CASE 6638: LADD PETROLEUM CORPORATION FOR DOWNHOLE COMMINGLING, RIO ARRIBA COUNTY, NEW MEXICO.

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CASE NO.

6638

APPlication, Transcripts, Small Exhibits,

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico
5 September 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Ladd Petroleum Cor-) poration for downhole commingling,) Rio Arriba County, New Mexico.

CASE 6638

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

APPEARANCES

For the Oil Conservation Division:

Ernest L. Padilla, Esq. Legal Counsel for the Division State Land Office Bldg. Santa Fe, New Mexico 87503

For the Applicant:

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

SALLY WALTON E
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RICK HOGAN

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Santa Fe, New Mexico 31501

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24 25 MR. STAMETS: We'll call next Case 6638.

MR. PADILLA: Application of Ladd Petroleum

Corporation for downhole commingling, Rio Arriba County, New Mexico.

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

(Witness sworn.)

RICK HOGAN

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

- Q. Mr. Hogan, would you please state your name, by whom you're employed, and in what capacity?
- A. My name is Rick Hogan. I'm a Production Engineer for Ladd Petroleum.
- Q. Mr. Hogan, have you previously testified before the Oil Conservation Division?
 - A. No, I have not.
- Q. Would you summarize for the Examiner when and where you obtained your degree in petroleum engineering?

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Senta Po. New Months

Α.	I got my Bachelor degree	e in petroleum
engineering from	the Colorado School of M	lnes in December of
1974.		

- Q. Subsequent to graduation where have you been employed as a petroleum engineer?
- A. I worked for three and a half years for Continental Oil Company as a production engineer. I then worked for one year for Petro Lewis Corporation as a development engineer. In May of this year I started working for Ladd Petroleum as a production engineer.
- Q As part of your duties as a petroleum engineer have you made a study of the proposed downhole commingling in this case?
 - A. Yes, I have.

MR. KELLAHIN: We tender Mr. Hogan as an expert petroleum engineer.

MR. STAMETS: The witness is considered qualified.

- Q. (Mr. Kellahin continuing.) Would you refer to what we've marked as Exhibit Number One and identify that?
- A. Okay. Exhibit Number One is a section of the area of interest. This is a section of a POMCO map, which is a publication that can be ordered similar to PR reports. It's done by an independent.

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The well that is in question, the Lindrith No. 24, is circled in red. The area inside the red lines is the area that Ladd Petroleum owns all the mineral rights from the surface down.

Q What is the proration unit dedicated to the subject well?

A. Okay, it is presently the northwest quarter of Section 4.

Q. There are certain other wells indicated on Exhibit Number One in the northwest quarter of 4. Would you identify those wells for us?

A. Okay, those wells are shallow wells and they are operated by other -- other operators. They do not go down into the Largo Gallup or the Basin Dakota. They are they are strictly there for purpose of this map which puts down all the wells in the area.

Q Would you identify for us the other Gallup or Dakota production that Ladd Petroleum Corporation has in this area?

A. Ladd has three other wells, one in each section, Section 3, Section 9, and Section 10, and they are all three Gallup-Dakota completions. They're all dual.

Q. And they are identified on the plat by the word "Ladd" and then the well symbol?

A. Yes.

	Q.	Okay.	What	do	you	propose	to	do	with	this
well, Mr.	Hogan?									
	A.	Okay,	going	to	Exh	ibit Num	ber	Two	o, if	we
may, this	is a pl	ot of	the cal	lcu.	lated	l bottom	ho	le p	ressi	ıre

may, this is a plot of the calculated bottom hole pressure for the Dakota and Gallup formations versus time. It's noted that sometime during 1975 we had a packer leakage, which commingled the two zones at that time.

Again, Exhibit Number Three, also, is a completion sketch of the present completion of the well, as it is right now.

Q. If the downhole commingling is approved by the Division, what changes, if any, would you make in the manner of completion of the well?

A. Okay, as the well is right now, we propose to -- to make no changes. We prefer to leave it just as it is and continue to commingle it in the, you know, in the present wellbore condition.

Q. Your pressure versus time curve on Exhibit

Number Two shows that at some point in '75 the two zones be
came commingled, is that correct?

A. Yes, it is.

Q. Do you have any opinion as to how they became commingled?

A. Okay. I feel that that is a packer leak due to the length of time that everything has been in the

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wellbore. The quality of the tubing is possibly questionable but had this been any type of corrosive zone, that problem would have surfaced a long time ago, and I personally feel that it is probably a packer seal leak or seal assembly leak, just due to the length of time that the packer and seal assembly has been in the hole. When was this well first completed? It was completed in December, 1962.

- production was in January of '73, or excuse me, '63.
- Is the working interest and the royalty -or the overriding royalty interests common for the northwest quarter of this section?
 - Yes, they are.
 - And this is a Federal lease?
 - Yes, it is.
- Is either the Gallup or the Dakota zone produced under compression?
- Yes, the Gallup is presently produced under compression because of the low bottom hole pressure that it exhibited earlier on in the life of the well.

The Dakota is not.

- If the commingling is approved, would you continue to produce the well in the same way?
- Yes, we would. We would be compressing the Gallup and all production would go through the compressor

	Q.	As a petroleum engineer do you see any
problems w	vith cor	tinued production of the well in this manner
	A.	No, I do not.
	Q.	Would you refer to what we've marked as
Exhibit Nu	mber Fo	ur and identify that?
	Д.	Exhibit Four is just a summary of the
production	from t	he Dakota and the Gallup logged individually
from the w	ell sin	ce 1971 when we took over operations of
this well.		
	Q.	Exhibit Four is the Gallup production and
Exhibit Fi	ve is t	he Dakota production?
	λ.	Yes.
ſ	Q .	The Gallup zone does make some oil production:
1	A.	Yes, it does. There's a small amount of
condensate	and a	very small amount of water produced from
the Gallup.	•	
g e).	Your tabulation of production doesn't show
any water r	roducti	on. What amounts are you talking about?
************** \	I•	Probably less than one barrel a day.
Q	,	And for the Dakota production, does that
zone make a	my oil	or water?
A	•	It makes just a trace of condensate; re-
cently hasn	't made	any.

In your opinion will there be any problems

encountered by the fact that condensate and water may be

produced by either of the zones?

A. No.

Q. The volumes in question are not significant enough to encounter problems with the downhole commingling?

A. No, they are not. They're nearly insignificant.

Q. Would you refer to what has been marked as Exhibit Six and Seven and identify those exhibits?

A. Okay. Exhibits Six and Seven are the production decline curves for the Largo Gallup and the Basin Dakota for the well in question, throughout the entire life of the well.

Q. Do you have an opinion concerning whether or not Ladd Petroleum Corporation could go back and repair the leak in the packer and continue to produce these wells as a dual completion well?

A. It's our opinion that we could not do that because of low bottom hole pressure in these wells right now. It would require killing one or both of the zones and both zones are at low enough pressure right now and sensitive enough to fluids that we feel that if we were to have to kill them, we would not get either one of them back. We'd probably end up plugging the well.

Q. Have you made any calculations concerning the producable reserves remaining from both the zones?

А.	Yes,	Ţ	nave.

Q. And what is that figure?

A. Okay. From the decline curve analysis it shows that we have approximately 1.3-billion cubic feet.

My personal opinion is that that is extremely optimistic. Plotting of P/Z versus cumulative plot, we come up with something along the lines of 800,000 -- or excuse me, 800-million cubic feet remaining.

I feel that is much closer to the real case because you can take into consideration the fact that you'd have to have some bottom hole pressure when you deplete your zones.

MR. STAMETS: Is that a combined figure?

A. Yes.

Q. Can you allocate for us the producable reserves remaining to each of the zones?

A. Yes, I can.

Referring to Exhibits Five and Six, I believe, the depletion, or excuse me, the production curves,
at the beginning of 1975 for the Largo Gallup, and also at
the beginning of 1975 for the Basin Dakota, we have the cumulative production to date for both of those zones.

The ratio of the production from the Gallup to the Dakota -- well, the percentage is 72.4 percent of all the production from that well came from the Gallup up to the

beginning of 1975. At that time we encountered problems with the packer. It has been commingled since then and referring to this example again, looking at the latest figure of June of 1979, of what our cumulative production is, and taking the exact same ratio, we have a 72.6 percent of the cumulative production has been out of the Gallup and that is a change of only 2/100ths percent, so we feel that there would be no difference in continuing to produce. They're producing at the same ratio and have all their life.

Mr. Hogan, have you obtained waivers from all the offset operators with regards to the proposed downhole commingling?

A. Yes, we have. We have contacted them and asked for waiver of objection letters to be signed and returned to us and to the Conservation Commission. If they did not, you know, have any objection to us commingling these two zones, and all of the waiver letters have been signed and turned back in.

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

A. Yes, it will.

Q. And were Exhibits One through Seven prepared by you or compiled under your direction and supervision?

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	Α.	Ex	hibit l	Number	One is	s a pu	blica	tion th	nat
can be	obtaine	ed by a	nyone.	It's	an ind	depend	ent c	orpora	tion
that pr	oduces	that.	I did	Two an	d Thre	e and	the	remain	ler
of thos	e were	done j	ust in	accoun	ting.	It's	just	a	

Q. They're documents from Ladd Petroleum Corporation's records?

A. Yes, they are.

MR. KELLAHIN: We'd move the introduction of Exhibits One through Seven.

MR. STAMETS: These exhibits will be admitted.

CROSS EXAMINATION

BY MR. STAMETS:

Mr. Hogan, what was the figure you gave as the split on the Gallup there, 72 percent?

A. 72.4 percent prior to 1975 and 72.6 percent subsequent to 1975.

Well, 72.6 percent is from the beginning of the well to the present.

Q. So you are recommending, then, that the, if the well is allowed to be downhole commingled, that the percentage of production assigned to the Gallup would be 72 percent of the total?

A. 72.6 percent, yes.

Q Okay, I don't think we'll get quite that close.

A. There is just almost no condensate produced from -- from the Dakota, and hasn't been for some time.

There's a little bit coming out of the Gallup and it's not a great deal of it.

How about the oil production in this well?

We'll probably allocate that on the same percentage unless we go back and find that there's a significant difference between the entire, you know, the cumulative volumes produced from either zone.

Those have not been summed on this exhibit.

Q If you could do that, Mr. Hogan, on the basis of production which had occurred up to 1974 and submit that at a later date, I would appreciate it.

A Okay.

Q It would be basically the same information you're already shown. It would be just summarized.

Mr. Hogan, why -- why do you not go into this well and, say, unlatch the Dakota tubing and produce both zones through a single string?

A. We would have to probably pull one string and we'd have problems with the pressure at the surface to pull the tubing, although that's not a great deal of pressure. It's not a significant problem. It can -- we can handle that.

We don't want to kill either one of the zones, which is why we're proposing to leave it the same way as it is, and we are presently 292 feet from the top of the packer to the top of the lower set of perforations in the Dakota, and I believe we're only allowed 300, and we don't feel like it's -- you know, we think that that would probably be real close, if we had to pull that up.

Q. Is there some kind of a wireline instrument that you could run inside the Dakota tubing and put a hole in that tubing above the packer and produce both zones through the single string of tubing?

A. Yes, there is,

Q. Would that result in more efficient production or less efficient production?

A. It would probably result in more efficient production, although we don't feel that we have too much -- we don't have very large, you know, production figures coming from the Dakota right now, that it's probably not going to improve the quality that much. But overall it would be a more effective, more efficient method of producing.

Q. Would that result in both zones being produced through the compressor?

A. Yes.

Q And this could be accomplished without killing either zone, is that correct?

1	A.	Yes.
2	Q	And it could be accomplished economically
3	A.	Yes.
4		MR. STAMETS: Any other questions of the
5	witness? He ma	y be excused.
6		Oh, yes, I have one additional question.
7.	What are the es	timates of the current pressures in these
8	two zones?	
9	а.	The last pressures that we had were 320
10	psi for the Gal	lup; 260 psi for the Dakota.
11	Q	And when did you get those pressures?
12	А.	Those were in July of 1979,
13	Q.	Do those reflect real pressures or the
14	commingled press	sures?
15	A .	Those are reflective of commingled pres-
16	sures.	
17	,	Okay. If we go back then to 1974, on Ex-
18	hibit Number Two	o, would those pressures be indicative of
19	the differential	L at that time?
20		Yes.
11	Q.	Could those be projected to make a deter-
2	mination of what	: bottom hole pressures might be expected
з	today?	

I don't understand your question.

Okay. Can you extrapolate the expected

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bottom hole pressure today utilizing information shown on this exhibit?

- A. Yes.
 - Q Would you do that, please?
 - A From prior to 1974?
 - Q Yes.
 - A. Well, --
- Q I presume you feel the 1974 pressure is a good pressure.

A. Yes, it's a good pressure. Again, it has to be taken into consideration with the rest of the pressures

If you were to merge all five of those data points and draw a straight line through all five of those on an average, you would come up with something not too far removed from where we are right now. It would probably be a bit higher. I would say most likely it would be around 5-600 pounds.

- Q Let's just take the Dakota pressure itself.
- A. Okay.
- Q. Back in 1974 it looked like you had about 975 pounds?
 - A. Yes.
- Q. Okay, what would you expect the Dakota pressure to be today, based on that decline?
 - A. Okay, are you referring to the decline be-

tween those -- that point and the two points adjacent to it on either side?

Q Yes, I think so, or any other set of points that you feel would be appropriate.

A Okay, I, myself, would add all five of those points together and draw a line from the two points on the far left and it would -- it would drop off much less than that slope between those three points that you're looking at would indicate, and I would estimate that pressure to be somewhere around 5-600 pounds.

Q. Okay. Now, is that typically what happens to a Dakota well, that it goes down at that rate, or does the rate of decline tend to drop off in later years as it appears to in this well?

A. It generally for a Dakota well does level out. It does drop off. It does decrease at a slower rate in later life.

Q. So if we use only the last three points what kind of a pressure would we have?

A Okay, then we would be looking at probably around 800 pounds.

Q. Okay. Now, let's do the same thing for the Gallup and see if we can estimate what kind of pressure we might have.

A. Well, if you were to assume that it was --

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had a slope essentially similar to the Dakota zone, then you'd probably come out at around 100 pounds. You know, if it leveled off, you may have between 100 and 200 pounds depending upon how much it levels off.

- Q. Now, with that kind of pressure differential is there not an opportunity for cross flow between those two zones?
 - A. Yes, there is.
- Q. And can that have any harmful effect on the ability of this well to produce all of the gas from the two zones?
 - A. No. I feel like it will not affect it.
 - Q. And why do you say that? What --
- A. Well, the Dakota zone, the Dakota zone is a higher pressured zone. Any cross flow would go from the Dakota into the Gallup and the Gallup is a much better producer. So any -- any gas given up by the Dakota would flow into a higher permeable zone, which would then be recovered as the pressure depleted.

Just looking at the fact that we've got four years of commingled production and still have the exact same production ratio, I would say that that was evidence that it's not going to harm anything.

Q. Would the fact that you would have both zones producing through a compressor also ameliorate the

pressure differential?

Yes, it would.

MR. STAMETS: Any other questions of the witness? He may be excused.

> Anything further in this case? The case will be taken under advisement.

(Hearing concluded.)

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REPORTER'S CERTIFICATE

I, SALLY W. BOYD, 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, from my notes taken at the time of the hearing.

Sally W. Boyd, C.S.R.

do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 19.72 heard by me on heard by me on Conservation Division

SALLY WALTON BOY ENTIFED SHORTHAND REPORT 130 Plaze Bladca (606) 471-24

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MR. STAMETS: We'll call next Case 6638.

MR. PADILLA: Application of Ladd Petroleum

Corporation for downhole commingling, Rio Arriba County, New Mexico.

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

(Witness sworn.)

