

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

cont to Sep 4

Amberg

DUKE TO

CASE NO.

6638

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

Dan —

Another case for
a hearing??

This is a gas/gas dual
now. No indication it
will make anything but gas.

Carl

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-) CASE
poration for downhole commingling,) 6638
Rio Arriba County, New Mexico.)

BEFORE: Richard L. Stamets

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 for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87503

For the Applicant:

W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
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I N D E X

RICK HOGAN

Direct Examination by Mr. Kellahin 3

Cross Examination by Mr. Stamets 12

E X H I B I T S

Applicant Exhibit One, Plat 4

Applicant Exhibit Two, Graph 6

Applicant Exhibit Three, Sketch 6

Applicant Exhibit Four, Tabulation 8

Applicant Exhibit Five, Tabulation 8

Applicant Exhibit Six, Decline Curve 9

Applicant Exhibit Seven, Decline Curve 9

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

2 MR. PADILLA: Application of Ladd Petroleum
3 Corporation for downhole commingling, Rio Arriba County,
4 New Mexico.

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

8
9 (Witness sworn.)

10
11 RICK HOGAN
12 being called as a witness and having been duly sworn upon
13 his oath, testified as follows, to-wit:

14
15 DIRECT EXAMINATION

16 BY MR. KELLAHIN:

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

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

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

23 A No, I have not.

24 Q Would you summarize for the Examiner when
25 and where you obtained your degree in petroleum engineering?

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1 A I got my Bachelor degree in petroleum
2 engineering from the Colorado School of Mines in December of
3 1974.

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

6 A I worked for three and a half years for
7 Continental Oil Company as a production engineer. I then
8 worked for one year for Petro Lewis Corporation as a develop-
9 ment engineer. In May of this year I started working for
10 Ladd Petroleum as a production engineer.

11 Q As part of your duties as a petroleum en-
12 gineer have you made a study of the proposed downhole com-
13 mingling in this case?

14 A Yes, I have.

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

17 MR. STAMETS: The witness is considered
18 qualified.

19 Q (Mr. Kellahin continuing.) Would you re-
20 fer to what we've marked as Exhibit Number One and identify
21 that?

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

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Page 5

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

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

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

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

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

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

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

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

25 A Yes.

1 Q Okay. What do you propose to do with this
2 well, Mr. Hogan?

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

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

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

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

18 Q Your pressure versus time curve on Exhibit
19 Number Two shows that at some point in '75 the two zones be-
20 came commingled, is that correct?

21 A Yes, it is.

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

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

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

7 Q When was this well first completed?

8 A It was completed in December, 1962. First
9 production was in January of '73, or excuse me, '63.

10 Q Is the working interest and the royalty --
11 or the overriding royalty interests common for the northwest
12 quarter of this section?

13 A Yes, they are.

14 Q And this is a Federal lease?

15 A Yes, it is.

16 Q Is either the Gallup or the Dakota zone
17 produced under compression?

18 A Yes, the Gallup is presently produced under
19 compression because of the low bottom hole pressure that it
20 exhibited earlier on in the life of the well.

21 The Dakota is not.

22 Q If the commingling is approved, would you
23 continue to produce the well in the same way?

24 A Yes, we would. We would be compressing
25 the Gallup and all production would go through the compressor.

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1 Q As a petroleum engineer do you see any
2 problems with continued production of the well in this manner?

3 A No, I do not.

4 Q Would you refer to what we've marked as
5 Exhibit Number Four and identify that?

6 A Exhibit Four is just a summary of the
7 production from the Dakota and the Gallup logged individually
8 from the well since 1971 when we took over operations of
9 this well.

10 Q Exhibit Four is the Gallup production and
11 Exhibit Five is the Dakota production?

12 A Yes.

13 Q The Gallup zone does make some oil production?

14 A Yes, it does. There's a small amount of
15 condensate and a very small amount of water produced from
16 the Gallup.

17 Q Your tabulation of production doesn't show
18 any water production. What amounts are you talking about?

19 A Probably less than one barrel a day.

20 Q And for the Dakota production, does that
21 zone make any oil or water?

22 A It makes just a trace of condensate; re-
23 cently hasn't made any.

24 Q In your opinion will there be any problems
25 encountered by the fact that condensate and water may be

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1 produced by either of the zones?

2 A. No.

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

5 A. No, they are not. They're nearly insigni-
6 ficant.

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

9 A. Okay. Exhibits Six and Seven are the pro-
10 duction decline curves for the Largo Gallup and the Basin
11 Dakota for the well in question, throughout the entire life
12 of the well.

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

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

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

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1 A. Yes, I have.

2 Q. And what is that figure?

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

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

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

13 MR. STAMETS: Is that a combined figure?

14 A. Yes.

15 Q. Can you allocate for us the producable re-
16 serves remaining to each of the zones?

17 A. Yes, I can.

18 Referring to Exhibits Five and Six, I be-
19 lieve, the depletion, or excuse me, the production curves,
20 at the beginning of 1975 for the Largo Gallup, and also at
21 the beginning of 1975 for the Basin Dakota, we have the cumu-
22 lative production to date for both of those zones.

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

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

10 Q Mr. Hogan, have you obtained waivers from
11 all the offset operators with regards to the proposed down-
12 hole commingling?

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

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

23 A Yes, it will.

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

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

5 Q They're documents from Ladd Petroleum Cor-
6 poration's records?

7 A Yes, they are.

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

10 MR. STAMETS: These exhibits will be ad-
11 mitted.

12
13 CROSS EXAMINATION

14 BY MR. STAMETS:

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

17 A 72.4 percent prior to 1975 and 72.6 per-
18 cent subsequent to 1975.

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

21 Q So you are recommending, then, that the,
22 if the well is allowed to be downhole commingled, that the
23 percentage of production assigned to the Gallup would be
24 72 percent of the total?

25 A 72.6 percent, yes.

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

3 How about the oil production in this well?

4 A There is just almost no condensate pro-
5 duced from -- from the Dakota, and hasn't been for some time.
6 There's a little bit coming out of the Gallup and it's not
7 a great deal of it.

8 We'll probably allocate that on the same
9 percentage unless we go back and find that there's a signi-
10 ficant difference between the entire, you know, the cumula-
11 tive volumes produced from either zone.

12 Those have not been summed on this exhibit.

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

16 A Okay.

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

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

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

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

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

12 A Yes, there is.

13 Q Would that result in more efficient pro-
14 duction or less efficient production?

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

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

23 A Yes.

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

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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 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 Q. And when did you get those pressures?

