

ALIG - 1 1986

TEXACO INC. P. O. Box EE Cortez, Co. 81321

July 16, 1986

Energy Reserves Group
Production Department
P. O. Box 1407
633 17th St. Suite 3200
Denver, Co. 80201

Subject: Downhole commingling Jicarilla "C" well no 28

B Sec. 34 T25N R5W Rio Arriba County, NM.

Gentlemen:

Please find attached copies of our application for downhole commingling which we are submitting to the New Mexico Oil & Gas Conservation Commission.

If you as an offset operator, have no objections to the downhole commingling of the Gallup and Dakota formations of this well, please sign the waiver at the bottom of this page and send to:

New Mexico Oil & Gas Conservation P. O. Box 2088 Santa Fe, NM. 87501

We would appreciate your returning one executed copy to the undersigned.

Very Truly Yours,

Texaco Inc.

A. R. Marx

Area Superintendent

RECEIVED

JUL 24'86

ROCKY MOUNTAIN

113-80

ARM:DDW:nr Attachments

WAIVER

We hereby waive any objections to Texaco Inc. application for downhole commingling as set forth above.

NAME

DATE





Amoco Production Company Production Department 1670 Broadway Denver, Co. 80202 TEXACO INC.
P. O. Box EE
Cortez, Co. 81321

July 16, 1986



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ARM:DDW:nr Attachments

WAIVER

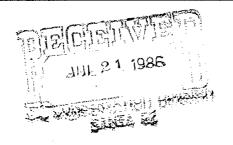
We hereby waive any objections to Texaco Inc. application for downhole commingling as set forth above.

NAME

56 Wykst 118-8-6-86

DATE





TEXACO INC.
P. O. Box EE
Cortez, Co. 81321

July 16, 1986

New Mexico Oil & Gas Conservation Commission P. O. Box 2088 Santa Fe, NM. 87501

Subject: Application of downhole commingling.

Dear Sirs:

Texaco Inc. as owner and operator of Jicarilla "C" well no. 28 request approval to downhole commingle production from the dually completed Basin Dakota and Otero Gallup pools. The subject well is located at the NW½ NE¾ of Section 34, Township 25N, Range 5W, Rio Arriba County, New Mexico. Down hole commingling of the Dakota and Gallup production is proposed to eliminate the hardship of producing the Dakota production separately thereby resulting in the recovery of additional hydrocarbons and preventing waste.

Production from the Dakota has been severely declining. It has been suffering from liquid loading and logging-off. Also the oil production from the Dakota has severe paraffin forming tendencies. When subjected to an extended shut-in, paraffin will form in the tubing. Both swabbing and hot oiling have resulted in expensive service jobs. The Dakota is produced under a packer and does not have the annular volume to store enough potential energy to effectively unload the well. By downhole commingling, the Dakota and Gallup formations will be able to work together to build the annular potential energy required to unload all produced liquids.

Presently 2 BOPD/63 MCFPD/1 BWPD is produced from the Dakota into a 250 psi. sales line and 4 BOPD/40 MCFPD/0 BWPD is produced from the Gallup into a 50 psi. line to a central compressor. Both formations are produced with plunger-lift equipment through separate tubing strings isolated by a packer. After the two formations are commingled, El Paso Natural Gas Company (gas purchaser) will allow the Dakota and Gallup to produce into the 50 psi. line to the central compressor.

Attachments 1 & 2 show the estimated bottom hole pressure for each zone, a description of the fluid characteristics of each zone and a computation showing the value of the commingled oil production. As shown the estimated bottom hole pressures are within 3% of each other, thereby minimizing the concern that one formation might thief the other.



New Mexico Oil & Gas Conservation Commission

The scale index on the Dakota water analysis indicates calcium carbonate and calcium sulfate scaling are unlikely. And finally, due to a gravity adjustment the value of the commingled oil production will be greater than the sum of the values of the individual streams.

All offset operators have been notified in writing of the proposed commingling. Texaco Inc. appreciates your attention to this matter of commingling and if you have any questions please contact the Area Office in Cortez, Colorado 303-565-8401.

Thank You,

Á. R. Marx

Area Superintendent

ARM:DDW:nr Attachments cc: Supron

Energy Reserves Group

Amoco Prod. Co. Amerada Hess Corp.

