RECEIVED | DURANGO PROJ.

This form is <u>not</u> to be used for reporting packer leakage tests in Southeast New Mexico NEW MEXICO OIL CONSERVATION SOMMISSION

Revised 11-1-58

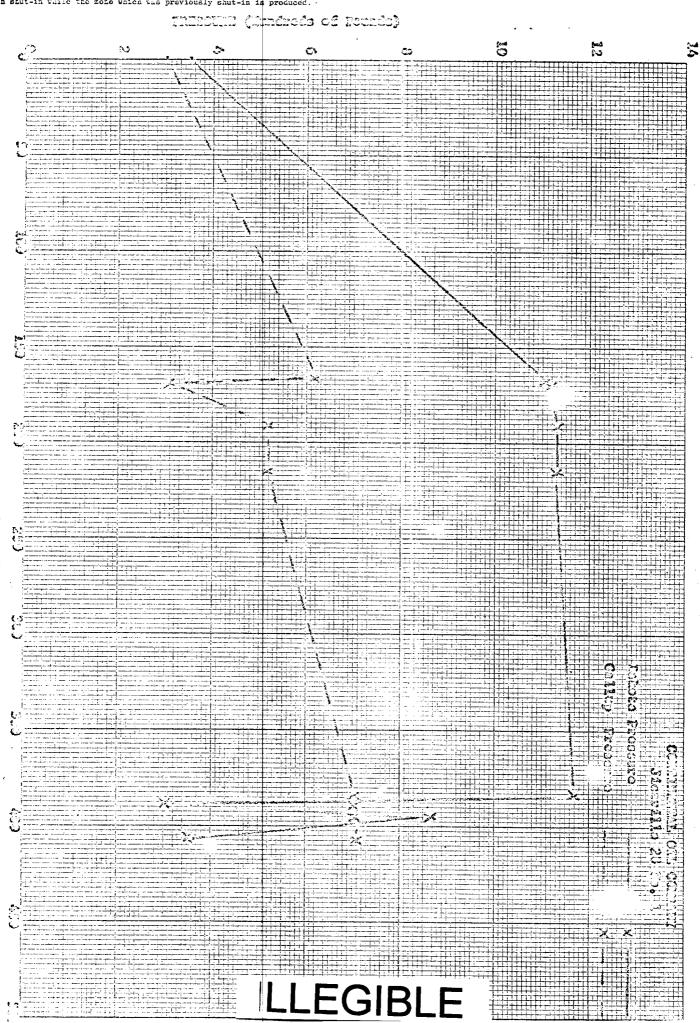
In Sout	heast New Mexico	NORTHWEST	NEW NEXTCO PAG		())					
Operator	Continental	. C11 Company	List.	الله معسم	rilla Apocha 2	Well 8 No. 1				
Location	_	_	LiST,			/				
of Well: Uni	tSec2	3 Twp. 2	EN Las Re	e	County	, Rio Arriba				
	Name of Rese	rvoir or Pool	Type of Prod (Oil or Gas)	Flow on	Art. Lift)	Prod. Medium (Tbg. or Csg.)				
Upper Completion C.	ාර්ගෝඋකස්පල් රි	blep	J. Joseph	C B &	ng dang	Tubing				
Lower Completion	:1:00:8		Cil	Plungor	1465	Tubing				
Upper Hour, d	2+0 11341 A	PRE-F	LOW SHUT-IN PR			Stabilized?				
Compl Shut-	in 12-17-64	time shu		SI pre		(Yes or No) 13				
Lower Hour, date 10:00 A.M. Length of SI press. Stabilized? Compl Shut-in 12-17-64 time shut-in 163 hours psig 1110 (Yes or No) No										
	·		FLOW TEST N	0.1						
Commenced at Time	(hour, date); (Lapsed time	Enancia :	12-24-64 sure	Zone prod. Zone	roducing (Uppe	r beiner):				
(hour, date)	since*		Lower Compl.	Temp.		arks				
12:00 11 12:04:05 2 310 1120 Peadweight Pressure										
10:00 A.H. 12-25-64	10:00 A.11.									
10:00 A.M. 12-26-64	48 hours	520	1239		Deschwight P	ressure				
		. T								
				ý.						
Production rational: 72	te during tes	st	Bbls. in	/ 88 m.	, A10 C	v. API GOR 3500				
Gas: 42	BOFD be	CFPD: Tested	thru (Orifice	or Meter):	s. 41° Gra	IV. FLEE GOR DOGG				
		MID-T	EST SHUT-IN PR	ESSURE DATA						
Upper Hour, da	ate 10000 A.	Length	of t-in 163 hour	SI pre	70 5	Stabilized? (Yes or No) No				
Compl Shut- Lower Hour, da	ate 10300 h.	Length	of	CT DYG		Stabilized?				
Compl Shut-	in 22-17-C	🕹 🖟 time shu	t-in 324 bour	psig	1170	(Yes or No) No				
Kommonand at	(hour dotal	v 2010) A 14	FLOW TEST N	0. 2	roducing (Eppe	CONTROL T OLIONA A				
Time	Lapsed time	Pres	FLOW TEST N 1-2-63 sure	Prod. Zone	roducing (appa	migrat Towel.)!				
(hour, date)	since **	Upper Compl.	Lower Compl.	Temp.	Rem	arks				
4:00 P.M. 1-2-65	6 bours	707	205	,	Doséweight P	ressure				
10:00 P.M. 1-2-05	12 hours	707	.073		Frozen In (2	Pon Recorder)				
10:03 A.H. 1-3-65	24 hours	720	350	1.	Teadweight 1	appaseo .				
	·									
			<i>.</i>		JA	N 2.0 1965				
5						CON. COM./				
Production rat	BOPD ba	sed on 1	5 Bbls. in	24 Hrs.	450 Grav.	API GOR 10.000				
		•	thru (Orlice		LUGGET					
			O INSTALLA		-10-11-11-11	2110115				
I heroby certi	ify that the	information h	erein containe	d is true a	nd complete to	the best of my				
_	/ -		Operat	or <u>.</u> C	ontinental 611 Oxiginal Sign	Сопрану				
Approved: - New Mexico Of	il Conservati	con Commission	- By		FRED VAN M					
By //it	ein C/C	andel	Title_	i de	istr ict E ngine	er				
Title	in Du	7711	Date		anuary 18, 196	5				
	\mathcal{J}_{i}		LEGIE	31 F	ExHIB	BIT No. /				
		16 Tables 21-	management Tailing of State	er Passas The sense						

