CASE 7137: CAULKINS OIL COMPANY FOR DOWNHOLE COMMINGLING, RIO ARRIBA COUNTY, NEW MEXICO

CASE NO.

7137

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

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

February 13, 1981

Re: CASE NO. 7137
ORDER NO. R-6588

Mr. Thomas Kellahin
Kellahin & Kellahin
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Applicant:

Caulkins Oil Company

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD ____x____
Artesia OCD ____x____
Aztec OCD ____x____

Other _____

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
28 January 1981

EXAMINER HEARING

IN THE MATTER OF:

Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico.

CASE 7137

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
500 Don Gaspar
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. NUTTER: We'll call next Case Number 7137.

MR. PADILLA: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico.

MR. KELLAHIN: I'm Tom Kellahin of Santa Fe, New Mexico, appearing on behalf of the applicant, and I have one witness.

(Witness sworn.)

CHARLES VERQUER

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Verquer, would you please state your name and occupation?

A. My name is Charles Verquer. I'm Superintendent for Caulkins Oil Company in northwest New Mexico.

Q. Mr. Verquer, have you made a study of the facts surrounding this particular application by Caulkins Oil Company?

A. I have.

Q. And have you previously testified before the Oil Conservation Division?

A. I have.

Q. In what capacity?

A. In the same as under this commingling, and so forth, as Superintendent for Caulkins Oil Company.

Q. You previously testified for Caulkins Oil Company to obtain downhole commingling of the Chacra-Blanco Mesaverde production?

A. I have.

Q. All right, sir.

MR. KELLAHIN: We tender Mr. Verquer as an expert witness.

MR. NUTTER: Mr. Verquer is qualified.

Q. Mr. Verquer, would you turn to what we've marked as Applicant Exhibit Number One and identify that for us?

A. This is a map of the -- in northwest New Mexico in 26, 6, basically. There is some in 26, 7, and some in 5 West. It's 5, 6, and 7 West, 26 North, and 2-1/2 sections in 27 North.

Caulkins Oil Company's property is the operated property on this map, is the shaded area. That is

the area that we hold leases on and operate.

Q. The purpose of this application is to set forth some type of administrative procedure for the down-hole commingling of Chacra-Mesaverde wells prior to the drilling of those wells?

A. That's correct.

Q. All right. Would you identify for us what's indicated by the red circles?

A. The red circles are wells that are now commingled in the Chacra-Mesaverde in the wellbore.

Q. And what is indicated by the red arrows?

A. The red arrows are wells that are com-mingled in the Chacra-Mesaverde, along with another zone. Three of them are commingled Pictured Cliffs-Mesaverde, and one is a Pictured Cliffs-Chacra-Mesaverde and Greenhorn com-mingled, the one in Section 13, 26 North, 7 West.

Q. All right, sir. Let's turn to Exhibit Number Two and have you identify that, if you please, sir. I believe there are two pages to it and the first page --

A. Yeah. Exhibit Number Two is the list of the wells that are commingled as identified with the red circle, their location, the order number authorizing the commingling, and the production split as set up by Commission order, Division order, or by tests and then conferring with

the Aztec office.

Q. All right, sir, and what is Exhibit Three, then?

A. Exhibit Three is the locations of the wells, their R numbers, or order numbers, and the production split for the four wells that are commingled with other zones.

Q. All right, the Exhibit Number Three, then, are the wells reflected by the red arrows?

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A. Exhibit Number Four is a list of the Chacra wells and Mesaverde wells that are operated by Caulkins Oil Company that have -- that we were -- have taken initial shut-in pressures on before they were commingled.

Now, as you notice, the Chacra zone well list is much longer than the Mesaverde wells, but these -- some of these wells that are in the Chacra zone were commingled later on with the Pictured Cliffs, but the pressures reflected are the initial Chacra pressures.

Q. Okay, what do you conclude by comparison of the Chacra and Mesaverde pressures, Mr. Verquer?

A. The -- from the average pressures as taken from the initial pressures, the average Chacra pressure

is 977 pounds. The average Mesaverde shut-in pressure is 1024 pounds, initial shut-in pressure.

Q. In your opinion, Mr. Verquer, based upon the study of the pressures involved in the other wells that involve the Chacra and Mesaverde formations, is there any risk of cross flows or loss of gas from one zone into another?

A. Not unless they are shut-in for an extended length of time. In this day of the market such as it is, they are on except for the normal shut-in pressure for deliverability pressures, and thus and so forth, so there shouldn't be any cross flow.

Q. Do you have an opinion as to whether or not it's reasonable and prudent to complete the Mesaverde and Chacra zones as commingled wells?

A. First off, you can't drill a straight-up Chacra well or a straight-up Mesaverde well in our area because of the marginal -- being such marginal flow wells in the normal situation that we -- the economics just don't allow it. So in our program, what we're -- what we're doing essentially is drilling a well to the Dakota on the infill program and then complete these two zones above, which lets us recover gas that we wouldn't normally even try to produce or even drill for.

Q. Is there any advantage to either zone of

being commingled with the other so far as increasing ultimate production?

A. It has helped our production by commingling. I didn't bring an exhibit to show it, but it has leveled our production out to where using the downhole energy of both zones you're able to keep the well clean and therefor the well stays on better.

Q. You made a reference to liquids produced by either one of these formations. Is there a problem with water or fluids produced in these zones?

A. Very little -- I'm estimating that they only make a barrel of water a month, so that it's very little water, but a barrel of water in 1-1/4 tubing will fill a lot of tubing and kill a 400 pound well pretty quick.

Q. Have you encountered what you would characterize as a substantial problem with regards to the accumulation of water in either of these wells?

A. Negative. They've been operating real good.

Q. All right, sir. I'm talking about the wells that have been commingled.

A. They're operating just right. They're doing much better than they did before they were commingled, or the ones that I tried to produce separately previously.

Q. Let me ask you to identify Exhibit Number Five, Mr. Verquer. What is that?

A. Exhibit Number Five is the monthly production for the Chacra wells produced by Caulkins Oil Company from September, '78, through December, 1980. It's just our monthly production reports that we make up as we start our C-115's. This is the same figure as represented on the C-115, in other words, for the monthly production for the wells.

Q. What kind of production are you getting out of the Mesaverde formation? Is that a dry gas or do you produce liquids with the Mesaverde?

A. The Mesaverde wells that we have will average three barrels a month of a little paraffin base condensate. That's the average. Some will make as high as a barrel a day and some of them will only make a barrel a month, so -- but over the wells we have a three barrel a month average, so it's just enough to create problems if you didn't have a little separator on it and a tank to catch it. That's the amount of production. It's not -- it's just very marginal but you do have to --

Q. What kind of production do you get out of the Chacra?

A. The Chacra is a dry gas. If there's any

fluid with it at all, it's very small amount of water.

Q. Would you identify Exhibit Number Six for us, Mr. Verquer?

A. It's a monthly production record from September, '79, through December, 1980, for all Mesaverde wells that are -- that we are now producing. As you see from the start, there are just a few on the first page; on the last one we're getting a few more Mesaverde wells. Every year we add a few.

Q. Okay.

A. And on the last page you'll note that some of them only have one month's production. Some of those wells I identified with the red circle were only on for one month. They were drilled and completed in 1980.

Q. Mr. Verquer, I'd like to show you a copy of Commission Order R-6564, which was entered January of '81, with regards to setting up an administrative procedure for the downhole commingling of Chacra and Pictured Cliffs production. If you'll look at a copy of that for a moment.

MR. KELLAHIN: And I've handed you a copy of that same order, Mr. Nutter.

Q. Now, that particular order sets up an administrative procedure for obtaining approval of downhole commingling for the -- I believe it was the Chacra and Pic-

tured Cliffs. Have you had an opportunity to look at that order, Mr. Verquer?

A. I have, yes.

Q. Would you have any objection or comment if the Commission should enter a similar order for the commingling of the Mesaverde-Chacra formations for this area?

A. That would be agreeable to our company for this --

Q. All right.

A. -- same procedure.

Q. That order provides that the zones be tested by some type of bottom hole pressure test prior to commingling. Is that any kind of difficulty for you?

A. No, sir. We were going to recommend -- it was my intention to recommend that each zone would be tested separately before they were commingled on completion of the well, so we would have pressure and flow rates for each well, and then confer with the Aztec office for a split on each well.

Q. All right, sir.

Do you have any other comments or observations with regards to an administrative procedure to be developed for this area?

A. No, sir.

Q. Were Exhibits One through Six prepared by you directly or compiled under your direction and supervision?

A. They were completed by me.

Q. And in your opinion, Mr. Verquer, will approval of this application be in the best interests of conservation, the prevention of waste, and the protection of correlative rights?

A. It will.

Q. All right.

MR. KELLAHIN: That concludes our examination of Mr. Verquer. We move the introduction of Exhibits One through Six.

MR. NUTTER: Exhibits One through Six will be admitted.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Verquer, this administrative procedure which was authorized for the commingling of Chacra and Pictured Cliffs production in certain areas of Rio Arriba County, requires that the first condition under Rule 1 would be that wells to qualify for downhole commingling administratively, it would be necessary that the two zones would not

otherwise be economically producable. These are very vague terms. Do you have any idea how we could translate that into Mcf production?

A. I believe --

Q. The wells that you're talking about here, Chacra and Mesaverde?

A. In my opinion a well that makes any water at all that makes less than 70 Mcf per day is -- is going to create some problems keeping it on the line. Therefor a normal Chacra well will come down to where its average Mcf is 30 Mcf in our area, and in fact that's pretty well true of 95 percent of the Chacra wells in the San Juan Basin.

And the Mesaverde in our area is very tight and it's the same thing. I would use a 70 Mcf, my personal opinion would be 70 Mcf, that they make less than that.

Q. That would be from either zone or from both zones combined?

A. From either zone.

Q. From either zone.

A. Yes, sir.

Q. So you'd have a maximum of maybe 140 Mcf.

A. Yes, sir.

Q. Now I notice that on your average production on Exhibit Six for the Mesaverde, this figures out to about 2614 per well. That would be per month, wouldn't it?

A. Yes, sir, that's per month.

Q. Uh-huh.

A. So that's 80 --

Q. That's 70 or 80 some --

A. Yes.

Q. Do you have an average figure on that?

A. Yes, I do.

Q. 1783 per month is average production. It would be about 60.

A. If you notice down the line, some of the wells that were figured in that average were only on for one month. I'll use as a reference 346, it had 4560. That was for two months, excuse me.

Q. Yeah, that's first month production --

A. Yes, the first month they look awfully good but you have that head that you pull off right there close and next month it's down drastically, normal.

Q. What you have done is average across --

A. Yes, sir.

Q. -- to get an average month for each well and then average the average months.

A. Yes, sir.

Q. So a high one month gets in there.

A. Yes, it did.

Q. As a full value.

A. As a full value and it isn't really representative. I should have dropped back and used fewer wells but we did turn those on and I had the month's production on them for 1980.

