ASE 6443: CAULKINS OIL COMPANY FOR A WAL COMPLETION AND DOWNHOLE COMMINGLING, IO ARRIBA COUNTY, NEW MEXICO

CASE MO.

643

APPlication,
Transcripts,
Small Exhibits,

ETC.

To Ernle Padilla / Charles Verquer

Memo

10/31/79

Case file

A. R. KENDRICK
Supervisor

Ernle Padilla
Charles Verquer

Case No. 6443

I misread The order for this well when I
sent outtthe poop last week.

Please replace the letter in the file with this.

NEW MEXICO OIL CONSERVATION COMMISSION - AZTEC, NEW MEXICO



STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION AZTEC DISTRICT OFFICE

> 1000 RIO BRAZOS ROAD AZTEC, NEW MEXICO 87410 (505) 334-6178

October 31, 1979

Mr. Charles Verquer Caulkins Oil Company P. 0. Box 780 Farmington, New Mexico 87401

Re: Order R-5926 Downhole Commingling Caulkins 011 Company Breech 8 #220R B-14-26N-7W

Dear Mr. Verquer:

We agree with your request of October 23, 1979, for a production split as follows for the subject well:

Pictured Cliffs Chacra

21% of all gas

32% of all gas

Mesaverde

47% of all gas, 100% of all oil produced

If there are questions, please contact us.

Yours very truly,

Kendrick

District Supervisor

Oll Conservation Division, Santa Fe Gas Company of New Mexico Shell Pipeline Corporation

AR:no

ECEIVED OIL CONSERVATION DIVISION

SANTA FE

CAULKINS OIL CO.

Post Office Box 780 Formington, New Mexico 87401 October 23, 1979

Mr. A. R. Kendrick Oil Conservation Division 1000 Rio Brazos Road: Aztec, New Mexico

Re: Downhole Commingled Production Caulkins Oil Company Breech B 220-R Unit B 14-26N-7W

Dear Mr. Kendrick:

Following are results of tests taken on Pictured Cliffs, Chacra and Mesa Verde Zones.

After all zones were fractured above zones were tested in following manner:

7" Packer was run in hole and set @ 2650'. Pictured Cliffs Zone was swabbed in thru 2" tubing. After well had flowed 6 hours rate of flow was 144 MCFPD. Pictured Cliffs Zone was then shut in for 6 hours. Shut In Pressure 550#. Bridge Plug below Pictured Cliffs removed and packer set above perforation and then Chacra Zone was swabbed in. Rate of flow after 6 hours 214 MCFPD. Shut In Pressure after 6 hours 705#. Bridge Plug below Chacra perforations drilled out then packer set above perforations and Mesa Verde Zone swabbed in. Rate of flow after 6 hours 314 MCFPD. Shut In Pressure after 6 hours 680#. Only Mesa Verde Zone had any show of oil.

From results of above tests we recommend following breakdown for various Zones.

Pictured Cliffs

21% of all Gas.

Chacra

32% of all Gas.

Mesa Verde

47% of all Gas and all Oil produced.

Yours very truly,

Charles Verquer

Supt., Caulkins Oil Company y

OH CONSERVATION DIVISION

SANTA FE

OCT 25 1979 OIL CON. COM.

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ENERGY AND OIL CONS State La Santa 31	OF NEW MEXICO MINERALS DEPARTMENT SERVATION DIVISION and Office Building Fe, New Mexico January 1979	
EXAM	AINER HEARING	14.5
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	and downhole commingling)	
Rio Arriba County,		
) ·	
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<u>A P</u> <u>P</u> <u>E</u>		
APPE	<u>ARANCES</u>	
$\underline{A} \ \underline{P} \ \underline{P} \ \underline{E}$ For the Oil Conservation	<u>ARANCES</u> Lynn Teschendorf, Esq	
APPE	Lynn Teschendorf, Esq Legal Counsel for the	Division
$\underline{A} \ \underline{P} \ \underline{P} \ \underline{E}$ For the Oil Conservation	Lynn Teschendorf, Esq Legal Counsel for the State Land Office Blde	Division g.
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APPE For the Oil Conservation Division:	Lynn Teschendorf, Esq Legal Counsel for the State Land Office Bld Santa Fe, New Mexico	Division g. 87503
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Certified Shorthand Reporters 621 Old Santa Fe Trail - Suite 7 Santa Fe, New Mexico 87501

MR. STAMETS: We will call the next case, 6443.

MS. TESCHENDORF: Case 6443, Application of Caulkins Oil Company for a dual completion and downhole commingling, Rio Arriba County, New Mexico.

MR. KELLAHIN: Tom Kellahin of Santa Fe, New Mexico, appearing on behalf of the applicant. I'd like the record to reflect that Mr. Verquer has previously qualified as an expert witness and that he is still under oath.

MR. STAMETS: The record will so show.

CHARLES VERQUER

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you refer to Exhibit Number One and identify the subject well, Mr. Verquer?

A This is also a map of the Caulkins property.

All the shaded area being the property that's operated by

Caulkins. The well is identified by the red arrow in Section

14, 26 north 7 west, number 220-R. Proposed completion is

a Pictured Cliffs-Chacra-Mesaverde-Dakota. We propose to

commingle three zones -- Pictured Cliffs-Chacra and Mesaverde

and then dual it in the Dakota. Well No. 228, which is two

miles east, was approved in 1978 in this manner.