RICK HOGAN

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Mr. Hogan, would you please state your name, by whom you're employed, and in what capacity?

My name is Rick Hogan. I'm a Production Engineer for Ladd Petroleum.

Mr. Hogan, have you previously testified before the Oil Conservation Division?

No, I have not.

Would you summarize for the Examiner when and where you obtained your degree in petroleum engineering

A. I got my Bachelor degree in petroleum engineering from the Colorado School of Mines in December of 1974.

Q Subsequent to graduation where have you been employed as a petroleum engineer?

A. I worked for three and a half years for Continental Oil Company as a production engineer. I then worked for one year for Petro Lewis Corporation as a development engineer. In May of this year I started working for Ladd Petroleum as a production engineer.

Q As part of your duties as a petroleum engineer have you made a study of the proposed downhole commingling in this case?

A Yes, I have.

MR. KELLAHIN: We tender Mr. Hogan as an expert petroleum engineer.

MR. STAMETS: The witness is considered qualified.

Q. (Mr. Kellahin continuing.) Would you refer to what we've marked as Exhibit Number One and identify that?

A. Okay. Exhibit Number One is a section of the area of interest. This is a section of a POMCO map, which is a publication that can be ordered similar to PR reports. It's done by an independent.

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The well that is in question, the Lindrith No. 24, is circled in red. The area inside the red lines is the area that Ladd Petroleum owns all the mineral rights from the surface down.

what is the proration unit dedicated to the subject well?

A. Okay, it is presently the northwest quarter of Section 4.

On Exhibit Number One in the northwest quarter of 4. Would you identify those wells for us?

A. Okay, those wells are shallow wells and they are operated by other -- other operators. They do not go down into the Largo Gallup or the Basin Dakota. They are they are strictly there for purpose of this map which puts down all the wells in the area.

Q Would you identify for us the other Gallup or Dakota production that hadd Petroleum Corporation has in this area?

Ladd has three other wells, one in each section, Section 3, Section 9, and Section 10, and they are all three Gallup-Dakota completions. They're all dual.

And they are identified on the plat by the word "Ladd" and then the well symbol?

A Yes.

		O.	Okay.	What do	you pro	opose	to do	with	this
well,	Mr.	Hogan?							

A. Okay, going to Exhibit Number Two, if we may, this is a plot of the calculated bottom hole pressure for the Dakota and Gallup formations versus time. It's noted that sometime during 1975 we had a packer leakage, which commingled the two zones at that time.

Again, Exhibit Number Three, also, is a completion sketch of the present completion of the well, as it is right now.

Q If the downhole commingling is approved by the Division, what changes, if any, would you make in the manner of completion of the well?

A. Okay, as the well is right now, we propose to -- to make no changes. We prefer to leave it just as it is and continue to commingle it in the, you know, in the present wellbore condition.

Q. Your pressure versus time curve on Exhibit

Number Two shows that at some point in '75 the two zones became commingled, is that correct?

A. Yes, it is.

Q. Do you have any opinion as to how they became commingled?

A. Okay. I feel that that is a packer leak due to the length of time that everything has been in the

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wellbore. The quality of the tubing is possibly questionable, but had this been any type of corrosive zone, that problem would have surfaced a long time ago, and I personally feel that it is probably a packer seal leak or seal assembly leak, just due to the length of time that the packer and seal assembly has been in the hole.

- Q When was this well first completed?
- A. It was completed in December, 1962. First production was in January of '73, or excuse me, '63.
- Q Is the working interest and the royalty --or the overriding royalty interests common for the northwest
 quarter of this section?
 - A. Yes, they are.
 - And this is a Federal lease?
 - A. Yes, it is.
- Q Is either the Gallup or the Dakota zone produced under compression?
- A Yes, the Gallup is presently produced under compression because of the low bottom hole pressure that it exhibited earlier on in the life of the well.

The Dakota is not.

- Q. If the commingling is approved, would you continue to produce the well in the same way?
- A. Yes, we would. We would be compressing the Gallup and all production would go through the compressor

	As a petroleum engineer do you see any
problems	with continued production of the well in this manner?
	A No, I do not.
	Q Would you refer to what we've marked as
Exhibit N	umber Four and identify that?
	A. Exhibit Four is just a summary of the
productio	n from the Dakota and the Gallup logged individually
from the	well since 1971 when we took over operations of
this well	
	Q Exhibit Four is the Gallup production and
Exhibit F	ive is the Dakota production?
	λ. Yes.
	Q. The Gallup zone does make some oil production
	A. Yes, it does. There's a small amount of
condensate	e and a very small amount of water produced from
the Gallu	2.
	Q Your tabulation of production doesn't show
any water	production. What amounts are you talking about?
	A. Probably less than one barrel a day.
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zone make	any oil or water?
	A. It makes just a trace of condensate; re-
and the line	mit made any

In your opinion will there be any problems

encountered by the fact that condensate and water may be

produced by either of the zones?

A. No.

The volumes in question are not significant enough to encounter problems with the downhole commingling?

A. No, they are not. They're nearly insignificant.

Q Would you refer to what has been marked as Exhibit Six and Seven and identify those exhibits?

A. Okay. Exhibits Six and Seven are the production decline curves for the Largo Gallup and the Basin Dakota for the well in question, throughout the entire life of the well.

A. It's our opinion that we could not do that because of low bottom hole pressure in these wells right now. It would require killing one or both of the zones and both zones are at low enough pressure right now and sensitive enough to fluids that we feel that if we were to have to kill them, we would not get either one of them back. We'd probably end up plugging the well.

O Have you made any calculations concerning the producable reserves remaining from both the zones?

10 11 your zones. 14 λ. Yes. 15 Ø 16 serves remaining to each of the zones? 17 Yes, I can. 18 19 20 21 22 lative production to date for both of those zones. 23 24

Yes, I have.

Q And what is that figure?

Okay. From the decline curve analysis it shows that we have approximately 1.3-billion cubic feet.

My personal opinion is that that is extremely optimistic. Plotting of P/Z versus cumulative plot, we come up with something along the lines of 800,000 -- or excuse me, 800-million cubic feet remaining.

I feel that is much closer to the real case because you can take into consideration the fact that you'd have to have some bottom hole pressure when you deplete

MR. STAMETS: Is that a combined figure?

Can you allocate for us the producable re-

Referring to Exhibits Five and Six, I believe, the depletion, or excuse me, the production curves, at the beginning of 1975 for the Largo Gallup, and also at the beginning of 1975 for the Basin Dakota, we have the cumu-

The ratio of the production from the Gallup to the Dakota -- well, the percentage is 72.4 percent of all the production from that well came from the Gallup up to the

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beginning of 1975. At that time we encountered problems with the packer. It has been commingled since then and referring to this example again, looking at the latest figure of June of 1979, of what our cumulative production is, and taking the exact same ratio, we have a 72.6 percent of the cumulative production has been out of the Gallup and that is a change of only 2/100ths percent, so we feel that there would be no difference in continuing to produce. They're producing at the same ratio and have all their life. 9

Mr. Hogan, have you obtained waivers from all the offset operators with regards to the proposed down-

Yes, we have. We have contacted them and hole commingling? asked for waiver of objection letters to be signed and returned to us and to the Conservation Commission. If they did not, you know, have any objection to us commingling these two zones, and all of the waiver letters have been signed and turned back in.

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

Yes, it will.

And were Exhibits One through Seven prepared A by you or compiled under your direction and supervision?

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A Exhibit Number One is a publication that can be obtained by anyone. It's an independent corporation that produces that. I did Two and Three and the remainder of those were done just in accounting. It's just a --

A They're documents from Ladd Petroleum Corporation's records?

A. Yes, they are.

MR. KELLAHIN: We'd move the introduction of Exhibits One through Seven.

MR. STAMETS: These exhibits will be admitted.

CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Hogan, what was the figure you gave as the split on the Gallup there, 72 percent?

A. 72.4 percent prior to 1975 and 72.6 percent subsequent to 1975.

Well, 72.6 percent is from the beginning of the well to the present.

So you are recommending, then, that the, if the well is allowed to be downhole commingled, that the percentage of production assigned to the Gallup would be 72 percent of the total?

A. 72.6 percent, yes.

	Q.	Okay, I	don't	think	we'll	get	quite	that
close.								

A. There is just almost no condensate produced from -- from the Dakota, and hasn't been for some time.

There's a little bit coming out of the Gallup and it's not a great deal of it.

How about the oil production in this well?

We'll probably allocate that on the same percentage unless we go back and find that there's a significant difference between the entire, you know, the cumulative volumes produced from either zone.

Those have not been summed on this exhibit.

Q If you could do that, Mr. Hogan, on the
basis of production which had occurred up to 1974 and submit
that at a later date, I would appreciate it.

A. Okay.

Q It would be basically the same information you're already shown. It would be just summarized.

Mr. Hogan, why -- why do you not go into this well and, say, unlatch the Dakota tubing and produce both zones through a single string?

A. We would have to probably pull one string and we'd have problems with the pressure at the surface to pull the tubing, although that's not a great deal of pressure. It's not a significant problem. It can -- we can handle that.

We don't want to kill either one of the zones, which is why we're proposing to leave it the same way as it is, and we are presently 292 feet from the top of the packer to the top of the lower set of perforations in the Dakota, and I believe we're only allowed 300, and we don't feel like it's -- you know, we think that that would probably be real close, if we had to pull that up.

Q. Is there some kind of a wireline instrument that you could run inside the Dakota tubing and put a hole in that tubing above the packer and produce both zones through the single string of tubing?

A. Yes, there is.

Q Would that result in more efficient production or less efficient production?

A. It would probably result in more efficient production, although we don't feel that we have too much --- we don't have very large, you know, production figures coming from the Dakota right now, that it's probably not going to improve the quality that much. But overall it would be a more effective, more efficient method of producing.

Q Would that result in both zones being produced through the compressor?

A. Yes.

And this could be accomplished without killing either zone, is that correct?

1	λ. Yes.
2	O And it could be accomplished economically?
3	A Yes.
4	MR. STAMETS: Any other questions of the
. 5	witness? He may be excused.
6	Oh, yes, I have one additional question.
7	What are the estimates of the current pressures in these
8	two zones?
9	A The last pressures that we had were 320
10	psi for the Gallup; 260 psi for the Dakota.
11	And when did you get those pressures?
12	A. Those were in July of 1979.
13	Do those reflect real pressures or the
14	commingled pressures?
15	A. Those are reflective of commingled pres-
6	sures.
7	Q Okay. If we go back then to 1974, on Ex-
8	hibit Number Two, would those pressures be indicative of
9	the differential at that time?
0	λ. Υes
1	Q Could those be projected to make a deter-
2	mination of what bottom hole pressures might be expected
3	today?

I don't understand your question.

Okay. Can you extrapolate the expected

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bottom hole pressure today utilizing information shown on this exhibit?

- A. Yes.
- Q Would you do that, please?
- A. From prior to 1974?
- Q. Yes.
- A. Well, ---
- O I presume you feel the 1974 pressure is a good pressure.

A Yes, it's a good pressure. Again, it has to be taken into consideration with the rest of the pressures.

If you were to merge all five of those data points and draw a straight line through all five of those on an average, you would come up with something not too far removed from where we are right now. It would probably be a bit higher. I would say most likely it would be around 5-600 pounds.

- Q Let's just take the Dakota pressure itself.
- A. Okay.
- Q Back in 1974 it looked like you had about 975 pounds?
 - A. Yes.
- Q Okay, what would you expect the Dakota pressure to be today, based on that decline?
 - A. Okay, are you referring to the decline be-

tween those -- that point and the two points adjacent to it on either side?

Q. Yes, I think so, or any other set of points that you feel would be appropriate.

A. Okay, I, myself, would add all five of those points together and draw a line from the two points on the far left and it would — it would drop off much less than that slope between those three points that you're looking at would indicate, and I would estimate that pressure to be somewhere around 5-600 pounds.

Okay. Now, is that typically what happens to a Dakota well, that it goes down at that rate, or does the rate of decline tend to drop off in later years as it appears to in this well?

A. It generally for a Dakota well does level out. It does drop off. It does decrease at a slower rate in later life.

Q so if we use only the last three points what kind of a pressure would we have?

A. Okay, then we would be looking at probably around 800 pounds.

Okay. Now, let's do the same thing for the Gallup and see if we can estimate what kind of pressure we might have.

A. Well, if you were to assume that it was --

had a slope essentially similar to the Dakota zone, then you'd probably come out at around 100 pounds. You know, if it leveled off, you may have between 100 and 200 pounds depending upon how much it levels off.

- Now, with that kind of pressure differential is there not an opportunity for cross flow between those two zones?
 - A. Yes, there is.
- Q And can that have any harmful effect on the ability of this well to produce all of the gas from the two zones?
 - M. No. I feel like it will not affect it.
 - O And why do you say that? What ---
- Mell, the Dakota zone, the Dakota zone is a higher pressured zone. Any cross flow would go from the Dakota into the Gallup and the Gallup is a much better producer. So any -- any gas given up by the Dakota would flow into a higher permeable zone, which would then be recovered as the pressure depleted.

Just looking at the fact that we've got four years of commingled production and still have the exact same production ratio, I would say that that was evidence that it's not going to harm anything.

Nould the fact that you would have both zones producing through a compressor also ameliorate the

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WALTON BOYD
HORTHAND REPORTER
Slance (501) 111-2462
New Mexico 87101

CERTIFIED SHORTHAND RE
1010 Planta Blanca (1015) 4
Santa Fe, New Mexico

pressure differential?

A. Yes, it would.

MR. STAMETS: Any other questions of the

witness? He may be excused.

Anything further in this case?

The case will be taken under advisement.

(Hearing concluded.)

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REPORTER'S CERTIFICATE

I, SALLY W. BOYD, 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, from my notes taken at the time of the hearing.

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. heard by me on_ Examiner

Oll Conservation Division

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STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

September 25, 1979

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO B7501 (505) 827-2434

Mr. Thomas Kellahin Kellahin & Kellahin	Re:	CASE NO.		
Attorneys at Law Post Office Box 1769 Santa Fe, New Mexico		Applican	t:	
		Ladd Pet	roleum Co	rporation
Dear Sir:				
Enclosed herewith are two conditions order recently ent				
Yours very truly, JOE D. RAMEY Director				
JDR/fd			.•	
Copy of order also sent to:	•			
Hobbs OCD X Artesia OCD X Aztec OCD X				14) 1
Other		14. 2		

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. 6638 Order No. R-6120

APPLICATION OF LADD PETROLEUM CORPORATION 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 September 5, 1979, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

Now, on this 24th day of September, 1979, the Division Director, having considered the testimony, the record, and the record, and the Examiner, and being fully advised in the FINDS:

- (1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the
- (2) That the applicant, Ladd Petroleum Corporation, is the owner and operator of the Lindrith Well No. 24, located in No. 24, l
- (3) That the applicant seeks authority to commingle Largo-Gallup and Basin-Dakota production within the wellbore of
- (4) That from the Largo-Gallup zone, the subject well is capable of low rates of production only.
- (5) That from the Basin-Dakota zone, the subject well is capable of low rates of 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.

Case No. 6638 Order No. R-6120

- (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
- That the applicant should provide for the production of the commingled hydrocarbons through the long tubing string.
- (9) 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 any time the subject well is shut-in
- (10) That in order to allocate the commingled production to each of the commingled zones in the subject well, 72 percent and 30 percent of the commingled gas and oil production, respectively, should be allocated to the Largo-Gallup zone, and 28 percent and 70 percent of the commingled gas and oil production, respectively, to the Basin-Dakota zone.

