

WITHDRAWN 6-1-95 VERBAL BS

CAL CONSERVATION DIVISION
BECHVED

Texaco Exploration and Production Inc

3300 N Butler Farmington NM 87401 15 円 8 52

May 26, 1995

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505

Attention: David Catanach

RE: Application for exception to NMOCD Rule 303-A: Downhole Commingle of H.J. Loe Federal B No. 3E 1100' FSL & 2000' FEL, Unit O, Sec. 23-T29N-R12W, NMPM, San Juan County, New Mexico

Dear Mr. Catanach:

Texaco Exploration and Production Inc. respectfully requests administrative approval to downhole commingle the Fulcher Kutz Pictured Cliffs Gas Pool and the Basin Dakota Gas Pool within the referenced well. Approval of this application would require an exception to NMOCD Rule 303-a. Please accept the attached information in your consideration of this matter. All offset operators were notified of this request by certified mail (copy of return receipt cards attached).

Production methods are limited due to the 4-1/2" production casing the well is completed with. This size of casing does not offer sufficient room to run adequately sized tubing strings to each formation. The downhole commingling of these zones will offer an economic method of production without reservoir damage, waste reserves, or violation of correlative rights.

If you have and questions concerning this matter please contact Mr. Robert Schaffitzel at (505) 325-4397, ext. 27. Your attention to this matter is greatly appreciated.

Sincerely,

Ted A. Tipton

Operating Unit Manager

Parked Hindi & TAT

RFS/s

Attachments NMOCD-Aztec file

# Application for Exception to Rule 303-Segregation of Production From Pools

**(1)** Name and address of the operator: **Texaco Exploration and Production** 

> 3300 N. Butler Suite 100 Farmington, NM 87401

**(2)** Lease name, well number, well location, name of the pools to be commingled.

Lease Name:

H.J. Loe Federal B

Well Number:

3E

Well Location:

1100' FSL & 2000' FEL, Unit O, Sec. 23

T29N-R12W, NMPM

San Juan County, New Mexico

Pools to Commingle: Fulcher Kutz, Pictured Cliffs

Basin, Dakota

A plat of the area showing the acreage dedicated to the well and the (3) ownership of all offsetting leases.

Attached (Attachment I, II, III)

A current (within 30 days) 24-hour productivity test on Division C-116 4) showing the amount of oil, gas and water produced from each zone.

The C-115 for H.J. Loe Federal B 3E Basin Dakota and Fulcher Kutz Pictured Cliffs are attached (Attachment IV, V).

A production decline curve for both zones showing that for a period of at **(5)** least one year a steady rate of decline has been established for each zone for statistical purposes. (This requirement may be dispensed with in the case of a newly completed or recently completed well which has little or no production history. However, a complete resume of the well's completion history including description of treating, testing, etc., of each zone, and a prognostication of future production from each zone shall be submitted.)

Dakota completion: Decline curve attached (Attachment VI), well has effective annual decline of 4.1 % and a calculated GOR of 177,000 SCF/STB.

P.C. completion: Decline curve attached (Attachment VII), formation was perforated at 1614'-1656' and stimulated on October 1, 1992 with 30,000 GALs of X-linked gel with 130,000 LBS of 20/40 sand followed with 24,000 LBS of Resin coated sand. The well was cleaned. The well is currently shut-in and both zones are logged off awaiting final production equipment and regulatory approvals.

Currently both zones are logged off due to insufficient bottom hole pressure on the PC formation therefore limiting production from the well. The Dakota zone has a 1.060 I.D. tubing string that causes too much friction loss to produce the well (Attachment VIII, current completion, Attachment IX, proposed completion).

# <u>Application for Exception to Rule 303-Segregation of Production From Pools Requirements Continued.</u>

(6) Estimated bottomhole pressure for each artificially lifted zone. A current (within 30 days) measured bottomhole pressure for each zone capable of flowing.

Dakota completion: 360 psig (Attachment X) Fulcher Kutz completion: 210 psig (Attachment X)

The Fulcher Kutz Pictured Cliffs and the Basin Dakota pressures are both shut-in pressures obtained from a State of NM packer leakage test conducted 10-03-94. The pressure differential between the zones will not present a crossflow problem. The proposed method of production is to run a 2-3/8" tubing string to the bottom of the Dakota perforations, run rods and install a pumping unit to pump both zones, this will keep all fluids off of the Dakota formation.