MR. STAMETS: How is it currently set up?

MR. VERQUER: We are going to drill this well.

This is a new well.

MR. STAMETS: Okay. Very good.

MR. VERQUER: If approved, we will drill it.

BY MR. KELLAHIN:

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Now, this application is very much like the application in Case 6438 with regards to the 224-A Well, except that in this instance you are adding the Pictured Cliffs production?

Right. It is the same information as presented in Case number 6119, Order number 5634 that was approved January 31, '78.

Let's look at Exhibit Number Two and have you identify that.

Exhibit Number Two is just a plat showing the proposed location and all the offset -- direct offset wells.

Let's look at Exhibit Number Three.

Exhibit Number Three is a pressure tabulation for the Pictured Cliffs-Chacra and Mesaverde zones all of the offset wells that were operated by Caulkins and this is the same information that was presented in Case number 6119 in 1978 that reflects the average pressure differences by the year for a fifteen-year period.

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Year dates are not on the Exhibit. What is the first year? 2 I just listed them that way as the first year, 3 Α because it wasn't always the same. In other words, this was 4 for 180 wells. This is the average pressure. 5 For the first year of production for the particular wells? 7 Yes. I overwhelmed him with them last year. 8 Let's look at Exhibit Number Four and have you Q identify it. 10 That's the average monthly production tabula-11 tions for the Pictured Cliffs-Chacra and Mesaverde wells on 12 our lease that we have the complete records on, and the pro-13 posed productions or the production splits the way they are 14 15 split here. Is this the production information from all the 16 wells that Caulkins operates? 17 Yes, in those zones. Yes, sir. 18 All right, sir. The requested allocation for-19 20 mula at the bottom of the Exhibit is based upon that past 21 production tabulation? A Yes. May we changed it before we wrote the 22 23 Order and made it an even nickle and made 30,20 and 50. 24 That's the way Order number 5634 is written and that's the 25 way -- I have it on another Exhibit here.

Q My Exhibit simply indicates different numbers
Would you tell us what your proposed method of allocation i
A Tom, on Exhibit Number Five, it's coming up.
Q All right. Let's look at that.
A Exhibit Number Five is the well records for
the well that was commingled in these three zones in 1978;
drilled and completed and commingled. The initial pressure
the initial potential, when they were connected and then the
production records from July through December, and the pro-
posed production split, same as the Order number 5634, which
is 50% gas to Pictured Cliffs and 20% of the gas to the
Chacra; 30% of the gas and 100% of the oil in the Mesaverde
zone.
Q Do you anticipate that both the Pictured Clift
and the Chacra zones will be dry?
A Yes, sir.
Q Is there any significant pressure differential
between any of the zones to be commingled?
A No. We came up with an initial pressure of
892 for the Pictured Cliffs; 912 for the Chacra; 1074 as an
average pressure for the Mesaverde are the initial pressures
It's less than 200 pound across the for the average pres-
sures.
Q In your opinion, is this sufficiently low

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Santa Fe, New Mexico 87501

enough to avoid damage to any of the formations?

A Yes, unless it's shut in for an extended period of time.

- Q Are the ownership and working interests common with regards to the commingled formations?
 - A They are.

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Q Would you identify Exhibit Number Six?

That's a diagram of my proposed well. inch casings, cemented top to bottom, and with a packer set between the Mesaverde and Dakota perforations. Tubing will be run with seals set in the packer and tubing will be set in the Dakota perforations; Dakota produced to the surface through the 2 3/8 tubing. 2/38 tubing will be run to the Mesaverde perforations for the commingled upper zones. need to add one more thing that we missed on this one. You notice the Well number is 220-R. I'm proposing to plug and abandon the well and drill this well, and I heard some comments earlier. I don't know whether I want to do that now. But the Pictured Cliffs in the 220 Well is down to where it's only producing -- I think the 1978 production, they told me from the Denver office, was less than two million for the year. We had problems with the well. In anticipating drilling another well in that proration unit, we wanted to go ahead and plug and abandon this 220-R -- this 220 well and just replace that zone with this new well that we are completing. It can be done the other way, but it's a double expense that

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from it as I could in that proration unit to drill another
Pictured Cliffs well there.
Q Were Exhibits One through Six prepared by you?
A Yes, they were.
Q In your opinion, Mr. Verquer, will approval of
the application prevent waste and protect correlative rights?
A They will.
MR. KELLAHIN: I move the introduction of
Exhibits One through Six.
MR. STAMETS: They will be admitted.
EXAMINATION
BY THE EXAMINER:
Q Mr. Verquer, do you have objection to the same
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A No, sir.
MR. STAMETS: Any other questions of the witness?
You may be excused. Anything further in this case? Take the
case under advisement.

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(Hearing Concluded.)

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REPORTER'S CERTIFICATE

I, STEFANIE XANTHULL, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

STEPANIE XANTHULL, C.S.R.

