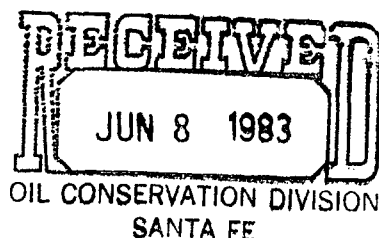


El Paso EXPLORATION
COMPANY



P.O. BOX 289
FARMINGTON, NEW MEXICO 87401
PHONE: 505-325-2841

May 26, 1983

Mr. Joe Ramey
New Mexico Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Subject: Mudge #4A
Unit C, Section 1, T-31-N, R-11-W
San Juan County, New Mexico

Dear Mr. Ramey:

El Paso Natural Gas Company requests administrative approval to downhole commingle the production from its Mudge #4A gas well located in Unit C, Section 1, T-31-N, R-11-W, San Juan County, New Mexico. This well is producing from both the Blanco Pictured Cliffs Pool and the Blanco Mesa Verde Pool. El Paso Natural Gas Company owns 100% working interest in both producing intervals and feels downhole commingling is the most efficient means to produce the well. As reservoir pressures decline, condensate production will become more difficult, and it is intended to equip the well for a possible pumping unit in the future in order to maximize productivity and eliminate waste.

Currently, the Pictured Cliffs side of this wellbore has a casing failure. It is intended to downhole commingle and produce the well through one string of tubing after the casing failure is permanently repaired. Due to the casing failure, the current producing rate and bottom hole pressure for the Blanco Pictured Cliffs must be estimated from the 1982 production history and state deliverability test.

The attached production decline curves show both formations have established a steady rate of decline. Fluctuation in producing rates for the year 1982 is a result of line pressure changes and low market demand. It is estimated the Blanco Pictured Cliffs will produce at an average rate of 210 MCF/D after the casing failure is repaired. Furthermore, the Pictured Cliffs produces no condensate and water in an amount too small to measure. The Mesa Verde is currently producing 699 MCF/D of gas and 14.28 bbls. of condensate per day with water in amounts too small to measure. Since both formations produce relatively no water, no formation damage should occur as a result of downhole commingling. It is estimated the minimum combined producing rate after commingling will be 909 MCF/D of gas and 14.28 bbls. condensate per day with a probable increase in condensate production with the aid of the Pictured Cliffs gas lifting the Mesa Verde fluid.

Mr. Joe Ramey
Page Two
May 26, 1983

The 1982 deliverability test showed the Pictured Cliffs zone to have a shut in pressure of 484 psia. The corresponding bottom hole pressure is estimated to be 519 psia. A current bottom hole pressure survey run of the Mesa Verde formation shows a bottom hole pressure of 587 psia. The ratio of bottom hole pressures is 1.13/1.0. Therefore, due to the small pressure differential between the two formations, it is not expected that any migration of gas or liquids will occur, particularly if the well is continuously produced.

It is proposed that the future production be allocated based on calculated remaining reserves. It is estimated that the Pictured Cliffs has approximately 1470 MMCF of remaining gas reserves and the Mesa Verde has about 4450 MMCF of remaining gas reserves, for a total of 5920 MMCF. Thus, based on remaining reserves, 25% of the well's gas production could be attributed to the Blanco Pictured Cliffs Pool and 75% to the Blanco Mesa Verde Pool. All condensate produced would be attributed to the Blanco Mesa Verde Pool.

All offset operators of the proposed commingling application, including the Minerals Management Service, have been notified by certified mail.

A well location plat, offset ownership plat, production decline curves, productivity test, and bottom hole pressure survey, are attached.

Sincerely,

A handwritten signature in dark ink, appearing to read 'G. W. Brink', with a stylized flourish at the end.

G. W. Brink
Project Drilling Engineer

GWB:pb

att.

