  
 40 purchaser shall be entitled to rely upon Operator's written statement concerning the amount of any default. Operator grants a like lien  
 41 and security interest to the Non-Operators to secure payment of Operator's proportionate share of expense.

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 43 If any party fails or is unable to pay its share of expense within sixty (60) days after rendition of a statement therefor by  
 44 Operator, the non-defaulting parties, including Operator, shall, upon request by Operator, pay the unpaid amount in the proportion that  
 45 the interest of each such party bears to the interest of all such parties. Each party so paying its share of the unpaid amount shall, to obtain  
 46 reimbursement thereof, be subrogated to the security rights described in the foregoing paragraph.

## C. Payments and Accounting:

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 50 Except as herein otherwise specifically provided, Operator shall promptly pay and discharge expenses incurred in the development  
 51 and operation of the Contract Area pursuant to this agreement and shall charge each of the parties hereto with their respective propor-  
 52 tionate shares upon the expense basis provided in Exhibit "C". Operator shall keep an accurate record of the joint account hereunder,  
 53 showing expenses incurred and charges and credits made and received.

54  
 55 Operator, at its election, shall have the right from time to time to demand and receive from the other parties payment in advance  
 56 of their respective shares of the estimated amount of the expense to be incurred in operations hereunder during the next succeeding  
 57 month, which right may be exercised only by submission to each such party of an itemized statement of such estimated expense, together  
 58 with an invoice for its share thereof. Each such statement and invoice for the payment in advance of estimated expense shall be submitted  
 59 on or before the 20th day of the next preceding month. Each party shall pay to Operator its proportionate share of such estimate within  
 60 fifteen (15) days after such estimate and invoice is received. If any party fails to pay its share of said estimate within said time, the amount  
 61 due shall bear interest as provided in Exhibit "C" until paid. Proper adjustment shall be made monthly between advances and actual ex-  
 62 pense to the end that each party shall bear and pay its proportionate share of actual expenses incurred, and no more.

## D. Limitation of Expenditures:

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 66 1. Drill or Deepen: Without the consent of all parties, no well shall be drilled or deepened, except any well drilled or deepened  
 67 pursuant to the provisions of Article VI.B.2. of this agreement. Consent to the drilling or deepening shall include:

ARTICLE VII  
continued

1  Option No. 1: All necessary expenditures for the drilling or deepening, testing, completing and equipping of the well, including  
2 necessary tankage and/or surface facilities.

3  
4  Option No. 2: All necessary expenditures for the drilling or deepening and testing of the well. When such well has reached its  
5 authorized depth, and all tests have been completed, and the results thereof furnished to the parties, Operator shall give immediate notice  
6 to the Non-Operators who have the right to participate in the completion costs. The parties receiving such notice shall have forty-eight  
7 (48) hours (exclusive of Saturday, Sunday and legal holidays) in which to elect to participate in the setting of casing and the completion at-  
8 tempt. Such election, when made, shall include consent to all necessary expenditures for the completing and equipping of such well, in-  
9 cluding necessary tankage and/or surface facilities. Failure of any party receiving such notice to reply within the period above fixed shall  
10 constitute an election by that party not to participate in the cost of the completion attempt. If one or more, but less than all of the parties,  
11 elect to set pipe and to attempt a completion, the provisions of Article VI.B.2. hereof (the phrase "reworking, deepening or plugging  
12 back" as contained in Article VI.B.2. shall be deemed to include "completing") shall apply to the operations thereafter conducted by less  
13 than all parties.

14  
15 2. Rework or Plug Back: Without the consent of all parties, no well shall be reworked or plugged back except a well reworked or  
16 plugged back pursuant to the provisions of Article VI.B.2. of this agreement. Consent to the reworking or plugging back of a well shall  
17 include all necessary expenditures in conducting such operations and completing and equipping of said well, including necessary tankage  
18 and/or surface facilities.

19  
20 3. Other Operations: Without the consent of all parties, Operator shall not undertake any single project reasonably estimated  
21 to require an expenditure in excess of twenty-five thousand Dollars (\$ 25,000.00)  
22 except in connection with a well, the drilling, reworking, deepening, completing, recompleting, or plugging back of which has been  
23 previously authorized by or pursuant to this agreement; provided, however, that, in case of explosion, fire, flood or other sudden  
24 emergency, whether of the same or different nature, Operator may take such steps and incur such expenses as in its opinion are required  
25 to deal with the emergency to safeguard life and property but Operator, as promptly as possible, shall report the emergency to the other  
26 parties. If Operator prepares an authority for expenditure (AFE) for its own use, Operator shall furnish any Non-Operator so requesting  
27 an information copy thereof for any single project costing in excess of fifteen thousand  
28 Dollars (\$ 15,000.00) but less than the amount first set forth above in this paragraph.

E. Rentals, Shut-in Well Payments and Minimum Royalties:

29  
30  
31  
32 Rentals, shut-in well payments and minimum royalties which may be required under the terms of any lease shall be paid by the  
33 party or parties who subjected such lease to this agreement at its or their expense. In the event two or more parties own and have con-  
34 tributed interests in the same lease to this agreement, such parties may designate one of such parties to make said payments for and on  
35 behalf of all such parties. Any party may request, and shall be entitled to receive, proper evidence of all such payments. In the event of  
36 failure to make proper payment of any rental, shut-in well payment or minimum royalty through mistake or oversight where such pay-  
37 ment is required to continue the lease in force, any loss which results from such non-payment shall be borne in accordance with the pro-  
38 visions of Article IV.B.2.

39  
40 Operator shall notify Non-Operator of the anticipated completion of a shut-in gas well, or the shutting in or return to production  
41 of a producing gas well, at least five (5) days (excluding Saturday, Sunday and legal holidays), or at the earliest opportunity permitted by  
42 circumstances, prior to taking such action, but assumes no liability for failure to do so. In the event of failure by Operator to so notify  
43 Non-Operator, the loss of any lease contributed hereto by Non-Operator for failure to make timely payments of any shut-in well payment  
44 shall be borne jointly by the parties hereto under the provisions of Article IV.B.3.

F. Taxes:

45  
46  
47  
48 Beginning with the first calendar year after the effective date hereof, Operator shall render for ad valorem taxation all property  
49 subject to this agreement which by law should be rendered for such taxes, and it shall pay all such taxes assessed thereon before they  
50 become delinquent. Prior to the rendition date, each Non-Operator shall furnish Operator information as to burdens (to include, but not  
51 be limited to, royalties, overriding royalties and production payments) on leases and oil and gas interests contributed by such Non-  
52 Operator. If the assessed valuation of any leasehold estate is reduced by reason of its being subject to outstanding excess royalties, over-  
53 riding royalties or production payments, the reduction in ad valorem taxes resulting therefrom shall inure to the benefit of the owner or  
54 owners of such leasehold estate, and Operator shall adjust the charge to such owner or owners so as to reflect the benefit of such reduc-  
55 tion. If the ad valorem taxes are based in whole or in part upon separate valuations of each party's working interest, then notwithstanding  
56 anything to the contrary herein, charges to the joint account shall be made and paid by the parties hereto in accordance with the tax  
57 value generated by each party's working interest. Operator shall bill the other parties for their proportionate shares of all tax payments in  
58 the manner provided in Exhibit "C".

59  
60 If Operator considers any tax assessment improper, Operator may, at its discretion, protest within the time and manner  
61 prescribed by law, and prosecute the protest to a final determination, unless all parties agree to abandon the protest prior to final deter-  
62 mination. During the pendency of administrative or judicial proceedings, Operator may elect to pay, under protest, all such taxes and any  
63 interest and penalty. When any such protested assessment shall have been finally determined, Operator shall pay the tax for the joint ac-  
64 count, together with any interest and penalty accrued, and the total cost shall then be assessed against the parties, and be paid by them, as  
65 provided in Exhibit "C".

66  
67 Each party shall pay or cause to be paid all production, severance, excise, gathering and other taxes imposed upon or with respect to  
68 the production or handling of such party's share of oil and/or gas produced under the terms of this agreement.  
69  
70

ARTICLE VII  
continued

1 G. Insurance:

2  
3 At all times while operations are conducted hereunder, Operator shall comply with the workmen's compensation law of  
4 the state where the operations are being conducted; provided, however, that Operator may be a self-insurer for liability under said com-  
5 pensation laws in which event the only charge that shall be made to the joint account shall be as provided in Exhibit "C". Operator shall  
6 also carry or provide insurance for the benefit of the joint account of the parties as outlined in Exhibit "D", attached to and made a part  
7 hereof. Operator shall require all contractors engaged in work on or for the Contract Area to comply with the workmen's compensation  
8 law of the state where the operations are being conducted and to maintain such other insurance as Operator may require.

9  
10 In the event automobile public liability insurance is specified in said Exhibit "D", or subsequently receives the approval of the  
11 parties, no direct charge shall be made by Operator for premiums paid for such insurance for Operator's automotive equipment.

12  
13 ARTICLE VIII.  
14 ACQUISITION, MAINTENANCE OR TRANSFER OF INTEREST  
15

16 A. Surrender of Leases:

17  
18 The leases covered by this agreement, insofar as they embrace acreage in the Contract Area, shall not be surrendered in whole  
19 or in part unless all parties consent thereto.

20  
21 However, should any party desire to surrender its interest in any lease or in any portion thereof, and the other parties do not  
22 agree or consent thereto, the party desiring to surrender shall assign, without express or implied warranty of title, all of its interest in  
23 such lease, or portion thereof, and any well, material and equipment which may be located thereon and any rights in production  
24 thereafter secured, to the parties not consenting to such surrender. If the interest of the assigning party is or includes an oil and gas in-  
25 terest, the assigning party shall execute and deliver to the party or parties not consenting to such surrender an oil and gas lease covering  
26 such oil and gas interest for a term of one (1) year and so long thereafter as oil and/or gas is produced from the land covered thereby, such  
27 lease to be on the form attached hereto as Exhibit "B". Upon such assignment or lease, the assigning party shall be relieved from all  
28 obligations thereafter accruing, but not theretofore accrued, with respect to the interest assigned or leased and the operation of any well  
29 attributable thereto, and the assigning party shall have no further interest in the assigned or leased premises and its equipment and pro-  
30 duction other than the royalties retained in any lease made under the terms of this Article. The party assignee or lessee shall pay to the  
31 party assignor or lessor the reasonable salvage value of the latter's interest in any wells and equipment attributable to the assigned or leas-  
32 ed acreage. The value of all material shall be determined in accordance with the provisions of Exhibit "C", less the estimated cost of  
33 salvaging and the estimated cost of plugging and abandoning. If the assignment or lease is in favor of more than one party, the interest  
34 shall be shared by such parties in the proportions that the interest of each bears to the total interest of all such parties.

35  
36 Any assignment, lease or surrender made under this provision shall not reduce or change the assignor's, lessor's or surrendering  
37 party's interest as it was immediately before the assignment, lease or surrender in the balance of the Contract Area; and the acreage  
38 assigned, leased or surrendered, and subsequent operations thereon, shall not thereafter be subject to the terms and provisions of this  
39 agreement.

40  
41 B. Renewal or Extension of Leases:

42  
43 If any party secures a renewal of any oil and gas lease subject to this agreement, all other parties shall be notified promptly, and  
44 shall have the right for a period of thirty (30) days following receipt of such notice in which to elect to participate in the ownership of the  
45 renewal lease, insofar as such lease affects lands within the Contract Area, by paying to the party who acquired it their several proper pro-  
46 portionate shares of the acquisition cost allocated to that part of such lease within the Contract Area, which shall be in proportion to the  
47 interests held at that time by the parties in the Contract Area.

48  
49 If some, but less than all, of the parties elect to participate in the purchase of a renewal lease, it shall be owned by the parties  
50 who elect to participate therein, in a ratio based upon the relationship of their respective percentage of participation in the Contract Area  
51 to the aggregate of the percentages of participation in the Contract Area of all parties participating in the purchase of such renewal lease.  
52 Any renewal lease in which less than all parties elect to participate shall not be subject to this agreement.

53  
54 Each party who participates in the purchase of a renewal lease shall be given an assignment of its proportionate interest therein  
55 by the acquiring party.

56  
57 The provisions of this Article shall apply to renewal leases whether they are for the entire interest covered by the expiring lease  
58 or cover only a portion of its area or an interest therein. Any renewal lease taken before the expiration of its predecessor lease, or taken or  
59 contracted for within six (6) months after the expiration of the existing lease shall be subject to this provision; but any lease taken or con-  
60 tracted for more than six (6) months after the expiration of an existing lease shall not be deemed a renewal lease and shall not be subject to  
61 the provisions of this agreement.

62  
63 The provisions in this Article shall also be applicable to extensions of oil and gas leases.

64  
65 C. Acreage or Cash Contributions:

66  
67 While this agreement is in force, if any party contracts for a contribution of cash towards the drilling of a well or any other  
68 operation on the Contract Area, such contribution shall be paid to the party who conducted the drilling or other operation and shall be  
69 applied by it against the cost of such drilling or other operation. If the contribution be in the form of acreage, the party to whom the con-  
70 tribution is made shall promptly tender an assignment of the acreage, without warranty of title, to the Drilling Parties in the proportions

ARTICLE VIII  
continued

1 said Drilling Parties shared the cost of drilling the well. Such acreage shall become a separate Contract Area and, to the extent possible, be  
2 governed by provisions identical to this agreement. Each party shall promptly notify all other parties of any acreage or cash contributions  
3 it may obtain in support of any well or any other operation on the Contract Area. The above provisions shall also be applicable to op-  
4 tional rights to earn acreage outside the Contract Area which are in support of a well drilled inside the Contract Area.

5  
6 If any party contracts for any consideration relating to disposition of such party's share of substances produced hereunder, such  
7 consideration shall not be deemed a contribution as contemplated in this Article VIII.C.

8  
9 **D. Maintenance of Uniform Interest:**

10  
11 For the purpose of maintaining uniformity of ownership in the oil and gas leasehold interests covered by this agreement, no  
12 party shall sell, encumber, transfer or make other disposition of its interest in the leases embraced within the Contract Area and in wells,  
13 equipment and production unless such disposition covers either:

- 14  
15 1. the entire interest of the party in all leases and equipment and production; or  
16  
17 2. an equal undivided interest in all leases and equipment and production in the Contract Area.

18  
19 Every such sale, encumbrance, transfer or other disposition made by any party shall be made expressly subject to this agreement  
20 and shall be made without prejudice to the right of the other parties.

21  
22 If, at any time the interest of any party is divided among and owned by four or more co-owners, Operator, at its discretion, may  
23 require such co-owners to appoint a single trustee or agent with full authority to receive notices, approve expenditures, receive billings for  
24 and approve and pay such party's share of the joint expenses, and to deal generally with, and with power to bind, the co-owners of such  
25 party's interest within the scope of the operations embraced in this agreement; however, all such co-owners shall have the right to enter  
26 into and execute all contracts or agreements for the disposition of their respective shares of the oil and gas produced from the Contract  
27 Area and they shall have the right to receive, separately, payment of the sale proceeds thereof.

28  
29 **E. Waiver of Rights to Partition:**

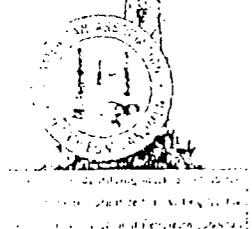
30  
31 If permitted by the laws of the state or states in which the property covered hereby is located, each party hereto owning an  
32 undivided interest in the Contract Area waives any and all rights it may have to partition and have set aside to it in severalty its undivided  
33 interest therein.

34  
35 ~~**F. Preferential Right to Purchase:**~~

36  
37 ~~Should any party desire to sell all or any part of its interests under this agreement, or its rights and interests in the Contract~~  
38 ~~Area, it shall promptly give written notice to the other parties, with full information concerning its proposed sale, which shall include the~~  
39 ~~name and address of the prospective purchaser (who must be ready, willing and able to purchase), the purchase price, and all other terms~~  
40 ~~of the offer. The other parties shall then have an optional prior right, for a period of ten (10) days after receipt of the notice, to purchase~~  
41 ~~on the same terms and conditions the interest which the other party proposes to sell; and, if this optional right is exercised, the purchas-~~  
42 ~~ing parties shall share the purchased interest in the proportions that the interest of each bears to the total interest of all purchasing par-~~  
43 ~~ties. However, there shall be no preferential right to purchase in those cases where any party wishes to mortgage its interests, or to~~  
44 ~~dispose of its interests by merger, reorganization, consolidation, or sale of all or substantially all of its assets to a subsidiary or parent com-~~  
45 ~~pany or to a subsidiary of a parent company, or to any company in which any one party owns a majority of the stock.~~

46  
47 **ARTICLE IX.**  
48 **INTERNAL REVENUE CODE ELECTION**

49  
50 This agreement is not intended to create, and shall not be construed to create, a relationship of partnership or an association  
51 for profit between or among the parties hereto. Notwithstanding any provision herein that the rights and liabilities hereunder are several  
52 and not joint or collective, or that this agreement and operations hereunder shall not constitute a partnership, if, for federal income tax  
53 purposes, this agreement and the operations hereunder are regarded as a partnership, each party hereby affected elects to be excluded  
54 from the application of all of the provisions of Subchapter "K", Chapter 1, Subtitle "A", of the Internal Revenue Code of 1954, as per-  
55 mitted and authorized by Section 761 of the Code and the regulations promulgated thereunder. Operator is authorized and directed to ex-  
56 ecute on behalf of each party hereby affected such evidence of this election as may be required by the Secretary of the Treasury of the  
57 United States or the Federal Internal Revenue Service, including specifically, but not by way of limitation, all of the returns, statements,  
58 and the data required by Federal Regulations 1.761. Should there be any requirement that each party hereby affected give further  
59 evidence of this election, each such party shall execute such documents and furnish such other evidence as may be required by the  
60 Federal Internal Revenue Service or as may be necessary to evidence this election. No such party shall give any notices or take any other  
61 action inconsistent with the election made hereby. If any present or future income tax laws of the state or states in which the Contract  
62 Area is located or any future income tax laws of the United States contain provisions similar to those in Subchapter "K", Chapter 1,  
63 Subtitle "A", of the Internal Revenue Code of 1954, under which an election similar to that provided by Section 761 of the Code is per-  
64 mitted, each party hereby affected shall make such election as may be permitted or required by such laws. In making the foregoing elec-  
65 tion, each such party states that the income derived by such party from operations hereunder can be adequately determined without the  
66 computation of partnership taxable income.



ARTICLE X.  
CLAIMS AND LAWSUITS

Operator may settle any single uninsured third party damage claim or suit arising from operations hereunder if the expenditure does not exceed ten thousand and no/100----- Dollars (\$10,000.00) and if the payment is in complete settlement of such claim or suit. If the amount required for settlement exceeds the above amount, the parties hereto shall assume and take over the further handling of the claim or suit, unless such authority is delegated to Operator. All costs and expenses of handling, settling, or otherwise discharging such claim or suit shall be at the joint expense of the parties participating in the operation from which the claim or suit arises. If a claim is made against any party or if any party is sued on account of any matter arising from operations hereunder over which such individual has no control because of the rights given Operator by this agreement, such party shall immediately notify all other parties, and the claim or suit shall be treated as any other claim or suit involving operations hereunder.

ARTICLE XI.  
FORCE MAJEURE

If any party is rendered unable, wholly or in part, by force majeure to carry out its obligations under this agreement, other than the obligation to make money payments, that party shall give to all other parties prompt written notice of the force majeure with reasonably full particulars concerning it; thereupon, the obligations of the party giving the notice, so far as they are affected by the force majeure, shall be suspended during, but no longer than, the continuance of the force majeure. The affected party shall use all reasonable diligence to remove the force majeure situation as quickly as practicable.

The requirement that any force majeure shall be remedied with all reasonable dispatch shall not require the settlement of strikes, lockouts, or other labor difficulty by the party involved, contrary to its wishes; how all such difficulties shall be handled shall be entirely within the discretion of the party concerned.

The term "force majeure", as here employed, shall mean an act of God, strike, lockout, or other industrial disturbance, act of the public enemy, war, blockade, public riot, lightning, fire, storm, flood, explosion, governmental action, governmental delay, restraint or inaction, unavailability of equipment, and any other cause, whether of the kind specifically enumerated above or otherwise, which is not reasonably within the control of the party claiming suspension.

ARTICLE XII.  
NOTICES

All notices authorized or required between the parties and required by any of the provisions of this agreement, unless otherwise specifically provided, shall be given in writing by mail or telegram, postage or charges prepaid, or by telex or telecopier and addressed to the parties to whom the notice is given at the addresses listed on Exhibit "A". The originating notice given under any provision hereof shall be deemed given only when received by the party to whom such notice is directed, and the time for such party to give any notice in response thereto shall run from the date the originating notice is received. The second or any responsive notice shall be deemed given when deposited in the mail or with the telegraph company, with postage or charges prepaid, or sent by telex or telecopier. Each party shall have the right to change its address at any time, and from time to time, by giving written notice thereof to all other parties.

ARTICLE XIII.  
TERM OF AGREEMENT

This agreement shall remain in full force and effect as to the oil and gas leases and/or oil and gas interests subject hereto for the period of time selected below; provided, however, no party hereto shall ever be construed as having any right, title or interest in or to any lease or oil and gas interest contributed by any other party beyond the term of this agreement.

Option No. 1: So long as any of the oil and gas leases subject to this agreement remain or are continued in force as to any part of the Contract Area, whether by production, extension, renewal or otherwise.

Option No. 2: In the event the well described in Article VI.A., or any subsequent well drilled under any provision of this agreement, results in production of oil and/or gas in paying quantities, this agreement shall continue in force so long as any such well or wells produce, or are capable of production, and for an additional period of 90 days from cessation of all production; provided, however, if, prior to the expiration of such additional period, one or more of the parties hereto are engaged in drilling, reworking, deepening, plugging back, testing or attempting to complete a well or wells hereunder, this agreement shall continue in force until such operations have been completed and if production results therefrom, this agreement shall continue in force as provided herein. In the event the well described in Article VI.A., or any subsequent well drilled hereunder, results in a dry hole, and no other well is producing, or capable of producing oil and/or gas from the Contract Area, this agreement shall terminate unless drilling, deepening, plugging back or reworking operations are commenced within \_\_\_\_\_ days from the date of abandonment of said well.

It is agreed, however, that the termination of this agreement shall not relieve any party hereto from any liability which has accrued or attached prior to the date of such termination.

ARTICLE XIV.  
COMPLIANCE WITH LAWS AND REGULATIONS

A. Laws, Regulations and Orders:

This agreement shall be subject to the conservation laws of the state in which the Contract Area is located, to the valid rules, regulations, and orders of any duly constituted regulatory body of said state; and to all other applicable federal, state, and local laws, ordinances, rules, regulations, and orders.

B. Governing Law:

This agreement and all matters pertaining hereto, including, but not limited to, matters of performance, non-performance, breach, remedies, procedures, rights, duties and interpretation or construction, shall be governed and determined by the law of the state in which the Contract Area is located. If the Contract Area is in two or more states, the law of the state of \_\_\_\_\_ shall govern.

C. Regulatory Agencies:

Nothing herein contained shall grant, or be construed to grant, Operator the right or authority to waive or release any rights, privileges, or obligations which Non-Operators may have under federal or state laws or under rules, regulations or orders promulgated under such laws in reference to oil, gas and mineral operations, including the location, operation, or production of wells, on tracts offsetting or adjacent to the Contract Area.

With respect to operations hereunder, Non-Operators agree to release Operator from any and all losses, damages, injuries, claims and causes of action arising out of, incident to or resulting directly or indirectly from Operator's interpretation or application of rules, rulings, regulations or orders of the Department of Energy or predecessor or successor agencies to the extent such interpretation or application was made in good faith. Each Non-Operator further agrees to reimburse Operator for any amounts applicable to such Non-Operator's share of production that Operator may be required to refund, rebate or pay as a result of such an incorrect interpretation or application, together with interest and penalties thereon owing by Operator as a result of such incorrect interpretation or application.

Non-Operators authorize Operator to prepare and submit such documents as may be required to be submitted to the purchaser of any crude oil sold hereunder or to any other person or entity pursuant to the requirements of the "Crude Oil Windfall Profit Tax Act of 1980", as same may be amended from time to time ("Act"), and any valid regulations or rules which may be issued by the Treasury Department from time to time pursuant to said Act. Each party hereto agrees to furnish any and all certifications or other information which is required to be furnished by said Act in a timely manner and in sufficient detail to permit compliance with said Act.

ARTICLE XV.  
OTHER PROVISIONS

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ARTICLE XVI.  
MISCELLANEOUS

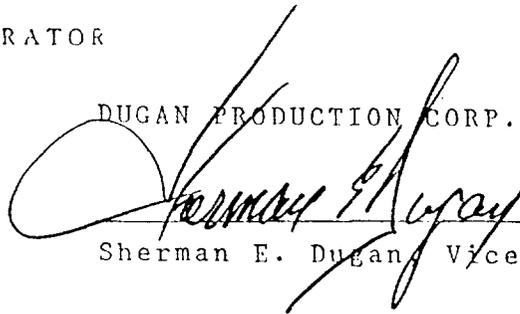
This agreement shall be binding upon and shall inure to the benefit of the parties hereto and to their respective heirs, devisees, legal representatives, successors and assigns.

This instrument may be executed in any number of counterparts, each of which shall be considered an original for all purposes.

IN WITNESS WHEREOF, this agreement shall be effective as of 3rd day of October, 1997.

OPERATOR

DUGAN PRODUCTION CORP.



Sherman E. Dugan, Vice President

ATTEST

NON-OPERATORS

Caulkins Oil Company

ATTEST

Louis Dreyfus Natural Gas Corp.

ATTEST

Marathon Oil Company

ATTEST

EXHIBIT "A"

Attached to and made a part of that certain Operating  
Agreement by and between  
DUGAN PRODUCTION CORP., as Operator, and  
CAULKINS OIL COMPANY, as Non-Operators,

dated OCTOBER 3, 1997

I. LANDS SUBJECT TO THIS AGREEMENT

Township 26 North, Range 7 West, NMPM  
Section 14: S/2  
Rio Arriba County, New Mexico

II. RESTRICTIONS AS TO DEPTH LIMITATION:

From the top of the Mesaverde Formation to the base of the Dakota  
Formation.

III. WORKING INTERESTS OF THE PARTIES TO THIS AGREEMENT  
AND ADDRESSES FOR NOTICE PURPOSES

Dugan Production Corp. P. O. Box 420 Farmington, New Mexico 87499	50.00%
Caulkins Oil Company P.O. Box 340 Bloomfield, New Mexico 87413	27.50%
Louis Dreyfus Natural Gas Corp. 14000 Quail Springs Parkway, Ste. 600 Oklahoma City, OK. 73134-2600	11.25%
Marathon Oil Company P.O. Box 552 Midland, TX 79702	11.25%
TOTAL	100.00%

IV. LEASES SUBJECT TO THIS AGREEMENT

Federal Lease NM - 99002, dated September 1, 1997 with Dugan Production Corp. as original lessee, insofar and only insofar as said lease covers the SE/4 of Section 14, Township 26 North, Range 7 West.

Federal Lease NM - 03381, dated April 1, 1948, with Husky Oil Company as original lessee, insofar and only insofar as said lease covers the SW/4 of Section 14. Township 26 North, Range 7 West.

EXHIBIT "B"

Attached to and made a part of that certain Operating  
Agreement by and between DUGAN PRODUCTION CORP.,  
as Operator, and CAULKINS OIL COMPANY , as Non-Operator,

dated October 3, 1997

There is no EXHIBIT "B" to this Agreement.

## EXHIBIT " C "

Attached to and made a part of that certain operating agreement dated October 3, 1997  
between Dugan Production Corp., as Operator and Caulkins Oil Company,  
as Non-operator

## ACCOUNTING PROCEDURE JOINT OPERATIONS

### I. GENERAL PROVISIONS

#### 1. Definitions

"Joint Property" shall mean the real and personal property subject to the agreement to which this Accounting Procedure is attached.

