

DATE IN 7/7/98	SUSPENSE 7/27/98	ENGINEER DC	LOGGED BY W	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

2040 South Pacheco, Santa Fe, NM 87505



zdf

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATION FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

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

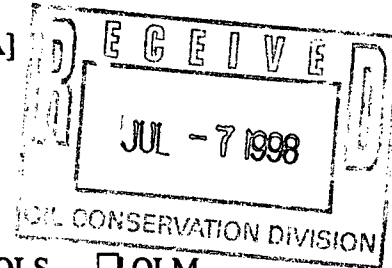
Check One Only for [B] or [C]

[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 - Certification

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 understand that any omission of data (including API numbers, pool codes, etc.), pertinent information and any required notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Print or Type Name

Signature

Title

Date

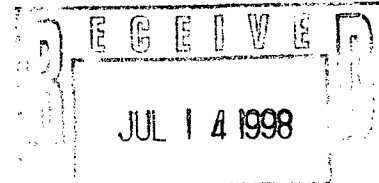
DHC 2044

TAURUS

TAURUS EXPLORATION, INC.
2198 Bloomfield Highway
Farmington, New Mexico 87401
Telephone (505) 325-6800

July 10, 1998

Ms. Lori Wrotenbery
New Mexico Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505



RE: Application to Commingle
Hardie A #2A
W² Sec. 24-29N-8W
San Juan County, New Mexico

Dear Ms. Wrotenbery:

This is to advise that Taurus Exploration U.S.A. Inc. has no objection to Burlington Resources proposed commingling of the Pictured Cliffs and Mesa Verde formations in the captioned well.

If there should be any questions concerning this matter please let me know.

Sincerely,

A handwritten signature in cursive script, reading "Richard P. Corcoran". The signature is fluid and stylized, with the first and last names being more prominent.

Richard P. Corcoran
District Landman

RPC/df
Enclosure

cc: Peggy Bradfield, Burlington Resources, Farmington, New Mexico

zac17e.doc

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 87505-6429Form C-107-A
New 3-12-96

APPROVAL PROCESS :

☒ Administrative
☐ Hearing

APPLICATION FOR DOWNHOLE COMMINGLING

EXISTING WELLBORE

☒ YES ☐ NO

Burlington Resources Oil and Gas

PO Box 4289, Farmington, NM 87499

Operator

Hardie A

#2A

Address

C 24-29N-08W

San Juan

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 7085 API NO. 30-045- 21766 Federal ☒ X, State, Fee

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Blanco Pictured Cliffs- 72359		Blanco Mesaverde - 72319
2. Top and Bottom of Pay Section (Perforations)	3391'-3454'		5030'-5937'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure	(Current) a. 615 psi (see attachment)		a. 144 psi (see attachment)
Oil Zones - Artificial Lift: Estimated Current	(Original) b. 1051 psi (see attachment)		b. 952 psi (see attachment)
Gas & Oil - Flowing: Measured Current			
All Gas Zones: Estimated or Measured Original			
6. Oil Gravity (°API) or Gas BTU Content	BTU 1241		BTU 1251
7. Producing or Shut-In?	Producing		Producing
Production Marginal? (yes or no)	Yes		No
* If Shut-In and oil/gas/water rates of last production	Date: N/A Rates:		Date: N/A Rates:
Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data			
* If Producing, give data and oil/gas/water of recent test (within 60 days)	Date: 6/17/98 Rates: 12 mcf/d 0.0 bopd		Date: 6/17/98 Rates: 317 mcf/d 1.4 bopd
8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)	Will be supplied upon completion.		Will be supplied upon completion.

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 ☒ No11. 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 ☐ No13. 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 of this application. ☒ Yes ☐ No

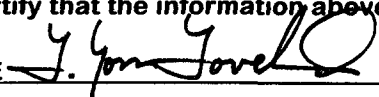
15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S).

16. ATTACHMENTS:

- * C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- * Production curve for each zone for at least one year. (If not available, attach explanation.)
- * For zones with no production history, estimated production rates and supporting data.
- * Data to support allocation method or formula.
- * Notification list of all offset operators.
- * Notification list of working, overriding, and royalty interests for uncommon interest cases.
- * Any additional statements, data, or documents required to support commingling.