All distances must be from the outer boundaries of the Section. JUN 8 1983

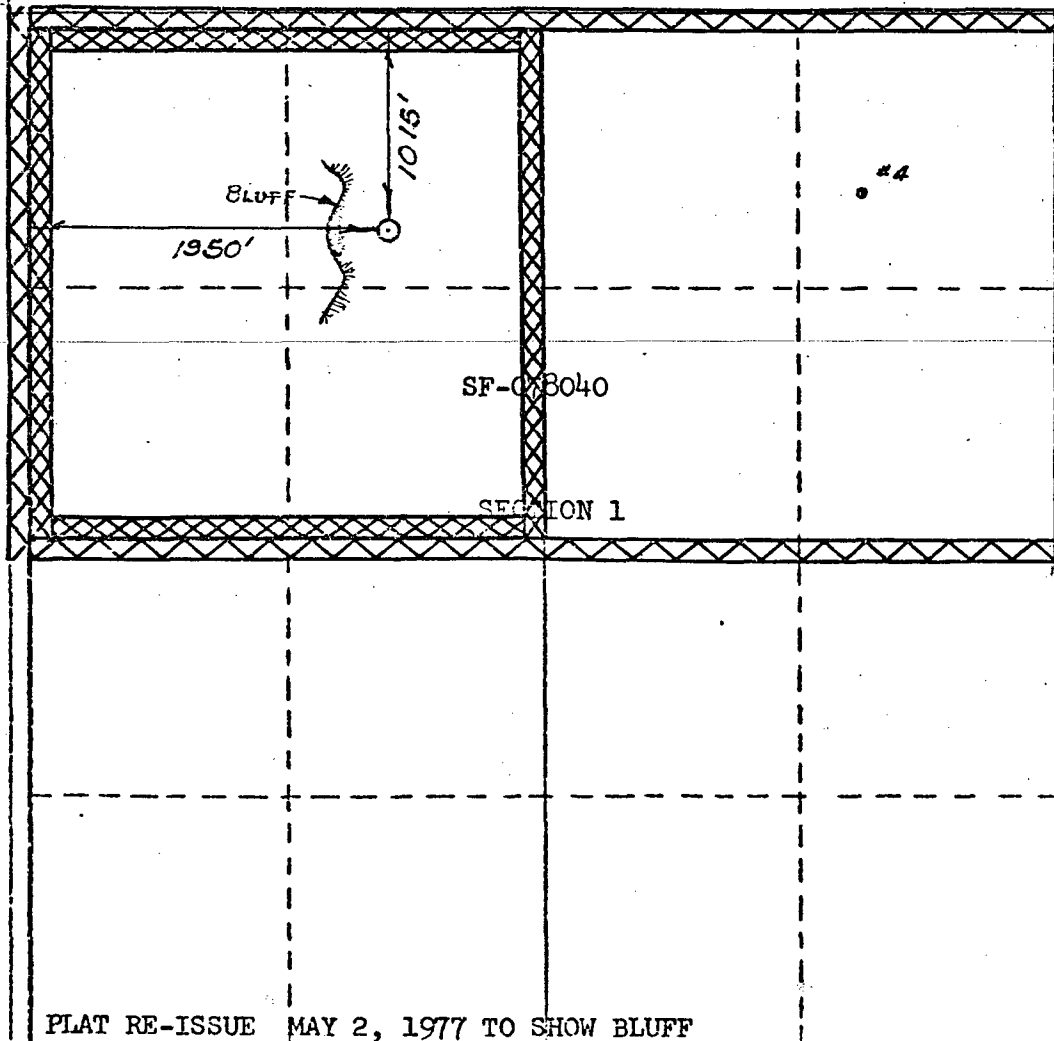
Operator EL PASO NATURAL GAS COMPANY		Lease MUDGE		Well No. 4A
Unit Letter C	Section 1	Township 31-N	Range 11-W	County SANTA FE SAN JUAN
Actual Footage Location of Well: 1015 feet from the NORTH line and 1950 feet from the WEST line				
Ground Level Elev. 6337	Producing Formation PICTURED CLIFFS & MESA VERDE	Pool BLANCO PICTURED CLIFFS BLANCO MESA VERDE	Dedicated Acreage: 160.34 & 320.59 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.