Q. And of course, as illustrated by your Exhibit Number Four, the bottom hole pressure of either zone is not less than 50 percent of the bottom hole pressure of the other.

A. That's right.

Q. The wells would meet qualification B, not producing more than 10 barrels of liquid a day.

A. Yes.

Q. Now how about C, is the ownership of both zones in this entire area common throughout?

A. Yes, they are common under every 160, yes.

Q. And you could furnish these other things that are required under Rule 2.

A. Right.

Q. Okay.

MR. NUTTER: Are there any further questions of Mr. Verquer? He may be excused.

Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: No, sir.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 7137?

We'll take the case under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing 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.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7157, heard by me on 1/28 19 81.

, Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
28 January 1981

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A. It will.

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BY MR. NUTTER:

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And the Mesaverde in our area is very tight and it's the same thing. I would use a 70 Mcf, my personal opinion would be 70 Mcf, that they make less than that.

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Q. From either zone.

A. Yes, sir.

Q. So you'd have a maximum of maybe 140 Mcf.

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Q. Now I notice that on your average production on Exhibit Six for the Mesaverde, this figures out to about 2614 per well. That would be per month, wouldn't it?

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Q. Uh-huh.

A. So that's 80 --

Q. That's 70 or 80 some --

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Q. Do you have an average figure on that?

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Q. 1783 per month is average production. It would be about 60.

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Q. Okay.

MR. NUTTER: Are there any further questions of Mr. Verquer? He may be excused.

Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: No, sir.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 7137?

We'll take the case under advisement.

(Hearing concluded.)

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing 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.

Sally W. Boyd C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7137 heard by me on 1/28 19 81.

Examiner
Oil Conservation Division

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. 7137
Order No. R-6588

APPLICATION OF CAULKINS OIL COMPANY FOR 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 28, 1981, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 12th day of February, 1981, 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, is the owner and operator of certain wells located in Sections 1 through 5, 7, 8, 21, 22, 24, and 25 in Township 26 North, Range 6 West; Sections 13, 14, 23, 24, and 26 in Township 26 North, Range 7 West; and Sections 33 through 35 in Township 27 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle Chacra and Blanco Mesaverde production within the wellbores of the above-described wells.

(4) That from the Chacra zone, the subject wells are expected to be capable of low production only.

(5) That from the Mesaverde zone, the subject wells are expected to be capable of low production only.

(6) That the proposed commingling should result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and would not violate correlative rights.

(7) 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 the establishment of an administrative procedure whereby production from the Chacra and Mesaverde formations in those sections described in Finding No. (2) above may be commingled within the wellbore of a producing well therein should permit the recovery of otherwise uneconomic reserves.

(9) That such an administrative procedure should provide for approval by the Division's District Supervisor at Aztec, safeguards to prevent crossflow between pools, and the protection of interest owners under each proration or spacing unit.

(10) That provision should be made whereby the applicant would consult with the Supervisor of the Aztec district office of the Division and determine an allocation formula for the allocation of production to each zone in each well commingled pursuant to this order and such administrative approval.

(11) That the operator of any well so commingled should immediately notify the Division's Aztec district office any time any such well commingled under terms of this order has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.

IT IS THEREFORE ORDERED:

(1) That an administrative procedure is hereby adopted whereby the district supervisor of the Division District Office at Aztec may administratively authorize downhole commingling of the Chacra and Mesaverde zones in Caulkins Oil Company's wells in Sections 1 through 5, 7, 8, 21, 22, 24, and 25, Township 26 North, Range 6 West, NMPM, and in Sections 13, 14, 23, 24, and 26, Township 26 North, Range 7 West, NMPM, and in Sections 33 and 35, Township 27 North, Range 6 West, NMPM, all in Rio Arriba County, New Mexico.

(2) That qualification and application for and approval of requests for downhole commingling shall be made in accordance with the following rules:

RULE 1. Wells shall qualify for approval for downhole commingling under this order provided that:

(a) That the commingling is necessary to permit production from the Chacra and Mesaverde zones which would not otherwise be economically producible, i.e., wells which are expected to have a combined stabilized pipeline delivery rate from both zones of 150 Mcf per day or less.

(b) neither zone produces more than 10 barrels of liquid per day;

(c) the bottom hole pressure of the lower pressure zone is not less than 50 percent of the bottom hole pressure of the higher pressure zone adjusted to a common datum; and,

(d) the ownership of the two zones is common (including working interest, royalty interest, and overriding royalty).

RULE 2. Applications for administrative approval of downhole commingling under this order shall include:

(a) Name and address of the operator.

(b) Lease name, well number, well location and names of the pools to be commingled.

(c) A mechanical log of the well.

(d) A diagrammatic sketch of the well showing casing, tubing, cement tops, perforations, and any downhole equipment.

(e) Pressures and production for each zone to be commingled as determined from drill stem tests or potential tests following completion.

(f) 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.

RULE 3. The district supervisor may approve the proposed downhole commingling if, in his opinion, there is no disqualifying disparity of bottomhole pressures or other reservoir characteristics, waste will not result thereby, and correlative rights will not be violated.

RULE 4. Upon such approval, the well shall be operated in accordance with the provisions of the administrative order which authorized the commingling.

RULE 5. That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator shall notify the Aztec district office of the Division any time any well commingled pursuant to this authority is shut-in for 7 consecutive days.

RULE 6. That in order to allocate the commingled production to each of the commingled zones in any such well, applicant should consult with the supervisor of the Aztec district office of the Division and determine an allocation formula for each of the production zones.

RULE 7. The Division Director may rescind authority to commingle production in the wellbore and require both zones to be produced separately in any well commingled pursuant to this authority if, in his opinion, waste or reservoir damage is resulting thereby, or if any change of conditions render the installation no longer eligible for downhole commingling under the provisions of Rule 1, paragraphs (a) through (d).

IT IS FURTHER ORDERED:

(1) 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
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L

dr/

CAULKINS OIL CO.

Post Office Box 780
Farmington, New Mexico 87401

Case No. 7137

Well Number	Location	Order Number	Production Split Chacra	Mesa Verde
54 E	P 4 26 6	R-6266	34%	66%
68 E	L 4 26 6	R-6266	32	68
104	P 5 26 6	R-5647	40	60
136E	O 10 26 6	R-5647	40	60
175E	B 8 26 6	R-5647	40	60
204E	L 9 26 6	R-5647	40	60
224A	D 13 26 7	R-5922	54	46
248E	D 13 26 6	R-6267	32	68
268E	J 16 26 6	R-6266	42	58
346	A 22 26 6	R-6266	42	58
583M	L 5 26 6	R-6266	31	69
679	J 9 26 6	R-5647	40	60
812	N 18 26 6	R-5922	52	48

All gas production being split as shown.

All oil production from commingled wells to Mesa Verde Zone.

Exhibit 2
Case 7137

1

CAULKINS OIL CO.

Post Office Box 780
Farmington, New Mexico 87401

Case No. 7137

Well No.	Location	Order No.	PC	Chacra	MV	Greenhorn
109	M 3 26N 6W	R-5647-A	42%	18%	40%	
220R	B 14 26N 7W	R-5926	50	20	30	
224	A 13 26N 7W	R-5927	25	30	33	12
228	A 18 26N 6W	R-5634	50	20	30	

All Gas production being split as shown.

Oil production from 224 being split 60% Mesa Verde and 40% to Greenhorn.

All oil production from 109, 220R and 228 to Mesa Verde zone.

Exhibit 3
Case 7137

INDIVIDUAL WELL INITIAL PRESSURE

BEFORE COMMINGLING

CHACRA ZONE

WELL NO.	LOCATION			PRESSURE
224 A	D	13	26N 7W	960
258	F	18	26N 6W	895
307	M	13	26N 7W	858
314	P	18	26N 6W	1003
330	C	23	26N 7W	1080
332	A	23	26N 7W	831
352	F	24	26N 7W	1196
812	N	18	26N 6W	995
264	H	17	26N 6W	975
291	J	17	26N 6W	970
121	D	7	26N 6W	954
193	M	7	26N 6W	1005
217	D	14	26N 7W	1150
342	A	21	26N 6W	1118
346	A	22	26N 6W	926
358	F	21	26N 6W	925
383	O	21	26N 6W	945
385	M	22	26N 6W	815
387	O	22	26N 6W	930
51	D	4	26N 6W	1040
54 E	P	4	26N 6W	991
68 E	L	4	26N 6W	1003
583 M	L	5	26N 6W	998
4	D	25	26N 6W	977
5	M	25	26N 6W	860
268 E	J	16	26N 6W	1020
				(28347)

Avg. 977#

MESA VERDE ZONE

WELL NO.	LOCATION			PRESSURE
224 A	D	13	26N 7W	1017
4	A	33	27N 6W	1085
8	A	34	27N 6W	844
12	A	35	27N 6W	980
45	M	35	27N 6W	914
58	A	3	26N 6W	1039
62	A	2	26N 6W	942
812	N	18	26N 6W	1060
307	M	13	26N 7W	1004
229	D	17	26N 6W	1028
341	B	21	26N 6W	1085
346	A	22	26N 6W	956
54 E	P	4	26N 6W	1010
68 E	L	4	26N 6W	1045
583 M	L	5	26N 6W	1090
268 E	J	16	26N 6W	1140
				(19473)