I do hereby could that the foregoing is a complete the foregoing in the Exercise of the foregoing is the foregoing in the foregoing is a complete that the foregoing

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23	(Hearing Concluded.)
24	From the second of the control of t

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REPORTER'S CERTIFICATE

I, STEFANIE XANTHULL, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct by me; that the said transcript is a full, true, and correct by me to the hearing, prepared by me to the best of my record of the hearing, prepared by me to the best of the ability, knowledge, and skill, from my notes taken at the time of the hearing.

STEFANIE XANTHULL, C.S.R.

I do hereby certify that the foregoing is a compared to the life of the life o

Oll Conservation Division



STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

JERRY APODACA

NICK FRANKLIN SECRETARY

February 21, 1979

POST OFFICE BOX 2088 BTATE LAND OFFICE BUILDING GANTA FE, NEW MEXICO 87501 (505) 827-2434

Re: Ar. Tom Kellahin Kellahin & Kellahin Attorneys at Law Post Office Box 1769 Santa Fe, New Mexico	CASE NO. 6443 ORDER NO. R-5926 Applicant:
	Caulkins Oil Company
Dear Sir:	
Enclosed herewith are two c Division order recently ent	opies of the above-referenced ered in the subject case.
Yours very truly,	
JOE D. RAMEY Director	
JDR/fd	
Copy of order also sent to:	
	$\mathbf{y}^{*} \leftarrow \mathbf{y}^{*} \leftarrow \mathbf{y}^{*} \in \mathbb{R}^{n}$, $\mathbf{y}^{*} \leftarrow \mathbf{y}^{*} \in \mathbb{R}^{n}$
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STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 6443 Order No. R-5926

APPLICATION OF CAULKINS OIL COMPANY FOR A DUAL COMPLETION AND DOWNHOLE COMMINGLING, RIO ARRIBA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on January 31, 1979, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 20th day of February, 1979, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises.

FINDS:

- (1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Caulkins Oil Company, seeks authority to complete its Breech B Well No. 220-R, located in Unit B of Section 14, Township 26 North, Range 7 West, NMPM, Rio Arriba County, New Mexico, as a dual completion (conventional) to produce gas from the Dakota formation through one string of tubing and to produce commingled Pictured Cliffs, Chacra and Mesaverde gas production through a second string of tubing.
- (3) That from each of the zones proposed to be commingled, the subject well is expected to be capable of low marginal production only.
- (4) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

-2-Case No. 6443 Order No. R-5926

- (5) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.
- (6) That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Aztec district office of the Division of the pressure and productivity encountered upon completion and to further notify said district office any time the subject well is shut-in for 7 consecutive days.
- (7) That in order to allocate the commingled production to each of the commingled zones in the subject well, 50 percent of the commingled gas production should be allocated to the Pictured Cliffs zone, 20 percent of the commingled gas production to the Chacra zone, and 30 percent of the commingled gas production and all of the condensate production to the Mesaverde zone.
- (8) That the Director of the Division should be authorized to rescind the commingling authority granted by this order whenever it appears that waste would be prevented thereby.
- (9) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.
- (10) That approval of the subject application will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Caulkins Oil Company, is hereby authorized to complete its Breech B Well No. 220-R, located in Unit B of Section 14, Township 26 North, Range 7 West, NMPM, Rio Arriba County, New Mexico, as a dual completion (conventional) to produce gas from the Dakota formation through one string of tubing and to produce Pictured Cliffs, Chacra and Mesaverde gas production, hereby authorised to be commingled in the wellbore, through a second string of tubing with separation of the Dakota zone from the other zones achieved by means of a packer set at approximately 5100 feet.

PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Division Rules and Regulations insofar as said rule is not inconsistent with this order;

-3-Case No. 6443 Order No. R-5926

PROVIDED FURTHER, that the applicant shall take packer leakage tests upon completion and annually thereafter during the Annual Deliverability Test Period for gas wells in Northwest New Mexico.

- (2) That 50 percent of the commingled gas production shall be allocated to the Pictured Cliffs zone, 20 percent of the commingled gas production shall be allocated to the Chacra zone, and 30 percent of the commingled gas production and all of the condensate production shall be allocated to the Mesaverde zone.
- (3) That the operator of the subject well shall immediately notify the Division's Aztec district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.
- (4) That the applicant shall immediately advise the Division's Aztec district office of the pressure and potential of the commingled zones.
- (5) That the Director of the Division may rescind the authority to commingle granted by this order if it appears that waste will be prevented thereby.
- (6) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

> STATE OF NEW MEXICO QIL CONSERVATION DIVISION

JOE D. RAMEY, Director

SEAL

CAULKINS OIL COMPANY

Breech B 220 R

Unit B Sec. 14 26N 7W

Rio Arriba County, New Mexico

Case No.

Proposal

Dual Complete Dakota and Comminged Pictured Cliffs, Chacra and Mesa Verde.

Ownership and all working interests Common for this well.

Exhibit # 1

Section map showing all Caulkins Wells, proposed well and all offset wells.

Exhibit # 2

Plat showing all direct offset wells.

Exhibit # 3

Tabulation of yearly average pressures for Pictured Cliff's, Chacra and Mesa Verde Zones. (Note: Same information as presented Case No. 6119, approved order No. 5634, January 31, 1978.)

Exhibit # 4

Tabulation of yearly averge Production for Pictured Cliffs, Chacra anddMesa Verde Zones. (Note: Same information as presented Case No. 6119, approved order No. 5634, January 31, 1978.)

