

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980
DISTRICT II
811 South First St., Artesia, NM 88210-2835
DISTRICT III
1000 Rio Brazos Rd, Aztec, NM 87410-1693

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

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

APPROVAL PROCESS:
☒ Administrative ☐ Hearing
EXISTING WELLBORE
☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

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

Sherman Edward 2B O-3 -T29N-R5W Rio Arriba
Lease Well No. Unit Ltr. - Sec - Twp - Rge County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 006515 Property Code 003836 API NO. 30-039-21411 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	Gobernador Pictured Cliffs 77440		Blanco Mesaverde 72319
2. Top and Bottom of Pay Section (Perforations)	3212'-3380'		5274'-5641'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated Or Measured Original	a. (Current) 424 PSIA @ 3292' (calculated) (Original) b. 1204 PSIA @ 3292' (calculated)	a. b.	a. 505 PSIA @ 3292' (calculated @ PC datum) b. 1241 PSIA @ 3292' (calculated @ PC datum)
6. Oil Gravity (*API) or Gas BTU Content	1080 BTU/CF		1109 BTU/CF
7. Producing or Shut-In?	Producing		Producing
Production Marginal? (yes or no)	Yes		Yes
* If Shut-In, give date and oil/gas/water rates of last production Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data	Date: Rates:	Date: Rates:	Date: Rates:
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: Average 3/99 Rates: 48 MCFD + 0.6 BWPD + 0.13 BCPD	Date: Rates:	Date: Average 3/99 Rates: 55 MCFD + 2.3 BWPD + 0 BCPD
8. Fixed Percentage Allocation Formula -% for each zone	Oil: 100% Gas: 45%	Oil: % Gas: %	Oil: 0% Gas: 55%

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.

10. Are all working, overriding, and royalty interests identical in all commingled zones? ☒ Yes ☐ No
If not, have all working, overriding, and royalty interests been notified by certified mail? ☐ Yes ☐ No
Have all offset operators been given written notice of the proposed downhole commingling? ☒ Yes ☐ No

11. Will cross-flow occur? ☒ Yes ☐ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☒ Yes ☐ No (If No, attach explanation)

12. Are all produced fluids from all commingled zones compatible with each other? ☒ Yes ☐ No

13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)

14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☒ Yes ☐ No

15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). R-10770, R-10771, DHC-1969

16. ATTACHMENTS:

- * C-102 for each zone to be commingled showing its spacing unit and acreage dedication.-Attachments 1 & 2
- * Production curve for each zone for at least one year. (If not available, attach explanation.)-Attachments 3 & 4
- * For zones with no production history, estimated production rates and supporting data.
- * Data to support allocation method or formula.-Attachment No. 5
- * Notification list of all offset operators.-Attachments 6 & 7
- * 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 May 28, 1999

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

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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

Application Acronyms:

[NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
[DD-Directional Drilling] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Directional Drilling
☐ NSL ☐ NSP ☐ DD ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☒ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☒ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] INFORMATION / DATA SUBMITTED IS COMPLETE - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I further verify that all applicable API Numbers are included. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