12 A. Those were in July of 1979.

13 Q. Do those reflect real pressures or the
14 commingled pressures?

15 A. Those are reflective of commingled pres-
16 sures.

17 Q. Okay. If we go back then to 1974, on Ex-
18 hibit Number Two, would those pressures be indicative of
19 the differential at that time?

20 A. Yes.

21 Q. Could those be projected to make a deter-
22 mination of what bottom hole pressures might be expected
23 today?

24 A. I don't understand your question.

25 Q. Okay. Can you extrapolate the expected

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1 bottom hole pressure today utilizing information shown on
2 this exhibit?

3 A. Yes.

4 Q. Would you do that, please?

5 A. From prior to 1974?

6 Q. Yes.

7 A. Well, --

8 Q. I presume you feel the 1974 pressure is a
9 good pressure.

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

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

18 Q. Let's just take the Dakota pressure itself.

19 A. Okay.

20 Q. Back in 1974 it looked like you had about
21 975 pounds?

22 A. Yes.

23 Q. Okay, what would you expect the Dakota
24 pressure to be today, based on that decline?

25 A. Okay, are you referring to the decline be-

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

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

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

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

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

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

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

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

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

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

5 Q Now, with that kind of pressure differential
6 is there not an opportunity for cross flow between those
7 two zones?

8 A Yes, there is.

9 Q And can that have any harmful effect on
10 the ability of this well to produce all of the gas from the
11 two zones?

12 A No. I feel like it will not affect it.

13 Q And why do you say that? What --

14 A Well, the Dakota zone, the Dakota zone is
15 a higher pressured zone. Any cross flow would go from the
16 Dakota into the Gallup and the Gallup is a much better pro-
17 ducer. So any -- any gas given up by the Dakota would flow
18 into a higher permeable zone, which would then be recovered
19 as the pressure depleted.

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

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

1 pressure differential?

2 A Yes, it would.

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

5 Anything further in this case?

6 The case will be taken under advisement.

7

8 (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.
 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
 heard by me on 9-5-1977
Richard L. Hunt Examiner
 Oil Conservation Division

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
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21 Q Mr. Hogan, have you previously testified
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4 Q Subsequent to graduation where have you
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14 A Yes, I have.

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1 Q Okay. What do you propose to do with this
2 well, Mr. Hogan?

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

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

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

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

18 Q Your pressure versus time curve on Exhibit
19 Number Two shows that at some point in '75 the two zones be-
20 came commingled, is that correct?

21 A Yes, it is.

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

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

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

7 Q When was this well first completed?

8 A It was completed in December, 1962. First
9 production was in January of '73, or excuse me, '63.

10 Q Is the working interest and the royalty --
11 or the overriding royalty interests common for the northwest
12 quarter of this section?

13 A Yes, they are.

14 Q And this is a Federal lease?

15 A Yes, it is.

16 Q Is either the Gallup or the Dakota zone
17 produced under compression?

18 A Yes, the Gallup is presently produced under
19 compression because of the low bottom hole pressure that it
20 exhibited earlier on in the life of the well.

21 The Dakota is not.

22 Q If the commingling is approved, would you
23 continue to produce the well in the same way?

24 A Yes, we would. We would be compressing
25 the Gallup and all production would go through the compressor.

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1 Q As a petroleum engineer do you see any
2 problems with continued production of the well in this manner?

3 A No, I do not.

4 Q Would you refer to what we've marked as
5 Exhibit Number Four and identify that?

6 A Exhibit Four is just a summary of the
7 production from the Dakota and the Gallup logged individually
8 from the well since 1971 when we took over operations of
9 this well.

10 Q Exhibit Four is the Gallup production and
11 Exhibit Five is the Dakota production?

12 A Yes.

13 Q The Gallup zone does make some oil production?

14 A Yes, it does. There's a small amount of
15 condensate and a very small amount of water produced from
16 the Gallup.

17 Q Your tabulation of production doesn't show
18 any water production. What amounts are you talking about?

19 A Probably less than one barrel a day.

20 Q And for the Dakota production, does that
21 zone make any oil or water?

22 A It makes just a trace of condensate; re-
23 cently hasn't made any.

24 Q In your opinion will there be any problems
25 encountered by the fact that condensate and water may be

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1 produced by either of the zones?

2 A. No.

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

5 A. No, they are not. They're nearly insigni-
6 ficant.

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

9 A. Okay. Exhibits Six and Seven are the pro-
10 duction decline curves for the Largo Gallup and the Basin
11 Dakota for the well in question, throughout the entire life
12 of the well.

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

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

24 Q Have you made any calculations concerning
25 the producible reserves remaining from both the zones?

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Page 10

1 A. Yes, I have.

2 Q And what is that figure?

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

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

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

13 MR. STAMETS: Is that a combined figure?

14 A. Yes.

15 Q Can you allocate for us the producable re-
16 serves remaining to each of the zones?

17 A. Yes, I can.

18 Referring to Exhibits Five and Six, I be-
19 lieve, the depletion, or excuse me, the production curves,
20 at the beginning of 1975 for the Largo Gallup, and also at
21 the beginning of 1975 for the Basin Dakota, we have the cumu-
22 lative production to date for both of those zones.

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

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

10 Q Mr. Hogan, have you obtained waivers from
11 all the offset operators with regards to the proposed down-
12 hole commingling?

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

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

23 A Yes, it will.

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

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

5 Q They're documents from Ladd Petroleum Cor-
6 poration's records?

7 A Yes, they are.

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

10 MR. STAMETS: These exhibits will be ad-
11 mitted.

12
13 CROSS EXAMINATION

14 BY MR. STAMETS:

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

17 A 72.4 percent prior to 1975 and 72.6 per-
18 cent subsequent to 1975.

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

21 Q So you are recommending, then, that the,
22 if the well is allowed to be downhole commingled, that the
23 percentage of production assigned to the Gallup would be
24 72 percent of the total?

25 A 72.6 percent, yes.

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

3 How about the oil production in this well?

4 A There is just almost no condensate pro-
5 duced from -- from the Dakota, and hasn't been for some time.
6 There's a little bit coming out of the Gallup and it's not
7 a great deal of it.

8 We'll probably allocate that on the same
9 percentage unless we go back and find that there's a signi-
10 ficant difference between the entire, you know, the cumula-
11 tive volumes produced from either zone.

12 Those have not been summed on this exhibit.

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

16 A Okay.

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

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

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

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

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

12 A Yes, there is.

13 Q Would that result in more efficient pro-
14 duction or less efficient production?

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

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

23 A Yes.

24 Q And this could be accomplished without
25 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 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 Q And when did you get those pressures?

