Hallwood Petroleum, Inc.

4582 South Ulster Street Parkway · Stanford Place III · Suite 1700 · Post Office Box 378111 Denver, Colorado 80237 · (303) 850-7373

CERTIFIED MAIL NO. P 212 222 137

November 11, 1997

Mr. David Catanach,
Hearing Examiner
State of New Mexico
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

RE:

State "B" 14 Com #1

Unit P – Section 14-T18S-R28E Eddy County, New Mexico Application for Downhole Commingling

Dear Mr. Catanach:

This letter is a follow-up letter to our October 15, 1997 letter and Application for Downhole Commingling on the subject well. To date Hallwood has received three (3) waivers from the eight (8) offset operators. The original waiver letters are enclosed for your files. We have also received an approval letter from the Commissioner of Public Lands (copy attached).

Also enclosed are copies of the "green cards" we have received, as more than 20 days have now elapsed.

We hope that this additional information is satisfactory for your files and approval of this application. Should you need any additional data, please contact me at (303) 850-6303.

Sincerely,

Kevin E. O'Connell

Drilling and Production Manager

KEO/jey

Enclosures

cc:

OCD District II 811 S. First Street Artesia, NM 88210

Well File

KEO97.080

Attachment #7

Address List for Offset Operators

State "B" 14 Com #1

		Waiver Approval Received	Green Card Receipt Date
1.	SDX Resources P. O. Box 5061 Midland, TX 79704	Yes 10/30/97	10/21/97
2.	Kay Jay Oil Company P. O. Box 1306 Artesia, NM 88210	Not received as of 11/10/97	10/20/97
3.	Yates Drilling Company 105 S. 4 th Street Artesia, NM 88210	Not received as of 11/10/97	10/20/97
4.	Harvey E. Yates Company 500 N. Main Street Roswell, NM 88202	Not received as of 11/10/97	10/20/97
5.	W. E. Jeffers P. O. Box 65 Artesia, NM 88211-0065	Not received as of 11/10/97	10/20/97
6.	Devon Energy Corporation 20 N. Broadway, Suite 1500 Oklahoma City, OK 73102-9951	Not received as of 11/10/97	10/20/97
7.	UMC Petroleum Corporation 410 17 th Street, Suite 1400 Denver, CO 80202	Yes 10/27/97	10/17/97
8.	Ray Wistall P. O. Box 4 Loco Hills, NM 88255	Yes 10/23/97	
	State of New Mexico Commissioner of Public Lands	Approval Letter Date 10/28/97 Received 11/3/97	10/20/97

October <u>15</u> , 1997	RECEIVED			
TO: Address List for Offset Operators	OCT 3 0 1997 DRLG & PROD.			
RE: State "B" 14 Com #1 Unit P-Section 14-T18S-R28E Eddy County, New Mexico Application for Downhole Commingling	DALCI OF THOSE			
Gentlemen:				
Hallwood Petroleum, Inc. is applying for administrative approval to commingle production from the Upper Penn and Morrow zones in the above referenced well. If you, as an offset operator, have no objection to the proposed commingling, please sign the waiver at the bottom of this page and return one copy in the enclosed self-addressed stamped envelope.				
Thank you for your cooperation.				
Sincerely, **Xuin E. O'Connell Drilling and Production Manager **Sincerely, 0: (303) 850-6303 **Fax: (303) 850-6290				
KEO/jey Enclosures				
KEO97.074				
**************************************	******			
WE HEREBY WAIVE ANY OBJECTIONS TO HALLWOOD PETROLEUM, INC.'S APPLICATION TO COMMINGLE PRODUCTION AS SET FORTH ABOVE.				
NAME: JOHN POOL				
TITLE: VICE PRESIDENT - SDX RESOURCES INC.				
DATE: 10/21/97	·			

October <u>15</u>, 1997

RECEIVED

TO: Address List for Offset Operators

OCT 2 3 1997

RE:

State "B" 14 Com #1

Unit P-Section 14-T18S-R28E Eddy County, New Mexico

Application for Downhole Commingling

DRLG & PROD.

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Thank you for your cooperation.

Sincerely,

Kevin E. O'Connell

Drilling and Production Manager

0: (303) 850-6303 FAX: (303) 850-6290

KEO/jey Enclosures

KEO97.074

WAIVER

WE HEREBY WAIVE ANY OBJECTIONS TO HALLWOOD PETROLEUM, INC.'S APPLICATION TO COMMINGLE PRODUCTION AS SET FORTH ABOVE.