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

SIGNATURE



TITLE Production Engineer DATE 6/23/98

TYPE OR PRINT NAME L. Tom Loveland TELEPHONE NO. (505) 326-9700

LOCATION AND ACREAGE DEDICATION PLAT

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

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

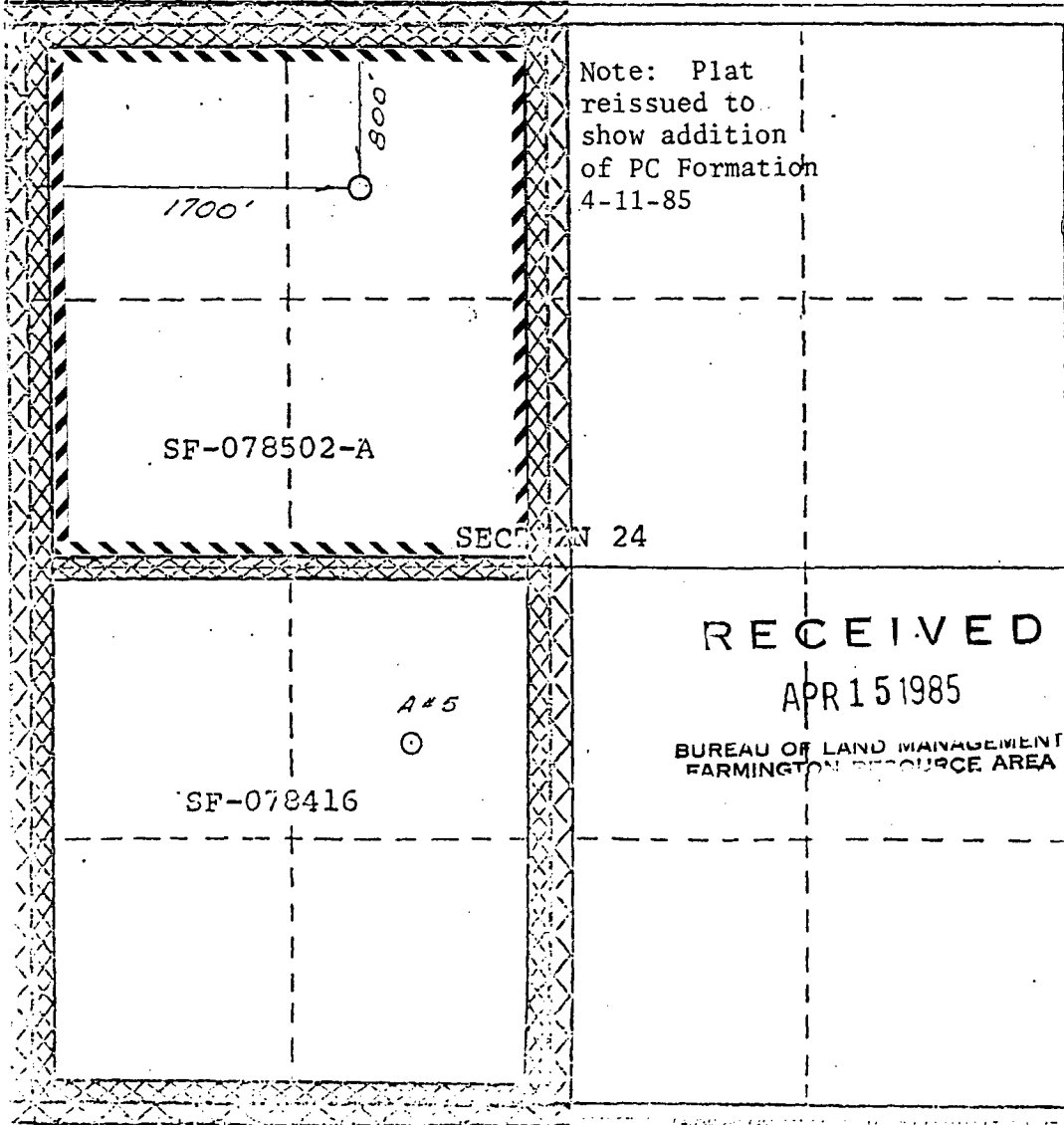
Operator EL PASO NATURAL GAS COMPANY		Lease HARDIE A. (SF-078502-A)		Well No. 2A
Unit Letter C	Section 24	Township 29-N	Range 8-W	County SAN JUAN
Actual Footage Location of Well: 800 feet from the NORTH line and 1700 feet from the WEST line				
Ground Level Elev. 6706	Producing Formation Pic. Cliffs MESA VERDE	Pool Blanco Pictured Cliffs	Dedicated Acreage: 160.08 320.00 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?