12 A. Those were in July of 1979.

13 Q Do those reflect real pressures or the
14 commingled pressures?

15 A. Those are reflective of commingled pres-
16 sures.

17 Q Okay. If we go back then to 1974, on Ex-
18 hibit Number Two, would those pressures be indicative of
19 the differential at that time?

20 A. Yes.

21 Q Could those be projected to make a deter-
22 mination of what bottom hole pressures might be expected
23 today?

24 A. I don't understand your question.

25 Q Okay. Can you extrapolate the expected

1 bottom hole pressure today utilizing information shown on
2 this exhibit?

3 A Yes.

4 Q Would you do that, please?

5 A From prior to 1974?

6 Q Yes.

7 A Well, ---

8 Q I presume you feel the 1974 pressure is a
9 good pressure.

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

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

18 Q Let's just take the Dakota pressure itself.

19 A Okay.

20 Q Back in 1974 it looked like you had about
21 975 pounds?

22 A Yes.

23 Q Okay, what would you expect the Dakota
24 pressure to be today, based on that decline?

25 A Okay, are you referring to the decline be-

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

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

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

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

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

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

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

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

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

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

5 Q Now, with that kind of pressure differential
6 is there not an opportunity for cross flow between those
7 two zones?

8 A Yes, there is.

9 Q And can that have any harmful effect on
10 the ability of this well to produce all of the gas from the
11 two zones?

12 A No. I feel like it will not affect it.

13 Q And why do you say that? What --

14 A Well, the Dakota zone, the Dakota zone is
15 a higher pressured zone. Any cross flow would go from the
16 Dakota into the Gallup and the Gallup is a much better pro-
17 ducer. So any -- any gas given up by the Dakota would flow
18 into a higher permeable zone, which would then be recovered
19 as the pressure depleted.

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

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

1 pressure differential?

2 A. Yes, it would.

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

5 Anything further in this case?

6 The case will be taken under advisement.

7
8 (Hearing concluded.)

9

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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. 19.

Oil Conservation Division, Examiner

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BRUCE KING
GOVERNOR
LARRY KEHOE
SECRETARY

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

September 25, 1979

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SANTA FE, NEW MEXICO 87501
(505) 827-2434

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

Re: CASE NO. 6638
ORDER NO. R-6120

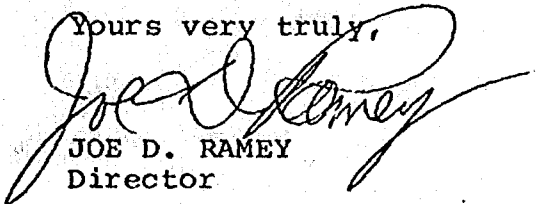
Applicant:

Ladd Petroleum Corporation

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

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 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, is the owner and operator 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.
- (3) That the applicant seeks authority to commingle Largo-Gallup and Basin-Dakota production within the wellbore of the above-described well.
- (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.

-2-

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 not shut-in for an extended period.

(8) 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 for 7 consecutive days.

(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:

(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 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 hydrocarbons through the long string of tubing by unlatching from the packer or by perforating the tubing immediately above such packer.

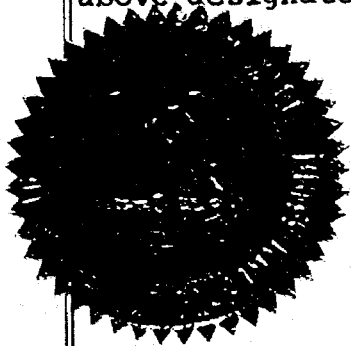
(4) That the operator of the subject well shall immediately notify the Division's Aztec district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.

(5) 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 herein-
above designated.



S E A L

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Joe D. Ramey
JOE D. RAMEY
Director

fd/

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico
22 August 1979

EXAMINER HEARING

IN THE MATTER OF:

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

CASE
6638

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 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

1 MR. NUTTER: We'll call next Case Number
2 6638.

3 MR. PADILLA: Application of Ladd Petro-
4 leum Corporation for downhole commingling, Rio Arriba County,
5 New Mexico.

6 MR. KELLAHIN: Tom Kellahin of Santa Fe,
7 New Mexico, appearing on behalf of Ladd Petroleum Corporation.

8 Mr. Examiner, I've requested this case be
9 continued to the hearing on September 5th.

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

13
14 (Hearing concluded.)
15
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25

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
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Santa Fe, New Mexico 87501

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.
 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,
 heard by me on 8/22 1979.

[Signature] Examiner
 Oil Conservation Division

SALLY WALTON BOYD
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 Santa Fe, New Mexico 87501

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

EXAMINER HEARING

IN THE MATTER OF:

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

CASE
6638

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 for the Division
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For the Applicant:

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MR. NUTTER: We'll call next Case Number

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 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.)

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
 heard by me on 8/22 1979.

[Signature] Examiner
 Oil Conservation Division

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Telephone 982-4285
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September 7, 1979

RECEIVED
SEP 10 1979
Mr. Richard L. Stamets
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

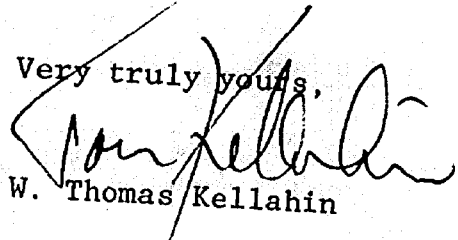
Re: Ladd Petroleum Corporation
OCD Case No. 6638

Dear Dick:

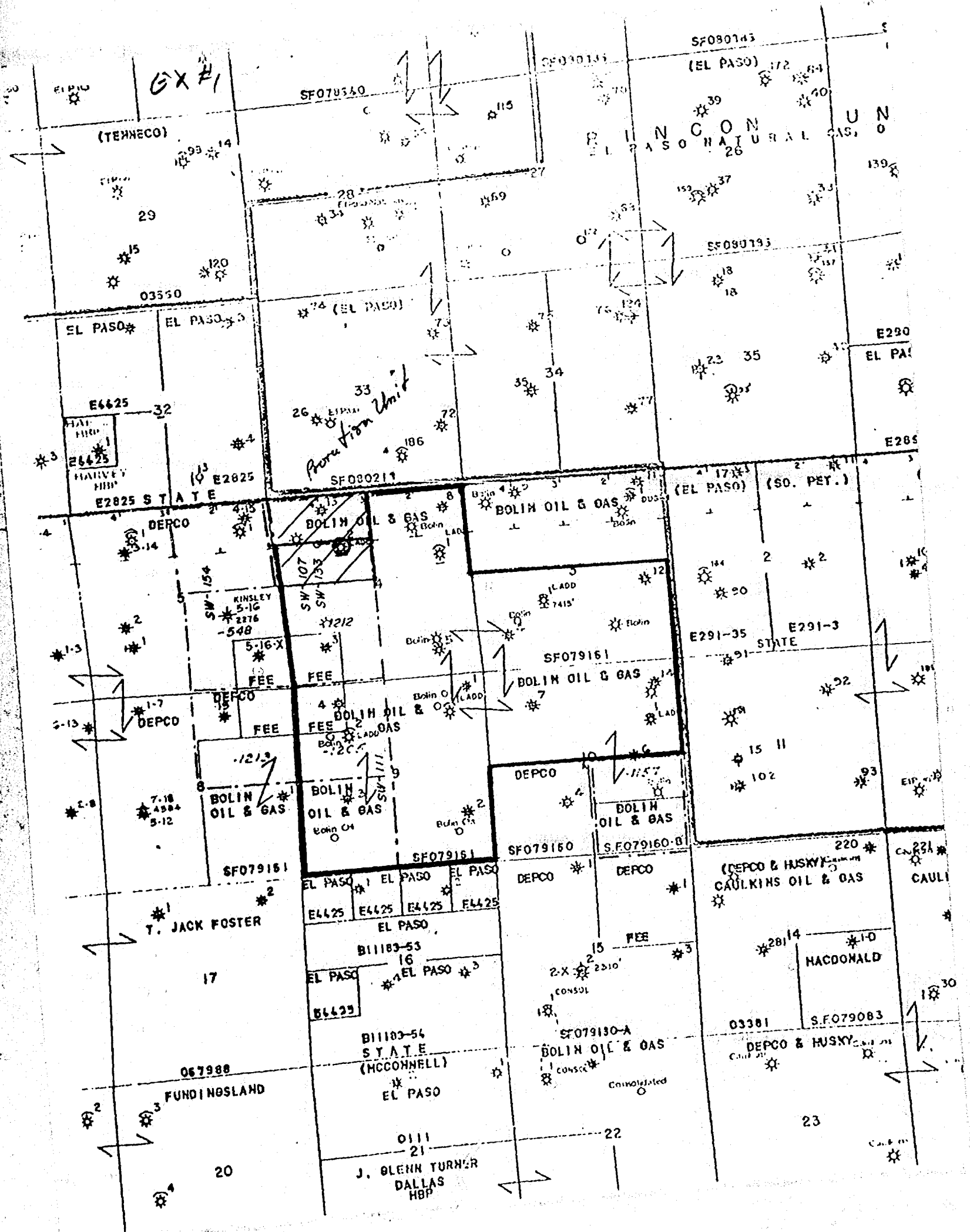
In accordance with your request at the hearing of the above referenced case on September 5, 1979, Mr. Rick Hogan has informed me that the condensate production and corresponding percentages for allocation are as follows:

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

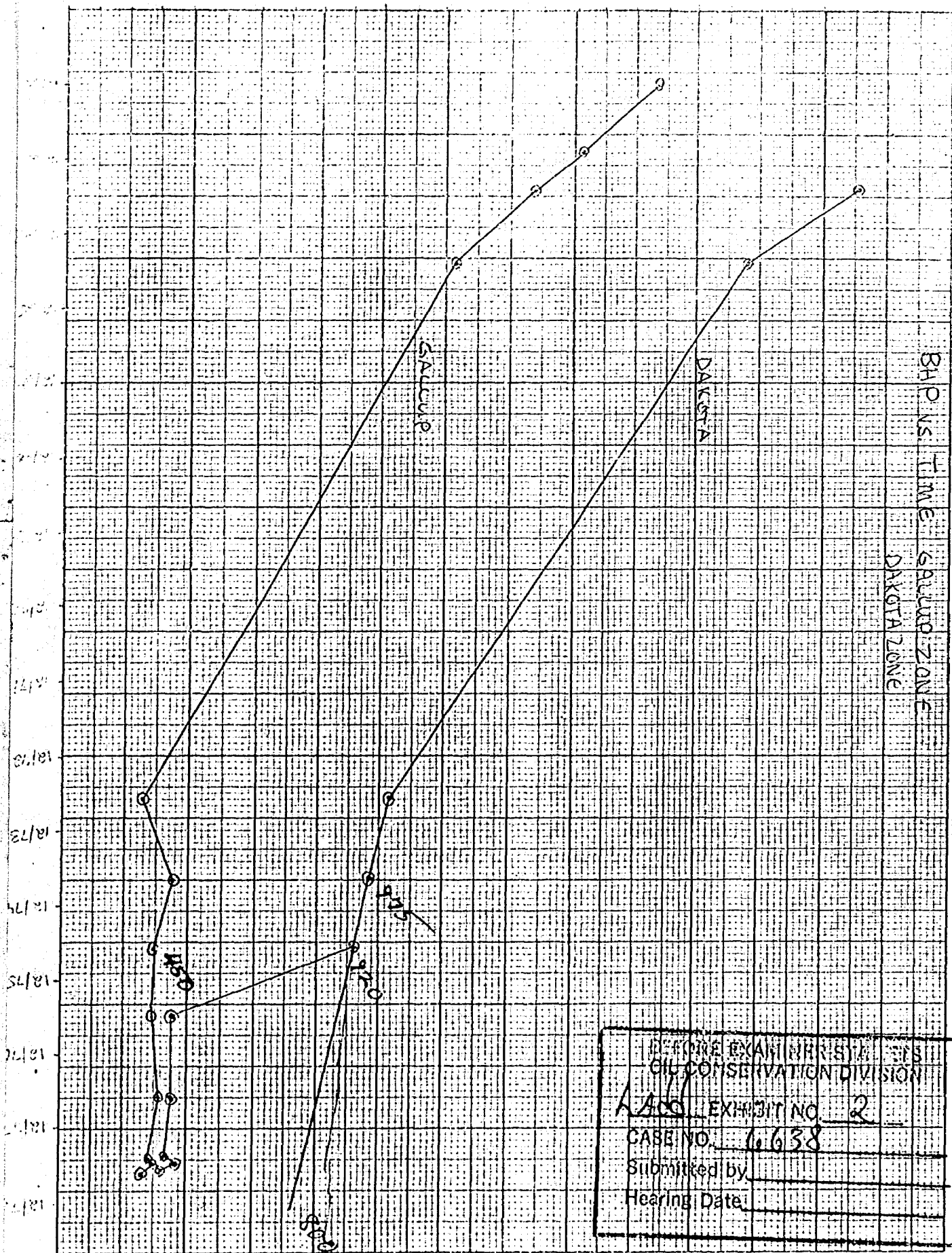
Please advise me if you desire any further information before issuing the requested order.