- 1. A prober leakage test shall be commenced on each multiply completed well within reten days after retual completion of the well and annually theresisted a reversion by the order authorizing the multiple completion. Such test chall also be commanced on all multiple completions within seven days following recompletion and/or chemical or fracture treatment, and when the results worth has been done on a well during which the packer or the tabling more deen disturbed. Tests shall also be taken at any time that conscious and the supported or when requested by the Chimission.
- At least 78 hours prior to the commencement of any packer lenkage test, open for chall ratify the Commission in writing of the exact time the tas to as commenced. Offset operators shall also be so notified.
- 2. The state of the content of the content of the shall content when both zones of the dual completion are shall for pressure stabilization. Both zones shall remain shut-in until the well-med pressure in each has stabilized, provided however, that they seed not remain shut-in more than seven days.

 4. For Flow Cost No. 1, one note of the dual completion shall be produced at the normal rate of production while the other zone remains shut-in. Such test shall be continued for seven days in the case of a gas well and for 24 hours in the case of an oil vell. Note: If, on an initial packer lookings test, a gas well is being flowed to TES atmosphere due to the lack of a pipuline connection the flow period shall be three hours.
- Following completion of Flow Test No. 1, the well shall again be shut-in accordance with Paragraph 3 above.
- 6. Flow Test No. 2 shall be conducted even though no leak was indicated during Flow Test No. 1. Procedure for Flow Test No. 1 is to be the same as for Flow Test No. 1 except that the previously produced zone shall remain shut-in while the zone which was previously shut-in is produced.