"Joint Operations" shall mean all operations necessary or proper for the development, operation, protection and maintenance of the Joint Property.

"Joint Account" shall mean the account showing the charges paid and credits received in the conduct of the Joint Operations and which are to be shared by the Parties.

"Operator" shall mean the party designated to conduct the Joint Operations.

"Non-Operators" shall mean the Parties to this agreement other than the Operator.

"Parties" shall mean Operator and Non-Operators.

"First Level Supervisors" shall mean those employees whose primary function in Joint Operations is the direct supervision of other employees and/or contract labor directly employed on the Joint Property in a field operating capacity.

"Technical Employees" shall mean those employees having special and specific engineering, geological or other professional skills, and whose primary function in Joint Operations is the handling of specific operating conditions and problems for the benefit of the Joint Property.

"Personal Expenses" shall mean travel and other reasonable reimbursable expenses of Operator's employees.

"Material" shall mean personal property, equipment or supplies acquired or held for use on the Joint Property.

"Controllable Material" shall mean Material which at the time is so classified in the Material Classification Manual as most recently recommended by the Council of Petroleum Accountants Societies.

#### 2. Statement and Billings

Operator shall bill Non-Operators on or before the last day of each month for their proportionate share of the Joint Account for the preceding month. Such bills will be accompanied by statements which identify the authority for expenditure, lease or facility, and all charges and credits summarized by appropriate classifications of investment and expense except that items of Controllable Material and unusual charges and credits shall be separately identified and fully described in detail.

#### 3. Advances and Payments by Non-Operators

A. Unless otherwise provided for in the agreement, the Operator may require the Non-Operators to advance their share of estimated cash outlay for the succeeding month's operation within fifteen (15) days after receipt of the billing or by the first day of the month for which the advance is required, whichever is later. Operator shall adjust each monthly billing to reflect advances received from the Non-Operators.

B. Each Non-Operator shall pay its proportion of all bills within fifteen (15) days after receipt. If payment is not made within such time, the unpaid balance shall bear interest monthly at the prime rate in effect at Chase  
Manhattan, New York on the first day of the month in which delinquency occurs plus 1% or the maximum contract rate permitted by the applicable usury laws in the state in which the Joint Property is located, whichever is the lesser, plus attorney's fees, court costs, and other costs in connection with the collection of unpaid amounts.

#### 4. Adjustments

Payment of any such bills shall not prejudice the right of any Non-Operator to protest or question the correctness thereof; provided, however, all bills and statements rendered to Non-Operators by Operator during any calendar year shall conclusively be presumed to be true and correct after twenty-four (24) months following the end of any such calendar year, unless within the said twenty-four (24) month period a Non-Operator takes written exception thereto and makes claim on Operator for adjustment. No adjustment favorable to Operator shall be made unless it is made within the same prescribed period. The provisions of this paragraph shall not prevent adjustments resulting from a physical inventory of Controllable Material as provided for in Section V.

## 5. Audits

- A. A Non-Operator, upon notice in writing to Operator and all other Non-Operators, shall have the right to audit Operator's accounts and records relating to the Joint Account for any calendar year within the twenty-four (24) month period following the end of such calendar year; provided, however, the making of an audit shall not extend the time for the taking of written exception to and the adjustments of accounts as provided for in Paragraph 4 of this Section I. Where there are two or more Non-Operators, the Non-Operators shall make every reasonable effort to conduct a joint audit in a manner which will result in a minimum of inconvenience to the Operator. Operator shall bear no portion of the Non-Operators' audit cost incurred under this paragraph unless agreed to by the Operator. The audits shall not be conducted more than once each year without prior approval of Operator, except upon the resignation or removal of the Operator, and shall be made at the expense of those Non-Operators approving such audit.
- B. The Operator shall reply in writing to an audit report within 180 days after receipt of such report.

## 6. Approval By Non-Operators

Where an approval or other agreement of the Parties or Non-Operators is expressly required under other sections of this Accounting Procedure and if the agreement to which this Accounting Procedure is attached contains no contrary provisions in regard thereto, Operator shall notify all Non-Operators of the Operator's proposal, and the agreement or approval of a majority in interest of the Non-Operators shall be controlling on all Non-Operators.

## II. DIRECT CHARGES

Operator shall charge the Joint Account with the following items:

### 1. Ecological and Environmental

Costs incurred for the benefit of the Joint Property as a result of governmental or regulatory requirements to satisfy environmental considerations applicable to the Joint Operations. Such costs may include surveys of an ecological or archaeological nature and pollution control procedures as required by applicable laws and regulations.

### 2. Rentals and Royalties

Lease rentals and royalties paid by Operator for the Joint Operations.

### 3. Labor

- A. (1) Salaries and wages of Operator's field employees directly employed on the Joint Property in the conduct of Joint Operations.
- (2) Salaries of First Level Supervisors in the field.
- (3) Salaries and wages of Technical Employees directly employed on the Joint Property if such charges are excluded from the overhead rates.
- (4) Salaries and wages of Technical Employees either temporarily or permanently assigned to and directly employed in the operation of the Joint Property if such charges are excluded from the overhead rates.
- B. Operator's cost of holiday, vacation, sickness and disability benefits and other customary allowances paid to employees whose salaries and wages are chargeable to the Joint Account under Paragraph 3A of this Section II. Such costs under this Paragraph 3B may be charged on a "when and as paid basis" or by "percentage assessment" on the amount of salaries and wages chargeable to the Joint Account under Paragraph 3A of this Section II. If percentage assessment is used, the rate shall be based on the Operator's cost experience.
- C. Expenditures or contributions made pursuant to assessments imposed by governmental authority which are applicable to Operator's costs chargeable to the Joint Account under Paragraphs 3A and 3B of this Section II.
- D. Personal Expenses of those employees whose salaries and wages are chargeable to the Joint Account under Paragraph 3A of this Section II.

### 4. Employee Benefits

Operator's current costs of established plans for employees' group life insurance, hospitalization, pension, retirement, stock purchase, thrift, bonus, and other benefit plans of a like nature, applicable to Operator's labor cost chargeable to the Joint Account under Paragraphs 3A and 3B of this Section II shall be Operator's actual cost not to exceed the percent most recently recommended by the Council of Petroleum Accountants Societies.

### 5. Material

Material purchased or furnished by Operator for use on the Joint Property as provided under Section IV. Only such Material shall be purchased for or transferred to the Joint Property as may be required for immediate use and is reasonably practical and consistent with efficient and economical operations. The accumulation of surplus stocks shall be avoided.

### 6. Transportation

Transportation of employees and Material necessary for the Joint Operations but subject to the following limitations:

- A. If Material is moved to the Joint Property from the Operator's warehouse or other properties, no charge shall be made to the Joint Account for a distance greater than the distance from the nearest reliable supply store where like material is normally available or railway receiving point nearest the Joint Property unless agreed to by the Parties.

- B. If surplus Material is moved to Operator's warehouse or other storage point, no charge shall be made to the Joint Account for a distance greater than the distance to the nearest reliable supply store where like material is normally available, or railway receiving point nearest the Joint Property unless agreed to by the Parties. No charge shall be made to the Joint Account for moving Material to other properties belonging to Operator, unless agreed to by the Parties.
- C. In the application of subparagraphs A and B above, the option to equalize or charge actual trucking cost is available when the actual charge is \$400 or less excluding accessorial charges. The \$400 will be adjusted to the amount most recently recommended by the Council of Petroleum Accountants Societies.

## 7. Services

The cost of contract services, equipment and utilities provided by outside sources, except services excluded by Paragraph 10 of Section II and Paragraph i, ii, and iii, of Section III. The cost of professional consultant services and contract services of technical personnel directly engaged on the Joint Property if such charges are excluded from the overhead rates. The cost of professional consultant services or contract services of technical personnel not directly engaged on the Joint Property shall not be charged to the Joint Account unless previously agreed to by the Parties.

## 8. Equipment and Facilities Furnished By Operator

- A. Operator shall charge the Joint Account for use of Operator owned equipment and facilities at rates commensurate with costs of ownership and operation. Such rates shall include costs of maintenance, repairs, other operating expense, insurance, taxes, depreciation, and interest on gross investment less accumulated depreciation not to exceed twelve percent (12%) per annum. Such rates shall not exceed average commercial rates currently prevailing in the immediate area of the Joint Property.
- B. In lieu of charges in paragraph 8A above, Operator may elect to use average commercial rates prevailing in the immediate area of the Joint Property less 20%. For automotive equipment, Operator may elect to use rates published by the Petroleum Motor Transport Association.

## 9. Damages and Losses to Joint Property

All costs or expenses necessary for the repair or replacement of Joint Property made necessary because of damages or losses incurred by fire, flood, storm, theft, accident, or other cause, except those resulting from Operator's gross negligence or willful misconduct. Operator shall furnish Non-Operator written notice of damages or losses incurred as soon as practicable after a report thereof has been received by Operator.

## 10. Legal Expense

Expense of handling, investigating and settling litigation or claims, discharging of liens, payment of judgements and amounts paid for settlement of claims incurred in or resulting from operations under the agreement or necessary to protect or recover the Joint Property, except that no charge for services of Operator's legal staff or fees or expense of outside attorneys shall be made unless previously agreed to by the Parties. All other legal expense is considered to be covered by the overhead provisions of Section III unless otherwise agreed to by the Parties, except as provided in Section I, Paragraph 3.

## 11. Taxes

All taxes of every kind and nature assessed or levied upon or in connection with the Joint Property, the operation thereof, or the production therefrom, and which taxes have been paid by the Operator for the benefit of the Parties. If the ad valorem taxes are based in whole or in part upon separate valuations of each party's working interest, then notwithstanding anything to the contrary herein, charges to the Joint Account shall be made and paid by the Parties hereto in accordance with the tax value generated by each party's working interest.

## 12. Insurance

Net premiums paid for insurance required to be carried for the Joint Operations for the protection of the Parties. In the event Joint Operations are conducted in a state in which Operator may act as self-insurer for Worker's Compensation and/or Employers Liability under the respective state's laws, Operator may, at its election, include the risk under its self-insurance program and in that event, Operator shall include a charge at Operator's cost not to exceed manual rates.

## 13. Abandonment and Reclamation

Costs incurred for abandonment of the Joint Property, including costs required by governmental or other regulatory authority.

## 14. Communications

Cost of acquiring, leasing, installing, operating, repairing and maintaining communication systems, including radio and microwave facilities directly serving the Joint Property. In the event communication facilities/systems serving the Joint Property are Operator owned, charges to the Joint Account shall be made as provided in Paragraph 8 of this Section II.

## 15. Other Expenditures

Any other expenditure not covered or dealt with in the foregoing provisions of this Section II, or in Section III and which is of direct benefit to the Joint Property and is incurred by the Operator in the necessary and proper conduct of the Joint Operations.

III. OVERHEAD

1. Overhead - Drilling and Producing Operations

i. As compensation for administrative, supervision, office services and warehousing costs, Operator shall charge drilling and producing operations on either:

- Fixed Rate Basis, Paragraph 1A, or
- Percentage Basis, Paragraph 1B

Unless otherwise agreed to by the Parties, such charge shall be in lieu of costs and expenses of all offices and salaries or wages plus applicable burdens and expenses of all personnel, except those directly chargeable under Paragraph 3A, Section II. The cost and expense of services from outside sources in connection with matters of taxation, traffic, accounting or matters before or involving governmental agencies shall be considered as included in the overhead rates provided for in the above selected Paragraph of this Section III unless such cost and expense are agreed to by the Parties as a direct charge to the Joint Account.

ii. The salaries, wages and Personal Expenses of Technical Employees and/or the cost of professional consultant services and contract services of technical personnel directly employed on the Joint Property:

- shall be covered by the overhead rates, or
- shall not be covered by the overhead rates.

iii. The salaries, wages and Personal Expenses of Technical Employees and/or costs of professional consultant services and contract services of technical personnel either temporarily or permanently assigned to and directly employed in the operation of the Joint Property:

- shall be covered by the overhead rates, or
- shall not be covered by the overhead rates.

A. Overhead - Fixed Rate Basis

(1) Operator shall charge the Joint Account at the following rates per well per month:

Drilling Well Rate \$ 4000.00  
(Prorated for less than a full month)

Producing Well Rate \$ 400.00

(2) Application of Overhead - Fixed Rate Basis shall be as follows:

(a) Drilling Well Rate

- (1) Charges for drilling wells shall begin on the date the well is spudded and terminate on the date the drilling rig, completion rig, or other units used in completion of the well is released, whichever is later, except that no charge shall be made during suspension of drilling or completion operations for fifteen (15) or more consecutive calendar days.
- (2) Charges for wells undergoing any type of workover or recompletion for a period of five (5) consecutive work days or more shall be made at the drilling well rate. Such charges shall be applied for the period from date workover operations, with rig or other units used in workover, commence through date of rig or other unit release, except that no charge shall be made during suspension of operations for fifteen (15) or more consecutive calendar days.

(b) Producing Well Rates

- (1) An active well either produced or injected into for any portion of the month shall be considered as a one-well charge for the entire month.
  - (2) Each active completion in a multi-completed well in which production is not commingled down hole shall be considered as a one-well charge providing each completion is considered a separate well by the governing regulatory authority.
  - (3) An inactive gas well shut in because of overproduction or failure of purchaser to take the production shall be considered as a one-well charge providing the gas well is directly connected to a permanent sales outlet.
  - (4) A one-well charge shall be made for the month in which plugging and abandonment operations are completed on any well. This one-well charge shall be made whether or not the well has produced except when drilling well rate applies.
  - (5) All other inactive wells (including but not limited to inactive wells covered by unit allowable, lease allowable, transferred allowable, etc.) shall not qualify for an overhead charge.
- (3) The well rates shall be adjusted as of the first day of April each year following the effective date of the agreement to which this Accounting Procedure is attached. The adjustment shall be computed by multiplying the rate currently in use by the percentage increase or decrease in the average weekly earnings of Crude Petroleum and Gas Production Workers for the last calendar year compared to the calendar year preceding as shown by the index of average weekly earnings of Crude Petroleum and Gas Production Workers as published by the United States Department of Labor, Bureau of Labor Statistics, or the equivalent Canadian index as published by Statistics Canada, as applicable. The adjusted rates shall be the rates currently in use, plus or minus the computed adjustment.

B. Overhead - Percentage Basis

(1) Operator shall charge the Joint Account at the following rates:

## (a) Development

\_\_\_\_\_ Percent ( \_\_\_\_\_ %) of the cost of development of the Joint Property exclusive of costs provided under Paragraph 10 of Section II and all salvage credits.

## (b) Operating

\_\_\_\_\_ Percent ( \_\_\_\_\_ %) of the cost of operating the Joint Property exclusive of costs provided under Paragraphs 2 and 10 of Section II, all salvage credits, the value of injected substances purchased for secondary recovery and all taxes and assessments which are levied, assessed and paid upon the mineral interest in and to the Joint Property.

## (2) Application of Overhead - Percentage Basis shall be as follows:

For the purpose of determining charges on a percentage basis under Paragraph 1B of this Section III, development shall include all costs in connection with drilling, redrilling, deepening, or any remedial operations on any or all wells involving the use of drilling rig and crew capable of drilling to the producing interval on the Joint Property; also, preliminary expenditures necessary in preparation for drilling and expenditures incurred in abandoning when the well is not completed as a producer, and original cost of construction or installation of fixed assets, the expansion of fixed assets and any other project clearly discernible as a fixed asset, except Major Construction as defined in Paragraph 2 of this Section III. All other costs shall be considered as operating.

## 2. Overhead - Major Construction

To compensate Operator for overhead costs incurred in the construction and installation of fixed assets, the expansion of fixed assets, and any other project clearly discernible as a fixed asset required for the development and operation of the Joint Property, Operator shall either negotiate a rate prior to the beginning of construction, or shall charge the Joint Account for overhead based on the following rates for any Major Construction project in excess of \$ \_\_\_\_\_ :

- A. -5- % of first \$100,000 or total cost if less, plus  
 B. -3- % of costs in excess of \$100,000 but less than \$1,000,000, plus  
 C. -2- % of costs in excess of \$1,000,000.

Total cost shall mean the gross cost of any one project. For the purpose of this paragraph, the component parts of a single project shall not be treated separately and the cost of drilling and workover wells and artificial lift equipment shall be excluded.

## 3. Catastrophe Overhead

To compensate Operator for overhead costs incurred in the event of expenditures resulting from a single occurrence due to oil spill, blowout, explosion, fire, storm, hurricane, or other catastrophes as agreed to by the Parties, which are necessary to restore the Joint Property to the equivalent condition that existed prior to the event causing the expenditures, Operator shall either negotiate a rate prior to charging the Joint Account or shall charge the Joint Account for overhead based on the following rates:

- A. -5- % of total costs through \$100,000; plus  
 B. -3- % of total costs in excess of \$100,000 but less than \$1,000,000; plus  
 C. -2- % of total costs in excess of \$1,000,000.

Expenditures subject to the overheads above will not be reduced by insurance recoveries, and no other overhead provisions of this Section III shall apply.

## 4. Amendment of Rates

The overhead rates provided for in this Section III may be amended from time to time only by mutual agreement between the Parties hereto if, in practice, the rates are found to be insufficient or excessive.

## IV. PRICING OF JOINT ACCOUNT MATERIAL PURCHASES, TRANSFERS AND DISPOSITIONS

Operator is responsible for Joint Account Material and shall make proper and timely charges and credits for all Material movements affecting the Joint Property. Operator shall provide all Material for use on the Joint Property; however, at Operator's option, such Material may be supplied by the Non-Operator. Operator shall make timely disposition of idle and/or surplus Material, such disposal being made either through sale to Operator or Non-Operator, division in kind, or sale to outsiders. Operator may purchase, but shall be under no obligation to purchase, interest of Non-Operators in surplus condition A or B Material. The disposal of surplus Controllable Material not purchased by the Operator shall be agreed to by the Parties.

## 1. Purchases

Material purchased shall be charged at the price paid by Operator after deduction of all discounts received. In case of Material found to be defective or returned to vendor for any other reasons, credit shall be passed to the Joint Account when adjustment has been received by the Operator.

## 2. Transfers and Dispositions

Material furnished to the Joint Property and Material transferred from the Joint Property or disposed of by the Operator, unless otherwise agreed to by the Parties, shall be priced on the following basis exclusive of cash discounts:

## A. New Material (Condition A)

## (1) Tubular Goods Other than Line Pipe

- (a) Tubular goods, sized 2 $\frac{3}{8}$  inches OD and larger, except line pipe, shall be priced at Eastern mill published carload base prices effective as of date of movement plus transportation cost using the 80,000 pound carload weight basis to the railway receiving point nearest the Joint Property for which published rail rates for tubular goods exist. If the 80,000 pound rail rate is not offered, the 70,000 pound or 90,000 pound rail rate may be used. Freight charges for tubing will be calculated from Lorain, Ohio and casing from Youngstown, Ohio.
- (b) For grades which are special to one mill only, prices shall be computed at the mill base of that mill plus transportation cost from that mill to the railway receiving point nearest the Joint Property as provided above in Paragraph 2.A.(1)(a). For transportation cost from points other than Eastern mills, the 30,000 pound Oil Field Haulers Association interstate truck rate shall be used.
- (c) Special end finish tubular goods shall be priced at the lowest published out-of-stock price, f.o.b. Houston, Texas, plus transportation cost, using Oil Field Haulers Association interstate 30,000 pound truck rate, to the railway receiving point nearest the Joint Property.
- (d) Macaroni tubing (size less than 2 $\frac{3}{8}$  inch OD) shall be priced at the lowest published out-of-stock prices f.o.b. the supplier plus transportation costs, using the Oil Field Haulers Association interstate truck rate per weight of tubing transferred, to the railway receiving point nearest the Joint Property.

## (2) Line Pipe

- (a) Line pipe movements (except size 24 inch OD and larger with walls  $\frac{3}{4}$  inch and over) 30,000 pounds or more shall be priced under provisions of tubular goods pricing in Paragraph A.(1)(a) as provided above. Freight charges shall be calculated from Lorain, Ohio.
  - (b) Line pipe movements (except size 24 inch OD and larger with walls  $\frac{3}{4}$  inch and over) less than 30,000 pounds shall be priced at Eastern mill published carload base prices effective as of date of shipment, plus 20 percent, plus transportation costs based on freight rates as set forth under provisions of tubular goods pricing in Paragraph A.(1)(a) as provided above. Freight charges shall be calculated from Lorain, Ohio.
  - (c) Line pipe 24 inch OD and over and  $\frac{3}{4}$  inch wall and larger shall be priced f.o.b. the point of manufacture at current new published prices plus transportation cost to the railway receiving point nearest the Joint Property.
  - (d) Line pipe, including fabricated line pipe, drive pipe and conduit not listed on published price lists shall be priced at quoted prices plus freight to the railway receiving point nearest the Joint Property or at prices agreed to by the Parties.
- (3) Other Material shall be priced at the current new price, in effect at date of movement, as listed by a reliable supply store nearest the Joint Property, or point of manufacture, plus transportation costs, if applicable, to the railway receiving point nearest the Joint Property.
- (4) Unused new Material, except tubular goods, moved from the Joint Property shall be priced at the current new price, in effect on date of movement, as listed by a reliable supply store nearest the Joint Property, or point of manufacture, plus transportation costs, if applicable, to the railway receiving point nearest the Joint Property. Unused new tubulars will be priced as provided above in Paragraph 2 A (1) and (2).

## B. Good Used Material (Condition B)

Material in sound and serviceable condition and suitable for reuse without reconditioning:

## (1) Material moved to the Joint Property

At seventy-five percent (75%) of current new price, as determined by Paragraph A.

## (2) Material used on and moved from the Joint Property

- (a) At seventy-five percent (75%) of current new price, as determined by Paragraph A, if Material was originally charged to the Joint Account as new Material or
- (b) At sixty-five percent (65%) of current new price, as determined by Paragraph A, if Material was originally charged to the Joint Account as used Material.

## (3) Material not used on and moved from the Joint Property

At seventy-five percent (75%) of current new price as determined by Paragraph A.

The cost of reconditioning, if any, shall be absorbed by the transferring property.

## C. Other Used Material

## (1) Condition C

Material which is not in sound and serviceable condition and not suitable for its original function until after reconditioning shall be priced at fifty percent (50%) of current new price as determined by Paragraph A. The cost of reconditioning shall be charged to the receiving property, provided Condition C value plus cost of reconditioning does not exceed Condition B value.

(2) Condition D

Material, excluding junk, no longer suitable for its original purpose, but usable for some other purpose shall be priced on a basis commensurate with its use. Operator may dispose of Condition D Material under procedures normally used by Operator without prior approval of Non-Operators.

- (a) Casing, tubing, or drill pipe used as line pipe shall be priced as Grade A and B seamless line pipe of comparable size and weight. Used casing, tubing or drill pipe utilized as line pipe shall be priced at used line pipe prices.
- (b) Casing, tubing or drill pipe used as higher pressure service lines than standard line pipe, e.g. power oil lines, shall be priced under normal pricing procedures for casing, tubing, or drill pipe. Upset tubular goods shall be priced on a non upset basis.

(3) Condition E

Junk shall be priced at prevailing prices. Operator may dispose of Condition E Material under procedures normally utilized by Operator without prior approval of Non-Operators.

D. Obsolete Material

Material which is serviceable and usable for its original function but condition and/or value of such Material is not equivalent to that which would justify a price as provided above may be specially priced as agreed to by the Parties. Such price should result in the Joint Account being charged with the value of the service rendered by such Material.

E. Pricing Conditions

- (1) Loading or unloading costs may be charged to the Joint Account at the rate of twenty-five cents (25¢) per hundred weight on all tubular goods movements, in lieu of actual loading or unloading costs sustained at the stocking point. The above rate shall be adjusted as of the first day of April each year following January 1, 1935 by the same percentage increase or decrease used to adjust overhead rates in Section III, Paragraph 1.A(3). Each year, the rate calculated shall be rounded to the nearest cent and shall be the rate in effect until the first day of April next year. Such rate shall be published each year by the Council of Petroleum Accountants Societies.
- (2) Material involving erection costs shall be charged at applicable percentage of the current knocked-down price of new Material.

3. Premium Prices

Whenever Material is not readily obtainable at published or listed prices because of national emergencies, strikes or other unusual causes over which the Operator has no control, the Operator may charge the Joint Account for the required Material at the Operator's actual cost incurred in providing such Material, in making it suitable for use, and in moving it to the Joint Property; provided notice in writing is furnished to Non-Operators of the proposed charge prior to billing Non-Operators for such Material. Each Non-Operator shall have the right, by so electing and notifying Operator within ten days after receiving notice from Operator, to furnish in kind all or part of his share of such Material suitable for use and acceptable to Operator.

4. Warranty of Material Furnished By Operator

Operator does not warrant the Material furnished. In case of defective Material, credit shall not be passed to the Joint Account until adjustment has been received by Operator from the manufacturers or their agents.

V. INVENTORIES

The Operator shall maintain detailed records of Controllable Material.

1. Periodic Inventories, Notice and Representation

At reasonable intervals, inventories shall be taken by Operator of the Joint Account Controllable Material. Written notice of intention to take inventory shall be given by Operator at least thirty (30) days before any inventory is to begin so that Non-Operators may be represented when any inventory is taken. Failure of Non-Operators to be represented at an inventory shall bind Non-Operators to accept the inventory taken by Operator.

2. Reconciliation and Adjustment of Inventories

Adjustments to the Joint Account resulting from the reconciliation of a physical inventory shall be made within six months following the taking of the inventory. Inventory adjustments shall be made by Operator to the Joint Account for overages and shortages, but, Operator shall be held accountable only for shortages due to lack of reasonable diligence.

3. Special Inventories

Special inventories may be taken whenever there is any sale, change of interest, or change of Operator in the Joint Property. It shall be the duty of the party selling to notify all other Parties as quickly as possible after the transfer of interest takes place. In such cases, both the seller and the purchaser shall be governed by such inventory. In cases involving a change of Operator, all Parties shall be governed by such inventory.

4. Expense of Conducting Inventories

- A. The expense of conducting periodic inventories shall not be charged to the Joint Account unless agreed to by the Parties.
- B. The expense of conducting special inventories shall be charged to the Parties requesting such inventories, except inventories required due to change of Operator shall be charged to the Joint Account.

EXHIBIT "D"

Page 1 of 1

Attached to and made a part of that certain Operating Agreement by and between DUGAN PRODUCTION CORP., as Operator, and CAULKINS OIL COMPANY as Non-Operator.

dated October 3, 1997

INSURANCE COVERAGE

Operator shall carry for the joint account Worker's Compensation Insurance granting full compensation under the Worker's Compensation Law of the State in which the Contract Area is located, if applicable, with limits of not less than \$100,000.00 for all Operator's employees engaged in work for the joint account.

The Operator shall also maintain and pay for Comprehensive General Liability Insurance, endorsed to provide Blanket Contractual Liability coverage with a combined single limit of \$200,000.00 per occurrence for bodily injury and property damage.

During all drilling and completion operations, the drilling contractors and subcontractors (or the Operator, if using the Operator's own equipment) shall provide minimum insurance coverage for Bodily Injury and Property Damage.

Any party hereto individually may acquire any additional insurance as it desires at its own expense to protect itself against any liability not covered by the insurance specified above. Each party agrees to be liable for and insure (or self-insure) its proportionate share of Operator's self-insured retention (deductible) with respect to each of the coverages set forth above, it being the intent of the parties that Operator shall not act as an insurer for the joint account to the extent of its self-insured retention.

EXHIBIT "E"

Page 1 of 2

Attached to and made a part of that certain Operating Agreement by and between DUGAN PRODUCTION CORP. as Operator and CAULKINS OIL COMPANY, as Non-Operator dated October 3, 1997

GAS BALANCING AGREEMENT

The parties to the Operating Agreement to which this Agreement is attached, own or may acquire an interest in the gas rights underlying the Contract Area covered by such Operating Agreement in accordance with the percentages of participation as set forth in said Operating Agreement.