IT IS THEREFORE ORDERED:

- That the applicant, Ladd Petroleum Corporation, is hereby authorized to commingle Largo-Gallup and Basin-Dakota production within the wellbore of the Lindrith Well No. 24, located in Unit F of Section 4, Township 26 North, Range 7 West, NMPM, Rio Arriba County, New Mexico.
- (2) That 72 percent and 30 percent of the commingled gas and oil production, respectively, shall be allocated to the Largo-Gallup zone and 28 percent and 70 percent of the commingled gas and oil production, respectively, shall be allocated to the Basin-Dakota zone.
- (3) That the operator shall provide for production of the commingled hydrogarbons through the long string of tubing by unlatching from the packer or by perforating the tubing immediately above such packer.
- (4) 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.
- That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

-3-Case No. 6638 Order No. R-6120

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

STATE OF NEW MEXICO OLL CONSERVATION DIVISION

JOE D. RAMEY Director

SEAL

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MR. NUTTER: We'll call next Case Number

6638.

MR. PADILLA: Application of Ladd Petroleum Corporation for downnole commingling, Rio Arriba County, New Mexico.

MR. KELLAHIN: Tom Kellahin of Santa Fe,

New Mexico, appearing on behalf of Ladd Petroleum Corporation

Mr. Examiner, I've requested this case be

continued to the hearing on September 5th.

MR. NUTTER: Case Number 6638 will be continued to the Examiner Hearing scheduled to be held at this same place at 9:00 o'clock a.m. September 5th, 1979.

(Hearing concluded.)

SALLY WALTON BOY SERVICES SHORTHAND REPORT SORDIAZE Bibnes (606) 471-44 Santa Fa New Medica 871-44

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REPORTER'S CERTIFICATE

I, SALLY W. BOYD, 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, from my notes taken at the time of the hearing.

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. 438, heard by me on

Examiner

Oll Conservation Division

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT Oil Conservation Division State Land Office Building Santa Fe, New Mexico 22 August 1979 5 EXAMINER HEARING 6 IN THE MATTER OF: Application of Ladd Petroleum Cor-) poration for downhole commingling,) CASE Rio Arriba County, New Mexico. 6638 BEFORE: Daniel S. Nutter TRANSCRIPT OF HEARING APPEARANCES For the Oil Conservation Ernest L. Padilla, Esq. Division: Legal Counsel for the Division State Land Office Bldg. Santa Fe, New Mexico 87503 For the Applicant: W. Thomas Kellahin, Esq. KELLAHIN & KELLAHIN 500 Don Gaspar Santa Fe, New Mexico 87501

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SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 PLAZA BRADCE (605) 471-3462
Senta Pe, New Mexico 57501

MR. NUTTER: We'll call next Case Number

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MR. PADILLA: Application of Ladd Petro-

leum Corporation for downnole commingling, Rio Arriba County,

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MR. KELLAHIN: Tom Kellahin of Santa Fe,

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MR. NUTTER: Case Number 6638 will be continued to the Examiner Hearing scheduled to be held at this same place at 9:00 o'clock a. m. September 5th, 1979.

(Hearing concluded.)

SALLY WALTON BOYD CERTIFIED SHORTHAND REPORTER 1010 Plaza Blanca (605) 471-3462 Santa Fe, New Mexico 84501

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, 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, from my notes taken at the time of the hearing.

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. 6638, 9/22 19.79 heard by me on

Examiner Oll Conservation Division

KELLAHIN and KELLAHIN

Jason Kellahin
W. Thomas Kellahin
Karen Aubrey

Attorneys at Law

500 Don Gaspar Avenue
Post Office Box 1769

Santa Fe, New Mexico 87501

Telephone 982-4285 Area Code 505

September 7, 1979

Mr. Richard L. Standis () 1979
Oil Conservation Division
P. O. Box 2088 OIL CONSERVATION DIVISION
Santa Fe, New Mexico SANTA FE

Re: Ladd Petroleum Corporation OCD Case No. 6638

Dear Dick:

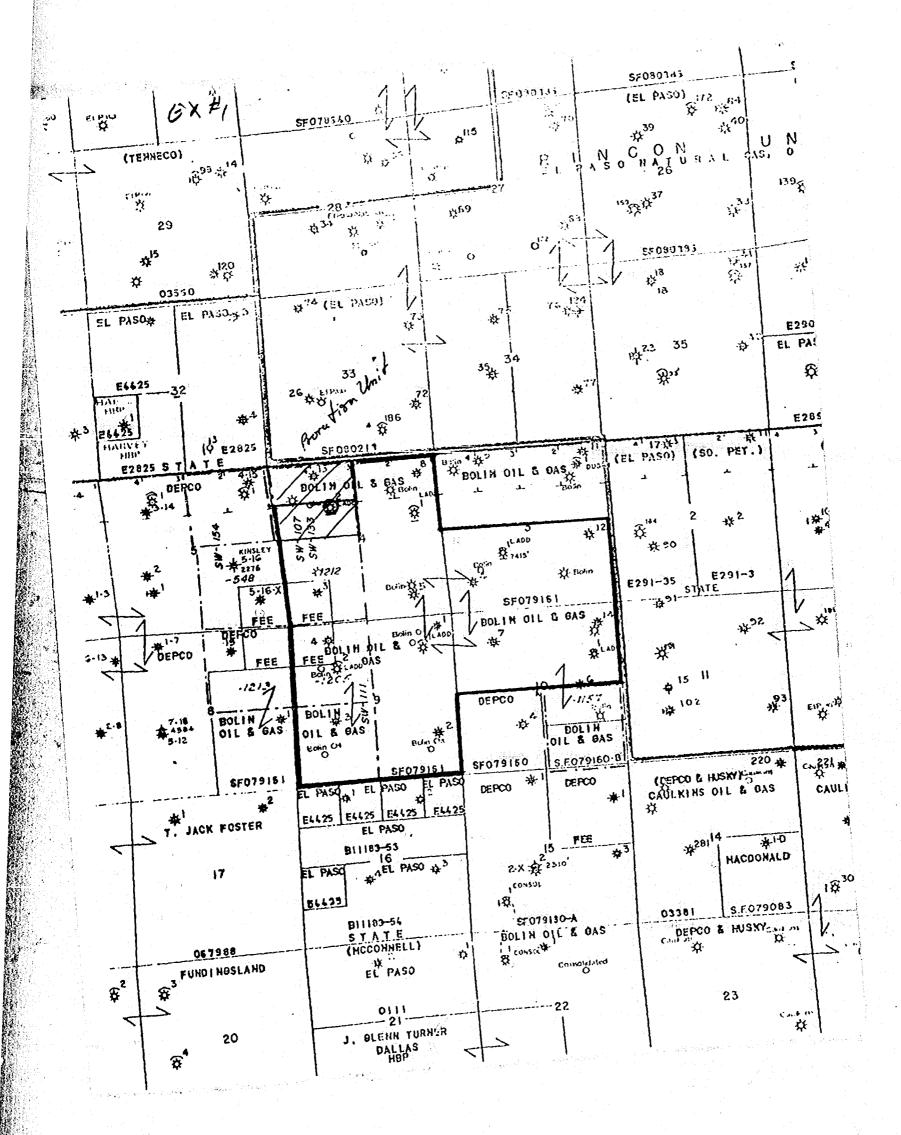
In accordance with your request at the hearing of the above referenced case on September 5, 1979, Mr. Rick Hogan has informed me that the condensate production and corresponding percentages for allocation are as follows:

Oil Production	Dakota	
Jan.75 Cum.		Gallup
	60,908 Brl. 69.5%	26,687 Brl. 30.5%
June 79 Cum.	61,508 Brl. 65.9%	31,982 Br1. 34.1%

Please advise me if you desire any further information before issuing the requested order.

W. Thomas Kellahin

cc: Mr. Rick Hogan



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FIELD: LONGO (SQ) COUNTY: DIO ACCIDA

LEASE: LINGOITH ID NUMBER:

RESERVOIR LOULLO LPC INTEREST:

MONTH NO OIL PRODUCTION — BBLS. GAS—MCI

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FILE WI 80.2116 %; NI. 589555 STATE: New Mexico COUNTY: LINGRITH LEASE:__ WELL NO .: -OPERATOR: -Gallup RESERVOIR: _ PERFS: DATE COMPLETED: OIL PRODUCTION - BBLS. GAS - MCF WATER . BBLS. PRESSURE REMARKS MONTH 2,938,386 CUMULATIVE 1,978,75 DAYS ALLOW. PROD. CUMULATIVE 1974 JAN. FEB. 37 8042 MAR 97 17.389 13.443 39 7 38 APR. 8,471 5,357 MAY 3 PWD JUNE JULY 0 54 5212 AUG. 13,268 9.033 SEP. 58 43 39 9,750 OCT. NOV. 81 575 DEC. 14,234 3.054.506 116,120 197 JAN. 86 12,876 FEB. 138 18,259 14,872 MAR. 120 13,238 196 138 APR. MAY 15.00% JUNE 158 8,021 (6,788, JULY 138 AUG. SEP. 151 10144 9,364 5,068 6,932 OCT. 61 NOV. 15 DEC. 1330 28017 148313 32.02819 1974 JAN. 94 FEB. MAR. APR. 8636 MAY 9684 8835 71 118 153 164 JUNE JULY 11736 AUG, 13646 SEP. 13753 OCT. 171 14613 6553 9806 28719 333/618 181 NOV. DEC.