(7) A description of the fluid characteristics of each zone showing that the fluids will not be incompatible in the well-bore.

The fluids have no abnormal components that would prohibit commingling, or promote the creation of emulsions or scale (see attachment XI-A,B, produced water analysis from offset currently commingled).

(8) A computation showing that the value of the commingled production will not be less than the sum of the individual streams.

Dakota Produc	tion_	Fulcher Kutz Po	C Production
Oil, BOPD	1	Oil, BOPD	0
Gas, MCFD	150	Gas, MCFD	150
Water, BWPD	1	Water, BWPD	25

The combined production from the PC and Dakota formations will be approximately 300 MCFD, 1 BOPD, and 26 BWPD. The increase in production will occur due to the pressure drop on both formations because the fluid will be pumped out through the 2 3/8" tubing and the gas will flow free of fluid up the 4.5" casing.

(9) A formula for the allocation of production to each of the commingled zones and a description of the factors or data used in determining such formula.

Using our anticipated rates as shown in item #8 as an example, allocation will be calculated as follows:

	<u>Uas</u>	<u>On</u>	<u>vv ater</u>
Pictured Cliffs	150/300=50%	0/1=0%	25/26=96%
Dakota	150/300=50%	1/1=100%	1/26=04%

(10) A statement that all offset operators and, in the case of a well on federal land, the United States Bureau of Land Management, have been notified in writing of the proposed commingling.

All offset operators and the BLM have been notified. Please find attached, signed return receipt cards from each operator.

# State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102 Revised 1-1-89

# **JIL CONSERVATION DIVISION**

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT II P.O. Drawer DD, Artesia, NM 88210

<u>DISTRICT I</u> P.O. Box 1980, Hobbs, NM 88240

DISTRICT III
1000 Rio Brazos Rd., Azzec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

		AN USU	ai Aces illust de		r boundaries of	THE SECTION		
Operator T	exaco E & I	P Inc.		H.J.	Loe Federa	1 B		Well No.
Unit Letter	Section	Township		Range			County	<del> </del>
O	23	29	N	_	2W	NMPM	1 1	San Juan
Actual Footage Locati	on of Well:							_
	feet from the	South ng Formation	line and	(B(	2000	feet from	the	East line
fround level Elev. 5583'		ed Cliffs		Pool	ner Futz			Dedicated Acreage:
		ed to the subject well	l by colored per			helmu	· ·	Acres
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<u>unitizatio</u>	on force-pooling, e	tc.?			4		,	······································
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this form if	neccessary.				·			
No allowab	le will be assigned	to the well until all i iminating such intere	interests have b	een consolidate	d (by communitiz	ation, unitizatio	n, forced-	cooling, or otherwise)
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Lease T29N-R12W **LO6** Operators H.J Offset

Sg		CJ D	
Alpine Oil & Gas Conoco	Атосо	Amoco	
Texaco	H.J Loe Federal B 3E	Апосо	
Texaco	Texaco	BHP Petr Americas Amoco	

# Offset Operators H.J. Loe Federal B No. 3E Sec. 23 T29N/R12W

Alpine Oil & Gas Box 2567 Durango, CO 81302

Amoco Production 200 Amoco Court Farmington, NM 87401

BHP Petroleum (Americas) Inc. Box 977 Farmington, NM 87499

CONOCO Inc. 3315 Bloomfield Hwy. Bloomfield, NM 87413

DISTRICT I P.O. Box 1980, Hobbs, NM 88240

DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410 DISTRICT II P.O. Drawer DD, Artesia, NM 88210

State of New Mexico Energy, Minerals, and Natural Resources Department

# OIL CONSERVATION DIVISION

P.O. BOX 2088 Santa Fe, New Mexico 87504-2088

Form C-115 - Revised 1/1/9 See Distribution and Code Information Bottom of Page OPERATOR'S MONTHLY REPOR

Company or Operator TEXACO E &	P INC.			Address		3300 NORTH BUTLER FARMINGTON, NM	ER 87401	2	Zip		For Month, Year	02 1985	ស	Page	33	of 126
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DISTRICT I P.O. Box 1980, Hobbs, NM 88240 DISTRICT II P.O. Drawer DD, Artesia, NM 88210 DISTRICT III 1000 Rio Brazos Rd. Aztec, NM 87410