PLAT RE-ISSUE MAY 2, 1977 TO SHOW BLUFF

CERTIFICATION

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

Original Signed by
D. G. Brisco

Name

Drilling Clerk
Position

El Paso Natural Gas
Company

May 6, 1977
Date

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
APRIL 7, 1977

Registered Professional Engineer
and/or Land Surveyor

Certificate No. **1760**

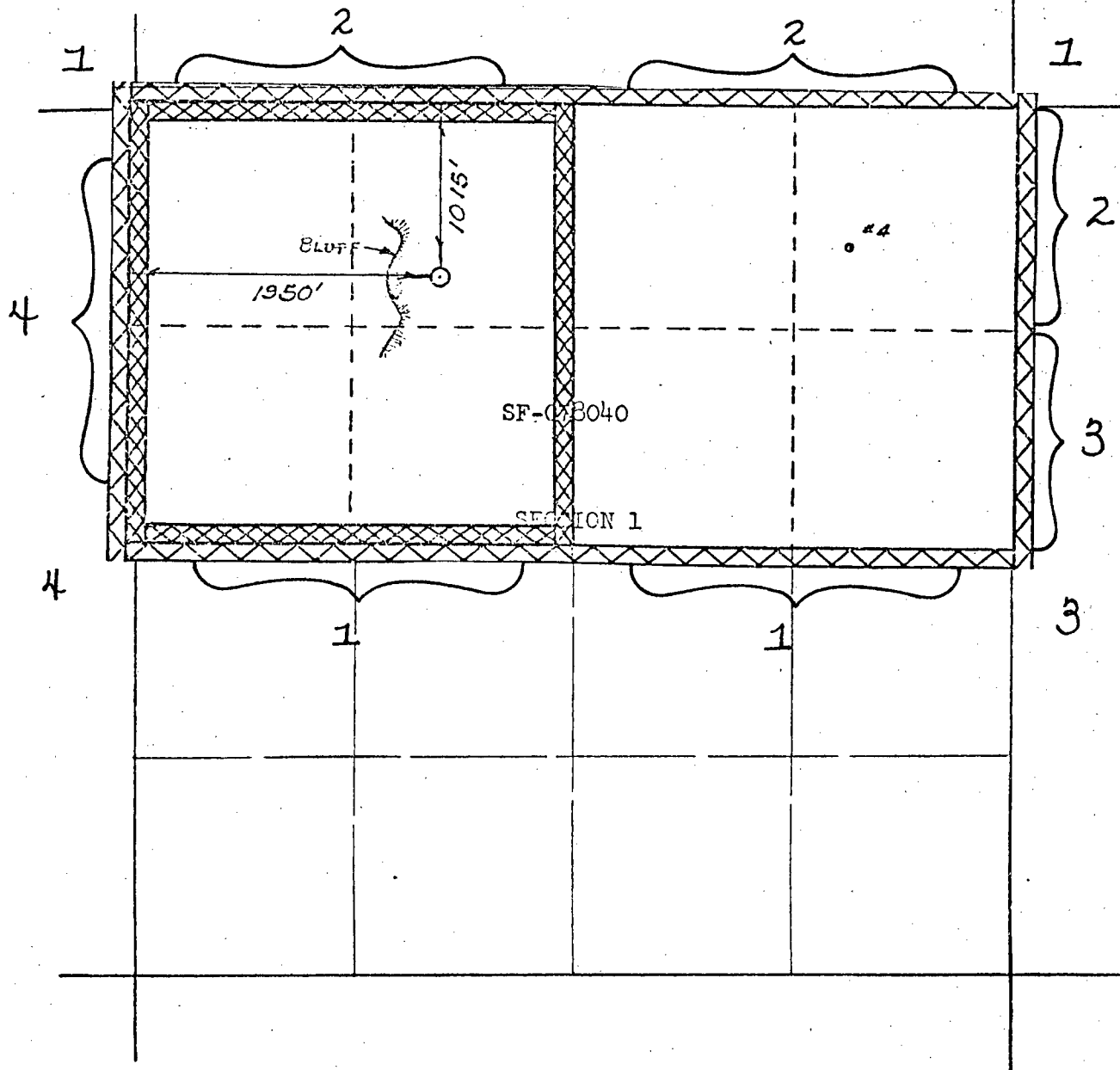