John Roe
Print or Type Name

John Roe
Signature

Engineering Manager
Title

5/28/99
Date

MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION

Form C-102
Supersedes C-103
Effective 1-1-65

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

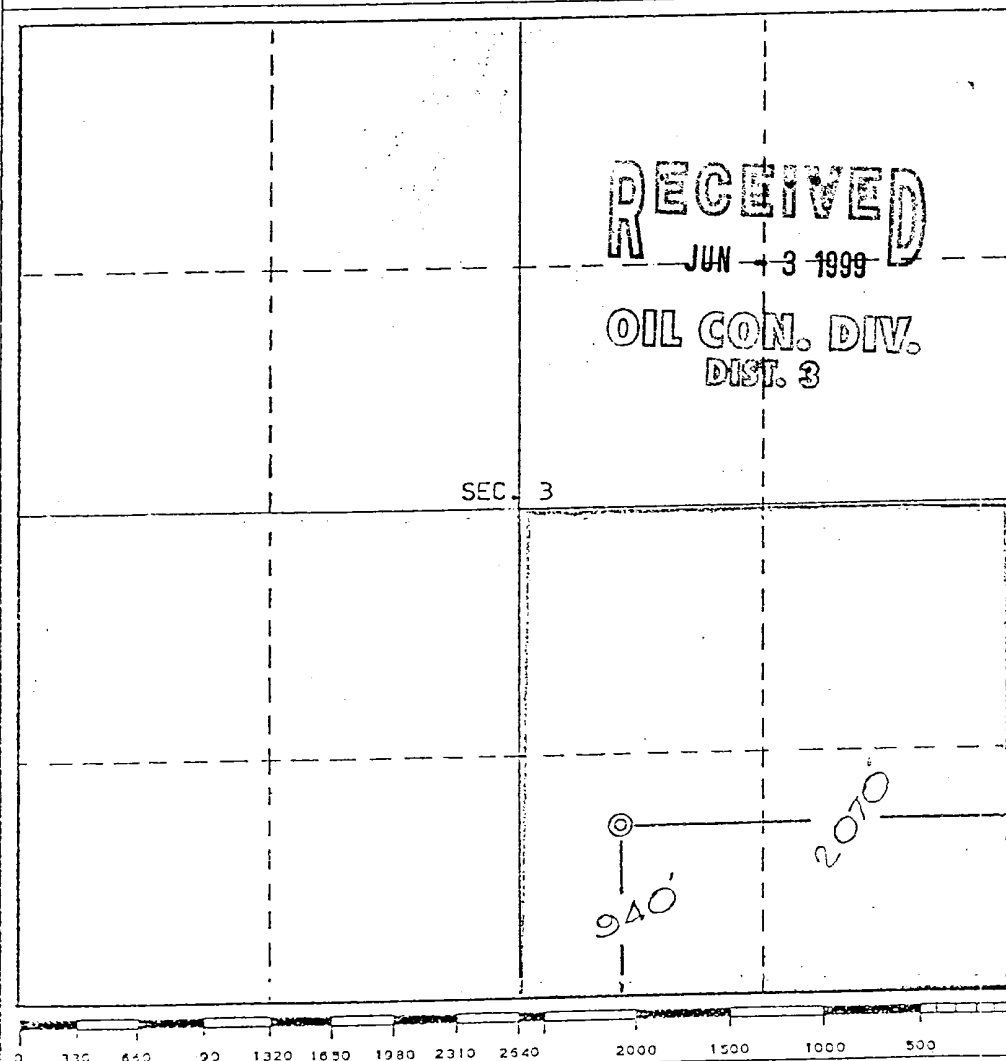
Operator Dugan Production Corporation			Lease Sherman Edward			Well No. 2B		
Unit Letter 0	Section 3	Township 29 North	Range 5 West	County Rio Arriba				
Actual Postage Location of Well:								
940		feet from the South		line and 2070		feet from the East		line
Ground Level Elev. 6401	Producing Formation Pictured Cliffs		Pool Gobernador			Dedicated Acreage: 160 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Name **Thomas A. Dugan**

Position **Petroleum Engineer**

Company **Dugan Production Corp.**

Date **11-22-77**

REGISTERED LAND
I hereby certify that the location shown on this plat was plotted from field notes of survey made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.
E.V. ECHOHAWK