State of New Mexico Energy, Minerals, and Natural Resources Department

# OIL CONSERVATION DIVISION

P.O. BOX 2088 Santa Fe, New Mexico 87504-2088

OPERATOR'S MONTHLY REPOR Form C-115 - Revised 1/1/9 See Distribution and Code Information Bottom of Page

Company TEXACO E &	P INC.			Address	ı	3300 NORTH BUT! FARMINGTON, NM	BUTLER	87401		diZ		For Month, Year	02 1895	2	Page	107	of 1	126
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Attachment VI

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YEARS

WCFPD

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Attachment VII

**B0PD** 

O



# H. J. LOE FEDERAL B No. 3E CURRENT COMPLETION

### LOCATION:

Unit O, 1100' FSL & 2000' FEL Sec. 23, T29N, R12W Sen Juan County

### SPUD DATE:

9/29/80

### COMPL DATE:

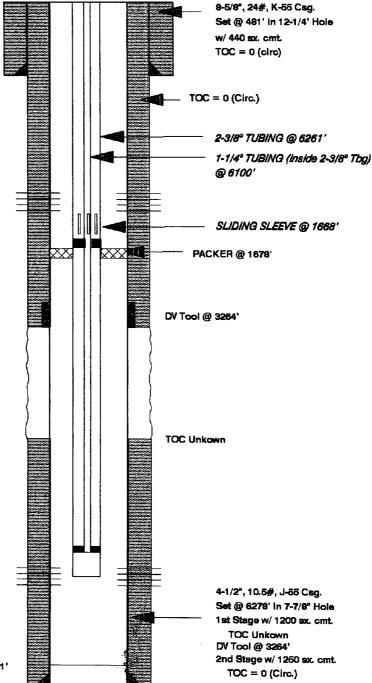
10/31/80

# PICTURED CLIFFS PERFORATIONS:

1614'-1656'

### **FORMATION TOPS:**

Fruitland 1356'
Pictured Cliffs 1608'
Chacra 2696'
Mesa Verde 3143'
Gailup 5225'
Dakota 6061'



**DAKOTA PERFS:** 6066' - 6179'

PBTD - 6221'

Attachment VIII

8-5/8", 24#, K-55 Csg.



# H. J. LOE FEDERAL B No. 3E

# **Proposed Commingled Completion**

### LOCATION:

Unit O, 1100' FSL & 2000' FEL Sec. 23, T29N, R12W San Juan County

SPUD DATE: 9/29/80 RECOMPL. DATE: 11/17/92

# PICTURED CLIFFS PERFS (11/92):

1614'-20', 1650'-56'; 4 JSPF Frac w/ 30000 gais. XL gel, 130000# 20/40 sand talled w/ 24000# resin coated sand.

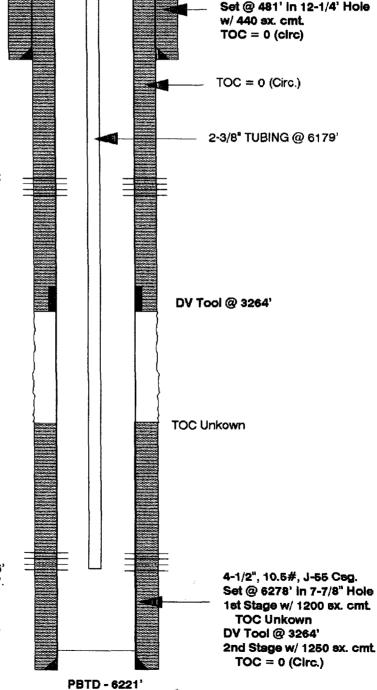
## **FORMATION TOPS:**

Fruitland 1356'
Pictured Cliffs 1608'
Chacra 2595'
Mesa Verde 3143'
Gallup 5225'
Dakota 6061'

### DAKOTA PERFS (10/80):

6066'-69', 6138'-42', 6145', 6148', 6156' 6160', 6164', 6168', 6171', 6176', 6179'. W/ 1 JSPF.