EL PASO NATURAL GAS COMPANY

Well Name Mudge #4 A, Blanco PC/Blanco MV

Footage---- 1015' FNL, 1950' FWL

APPLICATION FOR DOWNHOLE COMMINGLE

County San Juan State New Mexico Section 1 Township 31N Range 11W



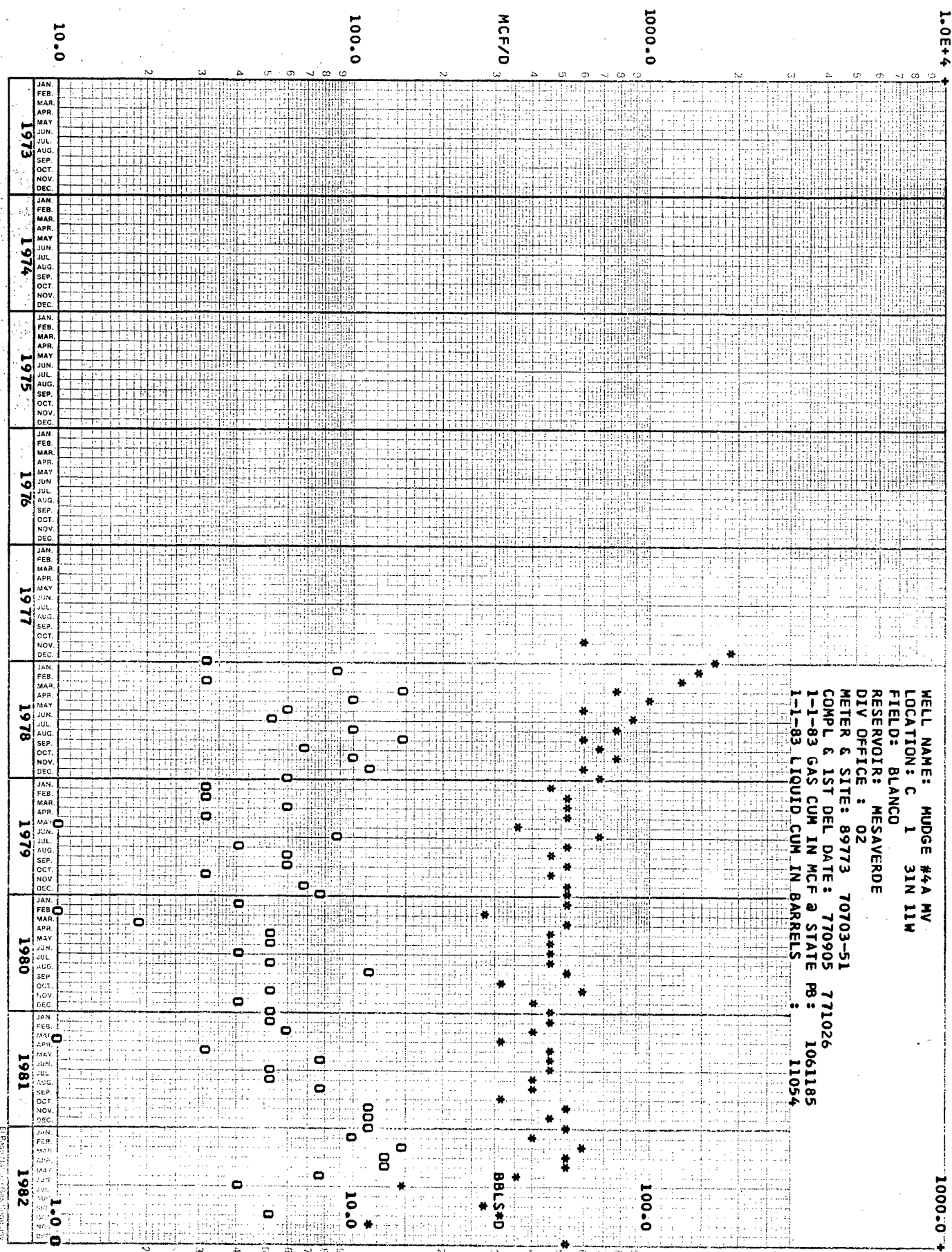
REMARKS: (1) Southland Royalty Company
(2) Mesa Petroleum Company
(3) C&E Operators, Inc.
(4) El Paso Natural Gas Company