In accordance with the terms of said Operating Agreement, each party thereto has specific rights relating to the taking and disposition of gas produced, including the right to take in kind its share of gas produced from the Contract Area and market or otherwise dispose of same. In the event any party hereto is not at any time taking or marketing its share of gas, or has contracted to sell its share of gas produced from the Contract Area to a purchaser which does not at any time take the full share of gas attributable to the interest of such party, the terms of this Agreement shall automatically become operative.

During the period when any party hereto is not marketing or otherwise disposing of its share of gas produced from any well within the Contract Area, the other parties hereto shall be entitled to produce, in addition to their own share of production, that portion of such other party's share of production which said party is not marketing or otherwise disposing of and shall be entitled to take such gas production and deliver same to its or to their purchaser(s). All parties hereto shall share in and own the liquid hydrocarbons recovered from such gas by lease equipment in accordance with their respective interest and subject to the aforesaid Operating Agreement, but the party or parties taking such gas shall own all of such gas delivered to its or their purchaser(s) or taken for their own use.

An account shall be established for each party not marketing or otherwise disposing of its full share of the gas produced, which account shall be credited with an amount of gas equal to such party's full share of the gas produced, less its share of gas used in lease operations, vented or lost, and less that portion marketed or otherwise disposed of by such party. Each party taking gas shall furnish the Operator a disposition of those volumes (contract purchases, spot sales, own use, other). The Operator shall maintain a current over and under account of the gas balance between the parties and furnish all parties hereto monthly statements showing the total quantity of gas produced, the amount used in lease operations, vented or lost, the total quantity of liquid hydrocarbons recovered therefrom, and the monthly and cumulative over and under account of each party.

Each party hereto shall make settlement with the royalty owners to whom it is accountable, just as if such party were marketing or otherwise disposing of its share, and its share only, of such gas production exclusive of gas used in lease operation, vented or lost. Each party hereto agrees to hold each other harmless from any and all claims for royalty payments asserted by royalty owners to whom each party is accountable. The term "royalty owner" shall include owners of royalty, overriding royalties, production payments and similar interests.

After notice to the Operator, any party at any time after giving the Operator verbal notice to be confirmed in writing at least 15 days before the beginning of a calendar month, may begin marketing or otherwise disposing of its full share of the gas produced from a well within the contract area. In addition to such share, said party or parties, until it has brought its account into balance, shall be entitled to take a

EXHIBIT "E"

Page 2 of 2

share of gas produced equal to 30% during the months from November through March (winter months) and 50% from April through October (summer months), reduced by the proportion that its interest bears to the total of all underproduced parties desiring to make up an underproduced balance and provided that the total volume available as make up gas for all underproduced parties shall never exceed 50% of the total volume of the gas produced. Each overproduced party shall reduce its respective share of production in the proportion that such party's interest bears to the total interest of all overproduced parties, but in no event shall any overproduced party be required to reduce its share to less than fifty percent (50%) during summer months and seventy percent (70%) during winter months of such overproduced party's proportionate share of the Well's current production.

Each party marketing or otherwise disposing of gas shall pay the production and other taxes due on such gas.

Nothing herein shall be construed to deny any party the right, from time to time, to produce and deliver to its purchaser its full share of the allowable gas production to meet the deliverability test required by its purchaser.

When production from the proration unit permanently ceases, the Operator shall make a final determination of the volumes last accrued over- and underproduction, if any, as of the date of such cessation of production and the identity of the party or parties who are over- or underproduced. Should an imbalance exist, a cash settlement (without interest) shall be made between the underproduced and overproduced parties within 60 days of receipt of such final balancing statement. In making such cash settlement, each overproduced party shall remit to the underproduced party a sum of money attributable to the amount actually or constructively received by such overproduced party from the sale or utilization of over production which remains accrued to such party, less applicable taxes and other payments made on the overproduced volume by such overproduced party. It is recognized that there may have been some changes in the price received by overproduced parties for overproduction sold or otherwise utilized. It is therefore agreed that any underproduction credited from time to time against any overproduced party shall be applied against such party's overproduction in the order in which such overproduction occurred. The amount actually or constructively received shall then be that overproduction remaining following application of the above rule and valued at the price in effect at the time such overproduction occurred. If a portion of a party's gas is taken for its own use and a portion thereof is sold, the gas value for accounting between/among the parties will be based on the price received simultaneously by such party for gas sold from the Well. During periods in which a party is taking gas for its own use and making no sale, gas so taken will be valued at the maximum price which such party could have received for such gas if actually delivered under such party's contract, or if not, the weighted average price received simultaneously by all other parties for gas sold from all wells. In either such instance the value so determined for gas so used will be deemed to have been constructively received by such using party. In the event refunds are later required by any governmental authority, each party shall be accountable for such refunds on the basis of its share of gas produced and finally balanced hereunder.

Nothing herein shall change or affect each party's obligation to pay its proportionate share of all costs and liabilities incurred, as provided in the aforesaid Operating Agreement.

This Agreement shall constitute a separate agreement as to each well within the Contract Area. It shall inure to the benefit of and be binding upon the parties hereto, their successors, legal representatives and assigns. It shall become effective in accordance with its terms and shall remain in force and effect for so long as the Operating Agreement to which it is attached remains in effect and thereafter until the gas balance accounts between

EXHIBIT "F"

Page 1 of 2

Attached to and made a part of that certain Operating Agreement by and between DUGAN PRODUCTION CORP., as Operator, and CAULKINS OIL COMPANY, as Non-Operator,

dated October 3, 1997

EQUAL EMPLOYMENT OPPORTUNITY PROVISION

During the performance of this contract, the Operator agrees as follows:

1. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex or national origin. Such action shall include but not be limited to employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this non-discrimination clause.
2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.
3. The contractor will send to each labor union or representative of works with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or worker's representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
5. The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
6. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rules, regulations, or order of the Secretary of Labor, or as otherwise provided by law.
7. The contractor will include the provisions of Paragraphs 1. through 7. in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for non-compliance; provided, however, that in the event the contractor becomes involved in.

EXHIBIT "F"

Page 2 of 2

Attached to and made a part of that certain Operating Agreement by and between DUGAN PRODUCTION CORP., as Operator, and CAULKINS OIL COMPANY, as Non-Operator,

dated October 3, 1997

EQUAL EMPLOYMENT OPPORTUNITY PROVISION

or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

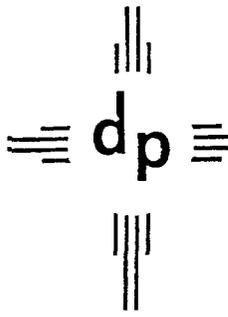
Operator acknowledges that it may be required to file Standard Form 100 (EEO-1) promulgated jointly by the Office of Federal Contract Compliance, the Equal Employment Opportunity Commission and Plans for Progress with the appropriate agency within 30 days of the date of the contract aware if such report has not been filed for the current year and otherwise comply with or file such other compliance reports as may be required under Executive Order 11246, as amended and Rules and Regulations adopted thereunder.

Operator further acknowledges that it may be required to develop a written affirmative action compliance program as required by the Rules and Regulations approved by the Secretary of Labor under authority of Executive Order 11246 and supply Non-Operators with a copy of such program if they so request.

CERTIFICATION OF NON-SEGREGATED FACILITIES

Operator assures Non-Operators that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and it does not and will not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. For this purpose, it is understood that the phrase "segregated facilities" includes facilities because of habit, local custom or otherwise. It is further understood and agreed that maintaining or provided segregated facilities for its employees or permitting its employees to perform their services at any location under its control where segregated facilities are maintained is a violation of the equal opportunity clause required by Executive Order 11246 of September 24, 1965.

Operator further understands and agrees that a breach of the assurance herein contained subject it to the provisions of the Order at 41 CFR Chapter 60 of the Secretary of Labor dated May 21, 1968, and the provisions of the equal opportunity clause enumerated contracted between the United States of America and Non-Operators.



# dugan production corp.

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October 28, 1997

Caulkins Oil Company  
P.O. Box 340  
Bloomfield, New Mexico 87413

Marathon Oil Company  
P.O. Box 552  
Midland, Texas 79702

Attn: Mr. Bobby Berquer

Attn: Mr. Steve Daniels

Louis Dreyfus Natural Gas Corp.  
14000 Quail Springs Parkway  
Suite 600  
Oklahoma City, OK. 73134-2600

Attn: Mr. Rusty Waters

RE: Well Proposal  
Mona Lisa #2  
Township 26 North, Range 7 West  
Section 14: S2  
Rio Arriba County, New Mexico

Gentlemen:

Dugan Production Corp. (DPC) is proposing to drill a Mesaverde-Dakota Well to an estimated depth of 7,000 feet, located 1,620' FSL and 1,850' FEL of Section 14, Township 26 North, Range 7 West, Rio Arriba County, New Mexico. You have previously received copies of the AFE and Operating Agreement. Enclosed is a revised "Exhibit A" and a revised signature page to the Operating Agreement.

The acreage falls within the Mesaverde and Dakota Pools which require 320.00 acre spacing units per well. Our proposed spacing will be the S1/2 of Section 14, in which you own collectively 50.0% interest by virtue of Federal Lease NM-03381. There have been discussions relating to the possibility of a non-standard proration unit which would allow 160.00 acre spacing but the New Mexico Oil Conservation Division has advised that this would not receive approval.

Proposal: Mona Lisa #2  
Page 2 of 2

As a working interest owner in the proposed spacing unit, we invite you to participate with DPC in drilling said well and request you execute and return one copy of the signature pages to the enclosed Operating Agreement, along with the AFE totaling \$420,500 to drill, complete and equip the captioned lease for production. It is our plan to drill this well at the earliest possible date to obtain as much of the winter prices as possible.

Thank you for your early attention to this matter. If there should be any questions, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "David M. Poage", with a long, sweeping horizontal stroke extending to the right.

David M. Poage  
Land Manager

DMP/tf

enclosures

CAULKINS OIL COMPANY

1600 Broadway, Suite 1400  
Denver, Colorado 80202

(303) 861-4230

December 4, 1997



Dugan Production Corp.  
Attn: Mr. David M. Poage  
709 E. Murray Dr.  
P.O. Box 420  
Farmington, NM 87499-0420

RE: Well Proposal  
Breech B 781  
Section 14, Township 26 North, Range 7 West  
Rio Arriba County, New Mexico

Gentlemen:

Caulkins Oil Company understands your desire to drill a well and wish to cooperate with you. But as a long-term operator in that area and representative for two other sizable companies, we believe we should be the Operator and therefore submit the enclosed operating agreement and AFE. We would not plan to drill the well until the weather is favorable.

We propose the joint development with Dugan and Caulkins, et al, the south half of section 14 by drilling a Dakota-Mesaverde well to a depth of approximately 7,000 feet. The location is 1,800' FSL and 1,150' FWL of Section 14, T26N, R7W, Rio Arriba County, New Mexico.

The acreage in the south half of section 14 falls within the Dakota and Mesaverde pools which require 320 acre spacing units per well. Dugan, as owner of a Federal lease in the SE/4 of Section 14, would be a 50% owner in the proposed spacing unit.

Caulkins would like to join with Dugan, Marathon Oil Company and Louis Dreyfus Natural Gas Corp. in drilling this well and request that you execute and return a copy of the signature pages to the Operating Agreement along with a copy of the Authorization For Expenditure.

If you have any questions, please feel free to call.

Yours truly,

CAULKINS OIL COMPANY

  
Patrick L. Robinson  
Controller

NMOCD Case Nos. 11897 & 11899  
January 8, 1998  
Dugan Production Corp.

Exhibit No. 7

NMOCD Case Nos. 11897 & 11899  
 January 8, 1998  
 Dugan Production Corp.

Exhibit No. 8

State of New Mexico  
 Energy, Minerals & Natural Resources Department

CONSERVATION DIVISION  
 PO Box 2088  
 Santa Fe, NM 87504-2088

Form C-102  
 Revised February 21, 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

<sup>1</sup> API Number 30 039 25745		<sup>2</sup> Pool Code 72319		<sup>3</sup> Pool Name Blanco Mesa Verde	
<sup>4</sup> Property Code 21582		<sup>5</sup> Property Name Mona Lisa			<sup>6</sup> Well Number 2
<sup>7</sup> OGRID No. 006515		<sup>8</sup> Operator Name Dugan Production Corp.			<sup>9</sup> Elevation 6121' est.

<sup>10</sup> Surface Location

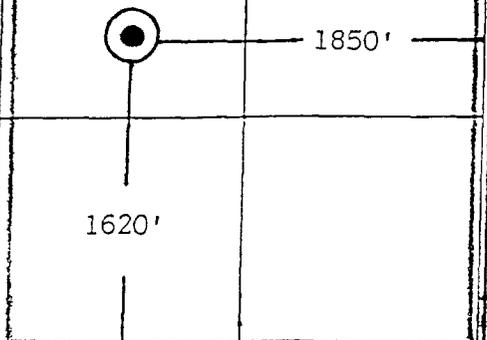
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	14	26N	7W		1620'	South	1850'	East	Rio Arriba

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres 320	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. Will be communitized or pooled.
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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				<sup>17</sup> OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</i>   Signature John D. Roe Printed Name Engineering Manager Title October 31, 1997 Date
	Caulkins Oil NM 03381		Dugan Prod. NM 99002	<sup>18</sup> SURVEYOR CERTIFICATION <i>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.</i>  August 26, 1997 Date of Survey Signature and Seal of Professional Surveyer:  Original signed by Edgar L. Risenhoover Certificate Number 5979
				

District I  
 PO Box 1980, Hobbs, NM 88241-1980  
 District II  
 PO Drawer DD, Artesia, NM 88211-0719  
 District III  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV  
 PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
 Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
 PO Box 2088  
 Santa Fe, NM 87504-2088

Form C-102  
 Revised February 21, 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

<sup>1</sup> API Number 30 039		<sup>1</sup> Pool Code 71599		<sup>1</sup> Pool Name Basin Dakota	
<sup>4</sup> Property Code		<sup>1</sup> Property Name Mona Lisa			<sup>4</sup> Well Number 2
<sup>1</sup> OGRID No. 006515		<sup>4</sup> Operator Name Dugan Production Corporation			<sup>4</sup> Elevation 6121' Estimated

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	14	26N	7W	J	1620	South	1850	East	Rio Arriba

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres 320	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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	Section 14	Dugan Prod. NM 99002		<sup>17</sup> OPERATOR CERTIFICATION	
				<p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</i></p> <p><i>Sherman E. Dugan</i>          Signature          Sherman E. Dugan          Printed Name          Vice-President          Title          September 3, 1997          Date</p>	
Caulkins Oil NM 03381				<sup>18</sup> SURVEYOR CERTIFICATION	
				<p><i>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.</i></p> <p>August 26, 1997          Date of Survey          Signature and Seal of            Edgar L. Risenhoover          Certificate Number 5979</p>	

NMOCD Case Nos. 11897 & 11899  
 January 8, 1998  
 Dugan Production Corp.  
 Exhibit No. 7

**NET OWNERSHIP**  
**DUGAN PRODUCTION CORP.'S**  
**MONA LISA NO. 2**  
**J-14-T26N-R7W**  
**BLANCO MESA VERDE & BASIN DAKOTA GAS POOLS**  
**RIO ARRIBA COUNTY, NEW MEXICO**

Interest Owner	Non Standard 160 A Spacing Units		Standard 320 A Spacing Unit
	SE/4	SW/4 **	S/2
Dugan Production Corp. *	87.50%	0	43.75%
Caulkins Oil Co. *	0	28.15%	14.08%
Marathon Oil *	0	11.51%	5.75%
Louis Dreyfus Natural Gas *	0	11.51%	5.75%
Royalty - USA	12.50%	12.50%	12.50%
ORRI	0	3.00%	1.50%
Net Profits ORRI	0	33.33%	16.67%
	100.00%	100.00%	100.00%

\* = Working Interest Owner

\*\* = A NSPU comprising the SW/4 of Section 14, T26N, R7W will be dedicated to a well to be proposed, drilled and operated by Caulkins Oil Co.

AS OF DATE: JAN98

NAME: MONA LISA NO. 2 DHC  
FIELD: BLANCO MV & BASIN DAKOTA  
LOCATION: J-14-T26N-R7W  
FORMATION: MESAVERDE & DAKOTA  
OPERATOR: DUGAN PROD. CORP.

SE/4 ECONOMICS  
S/2 - 320 A. SPACING UNIT  
DOWNHOLE COMMINGLED  
MV & DK

NPV 5.0% 432.228 BFIT  
NPV 10.0% 294.943 BFIT  
NPV 15.0% 210.627 BFIT  
NPV 20.0% 154.156 BFIT  
NPV 25.0% 113.851 BFIT  
IRR 56% BFIT  
PAYOUT DEC99 BFIT  
PI 4.25:1 BFIT

===== INTERESTS AND EFFECTIVE DATE =====					===== PRICES =====			===== GROSS RESERVES =====					
COST	OIL	GAS	COND	PRODT	DATE	BEGINING	ENDING	AVERAGE	CUMULATIVE	REMAINING	ULTIMATE	%REMAINING	
0.50000	0.43750	0.43750	0.43750	0.43750	JAN98	OIL	0.00	0.00	0.00	0.000	0.000	0.000	0.00 OIL
						GAS	2.31	2.31	2.31	0.000	1081.198	1081.198	100.00 GAS
						COND	19.43	19.43	19.43	0.000	10.812	10.812	100.00 COND
						PRDT	0.00	0.00	0.00	0.000	0.000	0.000	0.00 PRDT

YEAR	GROSS WELLCOUNT	GROSS GAS PRODUCTION	AVERAGE COND YIELD	GROSS COND PRODUCTION	NET GAS PRODUCTION	NET COND PRODUCTION	AVERAGE GAS PRICE	AVERAGE COND PRICE	NET GAS SALES	NET COND SALES
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
1998(12Mo)	1.000	139.938	10.000	1.399	61.223	0.612	2.310	19.430	141.425	11.896
1999	1.000	85.487	10.000	0.855	37.400	0.374	2.310	19.430	86.395	7.267
2000	1.000	73.681	10.000	0.737	32.236	0.322	2.310	19.430	74.464	6.263
2001	1.000	67.787	10.000	0.678	29.657	0.297	2.310	19.430	68.507	5.762
2002	1.000	62.364	10.000	0.624	27.284	0.273	2.310	19.430	63.026	5.301
2003	1.000	57.375	10.000	0.574	25.101	0.251	2.310	19.430	57.984	4.877
2004	1.000	52.785	10.000	0.528	23.093	0.231	2.310	19.430	53.346	4.487
2005	1.000	48.562	10.000	0.486	21.246	0.212	2.310	19.430	49.078	4.128
2006	1.000	44.677	10.000	0.447	19.546	0.195	2.310	19.430	45.152	3.798
2007	1.000	41.103	10.000	0.411	17.982	0.180	2.310	19.430	41.540	3.494
2008	1.000	37.815	10.000	0.378	16.544	0.165	2.310	19.430	38.216	3.214
2009	1.000	34.789	10.000	0.348	15.220	0.152	2.310	19.430	35.159	2.957
2010	1.000	32.006	10.000	0.320	14.003	0.140	2.310	19.430	32.346	2.721
2011	1.000	29.446	10.000	0.294	12.883	0.129	2.310	19.430	29.759	2.503
2012	1.000	27.090	10.000	0.271	11.852	0.119	2.310	19.430	27.378	2.303
SUBTOTAL	1.000	834.904	10.000	8.349	365.271	3.653	2.310	19.430	843.775	70.972
REMAINING	1.000	246.294	10.000	2.463	107.754	1.078	2.310	19.430	248.911	20.937
TOT 33.8Yr	1.000	1081.198	10.000	10.812	473.024	4.730	2.310	19.430	1092.686	91.909

YEAR	NET TOTAL REVENUE	NET TOTAL LOE	NET TOTAL PROD TAX	NET TOTAL LOE+TAX	NET LEASE REVENUE	NET TOTAL INVESTMENTS	NET BFIT CASHFLOW	CUM BFIT CASHFLOW	BFIT CF DISC 10.0%	CUM BFIT CF DISC 10.0%
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
1998(12Mo)	153.321	5.400	14.012	19.412	133.909	210.250	-76.341	-76.341	-80.607	-80.607
1999	93.662	5.400	8.560	13.960	79.702	0.000	79.702	3.361	68.959	-11.649
2000	80.727	5.400	7.377	12.777	67.950	0.000	67.950	71.311	53.389	41.741
2001	74.269	5.400	6.787	12.187	62.082	0.000	62.082	133.393	44.345	86.085
2002	68.328	5.400	6.244	11.644	56.683	0.000	56.683	190.077	36.808	122.893
2003	62.862	5.400	5.745	11.145	51.717	0.000	51.717	241.794	30.530	153.423
2004	57.833	5.400	5.285	10.685	47.147	0.000	47.147	288.941	25.302	178.725
2005	53.206	5.400	4.862	10.262	42.944	0.000	42.944	331.885	20.951	199.677
2006	48.950	5.400	4.473	9.873	39.076	0.000	39.076	370.961	17.332	217.008
2007	45.034	5.400	4.116	9.516	35.518	0.000	35.518	406.479	14.321	231.330
2008	41.431	5.400	3.786	9.186	32.245	0.000	32.245	438.723	11.820	243.149
2009	38.116	5.400	3.483	8.883	29.233	0.000	29.233	467.956	9.742	252.891
2010	35.067	5.400	3.205	8.605	26.462	0.000	26.462	494.419	8.017	260.908
2011	32.262	5.400	2.948	8.348	23.913	0.000	23.913	518.332	6.586	267.494
2012	29.681	5.400	2.712	8.112	21.568	0.000	21.568	539.901	5.400	272.894
SUBTOTAL	914.747	81.000	83.596	164.596	750.151	210.250	539.901	539.901	272.894	272.894
REMAINING	269.847	101.250	24.661	125.911	143.937	0.000	143.937	683.837	22.049	294.943
TOT 33.8Yr	1184.594	182.250	108.257	290.507	894.087	210.250	683.837	683.837	294.943	294.943

NMOCD Case Nos. 11897 & 11899  
January 8, 1998  
Dugan Production Corp.

*Net Present Value*

Exhibit No. 10

AS OF DATE: JAN98

NAME: MONA LISA NO. 2 DHC  
FIELD: BLANCO MV & BASIN DAKOTA  
LOCATION: J-14-T26N-R7W  
FORMATION: MESAVERDE & DAKOTA  
OPERATOR: DUGAN PROD. CORP.

SW/4 ECONOMICS  
S/2 - 320 A. SPACING UNIT  
DOWNHOLE COMMINGLED  
MV & DK

NPV 5.0% 130.391 BFIT  
NPV 10.0% 63.711 BFIT  
NPV 15.0% 21.128 BFIT  
NPV 20.0% -8.026 BFIT  
NPV 25.0% -29.089 BFIT  
IRR 19% BFIT  
PAYOUT JUL02 BFIT  
PI 2.16:1 BFIT

===== INTERESTS AND EFFECTIVE DATE =====						===== PRICES =====			===== GROSS RESERVES =====				
COST	OIL	GAS	COND	PRODT	DATE	BEGINING	ENDING	AVERAGE	CUMULATIVE	REMAINING	ULTIMATE	%REMAINING	
0.50000	0.25580	0.25580	0.25580	0.25580	JAN98	OIL	0.00	0.00	0.00	0.000	0.000	0.000	0.00 OIL
						GAS	2.31	2.31	2.31	0.000	1035.039	1035.039	100.00 GAS
						COND	19.43	19.43	19.43	0.000	10.350	10.350	100.00 COND
						PRODT	0.00	0.00	0.00	0.000	0.000	0.000	0.00 PRODT

YEAR	GROSS WELLCOUNT	GROSS GAS PRODUCTION	AVERAGE COND YIELD	GROSS COND PRODUCTION	NET GAS PRODUCTION	NET COND PRODUCTION	AVERAGE GAS PRICE	AVERAGE COND PRICE	NET GAS SALES	NET COND SALES
=====	====WELLS====	====MMSCF====	==B/MMSCF==	====MBBLS====	====MMSCF====	====MBBLS====	==\$/MSCF==	====\$/B====	====M\$====	====M\$====
1998(12Mo)	1.000	139.938	10.000	1.399	35.796	0.358	2.310	19.430	82.689	6.955
1999	1.000	85.487	10.000	0.855	21.867	0.219	2.310	19.430	50.514	4.249
2000	1.000	73.681	10.000	0.737	18.848	0.188	2.310	19.430	43.538	3.662
2001	1.000	67.787	10.000	0.678	17.340	0.173	2.310	19.430	40.055	3.369
2002	1.000	62.364	10.000	0.624	15.953	0.160	2.310	19.430	36.851	3.100
2003	1.000	57.375	10.000	0.574	14.676	0.147	2.310	19.430	33.903	2.852
2004	1.000	52.785	10.000	0.528	13.502	0.135	2.310	19.430	31.190	2.624
2005	1.000	48.562	10.000	0.486	12.422	0.124	2.310	19.430	28.695	2.414
2006	1.000	44.677	10.000	0.447	11.428	0.114	2.310	19.430	26.400	2.221
2007	1.000	41.103	10.000	0.411	10.514	0.105	2.310	19.430	24.288	2.043
2008	1.000	37.815	10.000	0.378	9.673	0.097	2.310	19.430	22.345	1.879
2009	1.000	34.789	10.000	0.348	8.899	0.089	2.310	19.430	20.557	1.729
2010	1.000	32.006	10.000	0.320	8.187	0.082	2.310	19.430	18.912	1.591
2011	1.000	29.446	10.000	0.294	7.532	0.075	2.310	19.430	17.399	1.464
2012	1.000	27.090	10.000	0.271	6.930	0.069	2.310	19.430	16.007	1.346
SUBTOTAL	1.000	834.904	10.000	8.349	213.569	2.136	2.310	19.430	493.343	41.496
REMAINING	1.000	200.135	10.000	2.001	51.194	0.512	2.310	19.430	118.259	9.947
TOT 27.3Yr	1.000	1035.039	10.000	10.350	264.763	2.648	2.310	19.430	611.602	51.443

YEAR	NET TOTAL REVENUE	NET TOTAL LOE	NET TOTAL PROD TAX	NET TOTAL LOE+TAX	NET LEASE REVENUE	NET TOTAL INVESTMENTS	NET BFIT CASHFLOW	CUM BFIT CASHFLOW	BFIT CF DISC 10.0%	CUM BFIT CF DISC 10.0%
=====	====M\$====	====M\$====	====M\$====	====M\$====	====M\$====	====M\$====	====M\$====	====M\$====	====M\$====	====M\$====
1998(12Mo)	89.644	5.400	8.192	13.592	76.052	210.250	-134.198	-134.198	-135.890	-135.890
1999	54.763	5.400	5.005	10.405	44.358	0.000	44.358	-89.840	38.382	-97.507
2000	47.200	5.400	4.314	9.714	37.487	0.000	37.487	-52.353	29.455	-68.052
2001	43.424	5.400	3.968	9.368	34.056	0.000	34.056	-18.297	24.327	-43.726
2002	39.950	5.400	3.651	9.051	30.899	0.000	30.899	12.602	20.066	-23.660
2003	36.754	5.400	3.359	8.759	27.995	0.000	27.995	40.597	16.527	-7.132
2004	33.814	5.400	3.090	8.490	25.324	0.000	25.324	65.921	13.591	6.459
2005	31.109	5.400	2.843	8.243	22.866	0.000	22.866	88.787	11.157	17.616
2006	28.620	5.400	2.616	8.016	20.605	0.000	20.605	109.391	9.140	26.755
2007	26.330	5.400	2.406	7.806	18.524	0.000	18.524	127.916	7.470	34.225
2008	24.224	5.400	2.214	7.614	16.610	0.000	16.610	144.526	6.089	40.314
2009	22.286	5.400	2.037	7.437	14.849	0.000	14.849	159.375	4.949	45.263
2010	20.503	5.400	1.874	7.274	13.229	0.000	13.229	172.605	4.008	49.272
2011	18.863	5.400	1.724	7.124	11.739	0.000	11.739	184.344	3.234	52.505
2012	17.354	5.400	1.586	6.986	10.368	0.000	10.368	194.712	2.596	55.102
SUBTOTAL	534.840	81.000	48.878	129.878	404.962	210.250	194.712	194.712	55.102	55.102
REMAINING	128.206	66.600	11.716	78.317	49.890	0.000	49.890	244.602	8.609	63.711
TOT 27.3Yr	663.046	147.600	60.594	208.194	454.852	210.250	244.602	244.602	63.711	63.711