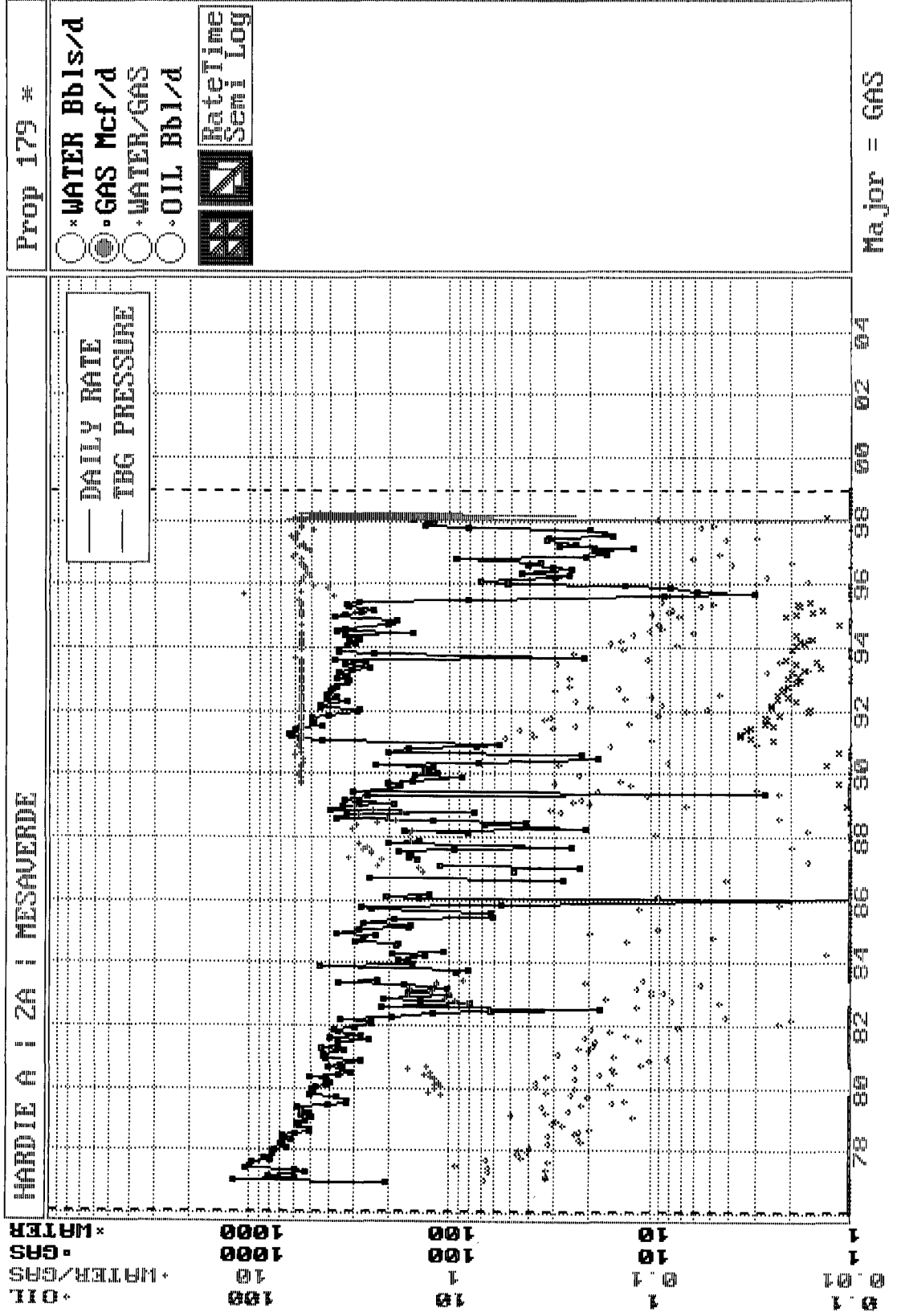
☒ Yes ☐ No If answer is "yes," type of consolidation Communitization