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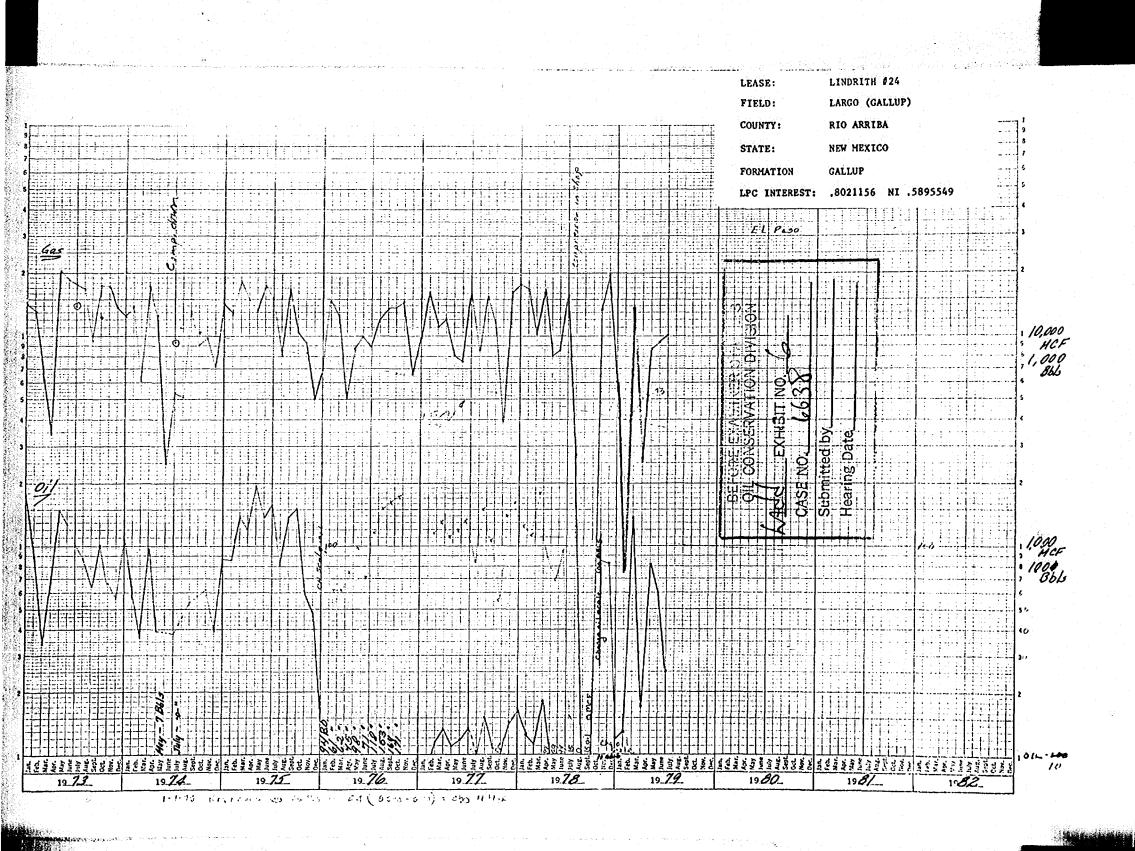
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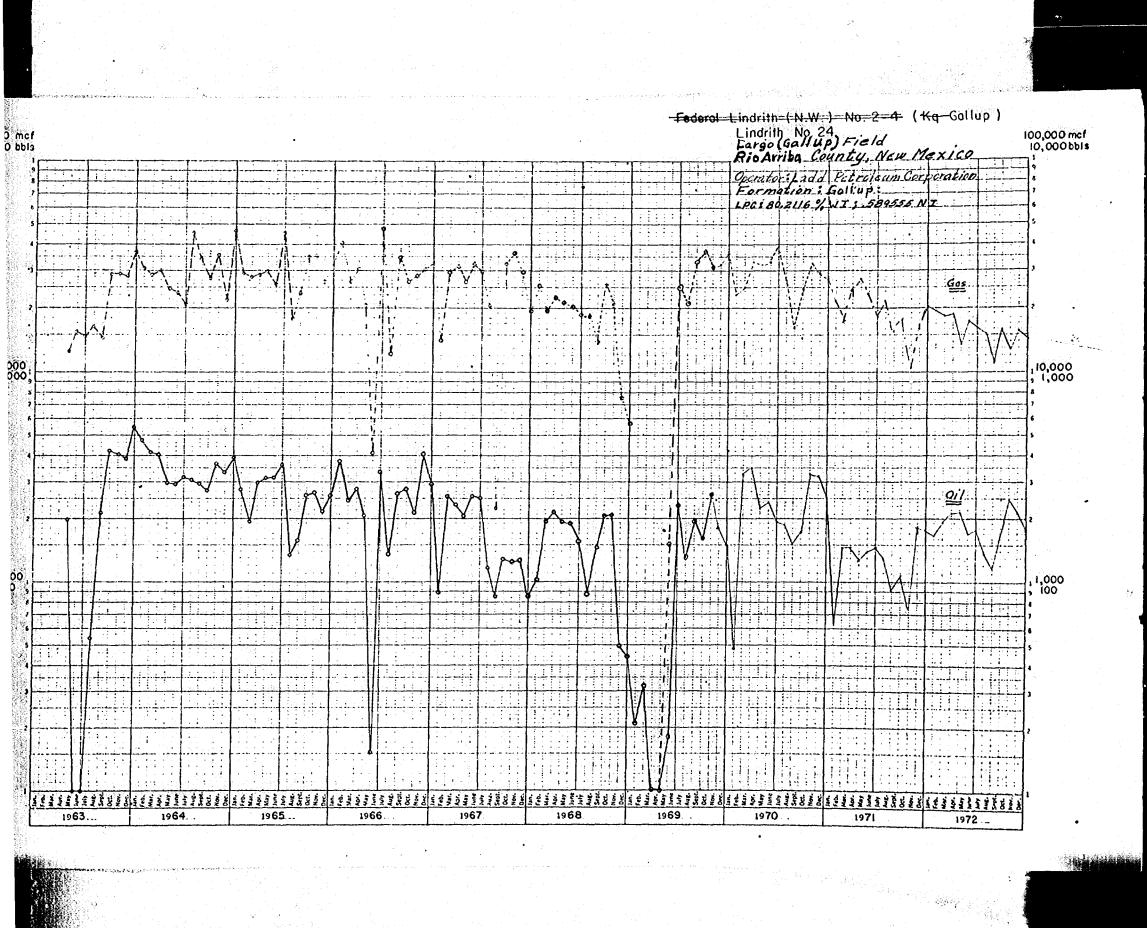
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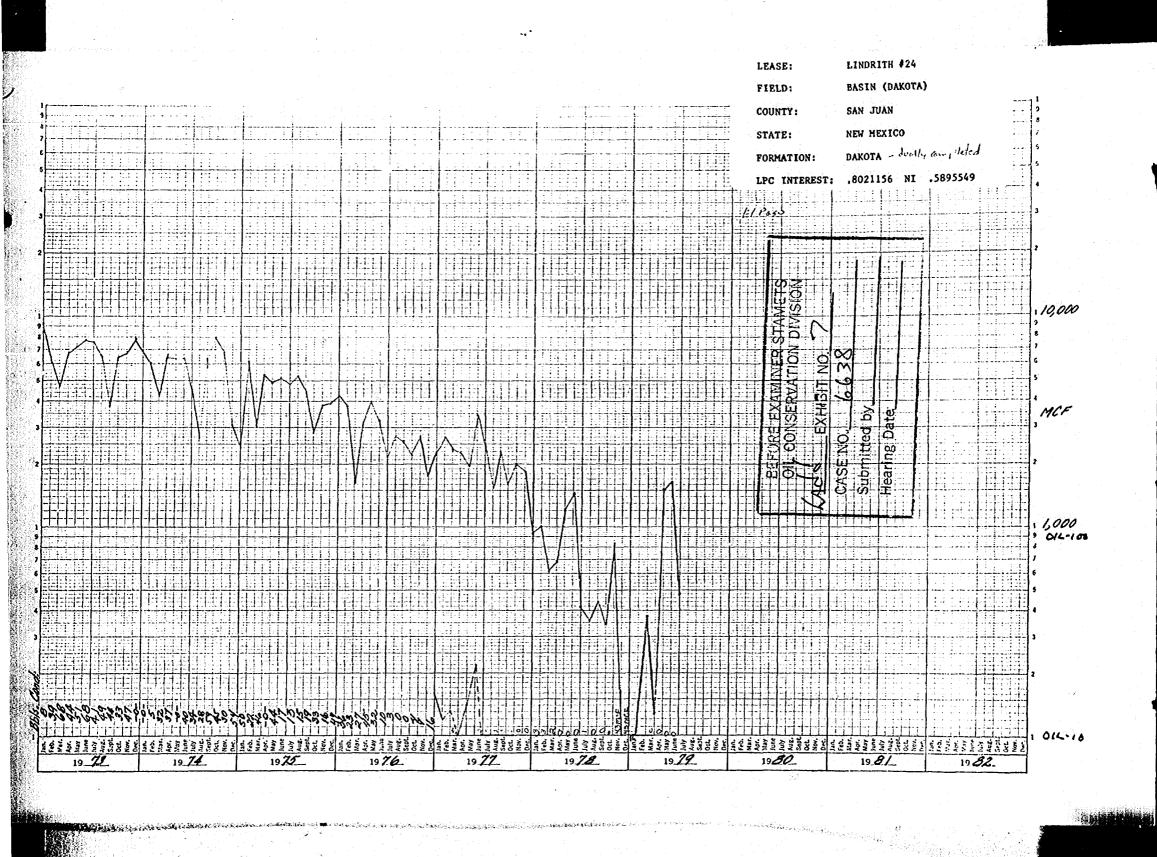
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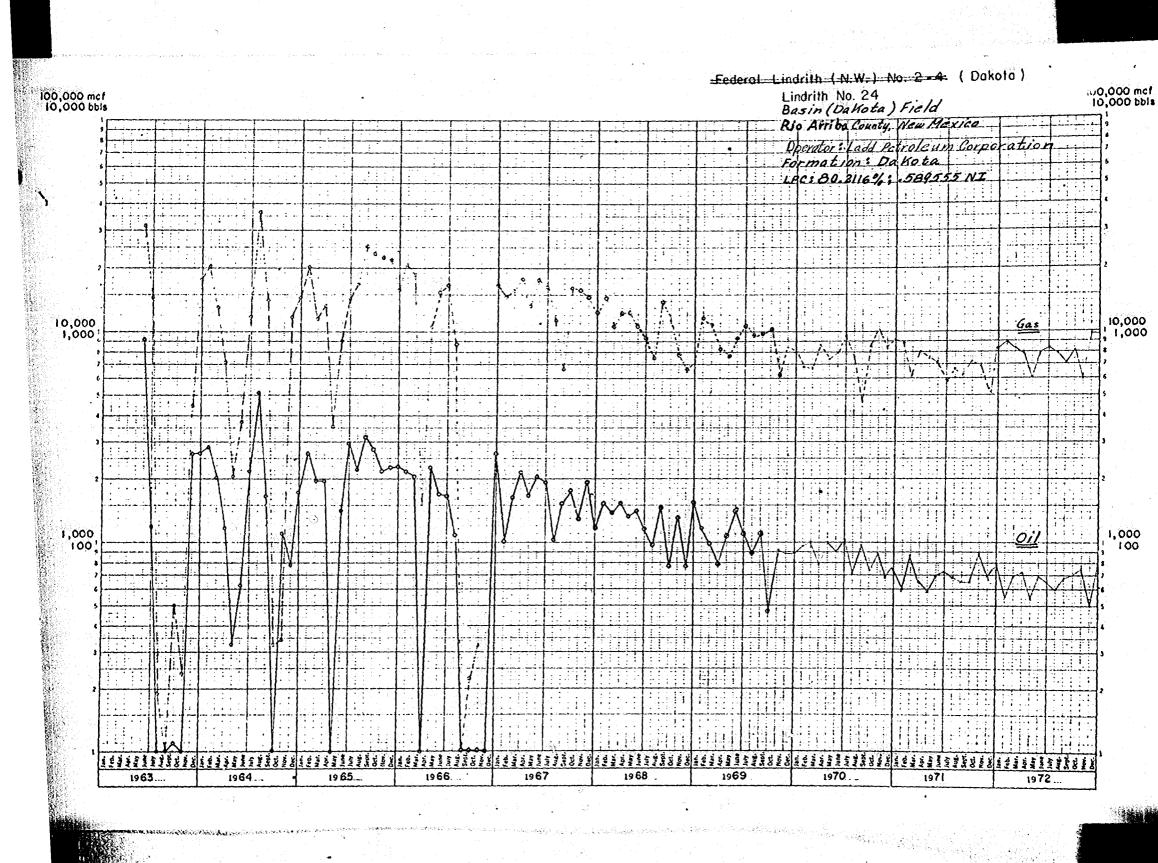
FILE WI 80,2116 % SNT, 589555 FIELD: Busin (OK) Rio Arriba STATE: NEW MEXICO COUNTY: LEASE: LINDAITH OPERATOR: LADD WELL NO ... Dakota RESERVOIR: __ DATE COMPLETED: PERFS: OIL PRODUCTION - BBLS. GAS - MCF WATER . BBLS. PRESSURE REMARKS MONTH. 1,075,819 CUMULATIVE G. O. R ALLOW. PROD. NONTHLY COMULATIVE MONTHLY MONTHLY CUMULATIVE csa. 100. BHP. 19/4 JAN. <u>--- 💠 --</u> 6056 FEB. -5 1/3/14 MAR. 33 6412 APR. 37 6340 MAY 6,381 4,489 -0-JUNE 40 34 38 59 45 30 54 JULY 2,647 AUG. 6,326 SEP. Όςτ. 6,856 3,095 Nov. CEC. 68,349 1.164,068 Del Test: Flo-Test (4/10/15-15/10/10); SI test (5/2/15); FTP 242. SITP 822; Del 208 MEGED JAN. 50 6.132 FEB. 22 3.065 5,492 4,926 5,117 MAR. APR. Ω MAY 4.4 17 13 19 33 JUNE 4.824 5,230 4439 JULY ÁÚG. SEP. 2830 ÖCT. 3837 NOV. 16 3900 DEC. 47 4221 322 54013 1272034 1974 JAN. 3824 36 FEB. 23 1696 3/08 MAR. APR. 3970 MAY TONE VOLY AUG. SEP. OCT. NOV. 32 3216 2190 10 2755 3 2545 0 2222 2722 4 1774 16 203 32,350 1,304,444

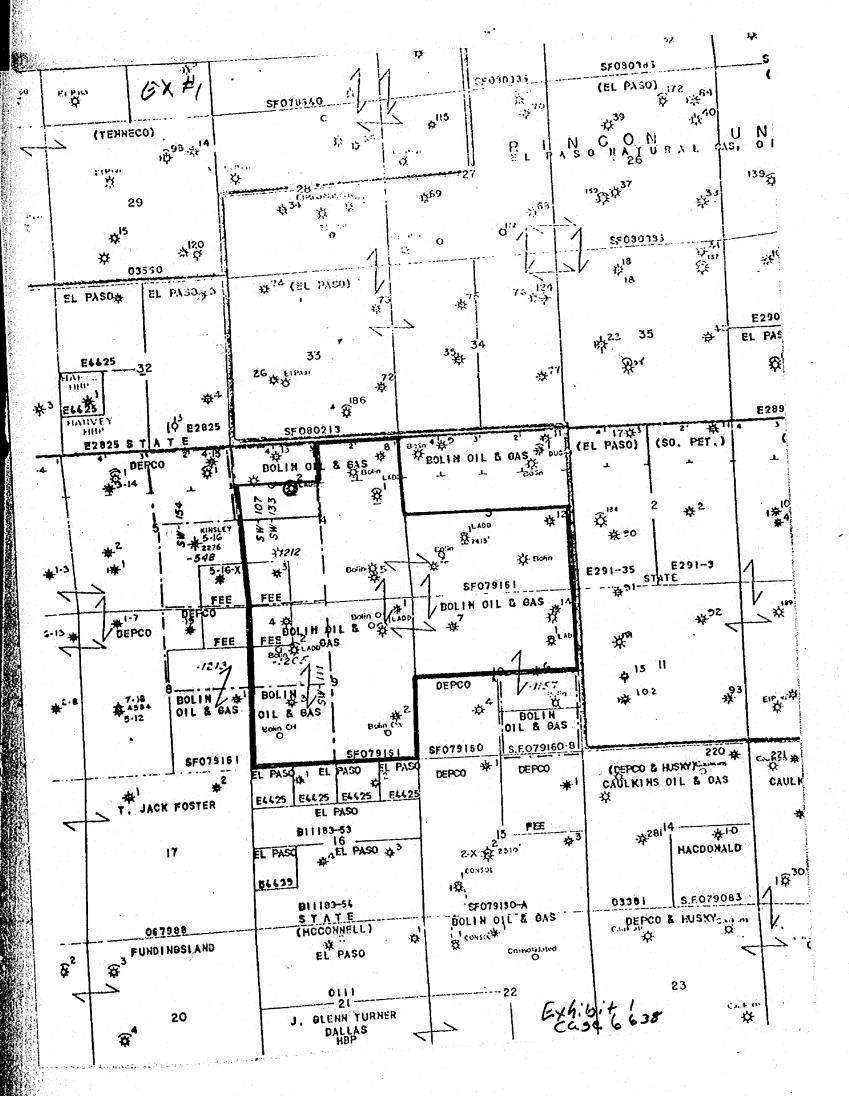
FILE Sal 180, 2116 %; NI . 58 9555 FIELD: Basin (DK) LEASE: Lively 17/12 STATE: NEW MEZICO Rio Arriba. COUNTY:_ WELL NO.: 24 OPERATOR: Ladd RESERVOIR: DALota PERFS: DATE COMPLETED: OIL PRODUCTION . BULS. GAS - MCF WATER - BBLS. PRESSURE REMARKS 19 7/ G. O. R ALLOW. PROD. DAILY MONTHLY CUMULATIVE MONTHLY CUMULATIVE MONTHLY CUMULATIVE CSG. TBG BHP. JAN. 8086 FEB. 87 6169 65 MAR 8022 APR. 1482 1149 5911 6651 58 69 12 63 MAY JUNE JULY PAUG. SEP. OCT. NOV. 65 6201 65 7/74 6947 69 841 5398 DEC. 8234 83,424 1972 55 69 12 59 8811 8345 1850 JAN. 2/12/12 to 2/20/12; 5/22/12): FTP 511P 947 # 51 res. MAR. 6.001 7921 1883 1833 1833 APR. MAY 600 ÜÜNE ĴÜLY AUG. SEP. ост. Nov. 5951 9882 9734 16.104 <u>75</u> 50 79 186 OEC. 1973 Melicontality Test (Florital
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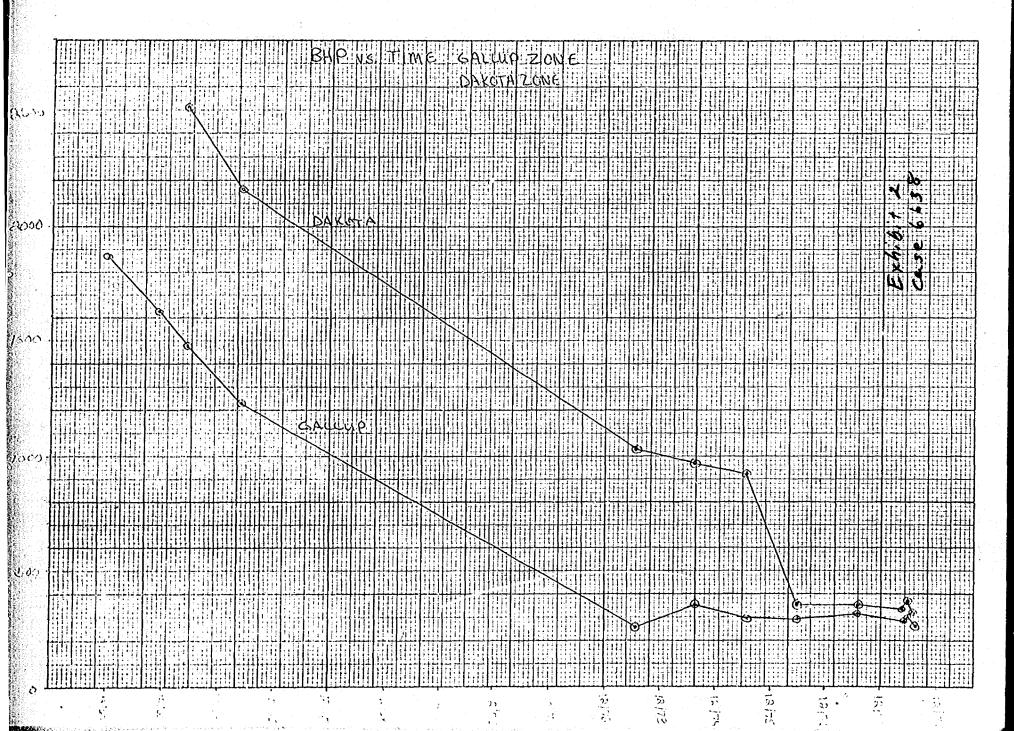








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OCT.	55		3982		· · · · · · · · · · · · · · · · · · ·		. The second
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FIELD: Large (Ga) FILE WI 80.2116 %; NI. 589555 Rio Arriba
LEASE: WELL NO.1 221 New Mexico OPERATOR: Gallup RESERVOIR: __ PERFS: DATE COMPLETED: OIL PRODUCTION - BBLS. GAS - MCF WATER - BBLS. PRESSURE REMARKS 2,938,386 CUMULATIVE DAYS G. O. R ALLOW. PROD. DAILY MONTHLY CUMULATIVE MONTHLY CUMULATIVE MONTHLY TBG. 19/4 13,290 *57 37* JAN. FEB. MAR. 97 17389 APR. 32 12,443 3,471 7 :38 MAY 3 P.W.O. JUNE 54 JULY 5.312 13,268 9.033 AUG. 58 SEP. 103 39 9,750 OCT. NOV. 87 575 DEC. 14,234 116,120 3,054,56 JAN. 12,876 FE8. 138 18,259 14,872 MAR 13,238 APR. 196 MAY 138 JUNE 1.58 15,002 8,021 16788, JULY AUG. 10144 SEP. 151 ост. 61 48 5,068 NOV. 6,932 148313 32.02819 15 DEC. 1976 14/64 94 JAN. FEB. 5192 MAR. APR. 8636 968.4 8835 MAY 71 118 153 JUNE JULY 11736 AUG. 13646 ŞEP. 13753 14613 _19 131 1258 NOV. 9806 DEC.