- 7. Pressures for gas-ze sts must be measured on each zone with a fendreight pressure gaus time intervals as follows: 3-hour tests: immediately prior to the auginning of each flow-period, at fifteen-minute intervals during the first hour thereof, and at hourly intervals thereafter, including one pressure measurement immediately prior to the conclusion of each flow period. 7-day tosts: immediately prior to the heginning of each flow period, at least one time during each flow period (at approximately the midway point) and immediately prior to the conclusion of each flow period. Other pressures may be taken as desired, or may be requested on wells which have previously shown questionable test caux. Lava.
- 24-hour oil zone tests: all pressures, throughout the entire test, thall be constituously measured and recorded with recording pressure spages, the accuracy of which must be checked at least twice, once at the laginning and once at the end of each test, with a deadweight pressure rauge. If a well is a gas-oil or an oil-gas dual completion, the recording gauge shall be required on the oil zone only, with deadweight pressures as required above being taken on the gas zone.

 8. The results of the above-described tests shall be filed in triplicate within 15 days after completion of the test. Tests shall be filed with the Aztec Dastrict Office of the New Estico Oil Conservation Commission on Morthwest New Mexico Packer Leakage Test Form Revised 11-1-58, with all cendraght pressures indicated thereon as well as the flowing temperatures (gas zones only) and gravity and GOR (oil zones only). A pressure versus time curve for each zone of each test shall be constructed on the reverse side of the Packer Leakage Test Form with all deadweight pressure points taken indicated thereon. For oil zones, the pressure curve should also indicate all key pressure changes which may be reflected by the recording gauge clarits. These key pressure changes should also be tabulated on the front of the Packer Leakage Test Form.



pd bd	nis form is not to sused for reporting acker leakage tests		NEW MEXI	co oi	L CONSERVA	rion	COMMISS	SION		Revised	111-1	- 58
	Continue Mexico			NEW I	MEXICO PAC			TEST rilla 28		Well	-	
Location					1.1	- -	0 20 4			No•_		
of Well:	Jnit 3 Sec.	. <u>23 </u>	.wp352		Rge	e	49		ounty			
.	Name of Re	eservoir	or Pool		pe of Prod il or Gas)			of Prod. Art. Lif	t)	Prod. (Tbg. d		
Upper Completion	<u>Undesign</u> e	cad Gol	lup		C11		Flow	·		Casing		
Lower Completion	Rooin Dah	ಾ ತಿಡಿ			021		Plen	ger Lift		Tu	bing	
					SHUT-IN PRI	SSU						
	, date 2:03 ; ut-in 3-22=		Length		164 hours		SI pres			Stabili (Yes or	_	Нэ
	, date 2:00		Length				SI pres			Stabili		200
Compl Shi	ut-in <u>8-23-</u>	្សី	time sh		164 Estars		psig			(Yes or	No)	No
Commenced a	it (hour, dat	te)* To	203 A.C.		LOW TEST NO 1-30-35) <u>. 1</u>		coducing	(Uppe)	r Militar		
fime	Lapsed t	ime [Pre	ssure		Pro	d. Zone	oudoing	(oppo.			
(hour, date	since*	Üppe	r Compl.	Lowe	er Compl.		. Cen		Rema	arks		
1-20-65 10:00 4.2.	4 had	29 21	25		1165			Fren 2-1	en Re	corder		
1-91-65	24 had	es 25	25		1190			U/Dead F	le ight			
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										MAR9	1965	
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Production	rate during			·				· · · · · · · · · · · · · · · · · · ·	5.27.		1/	III
Oil:	O BOPI) based		41	Bbls. in_ (Orifice o	200	Hrs		Grav		GOR	
Gas:		MOFFD			OPILICE (SHUT-IN PRI			12802		zini,		
Upper Hour, Compl Shu	date 10:00 t-in 1-01-		Length	of	168 homo		SI pres	66 3		Stabili (Yes or	zed?	l'o
Lower Hour,	date	Jolls	Length	of	356 how		SI pres	SS.		Stabili (Yes or	zed?	No
		V00 1		FI	CW TEST NO). 2			76/ 4 (474 K)	7€**??* + _		
Commenced a	t (hour, dat Lapsed ti		Pre				zone pr d. Zone	roducing	(40,3500)	STOR TON	er):	
(hour, date					er Compl.		emp.		Rema	arks		
2:00 P.H. 2-7-65	4 100.	;	633		353			From 2-0	ron Re	corder		
10:00 A.M. 2-0-05	24 1	3	ેઇ2	1	203			W/Zeed	20	<u> </u>		
10:00 A.M. 2-9-05	40 ban	3	000		234			W/Dood (?cigb t	•		
								ž				
Production	rate during	test		1								
Oil: 2 Gas: 20	rate during BOPI) based MCFP	on <u>42</u> D; Tested	i thru	Bbls. in_ (Orifice	48 or 1	Hrs. Meter):	G: Neter	rav	GC)R 99	<u> </u>
	To a site yes Mills on a production								ing ^{is}	in accos	:dance	
1221 Co	zz iocio m Ord	s: No. 1	1-2024.									
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_	Oil Conserv	-24	19 <i>ل</i>			-		inental (1	1. 30 B 35 B	A	
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Ву	2 /2/1	Pria	le .		Title_		Dist		ಾಂರ್ <u>ಷ</u>	FEB	-5	
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ILLEGIBLE