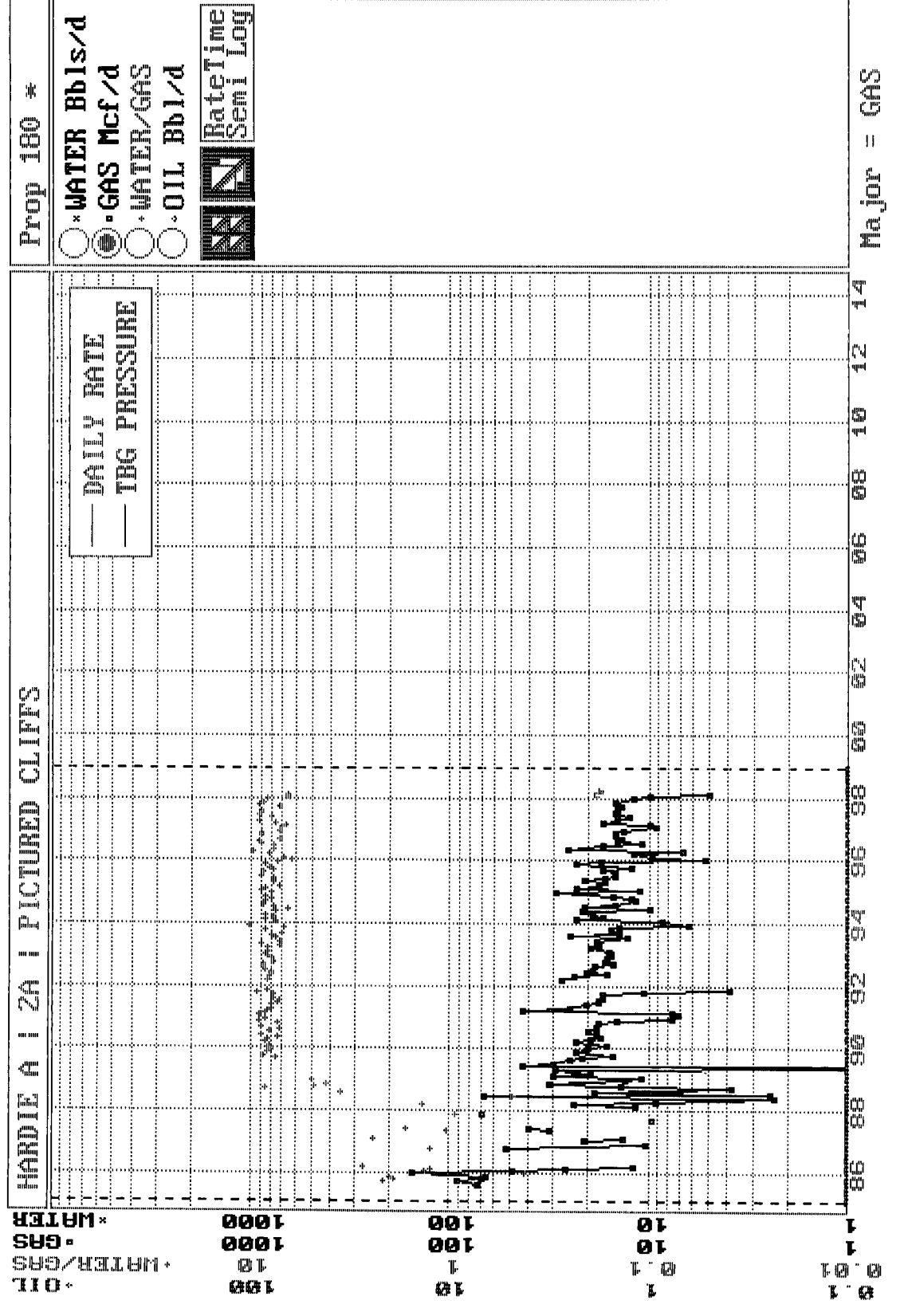
If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