AS OF DATE: JAN98

NPV 5.0% 301.837 BFIT  
NPV 10.0% 231.233 BFIT  
NPV 15.0% 189.499 BFIT  
NPV 20.0% 162.182 BFIT  
NPV 25.0% 142.940 BFIT  
IRR >100% BFIT  
PAYOUT JAN98 BFIT  
PI 2.04:1 BFIT

===== PRICES =====				===== GROSS RESERVES =====			
	BEGINING	ENDING	AVERAGE	CUMULATIVE	REMAINING	ULTIMATE	%REMAINING
OIL	0.00	0.00	0.00	0.000	0.000	0.000	0.00 OIL
GAS	0.00	2.31	2.31	0.000	46.159	46.159	100.00 GAS
COND	0.00	19.43	19.43	0.000	0.462	0.462	100.00 COND
PRDT	0.00	0.00	0.00	0.000	0.000	0.000	0.00 PRDT

YEAR	GROSS WELLCOUNT	GROSS GAS PRODUCTION	AVERAGE COND YIELD	GROSS COND PRODUCTION	NET GAS PRODUCTION	NET COND PRODUCTION	AVERAGE GAS PRICE	AVERAGE COND PRICE	NET GAS SALES	NET COND SALES
=====	===WELLS===	===MMSCF===	==B/MMSCF==	===MBBLS===	===MMSCF===	===MBBLS===	==\$/MSCF==	====\$/B====	====M\$====	====M\$====
1998(12Mo)	0.000	0.000	0.000	0.000	25.427	0.254	0.000	0.000	58.736	4.940
1999	0.000	0.000	0.000	0.000	15.533	0.155	0.000	0.000	35.881	3.018
2000	0.000	0.000	0.000	0.000	13.388	0.134	0.000	0.000	30.926	2.601
2001	0.000	0.000	0.000	0.000	12.317	0.123	0.000	0.000	28.452	2.393
2002	0.000	0.000	0.000	0.000	11.332	0.113	0.000	0.000	26.176	2.202
2003	0.000	0.000	0.000	0.000	10.425	0.104	0.000	0.000	24.082	2.026
2004	0.000	0.000	0.000	0.000	9.591	0.096	0.000	0.000	22.155	1.864
2005	0.000	0.000	0.000	0.000	8.824	0.088	0.000	0.000	20.383	1.714
2006	0.000	0.000	0.000	0.000	8.118	0.081	0.000	0.000	18.752	1.577
2007	0.000	0.000	0.000	0.000	7.468	0.075	0.000	0.000	17.252	1.451
2008	0.000	0.000	0.000	0.000	6.871	0.069	0.000	0.000	15.872	1.335
2009	0.000	0.000	0.000	0.000	6.321	0.063	0.000	0.000	14.602	1.228
2010	0.000	0.000	0.000	0.000	5.816	0.058	0.000	0.000	13.434	1.130
2011	0.000	0.000	0.000	0.000	5.350	0.054	0.000	0.000	12.359	1.040
2012	0.000	0.000	0.000	0.000	4.922	0.049	0.000	0.000	11.370	0.956
SUBTOTAL	0.000	0.000	0.000	0.000	151.702	1.517	0.000	0.000	350.432	29.476
REMAINING	0.000	46.159	10.000	0.462	56.559	0.566	2.310	19.430	130.652	10.989
TOT 33.8Yr	0.190	46.159	10.000	0.462	208.261	2.083	2.310	19.430	481.083	40.465

YEAR	NET TOTAL REVENUE	NET TOTAL LOE	NET TOTAL PROD TAX	NET TOTAL LOE+TAX	NET LEASE REVENUE	NET TOTAL INVESTMENTS	NET BFIT CASHFLOW	CUM BFIT CASHFLOW	BFIT CF DISC 10.0%	CUM BFIT CF DISC 10.0%
=====	====M\$====	====M\$====	====M\$====	====M\$====	====M\$====	====M\$====	====M\$====	====M\$====	====M\$====	====M\$====
1998(12Mo)	63.676	0.000	5.819	5.819	57.857	0.000	57.857	57.857	55.282	55.282
1999	38.899	0.000	3.555	3.555	35.344	0.000	35.344	93.201	30.577	85.859
2000	33.527	0.000	3.064	3.064	30.463	0.000	30.463	123.665	23.934	109.793
2001	30.845	0.000	2.819	2.819	28.026	0.000	28.026	151.691	20.018	129.811
2002	28.377	0.000	2.593	2.593	25.784	0.000	25.784	177.475	16.742	146.553
2003	26.107	0.000	2.386	2.386	23.721	0.000	23.721	201.196	14.002	160.555
2004	24.019	0.000	2.195	2.195	21.824	0.000	21.824	223.020	11.711	172.266
2005	22.097	0.000	2.019	2.019	20.078	0.000	20.078	243.098	9.795	182.061
2006	20.329	0.000	1.858	1.858	18.472	0.000	18.472	261.569	8.192	190.253
2007	18.703	0.000	1.709	1.709	16.994	0.000	16.994	278.563	6.851	197.105
2008	17.207	0.000	1.572	1.572	15.634	0.000	15.634	294.198	5.730	202.835
2009	15.830	0.000	1.447	1.447	14.384	0.000	14.384	308.581	4.793	207.628
2010	14.564	0.000	1.331	1.331	13.233	0.000	13.233	321.814	4.008	211.636
2011	13.399	0.000	1.224	1.224	12.174	0.000	12.174	333.988	3.352	214.989
2012	12.327	0.000	1.127	1.127	11.200	0.000	11.200	345.189	2.804	217.792
SUBTOTAL	379.908	0.000	34.719	34.719	345.189	0.000	345.189	345.189	217.792	217.792
REMAINING	141.641	34.650	12.944	47.594	94.047	0.000	94.047	439.236	13.440	231.232
TOT 33.8Yr	521.549	34.650	47.663	82.313	439.236	0.000	439.236	439.236	231.232	231.232

NMOCD Case Nos. 11897 & 11899

January 8, 1998

Dugan Production Corp.

Exhibit No. 11

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

1000 Rio Brazos Rd, Aztec, NM 87410-1693

APPLICATION FOR DOWNHOLE COMMINGLING

Operator Dugan Production Corp. Address P. O. Box 420, Farmington, NM 87499-0420

Lease Mona Lisa Well No. 2 Unit Ltr. - Sec - Twp - Rge J-14-26N-7W County Rio Arriba

OGRID NO. 006515 Property Code 21582 API NO. 30 039 25745 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 Zone	Lower Zone
1. Pool Name and Pool Code	Blanco Mesaverde 72319		Basin Dakota 71599
2. Top and Bottom of Pay Section (Perforations)	Approximately 4600' - 4740'		Approximately 6620' - 6765'
3. Type of production (Oil or Gas)	Gas & Condensate		Gas & Condensate
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	a. (Current) Not completed	a.	a. Not completed
	b. (Original) 1087 psia (est.)	b.	b. 2680 psia (est.)
6. Oil Gravity (°API) or Gas BTU Content	1279 BTU/SCF (est.)		1249 BTU/SCF (est.)
7. Producing or Shut-In?	Not completed		Not completed
Production Marginal? (yes or no)	Anticipated to be		Anticipated to be
* 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: 74 MCFD + 0.6 BCPD (est.)	Date: Rates:	Date: Rates: 118 MCFD + 0.9 BCPD (est.)
	Date: Rates:	Date: Rates:	Date: Rates:
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: Rates:	Date: Rates:	Date: Rates:
8. Fixed Percentage Allocation Formula -% for each zone	Oil: 40 % Gas: 40 %	Oil: % Gas: %	Oil: 60 % Gas: 60 %

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#s-10476-B, 5403, 5927

16. ATTACHMENTS: DHC#s-455, 610, 659, 660, 1207, 1607

- \* 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 John D. Roe TITLE Engineering Manager DATE 12-1-97

TYPE OR PRINT NAME John D. Roe TELEPHONE NO. ( 505 ) 325-1821

DUGAN PRODUCTION'S PROPOSED MONA LISA #2 (J-14-26N-7W)  
 OFFSET WELL DATA ①  
 BLANCO MESAVERDE & BASIN DAKOTA GAS POOLS  
 RIO ARRIBA COUNTY, NEW MEXICO

NMOCOD Case Nos. 11897 & 11899  
 January 8, 1998  
 Dugan Production Corp.  
 Exhibit No.   1  /  2  

320 ACRE SPACING UNIT		T-26N, R-7W		INITIAL SICP		DOWNHOLE COMMINGLING				CURRENT AVERAGE PRODUCTION ③									
OFFSET DIRECTION	OPERATOR	WELL NO.	WELL LOCATION UNIT-SECTION	API NO.	COMPLETION DATE	MV	DK	ORDER NO.	GAS ALLOCATION-MV	DK	COND. ALLOCATION-%	MV	DK	GAS-MCFD	DK	MV	DK	COND.-B/D	DK
North	CAULKINS	BREECH B 220R	B-14	21998	10-15-79	519(3)	1719	DHC-1207	55	45	34	66	112	100	100	0.4	0.4	0.9	0.9
"	"	BREECH B 220M	E-14	23676	10-11-85	913	2148	DHC-659	48	52	46	58	113	121	121	0.9	0.9	1.0	1.0
NE	"	BREECH 224	A-13	06508	01-20-59	588	1216	R-5927	33(4)	--(4)	60(4)	--(4)	77	--	--	0.7	0.7	--	--
"	"	BREECH 224A	D-13	21997	10-15-79	994	1949	DHC-660	45(2)	38(2)	80	20	116	59	59	1.0	1.0	0.5	0.5
East	"	BREECH 307	M-13	08157	10-26-65	1004	2358	R-5403	15	85	25	75	18	97	97	0.2	0.2	0.7	0.7
"	"	BREECH 307M	O-13	23143	09-21-83	1415	1415	DHC-455	23	77	50	50	54	176	176	0.7	0.7	0.7	0.7
SE	"	BREECH 854	H-24	23489	10-11-84	1164	1943	DHC-659	1	99	15	85	1	58	58	0.1	0.1	0.7	0.7
"	"	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
South	CAULKINS	BREECH 377	M-23	25690	WOCT (5)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
"	"	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SW	CHATEAU	NGRA #1	D-22	06407	02-02-61	NC (6)	1732	--	--	100	--	100	--	137	137	--	--	1.3	1.3
"	"	NCRA #1E	G-22	22102	11-22-79	1235	2100	DHC-610	9	91	23	77	25	269	269	0.4	0.4	1.4	1.4
West	"	CANDADO #1	M-15	06445	05-04-61	1287	2478	DUAL	--	--	--	--	SI	26	26	SI	SI	0.7	0.7
"	"	CANDADO #1E	J-15	23497	08-01-84	931	2100	DHC-1607	8	92	11	89	SI(7)	137	137	SI	SI	0.8	0.8
NW	"	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
"	"	"	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

NOTES

1. Data from NMOCOD MST-KARDEX File
2. Chacra is also downhole commingled - Gas = 17% & Cond. = 0% of commingled production.
3. Mesaverde commingled downhole with the PC & Chacra at time of test.
4. PC (25% gas & 0% cond.), Chacra (30% gas & 0% cond.) & Greenhorn (12% gas & 40% cond.) are also downhole commingled with Mesaverde. The Dakota was perforated but is TA below a CIBP.
5. Well spudded 9-14-97, DTD = 7565' in Dakota and is reported to be currently waiting on completion.
6. Mesaverde interval not completed - well is a single Dakota completion.
7. DHC-1607 issued 7-24-97 at which time Mesaverde completion was shut in with a potential to produce 12 MCFD.
8. Average daily production 2/97 & 3/97. Data from NM Oil & Gas Engineering Committee Reports.

Average Production - Wells Offsetting  
Dugan's Proposed Mona Lisa No. 2

NMOCD Case Nos. 11897 & 11899  
January 8, 1998  
Dugan Production Corp.  
Exhibit No. 13

T-26N R-7W Unit & Sec.	Operator & Well	Prod. Plot Page #	Blanco Mesaverde					Initial Prod. Rate MCF/MO
			MCFD & BC/D		Average	Cum. 4-1-97 MMCF + bbl		
			2/97	3/97				
B-14	Caulkins - Breech B #220R	2	113 + 0.4	110 + 0.4	112 + 0.4	428.5 + 3,836	7,500	
E-14	Caulkins - Breech B #220M	3	122 + 1	103 + 0.7	113 + 0.9	295.7 + 3,348	4,200	
A-13	Caulkins - Breech #224	4	78 + 0.7	76 + 0.7	77 + 0.7	1,803.4 + 12,575	33,000*	
D-13	Caulkins - Breech #224A	5	120 + 1.0	111 + 1.0	116 + 1.0	639.4 + 7,519	8,500	
M-13	Caulkins - Breech #307	6	17 + 0.2	18 + 0.3	18 + 0.2	223.3 + 2,211	3,000*	
O-13	Caulkins - Breech #307M	7	58 + 0.8	50 + 0.6	54 + 0.7	243.9 + 4,075	5,000	
H-24	Caulkins - Breech #854	8	0.5 + 0.1	0.5 + 0.1	0.5 + 0.1	4.0 + 841	38	
M-23	Caulkins - Breech #377	--	WOCT	WOCT	WOCT	0 + 0	--	
G-22	Chateau - NCRA #1E	9	25 + 0.4	25 + 0.4	25 + 0.4	150.7 + 3,409	2,600	
M-15	Chateau - Candado #1	10	SI	SI	SI	48.0 + 52	?	
J-15	Chateau - Candado #1E	11	SI	SI	SI	80.3 + 1,419	2,400	
	<b>10 Well Total</b>					<b>516 + 4.4</b>	<b>3,917.2 + 39,285</b>	
	<b>7 Well Average</b>					<b>74 + 0.6</b>	<b>4,750</b>	

B-14 E-14 A-13 D-13 M-13 O-13 H-24 M-23 D-22 G-22 M-15 J-15	Operator & Well	Prod. Plot Page #	Basin Dakota					Initial Prod. Rate MCF/MO
			MCFD & BC/D		Average	Cum. 4-1-97 MMCF & bbl		
			2/97	3/97				
B-14	Caulkins - Breech B #220R	12	101 + 0.8	99 + 0.9	100 + 0.9	529.4 + 7,434	4,400	
E-14	Caulkins - Breech #220M	13	131 + 1.2	111 + 0.8	121 + 1.0	327.2 + 3,810	5,000	
A-13	Caulkins - Breech #224	--	--	--	--	0 + 0	--	
D-13	Caulkins - Breech #224A	14	64 + 0.6	54 + 0.3	59 + 0.5	339.1 + 3,227	9,300	
M-13	Caulkins - Breech #307	15	94 + 0.6	99 + 0.8	97 + 0.7	1,237.4 + 9,957	18,000	
O-13	Caulkins - Breech #307M	16	189 + 0.8	163 + 0.6	176 + 0.7	733 + 4,083	14,000	
H-24	Caulkins - Breech #854	17	62 + 0.8	53 + 0.6	58 + 0.7	209.6 + 4,394	5,300	
M-23	Caulkins - Breech #377	--	WOCT	WOCT	WOCT	0 + 0	--	
D-22	Chateau - NCRA #1	18	140 + 1.3	134 + 1.2	137 + 1.3	2,161.9 + 24,012	27,000	
G-22	Chateau - NCRA #1E	19	270 + 1.3	268 + 1.4	269 + 1.4	1,850.5 + 11,590	17,500	
M-15	Chateau - Candado #1	20	31 + 0.6	21 + 0.8	26 + 0.7	645.9 + 19,647	7,600	
J-15	Chateau - Candado #1E	21	138 + 0.7	135 + 0.9	137 + 0.8	603.5 + 4,601	9,000	
	<b>10 Well Total</b>					<b>1,180 + 8.7</b>	<b>117,100</b>	
	<b>10 Well Average</b>					<b>118 + 0.9</b>	<b>11,710</b>	

Average MV & Dakota		192 + 1.5	1,404.5 + 14,558	16,460
Average % Mesa Verde - Gas % & Oil %		39% + 40%	39% + 36%	29% + --
Average % Dakota - Gas % & Oil %		61% + 60%	61% + 64%	71% + --

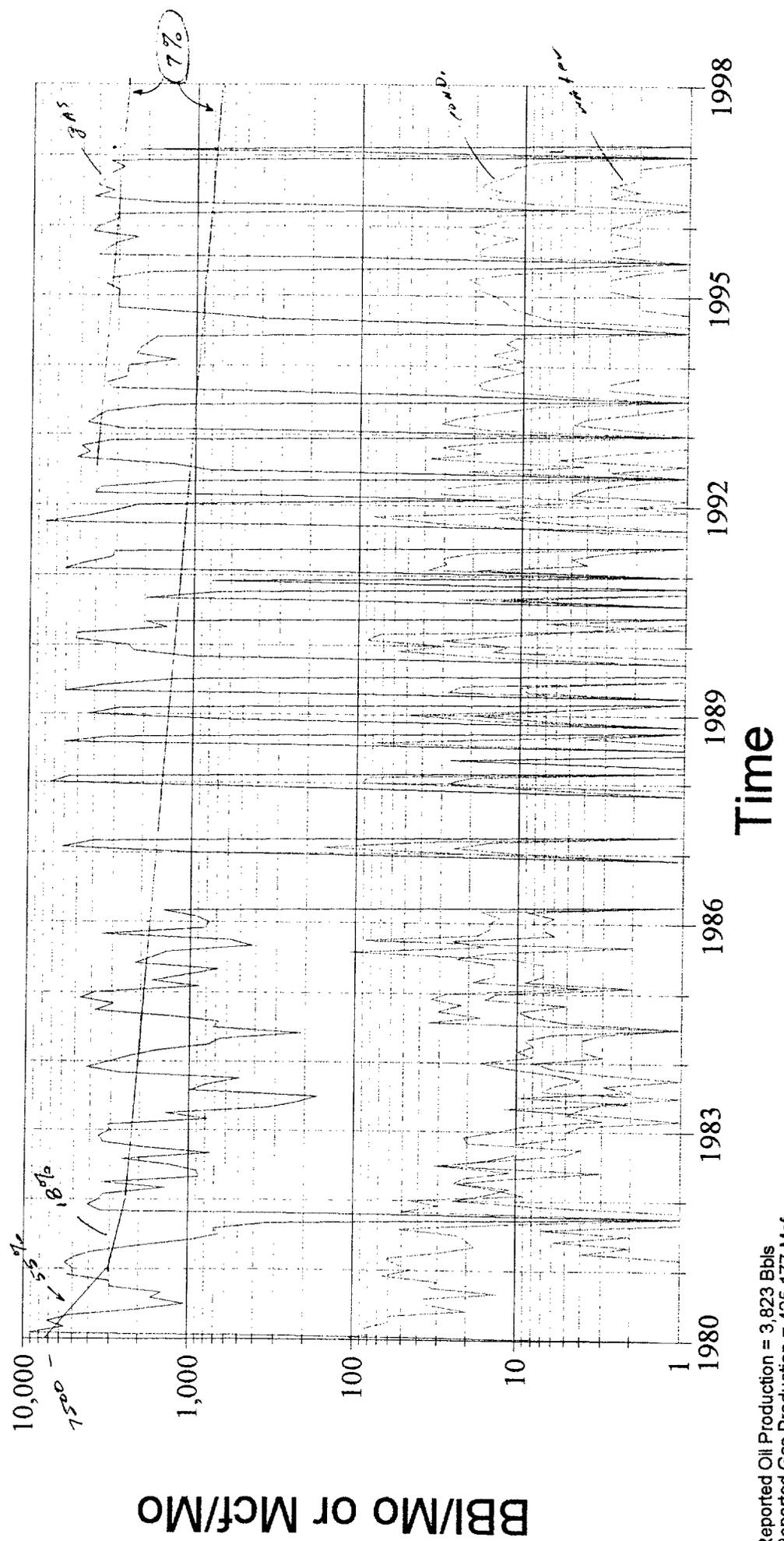
\*1st production occurred prior to start of production graph and is estimated assuming average trends.

Oil  
 Gas  
 Water  
 Wells

Field: BLANCO *Mesa Verde*  
 Lease: BREECH B | Well #220R (B-14-261V-7W)  
 Operator: CAULKINS OIL COMPANY

1180

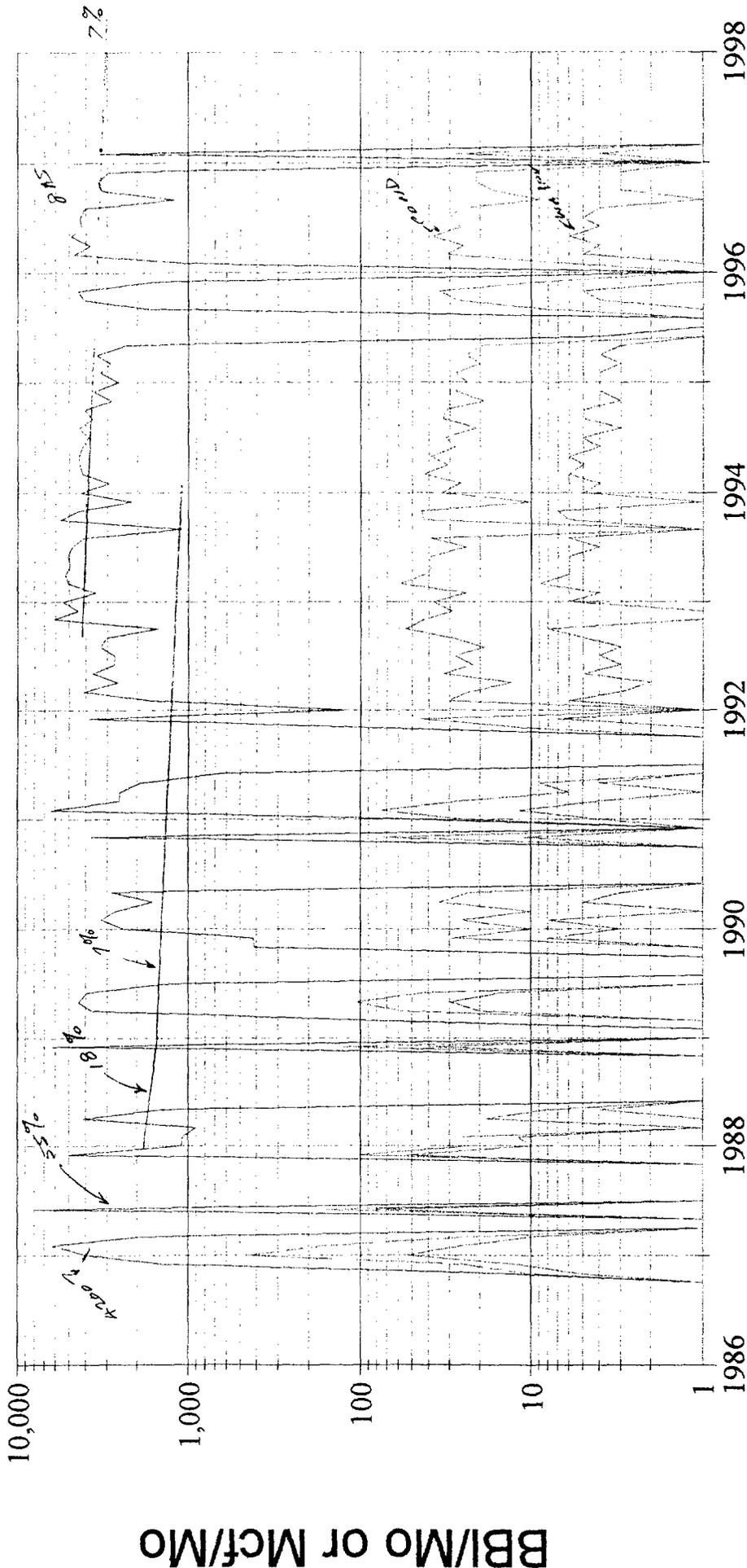
Production Rate vs Time  
 For the Period 01/1980 to 12/1997 | API: 30039219980000



Reported Oil Production = 3,823 Bbls  
 Reported Gas Production = 425,177 Mcf  
 Reported Water Production = 981 Bbls

11/86

Field: BLANCO *MCS + 1000*  
 Lease: BREECH B | Well #220M (E-14-26N-7W)  
 Operator: CAULKINS OIL COMPANY  
 Production Rate vs Time  
 For the Period 01/1986 to 12/1997 | API: 30039236760000



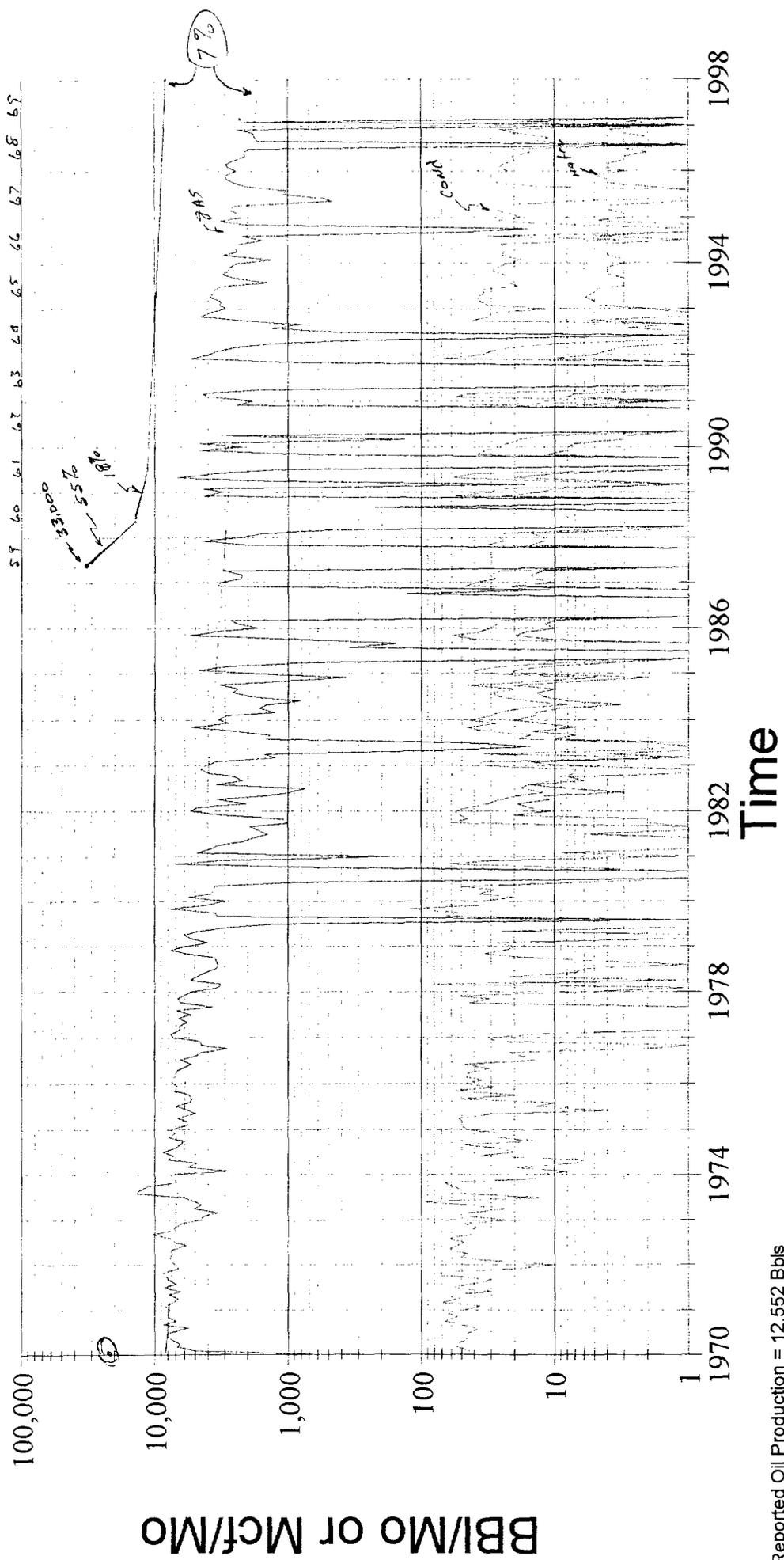
Time

Reported Oil Production = 3,326 Bbls  
 Reported Gas Production = 292,556 Mcf  
 Reported Water Production = 680 Bbls