Avg. 1024#

Exhibit 4
Case 7137

CHACRA	9/78	10/78	11/78	12/78	1/79	2/79	3/79	4/79	5/79	6/79	7/79	8/79
Breech												
C 228	808	1070	812	690	1330	534	861	917	908	930	558	847
C 258	968	1374	1238	1408	1494	1415	1225	964	1078	1094	590	984
C 307	2760	2895	2542	3349	3142	3047	2633	2680	1924	2303	2353	1958
C 324	1229	2581	1068	500	1097	1988	-0-	-0-	-0-	933	1581	1943
C 330	850	1501	2244	3174	-0-	2053	1718	1758	1460	1079	1118	1318
C 332	1127	-0-	1877	2595	2345	1458	-0-	1599	2785	1644	1917	2060
C 352	917	1587	2468	2085	1890	2256	2355	2444	2039	1828	1406	1739
C 354	3216	2873	2323	4008	4378	3352	3062	5287	3098	2840	2306	2285
C 368	423	430	291	730	800	856	771	777	676	519	400	462
C 382	74	-0-	779	1771	1512	1803	1368	1145	831	452	128	175
Breech A												
C 264	1404	1096	1538	1682	1495	1640	1461	1299	1192	1106	877	1110
C 291	1130	826	1028	1143	972	1046	860	793	784	770	607	735
C 675	-0-	2829	3912	4506	4037	3356	2912	3803	2615	2316	1650	2125
Breech B												
C 121	1338	1089	924	934	1510	895	953	1340	1003	1004	921	766
C 193	2303	2130	2377	2479	2333	2095	1799	2014	1683	1109	1127	1355
C 196	-0-	3816	4023	3731	3022	2983	2921	1004	2035	2390	2196	2778
C 217	977	1689	1765	1743	1485	1971	1834	1545	1648	1666	1234	1627
Breech D												
C 342	517	892	1087	1177	1179	1077	970	897	841	785	576	764
C 358	981	1090	1117	1027	1021	1064	986	874	856	814	664	832
C 383	728	1002	1033	1194	1169	1031	939	853	938	886	681	818
C 385	883	1216	1429	1439	1471	1337	1156	1060	1129	1047	785	1064
C 387	1245	1900	2210	2237	2413	2033	2085	1971	1896	1756	1145	1674
Breech E												
C 51	804	916	1012	1679	1153	1497	329	1289	1418	1175	1006	876
C 104	-0-	2444	1397	2306	1761	643	1843	1235	1299	1097	870	724
C 109	-0-	2531	1083	1247	1934	1576	803	1585	1093	756	821	1524
C 581	409	264	754	533	713	645	566	555	560	540	457	562
								4674				
Reuter												
C 297	-0-	156	1235	1570	1116	1405	1412	1191	1073	1008	447	278
C 343	-0-	690	829	1597	1465	1244	903	1121	1050	1058	676	748
Sanchez												
C 4	1466	1523	1381	1643	1538	1181	1514	1364	1364	858	960	1729
C 5	2024	1320	2464	886	873	485	-0-	3962	3278	2608	1512	2779
State C - COM												
C 235-R	-0-	-0-				4044	2195	2887	2527	1859	1472	1320

Exhibit 5
Case 7137

CHACRA	9/79	10/79	11/79	12/79	1/80	2/80	3/80	4/80	5/80	6/80	7/80	8/80
Breech												
C 224	3133	3209	5939	3842	2647	5166	3484	3278	3290	951	-0-	-0-
C 224-A	-0-	-0-	8975	10457	9822	9929	8436	8544	7959	5279	6005	7595
C 228	799	709	621	791	438	1108	793	403	537	141	5	180
C 258	1176	995	1092	683	1303	1465	901	1008	942	396	107	971
C 307	2010	1803	2218	2098	2079	2761	2038	1957	2160	880	851	668
C 314	2077	1844	1967	1948	1265	2096	4295	1430	1916	1209	311	1543
C 330	1420	1252	1300	1593	1046	1373	1609	1366	1081	260	275	1011
C 332	2072	1777	1582	1834	1468	1583	1560	1448	1440	763	223	1222
C 352	1877	1696	1457	1619	1700	1921	1628	1717	1395	446	229	1050
C 354	2888	2794	806	742	608	939	774	795	721	447	313	818
C 368	527	531	440	568	509	590	460	531	427	425	174	439
C 382	1284	843	671	1146	613	60	612	816	478	89	41	27
C 812	-0-	-0-	9363	6451	5947	6670	6733	4939	5729	5170	3193	5114
Breech A												
C 125	-0-	-0-	5206	3899	1380	1667	2704	1398	969	322	-0-	697
C 264	1010	943	910	1096	1249	1060	2162	713	1108	706	408	927
C 291	812	714	751	692	682	656	1607	498	756	565	542	620
C 675	2086	1981	2192	2126	2091	2012	1678	1728	1421	758	545	1668
C 679	-0-	230	4800	2697	2638	2208	1736	1360	1277	996	663	1257
C 729	-0-	2073	1648	2017	1579	1764	1427	1406	1078	1071	543	1139
Breech B												
C 121	930	829	874	893	766	688	1867	823	655	706	423	530
C 193	1483	1287	1978	1466	1394	1413	2924	1230	1075	492	277	1116
C 196	1767	1578	1609	1482	1145	1780	1352	1386	1238	719	508	1208
C 217	1266	-0-	1911	1272	1814	1966	1692	1683	1489	818	200	1358
C 220-R						6284	3849	4893	3533	4184	715	1154
Breech D												
C 342	793	789	1018	973	945	896	772	647	766	408	183	542
C 358	846	810	861	713	770	795	1641	544	772	317	387	748
C 383	1001	837	1069	925	935	885	772	732	929	464	225	886
C 385	1169	1058	1285	1188	1174	1063	999	805	1040	733	276	943
C 387	1825	1643	2066	1943	1882	1867	1667	1291	1643	868	374	1444
Breech E												
C 51	1133	966	1113	1083	1132	1387	971	901	895	347	145	684
C 104	895	723	692	715	659	687	577	529	463	331	302	567
C 109	757	632	833	802	1016	600	771	588	617	99	10	-0-
C 581	628	700	486	549	329	515	335	300	230	99	-0-	-0-
Router												
C 297	1209	984	1192	1254	1117	1137	992	761	940	308	8	636
C 343	727	728	1038	939	1024	968	780	671	871	587	205	704
Sanchez												
C 4	1324	1326	1273	1174	1219	1699	1962	1420	1136	1118	994	1137
C 5	2152	2190	2040	2234	2183	1150	1367	2131	1565	3683	1421	1587
State C - COM												
C 235-R	1497	1608	1856	1798	1057	1963	1336	1104	1278	518	175	941

CRCRA	9/80	10/80	11/80	12/80	Cum Prod	Mod	Cum mon
Breech							
C 224	-0-	493	6318	3003	44163	(28)	2396
C 224-A	400.7	5640	7987	6875	102410	(28)	7672
C 228	136	-0-	1015	1348	19289	(27)	714
C 258	515	780	1187	721	27716	(28)	994
C 307	4198	4198	4997	3836	70332	(28)	2507
C 314	871	1316	2168	1436	42332	(29)	1463
C 330	473	545	711	1151	34739	(29)	1286
C 332	587	1034	1888	1226	41114	(26)	1581
C 352	604	910	1749	1297	44207	(28)	1580
C 354	472	646	841	682	52182	(28)	1864
C 368	191	242	364	295	13848	(28)	494
C 382	4	24	1219	671	18415	(27)	682
C 812	3093	3965	5645	3970	75831	(14)	5416
Breech A							
C 125	1115	1481	1710	1371	23879	(13)	1836
C 136-E				736	736	(1)	736
C 175-E				2762	2762	(1)	2762
C 204-E				3542	3542	(1)	3542
C 264	642	856	1022	913	31625	(28)	1129
C 291	439	571	666	503	21514	(28)	768
C 675	1162	1417	2106	1483	60535	(27)	2242
C 679	1040	1266	1570	1181	24614	(14)	1758
C 729	909	920	1061	996	19621	(15)	1308
Breech B							
C 121	623	589	826	781	25485	(28)	910
C 193	703	988	1409	978	44417	(28)	1586
C 196	879	1079	1566	1071	51235	(27)	1897
C 217	452	882	1848	1362	39387	(27)	1459
C 220-R	991	2094	2061	3690	32361	(11)	3033
Breech D							
C 342	415	670	1071	897	22587	(28)	807
C 346				2985	2985	(1)	2985
C 358	460	705	918	1112	23210	(26)	893
C 383	476	796	1164	917	28374	(28)	1013
C 385	414	969	1398	1156	29684	(28)	1060
C 387	650	1178	2080	1764	46696	(28)	1667
Breech E							
C 51	513	863	1400	1069	27754	(28)	991
C 54-E				1296	1296	(1)	1296
C 68-E				2423	2423	(1)	2423
C 104	409	471	699	606	24844	(27)	920
C 109	-0-	160	1080	697	23607	(25)	944
C 581	-0-	-0-	-0-	-0-			
C 583-M				1765	1765	(1)	1765
Peuter							
C 297	189	408	1296	932	24458	(26)	940
C 343	462	765	1145	927	23922	(26)	920
Sanchez							
C 4	1012	1051	1006	1142	35614	(28)	1271
C 5	834	685	574	2169	50628	(27)	1875
State A							
C 268-E				2620	2620	(1)	2620
State C - COM							
C 235-R	485	896	1681	1054	35551	(28)	1555

Gross monthly 1283 mcf

	9/78	10/78	11/78	12/78	1/79	2/79	3/79	4/79	5/79	6/79	7/79	8/79
MESA VERDE												
Breech												
MV 224	3496	3556	5802	7732	5668	4018	5379	5972	4649	2699	1285	-0-
MV 228	1212	1606	1219	1035	1995	802	1362	1375	1360	1598	836	1271
MV 307	625	582	482	731	661	689	526	784	566	540	645	724
Breech A												
MV 182	807	925	1419	1717	1168	1728	812	977	1014	1150	564	461
MV 182 "A"	-0-	792	755	575	2123	-0-	-0-	2406	2456	3376	188	568
MV 229	702	664	1183	1915	1648	1385	1363	1703	1460	1153	979	967
Breech D												
MV 341	1200	1736	1830	1685	1715	1715	1334	1520	1644	1581	1198	1586
Breech E												
MV 58	1491	1336	2925	5089	5556	5362	3806	2956	2995	533	1331	-0-
MV 64	1315	2655	3447	2188	3322	3090	2850	3061	1400	3276	2697	2322
MV 104	-0-	-0-	2096	3460	2642	964	3764	1852	1948	1648	1306	1086
MV 109	-0-	-0-	3659	4266	1559	-0-	-0-	77	-0-	-0-	-0-	2105
Breech F												
MV 4	622	-0-	2186	1637	1517	1590	889	1677	1281	1414	1213	679
MV 8	1573	1257	1271	1846	1426	1501	1563	1564	1626	1938	1243	462
MV 12	2373	2513	5054	4798	6276	4075	5561	4039	5200	701	-0-	1313
MV 45	1651	1913	2930	3635	4198	3533	3619	3689	1132	4147	2262	-0-
State A												
MV 62	1277	2870	2434	100	3305	1858	1857	4055	3116	2859	1913	1823