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	Drilling Clerk
Position	El Paso Natural Gas Co
Company	April 12, 1985
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	MARCH 4, 1975
Registered Professional Engineer and/or Land Surveyor	





Hardie A #2A
Bottom Hole Pressures
Flowing and Static BHP
Cullender and Smith Method
Version 1.0 1/14/98

Pictured Cliffs		Mesa Verde	
<u>PC-Current</u>		<u>MV-Current</u>	
GAS GRAVITY	0.719	GAS GRAVITY	0.705
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.62	%N2	0.58
%CO2	0.21	%CO2	0.22
%H2S	0	%H2S	0
DIAMETER (IN)	7	DIAMETER (IN)	2.375
DEPTH (FT)	3423	DEPTH (FT)	5484
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	115	BOTTOMHOLE TEMPERATURE (DEG F)	155
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	560	SURFACE PRESSURE (PSIA)	126
BOTTOMHOLE PRESSURE (PSIA)	615.4	BOTTOMHOLE PRESSURE (PSIA)	143.6
<u>PC-Original</u>		<u>MV-Original</u>	
GAS GRAVITY	0.719	GAS GRAVITY	0.705
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.62	%N2	0.58
%CO2	0.21	%CO2	0.22
%H2S	0	%H2S	0
DIAMETER (IN)	7	DIAMETER (IN)	2.375
DEPTH (FT)	3423	DEPTH (FT)	5484
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	115	BOTTOMHOLE TEMPERATURE (DEG F)	155
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	949	SURFACE PRESSURE (PSIA)	821
BOTTOMHOLE PRESSURE (PSIA)	1051.3	BOTTOMHOLE PRESSURE (PSIA)	951.9

Page No.: 20

Print Time: Fri May 08 08:28:40 1998

Property ID: 180

Property Name: HARDIE A | 2A | PICTURED CLIFFS

Table Name: S:\ARIES\78LTL\TEST.DBF

--DATE--	--CUM OIL-- Bbl	---CUM GAS--- Mcf	M SIWHP Psi
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01/01/84		0	949.0	Original
10/22/85		7091	625.0	
4/1/98		85375	560.0	Current estimated from P/z data

Page No.: 19

Print Time: Fri May 08 08:28:40 1998

Property ID: 179

Property Name: HARDIE A | 2A | MESAVERDE

Table Name: S:\ARIES\78LTL\TEST.DBF

--DATE--	--CUM OIL--	---CUM GAS---	M SIWHP
	Bbl	Mcf	Psi

10/27/76		0	821.0	Original
05/25/77		120079	640.0	
05/16/78		415082	453.0	
08/21/79		650513	474.0	
07/29/80		794816	437.0	
05/28/82		1017391	458.0	
08/28/84		1137691	505.0	
10/03/86		1251457	417.0	
08/14/89		1406893	422.0	
05/20/91		1549671	275.0	
07/15/91		1580380	287.0	
04/16/93		1839843	171.0	
06/01/93		1844466	212.0	
04/01/98		2110335	126.0	Current estimated from P/z data