EXHIBIT #Z

- 1. A picker leakage test shall be commenced on each multiply completed well within seven days after actual completion of the well, and annually thereafter is prescribed by the order authorizing the multiple completion. Such tests which also be commenced on all multiple completions within soven cays following recompletion and/or chemical or fracture treatment, and whenever remedial work has been done on a well during which the packer or the tubing have been disturbed. Tests shall also be taken at any time that communication is suspected or when requested by the Commission.
- 2. At least 72 hours prior to the commoncement of any packer leakage test the operator shall notify the Commission in writing of the exact time the test is to be commenced. Offset operators shall also be so notified.

 3. The packer leakage test shall commonce when both zones of the dual completion are shut-an for pressure stabilization. Both zones shall remain shut-in until the well-head pressure in each has stabilized, provided however, that they need not remain shut-in more than seven days.
- For Flow Test No. 1, one mone of the dual completion shall be produced the normal face of production while the other zone remains shut-in. ch test shall be continued for seven days in the case of a gas well and 124 hours in the case of an oil well. Note: If, on an initial packer alange test, a gas well is being flowed to the atmosphere due to the lack a pipeline connection the flow period shall be three hours.
- 5. Following completion of Flow Test No. 1, the well shall again be shut-in, in accordance with Paragraph 3 above.

7. Pressings for gas-zone tests must be measured on each zone with a dealweight pressure gauge at time intervals as follows; 3-hour tests; intradictely prior to the beginning of each flow-period, at fifteen-minute intervals during the first hour thereof, and at hourly intervals thereafter, including one pressure measurement inacdiately prior to the conclusion of each flow period. 7-day tests; inacdiately prior to the beginning of each flow period, at least one time during each flow period (at approximately the midway point) and inmediately prior to the conclusion of each flow period. Other pressures may be taken as desired, on may be requested on wells which have previously shown questionable test data.

24-bour oil zone tests: all pressures, throughout the entire test, shall be continuously measured and recorded with recording pressure gauges, the accuracy of which must be checked at least twice, once at the beginning and once at the end of each test, with a deadweight pressure gauge. If a well is a gas-oil or an oil-gas dual completion, the recording gauge shall be required on the oil zone only, with deadweight pressur as required above being taken on the gas zone.