ld

*=GAS, O=L LIQUID, a=BOTH

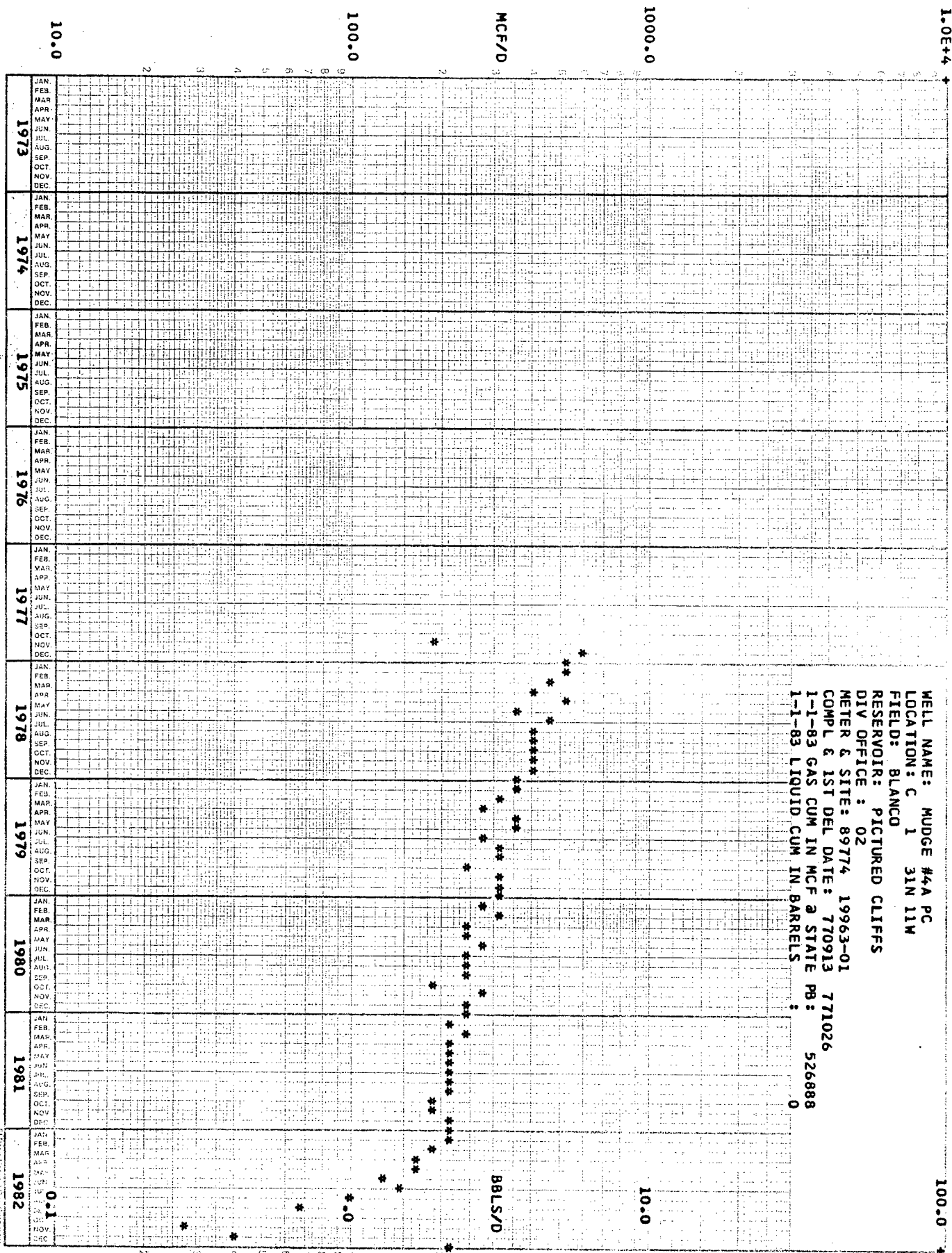
EL PASO NATURAL GAS CO

WELL NAME: MUDGE #4A MV
 LOCATION: C 1 3IN 11W
 FIELD: BLANCO
 RESERVOIR: MESAVERDE
 DIV OFFICE : 02
 METER & SITE: 89773 70703-51
 COMPL & 1ST DEL DATE: 770905 771026
 1-1-83 GAS CUM IN MCF a STATE PB: 1061185
 1-1-83 LIQUID CUM IN BARRELS : 11054



*=GAS, O=Liquid, a=BOTH

EL PASO NATURAL GAS CO



NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator		Pool		County											
E1 Paso Natural Gas Company		Blanco Mesa Verde/Pictured Cliffs		San Juan											
Address		TYPE OF TEST - (X)		Completion		Special									
LEASE NAME		WELL NO.	LOCATION		DATE OF TEST	STATUS	CHOKESIZE	TBGPRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT./BBL.	
		U	S	T	R						WATER BBL.S.	GRAV. OIL BBL.S.	GAS M.C.F.		
Mudge	4A (MV)	C	1	31	11	F				24	---	39.8	14.28	699	48950
Mudge	4A (PC)	C	1	31	11	F				24	---	---	---	210	
Average 1982 daily production rate.															

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

Don W. Fairbank
(Signature)
Sr. Production Engineer
(Title)
May 25, 1983
(Date)

BOTTOM HOLE PRESSURE REPORT

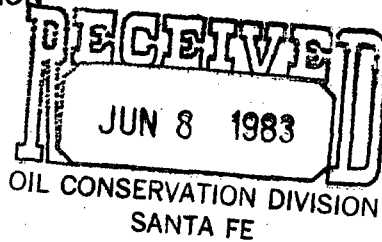
Form 23-85 (Rev. 7-62)

Company El Paso Natural Gas			Date May 17, 1983		
Well Name Mudge		Well No. 4-A (MV)	Location NW/4, Sec. 1, T-31-N, R-11-W		
County San Juan County		State New Mexico		Status of Well Shut in 7 days	