DPNo: 48789A HARDIE A 2A Form: MV

Compressor: No

6/17/98

DPNo: 48789B

HARDIE A

2A

Form: PC

FF: 335 LARY BYARS

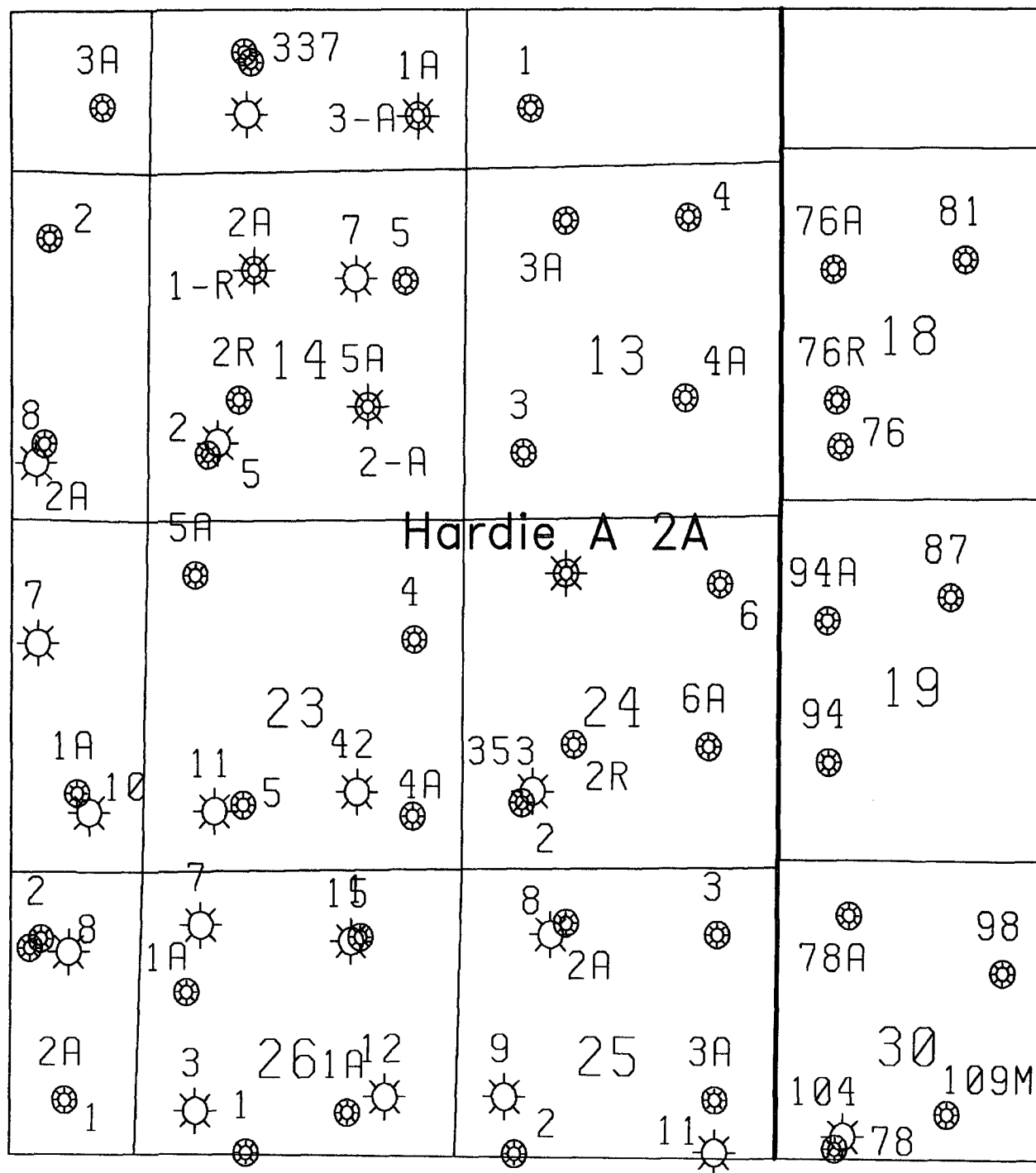
MS: 318 J.R TRUJILLO

Plunger: No

Dual: Yes

Compressor: No

- Township 29 North, Range 8 West**



PLH 5/7/98

Hardie A 2A
Sec. 24, T29N, R8W
Mesaverde/Picture Cliffs

PO Box 4289, Farmington, NM 87499 (505) 599-4046 Fax

**Burlington Resources
Regulatory/Compliance**

Fax

To: David Catanach From: Peggy
Fax: 827 1389 Pages: 5
Phone: _____ Date: 8/10/98
Re: _____ CC: _____

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

• Comments:

Hardie A2A Interest owners list
27-4 Unit - Interest owners list

Hope to see you at lunch next Mon.
Thanks for your help.