Acidized w/ 1500 gals. MSR acid w/ 4 gals. per 1000 inhibitor 400 SCF N2 per bbi. 54000 gals. water & 47500# sand.



TD - 6278'
Attachment IX

# OIL CONSERVATION DIVISION

Page 1 Revised 10/10/78

# NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

Operator_	TEX	ACO	E&PING	)	**				Lease	H.J.LC	E.FE	DERAL	В	Well No.		
Location of Well:		0		_Sec	23 Twp.	29N			_Rge	1:	2W		Co.	unty <u>SAN</u>	JUA	.N.
				NAME OF	RESERVOI	R OR POO	L				E OF	PROD. BAS)	METHO (Flow	D OF PR		PROD. MEDIUM (Tbg. or Csg.)
Con	Upper npletic	on		FULCHER	KUTZ PICT	URED CLI	FS.			G	AS		FLOW			TBG.
	Lower npletic			BASIN DAI	KOTA					G	AS		FLOW	<u> </u>		TBG.
					-FLOW S	HUT-IN										
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						FLOW T	EST	NO.	. 1							
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10-6-9 10-7-9			6 HRS. 20 HRS.		200 200	342 348	LNG			BRH			<b>j</b>			
10-7-9	4	•	ZU MNO.	,	200	340							] .	•	•	
10-8-9	4	1	44 HRS.	<u> </u>	201	352	<u> </u>		iou		<del>^</del>		<u> </u>			
10-9-9	4	1	68 HR\$.		203	359			107		994		•	•	•	•
10-10-	94	1	92 HRS.		205	60	RSD MGB	31		JLW JDP RFS	V	3-10	UPPER	SHUTI	N; LC	WER FLOWING
10-11-	94	2	16 HRS.		206	65	DBS TLD			Retu	rn To		UPPER :	SHUTIN	: LO\	WER FLOWING
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Oil		B	OPD base	ed on		_ Bbls. in			Hours	-			Grav		3OR_	
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	ower		Hour, Dat	e shut-in			Len	gth of	time s	hut-in			Si press	. psig	,	Stablized (Yes or No)

Attachment X

OH CON. DIV.

P.O. BOX 61427

4312 County Road 1298 S.

Midland, Texas 79711

Texaco

Report Date: March 8, 1994

Lab In Date: March 8, 1994

Sample Date: March 4, 1994

	Specific Gravity:		1.025	
	Total Dissolved Sol	ids:	35126	
	PH:		7.72	
	Ionic Strength:	•	.602	
=======================================	;=====================================			=======================================
CATIONS:			mg/liter	
	Calcium:	(Ca++)	144	
	Magnesium:	(Mg++)	136	
	Sodium:	(Na+)	13176	
	Iron (Total)	(Fe++)	.60	-
	Berium	(8a++)	49.50	
	Manganese:	(Mn++)	0.00	
	Resistivity:			
ANIONS:				
	Bicarbonate:	(HCO3-)	1659	
	Carbonate:	(03)	0	
	Hydroxide:	(OH-)	0	
	Sulfate:	(SO4)	10	
	Chloride:	(Cl-)	20000	
-2	. # 2 # 2 # 2 # 2 # 2 # 2 # 2 # 2 # 2 #			
GASES:				
	Carbon Dioxide:	(CO2)	****	
	Oxygen:	(02)	****	
	Hydrogen Sulfide:	(H2S)		

Temp	erature	CaCO3 SI	CaS04 SI
86F	30.0c	.57	-66.53
104F	40.0C	.79	-66.81
1 <b>2</b> 2F	50.0C	1.03	-66.53
140F	60.0C	1.37	-65.95
168F	70.0C	1.67	-65.09
176F	80.0C	2.01	-63.02

SCALE INDEX (Positive Value Indicates Scale Tendency) \* indicates tests were not run.

If you have any questions or require further information, please contact us.