FORM ENG-4	TEXACO	INC.	SHEET NO. DATE 7/11/86 BY DDW
LOCATION SUBJECT			
Attachment	4		APP D
= Estimated	Bottom Hole Ples	surc	
<u>Gallup</u> Albe	5 day SI 6990 To Mid Est. BHP 2 753 P	6.44 P≠I. Pa.P	Specific Gautus
Dakota	7 day ST 77255' To Mid		
	Est BHP = 769 PSI Commingled Oil Pi	::645 Exp(.om	3 PECTE 3 ST 5 ST
<u>Dakota</u> 2.9 Bo	くがは「さんに」 特 さいコンド 土部 しいいきまご チェビチにん コバーバ	「こうくか」 ひいばい はっこうけい 御り 大幅 ファイ 前 間 ちゅうじゅつじゅつ	
<u>Value</u>	e Z.4 BOPO (\$12.75./BO Permian Oil Co. Purchasing Phice	Gmulty Adj For 12 Textles of a Degree A	
Gallup			
	41.6 °API - 4 BORP (#12.75/)	30) = \$ 51.0	d
• API	allup Communated Z180PD (162°) + 980P1 61980P0	- ごずや ほしょうけいべい たいはんだがりしょう しじょう 過去する デー・ビ	
	: G.4 BoPO (4 8160 > ≠30.1);	42×/80) = #8.	

Attachment 2

UNICHEM INTERNATIONAL

707 NORTH LEECH

P.O.BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : TEXACO INC.

DATE : 06/19/86

FIELD, LEASE & WELL : JICARILLA C-28 DAKOTA

SAMPLING POINT: SEPARATOR DATE SAMPLED : 06/10/86

SPECIFIC GRAVITY = 1.009

TOTAL DISSOLVED SOLIDS = 16300

PH = 6.86

			ME/L	MG/L
CATIONS	· •			
CALCIUM MAGNESIUM SODIUM	(CA)+2 (MG)+2 (NA),CALC.		.08 6.3 261.	1.6 76.8 6016.
ANIONS			• • • • • • • • • • • • • • • • • • •	
BICARBONATE CARBONATE HYDROXIDE SULFATE CHLORIDES	(HCO3)-1 (CO3)-2 (OH)-1 (SO4)-2 (CL)-1		14 0 0 28.1 226	354. 0 0 1350 3000
DISSOLVED GASES				
CARBON DIOXIDE HYDROGEN SULFIDE OXYGEN	(002) (H2S) (02)		NOT RUN NOT RUN NOT RUN	
IRON(TOTAL) BARIUM MANGANESE	(FE) (BA)+2 (MN)	(A STATE OF THE S	.01 NOT RUN	507. .7

IONIC STRENGTH (MOLAL) = .289

SCALING INDEX	TEMP	•
	300	48.8C
		120F
CARBONATE INDEX	-2.3	-1.9
CALCIUM CARBONATE SCALING	UNLIKELY	UNLIKELY
CALCIUM SULFATE INDEX	-37.	-37.

NEW MEXICO OIL CONSERVATION COMMISSION GAS-OIL RATIO TESTS

Revised 1-1-65

	une 10t alla abbiobitate boot traes.	Will be 0.00. 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 Commi	Gas volumes must be reported in MCF measured at a pressure base of 15,025 psia and a temperature of 60°	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.		Jicarilla "C"	LEASE NAME		P. O. BOX EE CORTEZ,	Operator TEXACO PROD. INC.
		ubing pres	MCF meas	able great ell shall or is enco	·	28	NO. L	ξ T	co	
		ssure fo	sured at	er than be prod uraged		В	C		. 81	
		r any we istrict o	a press	the amo uced at to take		34	s	L0C/	81321	Pool
		ill produc	sure base	unt of oil a rate n advantag		25N	4	LOCATION		OTERO
		ing throuthe New	of 15.0	l produce not excee		5W	סג			1 1
		igh casing. Mexico Oil Cons	25 psia and a ten	d on the official eding the top units 25 percent tole		6/12/86	TEST		ゴロ	GALLUP
		ervatio	nperatu	test. t allow: rance ii		ㅂ	STATI		TYPE O	
		п Сотт	e of 60	able for					- (X)	
		ission in		the pool that well		97	PRESS.	TRG	- Sch	
		ssion in accordance with	F. Specific gravity base	the pool in which well is hat well can be assigned		42	ALLOW- ABLE	DAILY	Scheduled χ	County
		with	ю С	ned.		24	TEST HOURS	LENGTH		
	Area			I her is true ledge	·	0	WATER BBLS.	ים	Comp	RIO A
I hereby certify that the above information is true and complete to the best of my knowledge and belief. (Signature) Area Superintendent (Title)		41	GRAV.	ROD.	Completion [ARRIBA				
		4.	BBLS.	PROD. DURING		A				
	at the abov to the best		40	GAS M.C.F.	TEST	Spec	,			
				e information : of my know-		10,000		GAS - OIL	Special	