Very truly yours,

W. Thomas Kellahin

cc: Mr. Rick Hogan
WTK:mf



46 1240



WELL COMPLETION
SKETCH

LINORITH # 24
SEC 4 - T20N - R7W
RIO ARriba COUNTY

8 5/8" CSG SET @ 242'
w/ 150 SX CEMENT

2 1/16" U-50 3.25 #/ft 10RD
INTEGRAL JOINT TBC SET
@ 6608

1 1/2" U-50 2.75 #/ft 10RD TBC
SET @ 7010

DV TOOL @ 2950 CEMENTED
w/ 50 SX

4940' TOP OF 1ST STAGE
CEMENT

PERFS 6666-6672 TREATED
15000' 20-40 SAND, 25300 gal
OIL

BAKER MODEL D PACKER SET
@ 7010
6' TAIL ASSEMBLY

PERFS 7160-82, 7256-64 TREATED
32,000 gal WATER, 20,000 gal
20-40 SAND

PERFS 7302-7322 TREATED
62,000 gal WATER, 40,000 gal
20-40 SAND

PBTD 7448'
TD 7483'

BEFORE EXAMINER STAMPS
OIL CONSERVATION DIVISION

EXHIBIT NO. 3

CASE NO. 6638

Submitted by

Hearing Date

5 1/2" CSG SET @ 7479

1ST STAGE 300 SX CEMENT

46 1240

20 X 20 TO THE INCH 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

K-E

FIELD: Largo (Ga) COUNTY: Bio Arriba STATE: New Mexico DISTRICT: _____
 LEASE: Lincoln ID NUMBER: _____ WELL NUMBER: 24 OPERATOR: Ladd Petroleum Corp
 RESERVOIR: Gallup LPC INTEREST: _____ DATE COMPLETED: _____

MONTH 19 <u>77</u>	NO. PROD. WELLS	OIL PRODUCTION — BBLs.		GAS — MCF		WATER — BBLs.		REMARKS
		MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	
JAN.		87		16,201				
FEB.		115		11,057				
MAR.		132		11,991				
APRIL		110		20,866				
MAY		118		7,556				
JUNE		133		15,778				
JULY		84		8,636				
AUG.		151		15,540				
SEPT.		108		11,740				
OCT.		55		3,982				
NOV.		146		16,361				
DEC.		164		17,843				
1978		1403		144,771	3,476,389			
JAN.		126		16,767				
FEB.		113		10,135				
MAR.		180		16,292				
APRIL		89		8,069				
MAY		69		8,589				
JUNE		94		15,827				
JULY		15		2,743				
AUG.		0		0				
SEPT.		15		0				
OCT.		84		13,631				
NOV.		82		19,694				
DEC.		12		6,049				
1979		819		117,796	3,594,185			
JAN.		13		726				
FEB.		138		13,802				
MAR		17		2,663				
APRIL		82		8,796				
MAY		60		9,452				
JUNE		25		2,055	363,1729			
JULY								
AUG.								
SEPT.								
OCT.								
NOV.								
DEC.								

BEFORE EXAMINER STATEMENTS
 OIL CONSERVATION DIVISION
 LADD EXHIBIT NO. 4
 CASE NO. 6638
 Submitted by _____
 Hearing Date _____

DATE COMPLETED:

MONTH		OIL PRODUCTION - BBLs.			GAS - MCF		WATER - BBLs.			G. O. R.	PRESSURE			DAYS PROD.	REMARKS
MONTH.	ALLOW.	DAILY	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	%		CSG.	TBG.	BHP.		
1971						2,938,386 CUMULATIVE 2,938,386									
JAN.			57		13,790										
FEB.			37		6,048										
MAR.			97		17,389										
APR.			39		12,443										
MAY			7		2,471										9 P.W.D.
JUNE			38		5,357										
JULY			0		5,212										
AUG.			54		13,268										
SEP.			58		9,033										
OCT.			68		9,750										
NOV.			39		7,131										
DEC.			87		14,234										
			575		116,120	3,054,506									
1975															
JAN.			86		12,876										
FEB.			138		18,259										
MAR.			120		14,872										
APR.			196		13,238										
MAY			138		17,449										
JUNE			158		15,002										
JULY			81		8,021										
AUG.			138		16,788										
SEP.			151		10,444										
OCT.			61		9,364										
NOV.			48		5,068										
DEC.			15		6,932										
			1330	28071	148,313	32,02819									
1976															
JAN.			94		14,164										
FEB.			61		12,179										
MAR.			62		5122										
APR.			75		2636										
MAY			98		9684										
JUNE			71		8835										
JULY			118		11736										
AUG.			153		13646										
SEP.			164		13753										
OCT.			171		14613										
NOV.			10		6555										
DEC.			181		9826										
			1258		128711	3331618									

FIELD: Largo (Ga) FILE: WI 80.2116 % ; NI. 589555 COUNTY: Rio Arriba STATE: New Mexico
 LEASE: Lindrich WELL NO.: 24 OPERATOR: Ladd
 RESERVOIR: Gallup PERFS: DATE COMPLETED:

MONTH	MONTH. ALLOW.	OIL PRODUCTION - BBLs.			GAS - MCF		WATER - BBLs.			G. O. R.	PRESSURE			DAYS PROD.	REMARKS
		DAILY	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	%		CSO.	TRG.	DHP.		
1971															
JAN.			63		23243										
FEB.			141		17566										
MAR.			147		24366										
APR.			137		27328										
MAY			138		23298										
JUNE			145		18013										
JULY			129		21341										
AUG.			91		15747										
SEP.			105		17761										
OCT.			75		10432										
NOV.			131		16743										
DEC.			175		20217										
			1517		236060										
1972															
JAN.			167		19205										
FEB.			193		18283										
MAR.			211		12724										
APR.			213		13538										
MAY			170		17294										
JUNE			177		16022										
JULY			136		15074										
AUG.			115		11136										
SEP.			170		15841										
OCT.			244		12894										
NOV.			212		15598										
DEC.			177		14202										
			2125		187862										
1973															
JAN.			88		13066										
FEB.			34	25,180	6677										
MAR.			67		3412										
APR.			149		20393										
MAY			128		18571										
JUNE			101		17658										
JULY			87		16739										
AUG.			64		9480										
SEP.			101		17439										
OCT.			66		17169										
NOV.			57		13842										
DEC.			108		12677										
			1050		147129										

1972 Deliverability Test (Flow
 test 2/12/72 to 2/26/72, STP test
 8/23/72) STP 146" STP
 267", STCP 267" Gas
 Gty. 0.747, Deliverability
 811 MCFG PD