Exhibit 6
Case 7137

	Initials	Date
Prepared by		
Approved by		

CUMULATIVE
STATEMENT OF GAS PRODUCTION

Well No.	9/79	10/79	11-79	12-79	1-80	2-80	3-80	4-80	5-80	6-80	7-80	8-80
	1	2	3	4	5	6	7	8	9	10	11	12
MESA VERDE												
Breech												
MV 224	3445	3529	5873	4226	2911	5683	3831	3606	3618	1047	-0-	-0-
MV 224-A	-0-	-0-	7645	8904	5137	8459	7185	7279	6611	4496	5113	6470
MV 228	1198	1063	930	1186	655	1659	1187	606	802	211	7	269
MV 307	594	466	472	670	529	566	693	678	653	554	448	654
MV 812	-0-	711	8644	5955	5489	6157	6217	4559	5288	4773	2947	4673
Breech A												
MV 182	847	547	943	743	681	815	552	520	580	457	89	272
MV 182-A	1194	683	766	680	1908	1656	462	519	687	401	447	729
MV 229	-0-	1450	1187	1453	1107	1446	1318	1081	1169	665	222	889
MV 679	-0-	-0-	6750	4044	3955	3314	2604	2040	1915	1494	997	1883
Breech B												
MV 220-R	-0-	-0-	-0-	-0-	-0-	9231	5653	7187	5188	2132	1053	1695
Breech D												
MV 341	1482	1394	1518	1281	1508	1586	1353	1154	1548	1151	787	1342
Breech E												
MV 58	8	945	1912	2140	1222	3219	3685	3517	2721	2132	719	-0-
MV 64	2889	2661	2388	2661	2645	2504	1819	2636	2324	1154	650	1139
MV 104	1342	1085	1039	1073	990	1030	865	793	694	497	451	850
MV 109	1688	1403	1852	1783	1255	1332	1714	1305	1374	220	21	-0-
Breech F												
MV 4	1461	1299	1303	1227	1552	1497	1166	1282	1089	808	536	1107
MV 8	-0-	1006	1273	1368	1608	1800	1576	1430	1341	430	158	1667
MV 12	4416	4117	4558	6273	5771	6575	5117	4957	4221	914	986	1916
MV 45	-0-	1781	4219	2701	-0-	4002	3836	3165	2356	402	191	529
State A												
MV 62	3337	2370	1448	2515	3255	3013	1992	2576	1918	579	493	836

CUMULATIVE

STATEMENT OF GAS PRODUCTION

Well No.	9/80	10/80	11/80	12/80	Cum. Prod	avg mo prod
MESA VERDE						
Breech						
MV 224	-0-	542	6949	3304	98820	4117 (24)
MV 224-A	3414	4806	6803	5855	88174	6298 (14)
MV 228	204	-0-	1522	2020	29190	1081 (27)
MV 307	-0-	-0-	-0-	17	14589	581 (25)
MV 812	2853	3657	5117	3664	70704	4714 (15)
Breech A						
MV 136-E				1104	1104	1104 (1)
MV 175-E				4143	4143	4143 (1)
MV 182	55	-0-	-0-	767	20410	792 (26)
MV 182-A	225	160	533	725	25014	1000 (25)
MV 204-E				2361	2361	2361 (1)
MV 229	991	1149	1704	1403	32356	1198 (27)
MV 679	1560	1887	2361	1771	36577	2612 (14)
Breech B						
MV 220-R	1459	2974	3089	5430	95021	4093 (1)
Breech C						
MV 248-E				1271	1271	1271 (1)
Breech D						
MV 341	906	1092	1770	1548	40144	1434 (28)
MV 346			4998	4122	9120	4560 (2)
Breech E						
MV 54-E				2515	2515	2515 (1)
MV 58	-0-	-0-	-0-	4168	59758	2598 (23)
MV 64	1416	1491	3165	2602	65766	2349 (28)
MV 68-E				5151	5151	5151 (1)
MV 104	615	708	1046	909	23753	1298 (24)
MV 109	-0-	367	2401	1547	30918	1621 (19)
MV 583-M				3929	3929	3929 (1)
Breech F						
MV 4	2351	590	1863	1171	38189	1229 (29)
MV 8	494	298	2313	1294	35326	1308 (27)
MV 12	827	3495	5968	4134	105148	3894 (27)
MV 45	-0-	-0-	-0-	3950	58891	2676 (22)
State A						
MV 62	518	-0-	3039	2072	58063	2150 (27)
MV 248-E				3716	3716	3716 (1)

75778 ÷ 29 = 2614 avg per well

CAULKINS OIL CO.

Post Office Box 780
Farmington, New Mexico 87401

Case No. 7137

Well Number	Location	Order Number	Production Split Chacra	Mesa Verde
54 E	P 4 26 6	R-6266	34%	66%
68 E	L 4 26 6	R-6266	32	68
104	P 5 26 6	R-5647	40	60
136E	O 10 26 6	R-5647	40	60
175E	B 8 26 6	R-5647	40	60
204E	L 9 26 6	R-5647	40	60
224A	D 13 26 7	R-5922	54	46
248E	D 13 26 6	R-6267	32	68
268E	J 16 26 6	R-6266	42	58
346	A 22 26 6	R-6266	42	58
583M	L 5 26 6	R-6266	31	69
679	J 9 26 6	R-5647	40	60
812	N 18 26 6	R-5922	52	48

All gas production being split as shown.

All oil production from commingled wells to Mesa Verde Zone.

Exhibit 2
Case 7137

CAULKINS OIL CO.

Post Office Box 780
Farmington, New Mexico 87401

Case No. 7137

Well No.	Location	Order No.	PC	Chacra	MV	Greenhorn
109	M 3 26N 6W	R-5647-A	42%	18%	40%	
220R	B 14 26N 7W	R-5926	50	20	30	
224	A 13 26N 7W	R-5927	25	30	33	12
228	A 18 26N 6W	R-5634	50	20	30	

All Gas production being split as shown.

Oil production from 224 being split 60% Mesa Verde and 40% to Greenhorn.

All oil production from 109, 220R and 228 to Mesa Verde zone.

Exhibit 3
Case 7137

INDIVIDUAL WELL INITIAL PRESSURE

BEFORE COMMINGLING

CHACRA ZONE

WELL NO.	LOCATION			PRESSURE
224 A	D 13	26N	7W	960
258	F 18	26N	6W	895
307	M 13	26N	7W	858
314	P 18	26N	6W	1003
330	C 23	26N	7W	1080
332	A 23	26N	7W	831
352	F 24	26N	7W	1196
812	N 18	26N	6W	995
264	H 17	26N	6W	975
291	J 17	26N	6W	970
121	D 7	26N	6W	954
193	M 7	26N	6W	1005
217	D 14	26N	7W	1150
342	A 21	26N	6W	1118
346	A 22	26N	6W	926
358	F 21	26N	6W	925
383	O 21	26N	6W	945
385	M 22	26N	6W	815
387	O 22	26N	6W	930
51	D 4	26N	6W	1040
54 E	P 4	26N	6W	991
68 E	L 4	26N	6W	1003
583 M	L 5	26N	6W	998
4	D 25	26N	6W	977
5	M 25	26N	6W	860
268 E	J 16	26N	6W	1020
				(28347)

Avg. 977#

MESA VERDE ZONE

WELL NO.	LOCATION			PRESSURE
224 A	D 13	26N	7W	1017
4	A 33	27N	6W	1085
8	A 34	27N	6W	844
12	A 35	27N	6W	980
45	M 35	27N	6W	914
58	A 3	26N	6W	1039
62	A 2	26N	6W	942
812	N 18	26N	6W	1060
307	M 13	26N	7W	1004
229	D 17	26N	6W	1028
341	B 21	26N	6W	1085
346	A 22	26N	6W	956
54 E	P 4	26N	6W	1010
68 E	L 4	26N	6W	1045
583 M	L 5	26N	6W	1090
268 E	J 16	26N	6W	1140
				(19473)

Avg. 1024#

Exhibit 4
Case 7137

CHACRA	9/78	10/78	11/78	12/78	1/79	2/79	3/79	4/79	5/79	6/79	7/79	8/79
Breech												
C 228	808	1070	812	690	1330	534	861	917	908	930	558	847
C 258	968	1374	1238	1408	1494	1415	1225	964	1078	1094	590	984
C 307	2760	2895	2542	3349	3140	3047	2633	2680	1924	2303	2353	1958
C 314	1229	2581	1068	500	1097	1988	-0-	-0-	-0-	933	1581	1943
C 330	850	1501	2244	3174	-0-	2053	1718	1758	1460	1079	1118	1318
C 332	1127	-0-	1877	2595	2345	1458	-0-	1599	2785	1644	1917	2060
C 352	917	1587	2463	2085	1890	2256	2355	2444	2039	1828	1406	1739
C 354	3216	2873	2323	4008	4372	3332	3062	3287	3098	2840	2306	2085
C 368	423	430	291	730	800	856	771	777	676	519	400	462
C 382	74	-0-	779	1771	1512	1503	1368	1145	831	452	128	175
Breech A												
C 264	1404	1096	1538	1682	1495	1640	1461	1299	1192	1106	877	1110
C 291	1130	826	1028	1143	972	1046	860	793	784	770	607	735
C 675	-0-	2829	3912	4506	4037	3356	2912	3823	2615	2316	1650	2125
Breech B												
C 121	1338	1089	924	934	1510	895	953	1340	1003	1004	921	766
C 193	2303	2130	2377	2479	2233	2095	1799	2014	1683	1109	1127	1355
C 196	-0-	3816	4023	3731	3022	2983	2921	1004	2035	2390	2196	2778
C 217	977	1689	1765	1743	1485	1971	1834	1548	1648	1666	1234	1627
Breech D												
C 342	517	892	1087	1177	1179	1077	970	897	841	785	576	764
C 358	981	1090	1117	1027	1021	1069	986	874	856	814	664	832
C 383	728	1002	1033	1194	1169	1031	939	853	938	886	681	818
C 385	883	1216	1429	1439	1471	1337	1156	1060	1129	1047	785	1064
C 387	1245	1900	2210	2237	2413	2033	2085	1971	1896	1756	1145	1674
Breech E												
C 51	804	916	1012	1679	1153	1497	329	1289	1418	1175	1006	876
C 104	-0-	2444	1397	2306	1761	643	1843	1285	1299	1097	870	724
C 109	-0-	2531	1083	1247	1934	1576	803	1595	1073	756	821	1524
C 581	409	264	754	533	713	645	566	555	560	540	457	562
								4674				
Reuter												
C 297	-0-	156	1235	1570	1116	1405	1412	1191	1073	1008	447	278
C 343	-0-	690	829	1597	1465	1244	903	1121	1050	1058	676	748
Sanchez												
C 4	1466	1523	1381	1643	1538	1181	1514	1364	1364	852	960	1729
C 5	2024	1320	2464	886	873	485	-0-	3962	3278	2608	1512	2779
State C - COM												
C 235-R	-0-	-0-				4044	2195	2887	2527	1859	1492	1320