Form 9-230 (Rev. 5-68)	1	IN TED	CT A T	 -	SUBM	IT IN	DUPL	TE.	l	Form ap	proved.	
	DEPART	UN'TED					(É	her in-			Bureau No. 42-R3	
		COLOGICA				`	rever	se side)	i		ON AND SERIAL	NO.
		CLOGICA	L SUR	VEI					Contr		TEE OR TRIBE N	AVE
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1a. TYPE OF WEI	LL: OIL WELL	GAS WELL X	DRY	.П	Other		-		7. UNIT AGE			
L TYPE OF COM				· —	Other							
WELL X	WORK DEEP-	PLUG BACK	DIFF. Cesvr	🔲	Other				S. FARM OR	LEASE	NAMB	_
2. NAME OF OPERA	TOR					• ••		· ·	Jicar	illa	"C"	
	il Company		11.						9. WELL NO	-		
3. ADDRESS OF OPE				21-/			;		2		<u> </u>	
	x 3360, Casp				<u> </u>)				or WILDCAT	Dakati
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<u> </u>	terval reported below -	, bame	U. :	s. aca	LOGICAL S	URVE	, I			•	•	
At total depth	Same			FARMI	NGTON, N.	М.	".	,	B Sec	. 34-	-T25N-R5W	
		. [:	14. PERM	IT NO.			1880 pd		12. COUNTY PARISH	OR	13. STATE	
							14-81		Rio Ar		New Me	
15. DATE SPUDDED	16. DATE T.D. REAC	HED 17. DATE	COMPL. (R	eady to	prod.) 18				T, GR, ETC.)	19. E	LEV. CASINGHEAI	,
4-19-81 20. TOTAL DEPTH. MD	5-9-81	7- ACK T.D., MD 4 TV	29-81	IN MUL	TIPLE COMPL.		874 G		ROTARY TO	nLS	CABLE TOOLS	
	211200, 2			HOW M.		•		LED BY	0'-7435'	- 1		
7435 7 24. PRODUCING INTER	BVAL(S), OF THIS CO.	7394 1 MPLETION—TOP, 1	BOTTOM, N	AME (M	LD AND TVD)			<u>→ </u>	0 - 7435	25.	WAS DIRECTION	AL
7165'-7344'	Dakota										SURVEY MADE	
7105 7544	Dakota										Yes	
DIL and CNI	AND OTHER LOGS RUN									27. W	NO NO	
23.		CASIN	G RECOR	D (Rep	ort all string	s set in	n well)					
CASINO SIZE	WEIGHT, LB./FT.	DEPTH SET	(MD)	ног	LE SIZE		CEM	ENTING	RECORD	<u>. </u>	AMOUNT PULLE	D :
8 5/8"	24#	32	2'	12	1/4"		30	0 sx.				
5 1/2"	14 & 15.5#	743	3'	7	7/8"		172	0 sx.				·
		_				.}						
29.	, , , , , , , , , , , , , , , , , , ,	VER RECORD				 	30.		UBING REC		· .	
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7165'-7173' 7276'-7283'			ta e 1	SFF	DEPTH IN	CERVAL	(MD)	AM	DUNT AND KI	M 40 GF	ATERIAL USED	
7290'-7293'	• •	o notes			7165'-						gal of 15	
7311'-7326'		• • • •									fluid, 9	<u>0,</u> 000 <i>i</i>
7341'-7344'					of 20-	40 8	sa, &	399,4	00 SCF o	1 N2.		•
33.*				PROD	UCTION						:	
DATE FIRST PRODUCT	ION PRODUCT	ON METHOD (Flo				and ty	pe of pum	<i>p</i>)			(Producing or	
8-23-81	HOURS TESTED	Flow:	ing	FOR.	OIL—BBL.	·	GASMC	P	WATER-BB		Shut-in	
8-10-81	3	48/64"	TEST PE		10		263	2.	8			
PLOW. TUBING PRESS. 131#	pkr.	CALCULATED 24-HOUR RATE	оть—вві 80	L.	GAS—	мст. 1924		WATER-64		OIL GR	AVITY-API (CORR.)
34. DISPOSITION OF G	AS (Sold, used for fue	l, vented, etc.)	<u> </u>		1	74 -			TEST WITNE			
·	Vented ·····						:		Paul D	. Ber	host	
35. LIST OF ATTACH	MENTS						.:		_			
36. I hereby certify	that the foresoing a	nd attached info	rmation is	compl	ete and corre	ect as	determine	d from	all available	records		_
SIGNED	h Hardin	tor	TITL	e Ar	e Super:	inte	ndent		DATI	9/1	/81	
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BY_

NSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

tion and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. I not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), forma-All attachments

pronta be listed on this form, see item 35.

fem 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions. Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

or each nterval, tems 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, additional interval to be separately produced, showing the additional data pertinent to such interval

tem 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

Gallup Dakota SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEFTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES · FORM ATION 6277 7165 TOP MOLLOR 6602 7344 ψÛ DESCRIPTION, CONTENTS, ETC. Pictured Cliffs Dakota Greenhorn Gallup MesaVerde Ojo Alamo Chacra 38 MANE GEOLOGIC MARKERS 6268 45161 3791 2926 2400 7160' 7057 MEAS. DEPTH TOP TRUS VERT. DEPTH

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal

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be listed on this form, see item 35.

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additional interval to be separately produced, records for this well should show the details of showing the additional data pertinent to such interval any multiple stage cementing and the location of the cementing tool

separate completion

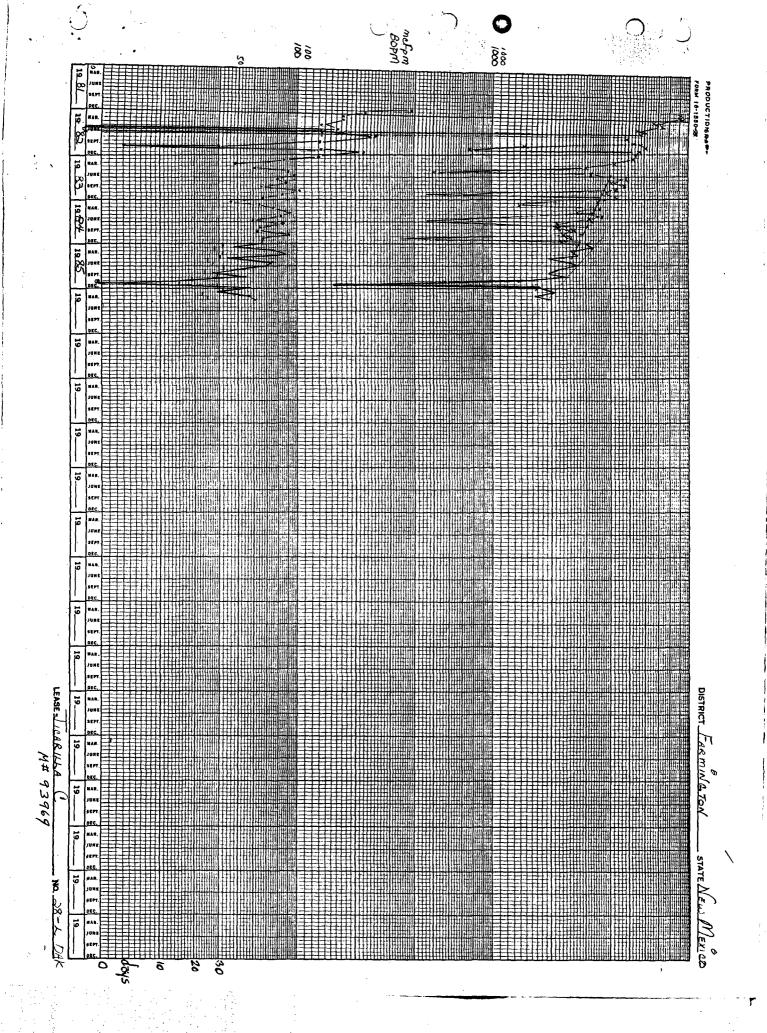
report on this form

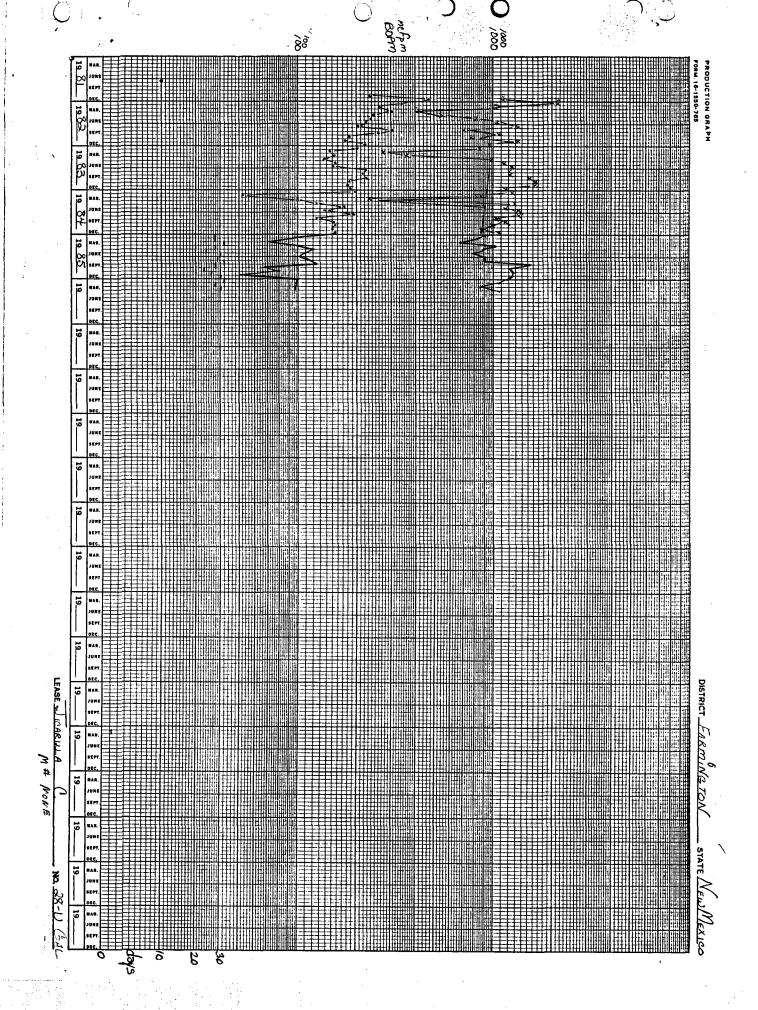
for each interval

produced.

(See instruction for items 22 and 24 above.)

FORMATION .	707	BOTTOM	DESCRIPTION, CONTENTS, ETC.		TOP
				NAME	MEAS. DEPTH TRUE VERT. DEPTH
Dakota	7165'	7344			
Gallup	6277'	6602¹		Ojo Alamo 💛 24	2400'
T.				ured Cliffs	2926* :
	· · ·	: Y]		Chacra 37	3791
	11.	. ·		rde ''	4516'
	-				62681
	••••			orn : 7	057
	- ,		5. 4	Dakota 71	160
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STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD AZTEC, NEW MEXICO 87410

	•	AZTEG DISTRICT OFFICE	
· .	ایند. وجو کما	STEEL ST	1000 RIO BRAZOS RO AZTEC, NEW MEXICO 8
OIL CONSERVAT	ION DIVISION	AUG -4 1986	(505) 334-6178
BOX 2088 SANTA FE, NEW	MEX ICO 87501		
DATE 7-3/	1-8/	The state of the s	
RE: Proposed		•	
Proposed Proposed	DHC X	•	
Proposed	SWD		
Proposed		•	
Proposed	PMX	•	•
Gentlemen:		•	
			_
I have examin	ed the applic	cation dated 2-30-	86
for the <u>lex</u>	900	Travilla"C"#28 Lease and Well No.	B-34-25N-5
	Operator	Lease and Well No.	Unit, S-T-R
and my recomm	endations are	e as follows:	
the process			
Yours truly,			es es
	D)		