FIELD: Basin (OK) COUNTY: Bta Arriba STATE: New Mexico DISTRICT: _____
 LEASE: Lindahl ID NUMBER: _____ WELL NUMBER: 24 OPERATOR: Ladd Petroleum Corp.
 RESERVOIR: Dakota LPC INTEREST: _____ DATE COMPLETED: _____

MONTH 1977	NO. PROD. WELLS	OIL PRODUCTION — BBLs.		GAS — MCF		WATER — BBLs.		REMARKS
		MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	
JAN.		12		2718				
FEB.		13		2372				
MAR.		5		2268				
APRIL		14		1978				
MAY		22		3452				
JUNE		0		2459				
JULY		0		1553				
AUG.		0		2287				
SEPT.		0		1609				
OCT.		0		2053				
NOV.		0		1852				
DEC.		0		935				
1978		66		25,536	1,354,516			
JAN.		3		1,000				
FEB.		3		617				
MAR.		2		678				
APRIL		0		1,202				
MAY		0		1,484				
JUNE		0		416				
JULY		1		361				
AUG.		0		438				
SEPT.		0		344				
OCT.		0		827				
NOV.		0		43				
DEC.		0		45				
1979		9		7395	1,361,911			
JAN.		0		86				
FEB.		0		380				
MAR.		0		129				
APRIL		0		1531				
MAY		0		1664				
JUNE		0		484	1366185			
JULY								
AUG.								
SEPT.								
OCT.								
NOV.								
DEC.								

BEFORE EXAMINER STAFFERS
OIL CONSERVATION DIVISION

LAND EXHIBIT NO. 5

CASE NO. 6638

Submitted by _____

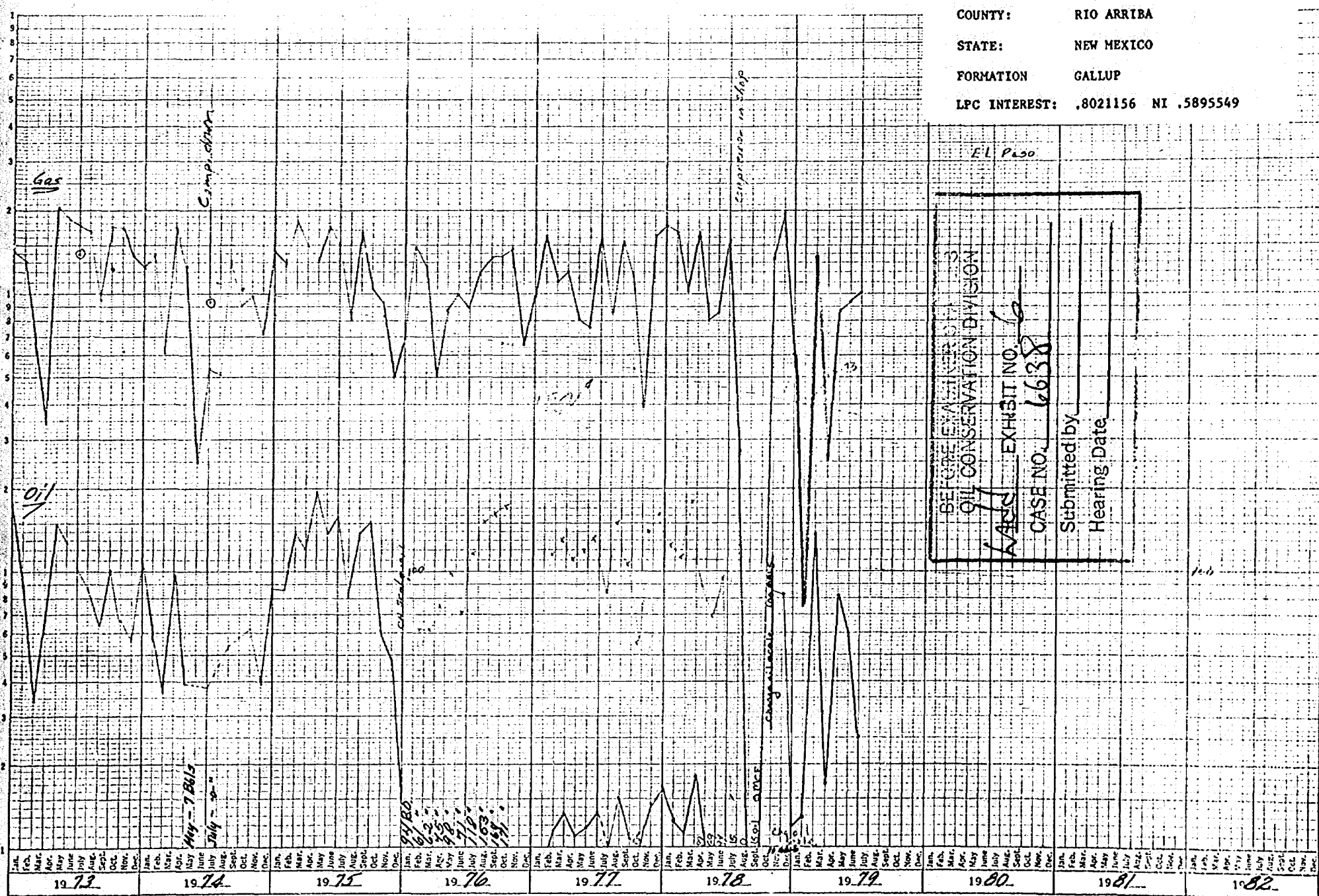
Hearing Date _____

FIELD: Basin (Dk) FILE WT 80.2116% & NE. 584555 COUNTY: Rio Arriba STATE: New Mexico
 LEASE: LINDRITH WELL NO.: 24 OPERATOR: LADD
 RESERVOIR: Dakota PERFS: DATE COMPLETED:

MONTH	MONTHLY ALLOW.	OIL PRODUCTION - BBLs.			GAS - MCF		WATER - BBLs.			G. O. R.	PRESSURE			DAYS PROD.	REMARKS
		DAILY	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	%		CSO.	TGC.	BHP.		
1974						1,075,819									
JAN.			52	6656											
FEB.			25	14314											
MAR.			32	6412											
APR.			37	6340											
MAY			0	6381											
JUNE			40	4489											
JULY			34	2647											
AUG.			28	6326											
SEP.			59	7913											
OCT.			45	6856											
NOV.			30	3095											
DEC.			54	7370											
			364	68,349		1,164,068									
1975															
JAN.			50	6132											
FEB.			22	3065											
MAR.			46	5492											
APR.			0	4926											
MAY			44	5117											
JUNE			17	4824											
JULY			13	5230											
AUG.			15	4439											
SEP.			19	2830											
OCT.			33	3837											
NOV.			16	3900											
DEC.			47	4221											
			322	54013		1,272,974									
1976															
JAN.			36	3824											
FEB.			23	1696											
MAR.			27	3108											
APR.			15	3970											
MAY			32	3216											
JUNE			10	2190											
JULY			3	2755											
AUG.			0	2565											
SEP.			0	2222											
OCT.			4	2722											
NOV.			7	1774											
DEC.			16	2302											
			203	32,350		1,304,444									