Date Surveyed **December 11, 1976**

Registered Professional Engineer and/or Land Surveyor

E.V. Echohawk
Certificate No. **3602**
E.V. Echohawk LS

MEXICO OIL CONSERVATION COMMISS.
WELL LOCATION AND ACREAGE DEDICATION PLAT

Handwritten:
No. 2
Pg 1 of 1

Form C-100
Supersedes C-128
Effective 1-1-65

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

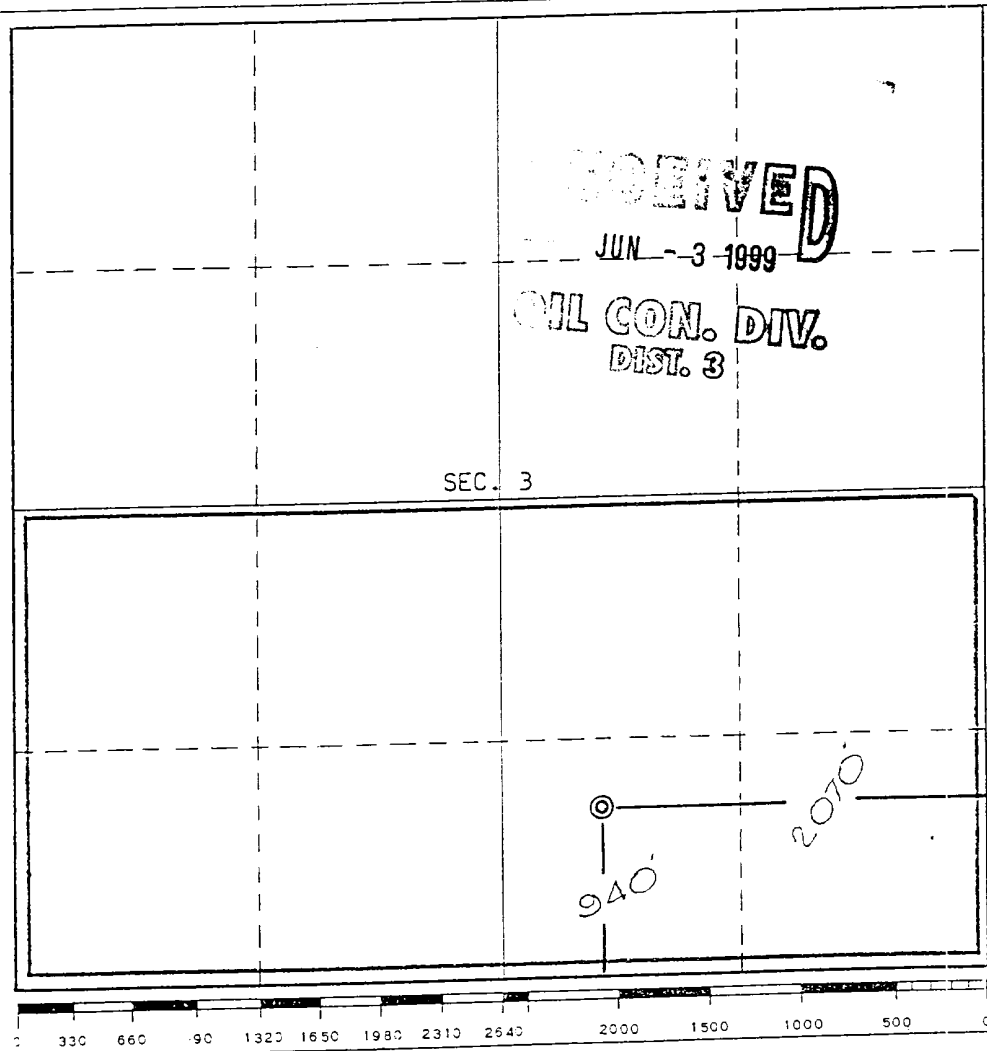
Operator Dugan Production Corporation			Lessee Sherman Edward		Well No. 2B
Unit Letter 0	Section 3	Township 29 North	Range 5 West	County Rio Arriba	
Actual Footage Location of Well: 940 feet from the South line and 2070 feet from the East line					
Ground Level Elev. 6401	Producing Formation Mesaverde	Pool Blanco Mesaverde		Dedicated Acreage: 320 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Handwritten Signature: Thomas A. Dugan
Name
Thomas A. Dugan

Position
Petroleum Engineer

Company
Dugan Production Corp.