6/59

Field: BLANCO *Mrs. ...*  
 Lease: BREECH | Well #224 (A-13-22 N-7 W)  
 Operator: CAULKINS OIL COMPANY  
 Production Rate vs Time  
 For the Period 01/1970 to 12/1997 | API: 30039065080000

Oil
Gas
Water
Wells



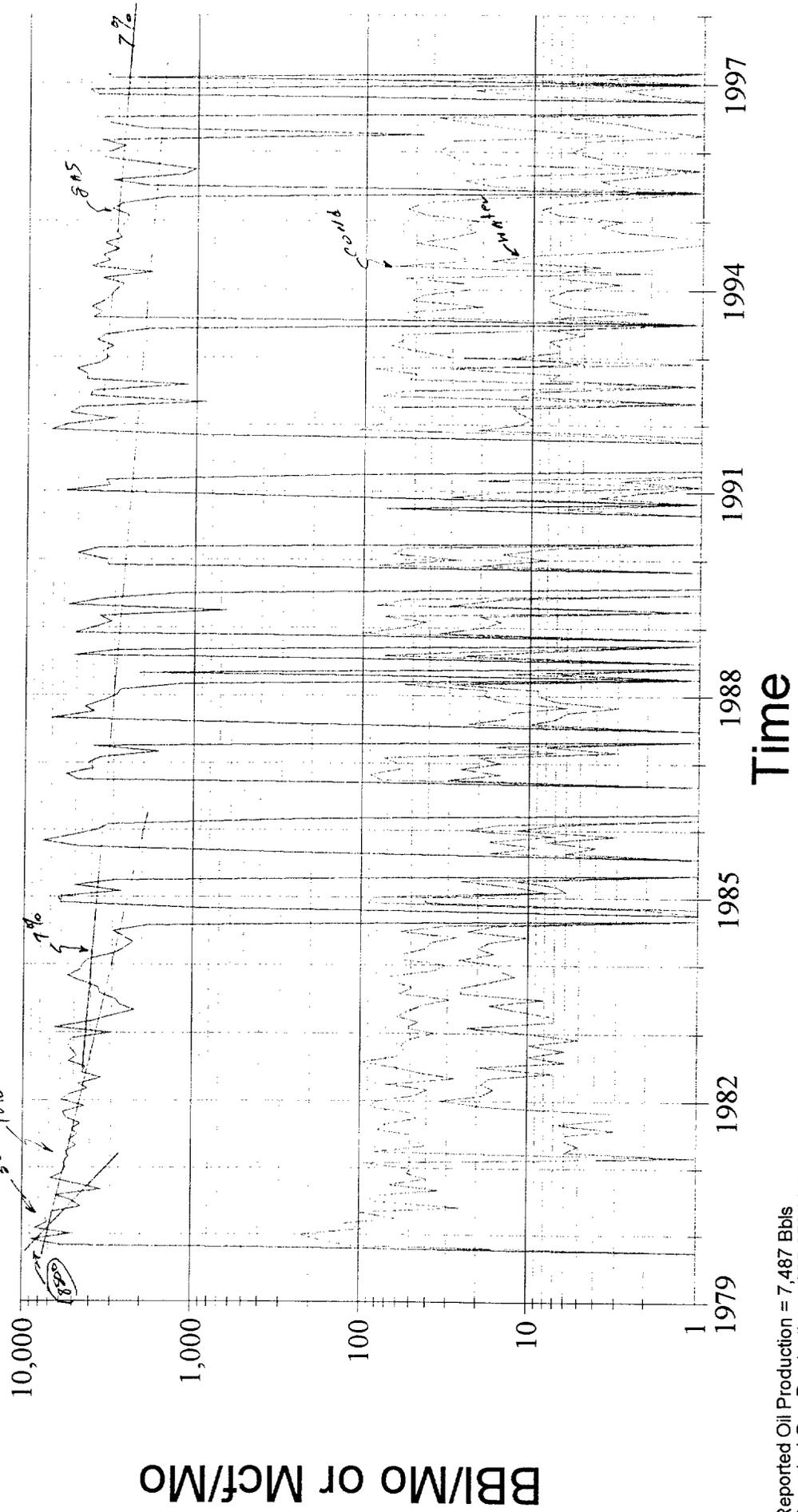
Reported Oil Production = 12,552 Bbls  
 Reported Gas Production = 1,801,024 Mcf  
 Reported Water Production = 953 Bbls

P805

(1179)

Field: BLANCO *Merced*  
 Lease: BREECH | Well #224A (D-13-ZLN-7W)  
 Operator: CAULKINS OIL COMPANY  
 Production Rate vs Time  
 For the Period 01/1979 to 12/1997 | API: 30039219970000

Oil  
 Gas  
 Water  
 Wells

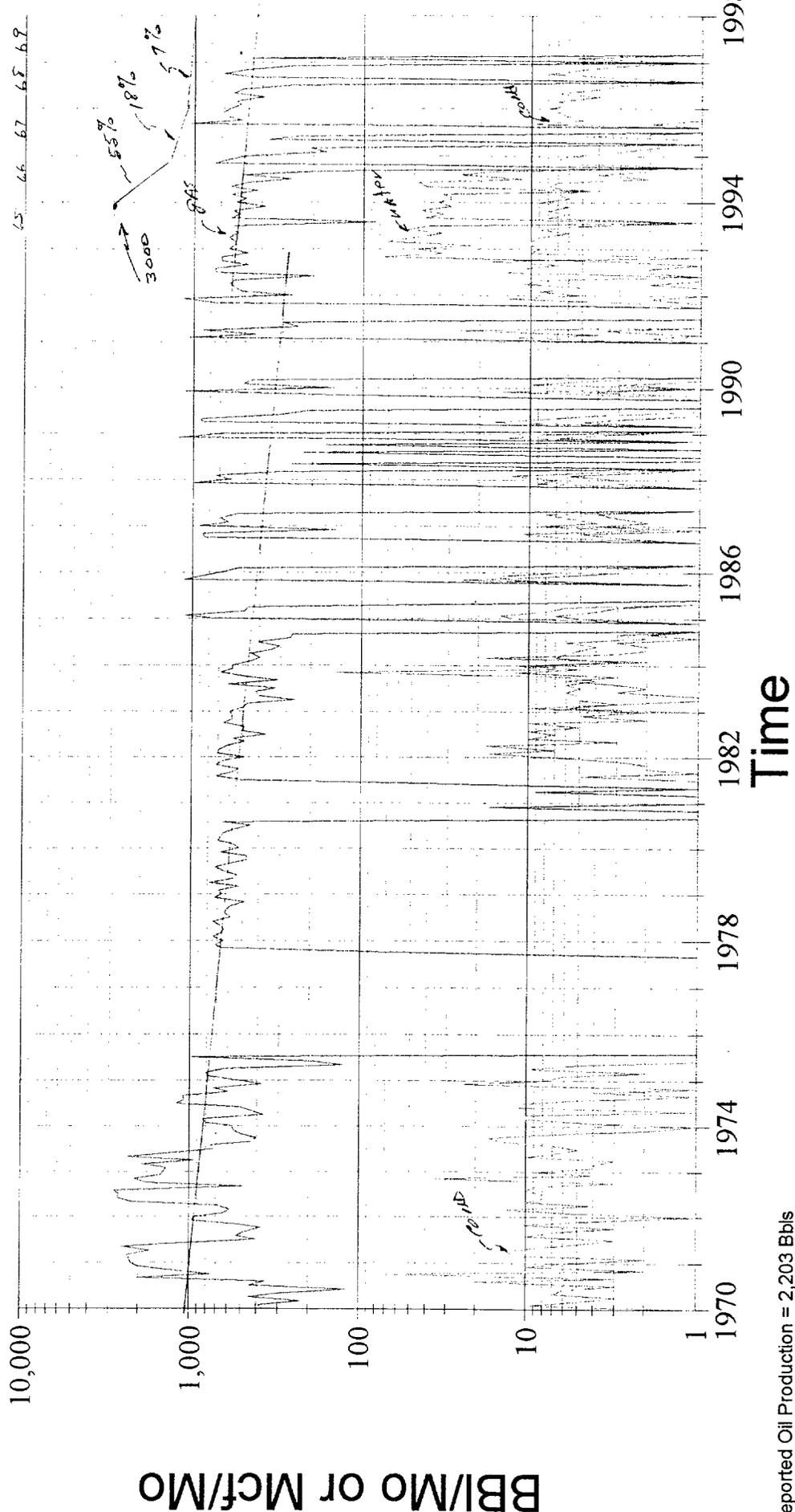


Reported Oil Production = 7,487 Bbls  
 Reported Gas Production = 635,953 Mcf  
 Reported Water Production = 1,497 Bbls

Oil  
 Gas  
 Water  
 Wells

Field: BLANCO *M-540000*  
 Lease: BREECH | Well #307 (*M-13-2LN-700*)  
 Operator: CAULKINS OIL COMPANY  
 Production Rate vs Time  
 For the Period 01/1970 to 12/1997 | API: 30039081570000

11/25



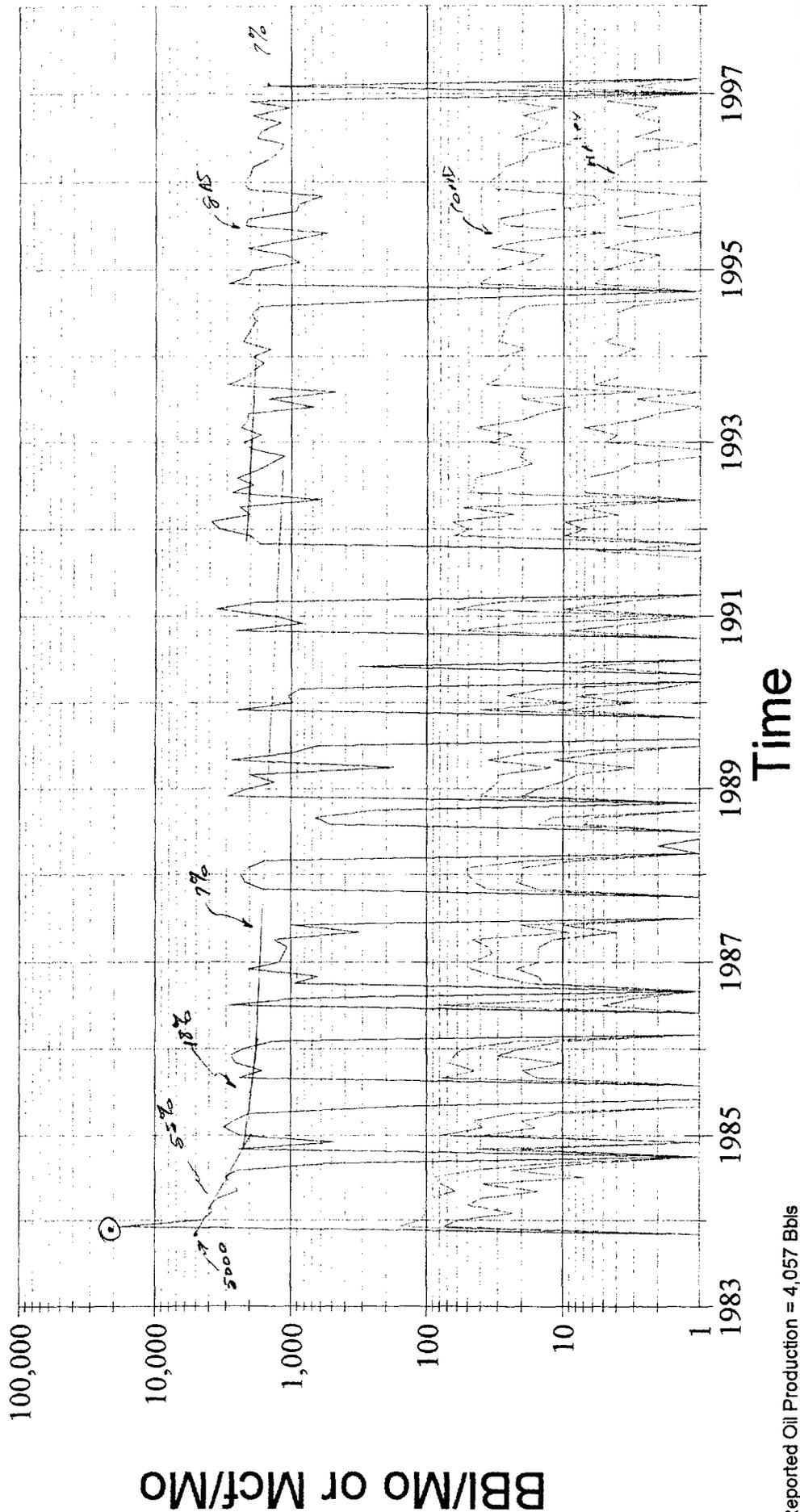
Reported Oil Production = 2,203 Bbls  
 Reported Gas Production = 222,768 Mcf  
 Reported Water Production = 1,206 Bbls

8247

11/83

Field: BLANCO *Mesa Verde*  
 Lease: BREECH | Well #307M (0-13-2CN-7W)  
 Operator: CAULKINS OIL COMPANY  
 Production Rate vs Time  
 For the Period 01/1983 to 12/1997 | API: 30039231430000

Oil  
 Gas  
 Water  
 Wells



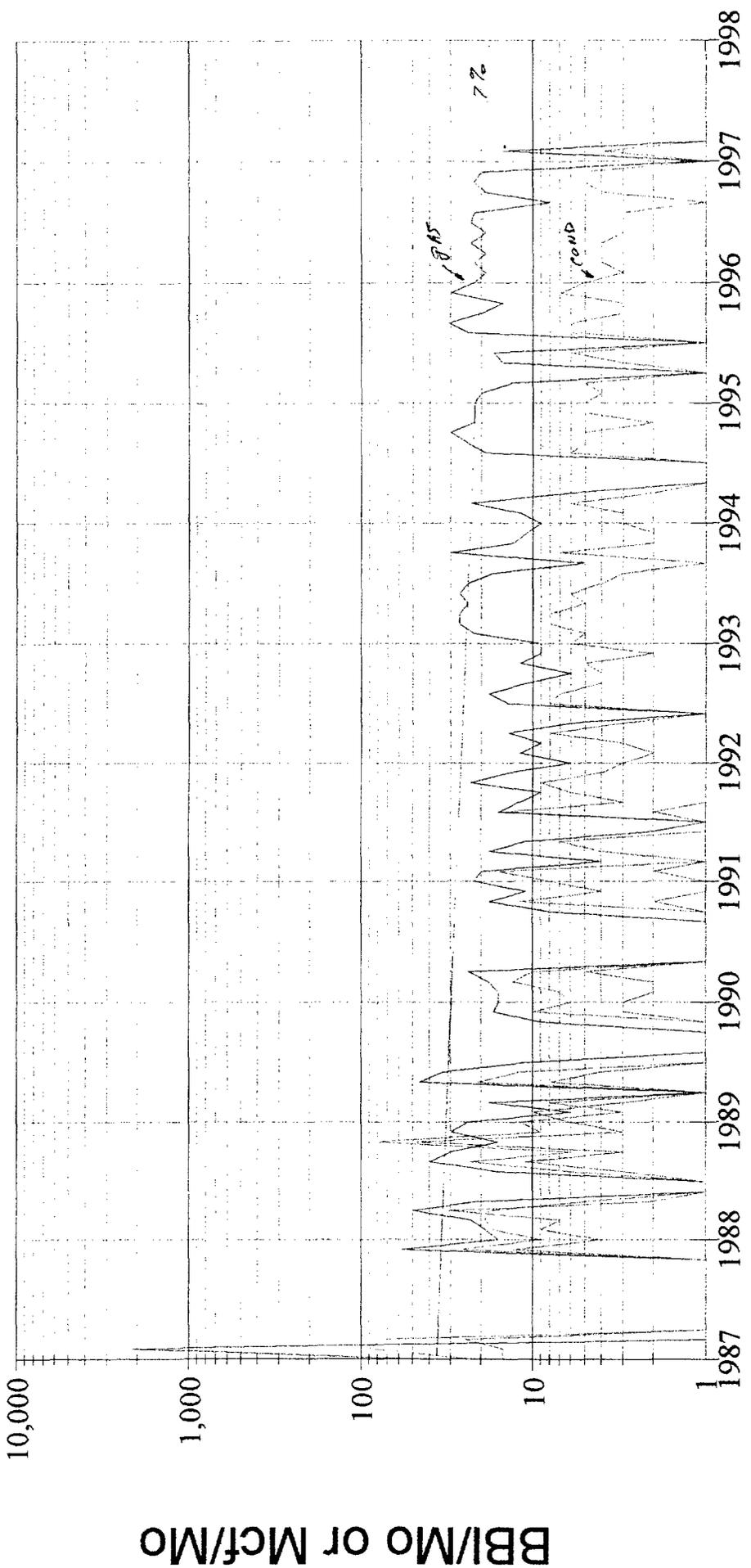
Reported Oil Production = 4,057 Bbls  
 Reported Gas Production = 242,405 Mcf  
 Reported Water Production = 1,142 Bbls

1808

1/87

Field: BLANCO *Mesquite*  
 Lease: BREECH | Well #854 (*H-29-26N-7W*)  
 Operator: CAULKINS OIL COMPANY  
 Production Rate vs Time  
 For the Period 01/1987 to 12/1997 | API: 30039234890000

Oil  
 Gas  
 Water  
 Wells



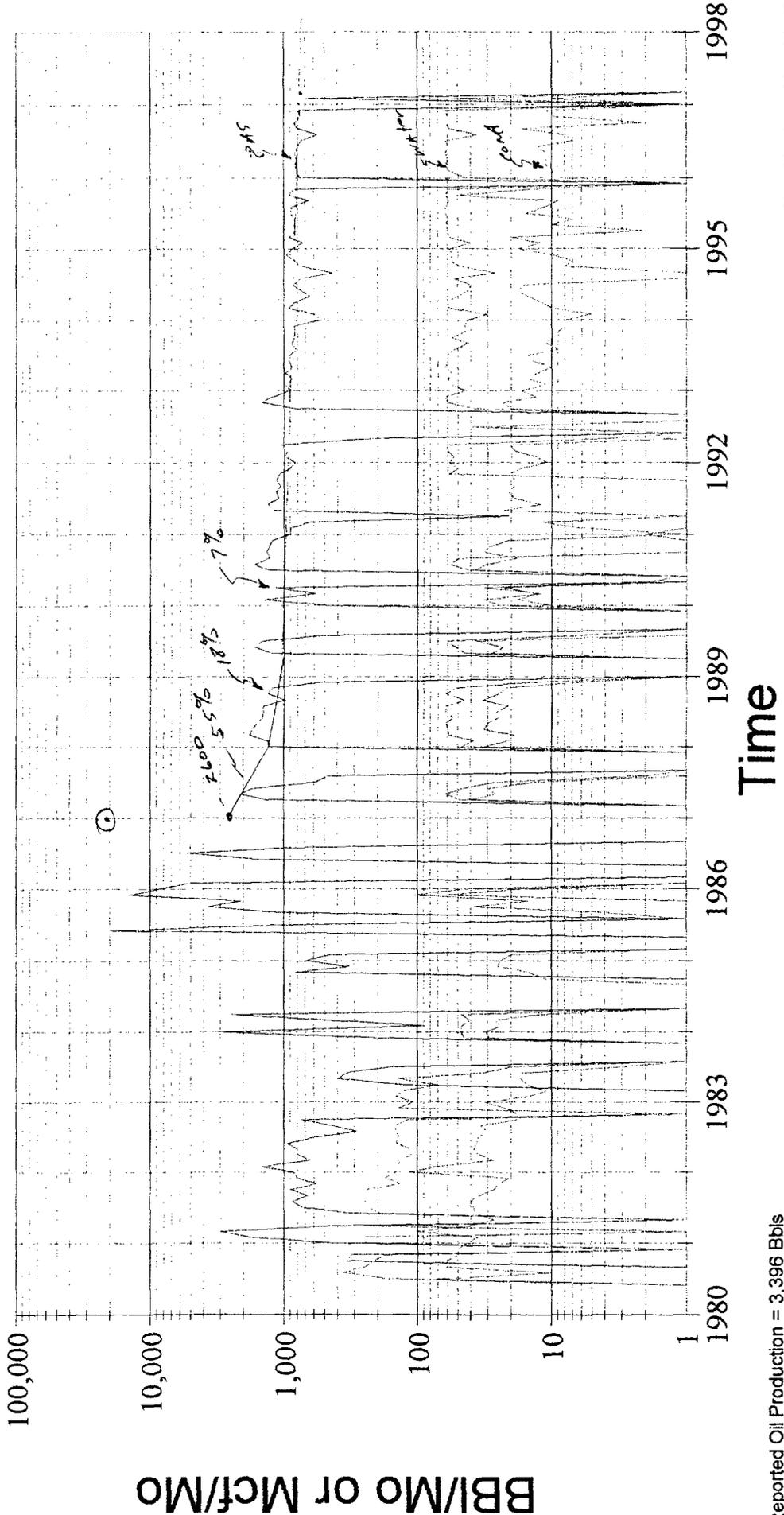
Time

Reported Oil Production = 838 Bbls  
 Reported Gas Production = 3,921 Mcf  
 Reported Water Production = 283 Bbls

Plot Displays Monthly Totals  
 Copyright (C) 1997 by Petroleum Information/Dwights LLC

Field: BLANCO *Messvide*  
 Lease: NCRA | Well #1E (6-22-26N-7W)  
 Operator: CHATEAU OIL AND GAS INC  
 Production Rate vs Time  
 For the Period 01/1980 to 12/1997 | API: 30039221020000

Oil	.....
Gas	.....
Water	.....
Wells	.....

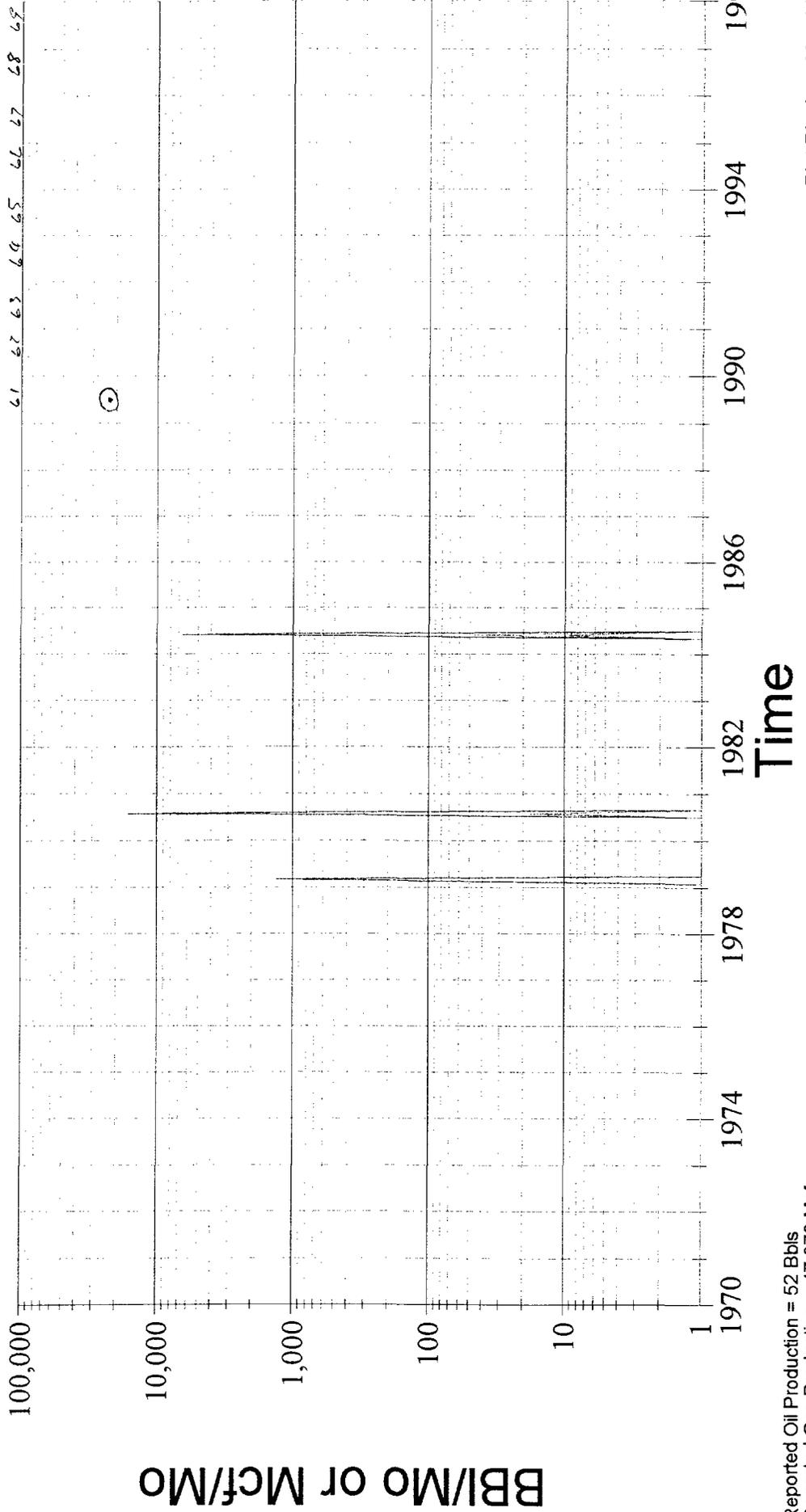


Reported Oil Production = 3,396 Bbls  
 Reported Gas Production = 149,928 Mcf  
 Reported Water Production = 10,079 Bbls

Oil  
 Gas  
 Water  
 Wells

Field: BLANCO *Messumade*  
 Lease: CANDADO | Well #1 (*M-15-26N-7W*)  
 Operator: CHATEAU OIL AND GAS INC  
 Production Rate vs Time  
 For the Period 01/1970 to 12/1997 | API: 30039064450000