3. The results of the above-described tests shall be filed in triplicate within 15 days after completion of the test. Tests shall be filed with the Azuc District Office of the New Exico Oll Conservation Conmission on Northwest New Mexico Packer Leakage Test Form Revised 11-1-58, with all deadweight pressures indicated thereon as well as the flowing temperatures (gas zones only) and gravity and GOR (oil zones only). A pressure versus time curve for each zone of each test shall be constructed on the reverse side of the Packer Leakage Test Form with all deadweight pressure points taken indicated thereon. For oil zones, the pressure curve should also indicate all key pressure changes which may be reflected by the recording gauge charts. These key pressure changes should also be tabulated on the front of the Packer Leakage Test Form.

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This form is not to be used for reporting packer leakage tests in Southeast New Marries

NEW MEXICO OIL CONSERVATION COMMISSION

Revised 11-1-58

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

Operator	Cont	inental 0 1	l Com	pozy		Lea	.se	Jica	rilla 28		Well No.	1	
Location of Well:	IIni÷.	J Sec. 2	S m	wn. 250		Ræ	4	U		ountr	Rio Arr	iba	
or worr.		ma of Rese			Type of	Prod. Gas)]	Method	of Prod.	•	Prod. Me (Tbg. or	dium)
Upper Completion		u icai gmated		3	011			Flou			Casi		
Lower Completion	n II:	noin Deketo		,	011				ger Lift		1duE	ng	
Inner Four	PRE-FLOW SHUT-IN PRESSURE DATA Upper Hour, date 2:00 P.M. Length of SI press. Stabilized?												
		1 <u> </u>	•		t-in 264	hours	_	pres psig	615		(Yes or N		lo
Lower Hou	r, dat	e 2:00 7.N 1 1-23-65	•	Length				SI pres	1165		Stabilize (Yes or N	ed?	lo
-				ļ	FLOW T	EST NO.	1						
Commenced Time		our, date)		CO A.M. Pres						(Uppe:	r <i>Millia</i> en	2)3.	
(hour, dat		since*			Lower Co		rou. Tem	. Zone		Rema	arks		
2:00 P.M. 1-30-65		4 hours	22		110				From 2-1				
10:00 A.II 1-01-05	•	24 hours	22	5	1100)			W/Desd	leight		0707	
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		during tes							·	D.ST.		111	
Oil:	<u>0</u> ආ	BOPD ba	ased (ACEPD	on <u>U</u> • Tested	Bbls thru (Ori	fice or	Zi) Met	Hrs		Gra	۷. GC د، ا	OR /	-
			•		EST SHUT-						Zivit 1	سندر	
		e 10:63 A.		Length		3 600000		SI pres	66 3		Stabilize		
Compl Sh Lower Hour	ut-in	<u>1</u> ~31~55 e 2:00 ₽.8	•	Length	t-in 165 of	3 4,126,78		psig SI pres			(Yes or N Stabilize		No
Compl St	ut-in	1-20-05	<u> </u>	time shu	t-in 350		$\bot \bot$	psig			(Yes or N		e/i
Commenced	at (h	our, date);	+× 10	eco A.M.	FLOW T	-05	12	Zone pr	roducing	(4538	Mass Lower	:):	
Time	IL	apsed time		Pres	sure			. Zone	,	Dom	n] - n		
(hour, dat	,e)				Lower Co	mbr•	Ter	mp.	7		arks	**************************************	
2-7-65 10:00 A.L	•	A house	-	663	350				From 2-1			· · · · · · · · · · · · · · · · · · ·	
2-0-33 10:03 A.M		24 hours		652	254		.		W/Dead W				.,
2-9-05		40 hours		662	254 -				W/Dead N	deight			
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Oil: Gas:	 	BOPD ba	MCFPi	on of Tested	thru (Or	ifice o	r Me	_Hrs eter):_	ræter	rav	GUH	9906	
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Approved:	o Oil	Conservati	on Co	19 <u>65</u>		y				1	18 John W	head her	
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	ومناسون	LIGHT MERCH.	=		-						_		