Field Blanco		Pay Zone Mesa Verde	Top 4688 ft.	Bottom 5659 ft.	
Tubing 2 3/8"	Depth 5552 ft.	Down Hole Equipment @ ft.			
Casing	Depth ft.	Liner 4 1/2"	From 3274 ft.	To 5767 ft.	
Tree Connection (Size Thread, Flow Tee, etc.)					

DEPTH FEET	PRESS. PSIG.	PRESS. GRADIENT lbs./ft.	Casing Press. (DWT)	---	Psig.
Lube	498		Tubing Press. (DWT)	504	Psig.
1000	511	.013	Oil Level	---	ft.
2000	525	.014	Water Level	---	ft.
2500	533	.016	Days Shut In	7	Flowing
5000	565	.0133	Temp. @	5551	Ft. 162 °F
5250	567	.008	Elevation KB		Ft. Ground 6337 ft.
5551	575	.027	Last Test Date		
			Press. Last Test		Psig.
			B.H.P. Change	Psi in	Days
			Pressure Loss		Psi/Day
			Instrument	RPG	No. 12161 N
			Run By	Goodwin	
			Calibration No.		
			Calculated By	L. W. Fothergill	

Remarks and/or Calculations

El Paso EXPLORATION
COMPANY



P. O. BOX 289
FARMINGTON, NEW MEXICO 87401
PHONE: 505-325-2841

June 3, 1983

Southland Royalty
Mesa Petroleum
C & E Operators, Inc.

Re: Mudge #4A
NW/4 Section 1, T-31-N, R-11-W
San Juan County, New Mexico
Blanco Pictured Cliffs - Blanco Mesa Verde

Gentlemen:

El Paso Natural Gas Company has requested administrative approval to downhole commingle the production from the Blanco Pictured Cliffs pool and the Blanco Mesa Verde pool in its Mudge #4A well. El Paso feels downhole commingling is the most efficient means to produce this well.