Sincerely,

Jeans monuney

Laboratory Technician

cc:

bc: Jerry Woodward

# UNICHEM INTERNATIONAL

P.O. 80X 61427

4312 County Road 1298 S.

Midland, Texas 79711

Texaco

Report Date:

March 8, 1994

Lab In Date:

March 8, 1994

Sample Date:

March 4, 1994

Listed below please	find our water analys	is report from	H J Lowe - 2E , PC :	
	Specific Gravity:		1.000	
	Total Dissolved Soli	ds:	268	
	PH:		6.51	
	Ionic Strength:		.004	
35252522222222255555	****************	************		
CATIONS:			mg/liter	
	Calcium:	(Ca++)	2	
	Magnes i um:	(Mg++)	0	
	Sodium:	(Na+)	91	
	Iron (Total)	(Fe++)	19.60	
	Barium	(Ba++)	1.20	
	Manganese:	(Mn++)	0.00	
	Resistivity:			
ANIONS:				
	Bicarbonate:	(HCO3-)	73	
	Carbonate:	(CO3)	0	
	Hydroxide:	(OH-)	0	
	Sulfate:	(\$04)	2	
	Chloride:	(Cl-)	100	
# 251125222322522222	=======================================	**********		
GASES:				
	Carbon Dioxide:	(CO2)	***	
	Oxygen:	(02)	****	
	Hydrogen Sulfide:	(H2S)	****	

T empi	erature	CaCO3 S1	CaSO4 SI
86F	30.0C	-2.73	-21.84
104F	40.0C	-2.45	-21.84
122F	50.0C	-2.33	-21.84
140F	60.0C	-2.13	-21.84
168F	70.0C	-2.01	-20.91
176F	80.0C	-1.85	-19.94

SCALE INDEX (Positive Value Indicates Scale Tendency) \* indicates tests were not run.

If you have any questions or require further information, please contact us.

Sincerely,

cc:

Cane McMinney
Laboratory Technician

•

bc: Jerry Woodward

SENDER:   Complete items 1 and/or 2 for additional services.   Complete items 3, and 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Second   Complete items 4a & b.     Se	nu. 4 gnisu not uoy		Return Gox 777  Registure (Addressee)  Service Ab. Service (Addressee)  8. Addressee	FS Form 3811, December 1991 *U.S. GPO: 1883 – 352-714 DOMESTIC RETURN RECEIPT Consult postmaster for fee.	4a. Article Number   43.7 1911 93.5 E. P. P. Service Type   Insured   100   10	-352-714 DOMESTIC RETURN RECEIPT
wish to rece services (for a vddressee's Av lestricted Delli ostmaster for	How Probation  200 Amico Court  From ingto 1, NM 87401  T. Date of Delivery	6. Signature (Addressee) 8. Addressee's Address (Only if requested and fee is paid) 6. Signature (Agent) 7. Land A.S. S. Prom 3811, December 1991 *u.s. apo: 1863–352-714 DOMESTIC RETURN RECEIPT	3. Article Addressed to:    As. Article Number   0 337 199	5. Signature (Addressee) and fle is paiding frequested and fle is paiding frequently frequested and fle is paiding frequently fre		E Signature (Agent) C S S S S S S S S S S S S S S S S S S

# ALPINE OIL & GAS CORPORATION P. O. BOX 2567 DURANGO, COLORADO 81302

Thomas B. Grandin, Jr. President

Phone (303) 247-5386 Fax (303) 247-5388

April 27, 1995

Texaco Exploration and Production, Inc. 3300 N. Butler Farmington, NM 87401

RE: Downhole Commingle
H.J. Loe Federal B No. 3E
Sec. 23-T29N-R12W Unit O NMPM
San Juan County. New Mexico

Attention: Ted A\_\_Tipton, Area Manager

Alpine Oil & Gas Corporation is an offset operator to the above referenced well, and has received your letter of April 24, 1995 concerning your proposal to commingle the Fulcher Kutz Pictured Cliffs and Basin Dakota formations.

Alpine Oil & Gas Corporation OBJECTS to your proposal. We feel that the reservoir characteristics of the Pictured Cliffs and Dakota formations are so different that commingling may result in injury to the offsetting operators. The purpose of Rule 303- Segregation of Production from pools is to prevent such injury from occurring. We feel that due to the differences in the producing formations that an exception to Rule 303 should not be granted.

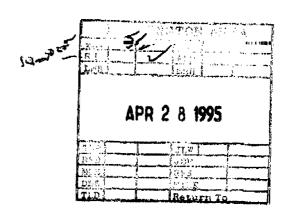
Sincerely yours,

Thomas B. Grandin, Jr.

President

Certified Mail
Return Receipt Requested

TG/sa



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TG/sq