EX 4.611 5
case 7137

CHACRA	9/79	10/79	11/79	12/79	1/80	2/80	3/80	4/80	5/80	6/80	7/80	8/80
Breech												
C 224	3133	3209	5339	3842	5647	5166	3484	3278	3290	951	-0-	-0-
C 224-A	-0-	-0-	8975	10457	9822	9729	8436	6544	7759	5279	6005	7595
C 228	778	709	621	791	438	1108	793	403	537	141	5	180
C 258	1174	995	1092	683	1303	1465	901	1008	942	396	107	771
C 307	2010	1803	2218	2078	2079	2761	2038	1957	2160	880	851	668
C 314	2077	1841	1667	1948	1265	2096	4295	1430	1916	1209	311	1543
C 330	1420	1252	1300	1593	1046	1373	1609	1366	1081	260	275	1011
C 332	2072	1777	1582	1834	1468	1583	1560	1448	1440	763	823	1222
C 352	1877	1696	1457	1619	1700	1921	1628	1717	1393	446	229	1050
C 354	2888	2794	806	742	608	939	774	795	721	447	313	818
C 368	527	531	440	568	509	590	460	531	407	425	1174	459
C 382	1284	843	671	1146	692	60	612	816	478	89	41	27
C 812	-0-	-0-	8363	6451	5947	6670	6733	4939	5729	5170	3193	5064
Breech A												
C 125	-0-	-0-	5206	3899	1580	1667	2704	1398	969	322	-0-	697
C 264	1010	943	910	1012	1249	1060	2162	713	1108	706	408	927
C 291	812	714	751	652	682	656	1507	498	756	565	342	620
C 675	2086	1981	2192	2126	2091	2012	1678	1728	1421	758	545	1668
C 679	-0-	230	4500	2697	2638	2208	1736	1360	1277	996	663	1257
C 729	-0-	2073	1648	2017	1579	1764	1427	1406	1078	1071	543	1139
Breech B												
C 121	934	829	874	893	766	688	1867	823	655	706	423	530
C 193	1483	1287	978	1466	1394	1413	2924	1930	1075	492	277	1116
C 196	1769	1575	1609	1482	1145	1780	1352	1386	1238	719	508	1208
C 217	1568	-0-	1911	1273	1814	1966	1692	1683	1489	818	200	1358
C 220-R						6284	3849	4893	3533	4184	715	1554
Breech D												
C 342	793	789	1018	973	945	896	772	647	746	408	183	542
C 358	846	810	861	713	770	705	1564	544	772	317	387	748
C 383	1001	837	1069	925	935	885	772	732	929	444	225	886
C 385	1169	1058	1285	1188	1174	1063	997	805	1040	733	476	943
C 387	1825	1640	2062	1843	1882	1867	1667	1291	1643	868	374	1444
Breech E												
C 51	1133	966	1113	1083	1132	1387	971	901	895	347	145	684
C 104	895	723	693	715	659	687	527	529	463	331	302	567
C 109	759	632	839	802	1016	600	771	588	617	99	10	-0-
C 581	528	400	486	548	329	515	835	300	230	99	-0-	-0-
Reuter												
C 297	1209	984	1196	1254	1117	1137	992	761	940	308	8	636
C 343	727	728	1037	939	1024	968	780	671	871	587	205	704
Sanchez												
C 4	1324	1326	1273	1174	1219	1699	1962	1420	1136	1118	994	1137
C 5	2152	2190	2540	2236	2183	1150	1367	2131	1565	3683	1421	1587
State C - COM												
C 235-R	1497	1608	1856	1798	1057	1963	1336	1104	1278	518	175	941

CHURN	9/80	10/80	11/80	12/80	Cum. Prod	Mos	Cum Mo. Av.
Breech							
C 224	-0-	493	0318	3003	44165	(13)	3396
C 224-A	1007	6640	09187	6875	102410	(14)	7672
C 228	1136	-0-	11015	13485	192189	(27)	7118
C 258	5115	780	11187	7241	272714	(26)	7991
C 307	41818	4114	14997	38816	702212	(28)	25079
C 314	8711	13116	21168	11436	403312	(25)	16613
C 330	473	545	7111	11511	347139	(27)	12986
C 332	5817	11034	11888	12226	411114	(26)	15881
C 352	6014	910	11749	12977	444307	(28)	16582
C 354	472	646	8411	6882	522082	(28)	18660
C 368	1911	242	3644	2895	138348	(28)	4941
C 382	14	214	12819	6711	184115	(27)	6822
C 812	30912	39615	56545	39770	758131	(14)	54166
Breech A							
C 125	11115	11441	11710	13711	238779	(13)	18367
C 136-E				736	736	(1)	736
C 175-E				2762	2762	(1)	2762
C 204-E				35442	35442	(1)	35442
C 264	6413	856	11022	9113	316425	(28)	11229
C 291	4439	571	1666	5553	215114	(28)	7968
C 675	11162	14117	21106	14883	605215	(27)	22412
C 679	10140	12656	15776	11181	246411	(19)	12971
C 729	9109	9120	10611	9916	174631	(19)	13088
Breech B							
C 121	6123	5189	8126	7181	254400	(38)	9910
C 193	7103	9188	14109	9718	411917	(28)	14997
C 196	8179	11079	15616	10711	512235	(27)	18971
C 217	4512	8812	18148	11362	393387	(27)	14569
C 220-E	9911	20114	20161	36910	333360	(11)	30396
Breech D							
C 342	4115	6710	10711	8897	225337	(28)	8048
C 346				29885	29885	(1)	29885
C 358	4610	7105	9123	7145	233616	(28)	8343
C 383	4716	7195	11154	9117	243714	(28)	8866
C 385	4114	9169	13198	11156	296814	(28)	10600
C 387	6510	11178	20180	11764	466916	(28)	16675
Breech E							
C 51	5113	8613	11400	10689	277516	(28)	9911
C 54-E				12916	12916	(1)	12916
C 68-E				24123	24123	(1)	24123
C 104	4109	4711	6199	6006	249144	(27)	9238
C 109	-0-	1610	10180	6917	236107	(25)	9444
C 581	-0-	-0-	-0-	-0-			
C 583-M				17615	17615	(1)	17615
Reuter							
C 297	1819	6108	12916	9132	246458	(27)	9905
C 343	4612	7165	11145	9127	239122	(27)	8016
Sanchez							
C 4	10112	10511	10016	11142	356114	(28)	12711
C 5	8014	6185	5714	21619	506128	(27)	18715
State A							
C 268-E				26220	26220	(1)	26220
State C - COM							
C 235-R	4815	8916	16181	10514	355511	(28)	15545

Churn monthly = 12825 mcf

	9/78	10/78	11/78	12/78	1/79	2/79	3/79	4/79	5/79	6/79	7/79	8/79
MESA VERDE												
Breech												
MV 224	3496	3556	5802	7732	5668	4018	5379	5972	4649	2699	1285	-0-
MV 228	1212	1606	1219	1035	1995	802	1362	1375	1360	1598	836	1271
MV 307	625	582	482	731	661	689	526	784	566	540	645	724
Breech A												
MV 182	807	925	1419	1717	1168	1728	812	977	1014	1150	564	461
MV 182 "A"	-0-	792	755	575	2123	-0-	-0-	2406	2456	3376	188	568
MV 229	702	664	1183	1915	1648	1385	1363	1703	1460	1153	979	967
Breech D												
MV 341	1200	1736	1830	1685	1715	1715	1334	1520	1644	1581	1198	1586
Breech E												
MV 58	1491	1336	2925	5089	5856	5362	3806	2956	2985	533	1331	-0-
MV 64	1315	2655	3447	2188	3322	3090	2850	3061	1400	3276	2697	2322
MV 104	-0-	-0-	2096	3460	2642	964	2764	1852	1948	1648	1306	1086
MV 109	-0-	-0-	3659	4266	1559	-0-	-0-	77	-0-	-0-	-0-	2105
Breech F												
MV 4	622	-0-	2186	1637	1517	1590	889	1677	1281	1414	1213	679
MV 8	1573	1257	1271	1846	1426	1501	1563	1564	1626	1938	1243	462
MV 12	2373	2513	5054	4798	6276	4075	5561	4059	5200	701	-0-	1313
MV 45	1651	1913	2930	3635	4198	3593	3619	3689	1132	4147	2262	-0-
State A												
MV 62	1277	2870	2434	100	3305	1858	1857	4055	3116	2859	1913	1823

Exhibit 6
Case 7137

	Initials	Date
Prepared by		
Approved by		

CUMULATIVE
STATEMENT OF GAS PRODUCTION

Well No.	9/79	10/79	11-79	12-79	1-80	2-80	3-80	4-80	5-80	6-80	7-80	8-80
MESA VERDE												
Breech												
MV 224	3445	3529	5873	4226	2911	5683	3831	3606	3618	1047	-0-	-0-
MV 224-A	-0-	-0-	7645	8906	5137	8459	7185	7279	6611	4496	5113	6470
MV 228	1198	1063	930	1186	655	1659	1187	606	802	211	7	269
MV 307	594	466	472	670	529	566	693	678	653	554	448	654
MV 812	-0-	711	8644	5955	5489	6157	6217	4559	5288	4773	2947	4673
Breech A												
MV 182	847	547	943	743	681	815	552	520	580	457	89	272
MV 182-A	1194	683	766	680	1908	1656	462	519	687	401	447	729
MV 229	-0-	1450	1187	1455	1107	1446	1318	1081	1169	665	222	889
MV 679	-0-	-0-	6750	4040	3955	3314	2604	2040	1915	1494	997	1883
Breech B												
MV 220-R	-0-	-0-	-0-	-0-	-0-	9231	5653	7187	5188	2132	1053	1695
Breech D												
MV 341	1482	1394	1518	1281	1508	1586	1353	1154	1548	1151	787	1342
Breech E												
MV 58	8	945	1912	2140	1222	3219	3685	3517	2721	2132	719	-0-
MV 64	2889	2661	2388	2661	2645	2504	1819	2636	2324	1154	650	1139
MV 104	1342	1085	1039	1073	990	1030	865	793	694	497	451	850
MV 109	1688	1403	1852	1783	2255	1332	1714	1305	1374	220	21	-0-
Breech F												
MV 4	1461	1299	1303	1222	1552	1497	1166	1282	1089	808	536	1107
MV 8	-0-	1006	1273	1368	1608	1800	1576	1430	1341	430	158	1667
MV 12	4416	4117	4558	6273	5771	5575	5117	4957	4221	914	986	1916
MV 45	-0-	1781	4219	2701	-0-	4002	3836	3165	2356	402	191	529
State A												
MV 62	3337	2370	1448	2515	3255	3013	1992	2576	1918	579	493	836

CUMULATIVE

STATEMENT OF GAS PRODUCTION

Well No.	9/80	10/80	11/80	12/80	Cum. End	avg mo Prod
MESA VERDE						
Breech						
MV 224	-0-	542	6949	3304	98820	4117 (24)
MV 224-A	3414	4806	6803	5855	88179	6298 (14)
MV 228	204	-0-	1522	2020	29190	1081 (27)
MV 307	-0-	-0-	-0-	117	14549	581 (25)
MV 812	2853	3657	5117	3664	70204	4214 (17)
Breech A						
MV 136-E				11104	11104	11104 (1)
MV 175-E				4143	4143	4143 (1)
MV 182	55	-0-	-0-	1767	20410	792 (26)
MV 182-A	225	160	533	725	25054	1000 (25)
MV 204-E				23611	23611	23611 (1)
MV 229	991	1149	1704	1403	32356	1198 (27)
MV 679	1560	1887	2361	1771	36577	2612 (14)
Breech B						
MV 220-R	1459	2274	3029	5426	95024	4093 (11)
Breech C						
MV 248-E				12771	12771	12771 (1)
Breech D						
MV 341	906	1092	1770	1578	40164	1434 (28)
MV 346			44998	44129	91120	4560 (20)
Breech E						
MV 54-E				25115	25115	25115 (1)
MV 58	-0-	-0-	-0-	41168	591758	2598 (23)
MV 64	1415	1491	3165	26092	657766	23499 (28)
MV 68-E				51511	51511	51511 (1)
MV 104	615	708	1046	709	32753	1298 (24)
MV 109	-0-	357	2401	15947	309718	16217 (19)
MV 583-M				2929	39299	39299 (1)
Breech F						
MV 4	238	890	1863	11171	331889	1229 (27)
MV 8	494	298	2313	12994	353326	1308 (27)
MV 12	827	3495	5968	41134	1051148	3894 (27)
MV 45	-0-	-0-	-0-	2950	58891	2676 (22)
State A						
MV 62	513	-0-	3039	27123	590613	21501 (27)
MV 268 E				3716	3716	3716 (1)

75378 ÷ 28 = 2691⅞ avg per well

CAULKINS OIL COMPANY

Case No. 7137

PROPOSAL:

Commingle Chacra and Mesa Verde production in wellbore in all Caulkins operated property, now completed or future wells drilled.