In compliance with New Mexico Oil Conservation Division rules, we are notifying you, as operators of an offsetting proration unit, of our application for administrative approval to downhole commingle the Mudge #4A. Enclosed are three copies of this letter. If there is no objection to this application, please sign and return one copy to the New Mexico Oil Conservation Division, PO Box 2088, Santa Fe, NM 87501; one copy to El Paso Natural Gas Company; and keep one copy for your files.

A well location plat and an offset ownership plat are attached.

Sincerely,

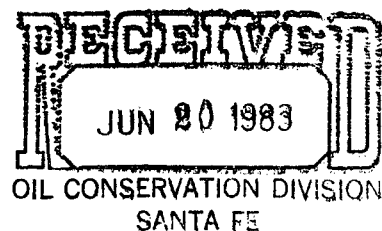
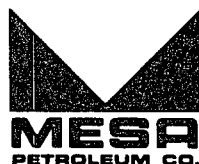
A handwritten signature in dark ink, appearing to read "G. W. Brink".

G. W. Brink

GWB:pb

WAIVER
hereby waives objection to El Paso Natural Gas Company's application for downhole commingling its Mudge #4A as proposed above.

By _____
Date _____



June 16, 1983

New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Gentlemen:

Subject: Mudge #4A
NW/4 Section 1, T31N, R11W
San Juan County, New Mexico
Blanco Pictured Cliffs-Blanco Mesa Verde

Enclosed is a waiver signifying Mesa Petroleum does not object to El Paso Exploration's application for downhole commingling the Mudge #4A, located in the NW/4 Section 1, T31N, R11W, San Juan County, New Mexico. El Paso indicates they will commingle the Blanco Pictured Cliffs and Mesa Verde.

Sincerely,

Michael P. Houston

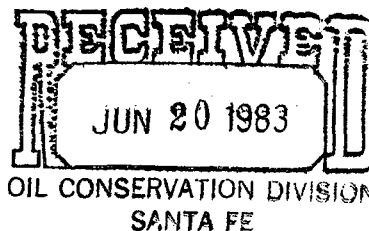
Michael P. Houston
Division Production Engineer

am

Enclosure

Copy to Production Records
El Paso Exploration

El Paso EXPLORATION
COMPANY



P. O. BOX 289
FARMINGTON, NEW MEXICO 87401
PHONE: 505-325-2841

June 3, 1983

Southland Royalty
Mesa Petroleum
C & E Operators, Inc.

Re: Mudge #4A
NW/4 Section 1, T-31-N, R-11-W
San Juan County, New Mexico
Blanco Pictured Cliffs - Blanco Mesa Verde

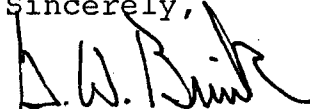
Gentlemen:

El Paso Natural Gas Company has requested administrative approval to downhole commingle the production from the Blanco Pictured Cliffs pool and the Blanco Mesa Verde pool in its Mudge #4A well. El Paso feels downhole commingling is the most efficient means to produce this well.

In compliance with New Mexico Oil Conservation Division rules, we are notifying you, as operators of an offsetting proration unit, of our application for administrative approval to downhole commingle the Mudge #4A. Enclosed are three copies of this letter. If there is no objection to this application, please sign and return one copy to the New Mexico Oil Conservation Division, PO Box 2088, Santa Fe, NM 87501; one copy to El Paso Natural Gas Company; and keep one copy for your files.

A well location plat and an offset ownership plat are attached.

Sincerely,



G. W. Brink

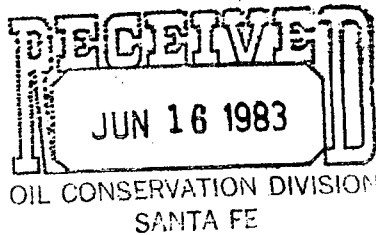
GWB:pb

WAIVER
Mesa Petroleum Co. hereby waives objection to El Paso Natural Gas Company's application for downhole commingling its Mudge #4A as proposed above.