Exhibit # 5

Production Records for Well No. 228.

Exhibit # 6

Diagram showing proposed Commingling and Dual Completion.

GAULKINS OIL COMPANY

3reech B 220 k

Unit B Sec. 14 26N 7W

Rio Arriba County, New Mexico

Case No. 6443

Proposal

Dual Complete Dakota and Comminged Pictured Cliffs, Chacra and Mesa Verde.

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Exhibit # 4

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Exhibit # 5

Production Records for Well No. 228.

Exhibit # 6

Diagram showing proposed Commingling and Dual Completion.

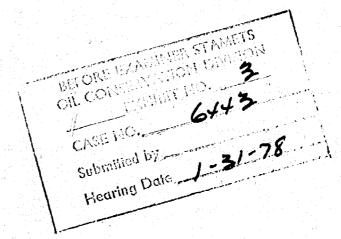
CAULKINS OIL COMPANY Breech B 220R Unit B Section 14 26N 7W Rio Arriba County, New Mexico Bolin El Paso El Paso PC C ... PC 0+ pc Q 93 Depdo Caulkins O220 283 Adobe 00 ZE 307 Arc () 330 Caulkins Caulkins PCC NOT 10 X 10 TO IN INCH + 714 X 10 INCHES Ø 2 PC C 34.8 El Paso Caulkins рес Ф **58**2 Pictured Cliffs - Chacra - Mesa Verde -Dakota Pictured Cliffs Chacra Pictured Cliffs - Chacra - B FO Mesa Verde pcmd D Pe c 6443 pcc nv-

CAULKINS OIL COMPANY

Case No.

Yearly Average Pressure Tabulation

Pictured Cliffs	Chacra	Mesa Verde
892	912	1074
645	646 494	861 814
568 542	433 382	782
540	382 379	749 729
534 512	351	712
512 497	416 395	676 619
485 474	395	636
462	379 371/	622 601
442 421	355	601 581.
397		561 548
379 358		533
347		479 498
338 324		458
. 318		448 430
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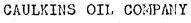


AVERAGE PRODUCTION TABULATIONS Monthly

		•	1 Pro 12		C	ase No	•
Pictured Cliffs	en e	The second second				Breakdo	own
	Chacra	Mesa V	erde	Total	PC	Ch	MV
9909	5588	3845		19642	50	20	00
104,64	4358	3845	5 5	18667		-	20
9832	3930	3845		17607	56	23	21
7557	3304	3845			56	23	22
6273	2980	3845		14706	51	22	27
6829	2602	3845	art, ita	13098	48	23	29
7164	2465	3845		13276	51	20	29
6973	2537			13474	53	18	29
6576	2396	3845		13355	53	19	29
6044	2153	3845		12317	51	19	30
5811	1921	3845		12042	50	18	32
4553	2143	3845		11577	50	17	33
5147	1991	3845		10541	43	20	37
5289		3225		10363	50	19	31
4822	2480	3225		10994	48	23	29
4808	2281	3225		10328	47	22	3 1
4838	2040	3225		10073	48	20	32
4015	2116	3225		10179	47	21	32
2942	1782	3225	r.	9022	45	20	35
3545	1539	3225	1 X 2 1 1 1	7706	38	20	42
4845	1647	3225		8417	42	20	38
	2043	3225		10113	48	20	32
4531	2174	3225		9930	46	22	32
4189	1765	3225		9179	46	<u> 19</u>	35
4354	1868	3225		9447	46	20	
4035	1828	2857		8720	46	21	34
4036	1949	2857		8842	46	22	33
3706	1732	2857		8295	45		32
3792	1849	2857		8498		21	34
3901	1893	2857		8651	45	22	33
3128	1714	2857		7699	45	22	33
3955	1720	2857		8532	41 46	22 20	37 34
				Avg.	48	21	31
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				R5634	00	20	30

Recommend production split all oil and 31% of gas to Mesa Verde Zone, 21% of gas to Chacra zone and 48% of gas to Pictured Cliffs zone.

Sulli 1-31-78



Breech B 220 R

Unit B Sec. 14 26N 7W

Rio Arriba County, lew Mexico

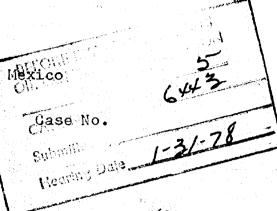


Exhibit # 5

Production records for Well No. 228 CommingTed Order No. 5634, located $1\frac{1}{4}$ miles east of this well.

Dakota Initial Potential	7-3-78	1,683 MCFPD.
Dakota Initial Shut in Press	7-3-78	1975 #
Commingled Initial Potential	6-26-78	3,132 MCFPD.
Commingled Initial Shut in Pres	s 6-26-78	794 #

Dakota Zone connected to Line 7-17-78.

Commingled Zones connected to Line 8-3-78.

July 1978	Dakcta Z o nes 3421	Commingled Zones
August	7403	3925
September	8509	4041
October	8909	2676
November	7138	4062
December	6682	4169
Cum. Total	42,062	18,873
Deliverability Tests		
Pressure	1635	685
Rate of Flow	202	245
Deliverability	> 168	.135

Propose production split same as Order No. 5634 50% Gas to Pictured Cliffs, 20% Gas to Chacra, 30% Gas and 100% of Oil to Mesa Verde Zone.