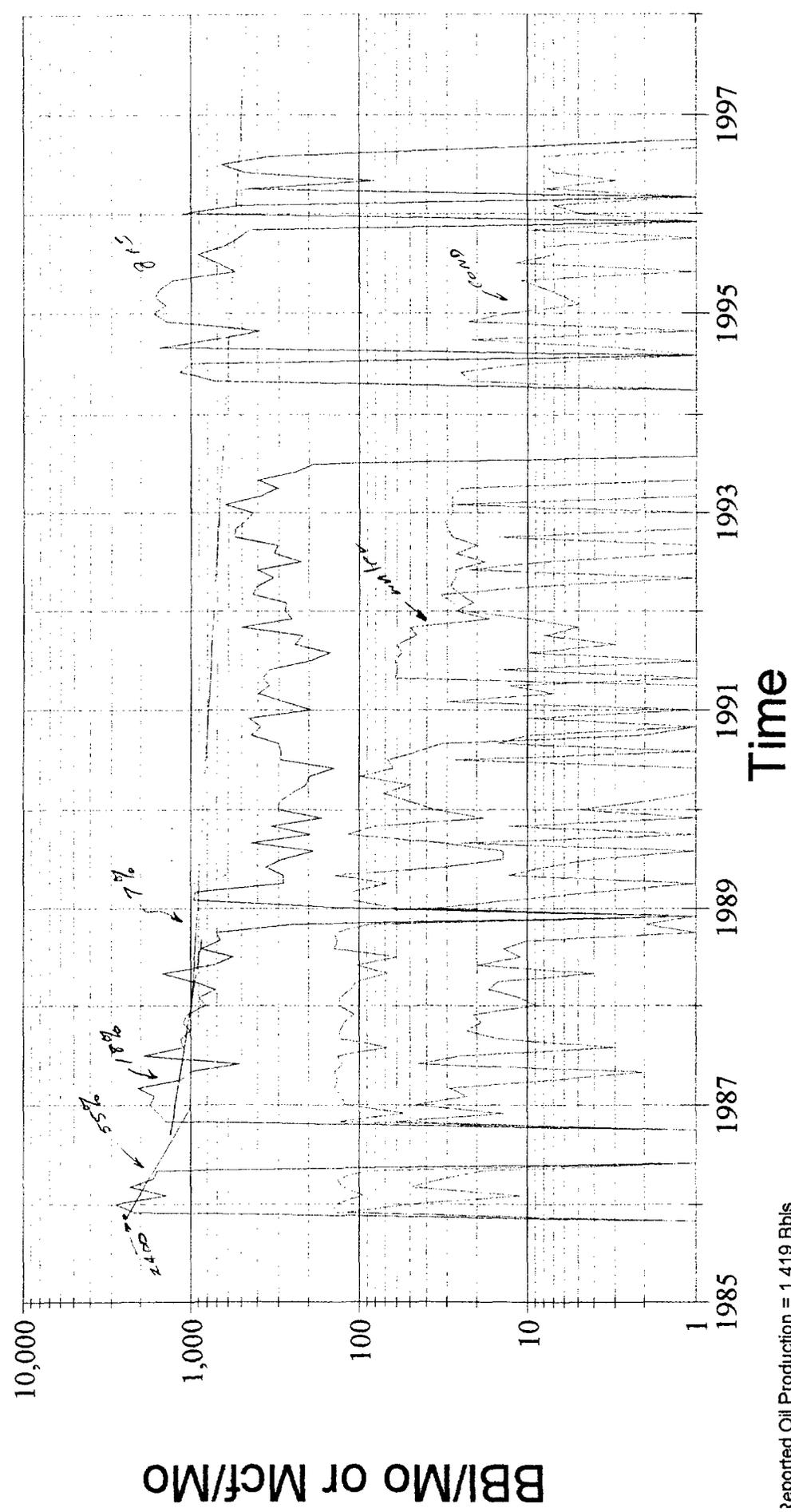
7/6/1



Reported Oil Production = 52 Bbls  
 Reported Gas Production = 47,978 Mcf  
 Reported Water Production = 28 Bbls

12/85

Field: BLANCO *Mesa Verde*  
 Lease: CANDADO | Well #1E (*J-15-26 N-7 W*)  
 Operator: CHATEAU OIL AND GAS INC  
 Production Rate vs Time  
 For the Period 01/1985 to 12/1997 | API: 30039234970000

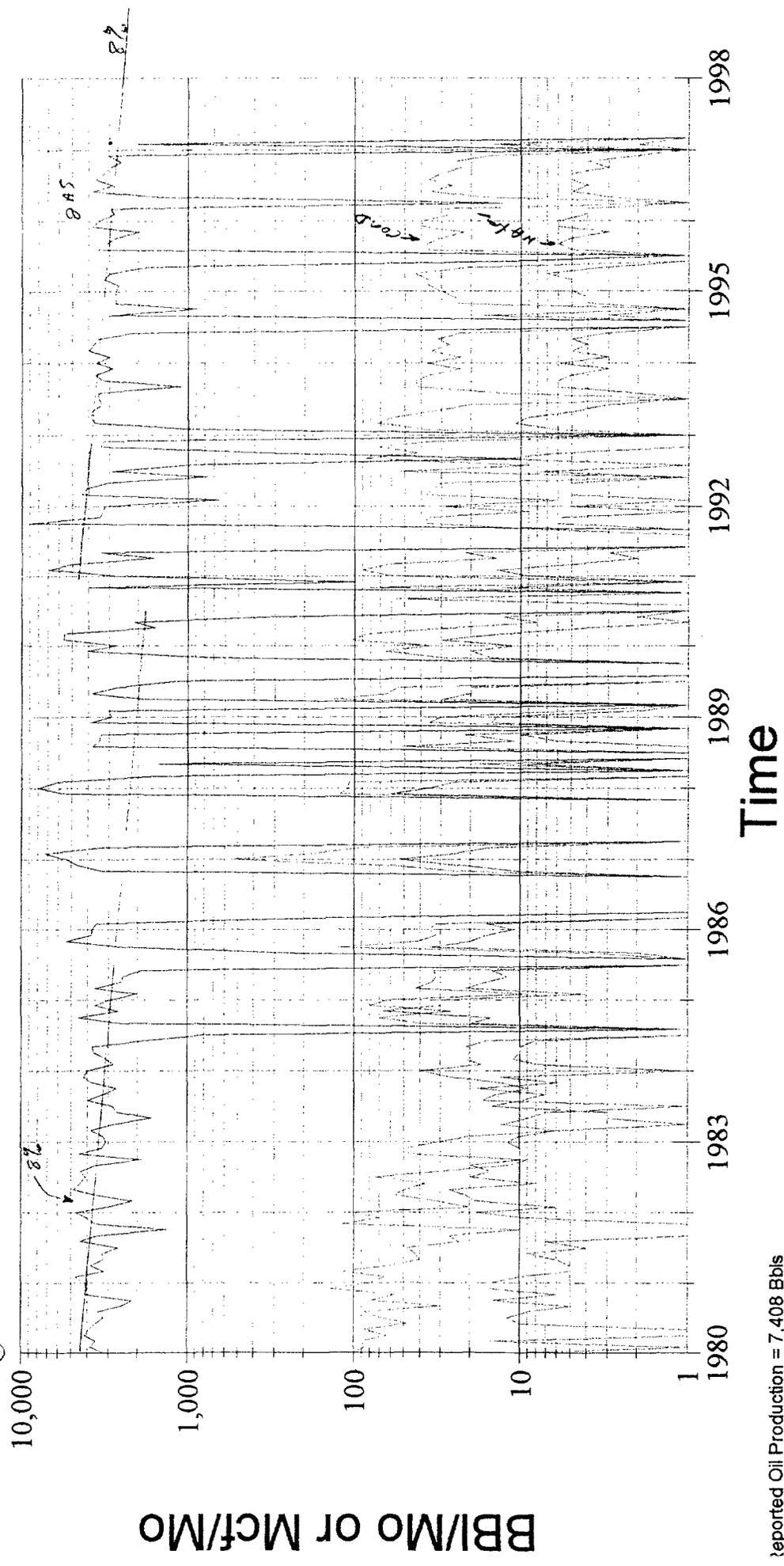


Reported Oil Production = 1,419 Bbls  
 Reported Gas Production = 80,285 Mcf  
 Reported Water Production = 5,760 Bbls

1/80

Field: **BASIN Dakota**  
 Lease: **BREECH B | Well #220R (B-A-ZLN-7L)**  
 Operator: **CAULKINS OIL COMPANY**  
 Production Rate vs Time  
 For the Period 01/1980 to 12/1997 | API: 30039219980000

Oil  
 Gas  
 Water  
 Wells

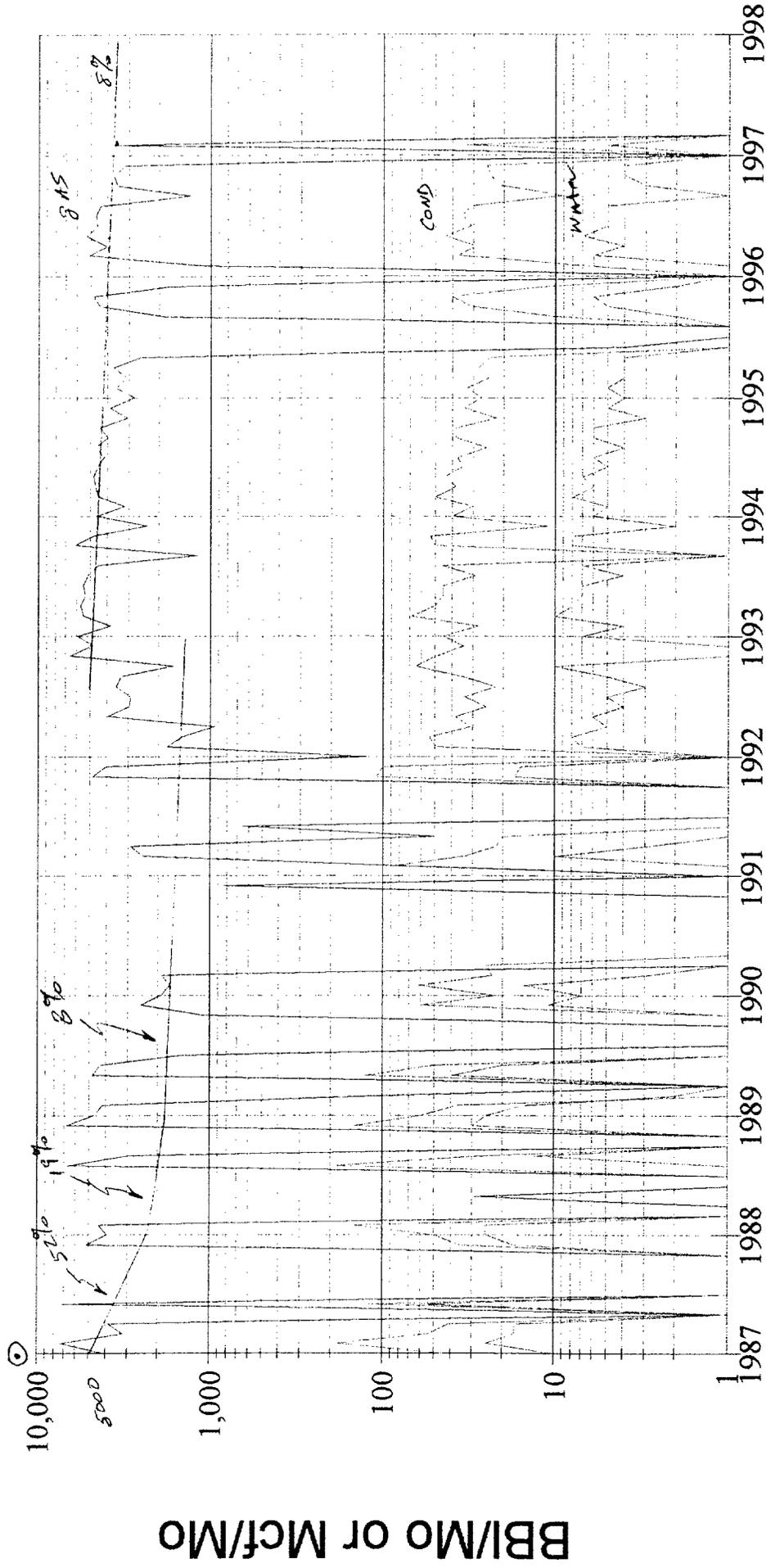


Reported Oil Production = 7,408 Bbls  
 Reported Gas Production = 526,418 Mcf  
 Reported Water Production = 1,623 Bbls

1187

Field: BASIN Dakota  
 Lease: BREECH B | Well #220M (E-14-ZLN-7 w)  
 Operator: CAULKINS OIL COMPANY  
 Production Rate vs Time  
 For the Period 01/1987 to 12/1997 | API: 30039236760000

Oil  
 Gas  
 Water  
 Wells



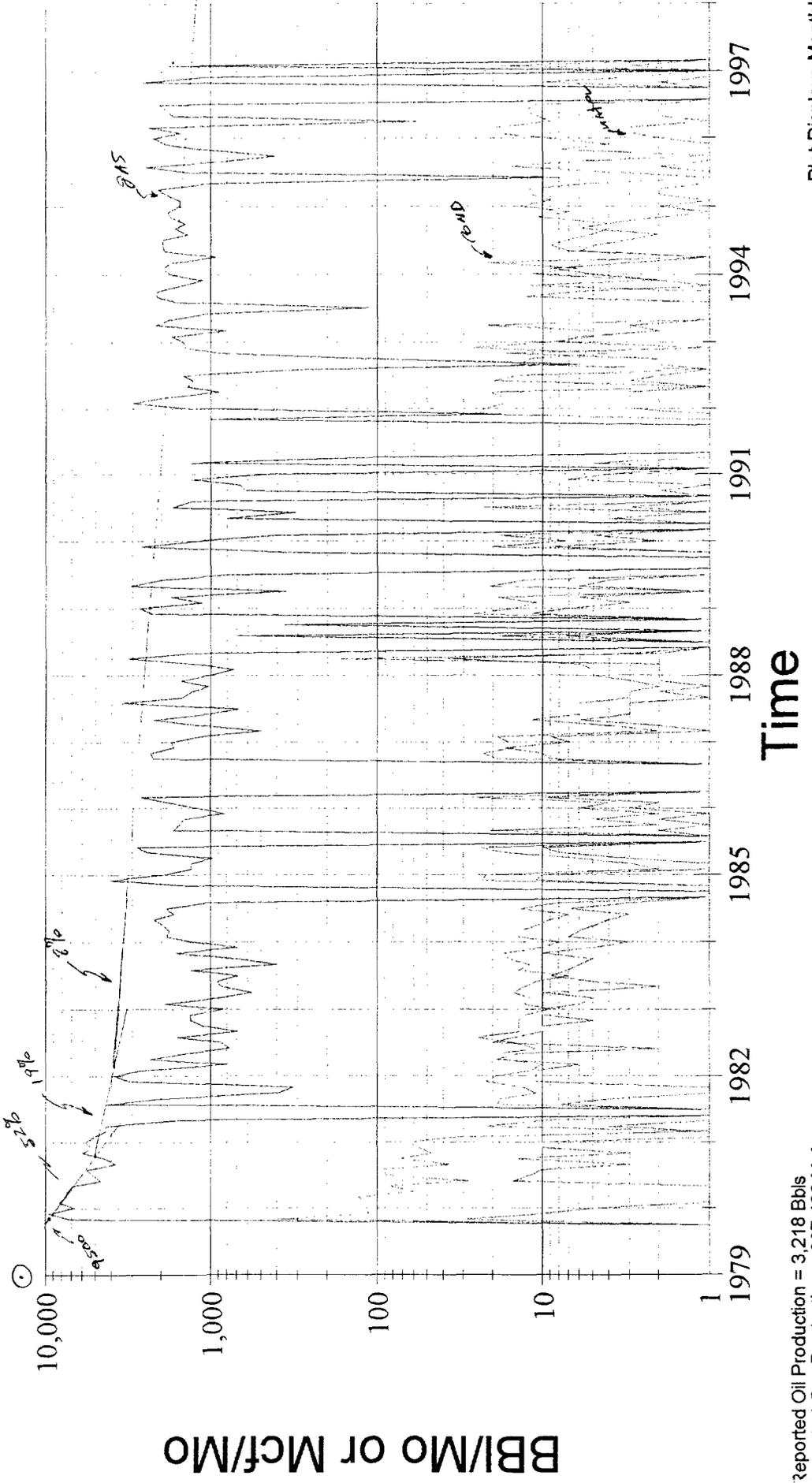
Time

Reported Oil Production = 3,784 Bbls  
 Reported Gas Production = 323,794 Mcf  
 Reported Water Production = 701 Bbls

11/79

Field: **BASIN Dakota**  
 Lease: **BREECH | Well #224A (D-13-26N-7W)**  
 Operator: **CAULKINS OIL COMPANY**  
 Production Rate vs Time  
 For the Period 01/1979 to 12/1997 | API: 30039219970000

Oil  
 Gas  
 Water  
 Wells

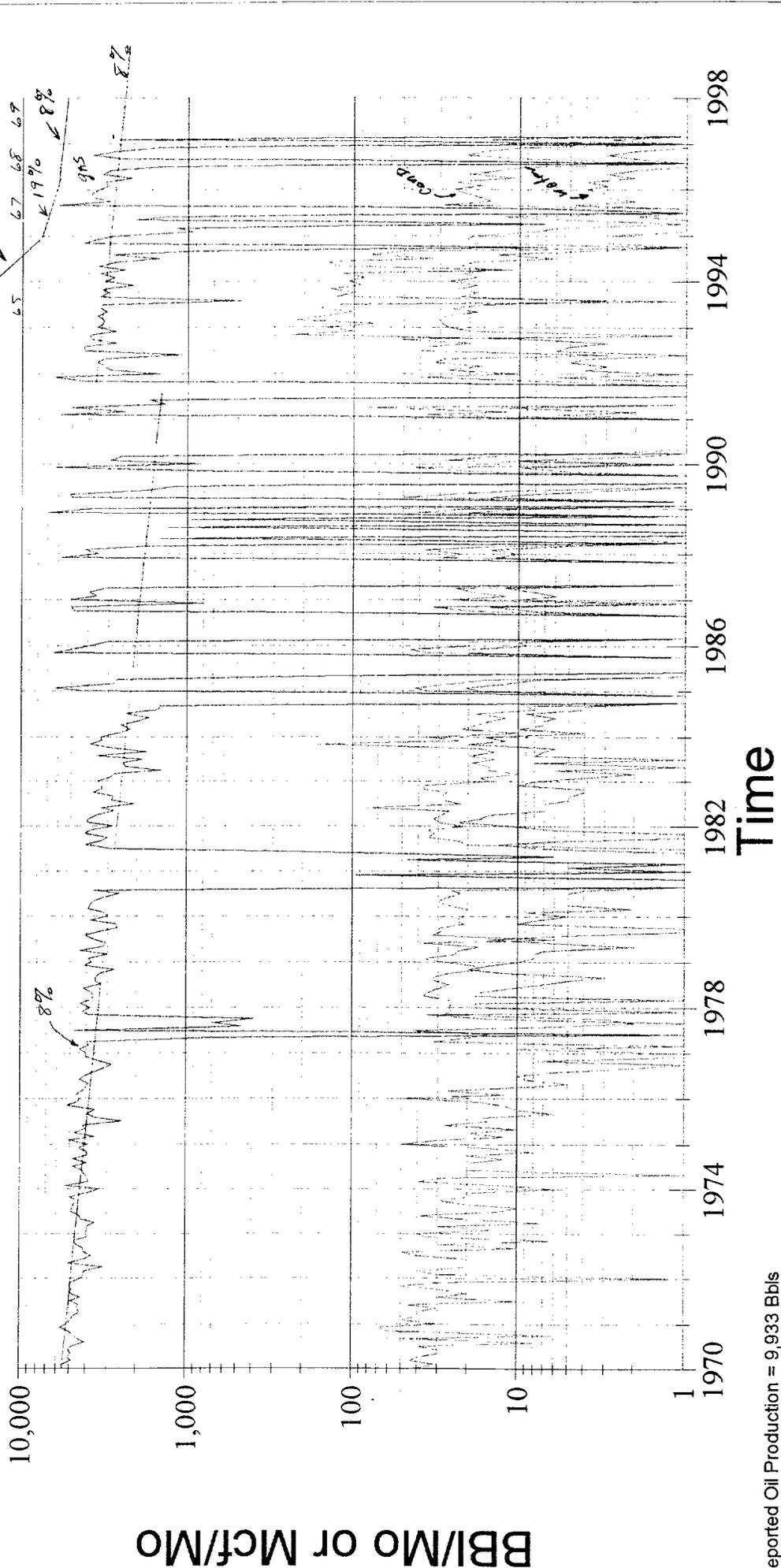


Reported Oil Production = 3,218 Bbls  
 Reported Gas Production = 337,436 Mcf  
 Reported Water Production = 950 Bbls

11/25

Oil  
 Gas  
 Water  
 Wells

Field: BASIN *Dorkota*  
 Lease: BREECH | Well #307 (M-13-ZL N-7W)  
 Operator: CAULKINS OIL COMPANY  
 Production Rate vs Time  
 For the Period 01/1970 to 12/1997 | API: 30039081570000



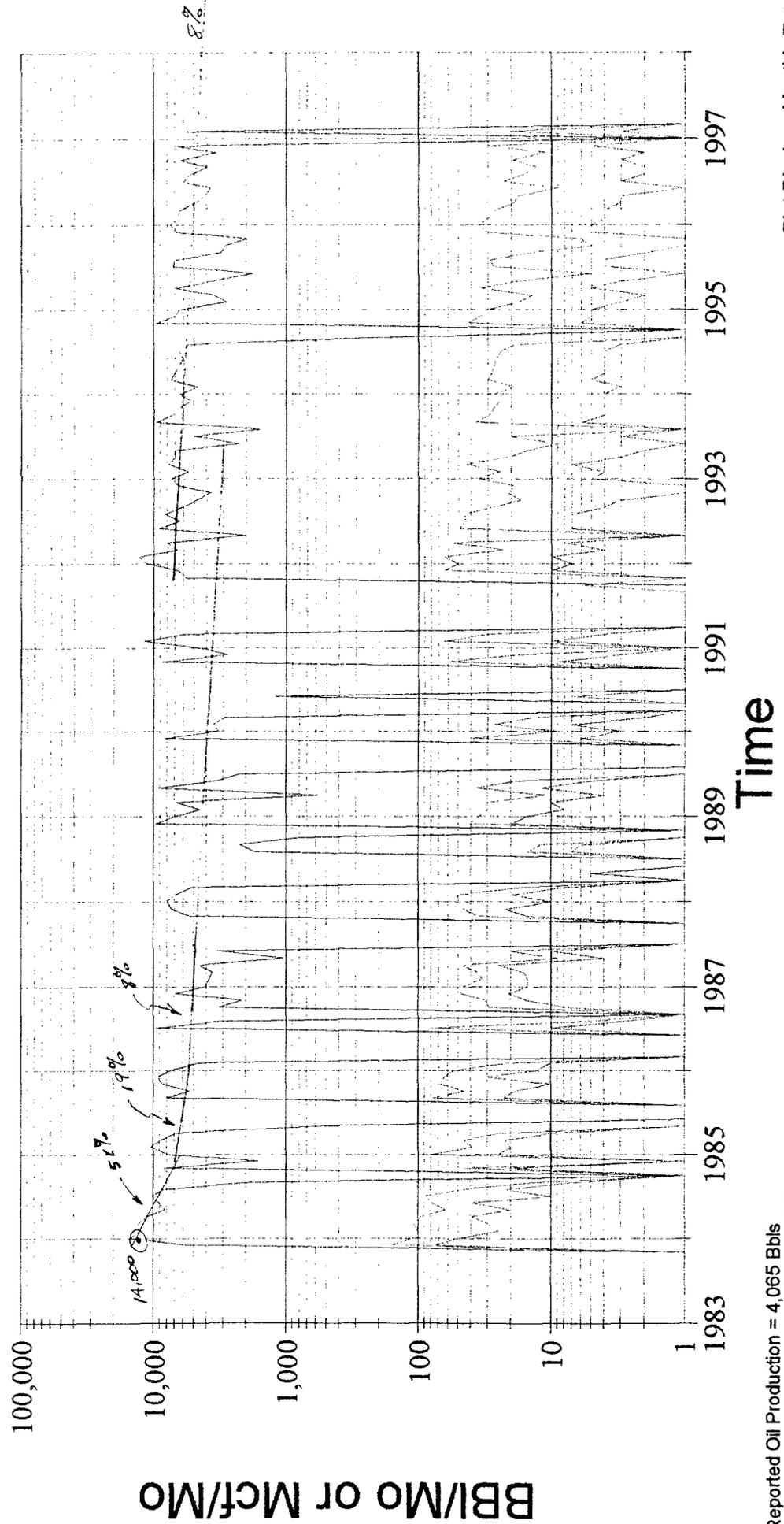
Reported Oil Production = 9,933 Bbls  
 Reported Gas Production = 1,234,434 Mcf  
 Reported Water Production = 3,575 Bbls

Plot Displays Monthly Totals  
 Copyright (C) 1997 by Petroleum Information/Dwights LLC

Oil  
 Gas  
 Water  
 Wells

Field: **BASIN Dakota**  
 Lease: **BREECH | Well #307M (D-13-ZCN-7W)**  
 Operator: **CAULKINS OIL COMPANY**  
 Production Rate vs Time  
 For the Period 01/1983 to 12/1997 | API: 30039231430000

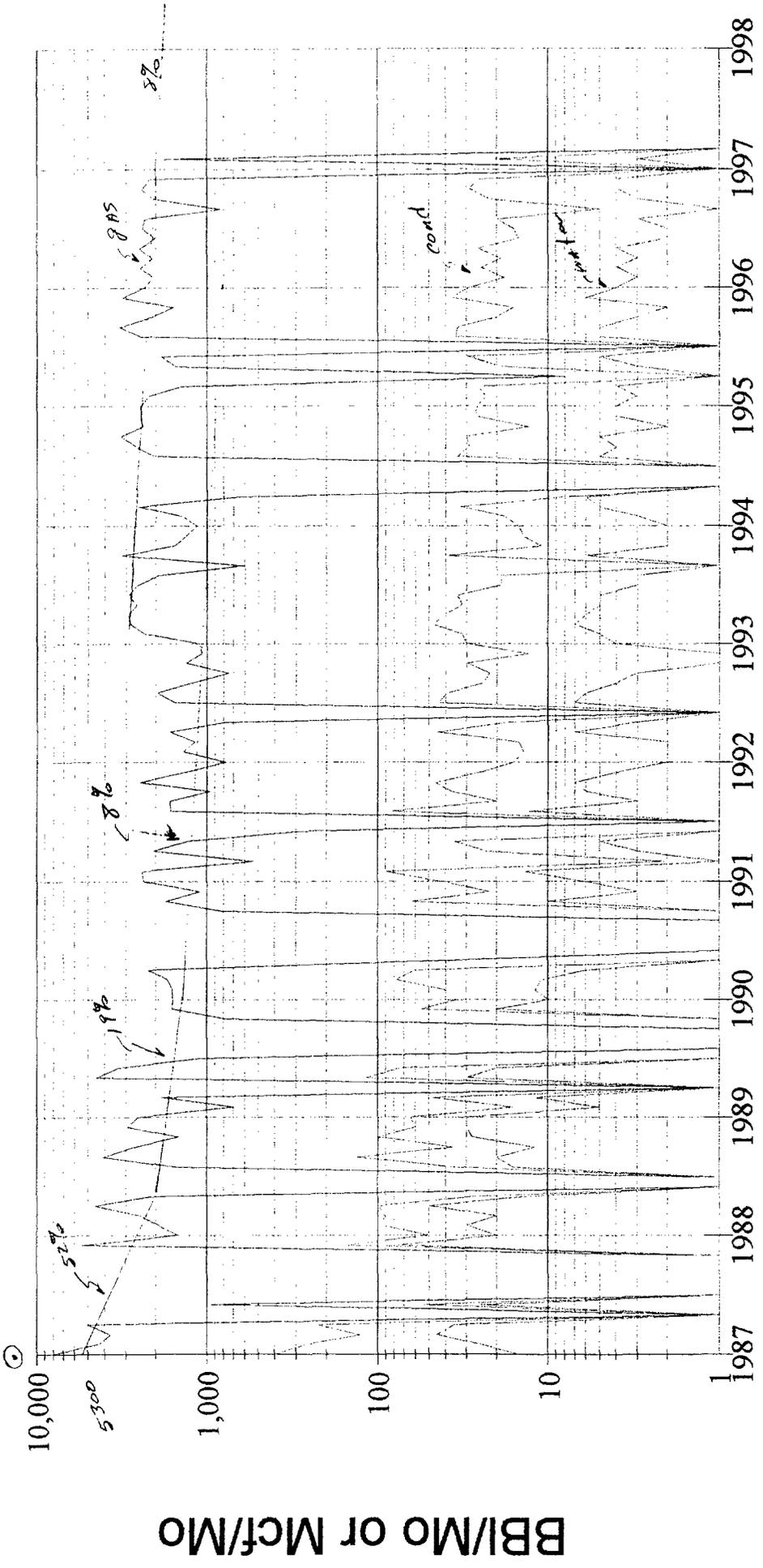
12/83



Reported Oil Production = 4,065 Bbls  
 Reported Gas Production = 727,932 Mcf  
 Reported Water Production = 1,107 Bbls