Del Test: Flow Test (4400 - 4500)
 SIT Test (4500); FIP 242
 SITP 832; Del. 208 HCF/AD

LEASE: LINDRITH #24
 FIELD: LARGO (GALLUP)
 COUNTY: RIO ARriba
 STATE: NEW MEXICO
 FORMATION: GALLUP
 LPC INTEREST: .8021156 NI .5895549



1-1-73 Received by [unclear] 24 (800-0-0) = 283 11/1/82

~~Federal Lindrith (N.W.) No. 2-4 (Kq Gallup)~~

Lindrith No 24

Largo (Gallup) Field

Rio Arriba County, New Mexico

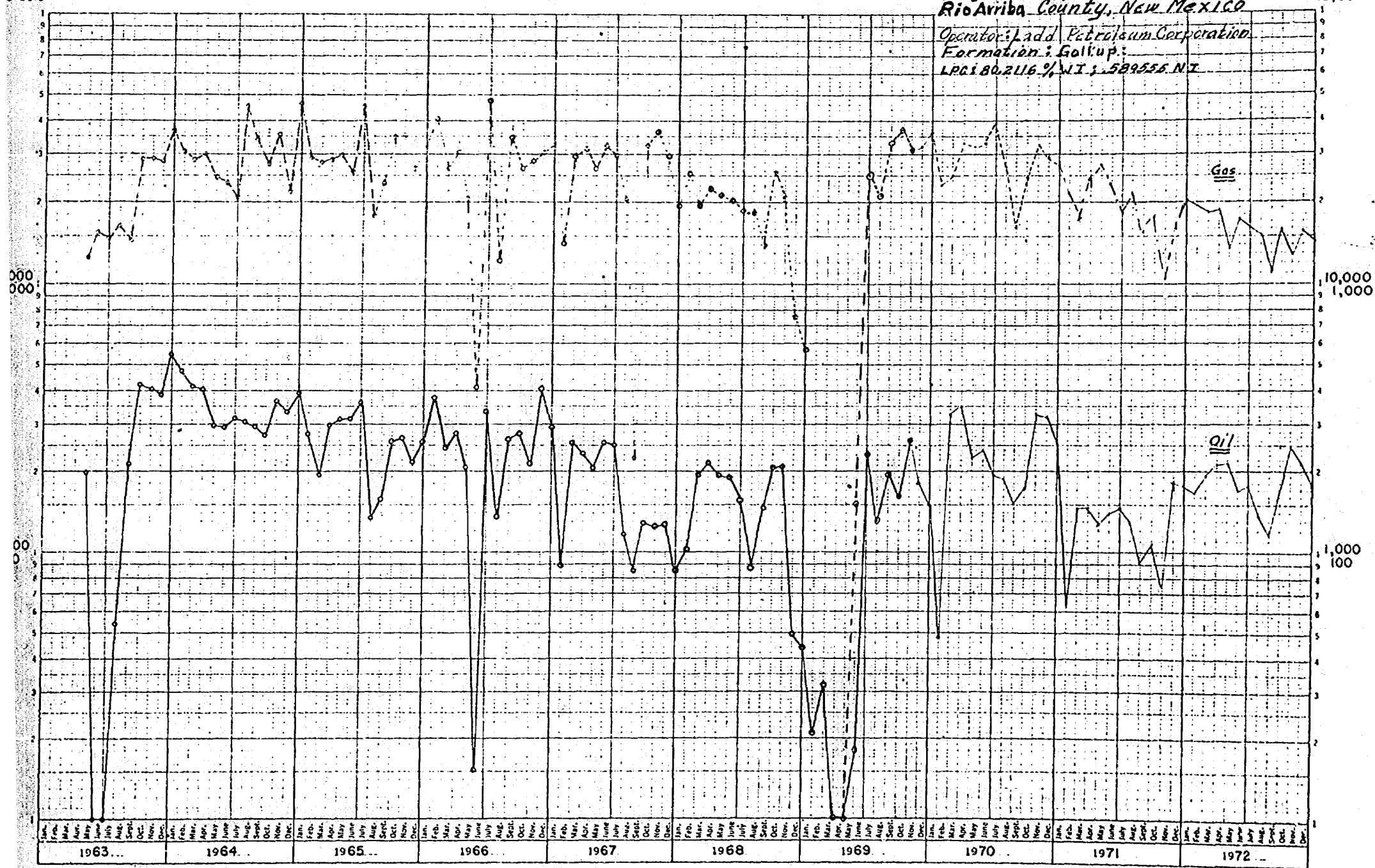
Operator: Ladd Petroleum Corporation

Formation: Gallup

LOG: 80.2116% WT; 589556 NT

100,000 mcf
10,000 bbls

0 mcf
0 bbls



FORMATION: DAKOTA - *dually completed*
LPC INTEREST: .8021156 NI .5895549



~~Federal Lindrith (N.W.) No. 2-4~~ (Dakota)