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CAULKINS OIL COMPANY

Case No. 644/3

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Yearly Average Pressure Tabulation

Pictured Cliffs	Chacra	Mesa Verde
892	912	1074
645	646	861
568	494	814
542	433	782
540	382	749
534	379	729
512	351	712
497 485	416	712 676
485	3 95	619
474 462	395	636
462	379	622
442 421 397	371	601
421	355	581
397		561
- 379		548
379 358		533
347		479
338		498
324		458
318		448
303		430

AVERAGE	PRODUCTION	TABULATIONS			
	Monthly				

	AVERAGE PRO	AVERAGE PRODUCTION TABLEATIONS Monthly		Case No. Breakdown		
23.4 613.666	Chacra	Mesa Verde	Total	PC	Ch	MV
Pictured Cliffs		201 6	19642	50	30	20
9909	5588		18667	56	23	21
10464	4358	3845	17607	56	23	22
9832	3930	384.5	14706	51	22	27
7557	3304	3845	13098	48	23	29
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6273	2602	3845	13474	53	18	29
6829	2465	3845	124 (4	53	19	29
7164	2537	3845	13355	51	- <u>1</u> 9	30
6973	2396	3845	12817	50	18	32
6576	2153	3845	120' 2	50 50	17	33
6044	1921	3845	115/7		20	33 37
5811	2143	3845	10541	43	19	31
4553		3225	10363	50	23	29
5147	1991	3225	1.0994	48		31
5289	2480	3225	10328	47	22	32.
4822	2281	3225	10073	48	20	
4808	2040	3225	10179	47	21 20	32
4838	2116	3225	9022	45		35
4015	1782	3225	7706	38	20	42
2942	1539		8417	42	20	38
354.5	1647	3225	10113	48	20	32
4845	2043	3225	9930	46	22	32
1 531	2174	3225	9179	46	19	35
4531	1765	3225	9447	46	20	34
4189	1868	3225	8720	46	21	33
4354	1828	2857	8842	46	22	32
4035	1949	2857	8295	45	21	34
4036	1732	2857		45	22	33
3706	1849	2857	84.98	45	22	. 33
3792	1893	2857	8651	// 41	22	37
3901	1714	2857	7699	46	20	34
3128	1720	2857	8532	ųψ	~~	
3955	1/20		Avg.	48	21	31

Recommend production split all oil and 31% of gas to Mesa Verde Zone, 21% of gas to Chacra zone and 48% of gas to Pictured Cliffs zone.

CAULKINS OIL COMPANY Breech B 220 R Unit B Sec. 14 26N 7W Rio Arriba County, New Mexico

Case No. 0443

Exhibit # 5

Production records for Well No. 228 Commingled Order No. 5634, located 11 miles east of this well.

Dakota Initial Potential	7-3-78	1,683 MCFPD.
Dakota Initial Shut in Press	7-3-78	1975 #
Commingled Initial Potential	6-26-78	3,132 MCFPD.
Commingled Initial Shut in Press	s 6-26-78	794 #

Dakota Zone connected to Line 7-17-78.

Commingled Zones connected to Line 8-3-78.

July 1978	Dakota Zones 3421	Commingled Zones	
August	7403		3925
September	8509		4041
October	8909		2676
November	7138		4062
December	6682		4169
Cum. Total.	42,062		18,873

Deliverability Tests

Pressure	1635		685
Rate of Flow	202		245
Deliverability	168	12 42 A	135

Propose production split same as Order No 5634 50% Gas to Pictured Cliffs, 20% Gas to Chacra, 30% Gas and 100% of Oil to Mesa Verde Zone.

Docket No. 4-79

Dockets Nos. 5-79 and 6-79 are tentatively set for hearing on February 14 and 28, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 31, 1979

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM, STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

- CASE 6422: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Helton Engineering & Geological Services, Inc., Travelers Indemnity Company, and all other interested parties to appear and show cause why the Brent Well No. 1 located in Unit M of Section 29 and the Brent Well No. 3 located in Unit G of Section 19, both in Township 13 North, Range 6 East, Sandoval County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.
- CASE 6415: (Continued from January 17, 1979, Examiner Hearing)

Application of Yates Petroleum Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp thru Devonian formations underlying the W/2 of Section 20, Township 14 South, Range 36 host, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6419: (Continued from January 17, 1979, Examiner Hearing)

Application of Yates Petroleum Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Lanning JC Well No. 1 located in Unit B of Section 7, Township 18 South, Range 26 East, Eagle Creek Field, Eddy County, New Mexico, to produce gas from the Strawn formation through the casing-tubing annulus and from the Morrow formation through tubing.

- CASE 6423: Application of Yates Petroleum Corporation for an unorthodox well location, Eddy County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Jackson AT

 Well No. 9 located 660 feet from the South and West lines of Section 13, Township 17 South, Range 25

 East, Eddy County, New Mexico, to test the Wolfcamp, Pennsylvanian, and Mississippian formations,
 the S/2 of said Section 13 to be dedicated to the well.
- CASE 6424: Application of Yates Petroleum Corporation for an unorthodox well location, Eddy County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Superior Fed. KJ Well No. 1 located 990 feet from the North and West lines of Section 7, Township 20 South, Range 29 East, Eddy County, New Mexico, to test the Wolfcamp and Pennsylvanian formations, the N/2 of said Section 7 to be dedicated to the well.
- CASE 6425: Application of T. B. Knox Estate for exception to Order No. R-111-A, Eddy County, New Mexico.