Ownership and all working interests are common for all producing zones.

Exhibit # 1

Section map of all Caulkins property operated in Rio Arriba County, N. M.

Exhibit # 2

List of wells now commingled in Chacra and Mesa Verde, their locations and Order No's. approving such commingling, and production split now being used.

Note: These wells identified on section map with red circle.

Exhibit # 3

List of wells now commingled in Chacra and Mesa Verde zones and other zones, their locations and order no's. approving such commingling and production split as now being used.

Note: These wells identified on section map with red arrow.

Exhibit # 4

Initial pressures taken on all Caulkins operated Chacra and Mesa Verde wells before they were commingled.

Exhibit # 5

Monthly production records for all Chacra wells September, 1978 thru December, 1980.

Exhibit # 6

Monthly production records for all Mesa Verde wells September, 1978 thru December, 1980.

Exhibit # 7

Production Split recommendations.

CAULKINS OIL CO.

Post Office Box 780
Farmington, New Mexico 87401

Case No. 7137

Previous test results indicate a great difference in production rates from these zones.

We would recommend a conference with Aztec Oil Conservation Division Supervisor after conducting pressure and production tests on each well as it is completed.

CAULKINS OIL CO.

Post Office Box 780
Farmington, New Mexico 87401

Case No. 7137

Previous test results indicate a great difference in production rates from these zones.

We would recommend a conference with Aztec Oil Conservation Division Supervisor after conducting pressure and production tests on each well as it is completed.

KELLAHIN and KELLAHIN
Attorneys at Law
500 Don Gaspar Avenue
Post Office Box 1769
Santa Fe, New Mexico 87501

Jason Kellahin
W. Thomas Kellahin

Karen Aubrey

Telephone 982-4285
Area Code 505

December 24, 1980

Mr. Dan Nutter
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

RE: Caulkins Oil Company

Case 7137

Dear Dan:

On December 22, 1980, I mailed you an application for downhole commingling to be set for January 28, 1981.

Please correct the caption of the application by deleting the word "FIVE".

Very truly yours,

W. Thomas Kellahin

WTK:jm
cc: Arnold Raether
Charles Varquer

	9/78	10/78	11/78	12/78	1/79	2/79	3/79	4/79	5/79	6/79	7/79	8/79
MESA VERDE												
Breech												
MV 224	3496	3556	5802	7732	5668	4018	5379	5972	4649	2699	1285	-0-
MV 228	1212	1606	1219	1035	1995	802	1362	1375	1360	1598	836	1271
MV 307	625	582	482	731	661	689	526	784	566	540	645	724
Breech A												
MV 182	807	925	1419	1717	1168	1728	812	977	1014	1150	564	461
MV 182 "A"	-0-	792	755	575	2123	-0-	-0-	2406	2456	3376	188	568
MV 229	702	664	1183	1915	1648	1385	1363	1703	1460	1153	979	967
Breech D												
MV 341	1200	1736	1830	1685	1715	1715	1334	1520	1644	1581	1198	1586
Breech E												
MV 58	1491	1336	2925	5089	5556	5362	3806	2956	2985	533	1331	-0-
MV 64	1315	2655	3447	2188	3322	3090	2850	3061	1400	3276	2697	2322
MV 104	-0-	-0-	2096	3460	2642	964	2764	1852	1948	1648	1306	1086
MV 109	-0-	-0-	3659	4266	1559	-0-	-0-	77	-0-	-0-	-0-	2105
Breech F												
MV 4	622	-0-	2186	1637	1517	1590	889	1677	1281	1414	1213	679
MV 8	1573	1257	1271	1846	1426	1501	1563	1564	1626	1938	1243	462
MV 12	2373	2513	5054	4798	6276	4075	5561	4059	5200	701	-0-	1313
MV 45	1651	1913	2930	3635	4198	3583	3619	3689	1132	4147	2262	-0-
State A												
MV 62	1277	2870	2434	100	3305	1858	1857	4055	3116	2859	1913	1823

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
CAULKINS EXHIBIT NO. 6
CASE NO. 7137

	Initials	Date
Prepared by		
Approved by		

CUMULATIVE
STATEMENT OF GAS PRODUCTION

Well No.	9/79	10/79	11-79	12-79	1-80	2-80	3-80	4-80	5-80	6-80	7-80	8-80
1	2	3	4	5	6	7	8	9	10	11	12	
MESA VERDE												
Breech												
MV 224	3445	3529	5873	4226	2911	5683	3831	3606	3618	1047	-0-	-0-
MV 224-A	-0-	-0-	7645	8906	5137	8459	7185	7279	6611	4496	5113	6470
MV 228	1198	1063	930	1186	655	1659	1187	606	802	211	7	269
MV 307	594	466	472	670	529	566	693	673	653	554	448	654
MV 812	-0-	711	8644	5955	5489	6157	6217	4559	5288	4773	2947	4673
Breech A												
MV 182	847	547	943	743	681	815	552	520	580	457	89	272
MV 182-A	1184	683	766	680	1908	1656	462	619	687	401	447	729
MV 229	-0-	1450	1187	1453	1107	1446	1318	1081	1169	665	222	889
MV 679	-0-	+0-	6750	4046	3955	3314	2604	2040	1915	1494	997	1883
Breech B												
MV 220-R	-0-	-0-	-0-	-0-	-0-	9231	5653	7187	5188	2132	1053	1695
Breech D												
MV 341	1482	1394	1518	1281	1508	1586	1353	1154	1548	1151	787	1342
Breech E												
MV 58	8	945	1912	2140	1222	3219	3685	3517	2721	2132	719	-0-
MV 64	2889	2661	2388	2661	2645	2504	1819	2636	2324	1154	650	1139
MV 104	1342	1085	1039	1073	990	1030	865	793	694	497	451	850
MV 109	1688	1403	1852	1783	2255	1332	1714	1305	1374	220	21	-0-
Breech F												
MV 4	1461	1299	1303	1222	1552	1497	1166	1282	1089	808	536	1107
MV 8	-0-	1006	1273	1368	1608	1800	1576	1430	1341	430	158	1667
MV 12	4416	4117	4558	6273	5771	5575	5117	4957	4221	914	986	1916
MV 45	-0-	1781	4219	3701	-0-	4002	3836	3165	2356	402	191	529
State A												
MV 62	3337	2370	1445	2515	3255	3013	1992	2576	1918	579	493	836

CUMULATIVE
STATEMENT OF GAS PRODUCTION

Well No.	9/80	10/80	11/80	12/80	Cum. Prod	avg. mo. Prod
MESA VERDE						
Breech						
MV 224	-0-	5343	6949	3304	99820	4147 (24)
MV 224-A	3414	4806	6803	5855	88179	6298 (14)
MV 228	204	-0-	1522	2020	29190	1081 (27)
MV 307	-0-	-0-	-0-	15	14549	581 (25)
MV 812	2853	3657	5117	3664	70704	4714 (15)
Breech A						
MV 136-E				11014	11014	11014 (1)
MV 175-E				4143	4143	4143 (1)
MV 182	55	-0-	-0-	767	20610	792 (26)
MV 182-A	225	160	533	725	25014	1000 (25)
MV 204-E				23611	23611	23611 (1)
MV 229	991	1149	1704	14403	323516	11198 (29)
MV 679	1560	1887	23611	17711	306577	26612 (12)
Breech B						
MV 220-R	1459	2974	3629	5420	45021	4093 (11)
Breech C						
MV 248-E				13711	13711	13711 (1)
Breech D						
MV 341	906	1093	1770	15768	401644	16694 (28)
MV 346			4998	41923	91120	45560 (2)
Breech E						
MV 54-E				25115	25115	25115 (1)
MV 58	-0-	-0-	-0-	41168	897258	25598 (28)
MV 64	1415	1491	3165	26092	657766	23348 (28)
MV 68-E				51651	51651	51651 (1)
MV 104	615	708	1046	909	33253	1288 (26)
MV 109	-0-	357	2401	15417	309118	16271 (19)
MV 583-M				3929	37129	3929 (1)
Breech F						
MV 4	938	890	1843	11171	331399	12289 (27)
MV 8	494	298	2313	12944	351326	13089 (27)
MV 12	827	3495	5968	41344	1051148	38894 (27)
MV 45	-0-	-0-	-0-	29510	588891	26676 (22)
State A						
MV 62	513	-0-	3039	27742	580613	21508 (27)
mv 248 C				3716	3716	3716 (1)