Date
5-16-77

Handwritten: I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.
Handwritten: E.V. Echohawk
 REGISTERED LAND SURVEYOR
 DISTRICT 3
 No. 3602
 E.V. ECHOHAWK

Date Surveyed
December 11, 1976
 Registered Professional Engineer and/or Land Surveyor

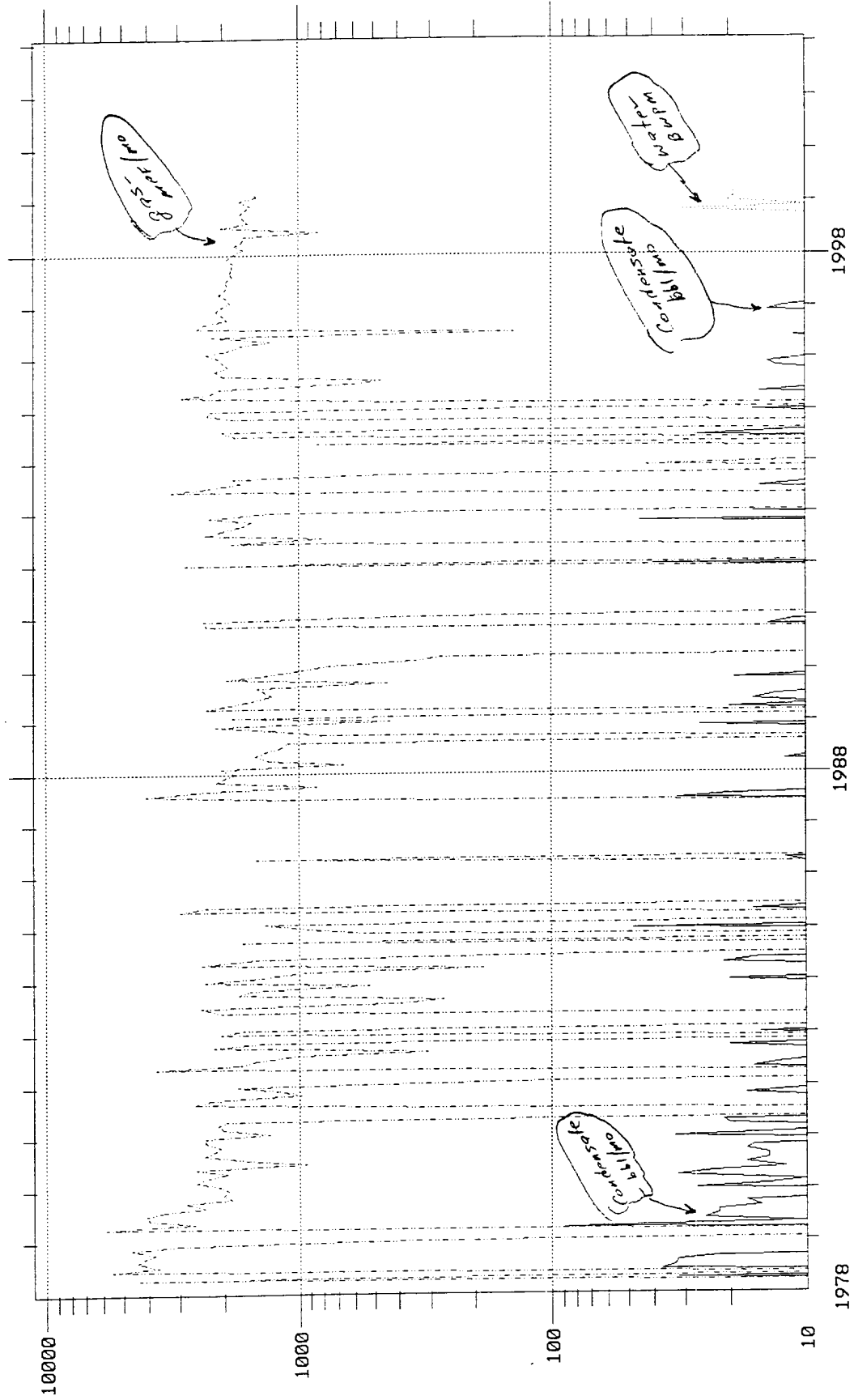
Handwritten Signature: E.V. Echohawk
 Certificate No. **3602**
E.V. Echohawk LS

Calculated
Oil
Gas
Water

DUGAN PRODUCTION CORP.
Production Rate vs Time
Bbl/Mo or Mcf/Mo vs Months
SHERMAN EDWARD NO.2B
GOVERNADOR PICTURED CLIFFS (0-3-29N-5W)