 Applicant, in the above-styled cause, seeks an exception to the casing/cementing rules for the Oil-Potash Area as promulgated by Order No. R-111-A to permit its Lucia Brookes Well No. 2 located in Unit K of Section 14, Township 18 South, Range 30 East, Eddy County, New Mexico, to be completed in the following manner: set surface casing and circulate cement; eliminate salt protection string; and do not circulate cement on production casing.
- CASE 6426:

 Application of C. W. Trainer for an unorthodox gas well location, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be located 660 feet from the North and West lines of Section 24, Township 20 South, Range 32 East, South Salt Lake-Norrow Pool, Lea County, New Mexico, the N/2 of said Section 24 to be dedicated to the well.
- CASE 6427: Application of Caribou Four Corners, Inc., for an unorthodox well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Caribou/Kirtland Well No. 1 to be located 1214 feet from the North line and 650 feet from the East line of Section 13, Township 29 North, Range 15 West, Cha Cha-Gallup Pool, San Juan County, New Mexico, the E/2 NE/4 to be dedicated to the well.
- CASE 6428: Application of Mobil Oil Corporation for the amendment of Order No. R-5801, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks the amendment of Order No. R-5801 to delete the requirements for lined tubing in injection wells in the North Vacuum Abo East Pressure Maintenance Project, Lea County, New Mexico.

Page 2 of 3 Examiner Hearing - Wednesday - January 31, 1979

Docket No. 4-79

- CASE 6429: Application of Zis Energy, Inc., for approval of infill drilling, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks a finding that the drilling of its Elliott State Well

 No. 2 to be located in Unit B of Section 34, Township 20 South, Range 36 East, Eumont Gas Pool,

 Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the

 proration unit which cannot be so drained by the existing well, and further seeks approval of a

 waiver of existing well-spacing requirements.
- CASE 6430: Application of Phoenix Resources Company for a unit agreement, Chaves County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for its Buckhorn Canyon Unit Area comprising 23,009 acres, more or less, of Federal and state lands in Township 19 South, Ranges 19 and 20 East, Chaves County, New Mexico.
- CASE 6431: Application of NNG 0il Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the N/2 of Section 35, Township 23 South, Range 28 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- Application of John Yuronka for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Langlie Mattix Pool underlying the NE/4 NW/4 and the SE/4 NW/4 of Section 29, Township 24 South, Range 37 East, Lea County, New Mexico, to form two 40-acre units, each to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the wells and a charge for risk involved in drilling said wells.
- CASE 6433: Application of Cities Service Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formations underlying the S/2 of Section 8, Township 23 South, Range 28 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6434: Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks a finding that the drilling of its State "O" Well No.

 5 to be located in Unit H of Section 30, Township 19 South, Range 37 East, Eumont Gas Pool, Lea

 County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration
 unit which cannot be so drained by the existing well, and further seeks approval of a waiver of
 existing well-spacing requirements.
- Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks a finding that the drilling of its W. A. Weir "B" Well

 No. 3 located in Unit B of Section 26, Township 19 South, Range 36 East, Eumont Gas Pool, Lea County,

 New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit

 which cannot be so drained by the existing well, and further seeks approval of a waiver of existing

 well-spacing requirements.
- CASE 6436: Application of Amerada dess Corporation for approval of infill drilling, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks a finding that the drilling of its State "U" Gas Com

 Well No. 2 to be located in Unit C of Section 32, Township 19 South, Range 37 East, Eumont Gas Pool,

 Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the

 proration unit which cannot be so drained by the existing well, and further seeks approval of a

 waiver of existing well-spacing requirements.
- CASE 6437: Application of Curtis Little for approval of infill drilling and a non-standard proration unit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of a well to be located 1085 feet from the South line and 285 feet from the West line of Section 12, Township 28 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well. Applicant further seeks rescission of Order No. R-4556 and approval of a 344.36-acre non-standard gas proration unit comprising all of Section 11, and Lot 4 and the SW/4 SW/4 of Section 12 for said well.
- CASE 6438:

 Application of Caulkins Oil Company for dual completions and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Breech Well No. 812 located in Unit N of Section 18, Township 26 North, Range 6 West, and its Breech Well No. 224-A located in Unit B of Section 13, Township 26 North, Range 7 West, Rio Arriba County, New Mexico, to produce gas from the Dakota formation through a separate string of tubing and to commingle Chacra and Mesaverde production in the wellbores of said wells.