NAME:

TITLE:

DATE:

	Attachment #/
October <u>15</u> , 1997	
TO: Address List for Offset Operators	RECEIVED
10. Address Elst for Offset Operators	OCT 2 7 1997
RE: State "B" 14 Com #1 Unit P-Section 14-T18S-R28E Eddy County, New Mexico	DRLG & PROD.
Application for Downhole Commingling	
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Thank you for your cooperation.	
Sincerely, **Revin E. O'Connell Drilling and Production Manager Sincerely, 0: (303) 850 - 6	:303 290
KEO/jey Enclosures	
KEO97.074	
**************************************	*********
WE HEREBY WAIVE ANY OBJECTIONS TO HALLWOO APPLICATION TO COMMINGLE PRODUCTION AS SET	
NAME: RD Many	
NAME: RP Many TITLE: District Manager - VMC Peter	steem Comp
DATE: /0/22/97	

PS Form **3811**, December 1994

102595-97-B-0179 Domestic Return Receipt

PS Form 3811 December 1994 102595-97-B-0179 Domestic Return Receipt

on the reverse side:	■ Complete items 1 and/or 2 for additional services. ■ Complete items 3, 4a, and 4b. ■ Print your name and address on the reverse of this form so that we card to you. ■ Attach this form to the front of the mailpiece, or on the back if space permit. ■ Write "Return Receipt Requested" on the mailpiece below the article. ■ The Return Receipt will show to whom the article was delivered and delivered.	I also wish to rectollowing services extra fee): 1. Addresse 2. Restricte Consult postmas	s (for an ee's Address d Delivery	
_	3. Article Addressed to: 4a. Artic			
completed			2 222 125	
Ĕ	UMC PETROLEUM CORPORATION	4b. Service Type		
	410 17TH STREET, SUITE 1400	☐ Registere	d	Certified
S	DENVER, CO 80202	☐ Express I	Mail	☐ Insured
<u>ADDRESS</u>				
Z		7. Date of De	eliveryOCT 17	1997 f requested
RETUR	5. Received By: (Print Name)	8. Addressee's Address (Only if requested and fee is paid)		
s your [6. Signaturé (Addressee or Agent)			-
-	PS Form 3811, December 1994 102	2595-97-B-0179	Domestic Retu	ırn Receint

on the reverse side?	SENDER: State "B" 14 Com #1 Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b. Print your name and address on the reverse of this form so that we can return this card to you. Attach this form to the front of the mailpiece, or on the back if space does not permit. Write "Return Receipt Requested" on the mailpiece below the article number. The Return Receipt will show to whom the article was delivered and the date delivered.		I also wish to receive the following services (for an extra fee): 1. Addressee's Address 2. Restricted Delivery Consult postmaster for fee.
LADDRESS completed o	3. Article Addressed to: State of New Mexico Commissioner of Public Lands 310 Old Santa Fe Trail P. 0. Box 1148 Santa Fe, NM 87504-1148	4b. Service ☐ Registere☐ Express	2 222 128 Type ed
Is your <u>RETUR</u>		8. Addresses and fee is	Paraestic Return Receipt



State of New Mexico Commissioner of Public Lands

RAY POWELL, M.S., D.V.M. COMMISSIONER

310 OLD SANTA FE TRAIL P.O. BOX 1148

SANTA FE, NEW MEXICO 87504-1148

RECEIVED

DRLG & PROD.

NOV

3 1997

(505) 827-5760 FAX (505) 827-5766

October 28, 1997

Hallwood Petroleum, Inc. P.O. Box 37811

Denver, Colorado 80237

Attn:

Mr. Kevin E. O'Connell

Re:

Downhole Commingling Application

State "B" 14 Com #1 Unit P, Section 14-18S-28E

Travis Upper Penn and Empire South Morrow Pools

Eddy County, New Mexico

Dear Mr. O'Connell:

We are in receipt of your application of October 15, 1997, requesting our approval to downhole commingle the production from the above subject well from the Travis Upper Penn and Empire South Morrow Pools in Eddy County, New Mexico.

It is our understanding that production from the subject well will be allocated as follows:

POOL	<u>ALLOCATION</u>	
	Oil%	Gas %
Travis Upper Penn	81%	46%
Empire South Morrow	19%	54%
	100%	100%

Since it appears that there will be no loss of revenue to the State of New Mexico as a result of your proposed operation, your request for downhole commingling the production from the above-mentioned well is hereby approved. Any deviation from the substance of your request will be sufficient grounds for rescinding our approval. Our approval is subject to like approval by the New Mexico Oil Conservation Division.

Please submit a filing fee in the amount of \$30.00.

Hallwood Petroleum, Inc. October 28, 1997 Page 2

If you have any questions or if we may be of further help, please contact Pete Martinez at (505) 827-5791.

Very truly yours,

RAY POWELL, M.S., D.V.M. COMMISSIONER OF PUBLIC LANDS

JAMI BAILEY, Director

Oil, Gas and Minerals Division

(505) 827-5744

RP/JB/cpm Enclosure

xc: Reader File

OCD-Attention: David Catanach, Ben Stone

Hallwood Petroleum, Inc.