Production
Oil
Gas
Water

Attachment
No.3
Pg 1 of 1



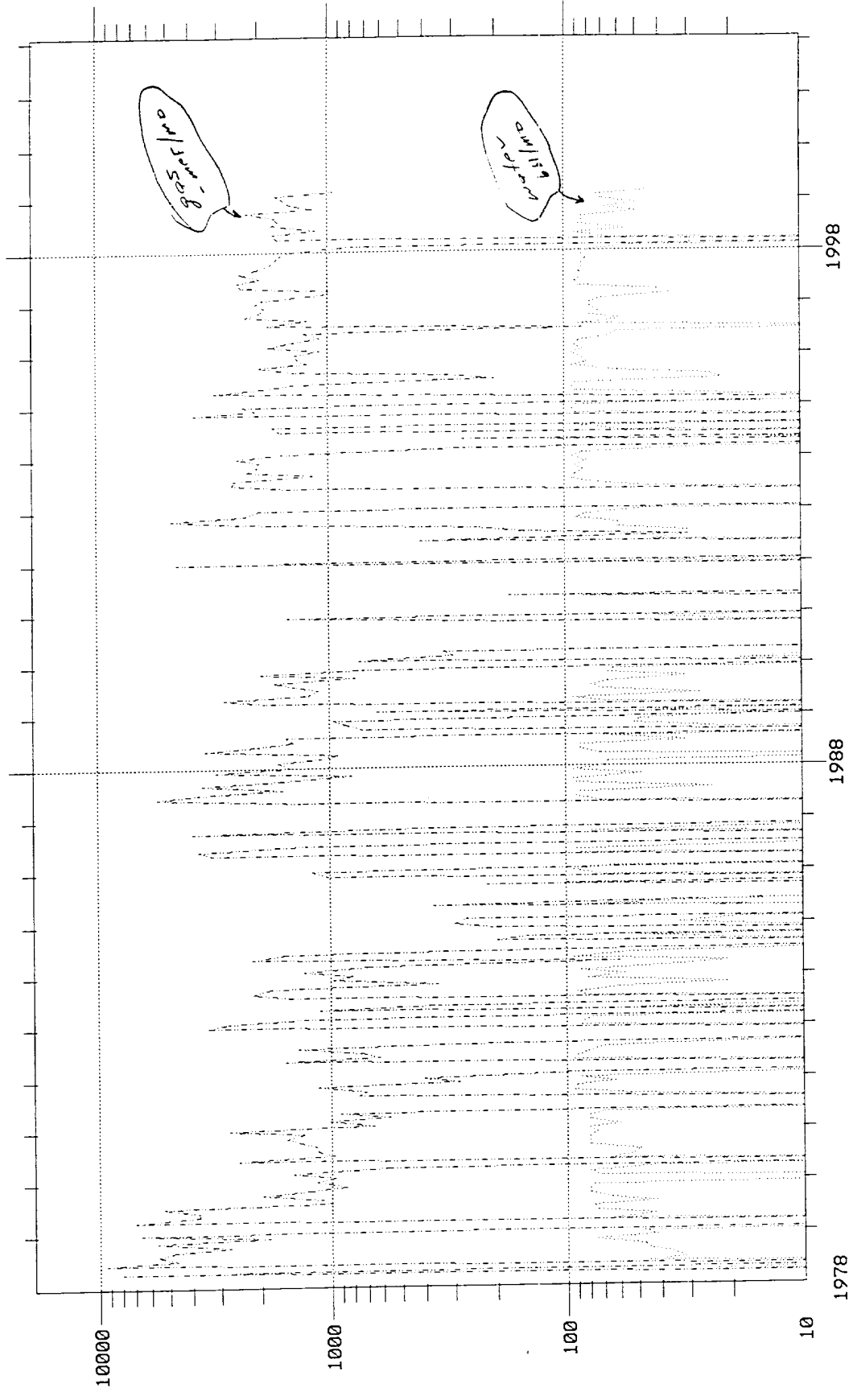
Reported Oil Production = 1777 Bbls
Reported Gas Production = 320203 Mcf
Reported Water Production = 100 Bbls