11/87

Field: **BASIN** *DeKort*  
 Lease: **BREECH | Well #854** (*H-24-26N-7W*)  
 Operator: **CAULKINS OIL COMPANY**  
 Production Rate vs Time  
 For the Period 01/1987 to 12/1997 | API: 300392348900000



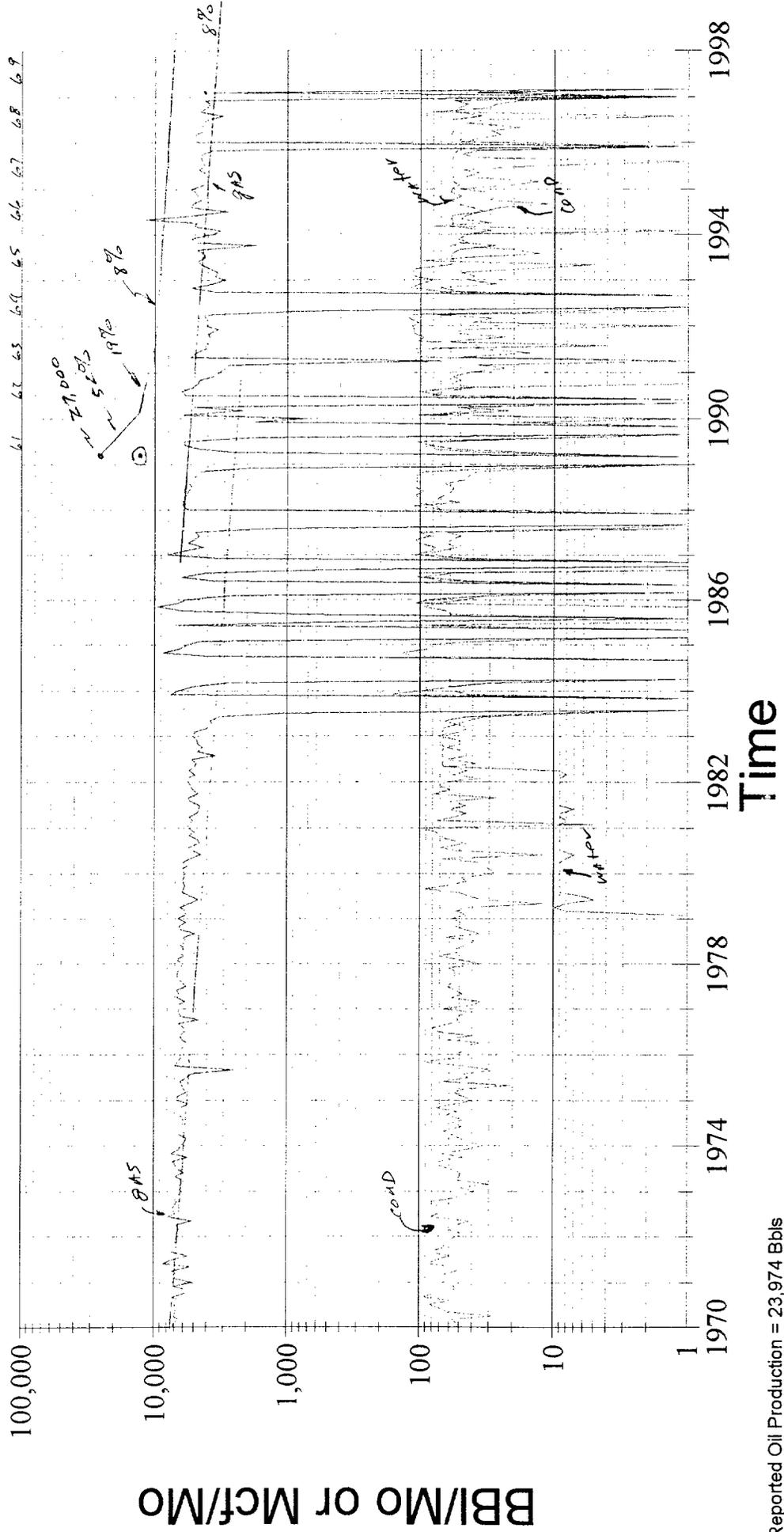
Time

Reported Oil Production = 4,377 Bbls  
 Reported Gas Production = 208,134 Mcf  
 Reported Water Production = 897 Bbls

2/6/1

Field: BASIN *Dorkota*  
 Lease: NCRA | Well #1 (*D-22-22N-7W*)  
 Operator: CHATEAU OIL AND GAS INC  
 Production Rate vs Time  
 For the Period 01/1970 to 12/1997 | API: 30039064070000

Oil  
 Gas  
 Water  
 Wells



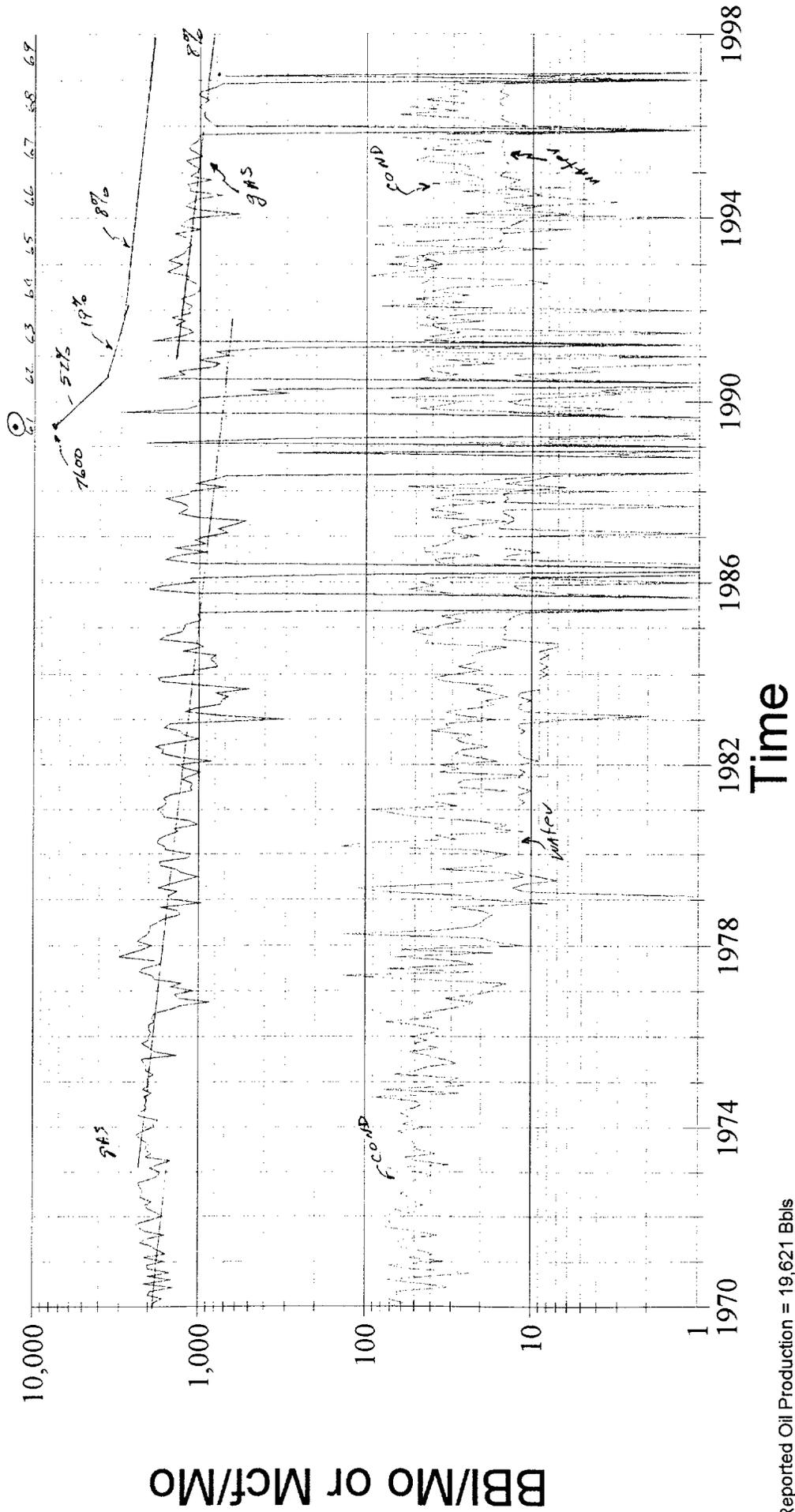
Reported Oil Production = 23,974 Bbls  
 Reported Gas Production = 2,157,697 Mcf  
 Reported Water Production = 8,708 Bbls



7/61

Field: BASIN *Darker for*  
 Lease: CANDADO | Well #1 (M-15-ZLN-7W)  
 Operator: CHATEAU OIL AND GAS INC  
 Production Rate vs Time  
 For the Period 01/1970 to 12/1997 | API: 30039064450000

Oil  
 Gas  
 Water  
 Wells

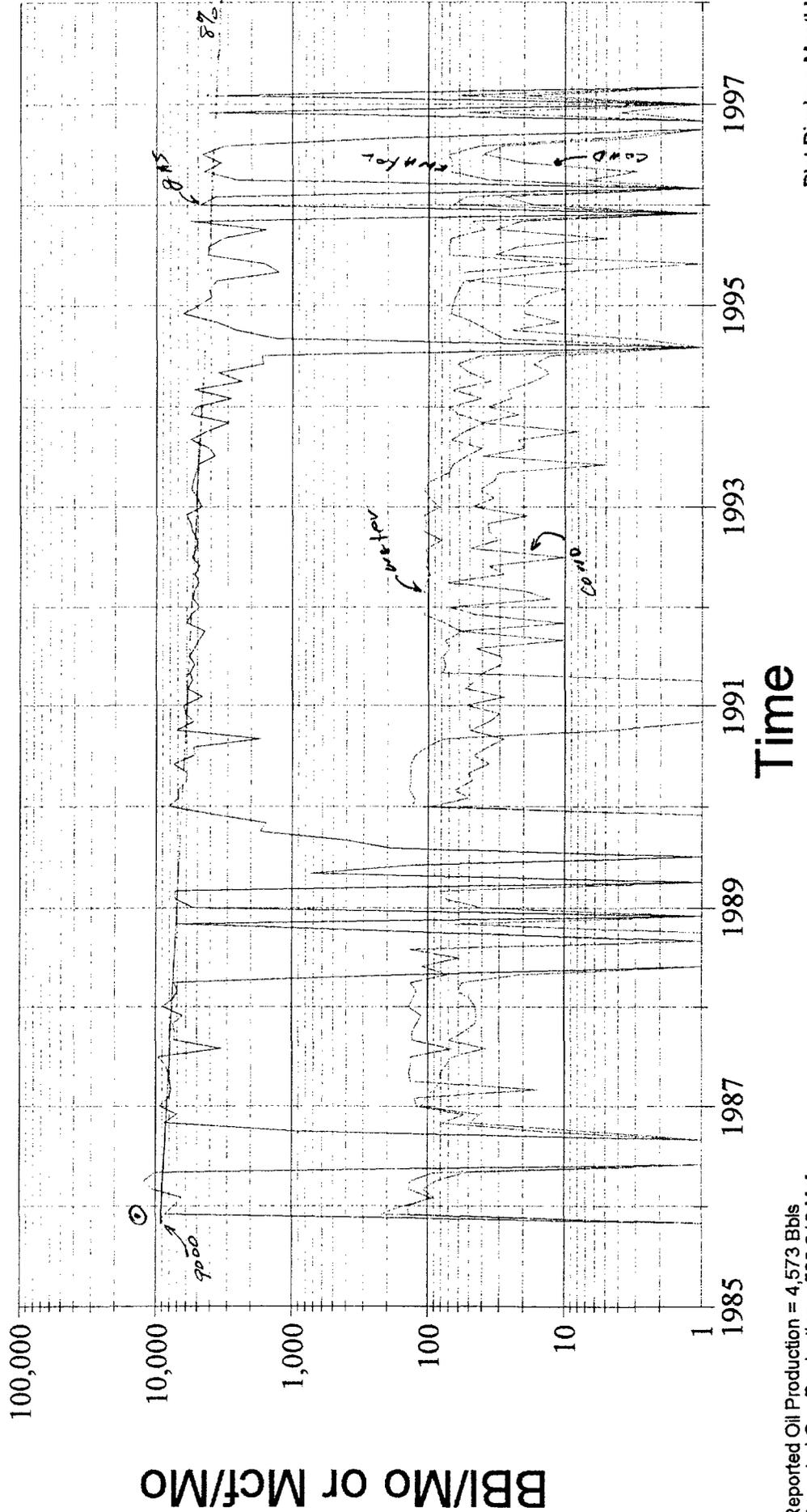


Reported Oil Production = 19,621 Bbls  
 Reported Gas Production = 645,208 Mcf  
 Reported Water Production = 2,905 Bbls

12/85

Field: **BASIN** *Dwight*  
 Lease: **CANDADO** | Well #1E (*I-15-26 N-7 W*)  
 Operator: **CHATEAU OIL AND GAS INC**  
 Production Rate vs Time  
 For the Period 01/1985 to 12/1997 | API: 30039234970000

Oil
Gas
Water
Wells



Reported Oil Production = 4,573 Bbls  
 Reported Gas Production = 599,310 Mcf  
 Reported Water Production = 8,676 Bbls

NMOCD Case Nos. 11897 & 11899

January 8, 1998

Dugan Production Corp.

Exhibit No. 14

Calculate BHP and Z-factor from surface shut-in pressure

11/07/97

WELL NAME : Mona Lisa No.2-MV (proposed) @ mid perf = 4670' (est.)  
 GAS GRAVITY: 0.73 % N2 0.41  
 CONDENSATE (YES=1): 1 % CO2 0.33 %  
 RESERVOIR TEMP: 120 'F % H2S 0.00 %  
 SURFACE TEMP: 60 'F Pc = 662.97 %  
 DEPTH OF ZONE: 4,670 feet Tc = 389.75

SURFACE PRES	BHP	Z	BHP/Z
psia	psia		psia
942	<u>1,087</u>	0.8480	1,281

Average SIWHP of 7 offset wells - Breech B 220M, Breech 224A, 307, 854, NCPA #1E, Condado #1 + 1E.

Calculate BHP and Z-factor from surface shut-in pressure

11/07/97

WELL NAME : Mona Lisa No.2-DK (proposed) @ mid perf = 6690' (est.)  
 GAS GRAVITY: 0.73 % N2 0.42  
 CONDENSATE (YES=1): 1 % CO2 1.18 %  
 RESERVOIR TEMP: 150 'F % H2S 0.00 %  
 SURFACE TEMP: 60 'F Pc = 667.22 %  
 DEPTH OF ZONE: 6,690 feet Tc = 388.42

SURFACE PRES	BHP	Z	BHP/Z
psia	psia		psia
2,154	<u>2,680</u>	0.8171	3,280

Average SIWHP of 7 offset wells - Breech B 220M, Breech 224A, 307, 854, NCPA #1E, Condado #1 + 1E.

Calculate BHP and Z-factor from surface shut-in pressure

11/07/97

WELL NAME : Mona Lisa No.2-DK (proposed) - Dakota BHP @ MV datum  
 GAS GRAVITY: 0.73 % N2 0.42  
 CONDENSATE (YES=1): 1 % CO2 1.18 %  
 RESERVOIR TEMP: 120 'F % H2S 0.00 %  
 SURFACE TEMP: 60 'F Pc = 667.22 %  
 DEPTH OF ZONE: 4,670 feet Tc = 388.42

SURFACE PRES	BHP	Z	BHP/Z
psia	psia		psia
2,154	<u>2,531</u>	0.7756	3,263

CO.CD 23 EL PASO NATURAL GAS  
CUSTOMER ACCOUNTING SERVICES DEPARTMENT  
VOLUME CALCULATION DIVISION  
POST OFFICE BOX 1492  
EL PASO, TEXAS 79978

CONTACTS:  
EL PASO FIELD SERVICES  
(713) 510-2931  
EL PASO MAINLINE  
(915) 496-2595

DATE 4/07/97

CHROMATOGRAPHIC GAS ANALYSIS REPORT

MAILEE  
26730

DUGAN PRODUCTION CORPORATION  
P O BOX 420  
FARMINGTON, NM 87499-0420

METER NUMBER 90378 - HANLEY B #1 MV - (N-18-29N-10W)  
OPERATOR 1862 - DUGAN PRODUCTION CORP

ANALYSIS DATE 2/11/97 TYPE CODE 2 - ACTUAL  
SAMPLE DATE 2/07/97 H2S GRAINS 0  
EFFECTIVE DATE 3/01/97 LOCATION F - FARM BECK  
EFFECTIVE FOR 6 MONTHS

<u>COMPONENTS</u>	<u>NORMALIZED MOL %</u>	<u>GPM</u>
CO2	.33	.000
H2S	.00	.000
N2	.41	.000
METHANE	78.68	.000
ETHANE	10.89	2.913
PROPANE	6.01	1.656
ISO-BUTANE	1.16	.379
NORM-BUTANE	1.30	.410
ISO-PENTANE	.42	.154
NORM-PENTANE	.30	.109
HEXANE PLUS	<u>.50</u>	<u>.218</u>
	100.00	5.839

SPECIFIC GRAVITY .734  
MIXTURE HEATING VALUE  
(BTU @ 14.73 DRY) 1279  
RATIO OF SPECIFIC HEATS .000  
NO TEST SECURED FOR H2S CONTENT

EL PASO NATURAL GAS COMPANY  
 VOLUME ACCOUNTING DEPARTMENT  
 MEASUREMENT DIVISION  
 POST OFFICE BOX 1492  
 EL PASO, TEXAS 79978  
 PHONE: (915) 541-2595  
 CHROMATOGRAPHIC GAS ANALYSIS REPORT

DATE 6/08/96

MAILEE  
 26730

DUGAN PRODUCTION CORPORATION  
 P O BOX 420  
 FARMINGTON, NM 87499-0420

METER NUMBER 72624 - NCRA #1 - Dakota (A-3-26N-3W)  
 OPERATOR 1862 - DUGAN PRODUCTION CORP

ANALYSIS DATE	4/19/96	TYPE CODE	2 - ACTUAL
SAMPLE DATE	4/15/96	H2S GRAINS	0
EFFECTIVE DATE	5/01/96	LOCATION	D - DANIELS FM
EFFECTIVE FOR	6 MONTHS		

COMPONENTS	NORMALIZED MOL %	GPM
CO2	1.18	.000
H2S	.00	.000
N2	.42	.000
METHANE	80.21	.000
ETHANE	10.16	2.718
PROPANE	4.34	1.196
ISO-BUTANE	.77	.252
NORM-BUTANE	1.20	.378
ISO-PENTANE	.50	.183
NORM-PENTANE	.37	.134
HEXANE PLUS	<u>.85</u>	<u>.371</u>
	100.00	5.232

SPECIFIC GRAVITY .729  
 MIXTURE HEATING VALUE  
 (BTU @ 14.73 DRY) 1249  
 RATIO OF SPECIFIC HEATS .000  
 NO TEST SECURED FOR H2S CONTENT



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

NMOCD Case Nos. 11897 & 11899  
January 8, 1998  
Dugan Production Corp.

Exhibit No. 16

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

RECEIVED  
OCT 28 1997

OIL CON. DIV.  
DIST. 3

CASE NO. 11815  
ORDER NO. R-10476-B

APPLICATION OF CONOCO INC. FOR THE ESTABLISHMENT OF A  
DOWNHOLE COMMINGLING REFERENCE CASE PURSUANT TO DIVISION  
GENERAL RULE 303.E AND FOR AN EXCEPTION TO DIVISION GENERAL  
RULE 303.C(1)(b)(ii), RIO ARRIBA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on July 24 and August 21, 1997 at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 17th day of October, 1997, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) By Order No. R-10476, issued in Case 11349 and dated October 6, 1995, the Division authorized Conoco, Inc. ("Conoco") to commingle gas production from the Basin-Dakota and Blanco-Mesaverde Pools within fourteen (14) existing Basin-Dakota Pool gas wells, and within seventeen (17) wells to be subsequently drilled and initially completed as Dakota/Mesaverde commingled wells, all located within its San Juan "28-7" Unit located in portions of Townships 27 and 28 North, Range 7 West, NMPM, Rio Arriba County, New Mexico. Two of the proposed seventeen wells were authorized to be drilled at unorthodox gas well locations therein.

(3) By Division Order No. R-10476-A, dated April 23, 1996, an amendment was issued for Order No. R-10476 which addressed the location of one particular well

affected by this action.

(4) Pursuant to the provisions of Division General Rule 303.E, Conoco at this time seeks to establish a downhole commingling "reference case" for its San Juan "28-7" Unit in Rio Arriba County, New Mexico and the adoption of special administrative rules therefor including provisions whereby all administrative applications for downhole commingling of gas production attributed to the Blanco-Mesaverde, Basin-Dakota, Basin-Fruitland Coal (Gas), Otero-Chacra, Blanco-Pictured Cliffs, and South Blanco-Pictured Cliffs Pools within its San Juan "28-7" Unit submitted subsequent to the filing of this application in this case shall be required to complete the information blanks on Division Form C-107-A but shall not be required to submit additional supporting evidence or data for the following criteria:

- (a) marginal economic criteria;
- (b) pressure criteria;
- (c) allocation formulas; and,
- (d) notice to owners of any production within spacing units where the ownership is not common and offset operators who also own an interest in this unit.

(5) Applicant further seeks an exception from the pressure limitation criteria set forth in Rule 303.C(1)(b)(ii) for all future "new drills" for Basin-Dakota and Blanco-Mesaverde gas production within the "28-7" Unit and for four (4) specific Dakota/Mesaverde wells described as follows:

- (a) the San Juan "28-7" Unit Well No. 224M (API No. 30-039-25697), to be drilled at a standard gas well location 1450 feet from the South line and 790 feet from the East line (Unit D) of Section 28, Township 28 North, Range 7 West, NMPM, Rio Arriba County, New Mexico;
- (b) the San Juan "28-7" Unit Well No. 226M (API No. 30-039-25694), to be drilled at a standard gas well location 790 feet from the North and West lines (Unit D) of Section 36, Township 28 North, Range 7 West, NMPM, Rio Arriba County, New Mexico;
- (c) the San Juan "28-7" Unit Well No. 227M (API No.

30-039-25661), located at a standard gas well location 1745 feet from the South line and 1850 feet from the East line (Unit J) of said Section 36; and,

(d) the San Juan "28-7" Unit Well No. 232M (API No. 30-039-25693), to be drilled at an unorthodox gas well location (approved by Division Administrative Order NSL-3784, dated April 3, 1997) 2425 feet from the South line and 500 feet from the East line (Unit I) of Section 20, Township 28 North, Range 7 West, NMPM, Rio Arriba County, New Mexico.

(6) Division General Rule 303.E, amended by Division Order R-10470-A, issued by the New Mexico Oil Conservation Commission on March 12, 1996 in Case 11353, currently states:

*"If sufficient data exists on a lease, pool, formation, geographic area, etc., so as to render it unnecessary to repeatedly provide such data on Form C-107-A, an operator may except any of the various criteria required under Paragraph 303.D of this rule by establishing a "reference case". The Division, upon its own motion, or by application from an operator, may establish "reference cases" either administratively or by hearing. Upon Division approval of such "reference cases" for specific criteria, subsequent applications to downhole commingle (Form C-107-A) will be required only to cite the Division order number which established such exceptions and shall not be required to submit data for those criteria."*

(7) In the absence of the establishment of a "reference case" as provided in Division Rule 303.E, Division Rule 303.C requires that administrative applications for downhole commingling of gas production be submitted, processed, and approved on a well by well basis including submittal of the following:

- (a) economic criteria to support that at least one zone to be commingled is marginal;
- (b) pressure criteria to demonstrate that the bottomhole pressure of each zone to be commingled is less than the original bottomhole pressure of the lowest pressured zone;

- (c) allocation formulas;
  - (d) notification in writing to each interest owner where ownership is not common in the zones to be commingled; and,
  - (e) notification in writing to each offset operator.
- (8) In accordance with its evidence and testimony presented at the time of the hearing, Conoco seeks to establish a "reference" case for:
- (a) **marginal economic criteria:** to support that the Dakota, Chacra, Pictured Cliffs and Fruitland Coal gas formations/pools may be identified as "Marginal" on Form C-107-A's subsequently filed for wells within the San Juan "28-7" Unit. The applicant further proposes that the data provided in the immediate case serve as supplemental data for confirmation that these formations and/or pools should be classified as "marginal";
  - (b) **allocation formulas:** whereby the Division utilizes the data presented in the immediate case to endorse or approve that each interest owner shall receive its fair and equitable share of production by the use of either the subtraction method or the fixed percentage method of allocation and whereby the applicant need not submit additional data or justification when proposing these methods of allocation production on Form C-107-A;s subsequently filed for wells within the San Juan "28-7" Unit;
  - (c) **elimination of unnecessary notice:** such that any future or further notice concerning downhole commingling applications within this unit shall not be required to (a) any owner (including royalty, overriding royalty or working interest owners) in instances where ownership are not common or percentages are not identical in the zones to be commingled or to (b) each offset operator who is also an interest owner in this unit;

(d) **notice to offset operators:** notification to each offset operator, except as provided in paragraph (c) above, will continue to be made provided those offset operators are operators other than applicant;

(e) **pressure limitation:** for an exception to Rule 303.C(1)(b)(ii), and to establish a pressure exception for the downhole commingling of Dakota with Mesaverde production for new wells drilled in the San Juan "28-7" Unit based upon data presented in the immediate case which demonstrated that downhole commingling of the Dakota formation with the Mesaverde formation can be approved even if the bottomhole pressure of the Dakota formation (the higher pressured reservoir) exceeds the original bottomhole pressure of the Mesaverde formation (the lowest pressured reservoir) because engineering data and analysis has shown that there is no possibility of damage to the Mesaverde formation, nor will there be any loss of reserves, waste or violation of correlative rights; and,

(f) **for an administrative procedure** for the submittal of Form C-107-A for wells in the San Juan "28-7" Unit directly to the Aztec Office of the Division for approval and thereby eliminating the necessity to review/approve said applications at the Santa Fe Office of the Division.

(9) Conoco is the current operator of the Dakota, Mesaverde, Chacra, and Pictured Cliffs producing intervals in the San Juan "28-7" Unit which encompasses the following described 30,684.76 acres, more or less, in Rio Arriba County, New Mexico:

TOWNSHIP 27 NORTH, RANGE 7 WEST, NMPM

Sections 1 through 12:	All
Section 15:	W/2
Sections 16 through 21:	All
Section 22:	W/2
Section 27:	NW/4
Section 28:	N/2
Sections 29 and 30:	All

TOWNSHIP 28 NORTH, RANGE 7 WEST, NMPM

Sections 7 through 36: All.