- 1. A women leakage test shall be connended on each multiply completed well within seven days after actual completion of the well, and annually thereafter is prescribed by the order authorizing the multiple completion. Such tests shall also be consenced on all multiple completions within seven days following recompletion annoyor chemical or fracture treatment, and whenever remodual work has been done on a well during which the packer or the tebing have been disturbed. Tests shall also be taken at any time that communication is suspected or when requested by the Commission.
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- 3. The prober least; test shall commence when both zones of the dual completion are sharen for pressure stabilization. Both gones shall remain shut-in that the well-head pressure in each has stabilized, provided however, that they need not remain shut-in more than seven days.
- 4. For Flow Test No. 1, one zone of the dual completion shall be produced at the normal rate of production while the other zone remains shuttin. Such test shall be continued for seven days in the case of a gas well and for 24 hours in the case of an oil well. Note: If, on an initial packer leakage test, a gas well is being flowed to the atnosphere due to the lack of a pipeline connection the flow period shall be three hours.
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7. Pressures for gas-zone tests must be measured on each zone with a deadweight pressure gauge at time intervals as follows: 3-hour tests: inmediately prior to the beginning of each flow-period, at fifteen-minute intervals during the first hour thereof, and at hourly intervals therealfter, including one pressure measurement immediately prior to the conclusion of cach flow period. 7-day tests: immediately prior to the beginning of each flow period, at least one time during each flow period (at approximately the midway point) and immediately prior to the conclusion of each flow period. Other pressures may be taken as desired, or may be requested on wells which have previously shown questionable test data.

24-bour oil zone tests: all pressures, throughout the entire test, shall be continuously measured and recorded with recording pressure gauges, the accuracy of which must be checked at least twice, once at the beginning and once at the end of each test, with a deadweight pressure gauge. If a well is a gas-oil or an oil-gas dual completion, the recording gauge shall be required on the oil zone only, with deadweight pressures as required above being taken on the gas zone.

S. The rosults of the above-described tests shall be filed in triplicate within 15 cays after completion of the test. Tests shall be filed with the Azico District Office of the New Maxico Oil Conservation Commission on Northwest New Maxico Packer Leakage Test Form Revised 11-1-58, with all deadweight pressures indicated thereon as well as the flowing temperatures (gas zones only) and gravity and GOR (oil zones only). A pressure versus time curve for each zone of each test shall be constructed on the reverse side of the Packer Leakage Test Form with all deadweight pressure points taken indicated thereon. For oil zones, the pressure curve should also indicate all key pressure changes which may be reflected by the recording gauge charts. Those key pressure changes should also be tabulated on the front of the Packer Leakage Test Form.

6. Flow Test No. 2 shall be conducted even though no leak was indicated during Flow Test No. 1. Procedure for Flow Test No. 2 is to be the same as for Flow Test No. 1 except that the previously produced zone shall remain shut-in while the zone which was previously shut-in is produced.