Calculated
Oil
Gas
Water

DUGAN PRODUCTION CORP.
Production Rate vs Time
Bbl/Mo or Mcf/Mo vs Months
SHERMAN EDWARD NO.2B
BLANCO MESAVERDE (O-3-29N-5W)

Production
Oil
Gas
Water

Attachment
No. 4
pg 1 of 1



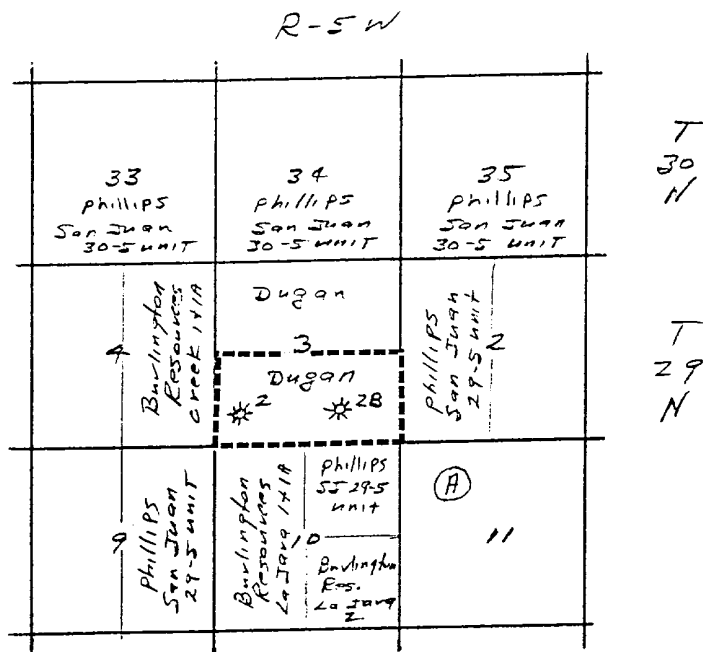
Reported Oil Production = 0 Bbls
Reported Gas Production = 312757 Mcf
Reported Water Production = 11327 Bbls

Attachment No. 5
Proposed Allocation of Downhole Commingled Production
Dugan Production's Sherman Edward No. 2B (O-3-29N-5W)
Gobernador PC & Blanco MV
API No. 30-039-21411

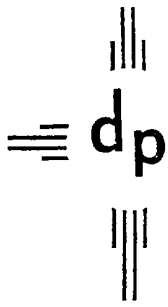
	<u>Gas-MCF</u>	<u>Condensate-bbl</u>	<u>Water-bbl</u>
<u>Cum. production 1-1-99 & % of total</u>			
Gobernador PC	321,768 (50.7%)	1779 (100%)	110 (1.0%)
Blanco MV (last production 8/92)	<u>312,757 (49.3%)</u>	<u>0 (0%)</u>	<u>11,327 (99.0%)</u>
Total	634,525	1779	11,437
<u>1998 Annual Production (12 months) & % of total</u>			
Gobernador PC	19,611 (54.2%)	47 (100%)	82 (9.7%)
Blanco MV	<u>16,602 (45.8%)</u>	<u>0 (0%)</u>	<u>767 (90.3%)</u>
Total	36,213	47	849
<u>Anticipated Commingled Production & % of total</u>			
Gobernador PC (current average)	50 MCFD (45.5%)	0.13 (100%)	1.0 BWPD (25%)
Blanco MV	<u>60 MCFD (54.5%)</u>	<u>0 (0%)</u>	<u>3.0 BWPD (75%)</u>
Total	110 MCFD	0.13	4.0 BWPD
<u>Proposed Commingled Production Allocation</u>			
Gobernador PC	45%	100%	25%
Blanco MV	55%	0%	75%

Attachment No. 6

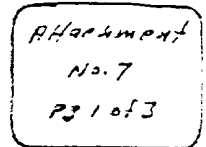
Operators Offsetting Dugan Production's
Sherman Edward No. 2B (0-3-29N-5W)
SE 1/4 + S/2 Spacing units - Gobernador PC + Blanco MU



- ① All of Section 11, T-29N, R-5W is undeveloped in the Gobernador PC + Blanco MU pools. Federal Lease SF-078736 comprises the whole section + according to BLM Records, operating rights are held by Phillips petroleum.



dugan production corp.