265178 ÷ 29 = 2614 avg per well

CHACRA	9/78	10/78	11/78	12/78	1/79	2/79	3/79	4/79	5/79	6/79	7/79	8/79
Breech												
C 228	808	1070	812	690	1330	534	861	917	903	930	558	847
C 258	968	1374	1238	1408	1494	1415	1225	964	1078	1094	590	984
C 307	2760	2895	2542	3349	3142	3047	2633	2680	1924	2303	2353	1958
C 314	1229	2581	1068	500	1097	1988	-0-	-0-	-0-	933	1581	1943
C 330	850	1501	2244	3174	-0-	2053	1718	1758	1460	1079	1118	1318
C 332	1127	-0-	1877	2595	2345	1458	-0-	1599	2785	1644	1917	2060
C 352	917	1587	2468	2085	1890	2256	2355	2446	2039	1828	1406	1731
C 354	3216	2873	2323	4008	4372	3332	3062	3287	3098	2840	2306	2285
C 368	423	430	291	730	800	856	771	777	696	519	400	462
C 382	74	-0-	779	1771	1512	1503	1368	1145	831	452	128	115
Breech A												
C 264	1404	1096	1538	1682	1495	1640	1461	1299	1192	1106	877	1110
C 291	1130	826	1028	1143	972	1046	860	1795	784	770	607	735
C 675	-0-	2829	3912	4506	4037	3356	2912	3823	2615	2316	1650	2125
Breech B												
C 121	1338	1089	924	934	1510	895	953	1340	1003	1004	921	766
C 193	2303	2130	2377	2479	2233	2095	1799	2014	1683	1109	1127	1355
C 196	-0-	3816	4023	3731	3022	2983	2921	1004	2035	2390	2196	2778
C 217	977	1689	1765	1743	1485	1971	1834	1548	1648	1666	1234	1627
Breech D												
C 342	517	892	1087	1177	1179	1077	970	897	841	785	576	764
C 358	981	1090	1117	1027	1021	1064	986	874	856	814	664	832
C 383	728	1002	1033	1194	1169	1031	939	853	938	886	681	818
C 385	883	1216	1429	1439	1471	1337	1156	1060	1129	1047	785	1064
C 387	1245	1900	2210	2237	2413	2033	2085	1971	1846	1756	1145	1674
Breech E												
C 51	804	916	1012	1679	1153	1497	329	1289	1418	1175	1006	876
C 104	-0-	2444	1397	2306	1761	643	1843	1285	1299	1097	870	724
C 109	-0-	2531	1083	1247	1934	1576	803	1595	1093	756	821	1524
C 581	409	264	754	533	713	695	566	555	560	540	457	562
								4674				
Reuter												
C 297	-0-	156	1235	1570	1116	1405	1412	1191	1073	1008	447	278
C 343	-0-	690	829	1597	1465	1244	903	1121	1050	1058	676	748
Sanchez												
C 4	1466	1523	1381	1643	1538	1181	1514	1364	1364	858	960	1729
C 5	2024	1320	2464	886	873	485	-0-	3962	3278	2608	1512	2779
State C - COM												
C 235-R	-0-	-0-				4044	2195	2887	2527	1859	1472	1320

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Caulkins EXHIBIT NO. 5
CASE NO. 7137

	9/79	10/79	11/79	12/79	1/80	2/80	3/80	4/80	5/80	6/80	7/80	8/80
CHACRA												
Breech												
C 224	3133	3209	5339	3842	2647	5166	3484	3278	3290	951	-0-	-0-
C 224-A	-0-	-0-	8975	10457	9922	9929	8436	8544	7959	5779	6005	7595
C 228	799	709	621	791	438	1108	793	403	537	141	5	180
C 258	1176	995	1092	683	1303	1465	901	1008	942	396	107	971
C 307	2010	1803	2218	2098	2079	2761	2038	1957	2160	880	851	668
C 314	3077	1844	1667	1968	1265	2096	2295	1430	1916	1209	311	1543
C 330	1430	1252	1309	1593	1046	1373	1609	1366	1081	260	275	1011
C 332	2072	1777	1582	1834	1468	1583	1560	1448	1440	763	223	1222
C 352	1877	1696	1457	1619	1700	1921	1628	1717	1393	446	229	1050
C 354	2888	2794	806	742	608	739	774	795	721	447	313	818
C 368	527	531	440	568	509	590	460	531	427	425	174	459
C 382	1284	843	671	1146	692	60	612	816	478	89	41	27
C 812	-0-	-0-	8363	6451	5947	6670	6733	4939	5729	5170	3193	5014
Breech A												
C 125	-0-	-0-	5206	3899	1380	1667	2704	1398	969	322	-0-	697
C 264	1010	943	910	1096	1249	1060	2162	713	1108	706	408	927
C 291	812	714	751	692	682	656	1507	496	756	565	342	620
C 675	2086	1481	2192	2124	2091	2012	1678	1728	1421	758	545	1668
C 679	-0-	230	4500	2697	2638	2208	1736	1360	1277	996	663	1254
C 729	-0-	2073	1648	2017	1579	1764	1421	1406	1078	1071	543	1139
Breech B												
C 121	930	829	874	893	706	688	1867	823	655	706	423	530
C 193	1483	1287	978	1446	1394	1413	2924	1230	1075	492	277	1116
C 196	1769	1545	1609	1482	1145	1780	1552	1386	1238	719	508	1208
C 217	1568	-0-	1911	1277	1814	1966	1692	1683	1489	818	200	1358
C 220-R						6284	3849	4893	3533	4184	715	1154
Breech D												
C 342	793	789	1018	973	945	896	772	647	766	408	183	542
C 358	846	810	861	713	770	775	1544	544	772	317	387	748
C 383	1001	837	1069	925	935	885	772	732	929	464	225	886
C 385	1169	1058	1285	1188	1174	1063	997	805	1040	733	276	943
C 387	1825	1640	2062	1942	1882	1867	1667	1291	1643	868	374	1444
Breech E												
C 51	1133	966	1113	1083	1132	1387	971	901	895	347	145	684
C 104	895	723	692	715	659	687	577	529	463	331	302	567
C 109	759	632	833	802	1016	600	771	588	617	99	10	-0-
C 581	528	400	480	548	329	515	335	300	230	99	-0-	-0-
Reuter												
C 297	1209	984	1192	1254	1117	1137	992	761	940	308	8	636
C 343	737	728	1038	939	1024	968	780	671	871	587	205	704
Sanchez												
C 4	1324	1326	1273	1174	1219	1699	1062	1420	1136	1118	994	1137
C 5	2152	2190	2540	2236	2183	1150	1367	2131	1565	3683	1421	1587
State C - COM												
C 235-R	1497	1608	1856	1798	1057	1963	1336	1104	1278	518	175	941

Officer	9/80	10/80	11/80	12/80	Cum Rec'd	Mod	Cum Mo Avg
Breech							
C 224	-0-	493	6318	8003	44162	(13)	3396
C 224-A	4007	5640	7987	6875	107410	(14)	7672
C 226	136	-0-	1015	1348	19289	(27)	714
C 258	515	780	1187	721	27704	(28)	991
C 307	4188	4115	4997	8816	70212	(28)	2507
C 314	871	1316	2168	1436	44332	(25)	1773
C 330	473	545	711	1151	34239	(29)	1286
C 332	561	1034	1888	1226	41114	(26)	1581
C 352	604	910	1749	1297	44207	(28)	1582
C 354	472	646	841	682	52082	(28)	1860
C 368	191	242	364	296	13848	(28)	494
C 382	4	214	1219	671	18415	(27)	682
C 812	3092	3965	5545	3970	78831	(14)	5631
Breech A							
C 125	1115	1411	1710	1371	23879	(13)	1836
C 136-E				736	736	(1)	736
C 175-E				2762	2762	(1)	2762
C 204-E				3542	3542	(1)	3542
C 264	642	856	1022	913	31625	(28)	1129
C 291	439	571	666	553	21514	(28)	768
C 675	1162	1417	2106	1483	60535	(27)	2242
C 679	1040	1256	1570	1181	24611	(14)	1757
C 729	909	920	1061	996	17682	(15)	1178
Breech B							
C 121	633	589	826	781	25480	(29)	910
C 193	703	988	1409	978	41917	(28)	1497
C 196	879	1079	1566	1071	51235	(28)	1829
C 217	453	882	1848	1362	39447	(29)	1360
C 220-R	999	2034	2061	3690	33384	(11)	3035
Breech D							
C 342	415	870	1071	887	29837	(28)	1065
C 346				2985	2985	(1)	2985
C 358	460	705	923	745	23266	(28)	831
C 383	476	795	1054	917	25274	(28)	903
C 385	414	969	1398	1156	29684	(28)	1060
C 387	650	1178	2080	1764	46696	(28)	1667
Breech E							
C 51	513	863	1400	1069	27754	(28)	991
C 54-E				1396	1396	(1)	1396
C 68-E				2823	2823	(1)	2823
C 104	409	471	699	606	24948	(27)	924
C 109	-0-	160	1080	997	25607	(26)	984
C 581	-0-	-0-	-0-	-0-			
C 583-M				1765	1765	(1)	1765
Reuter							
C 297	189	408	1296	932	24458	(27)	905
C 343	462	765	1145	927	23922	(26)	1800
Sanchez							
C 4	1012	1061	1006	1143	35616	(28)	1271
C 5	804	685	574	2169	50628	(27)	1875
State A							
C 268-E				2620	2620	(1)	2620
State C - COM							
C 235-R	485	896	1681	1054	35551	(23)	1545

Group monthly avg = 1725 mcf

CAULKINS OIL CO.

Post Office Box 780
Farmington, New Mexico 87401

Case No. 7137

Well Number	Location	Order Number	Production Split Chacra	Mesa Verde
54 E	P 4 26 6	R-6266	34%	66%
68 E	L 4 26 6	R-6266	32	68
104	P 5 26 6	R-5647	40	60
136E	O 10 26 6	R-5647	40	60
175E	B 8 26 6	R-5647	40	60
204E	L 9 26 6	R-5647	40	60
224A	D 13 26 7	R-5922	54	46
248E	D 13 26 6	R-6267	32	68
268E	J 16 26 6	R-6266	42	58
346	A 22 26 6	R-6266	42	58
583M	L 5 26 6	R-6266	31	69
679	J 9 26 6	R-5647	40	60
812	N 18 26 6	R-5922	52	48

All gas production being split as shown.

All oil production from commingled wells to Mesa Verde Zone.

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
CaulKins EXHIBIT NO. 2
CASE NO. 7137

CAULKINS OIL CO.

Post Office Box 780
Farmington, New Mexico 87401

Case No. 7137

Well No.	Location			Order No.	PC	Chacra	MV	Greenhorn
109	M	3	26N 6W	R-5647-A	42%	18%	40%	
220R	B	14	26N 7W	R-5926	50	20	30	
224	A	13	26N 7W	R-5927	25	30	33	12
228	A	18	26N 6W	R-5634	50	20	30	

All Gas production being split as shown.

Oil production from 224 being split 60% Mesa Verde and 40% to Greenhorn.

All oil production from 109, 220R and 228 to Mesa Verde zone.