4582 South Ulster Street Parkway · Stanford Place III · Suite 1700 · Post Office Box 378111 Denver, Colorado 80237 · (303) 850-7373

CERTIFIED MAIL NO. P 212 222 118

October 15, 1997

Mr. David Catanach,
Hearing Examiner
State of New Mexico
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

RE: State "B" 14 Com #1

Unit P – Section 14-T18S-R28E Eddy County, New Mexico Application for Downhole Commingling

Dear Mr. Catanach:

Hallwood Petroleum, Inc., as operator of the State "B" 14 Com #1 well, respectfully submits a Form 107-A, Application for Downhole Commingling. Enclosed with this application are supportive documents and a list of offset operators who are being notified of this proposal.

The State "B" 14 Com #1 was drilled in 1980 and originally dual completed in the Upper Penn formations at 9653-9804' and the Morrow formation at 10,690' – 10,743'. The well is still a dual completion in the Travis-Upper Penn pool and South Empire-Morrow pool, respectively. This well has a unique mechanical set-up downhole with an Otis brand "crossover" tool that allows for production from the deeper zone (South Empire-Morrow) to come up the tubing part way, then cross over and flow up the annulus. The shallower zone (Travis-Upper Penn), conversely, comes up the annulus part way and crosses over to the tubing string just under an upper packer. A color-coded diagram is attached to help illustrate this scenario (Attachment #9). This downhole configuration was set up due to the Upper Penn formations having more oil and needing to be produced up the tubing.

The Upper Upper-Penn zones still produce more oil than the deeper Morrow zones; however, this zone is now essentially a gas well with associated oil due to a 40,000 – 45,000 GOR (1995 production). This is considerably higher than the original completion (1980) reported 2343 gas-oil ratio.

Mr. David Catanach State of New Mexico Oil Conservation Division October 15, 1997 Page 2

Hallwood Petroleum, Inc. is seeking this downhole commingling for two (2) reasons:

- 1. The Upper completion Travis Upper Penn zone is currently not producing and is loaded up and logged off. This is graphically illustrated in the attached production plot for this zone (Attachment #3).
- 2. An attractive recompletion opportunity exists in an uphole zone at approximately 9100'. This zone (in the Wolfcamp) was drillstem tested in 1980 and flow tested gas and oil. In order to recomplete uphole to this zone, Hallwood wants to be able to commingle the Upper Penn and Morrow zones, and then eventually dual complete with a successful future Wolfcamp recompletion.

Hallwood believes that commingling of the two proposed formations will not cause any fluid compatibility problems and will most likely <u>increase</u> production and recoveries from the commingled zones. This is due in part to the elimination of the complicated downhole mechanism that is probably restricting flow presently. Also, the additional gas volumes from the Morrow zone (lower completion) should assist in lifting oil production from the upper completion.

Although pressure data is somewhat limited on this well, we have calculated the original BHP of the Upper Penn to be 4456 psig. This compares nearly identically to the measured BHP of 4434 psig for the Morrow zones. Both zones were originally drilled with a 10.1 ppg mud weight. In February 1991, after setting the well up for dual completion, the shut in pressures for each zone were within 640 psi (Travis-Upper Penn – 1560 psi; Empire-South Morrow – 2200 psi).

With regard to current formation pressures, they are essentially impractical to obtain due to the previously discussed downhole setup with two (2) packers and a "crossover" tool which will not allow wireline bombs to pass through. We have reviewed the 1996 packer integrity test data, which had extended (3-day) shut-in pressures and concluded that the current bottomhole pressures are as follows:

	Travis-Upper Penn	Empire-South Morrow
Shut-in Pressure	680# SITP	600# SICP
Calculated BHP	978 psig	898 psig

Mr. David Catanach State of New Mexico Oil Conservation Division October 15, 1997 Page 3

We hope that this information and supporting attachments are satisfactory for your review and approval of this application. Should you need any additional data, please contact me at (303) 850-6303. Hallwood is confident that increased production can be obtained from a downhole commingling of the Upper Penn and Morrow zones as both zones have such similar fluids, rates and pressures. This downhole commingling will also allow us to proceed with a planned Wolfcamp recompletion in early 1998 to try and develop additional reserves from this well.

Sincerely,

HALLWOOD PETROLEUM, INC.

Kevin E. O'Connell

Drilling and Production Manager

KEO/jey

Enclosures

cc:

OCD District II 811 S. First Street Artesia, NM 88210

State of New Mexico Commisioner of Public Lands 310 Old South Santa Fe Trail P.O. 1148 Santa Fe, NM 87504-1148

Offset Operators (8)

Well File

KEO97.069

COMMISSIONER OF PUBLIC LANDS