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- CASE 6439: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the downhole commingling of Mesaverde and Dakota production in the wellbore of its Breech A Well No. 229 located in Unit D of Section 17, Township 26 North, Range 6 West, Rio Arriba County, New Mexico.
- CASE 6440: Application of Caulkins Oil Company for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Breech F Well No. 8 located in Unit A of Section 34, Township 27 North, Range 6 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Mesaverde and Dakota production in the wellbore of said well.
- CASE 6441: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs and Mesaverde production in the wellbore of its Breech F Well No. 12 located in Unit A of Section 35, Township 27 North, Range 6 West, Rio Arriba County, New Mexico.
- CASE 6442: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs, Chacra and Mesaverde production in the wellbore of its Breech E Well No. 109 located in Unit M of Section 3, Township 26 North, Range 6 West, Rio Arriba County, New Mexico.
- CASE 6443: Application of Caulkins Oil Company for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Breech B Well No. 220-R located in Unit B of Section 14, Township 26 North, Range 7 West, to produce gas from the Dakota formation through a separate string of tubing and to commingle Pictured CLiffs, Chacra and Mesaverde production in the wellbore of said well.
- CASE 6444: Application of Caulkius Oil Company for downhole commingling, Rio Arriba County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs, Mesaverde, Chacra and Greenhorn production in the wellbare of its Breech Well No. 224 located in Unit A of Section 13, Township 26 North, Range 7 West, Rio Arriba County, New Mexico.

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BEFORE THE

NEW MEXICO ENERGY AND MINERALS DEPARTMENT :

IN THE MATTER OF THE APPLICATION OF CAULKINS OIL COMPANY FOR APPROVAL OF A DUAL COMPLETION AND DOWNHOLE COMMINGLING, RIO ARRIBA COUNTY, NEW MEXICO

Case 6443

APPLICATION

Comes now Caulkins Oil Company and applies to the Oil Conservation Division, New Mexico Energy and Minerals

Department, for approval of a dual completion, and for down hole commingling in its Well No. 220-R, located in Unit 8, A, Section 14, Township 26 North, Range 7 West, N.M.P.M., Rio Arriba County, New Mexico, and in support thereof would show the Division:

- 1. Applicant proposes to commingle production from the Pictured Cliffs, Chacra, and the Mesaverde formations in the wellbore, and to dually complete the well to produce the commingled production with production from the Dakota formation, as a conventional dual completion.
- 2. Approval of this application is in the interest of conservation and the prevention of waste, and will result in the production of gas and liquid hydrocarbons that would not otherwise be produced.

WHEREFORE applicant prays that this application be set for hearing at the last examiner hearing in January, 1979, and that after notice and hearing as required by law, the Division enter its order approving the commingling and dual completion as requested.

Respectfully submitted, CAULKINS OIL COMPANY

By Kallahin & Fox
P. D. Box 1769
Santa Fe, New Mexico 87501

ATTORNEYS FOR APPLICANT

BEFORE THE

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NEW MEXICO ENERGY AND MINERALS DEPARTMENT - \$ 1915

OIL CONSERVATION DIVISION

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IN THE MATTER OF THE APPLICATION OF CAULKINS OIL COMPANY FOR APPROVAL OF A DUAL COMPLETION AND DOWNHOLE COMMINGLING, RIO ARRIBA COUNTY, NEW MEXICO

Case 6443

APPLICATION

Comes now Caulkins Oil Company and applies to the Oil Conservation Division, New Mexico Energy and Minerals Department, for approval of a dual completion, and for downhole commingling in its Well No. 220-R, located in Unit B, Section 14, Township 26 North, Range 7 West, N.M.P.M., Rio Arriba County, New Mexico, and in support thereof would show the Division:

- 1. Applicant proposes to commingle production from the Pictured Cliffs, Chacra, and the Mesaverde formations in the wellbore, and to dually complete the well to produce the commingled production with production from the Dakota formation, as a conventional dual completion.
- 2. Approval of this application is in the interest of conservation and the prevention of waste, and will result in the production of gas and liquid hydrocarbons that would not otherwise be produced.

WHEREFORE applicant prays that this application be set for hearing at the last examiner hearing in January, 1979, and that after notice and hearing as required by law, the Division enter its order approving the commingling and dual completion as requested.

Respectfully submitted, CAULKINS OIL COMPANY

Ry Kellshin & Fox
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Santa Fe, New Mexico 87501

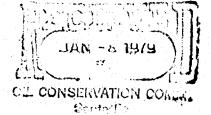
ATTORNEYS FOR APPLICANT

BEFORE THE

NEW MEXICO ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF CAULKINS OIL COMPANY FOR APPROVAL OF A DUAL COMPLETION AND DOWNHOLE COMMINGLING, RIO ARRIBA COUNTY, NEW MEXICO



APPLICATION

Case 6443

Comes now Caulkins Oil Company and applies to the Oil
Conservation Division, New Mexico Energy and Minerals
Department, for approval of a dual completion, and for downhole commingling in its Well No. 220-R, located in Unit B,
Section 14, Township 26 North, Range 7 West, N.M.P.M., Rio
Arriba County, New Mexico, and in support thereof would
show the Division:

- 1. Applicant proposes to commingle production from the Pictured Cliffs, Chacra, and the Mesaverde formations in the wellbore, and to dually complete the well to produce the commingled production with production from the Dakota formation, as a conventional dual completion.
- 2. Approval of this application is in the interest of conservation and the prevention of waste, and will result in the production of gas and liquid hydrocarbons that would not otherwise be produced.

WHEREFORE applicant prays that this application be set for hearing at the last examiner hearing in January, 1979, and that after notice and hearing as required by law, the Division enter its order approving the commingling and dual completion as requested.