(10) Within the above-described San Juan "28-7" Unit, Conoco currently operates approximately: (i) 133 gas wells within the Basin-Dakota Pool; (ii) 118 Blanco-Mesaverde gas wells; (iii) 10 Otero-Chacra wells; (iv) 76 Pictured Cliffs gas wells within both the Blanco-Pictured Cliffs and South Blanco-Pictured Cliffs Pools; and, (v) no Basin-Fruitland Coal gas wells.

(11) Within the above-described San Juan "28-7" Unit area Amoco Production Company operates the Fruitland Coal gas interval where they currently have approximately 15 completed wells. Amoco Production Company, the Basin-Fruitland Coal (Gas) Pool, and the San Juan "28-7" Unit were the subject of a nitrogen injection pilot project authorized by Division Order No. R-10113, issued in Case 10954 and dated May 9, 1994.

(12) Since the Basin-Fruitland Coal gas interval within the San Juan "28-7" Unit area, as described above, is not currently operated by Conoco, the Basin-Fruitland Coal (Gas) Pool should be eliminated from inclusion in any order issued in this matter.

(13) In support of its request to establish pressure limitation criteria and an exception from Rule 303.C(1)(ii), the applicant presented geologic and petroleum engineering evidence and testimony which demonstrates that within the San Juan "28-7" Unit:

(a) the average initial (original) reservoir pressure and average current reservoir pressures in existing wells, adjusted to a common datum of 5,000 feet from the various formations within the San Juan "28-7" Unit are summarized as follows:

<u>Formation</u>	<u>Original Pressure</u>	<u>Current Pressure</u>
Dakota	2866 psia	713 psia
Mesaverde	1238 psia	457 psia
Pictured Cliffs	1072 psia	360 psia
Chacra	1206 psia	400 psia
Fruitland Coal	1089 psia	734 psia;

(b) the Mesaverde formation is "under-pressured" and

both the Dakota and Mesaverde formations are low permeability reservoirs and have previously been qualified as "tight sand gas reservoirs";

(c) the average initial pressure of recently drilled Dakota wells has been 1959 psia while the initial pressure of recently drilled Mesaverde wells has been 858 psia at a 5,000 foot datum;

(d) there exists the possibility that a newly drilled well will encounter current reservoir pressure in the Dakota formation of 2,072 psia which is higher than the average original reservoir pressure of the Mesaverde formation of 1238 psia which would preclude the downhole commingling of those two formations unless an exception to Rule 303.C(1)(b)(ii) is granted;

(e) based upon pressure buildup calculations, if the Dakota formation is flowed for at least 30 days and then shut-in, it would take more than 10 days for the Dakota pressure to buildup to 1238 psia which is the original Mesaverde pressure; and,

(f) it is highly unlikely that any Dakota well in this unit would be shut-in for more than 10 days. However, in the event of that occurrence, fracture gradient data demonstrates that average fracture gradient for the Mesaverde formation is 0.52 psi/ft which means the Mesaverde formation can withstand a pressure of 3,850 psia before any fractures would be initiated; the maximum pressure the Dakota could possibly exert on the Mesaverde is 1959 psia.

(14) In support of its request to establish a "reference case" deleting the requirement that each application for downhole commingling be sent to each interest owner affected, the applicant provided evidence and testimony which demonstrated that:

(a) because this is a "divided" unit with various participating areas, the interest ownership between any zones to be downhole commingled within a given wellbore in the Unit will not be common;

(b) pursuant to Division Rule 303.D, applicant is currently required to notify all interest owners in the unit every time a Form C-107-A is submitted to the Division which can involve as many as 272 different owners; and,

(c) providing notice to each interest owner in the unit of subsequent downhole commingling application is unnecessary and is an excessive burden to the applicant.

(15) In support of its request to establish marginal economic criteria, the applicant presented geologic and petroleum engineering evidence and testimony which demonstrates that within the San Juan "28-7" Unit:

(a) the Pictured Cliffs Pool has been substantially depleted such that the most economic method to maximize recovery in existing wells is by recompleting them as downhole commingled wellbores;

(b) the Pictured Cliffs, Dakota, and Mesaverde formations/pools have been substantially developed such that any new wells to be drilled would only be economic if drilled as wellbores downhole commingled with production from one or more of these other formations/pools; and,

(c) the average recoverable gas reserves and average initial producing rates from the various formations within the San Juan "28-7" Unit are summarized as follows:

<u>Formation</u>	<u>Average Estimated Per Well Ultimate Recovery (MMCFG)</u>	<u>Average Initial Per Well Producing Rate (MCFPD)</u>
Dakota	852	437
Mesaverde	1702	675
Pictured Cliffs	419	248
Chacra	203	158
Fruitland Coal	415	130

(16) There is insufficient data available on gas production from the Chacra formation within the "28-7" Unit to include this zone within the provisions of this

application.

(17) However, the evidence and testimony presented by the applicant demonstrated that the Dakota and Pictured Cliffs formations within the San Juan "28-7" Unit should be properly classified as "marginal".

(18) The evidence and testimony presented by the applicant demonstrated that the economic life of the Dakota, Mesaverde, and Pictured Cliffs Pools within the San Juan "28-7" Unit can be extended by downhole commingling with other production in the unit.

(19) The evidence and testimony presented by the applicant demonstrates that the Dakota and Mesaverde formations can be downhole commingled without causing waste and therefore an exception from the pressure limitation set forth in Rule 303.C(1)(b)(ii) should be granted.

(20) In support of its request for approval of various allocation methods for this unit, applicant submitted at hearing proposed formulas for the allocation of production to each of the commingled zones and a description of the factors or data used in determining such formulas which included:

(a) utilizing a fixed allocation formula in those instances where a newly drilled well involves any zones other than the Fruitland Coal Gas Pool; and,

(b) justifying the fixed allocation formula as fair, accurate and reasonable because normalized production data from all wells in each pool in the San Juan "28-7" Unit demonstrates that production from all formations and pools declines at virtually the same rate and therefore a fixed percentage can be established which will continue to be accurate and reliable for the producing life of the well.

(21) The proposed allocation method is routinely utilized by the industry and approved by the Division and therefore, the proposal to establish these allocation methods for the San Juan "28-7" Unit should be approved.

(22) The downhole commingling of gas production attributed to the Blanco-Mesaverde, Basin-Dakota, Blanco-Pictured Cliffs, and South Blanco-Pictured Cliffs Pools from wells within this Unit area will benefit working, royalty, and overriding royalty interest owners. In addition, the downhole commingling of these three zones within this unit will not violate the correlative rights of an interest owners.

(23) All interest owners in this unit were sent a copy of the application and notice of hearing in this case and no interest owner appeared at the hearing in opposition to the establishment of an exception to Rule 303.D.

(24) The administrative process now in effect for handling downhole commingling applications is adequate; however it can be modified for wells within the San Juan "28-7" Unit for obtaining approval for subsequently downhole commingled wells without notice to unit interest owners.

(25) Conoco's request for the adoption of a summary administrative procedure for the necessary exceptions to Division Rule 303.C authorizing the Supervisor of the Aztec District Office of the Division to approve the downhole commingling of said production within this unit is unwarranted since such a procedure is currently in effect.

(26) The approval of downhole commingling of the Dakota, Mesaverde, and Pictured Cliffs intervals within this Unit area will extend the economic life of the existing wells and thereby increase ultimate recovery from these formations.

(27) It is anticipated that new wells, recompleted wells or existing wellbores in this unit will be most economically completed if there is a summary administrative procedure by which those wells may be downhole commingled.

(28) The processing of downhole commingling application for this unit in the absence of adopting a reference case will be an administrative burden to the Division and to the operator.

(29) Approval of a downhole commingling reference case within the above-described Unit area for the Dakota, Mesaverde, and Pictured Cliffs intervals is in the best interest of conservation, the prevention of waste and the protection of correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Conoco Inc. to establish a "reference case" for marginal economic criteria and modification of notification rules on a unit-wide basis for downhole commingling of Dakota, Mesaverde, and Pictured Cliffs formation gas production within existing and future drilled wells within the San Juan "28-7" Unit which encompasses the following described 30,684.76 acres, more or less, in Rio Arriba County, New Mexico is hereby approved:

TOWNSHIP 27 NORTH, RANGE 7 WEST, NMPM

Sections 1 through 12:	All
Section 15:	W/2
Sections 16 through 21:	All
Section 22:	W/2
Section 27:	NW/4
Section 28:	N/2
Sections 29 and 30:	All

TOWNSHIP 28 NORTH, RANGE 7 WEST, NMPM

Sections 7 through 36:	All.
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(2) However that portion of Conoco's request to include Chacra and Fruitland Coal gas production within the provisions of any order issued in this matter is hereby denied.

(3) The application of Conoco Inc. to establish an exception to Rule 303.D and for modification of notification rules on a unit-wide basis for downhole commingling of Dakota, Mesaverde, Pictured Cliffs, Chacra and Fruitland Coal Gas production within existing and future drilled wells within the San Juan 28-7 Unit is hereby approved.

(4) The application of Conoco Inc. to establish an exception from Rule 303.C(1)(b)(ii) to establish a "reference case" for pressure criteria on a unit-wide basis for downhole commingling of Dakota and Mesaverde formation gas production within existing and future drilled wells within the San Juan 28-7 Unit and for four (4) specific Dakota/Mesaverde wells currently being drilled described below is hereby approved:

(a) the San Juan "28-7" Unit Well No. 224M (API No. 30-039-25697), to be drilled at a standard gas well location 1450 feet from the South line and 790 feet from the East line (Unit I) of Section 28, Township 28 North, Range 7 West, NMPM, Rio Arriba County, New Mexico;

(b) the San Juan "28-7" Unit Well No. 226M (API No. 30-039-25694), to be drilled at a standard gas well location 790 feet from the North and West lines (Unit D) of Section 36, Township 28 North, Range 7 West, NMPM, Rio Arriba County, New Mexico;

(c) the San Juan "28-7" Unit Well No. 227M (API No. 30-039-25661), located at a standard gas well location 1745 feet from the South line and 1850 feet from the East line (Unit J) of said Section 36; and,

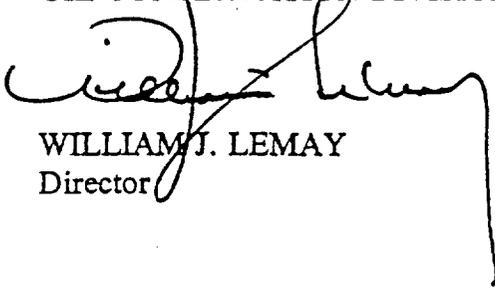
(d) the San Juan "28-7" Unit Well No. 232M (API No. 30-039-25693), to be drilled at an unorthodox gas well location (approved by Division Administrative Order NSL-3784, dated April 3, 1997) 2425 feet from the South line and 500 feet from the East line (Unit I) of Section 20, Township 28 North, Range 7 West, NMPM, Rio Arriba County, New Mexico;

(5) Upon filing of Division Form No. C-107-A's for wells subsequently downhole commingled within the San Juan 28-7 Unit, the applicant shall not be required to submit supporting data to justify classification of the Dakota and Pictured Cliffs gas production as "marginal", supporting data to verify the Dakota and Mesaverde pressure information when those two formations are downhole commingled, and support or justification for utilizing a given method or formula for allocation of production.

(6) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

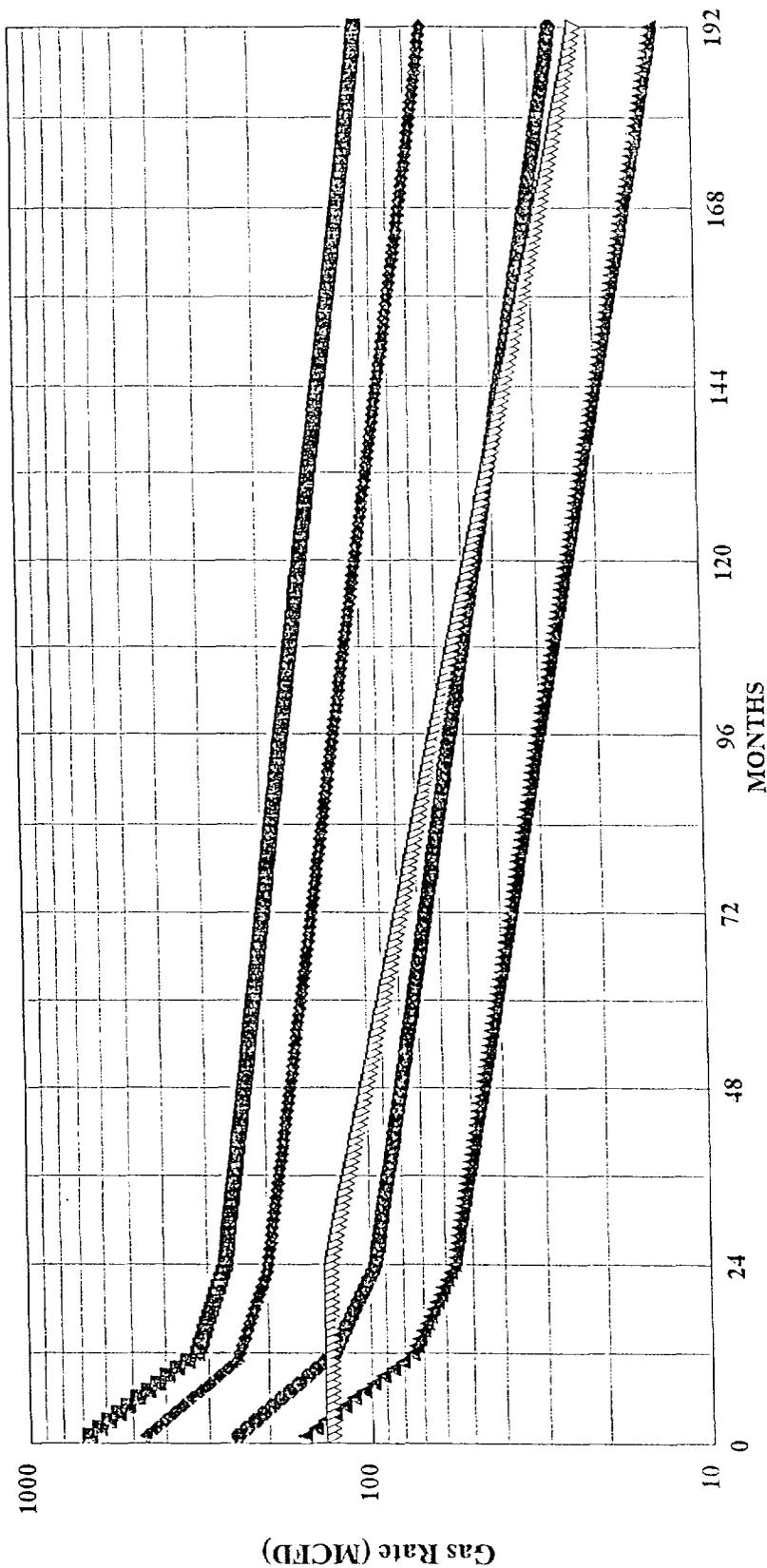
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
Director

SEAL

**SAN JUAN 28-7 UNIT**  
**Normalized Production Flowstreams**



◆ Dakota    ● Pictured Cliffs    ▲ Chacra    ▽ Fruitland Coal    ■ Mesaverde

Decline Summaries	Dakota	Mesaverde	Chacra	Pictured Cliffs	Fruitland Coal
Initial Rate (mcf/d)	123.3 m <sup>3</sup> /mo 437	20.5 m <sup>3</sup> /mo 675	158	248	130
Decline, 1st 12 months	52.0%	55.0%	55.0%	51.0%	1.0%
Decline, next 12 months	19.0%	18.0%	25.0%	25.0%	1.0%
Final Decline	8.0%	6.5%	10.0%	9.0%	12.0%

Conoco's EUR - mmscf/well - 852    1702    203    417    415  
 # of wells in Summary - 44    42    27    40    14

NMOCD Case Nos. 11897 & 11899  
 January 8, 1998  
 Dugan Production Corp.  
 Exhibit No. 17

BEFORE AN EXAMINER OF THE  
 OIL CONSERVATION DIVISION  
 EXHIBIT NO. 36  
 CASE NO. 11815  
 Submitted by: Conoco Inc.  
 Hearing Date: July 24, 1997



**EXHIBIT A  
APPLICATION OF DUGAN PRODUCTION CORP.  
FOR COMPULSORY POOLING AND  
DOWNHOLE COMMINGLING,  
RIO ARRIBA COUNTY, NEW MEXICO**

**LEASEHOLD OWNERSHIP  
S/2, SECTION 14, TOWNSHIP 26 NORTH, RANGE 7 WEST,  
NMPM, RIO ARRIBA COUNTY, NEW MEXICO**

Caulkins Oil Company.  
Post Office Box 340  
Bloomfield, New Mexico 87413  
Attn: Bobby Verquer

Marathon Oil Company  
Post Office Box 552  
Midland, Texas 79702  
Attn: Steve Daniels

Louis-Dreyfus Natural Gas Corporation  
14000 Quail Springs Parkway, Suite 600  
Oklahoma City, Oklahoma 73134-2600  
Attn: Rusty Waters

Dugan Production Corp.  
Post Office Box 420  
Farmington, New Mexico 87499  
Attn: Dave Poage

**SENDER**  
 Dugan Production Corp.  
 Case 11897  
 January 8, 1997 12/18/97

Can return this  
 does not  
 does  
 number:  
 the date

I also wish to receive the following services (for an extra fee):  
 Addressee's Address  
 Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 Chateau Oil & Gas Inc.  
 P.O. Box 2038  
 Farmington, NM 87499-2038

4a. Article Number  
 2 194 413 181

4b. Service Type  
 Registered  
 Express Mail  
 Return Receipt for Merchandise  
 COD

7. Date of Delivery  
 12-22

5. Received By: (Print Name)  
 Signature: (Addressee or Agent)  
 PS Form 3811, December 1994

8. Addressee's Address (Only if requested and fee is paid)

Domestic Return Receipt

Thank you for using Return Receipt Service.

**SENDER**  
 Dugan Production Corp.  
 Case 11897  
 January 8, 1997 12/18/97

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 number:  
 the date

I also wish to receive the following services (for an extra fee):  
 Addressee's Address  
 Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 Louis Dreyfus Natural Gas  
 14000 Quail Springs Parkway  
 Suite 600  
 Oklahoma City, OK 73134-2600  
 Attn: Rusty Waters

4a. Article Number  
 2 194 413 184

4b. Service Type  
 Registered  
 Express Mail  
 Return Receipt for Merchandise  
 COD

7. Date of Delivery  
 12-22

5. Received By: (Print Name)  
 Signature: (Addressee or Agent)  
 PS Form 3811, December 1994

8. Addressee's Address (Only if requested and fee is paid)

Domestic Return Receipt

Thank you for using Return Receipt Service.

**SENDER**  
 Dugan Production Corp.  
 Case 11897  
 January 8, 1997 12/18/97

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I also wish to receive the following services (for an extra fee):  
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 Restricted Delivery  
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3. Article Addressed to:  
 Caulkins Oil Company  
 P.O. Box 340  
 Bloomfield, NM 87413  
 Attn: Bobby Verquer

4a. Article Number  
 2 194 413 182

4b. Service Type  
 Registered  
 Express Mail  
 Return Receipt for Merchandise  
 COD

7. Date of Delivery  
 12/22/97

5. Received By: (Print Name)  
 Signature: (Addressee or Agent)  
 PS Form 3811, December 1994

8. Addressee's Address (Only if requested and fee is paid)

Domestic Return Receipt

Thank you for using Return Receipt Service.

**SENDER**  
 Dugan Production Corp.  
 Case 11897  
 January 8, 1997 12/18/97

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 the date

I also wish to receive the following services (for an extra fee):  
 Addressee's Address  
 Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 Marathon Oil Company  
 P.O. Box 552  
 Midland, TX 79702  
 Attn: Steve Daniels

4a. Article Number  
 2 194 413 183

4b. Service Type  
 Registered  
 Express Mail  
 Return Receipt for Merchandise  
 COD

7. Date of Delivery  
 DEC 23 1997

5. Received By: (Print Name)  
 Signature: (Addressee or Agent)  
 PS Form 3811, December 1994

8. Addressee's Address (Only if requested and fee is paid)

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KELLAHIN AND KELLAHIN

ATTORNEYS AT LAW

EL PATIO BUILDING

117 NORTH GUADALUPE

POST OFFICE BOX 2265

SANTA FE, NEW MEXICO 87504-2265

W. THOMAS KELLAHIN\*

\*NEW MEXICO BOARD OF LEGAL SPECIALIZATION  
RECOGNIZED SPECIALIST IN THE AREA OF  
NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

TELEPHONE (505) 982-4285  
TELEFAX (505) 982-2047

December 18, 1997

**CERTIFIED MAIL-RETURN RECEIPT REQUESTED**

TO: ALL INTERESTED PARTIES OF THE HEARING  
OF THE FOLLOWING NEW MEXICO  
OIL CONSERVATION DIVISION CASE:

*Re: NMOCD Case 11897: Application of Dugan Production Corp. for compulsory pooling and downhole commingling for S/2 Sec 14, T26N, R7W, Rio Arriba County, NM*

*Re: NMOCD Case 11899: Application of Dugan Production Corp. for two nonstandard spacing and proration units consisting of the SE/4 and the SW/4 of Section 14, T26N, R7W, Rio Arriba County, NM.*

On behalf of Dugan Production Corp., please find enclosed copies of its referenced applications and four letters dated December 12, 1997 addressed to the Division concerning these cases. These cases have been continued for hearing on the New Mexico Oil Conservation Division Examiner's docket now scheduled for January 8, 1998. The hearing will be held at the Division hearing room located at 2040 South Pacheco, Santa Fe, New Mexico.

As a party who may be affected by this application, we are notifying you of your right to appear at the hearing and participate in this case, including the right to present evidence either in support of or in opposition to the application. Failure to appear at the hearing may preclude you from any involvement in this case at a later date.

Pursuant to the Division's Memorandum 2-90, you are further notified that if you desire to appear in this case, then you are requested to file a Pre-Hearing Statement with the Division not later than 4:00 PM on Friday, January 1, 1998, with a copy delivered to the undersigned.

Very truly yours,



W. Thomas Kellahin

KELLAHIN AND KELLAHIN

ATTORNEYS AT LAW

EL PATIO BUILDING

117 NORTH GUADALUPE

POST OFFICE BOX 2265

SANTA FE, NEW MEXICO 87504-2265

TELEPHONE (505) 982-4285  
TELEFAX (505) 982-2047

W. THOMAS KELLAHIN\*

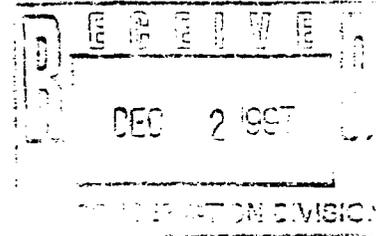
\*NEW MEXICO BOARD OF LEGAL SPECIALIZATION  
RECOGNIZED SPECIALIST IN THE AREA OF  
NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

December 12, 1997

HAND DELIVERED

Mr. Michael E. Stogner  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505



**Re: AMENDED APPLICATION**  
*OCD Case 11899—Application of Dugan Production Corp.  
for two non-standard gas spacing and a proration units,  
Rio Arriba County, New Mexico.*

Dear Mr. Stogner:

In review this application I note that the notice for this case only describes one of the two non-standard gas spacing and proration units. Accordingly, I request that the case be continued to the January 8, 1998 hearing and readvertised as follows:

Case 11899: Application of Dugan Production Corp. for two non-standard gas spacing and proration units, Rio Arriba County, New Mexico. Applicant seeks approval of two non-standard gas proration and spacing units in the Blanco-Mesaverde Gas Pool and the Basin-Dakota Gas Pool, one to consist of the SE/4 of Section 14 Township 26 North, Range 7 West to be dedicated to its Mona Lisa Well No. 2 to be drilled at a standard location 1620 feet from the South line and 1850 feet from the East line (Unit J) of said Section 14 and the other to be operated by Caulkins Oil Company and to consist of the SW/4 of said Section 14. Said units are located approximately 17-1/2 miles northeast of Blanco Trading Post, New Mexico.

Very truly yours,

A handwritten signature in black ink, appearing to read 'W. Thomas Kellahin'. The signature is fluid and cursive, written over the typed name below it.

W. Thomas Kellahin

cfx: William F. Carr, Esq.  
Attorney for Caulkins Oil Company

cfx: Dugan Production Corp.  
Attn: David Poage

KELLAHIN AND KELLAHIN

ATTORNEYS AT LAW

EL PATIO BUILDING

117 NORTH GUADALUPE

POST OFFICE BOX 2265

SANTA FE, NEW MEXICO 87504-2265

December 12, 1997

TELEPHONE (505) 982-4285

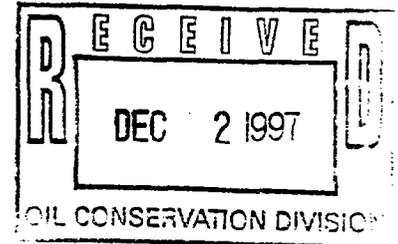
TELEFAX (505) 982-2047

W. THOMAS KELLAHIN\*

\*NEW MEXICO BOARD OF LEGAL SPECIALIZATION  
RECOGNIZED SPECIALIST IN THE AREA OF  
NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

HAND DELIVERED



Mr. Michael E. Stogner  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Re: **AMENDED APPLICATION**  
OCD Case 11897--Application of Dugan Production Corp.  
for compulsory pooling and downhole commingling  
Rio Arriba County, New Mexico.

Dear Mr. Stogner:

Dugan Production Corp. intends to drill this well for development of the Blanco Mesaverde and Basin Dakota gas pools and at this time only desires a pooling of this 320-acre spacing unit for that purpose.

Accordingly, on behalf of Dugan Production Corp., I would appreciate you continuing this case to the January 8, 1998 docket and readvertising it to reflect pooling of only those two pools.

Very truly yours,

A handwritten signature in black ink, appearing to read "W. Thomas Kellahin". The signature is fluid and cursive, written over the typed name below it.

W. Thomas Kellahin

cfx: William F. Carr, Esq.  
Attorney for Caulkins Oil Company  
cfx: Dugan Production Corp.  
Attn: David Poage

KELLAHIN AND KELLAHIN

ATTORNEYS AT LAW

EL PATIO BUILDING

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SANTA FE, NEW MEXICO 87504-2265

TELEPHONE (505) 982-4295

TELEFAX (505) 982-2047

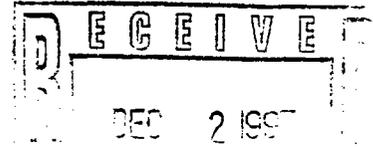
W. THOMAS KELLAHIN\*

\*NEW MEXICO BOARD OF LEGAL SPECIALIZATION  
RECOGNIZED SPECIALIST IN THE AREA OF  
NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

December 12, 1997

HAND DELIVERED



Mr. Michael E. Stogner  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Re: **REQUEST FOR CONTINUANCE**  
OCD Case 11897--Application of Dugan Production Corp.  
for compulsory pooling and downhole commingling  
Rio Arriba County, New Mexico.

Dear Mr. Stogner:

As a result of a District Court hearing, I am unable to appear at the Divison hearing of the referenced case now set for December 18, 1997. Accordingly, on behalf of Dugan Production Corp., I would appreciate you continuing this case to the January 8, 1998 docket. Mr. Carr, on behalf of Caulkins Oil Company, has concurred in this continuance request.

Very truly yours,

A handwritten signature in black ink, appearing to read "W. Thomas Kellahin". The signature is fluid and cursive, with a large initial "W" and a long, sweeping tail.

W. Thomas Kellahin

cfx: William F. Carr, Esq.  
Attorney for Caulkins Oil Company  
cfx: Dugan Production Corp.  
Attn: David Poage