NI.584555 COUNTY: RIOATTIBA. STATE: NOW MO7400 FIELO: . LEASE: Lindrith OPERATOR: Ladd Gallup RESERVOIR: _ PERFS: DATE COMPLETED OIL PRODUCTION - BBLS. GAS - MCF WATER - BBLS. PRESSURE REMARKS MONTH. DAYS G. O. R. ALLOW. PROD. MONTHLY CUMULATIVE MONTHLY CUMULATIVE CUMULATIVE cso. 197/ 63 JAN. 23248 FEB. 17566 141 ŇΛR. 24366 147 APR. 21328 121 138 145 MAY 23298 JUNE 18013 21341 ÜÜLY 129 91 AUG. 15747 105 15 131 135 1511 SEP. OCT. FIOV. ÖEC. 17761 10432 16743 202.17 /472 JAN. FEB. 236,060 1972 Delivershility Test (Flow iest 2/12/12 to 2/20/12, SI Test 8/22/12) 2 ETC 1464, SITP 2614, Gas Gty, 0.747, Deliverability B/1 MCFGPD 18283 13588 17294 MAR. APR. MAY 17244 16022 15074 11136 15841 12894 15,598 ÜÜNE ÜÜLΥ ALIG.
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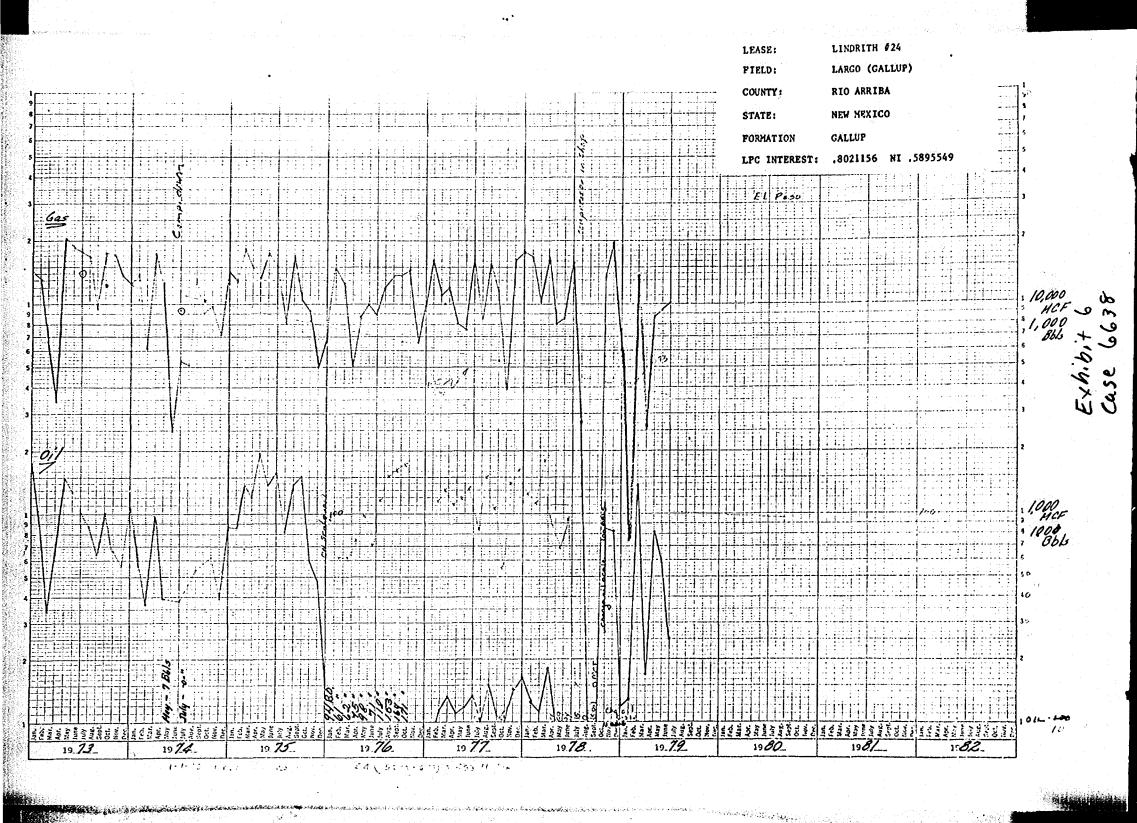
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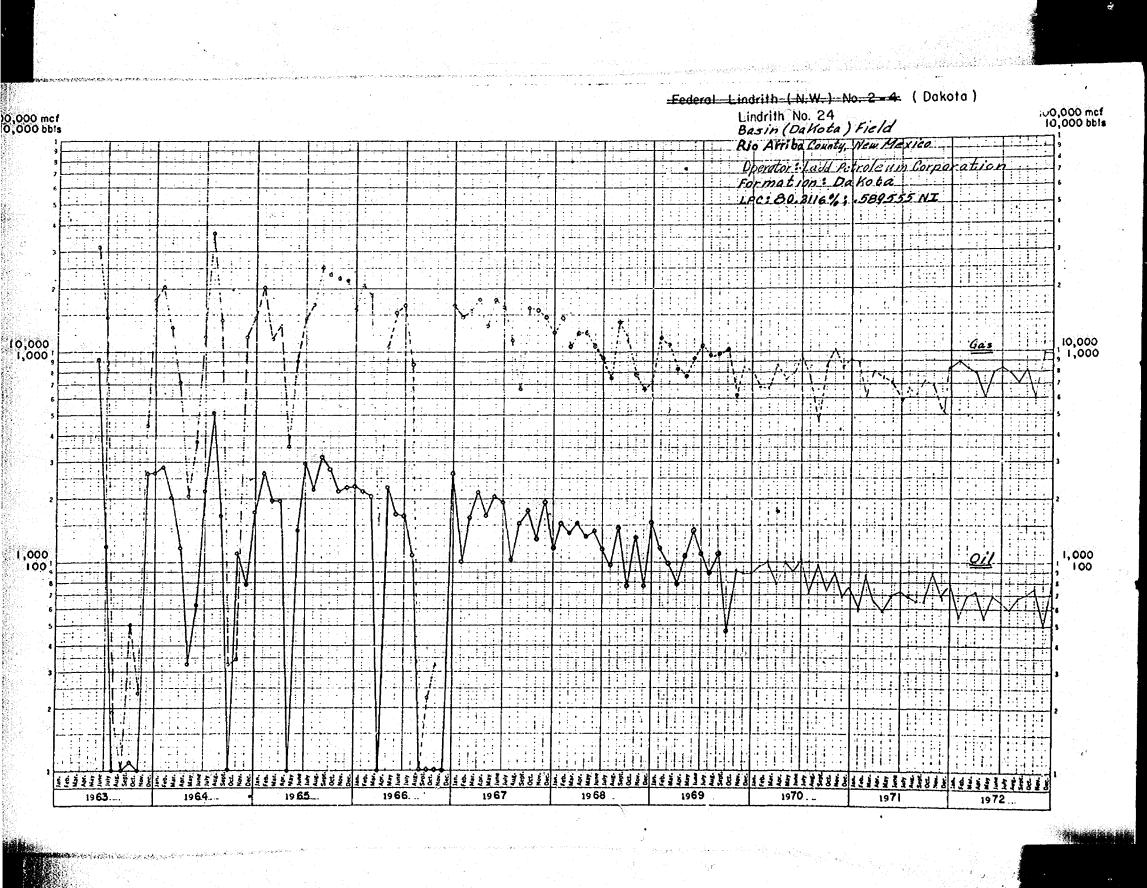
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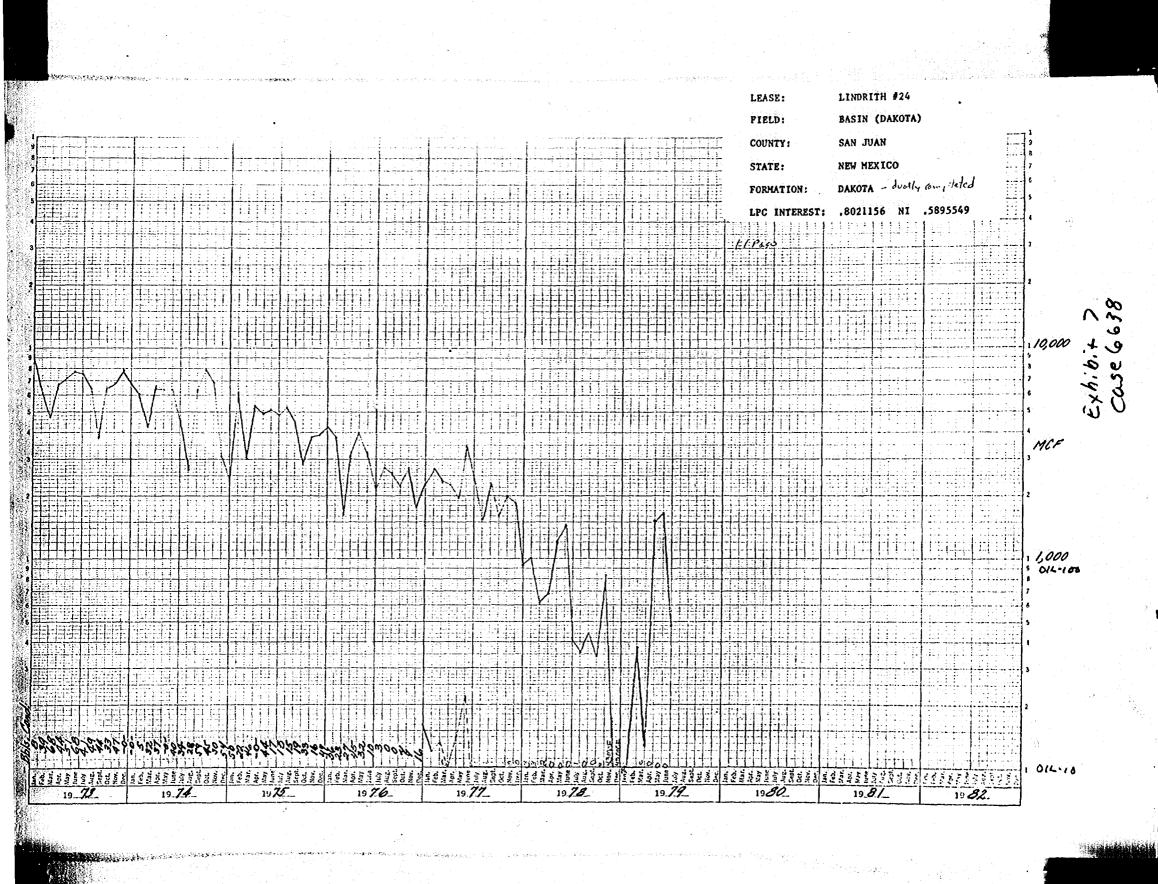
WELL PRODUCTION RECORD

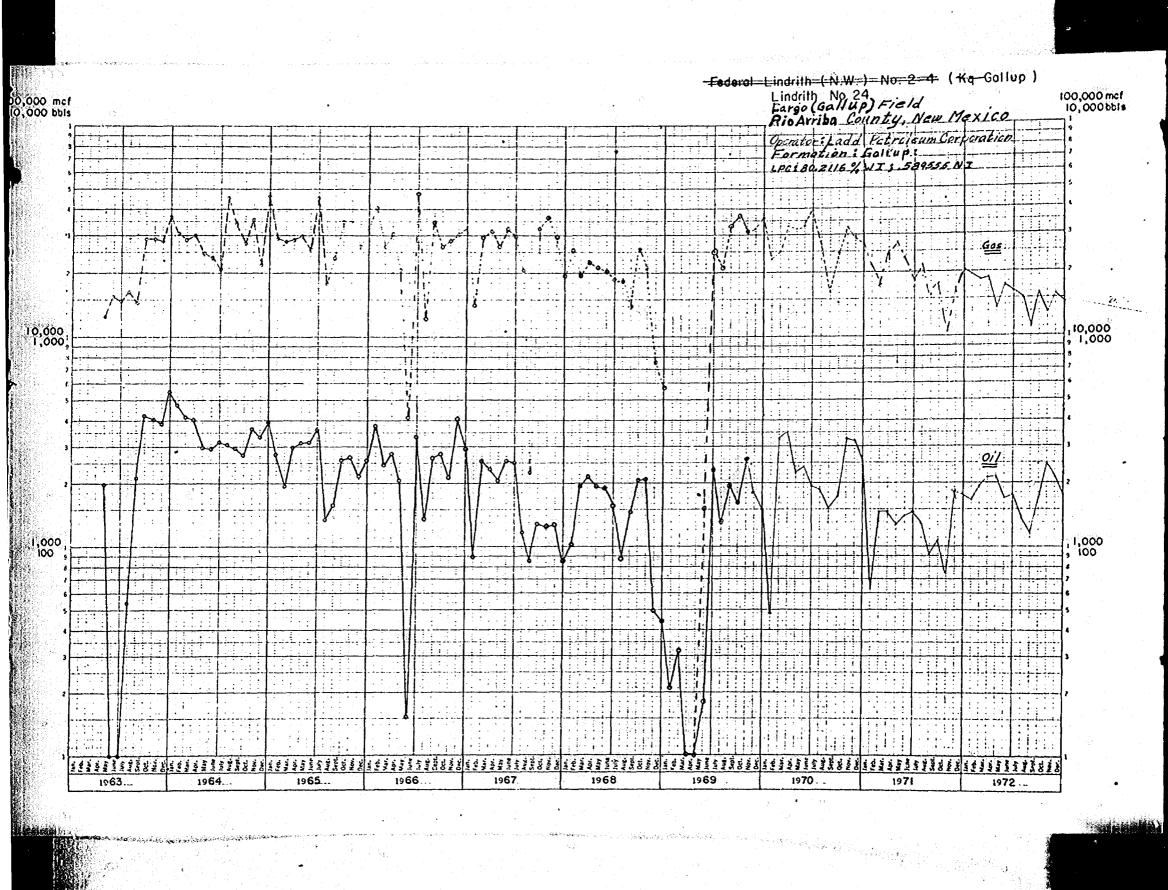
FILE WI 80,2116% SNT. 589555 Rio Arriba FIELD: BUTTO (OK) FI STATE: NEW MEXICO (1) LADD OPERATOR: _ WELL NO .: _ Dakota RESERVOIR: _ DATE COMPLETED: PERFS: MONTE OIL PRODUCTION - BBLS GAS · MCF WATER . BBLS. PRESSURE REMARKS 1095, 819 CUMULATIVE G. O. R ALLOW. PROO. % DAILY MONTHLY CUMULATIVE MONTHLY CUMULATIVE MONTHLY CSO. TEC BHP. 1974 <u>-0-</u> JAN. 6056 FEB. -5 MAR. 33 6412 APR. 6340 37 MAY 6,381 -0-JUNE 4,489 10 34 28 JULY 2,647 6,326 7,9/3 AUG. 59 15 30, SEP. ост. 6,856 3.095 NOV. 54 68,249 1.164,068 364 1925 Del Test: Flortest (0/12/15-4/10-12); SI Test (5/4/25); FTP 242, SITP 822; Del. 208 MCFGPD JAN. 50 6.132 FEB. 22 3.065 5,492 4,926 5,117 APR. MAY JUNE 0 44 4.824 5.230 4439 17 13 15 19 33 JULY AUG. SEP. 2830 фст. 3837 NOV. Lh 3900 DEC. 1970 JAN. FEB. 117 4221 33.2 54013 1272034 3824 23 1696 MAR. APR. 27 3/08 3970 MAY 3216 32 JUNE 2190 10 ขึ้นLY 2755 AUG. SEP. OCT. 25451 0 2222 <u>.</u> 2732 <u>.</u> 0 4 1774 NOV. DEC. 203 32,350 1,304,444