May 28, 1999

CERTIFIED RETURN RECEIPT

To: Operators and owners of undeveloped leases (address list attached)
Offsetting Dugan Production's
Sherman Edward No. 2B
Unit O, Section 3, Township 29N, Range 5W
Gobernador Pictured Cliffs and Blanco Mesaverde Gas Pools
Rio Arriba Co., New Mexico

Dear Offset Operator or Lease Owner:

Attached is a copy of our application to the NMOCD and BLM requesting administrative approval to downhole commingle the existing Gobernador Pictured Cliffs and Blanco Mesaverde completions in the captioned dually completed well.

Notice is being sent to you as an offsetting operator or holder of undeveloped offset leasehold interest. If you have objections to this proposal, you should notify the NMOCD at 2040 South Pacheco, Santa Fe, NM 87505 with a copy to Dugan at our letterhead address within 20 days of this letter date. If you have no objections to this proposal, we would appreciate your signing the waiver below on the duplicate copy of this letter and return to us in the enclosed postage paid envelope.

Should you have questions or need additional information, please let me know.

Sincerely,

John D. Roe

John D. Roe
Engineering Manager

The undersigned offset operator/undeveloped lease holder has no objection to Dugan Production's proposed downhole commingling of Gobernador Pictured Cliffs and Blanco Mesaverde production in their Sherman Edward No. 2B.

Signed

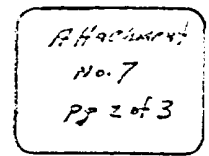
Company

Date

JDR/tmf

cc: NMOCD - Santa Fe

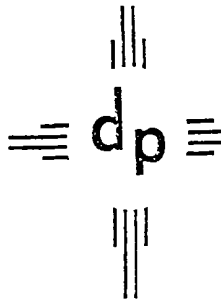
OFFSET OPERATOR NOTIFICATION
DUGAN PRODUCTION CORP.'S SHERMAN EDWARD NO. 2B
GOBERNADOR PICTURED CLIFFS & BLANCO MESAVERDE GAS POOLS
SE/4 & S/2 SPACING UNITS, SECTION 3, T-29N, R-5W
RIO ARriba COUNTY, NEW MEXICO



Burlington Resources
P. O. Box 4289
Farmington, NM 87499-4289

Phillips Petroleum Corp.
5525 US Highway 64
Farmington, NM 87401

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



dugan production corp.

SIGN & RETURN
THIS COPY

May 28, 1999

CERTIFIED RETURN RECEIPT

To: Operators and owners of undeveloped leases (address list attached)
Offsetting Dugan Production's
Sherman Edward No. 2B
Unit O, Section 3, Township 29N, Range 5W
Gobernador Pictured Cliffs and Blanco Mesaverde Gas Pools
Rio Arriba Co., New Mexico

Attachment
No. 7
P23 of 3

Dear Offset Operator or Lease Owner:

Attached is a copy of our application to the NMOCD and BLM requesting administrative approval to downhole commingle the existing Gobernador Pictured Cliffs and Blanco Mesaverde completions in the captioned dually completed well.

Notice is being sent to you as an offsetting operator or holder of undeveloped offset leasehold interest. If you have objections to this proposal, you should notify the NMOCD at 2040 South Pacheco, Santa Fe, NM 87505 with a copy to Dugan at our letterhead address within 20 days of this letter date. If you have no objections to this proposal, we would appreciate your signing the waiver below on the duplicate copy of this letter and return to us in the enclosed postage paid envelope.

Should you have questions or need additional information, please let me know.

Sincerely,

John D. Roe

John D. Roe
Engineering Manager

The undersigned offset operator/undeveloped lease holder has no objection to Dugan Production's proposed downhole commingling of Gobernador Pictured Cliffs and Blanco Mesaverde production in their Sherman Edward No. 2B.

Signed

Company

Date

JDR/tmf

cc: NMOCD - Santa Fe