> Respectfully submitted, CAULKINS OIL COMPANY

By Kettahin & Fox
P. O. Box 1769
Santa Fe, New Mexico 87501

ATTORNEYS FOR APPLICANT

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

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CASE NO. 6443 Order No. R- 5926 APPLICATION OF CAULKINS CIL COMPANY COMPLETION, AND DOWNHOLE COMMINGLING, RIO ARRIBA FOR A DUAL COUNTY, NEW MEXICO. ORDER OF THE DIVISION BY THE DIVISION: This cause came on for hearing at 9 o'clock a.m. on January 31 , at Santa Fe, New Mexico, before Examiner Richard L. Stamets NOW, on this day of February , 19 79 , the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises, FINDS: (1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof. (2) That the applicant, Caulkins Oil Company seeks authority to complete its Breech B Well No. 220-R rell No. _____, located in Unit B of Section 14 , Town-_, NMPM, Rio Arriba ship 26 North 7 West __, Range _ County, New Mexico, as a dual completion (conventional) -{combination} -- (tubingless)--- oilproduce gas from the Dakota formation through a separate string produce commingled of tubing and to Acommingle Pictured Cliffs, Chacra and Hore of said well Throng L Mesaverde Aproduction Aim

(3) (4) That from the zoner proposed tabe comming he some, the
subject well is papable of low marginal production only.
(4) (5) That from the zone, the
subject well is capable of low marginal production only.
(#) (6) That the proposed commingling may result in the recovery
of additional hydrocarbons from each of the subject pools, thereby
preventing waste, and will not violate correlative rights.
(4) +77 That the reservoir characteristics of each of the
subject zones are such that underground waste would not be caused
by the proposed commingling provided that the well is not shut-in
for an extended period.
(8) That to afford the Division the opportunity to assess
the potential for waste and to expeditiously order appropriate
remedial action, the operator should notify the Mater of the pressure and production encountered upon completion and district office of the Division any time the subject well is
shut-in for 7 consecutive days.
(3)(9) That in order to allocate the commingled production
to each of the commingled zones in the subject well, 50
percent of the commingled 905 production should be
allocated to the Pictured Cliff's zone, and 20
percent of the commingled gas production to the
Chaira zone, and 30 percent of the
Chacra zone, and 30 percent of the comminghed gos production and all of the condensate production (ALTERNATE) to the Mesaverde zone, (9) That in order to allocate the commingled production to
(9) That in order to allocate the commingled production to
each of the commingled zones in the wells, applicant should
consult with the supervisor of the
of the Division and determine an allocation formula for each of
the production zones:
That the Director of the Division should
be authorized to rescind the commingling
authority of granted by this order whenever it appears that works would be prevented
appears that waste would be prevented
Then by

- (1) (2) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices. (1)(4) That approval of the subject application will prevent
- waste and protect correlative rights.

IT IS THEREFORE ORDERED:

	mbat the appli	cant, <u>Caulkins</u>	Oil Company	
, , , ,		niete its Bi	reecii b	
is hereby	authorized to	complete its Bi	of Section 1	1
wall No.	220-R locate	ed in onro	NIMIDM . R	io Arriba
mownship	26 North	Range	completion	conventional)
County, 1	New Mexico, as		⇔ t	tubingless)

to produce gas from the Dakota formation through a separate string of tubing and to commingle Pictured Cliffs, Chacra and Mesaverde

Got a zone achieved by mea = 3 of a packer out & topportunately PROVIDED HOWEVER, that the applicant shall complete, operate, with sparation of the I

and produce said well in accordance with the provisions of Rule 112-A of the Division Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take tests upon completion and packer leakuge annually thereafter during the Annual Delivere bility Test Period for the gas wells in Northwest New Mexico. (2) That Junisdiction of this cause is retained for the

entry of such further orders as the Division may deem necessary. DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

production home

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	IT IS THEREFORE ORDERED:
	(1) That the applicant,, is
	hereby authorized to commingleand
	production within the wellbore of
	the of
	Section, Township, Range,
	NMPM,County, New Mexico.
	(2) That the applicant shall consult with the Supervisor
	of the district office of the Division and
	determine an allocation formula for the allocation of production
	to each zone in each of the subject wells.
	(ALTERNATE)
	(2) That 50 percent of the commingled 263
	production shall be allocated to the Richard Chiffs
	zone, and 20 percent of the commingled ges
	production shall be allocated to the Chacra
	zone, and 30 percent of the commingled gas production and allof the condensate production shall be allocated to the
	Mesaverde sone.
	(3) That the operator of the subject well shall immediately
	notify the Division's Parec district office any time the
	well has been shut-in for 7 consecutive days and shall concurrent
L	present, to the Division, a plan for remedial action.
	(6) (4) That jurisdiction of this cause is retained for the
	entry of such further orders as the Division may deem necessary.
	DONE at Santa Fe, New Mexico, on the day and year hereinabove
) }_	designated.
	(4) That the opplicant shell immediately advise
15	The Division's Aztec district office of
	pressure and potential encountered in the
	commingled zones,
	comming to
	(5) That the Director of the Disson
•	(5) That the Director of the Division 17704 escind the authority to commingle granted by his order if it appears that waste will be prevented thereby.
A	his order it it appears much
E	e prevente e menoy.

THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.