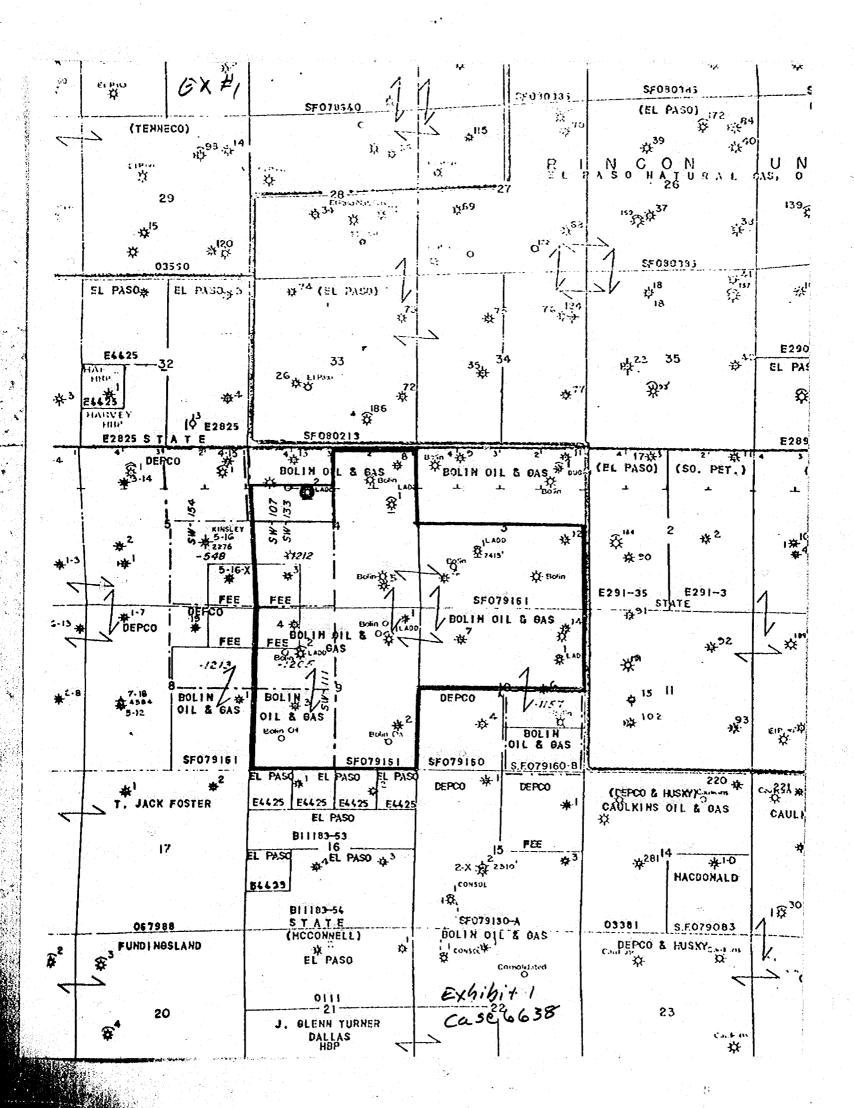
FILE NI 80.2116 % : NI . 58 9555 FIELD: <u>LASIN</u> Rio Arriba STATE: NEW MEXICO WELL NO.: 24 LEASE: LINGTIFA OPERATOR: Ladd RESERVOIR: Daleta PERFS: DATE COMPLETED: OIL PRODUCTION . BBLS. GAS - MCF WATER - BBLS. PRESSURE REMARKS MONTH DAYS G. O. R ALLOW PROD % DAILY MONTHLY. CUMULATIVE MONTHLY CUMULATIVE MONTHLY CUMULATIVE cso. TAG 19/ 59 81 JAN. 8086 FE8. 6/69 MAR. 65 8022 58 69 1482 1149 APR. MAY JUNE 5911 6651 12 INLY 63 6201 1174 6947 6.5 AUG. 6.5 89 69 SEP. ост. NOV. 5398 DEC. 8234 83,124 1972 Achverskility Test (FlowTest 2/12/12 to 2/20/12; SI Test 3/22/12) & FTP 268#, 5119 947#, 5109-0-4, 544, 0.660, 281 HCFGF) 55 69 12 54 69 8811 8345 UAN. FEB. MAR. 1350 6004 1921 8374 1883 8130 APR. MAY ÜÜNE AUG. SEP. OCT. 10 75 5951 9882 50 186 DEC. *1973* Jan. Feb. 6042 4732 6761 7202 7719 7548 6480 3198 Delwerchild, Test (Flostest History to JUSTS) ST Test STIP 612 # STOP -Lity GIO, IET MORGED MAR. APR. MAY JUNE 14 JULY 41 AUG. 44 6477 ÖCT. NOV. 33 47 6824 7999 6971 70498 70°-DEC. 1,093,314

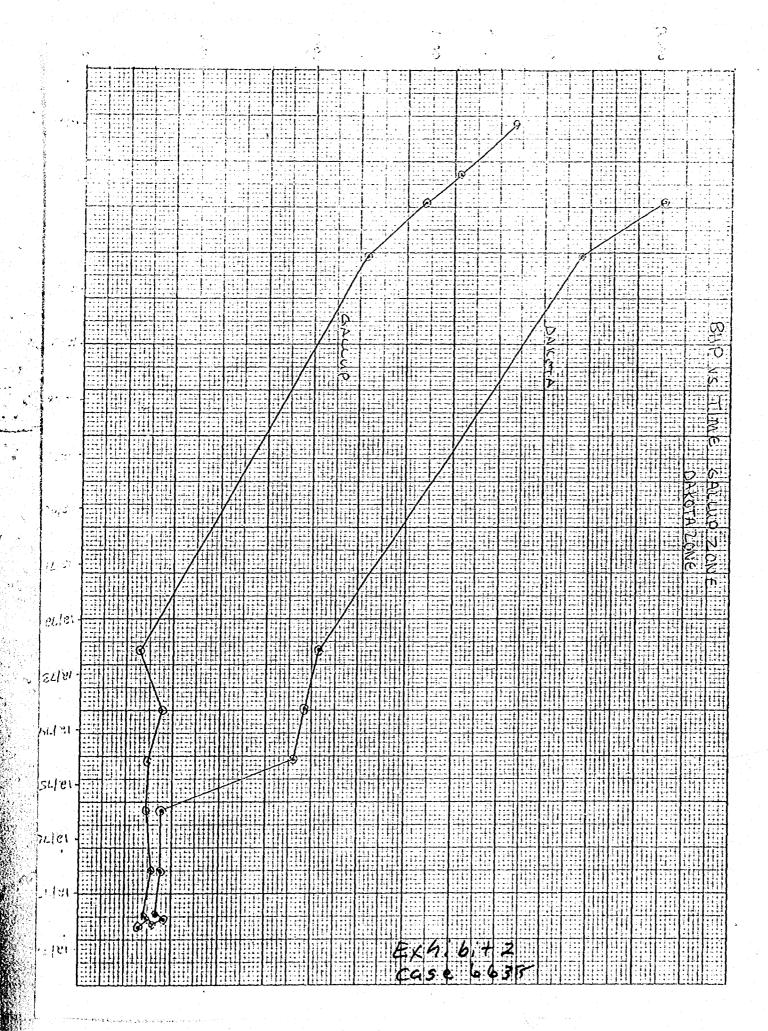












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FILE WI 80.2116 %; NT. 589555 COUNTY: ____ RIOArriba FIELDI Largo (Ga) LEASE: Lindrith STATE: NOW METHOD FIELD: _ OPERATOR: Ladd Gallup RESERVOIR: . PERFS: DATE COMPLETED: OIL PRODUCTION - BBLS. GAS - MCF PRESSURE WATER . BBLS. REMARKS MONTH. DAYS G. O. R ALLOW. MONTHLY PROD. CUMULATIVE CUMULATIVE MONTHLY CUMULATIVE CS.C. TEG. внР. 197/ 63 JAN. 23248 FEB. 141 17566 147 MAR. 24366 APR. 121 27328 MAY 138 23298 JUNE 18013 2/341 145 129 91 105 JULY ÁUG. 15747 SEP. 17761 10432 ост. [8] [5] [5] Nov. OEC. 20217 236,060 1972 19205 JAN. 1972 Deliverability Test (Flow Test 2/12/12 to 2/20/12, 57 70 st 8/22/12): FTP 146# SITP 261#, SICP 267#, Gas 6ty, 0.747, Deliverability 8/11 MCFGPD 18283 18724 18588 17294 FEB. MAR. 2/3/ 136 115 170 244 APR. MAY 15077 15074 1384 12894 ÜÜNE JULY ΆÜG. SEP. ост. 2/2 177 2/35 15,598 ÑOV. 14.203 181,862 DEC. 1973 1.3066 6677 3.412 2.0393 1.8571 17638 1.6739 9.480 JAN. FEB. 28,760 MAR. APR. MAY 101 JUNE ÜULY AUG. 64 SEP. 17439 10/ 17169 ocr. 66 NOV. 57 108 DEC.

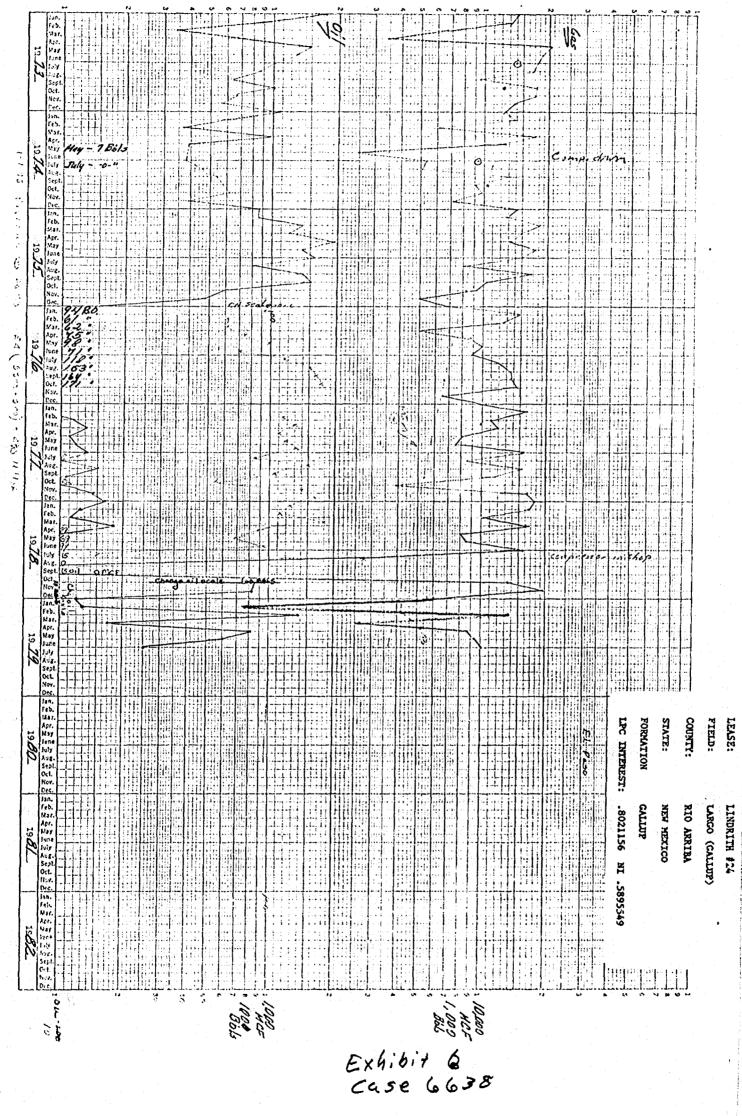
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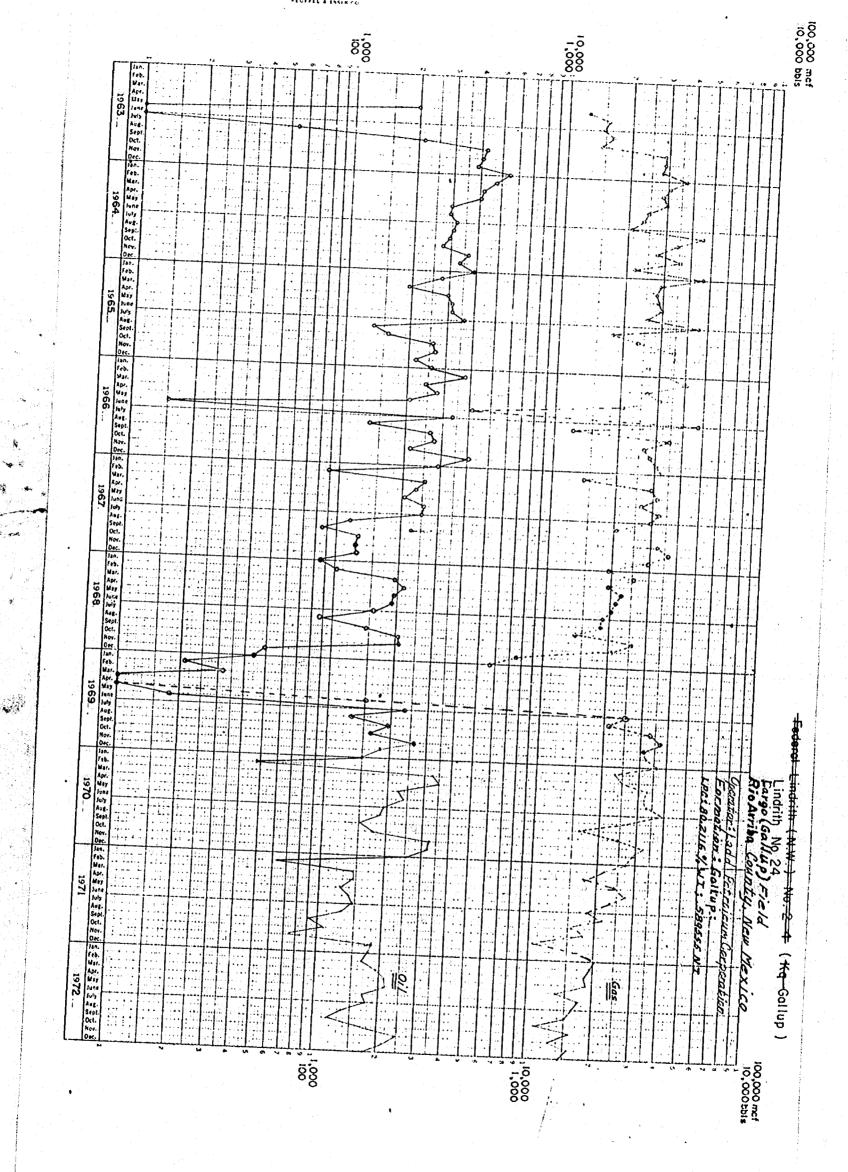
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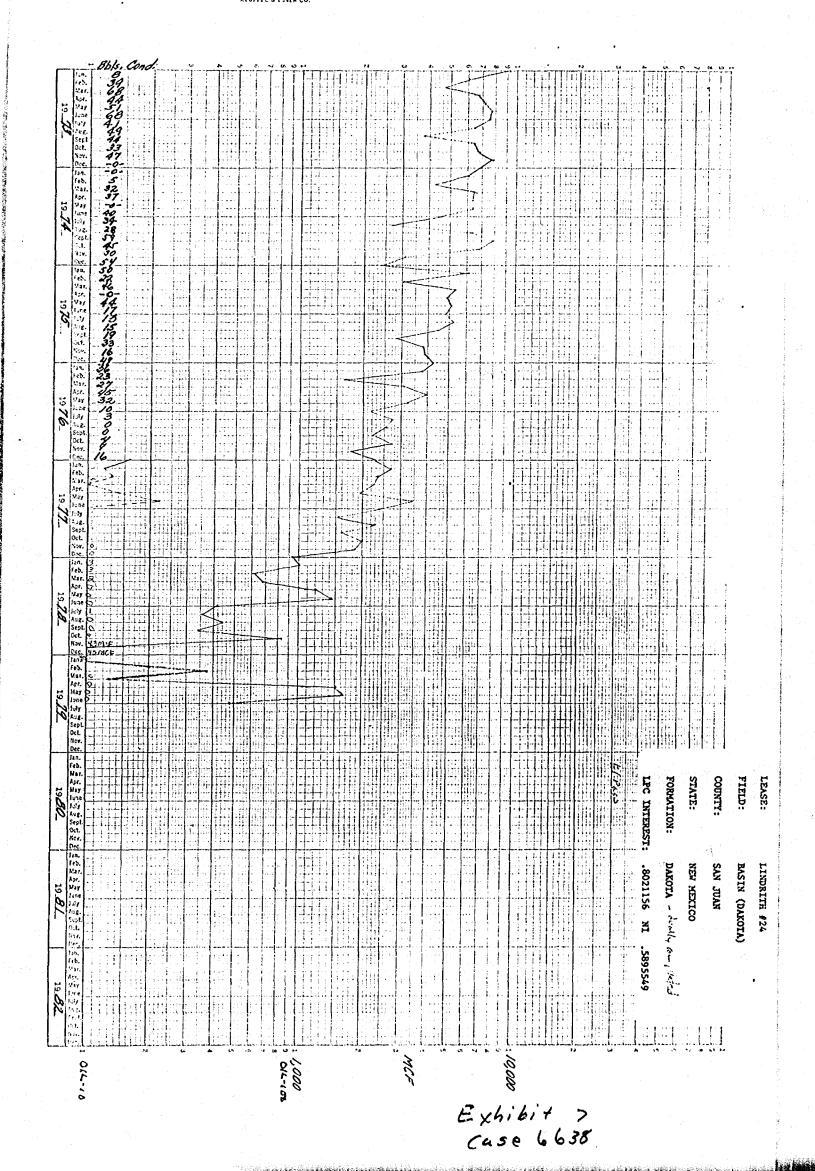
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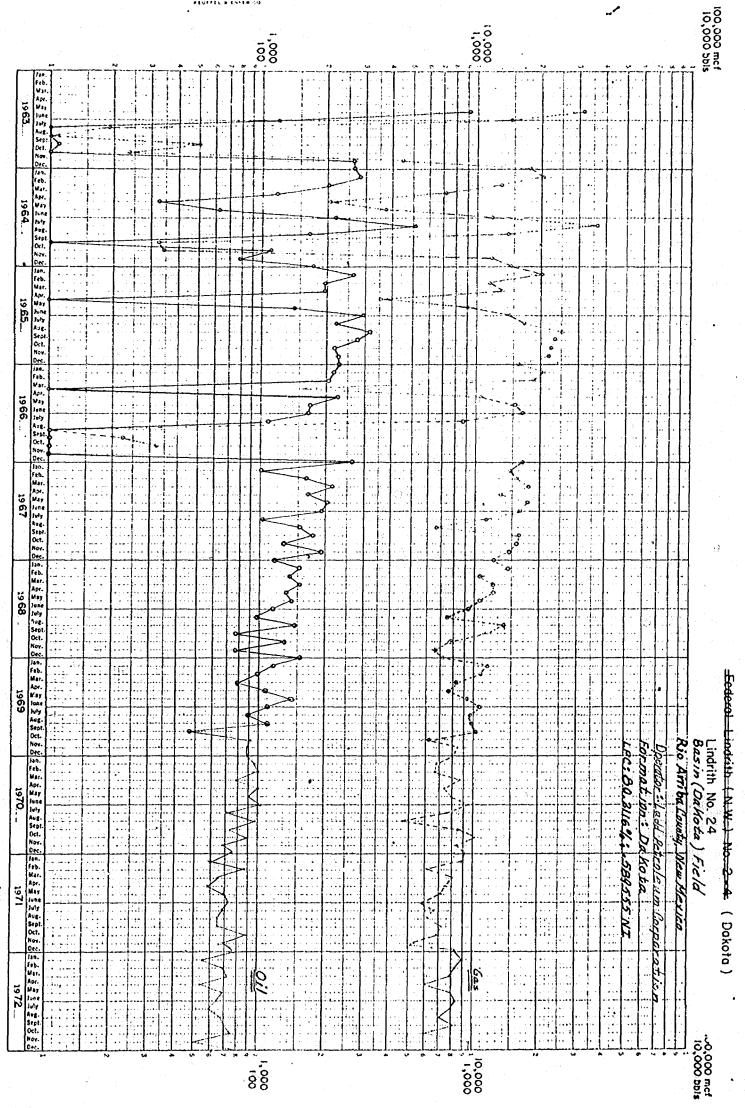
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FILE WI 80.2/16 %: NT . 58 9555 STATE: NEW MEXICO FIELD: DASIN Rio Arriba WELL NO. 24 OPERATOR: Ladd EASE: LINTE TELS RESERVOIR: Daleta PERFS: DATE COMPLETED: WATER - BBLS. OIL PRODUCTION - BBLS. GAS - MCF PRESSURE REMARKS MONTH. G. O. R 19*7/* JAN. ALLOW. PROD. MONTHLY CUMULATIVE csG. MONTHLY CUMULATIVE MONTHLY CUMULATIVE TBG. вне, 8086 FEB. 6/69 65 MAR. 802Z APR. MAY 53 69 JUNE ÜLY 6651 68 AUG. SEP. OCT. NOV. DEC. 6201 7174 6947 6.5 69 13 841 5398 8234 83,124 JAN. FEB. MAR. APR. MAY JUNE Deliverability Test (FlowTest 2)12/12 fo 2/20/12; SI Test 3/22/12): FTP 268# SITP 947#, SICP-0-# 8877 8345 TÝ 268# 5ICP-0 1850 1833 1833 1833 1833 608 JULY AÙG. SÉP. oct. Νόν. 50 DEC. 923 JAN. FEB. FTP 252# 2# STCP -189 MCFGPD MAR. APR. MAY JÜNE 4/ 49 JÜLY AUG. SEP. 6477 44 6821 7999 6971 78443 33 47 -0ocr. YOV. DEC.