HARDIE A #2A

DP #48789A, DP #48789B

NAME

ALMAR ACRES
ANNA CELIA HOWELL HILTON
BEN HOWELL LANGFORD
BEN R HOWELL TRUST
BURLINGTON RESOURCES O&G CO
ELIZABETH H LUND ROYALTY TRUST
ELIZABETH WHITE FAMILY TRUST
EMILIE M HARDIE ROYALTY TRUST
EMILY D GRAMBLING
ETHEL PARNELL
GLENN D HUGHES
HANSON MCBRIDE PETROLEUM CO
HOWELL GRANDCHILDRENS TRST EST
JANE MANNING PITKIN
JOHN A GRAMBLING
JOSEPH C JASTRZEMBSKI
KATHLYN H GIBSON ESTATE
MABEL GLENN HAM REVOCABLE TR
MABELLE H SOWERS ROYALTY TRUST
MARY ELIZABETH HARDIE ROY TRST
MINERALS MANAGEMENT SERVICE
PATRICIA G HARVEY
PAUL SLAYTON
PHILLIS STOES IDEAL
R H FEUILLE
RICHARD PARKER LANGFORD
WILLIAM B HARDIE SR ROYALTY TR

SAN JUAN 27-4 UNIT

PROPERTY	UNIT TYPE	NAME
MESAVERDE	GW	CINCO GENERAL PARTNERSHIP
MESAVERDE	NPI	BURLINGTON RESOURCES O&G CO
MESAVERDE	NWI	BEDROCK LIMITED PARTNERSHIP
MESAVERDE	NWI	BURLINGTON RESOURCES O&G CO
MESAVERDE	NWI	HARCO LTD PTSH
MESAVERDE	NWI	JAMES V HARRINGTON
MESAVERDE	NWI	MARY JONE CHAPPELL
MESAVERDE	NWI	ROMERO FAMILY LTD PARTNERSHIP
MESAVERDE	NWI	TEMPE LTD PARTNERSHIP
MESAVERDE	ORRI	AMALIA S SANCHEZ
MESAVERDE	ORRI	BEDROCK LIMITED PARTNERSHIP
MESAVERDE	ORRI	DEREK PETER VENEZIA
MESAVERDE	ORRI	EDNA E MORRELL LIVG TRUST
MESAVERDE	ORRI	ELEANOR G HAND
MESAVERDE	ORRI	GERALD F HARRINGTON
MESAVERDE	ORRI	HARCO LTD PTSH
MESAVERDE	ORRI	JAMES V HARRINGTON
MESAVERDE	ORRI	JOHN C MEADOWS
MESAVERDE	ORRI	JOSEPH R ABRAHAM
MESAVERDE	ORRI	LESLIE C TATUM
MESAVERDE	ORRI	LMA ROYALTIES LTD
MESAVERDE	ORRI	MANUEL A SANCHEZ TRUST
MESAVERDE	ORRI	MARY F ROBERTS
MESAVERDE	ORRI	MARY JO WELLS
MESAVERDE	ORRI	MARY JONE CHAPPELL
MESAVERDE	ORRI	MIKE C ABRAHAM TRUSTEE
MESAVERDE	ORRI	MISS M F ABRAHAM
MESAVERDE	ORRI	PATRICIA ANN ASHBURN
MESAVERDE	ORRI	PATRICIA P SCHIEFFER
MESAVERDE	ORRI	ROBBYE F BAKER
MESAVERDE	ORRI	ROBERT P & ANNA D EARNEST TR
MESAVERDE	ORRI	ROBERT S TATUM
MESAVERDE	ORRI	SCOTT ANTHONY VENEZIA
MESAVERDE	ORRI	TEMPE LTD PARTNERSHIP
MESAVERDE	ORRI	U/W FOSTER MORRELL DECD
MESAVERDE	ORRI	UNION OIL CO OF CALIF
MESAVERDE	RI	JUAN R MONTANO
MESAVERDE	RI	MINERALS MANAGEMENT SERVICE
MESAVERDE	RI	WILLIAM B GREENE