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Caulkins EXHIBIT NO. 3
CASE NO. 7137

INDIVIDUAL WELL INITIAL PRESSURE

BEFORE COMMINGLING

CHACRA ZONE

WELL NO.		LOCATION			PRESSURE
224 A	D	13	26N	7W	960
258	F	18	26N	6W	895
307	M	13	26N	7W	853
314	P	18	26N	6W	1003
330	C	23	26N	7W	1080
332	A	23	26N	7W	831
352	F	24	26N	7W	1196
812	N	18	26N	6W	995
264	H	17	26N	6W	975
291	J	17	26N	6W	970
121	D	7	26N	6W	954
193	M	7	26N	6W	1005
217	D	14	26N	7W	1150
342	A	21	26N	6W	1118
346	A	22	26N	6W	926
358	F	21	26N	6W	925
383	O	21	26N	6W	945
385	M	22	26N	6W	815
387	O	22	26N	6W	930
51	D	4	26N	6W	1040
54 E	P	4	26N	6W	991
68 E	L	4	26N	6W	1003
583 M	L	5	26N	6W	998
4	D	25	26N	6W	977
5	M	25	26N	6W	860
268 E	J	16	26N	6W	1020
					(28347)

Avg. 977#

MESA VERDE ZONE

WELL NO.		LOCATION			PRESSURE
224 A	D	13	26N	7W	1017
4	A	33	27N	6W	1085
8	A	34	27N	6W	844
12	A	35	27N	6W	980
45	M	35	27N	6W	914
58	A	3	26N	6W	1039
62	A	2	26N	6W	942
812	N	18	26N	6W	1060
307	M	13	26N	7W	1004
229	D	17	26N	6W	1028
341	B	21	26N	6W	1085
346	A	22	26N	6W	956
54 E	P	4	26N	6W	1010
68 E	L	4	26N	6W	1045
583 M	L	5	26N	6W	1090
268 E	J	16	26N	6W	1140
					(19473)

Avg. 1024#

Dockets Nos. 5-81 and 6-81 are tentatively set for February 11 and 25, 1981. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 28, 1981

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

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

CASE 7135: Application of Celeste C. Gryenberg for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Cottonwood Draw Unit Area, comprising 2555 acres, more or less, of State lands in Township 16 South, Range 24 East.

CASE 7119: (Continued from January 14, 1981, Examiner Hearing)

Application of Shell Oil Company for a unit agreement, Bernalillo and Sandoval Counties, New Mexico. Applicant, in the above-styled cause, seeks approval for the West Mesa Unit Area, comprising 26,722 acres, more or less, of State, Federal, and fee lands in Townships 10, 11, and 12 North, Ranges 1 and 2 East.

CASE 7136: Application of Hanson Oil Corporation for amendment of R-111-A, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the elimination of the NE/4 of Section 26, Township 18 South, Range 30 East, from the Potash-Oil Area as defined by Order No. R-111-A as amended. In the alternative, applicant seeks an exception to the casing and cementing rules of R-111-A for its wells to be drilled within the NE/4 of said Section 26.

CASE 7137: 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 Chacra and Blanco Mesaverde production in the wellbores of its wells located in: Sections 1 thru 5, and 7, 8, 21, 22, 24, and 25 in Township 26 North, Range 6 West; Sections 13, 14, 23, 24, and 26 in Township 26 North, Range 7 West; and Sections 33 thru 35 in Township 27 North, Range 6 West.

CASE 7138: Application of Wiser Oil Company for a special gas-oil ratio limitation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a special gas-oil ratio limitation of 6000 to one, retroactive to May 1, 1980, for the Hardy-Drinkard Pool.

CASE 7051: (Continued from December 30, 1980, Examiner Hearing)

Application of Petro Lewis Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Blinebry and Drinkard production in the wellbore of its L. G. Warlick "B" Well No. 2 located in Unit G of Section 19, Township 21 South, Range 37 East.

CASE 7139: Application of Yates Petroleum Corporation for amendment of Division Order No. R-6367, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-6367 to designate Yates Petroleum Corporation as the operator of the two proration units pooled by said order, replacing McClellan Oil Corporation as operator.

CASE 7140: Application of Yates Petroleum Corporation for compulsory pooling and an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying the N/2 of Section 26, Township 21 South, Range 26 East, to be dedicated to a well to be drilled at an unorthodox location 660 feet from the North line and 1650 feet from the East line of said Section 26. 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, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7100: (Continued from January 14, 1981, Examiner Hearing)

Application of Harvey E. Yates Company for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Atoka and Morrow production in the wellbore of its Travis 24 State Com Well No. 1 in Unit H of Section 24, Township 18 South, Range 28 East.

CASE 7141: Application of P & O Oil Field Service for an oil treating plant permit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority for the construction and operation of an oil treating plant for the purpose of treating and reclaiming sediment oil at a site in the SW/4 NW/4 of Section 25, Township 25 South, Range 36 East.

KELLAHIN and KELLAHIN
Attorneys at Law
500 Don Gaspar Avenue
Post Office Box 1769
Santa Fe, New Mexico 87501

Jason Kellahin
W. Thomas Kellahin
Karen Aubrey

Telephone 982-4285
Area Code 505

December 22, 1980

Mr. Joe Ramey
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

RE: Caulkins Oil Company

Dear Joe:

Please set the enclosed application for hearing on January 28, 1981.

Very truly yours,

W. Thomas Kellahin

WTK:jm
Encl.
cc: Mr. Arnold Raether
Mr. Charles Varquer

BEFORE THE

OIL CONSERVATION DIVISION

DEPARTMENT OF ENERGY

STATE OF NEW MEXICO

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

No. 7137

APPLICATION

COMES NOW CAULKINS OIL COMPANY and applies to the Oil Conservation Division of New Mexico for authority to commingle production from Chacra Formation and Mesa Verde Formation in various sections, Rio Arriba County, New Mexico and in support thereof would show the Division:

1. Applicant is the operator in the Mesa Verde and Chacra formations and seeks permission to downhole commingle production from the Chacra and Mesa Verde formations within the Blanco Mesa Verde Pool, Rio Arriba County, New Mexico, to-wit:

T26N, R6W
Sections 1, 2, 3, 4, 5, 7, 8, 21, 22, 24 & 25

T26N, R7W
Section 13, 14, 23 & 24 & 26

T27N, R6W
Section 33, 34 & 35

2. The approval of this application will recover gas that would not otherwise be produced, would not impair the correlative rights of others and will be in the best interest of conservation.

Respectfully submitted,

CAULKINS OIL COMPANY

By _____

W. Thomas Kellahin
KELLAHIN & KELLAHIN
P.O. Box 1769
Santa Fe, New Mexico 87501
(505) 982-4285

dr/

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. 7137

Order No. R-6588

APPLICATION OF CAULKINS OIL COMPANY

FOR 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 28, 19 81, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of February, 1981, 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, is the owner and operator of ~~the~~ certain wells located in Sections 1 through 5, 7, 8, 21, 22, 24, and 25 in Township 26 North, Range 6 ~~located in Unit xxxxxxx of Section xxxxxxxx, Township xxxxxxxxxxxxxx~~ West; Sections 13, 14, 23, 24, and 26 in Township 26 North, Range 7 West; ~~Range xxxxxxxxxxxxxxxx, NMPM, xxxxxxxxxxxxxx County, New Mexico xxx~~ and Sections 33 through 35 in Township 27 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle Chacra and Blanco Mesaverde production within the wellbores of the above-described wells.

(4) That from the Chacra zone, the subject wells are expected to be capable of low production only.

(5) That from the ~~Pictured Cliffs~~ Mesaverde zone, the subject wells are expected to be ~~are~~ capable of low production only.

(6) That the proposed commingling ~~may~~ should result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and ~~will~~ would not violate correlative rights.

(~~7~~) 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 the establishment of an administrative procedure whereby production from the Chacra and ~~Pictured Cliffs~~ Mesaverde formations in those sections described in Finding No. (2) above may be commingled within the wellbore of a producing well therein should permit the recovery of otherwise uneconomic reserves.

(9) That such an administrative procedure should provide for approval by the Division's District Supervisor at Aztec, safeguards to prevent crossflow between pools, and the protection of interest owners under each proration or spacing unit.

provision should be made whereby the

(10) ~~That the applicant shall~~ would consult with the Supervisor of the Aztec district office of the Division and determine an allocation formula for the allocation of production to each zone in each ~~of the subject~~ well ~~s~~ commingled pursuant to this order and such administrative approval.

(11) That the operator of ~~the subject well shall~~ any well so commingled should immediately notify the Division's Aztec district office any time any such well commingled under terms of this order has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.

THEREFORE

IT IS ~~FURTHER~~ ORDERED:

Caulkins Oil Company's

(1) That an administrative procedure is hereby adopted whereby the district supervisor of the Division District Office at Aztec may administratively authorize downhole commingling of the Chacra and ~~Pictured Cliffs~~ Mesaverde zones in ~~applicant's~~ wells in ~~Sections 1 through 4, 9 through 14, and 23 and 24, Township 24 North, Range 4 West, NMPM, Rio Arriba County, New Mexico.~~

Sections 1 through 5, 7, 8, 21, 22, 24 and 25 Township 26 North, Range 6 West, NMPM, and in Sections 13, 14, 23, 24, and 26, Township 26 North, Range 7 West, NMPM, and in Section 33 and 35 Township 27 North, Range 6 West, NMPM, all in Rio Arriba County, New Mexico.

(2) That qualification and application for and approval of requests for downhole commingling shall be made in accordance with the following rules:

RULE 1. Wells shall qualify for approval for downhole commingling under this order provided that:

(a) that the commingling is necessary to permit production from the Chacra and ~~Pictured Cliffs~~ Mesaverde zones which would not otherwise be economically producible, i.e., wells which are expected to have a combined stabilized pipeline delivery rate from both zones of 150 MCF per day or less.

(b) neither zone produces more than 10 barrels of liquid per day;

(c) the bottom hole pressure of the lower pressure zone is not less than 50 percent of the bottom hole pressure of the higher pressure zone adjusted to a common datum; and,

(d) the ownership of the two zones is common (including working interest, royalty interest, and overriding royalty).

RULE 2. Applications for administrative approval of downhole commingling under this order shall include:

(a) Name and address of the operator.

(b) Lease name, well number, well location, and names of the pools to be commingled.

(c) A mechanical log of the well.

(d) A diagrammatic sketch of the well showing casing, tubing, cement tops, perforations, and any downhole equipment.

(e) Pressures and production for each zone to be commingled as determined from drill stem tests or potential tests following completion.

(f) 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.

RULE 3. The district supervisor may approve the proposed downhole commingling if, in his opinion, there is no disqualifying disparity of bottomhole pressures or other reservoir characteristics, waste will not result thereby, and correlative rights will not be violated.

RULE 4. Upon such approval, the well shall be operated in accordance with the provisions of the administrative order which authorized the commingling, ~~and allocation of the commingled production from the well to each of the producing zones shall be in accordance with the allocation formula set forth in the order.~~

RULE 5. ~~(II)~~ That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator shall notify the Aztec district office of the Division any time ~~either of the subject wells is~~ any well commingled pursuant to this authority is shut-in for 7 consecutive days.

RULE 6. ~~(III)~~ That in order to allocate the commingled production to each of the commingled zones in ~~the~~ any such well in which commingling is approved, applicant should consult with the supervisor of the Aztec district office of the Division and determine an allocation formula for each of the production zones.

RULE 7. The Division Director may rescind authority to commingle production in the wellbore and require both zones to be produced separately in any well commingled pursuant to this authority if, in his opinion, waste or reservoir damage is resulting thereby, or if any change of conditions render the installation no longer eligible for downhole commingling under the provisions of Rule 1, paragraphs (a) through (d).

IT IS FURTHER ORDERED:

(1) 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
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L