Docket No. 35-79

Dockets Nos. 36-79 and 37-79 are tentatively set for September 19 and October 3, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 5, 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 6640: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Miles Production Company, National Surety Corporation, and all other interested parties to appear and show cause why the Thomas Drought Well No. 1 located in Unit A of Section 4, Township 15 North, Range 6 West, McKinley County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.
- CASE 6641: Application of Yates Petroleum Corporation for a unit agreement, Chaves County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the Willow Creek Unit Area, comprising 25,881 acres, more or less, of State, federal, and fee lands in Townships 4 and 5 South, Range 25 East.
- CASE 6642: Application of Bass Enterprises Production Company for pool contraction and creation, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the Indian Flats-Morrow Gas Pool by the deletion of the S/2 of Section 25, Township 21 South, Range 28 East, and the creation of a new Morrow gas pool comprising said lands for its Big Eddy Unit Well No. 66 in Unit K of said Section 25.
- CASE 6635: (Continued from August 22, 1979, Examiner Hearing)

Application of Exxon Corporation for an unorthodox well location and simultaneous dedication, Les County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of the W/2 of Section 31, Township 20 South, Range 37 East, Eumont Pool, to its Aggies State Well No. 4 located in Unit F, and to its Well No. 13, at an unorthodox location 660 feet from the South line and 1650 feet from the West line, both in said Section 31.

CASE 6636: (Continued from August 22, 1979, Examiner Hearing)

Application of Exxon Corporation for an unorthodox well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of all of Section 23, Township 21 South, Range 36 East, Eumont Pool, to its New Mexico "G" State Well No. 5 located in Unit E, and to its Well No. 20, at an unorthodox location in Unit M, both in said Section 23.

CASE 6637: (Continued from August 22, 1979, Examiner Hearing)

Application of Exxon Corporation for an unorthodox well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of the E/2 of Section 10, Township 21 South, Range 36 East, Eumont Pool, to its Knox Well No. 1 located in Unit J, and to its Well No. 13, at an unorthodox location 1650 feet from the North line and 990 feet from the East line, both in said Section 10.

- CASE 6643: Application of BTA 011 Producers for the amendment of Order No. R-5905, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks the amendment of Order No. R-5905 to provide that the N/2 of Section 27, Township 25 South, Range 33 East, be dedicated to its 7811 JV-P Rojo Well No. 1 rather than the W/2.
- CASE 6655: Application of BTA 0il Producers for an unorthodox well location, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the unorthodox location of its 7811 JV-P
 Rojo "B" Well No. 1, a Devonian test to be located 660 feet from the South line and 1980 feet from
 the East line of Section 28, Township 25 South, Range 33 East, the E/2 of said Section 28 to be
 dedicated to the well.
- Application of Tenneco Oil Corporation for downhole commingling, San Juan County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the downhole commingling of Fruitland and Pictured Cliffs production in the wellbores of its State K Com Well No. 12 located in Unit E of Section 16, Township 30 North, Range 9 West, and its Florence Well No. 60R in Unit L of Section 1, Township 29 North, Range 9 West.

- CASE 6645: Application of Depco Inc. for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Apache Springs Unit Area, comprising 31,199 acres, more or less, of State, federal, and fee lands in Townships 10, 11, and 12 South, Ranges 30 and 31 East.
- CASE 6646: Application of Belco Petroleum Corporation for approval of infill drilling and simultaneous dedication, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well spacing requirements and a finding that the drilling of its James Ranch Unit Well No. 10 to be located in Unit H of Section 1, Township 23 South, Range 30 East, Morrow formation, is necessary to effectively and efficiently drain that portion of the provation unit which cannot be so drained by the existing well.
- CASE 6638: (Continued from August 22, 1979, Examiner Hearing)

Application of Ladd Petroleum Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Largo-Gallup and Basin-Dakota production in the wellbore of its Lindrith Well No. 24 located in Unit F of Section 4, Township 26 North, Range 7 West.

- CASE 6647: Application of O. H. Rerry for an unorthodox gas well location, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Seven Rivers well to be located 1650 feet from the North line and 330 feet from the East line of Section 15, Township 24 South, Range 36 East, Jalmat Gas Pool, the NE/4 of said Section 15 to be dedicated to the well.
- CASE 6648: Application of Morris R. Antwell for pool creation and special pool rules, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks the creation of a new Mississippian oil pool for its Landlady Well No. 1 located in Unit B of Section 8, Township 12 South, Range 32 East, and special rules therefor, including 160-acre oil well spacing and a 4,000 to 1 gas-oil ratio.
- CASE 6549: Application of Morris R. Antweil for an unorthdox gas well location, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Morrow test well to be located 660 feet from the South line and 1980 feet from the East line of Section 5, Township 12 South, Range 32 East, the E/2 of said Section 5 to be dedicated to the well.
- CASE 6650: Application of Doyle Hartman for compulsory pooling, non-standard gas proration unit, and unorthodox well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Jalmat Gas Pool underlying the W/2 NE/4 of Section 36, Township 24

 South, Range 36 East, to form an 80-acre non-standard gas proration unit to be dedicated to a well to be drilled at an unorthodox location 2310 feet from the North line and 1650 feet from the East line of said Section 36. 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 6651: Application of Alpha Twenty-One Production Company for a non-standard proration unit, unorthodox well location, and approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well spacing requirements and a finding that the drilling of its El Paso Plant Well No. 1 at an unorthodox location 1650 feet from the South line and 660 feet from the West line of Section 32, Township 23 South, Range 37 East, Jalmat Gas Pool, is necessary to effectively and efficiently drain that portion of the non-standard proration unit, to comprise the N/2 SW/4 of said Section 32, which cannot be so drained by the existing well.
- CASE 6652: Application of Shell Oil Company for statutory unitization, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order unitizing, for the purpose of a pressure maintenance project, all mineral interests in the North Hobbs Grayburg-San Andres Unit encompassing 10,650 acres, more or less, underlying all or portions of the following lands in Lea County, New Mexico: Sections 13, 14, 23, 24, 25, 26, and 36, Township 18 South, Range 37 East; Sections 17 thru 21 and 27 thru 34, Township 18 South, Range 38 East.

The unitized interval would be the Grayburg-San Andres Formation between the depths of 3,698 feet and 4,500 feet in Shell's State A Well No. 7, located in Unit II of Section 32, Township 18 South, Range 38 East.

Among the matters to be considered at the hearing will be the necessity of unit operations; the designation of a unit operator; the determination of the horizontal and vertical limits of the unit area; the determination of a fair, reasonable, and equitable allocation of production and costs of production, including capital investment, to each of the various owners in the unit area; the determination of credits and charges to be made among the various owners in the unit area for their investment in wells and equipment; and such other matters as may be necessary and appropriate for carrying on efficient unit operations, including, but not necessarily limited to, unit voting procedures, selection, removal, or substitution of unit operator, and time of commencement and termination of unit operations. (This case will be continued to September 19, 1979.)

LADD PETROLEUM CORPORATION

830 Denver Club Building
Denver, Colorado 80202
Telephone (303) 292-3080

OIL CONSERVATION DIVISION SANTA FE

June 11, 1979

Mr. Ernie Padilla State of New Mexico Oil Conservation Division PO Box 2088 Santa Fe, New Mexico 87501 De Heave 6 6 38

Re: Application for Downhole Commingling
Ladd Petroleum Corporation
N. W. Lindreth #24
Unit F, Sec 4-T26N-R7W
Rio Arriba County, New Mexico

Dear Mr. Padilla:

Enclosed are three copies of subject application and three copies of a certificate of mailing to all offset operators, the U.S.G.S. and the supervisor of the Aztec District Office of the New Mexico Oil Conservation Division. We would appreciate you placing this application for hearing if one is needed. Please advise the undersigned if further information is needed.

Yours very truly,

LADD PETROLEUM CORPORATION

E. I. Blincoe Operations Manager

GBM:clf

enc.

cc w/enc: see attached list

A Subsidiary of Uteh International Inc.

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO

Hearing

In the matter of the Application of Ladd Petroleum Corporation for Downhole Commingling of the Lindrith #24 Well in Rio Arriba County, New Mexico

APPLICATION

Pursuant to Rule 303 (C) of the Rules and Regulations of the State of New Mexico Oil Conservation Division, the Applicant, Ladd Petroleum Corporation, hereby makes application for approval of downhole commingling in the well bore of the Lindrith #24 well in Rio Arriba County, New Mexico.

The Applicant further states:

- 1. The Operator of the Lindrith #24 well is the Applicant, Ladd Petroleum Corporation.
- 2. The Lindrith #24 well is located on Federal lease SF 079161 insofar as it covers the following described lands:

Township 26 North, Range 7 West, N.M.P.M.

Section 4: W/2

(Largo Gallup)

Section 4: W/2

(Basin Dakota)

Rio Arriba County, New Mexico

3. The legal location of the well is as follows:

Township 26 North, Range 7 West, N.M.P.M. Section 4: 1450' FNL & 1750' FWL

(Unit letter F)

Rio Arriba County, New Mexico

- 4. The Lindrith #24 well is currently <u>dually</u> completed in the Largo Gallup Pool and the Basin Dakota Pool pursuant to New Mexico Oil Conservation Multiple Completion Order MC-1313.
- 5. The Lindrith #24 well is capable of only low marginal production from the Largo Gallup Pool, and the well is also only capable of low marginal production from the Basin Dakota Pool.
- 6. The ownership of the above mentioned Pools is common.
- 7. The proposed commingling from the above Pools will result in the recovery of additional hydrocarbons from each of

these pools thereby preventing waste, and the commingling will not violate correlative rights.