SAN JUAN 27-4 UNIT

PROJ	WTYPE	NAME
PICTURED CLIFFS	GW	CINCO GENERAL PARTNERSHIP
PICTURED CLIFFS	NPI	BURLINGTON RESOURCES O&G CO
PICTURED CLIFFS	NWI	BEDROCK LIMITED PARTNERSHIP
PICTURED CLIFFS	NWI	BURLINGTON RESOURCES O&G CO
PICTURED CLIFFS	NWI	HARCO LTD PTSH
PICTURED CLIFFS	NWI	JAMES V HARRINGTON
PICTURED CLIFFS	NWI	MARY JONE CHAPPELL
PICTURED CLIFFS	NWI	TEMPE LTD PARTNERSHIP
PICTURED CLIFFS	ORRI	AMALIA S SANCHEZ
PICTURED CLIFFS	ORRI	BEDROCK LIMITED PARTNERSHIP
PICTURED CLIFFS	ORRI	DEREK PETER VENEZIA
PICTURED CLIFFS	ORRI	EDNA E MORRELL LIVG TRUST
PICTURED CLIFFS	ORRI	ELEANOR G HAND
PICTURED CLIFFS	ORRI	GERALD F HARRINGTON
PICTURED CLIFFS	ORRI	HARCO LTD PTSH
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PICTURED CLIFFS	ORRI	LMA ROYALTIES LTD
PICTURED CLIFFS	ORRI	MANUEL A SANCHEZ TRUST
PICTURED CLIFFS	ORRI	MARY F ROBERTS
PICTURED CLIFFS	ORRI	MARY JO WELLS
PICTURED CLIFFS	ORRI	MARY JONE CHAPPELL
PICTURED CLIFFS	ORRI	MIKE C ABRAHAM TRUSTEE
PICTURED CLIFFS	ORRI	MISS M F ABRAHAM
PICTURED CLIFFS	ORRI	PATRICIA ANN ASHBURN
PICTURED CLIFFS	ORRI	PATRICIA P SCHIEFFER
PICTURED CLIFFS	ORRI	ROBBY F BAKER
PICTURED CLIFFS	ORRI	ROBERT S TATUM
PICTURED CLIFFS	ORRI	SCOTT ANTHONY VENEZIA
PICTURED CLIFFS	ORRI	TEMPE LTD PARTNERSHIP
PICTURED CLIFFS	ORRI	UNION OIL CO OF CALIF
PICTURED CLIFFS	RI	JUAN R MONTANO
PICTURED CLIFFS	RI	MINERALS MANAGEMENT SERVICE

SAN JUAN 27-4 UNIT

PROPERTY	INTEREST	NAME
DAKOTA	GW	CINCO GENERAL PARTNERSHIP
DAKOTA	NPI	BURLINGTON RESOURCES O&G CO
DAKOTA	NWI	BEDROCK LIMITED PARTNERSHIP
DAKOTA	NWI	BURLINGTON RESOURCES O&G CO
DAKOTA	NWI	HARCO LTD PTSH
DAKOTA	NWI	JAMES V HARRINGTON
DAKOTA	NWI	MARY JONE CHAPPELL
DAKOTA	NWI	TEMPE LTD PARTNERSHIP
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DAKOTA	ORRI	BEDROCK LIMITED PARTNERSHIP
DAKOTA	ORRI	DEREK PETER VENEZIA
DAKOTA	ORRI	EDNA E MORRELL LIVG TRUST
DAKOTA	ORRI	ELEANOR G HAND
DAKOTA	ORRI	GERALD F HARRINGTON
DAKOTA	ORRI	HARCO LTD PTSH
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DAKOTA	RI	MINERALS MANAGEMENT SERVICE
DAKOTA	RI	WILLIAM B GREENE