DIRECTIFE (HEMDRES) OF POURIS) <u>الم</u> 14 Ş ILLEGIBLE

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

Operator	Continental C	il Company	Le	ease Ji	carilla 28	Well No1
Location						
of Well: Un	itJ_Sec	28 Twp	25N Rg	ə. <u>4</u> 5	County	Rio Arriba
			Type of Prod.	 Method 	of Prod.	Prod. Medium (Tbg. or Csg.)
Upper						(Tog. or Usg.)
Completion Lower	Undesignated	Gallup	Oil	F	1ow	Casing
	Basin Dakota		Oil	Plung	er Lift	Tubing
Manage Varia	3-4- 0-00 m	PRE-F	LOW SHUT-IN PRI	ESSURE DATA		7.01 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Compl Shut	iate 3:00 P. -in 5-1-65	m. Length time shu	of ut-in 33 days	SI pre	ss. 854	Stabilized? (Yes or No) Yes
Lower Hour,	iate 3:00 P.	M. Length	of 33 days	SI pre	SS.	Stabilized?
Compl Shut	-in 6-3-65	time shu	t-in 162 hrs. FLOW TEST NO	l nsig	855	(Yes or No) No
Commenced at	(hour, date)	* 9:00 A.M. 6	-10-65	2. J. Szone n	roducing (Uppe	r officeren):
Time	Lapsed time	Pres	-10-65 sure	Prod. Zone	Condition (oppo	
(hour, date)	since*	Upper Compl.	Lower Compl.	Temp.	Rem	arks
12:00 P.M. 6-10-65	3 hrs.	500	860			
3:00 P.M.	3 11238	300			Two-pen reco	order
6-10-65	6 hrs.	300	890		/Two-pen reco	order
9:00 A.M. 6-11-65	24	260	905	t	Dead weight	nraccura
					Dean Merall	hressure
	 					
				/		
Production	to during to					
Production ra	O BOPD be	ased on	O Bbls. in	24 Hr	s. Gra	v. GOB
Gas:	97	MCFPD; Tested	thru (Orifice o	or Meter):	Meter	vGOR
		ت ريي (ירוכו זודי וחודוות והסכדו	A COLUMN TO A COLU		
Compl Shut-	iate 9:10 A.1	Length	EST SHUT-IN PRE of t-in 157 1/2 P	SI pre	35.	Stabilized?
MOHINE DIRECT		Length	10-111 10: 1/2 1	TTO DOTE	174	(Yes or No) No Stabilized?
Compl Shut-	in 6-3-65	time shu	of their 354 hrs. FLOW TEST NO 6-18-65	psig	1255	(Yes or No) No
	· · · · · · · · · · · · · · · · · · ·		FLOW TEST NO	0.2	· · · · · · · · · · · · · · · · · · ·	
Commenced at	(nour, date)	* 8:40 A.M. Pres	6-18-65 sure	Zone p	roducing (Uppe	rxer Lower):
(hour, date)	since **	Upper Compl.	Lower Compl.	Temp.	Rem	arks
8:40 A.M.						
6-18-65			7055		Dondof abs -	
	0	774	1255		Dead weight g	
9:00 A.M.					Two-pen recor	der
	0 20 min.	800	555		Two-pen recor Intermitter O	der pen
9:00 A.M. 6-18-65 1:40 P.M. 5-18-65					Two-pen recor Intermitter O Two-pen recor Intermitter c	der pen der losed
9:00 A.M. 6-18-65 1:40 P.M. 6-18-65 8:30 A.M.	20 min. 5 hrs.	800 800 °	555 950		Two-pen recor Intermitter O Two-pen recor Intermitter c Dead weight g	der pen der losed auge
9:00 A.M. 6-18-65 1:40 P.M. 6-18-65 8:30 A.M. 6-19-65 9:15 A.M.	20 min. 5 hrs. 24 hrs.	800	555		Two-pen recor Intermitter O Two-pen recor Intermitter c	der pen der losed auge losed
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ILLEGIBLE EXHIBIT #3

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NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

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	V				Type	e of Prod		Method	of Prod.	Prod. Medium
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C. P. M. Waller, D. Schaller, and Evided State 1998, 1884, pp. 1875, and pp. 1875, pp. 1875,

PRESSURE (HUNDREDS OF POUNDS) 10 120 160 TIME (HOURS) **ILLEGIBLE**

EXHIBIT NO!