Wherefore, the Applicant requests this Application be set for hearing and that after this hearing the New Mexico Oil Conservation Division grant this application by giving approval to the downhole commingling of the Lindrith #24 well in the Rio Arriba County, New Mexico.

Respectfully submitted,

E. I. Blincoe Operations Manager Ladd Petroleum Corporation

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830 Denver Club Bldg.

Denver, Colorado 80202

CERTIFICATE OF MAILING

I certify that I mailed a copy of the Application for Downhole Commingling of the Lindrith #24 well in Rio Arriba County, New Mexico to all operators of leases offsetting the dedicated acreage for this well, the U.S. Geological Survey, and the Supervisor of the District III Office of the New Mexico Oil Conservation Division on the 11th of June, 1979.

E. I. Blincoe

Operations Manager
Ladd Petroleum Corporation
830 Denver Club Bldg.

Denver, CO 80202

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO

In the matter of the Application of Ladd Petroleum Corporation for Downhole Commingling of the Lindrith #24 Well in Rio Arriba County, New Mexico

Case 6638

APPLICATION

Pursuant to Rule 303 (C) of the Rules and Regulations of the State of New Mexico Oil Conservation Division, the Applicant, Ladd Petroleum Corporation, hereby makes application for approval of downhole commingling in the well bore of the Lindrith #24 well in Rio Arriba County, New Mexico.

The Applicant further states:

- 1. The Operator of the Lindrith #24 well is the Applicant, Ladd Petroleum Corporation.
- 2. The Lindrith #24 well is located on Federal lease SF 079161 insofar as it covers the following described lands:

Township 26 North, Range 7 West, N.M.P.M. Section 4: W/2 (Largo Gallup) Section 4: W/2 (Basin Dakota) Rio Arriba County, New Mexico

3. The legal location of the well is as follows:

Township 26 North, Range 7 West, N.M.P.M.
Section 4: 1450' FNL & 1750' FWL
(Unit letter F)
Rio Arriba County, New Mexico

- 4. The Lindrith #24 well is currently dually completed in the Largo Gallup Pool and the Basin Dakota Pool pursuant to New Mexico Oil Conservation Multiple Completion Order
- 5. The Lindrith #24 well is capable of only low marginal production from the Largo Gallup Pool, and the well is also only capable of low marginal production from the Basin Dakota Pool.
- 6. The ownership of the above mentioned Pools is common.
- 7. The proposed commingling from the above Pools will result in the recovery of additional hydrocarbons from each of

these pools thereby preventing waste, and the commingling will not violate correlative rights.

Wherefore, the Applicant requests this Application be set for hearing and that after this hearing the New Mexico Oil Conservation Division grant this application by giving approval to the downhole commingling of the Lindrith #24 well in the Rio Arriba County, New Mexico.

Respectfully submitted,

E. I. Blincoe Operations Manager

Ladd Petroleum Corporation 830 Denver Club Bldg.

Denver, Colorado 80202

CERTIFICATE OF MAILING

I certify that I mailed a copy of the Application for Downhole Commingling of the Lindrith #24 well in Rio Arriba County, New Mexico to all operators of leases offsetting the dedicated acreage for this well, the U.S. Geological Survey, and the Supervisor of the District III Office of the New Mexico Oil Conservation Division on the 11th of June, 1979.

E. I. Blincoe Operations Manager Ladd Petroleum Corporation 830 Denver Club Bldg. Denver, CO 80202

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO

In the matter of the Application of Ladd Petroleum Corporation for Downhole Commingling of the Lindrith #24 Well in Rio Arriba County, New Mexico case 66 38

APPLICATION

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The Applicant further states:

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- 2. The Lindrith #24 well is located on Federal lease SF 079161 insofar as it covers the following described lands:

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Rio Arriba County, New Mexico

3. The legal location of the well is as follows:

Township 26 North, Range 7 West, N.M.P.M.
Section 4: 1450' FNL & 1750' FWL
(Unit letter F)
Rio Arriba County, New Mexico

- 4. The Lindrith #24 well is currently dually completed in the Largo Gallup Pool and the Basin Dakota Pool pursuant to New Mexico Oil Conservation Multiple Completion Order MC-1313.
- 5. The Lindrith #24 well is capable of only low marginal production from the Largo Gallup Pool, and the well is also only capable of low marginal production from the Basin Dakota Pool.
- 6. The ownership of the above mentioned Pools is common.
- 7. The proposed commingling from the above Pools will result in the recovery of additional hydrocarbons from each of

these pools thereby preventing waste, and the commingling will not violate correlative rights.

Wherefore, the Applicant requests this Application be set for hearing and that after this hearing the New Mexico Oil Conservation Division grant this application by giving approval to the downhole commingling of the Lindrith #24 well in the Rio Arriba County, New Mexico.

Respectfully submitted,

E. I. Blincoe
Operations Manager
Ladd Petroleum Corporation 830 Denver Club Bldg.

Denver, Colorado 80202

CERTIFICATE OF MAILING

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E. I. Blincoe

Operations Manager

Ladd Petroleum Corporation 830 Denver Club Bldg. Denver, CO 80202



Mr. Ernie Padilla State of New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87501

Re: Application for Downhole

Commingling

Ladd Petroleum Corporation

N.W. Lindreth #24 Unit F, Sec. 4-T26N-R7W Rio Arriba County, NM

Dear Mr. Padilla:

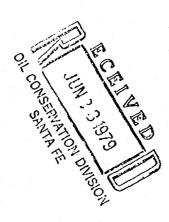
The undersigned, as an operator of a lease offsetting above subject well, does hereby acknowledge receipt of the application of Ladd Petroleum Corporation for the downhole commingling of the subject well in the Gallup and Dakota formations. The undersigned also hereby waives any objection to said application and voluntarily consents to the downhole commingling of subject well, as stated in the application received.

APPROVED	BY: Chang
COMPANY:	DEPCO, Inc.
TITLE:	Vice President-Production
ADDRESS:	1000 Petroleum Building
	Denver, CO 80202
DATE:	6-20-79

DISTRIBUTION LIST

- 1. Mr. Al R. Kendrick State of New Mexico Oil Conservation Division 1000 Rio Brazos Road Aztec, New Mexico 87410
- 11. Mr. Clyde Phillips Ladd Petroleum Corporation PO Box 7961 Midland, Texas 79701
- 2. Mr. Jerry Long U.S. Geological Survey PO Box 1809 Durango, Côlorado 81301
- 3. District Production Supt. Consolidated Oil & Gas, Inc. PO Box 2038 Farmington, New Mexico 87401
- Manager Lands & Contracts Depco, Inc. 1025 Petroleum Club Bldg. Denver, CO 80202
- 5. Mr. Richard Tully
 Dugan Production Corporation
 PO Box 234
 Farmington, New Mexico 87401
- 6. Production Superintendent Bolin Oil Company 1120 Oil & Gas Bldg. Wichita Falls, Texas 76301
- 7. Manager Land Husky Oil, Ltd. 600 South Cherry St. Denver, Colorado 80222
- 8. Director Land Department El Paso Natural Gas Company PO Box 1492 El Paso, Texas 79978
- 9. Helen Lorraine Harve, et al PO Box 177 Wichita Falls, Texas 76301
- 10. Petroleum Corporation of Texas PO Box 911 Breckenridge, Texas 76024

Mr. Ernie Padilla State of New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87501



Re: Application for Downhole Commingling Ladd Petroleum Corporation N.W. Lindreth #24 Unit F, Sec. 4-T26N-R7W Rio Arriba County, NM

Dear Mr. Padilla:

The undersigned, as an operator of a lease offsetting above subject well, does hereby acknowledge receipt of the application of Ladd Petroleum Corporation for the downhole commingling of the subject well in the Gallup and Dakota formations. The undersigned also hereby waives any objection to said application and voluntarily consents to the downhole commingling of subject well, as stated in the application received.

APPROVED	BY: D.T. Stogner &
COMPANY:	CONSCIONTED OUTEN IN
TITLE:	1P- OPERATIONS
ADDRESS:	1860 LINCOLN ST
•	DENVER CO.
DATE:	6/26/77

OIL CONSERVATION ON SON

Mr. Ernie Padilla State of New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87501

Re: Application for Downhole
Commingling
Ladd Petroleum Corporation
N.W. Lindreth #24
Unit F, Sec. 4-T26N-R7W
Rio Arriba County, NM

Dear Mr. Padilla:

The undersigned, as an operator of a lease offsetting above subject well, does hereby acknowledge receipt of the application of Ladd Petroleum Corporation for the downhole commingling of the subject well in the Gallup and Dakota formations. The undersigned also hereby consents to the downhole commingling of subject well, as stated in the application received.

APPROVED	BY: Orichard Tully
COMPANY: TITLE:	Dugan Production Coxp.
ADDRESS:	P. U. Box 234
DATE:	Farmington, NH 8740. June 22, 1979

JUN2 1 1979

OIL CONSERVATION DIVISION
ON SANTA FE

Mr. Ernie Padilla
State of New Mexico
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87501

Re: Application for Downhole Commingling
Ladd Petroleum Corporation
N.W. Lindreth #24
Unit F, Sec. 4-T26N-R7W
Rio Arriba County, NM

Dear Mr. Padilla:

The undersigned, as an operator of a lease offsetting above subject well, does hereby acknowledge receipt of the application of Ladd Petroleum Corporation for the downhole commingling of the subject well in the Gallup and Dakota formations. The undersigned also hereby waives any objection to said application and voluntarily consents to the downhole commingling of subject well, as stated in the application received.

APPROVED BY:

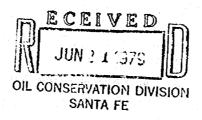
COMPANY: PETROLEUM CORPORATION OF TEXAS

TITLE: Division Superintendent

ADDRESS: P.O. Box 911

Breckenridge, Texas 76024

DATE: June 18, 1979



Mr. Ernie Padilla State of New Mexico Oil Conservation Division P.O. Box 2088 87501 santa Fe, NM

Application for Downhole Re: Commingling Ladd Petroleum Corporation N.W. Lindreth #24 Unit F, Sec. 4-T26N-R7W Rio Arriba County, NM

Dear Mr. Padilla:

The undersigned, as an operator of a lease offsetting above subject well, does hereby acknowledge receipt of the application of Ladd Petroleum Corporation for the downhole commingling of the subject well in the Gallup and Dakota formations. The undersigned also hereby waives any objection to said application and voluntarily consents to the downhole commingling of subject well, as stated in the application received.

APPROVED BY: 166 COMPANY: Bolin Oil Company TITLE: Land Manager ADDRESS: 1120 Oil and Gas Building Wichita Falls, Texas 76301

DATE:

June 19, 1979



Mr. Ernie Padilla State of New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87501

> Re: Application for Downhole Commingling Ladd Petroleum Corporation N.W. Lindreth #24 Unit F, Sec. 4-T26N-R7W Rio Arriba County, NM

Dear Mr. Padilla:

The undersigned, as an operator of a lease offsetting above subject well, does hereby acknowledge receipt of the application of Ladd Petroleum Corporation for the downhole commingling of the subject well in the Gallup and Dakota formations. The undersigned also hereby waives any objection to said application and voluntarily consents to the downhole commingling of subject well, as stated in the application received.

APPROVED BY: COMPANY

COMPANY: EL PASO NATURAL GAS COMPANY

TITLE: REGIONAL LAND MANAGER

ADDRESS: POST OFFICE BOX 990

FARMINGTON, NEW MEXICO 87401

DATE:

JUNE 25, 1979



600 South Cherry Street Denver, Colorado 80222 (303) 320-4040

June 27, 1979

Mr. Ernie Padilla State of New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe, New Mexico 87501

RE: Application for Downhole

Commingling

Ladd Petroleum Corporation

N.W. Lindreth #24 Unit F, Sec.4-T26N-R7W

Rio Arriba County, New Mexico

Gentlemen:

Please find attached one copy of subject 'Waiver of Objection', approved on behalf of Husky Oil Company.

Yours very truly,

Joint Interest Administrator

JLC:dh

Attach: (1)

cc: Ladd Petroleum Corporation

Mr. E.I. Blincoe

operation3 Manager 830 Denver Club Building Denver, Colorado 80202

OIL CONSERVATION DIVISION

SANTA FE

Mr. Ernie Padilla State of New Mexico 011 Conservation Division P.O. Box 2088 87501 Santa Fe, NM

> Application for Downhole Commingling Ladd Petroleum Corporation N.W. Lindreth #24 Unit F, Sec. 4-T26N-R7W Rio Arriba County, NM

Dear Mr. Padilla:

The undersigned, as an operator of a lease offsetting above subject well, does hereby acknowledge receipt of the application of Ladd Petroleum Corporation for the downhole commingling of the subject well in the Gallup and Dakota formations. The undersigned also hereby waives any objection to said application and voluntarily consents to the downhole commingling of subject well, as stated in the application received.

APPROVED BY:

COMPANY:

ADDRESS:

OIL CONSERVATION DIVISION SANTA FE

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.

Order No.

APPLICATION OF LADD PETROLEUM CORPORATION FOR DOWNHOLE COMMINGLING,

COUNTY, NEW MEXICO.

RIO ARRIBA

6638

BY THE DIVISION:

ORDER OF THE DIVISION This cause came on for hearing at 9 a.m. on

_, at Santa Fe, New Mexico, before Examiner Daniels. NOW, on this

Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

- That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- That the applicant, Ladd Petroleum Corporation the owner and operator of the XMAKBAKARXIMP VO. 24 located in Unit F of Section 4 Range 7 West
- NMPM, Rio Arriba County, New Mexico. That the applicant seeks authority to commingle Largo-Gallup

Within the Wellbore of the above-described Well. production

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

CASE NO.

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

2)

2::::

Order No. 6120 APPLICATION OF LADD PETROLEUM CORPORATION 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 19 79, at Santa Fe, New Mexico, before Examiner Daniel-S. R.L. Autter Stamets. NOW, on this day of August Sept. , 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, Ladd Petroleum Corporation Lindrith Well No. 24 the owner and operator of the xkgrggxQallum located in Unit F of Section 4, Township 26 North Range_ 7 West , NMPM, Rio Arriba County, New Mexico. (3) That the applicant seeks authority to commingle _and Basin-Dakota Largo-Gallup production within the wellbore of the above-described well.

(8) That the applicant should provide for the production, of the commingled hydrocarbons through the long tubing string. Largo-Gallup (4) That from the zone, the subject well is capable of low marginal production only. Basin-Dakota (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. 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. (%) 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 any time the subject well is shut-in for 7 consecutive days. That in order to allocate the commingled production to each of the commingled zones in the subject well, Percentan & percent of the commingled gos and oil production, respectively, production should be Largo-Gallup allocated to the percent of the commingled que and oil production to the Basin-Dakota zone. (ALTERNATE) 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 Aztec district office of the Division and determine an allocation formula for each of the production zones.

IT IS THEREFORE ORDERED:

(1) That the applicant, Ladd Petroleum Corporation , is
hereby authorized to commingle Largo-Gallup and
Basin-Dakota production within the wellbore of
the Lindrith Well No. 24 , located in Unit F of
Section 4 , Township 26 North , Range 7 West ,
NMPM, Rio Arriba County, New Mexico.
(2) That the applicant shall 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 wells.
(ALTERNATE)
(2) That Mountained 30 percent of the commingled gis and oil
production shall be allocated to the Largo-Gallup :-
zone and 28 percent and 70 percent of the commingled gus and of
production/shall be allocated to the Basin-Dakota
zone.
(4) 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.
(5) 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.
(3) That the operator shall provide for production
of the comming hed hydrocarbon's latching from the long string of tubing by unlatching from the
long string the Lubing immediately
packer or by perforating the Jubing immediately
above such packer.