By

Date 6/16/83

El Paso EXPLORATION
COMPANY



P. O. BOX 289
FARMINGTON, NEW MEXICO 87401
PHONE: 505-325-2841

June 3, 1983

Southland Royalty
Mesa Petroleum
C & E Operators, Inc.

Re: Mudge #4A
NW/4 Section 1, T-31-N, R-11-W
San Juan County, New Mexico
Blanco Pictured Cliffs - Blanco Mesa Verde

Gentlemen:

El Paso Natural Gas Company has requested administrative approval to downhole commingle the production from the Blanco Pictured Cliffs pool and the Blanco Mesa Verde pool in its Mudge #4A well. El Paso feels downhole commingling is the most efficient means to produce this well.

In compliance with New Mexico Oil Conservation Division rules, we are notifying you, as operators of an offsetting proration unit, of our application for administrative approval to downhole commingle the Mudge #4A. Enclosed are three copies of this letter. If there is no objection to this application, please sign and return one copy to the New Mexico Oil Conservation Division, PO Box 2088, Santa Fe, NM 87501; one copy to El Paso Natural Gas Company; and keep one copy for your files.

A well location plat and an offset ownership plat are attached.

Sincerely,

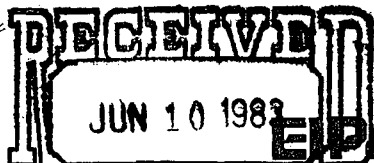
A handwritten signature in dark ink, appearing to read "G. W. Brink".

G. W. Brink

GWB:pb

WAIVER
C & E OPERATORS, INC. hereby waives objection to El Paso Natural Gas Company's application for downhole commingling its Mudge #4A as proposed above.

By M. W. Carr M. W. Carr, President
Date June 13, 1983



OIL CONSERVATION DIVISION
SANTA FE

EXPLORATION
COMPANY

RECEIVED

JUN 07 1983

FARMINGTON DISTRICT

P.O. BOX 289
FARMINGTON, NEW MEXICO 87401
PHONE: 505-325-2841

June 3, 1983

Southland Royalty
Mesa Petroleum
C & E Operators, Inc.

Re: Mudge #4A
NW/4 Section 1, T-31-N, R-11-W
San Juan County, New Mexico
Blanco Pictured Cliffs - Blanco Mesa Verde

DHC
467

Gentlemen:

El Paso Natural Gas Company has requested administrative approval to downhole commingle the production from the Blanco Pictured Cliffs pool and the Blanco Mesa Verde pool in its Mudge #4A well. El Paso feels downhole commingling is the most efficient means to produce this well.

In compliance with New Mexico Oil Conservation Division rules, we are notifying you, as operators of an offsetting proration unit, of our application for administrative approval to downhole commingle the Mudge #4A. Enclosed are three copies of this letter. If there is no objection to this application, please sign and return one copy to the New Mexico Oil Conservation Division, PO Box 2088, Santa Fe, NM 87501; one copy to El Paso Natural Gas Company; and keep one copy for your files.

A well location plat and an offset ownership plat are attached.

Sincerely,

G. W. Brink

GWB:pb

WAIVER

Southland Royalty Company hereby waives objection to El Paso Natural Gas Company's application for downhole commingling its Mudge #4A as proposed above.

By CC Parson, District Production Manager
Date June 7, 1983



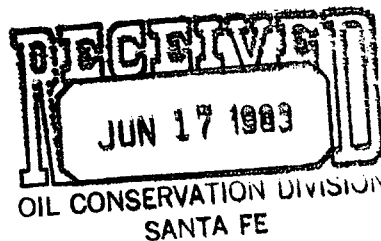
STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

DATE June 14, 1983

RE: Proposed MC _____
Proposed DHC X _____
Proposed NSL _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____



Gentlemen:

I have examined the application dated June 6, 1983
for the SPMB Co. Mudlog #4A C-1-31N-11W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve

Yours truly,

Frank D. Dancy