BEFORE EXAMINER NU	TTER
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OIL CONSERVATION COMMISSION

OF EXHIBIT NO. 6

CASE NO. 3//2

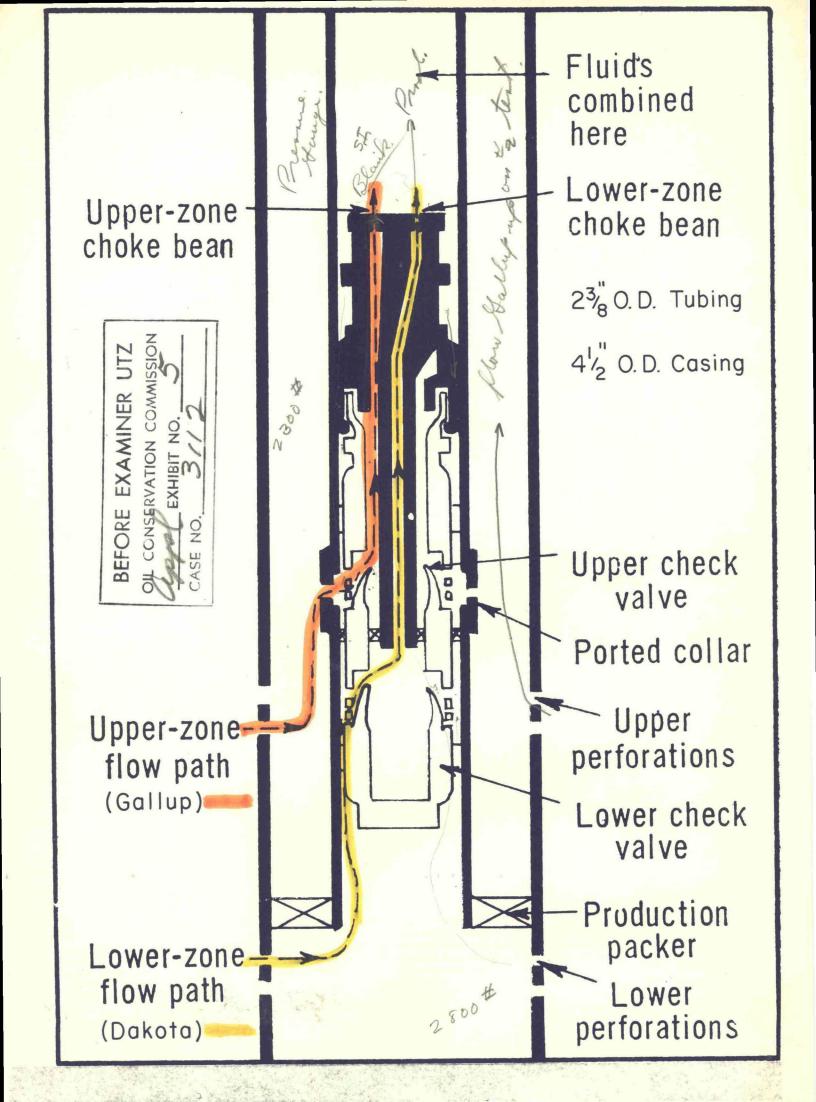


FIGURE NO. 7

Schematic diagram showing installation of Otis "Dual flow choke assembly" for dual zone downhole commingling.

Summary

my opinion

It is bettered the data presented conclusively shows that the Dual Flow downhole choke assembly can be effectively used to produce commingled hydrocarbons from two separate reservoirs simultaneously through a single tubing string without communicating between the two zones. The tests show that leakage does not occur through the check assembly, and that annual production allocation tests and packer leakage tests can be satisfactorily performed in accordance with NMOCC requirements for commingling of marginal zone wells.

The tests show that excess energy from the lower Dakota zone can be effectively utilized to lift production from the weaker Gallup zone which previously required artificial lift by pumping.

By minimizing test requirements, operating costs over conventional dual completion methods can be greatly reduced and current income from a marginal well such as 28 well No. 1 can be increased.

By use of this tool, future well costs for the Jicarilla Apache West

Lindrith leases can be greatly reduced and further development of the Gallup and

Dakota reservoirs may become economically feasible. Use of the tool in this area

will prolong the economic limit of both zones and result in an increase in ultimate

recovery from both reservoirs thus preventing unnecessary waste, and recovery

of considerable oil reservoir that would afterwise not be

recovered