Lindrith No. 24
Basin (Dakota) Field

Rio Arriba County, New Mexico

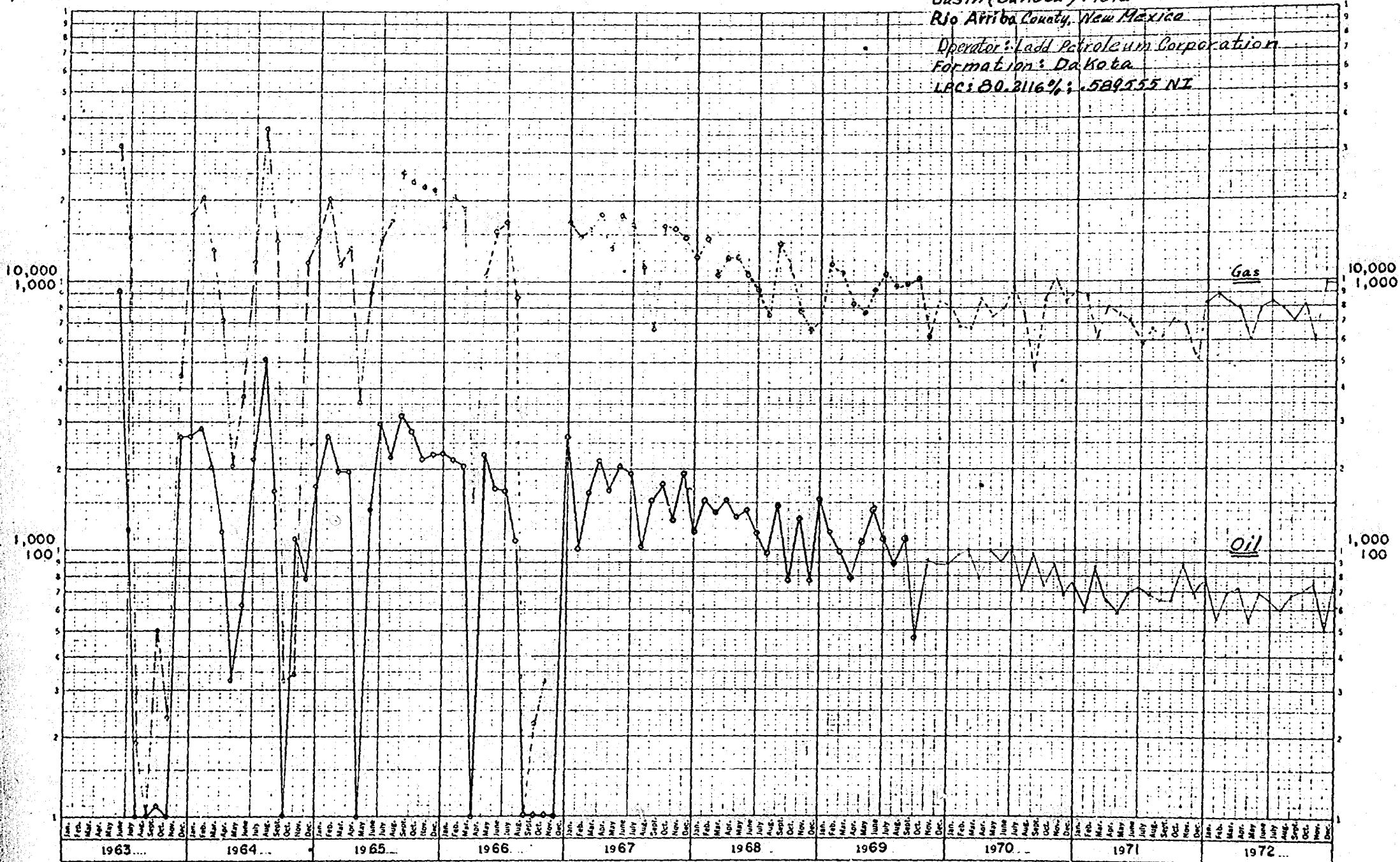
Operator: Ladd Petroleum Corporation

Formation: Dakota

LPI: 80.2116%; .58955 NT

100,000 mcf
10,000 bbls

100,000 mcf
10,000 bbls



EX #1

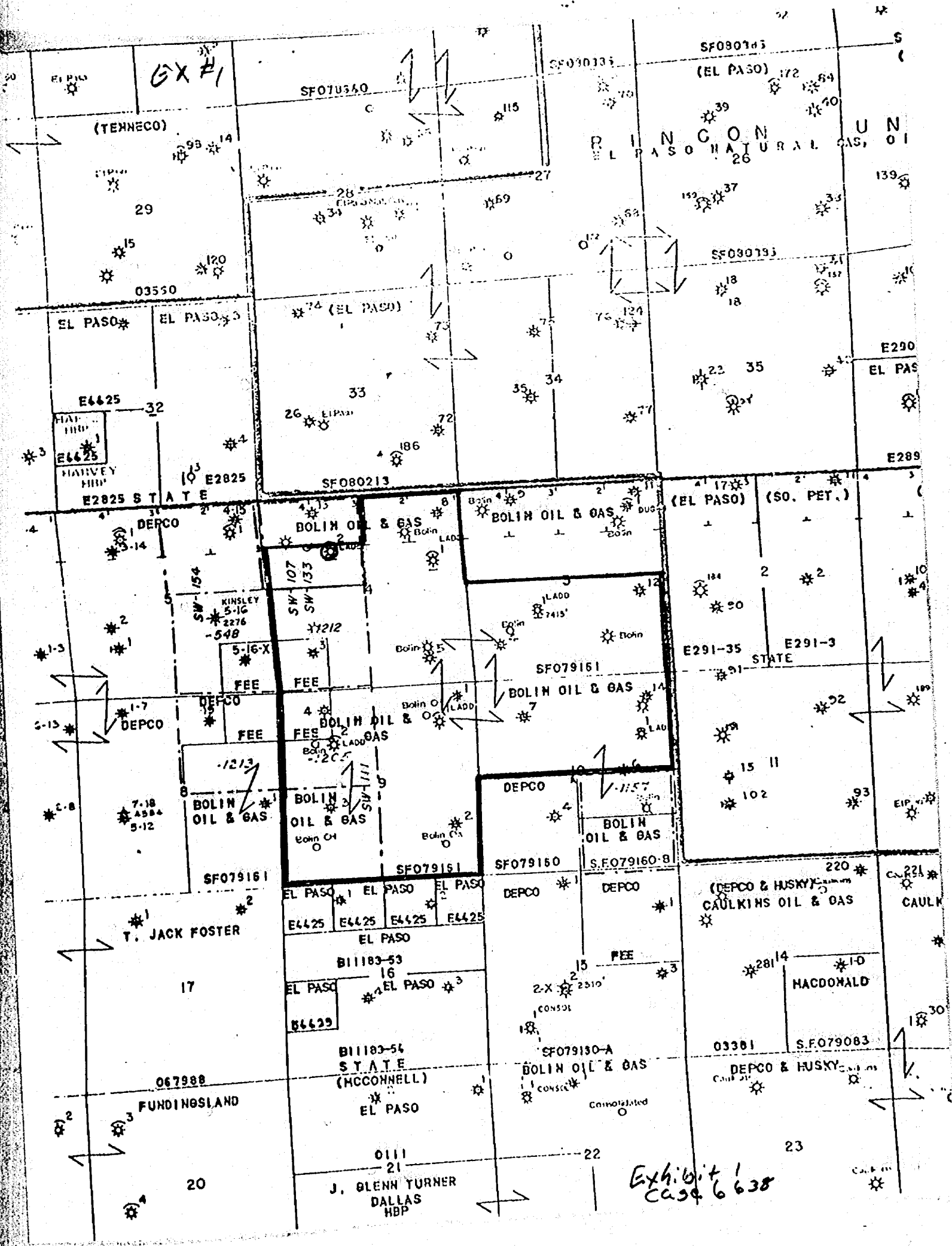
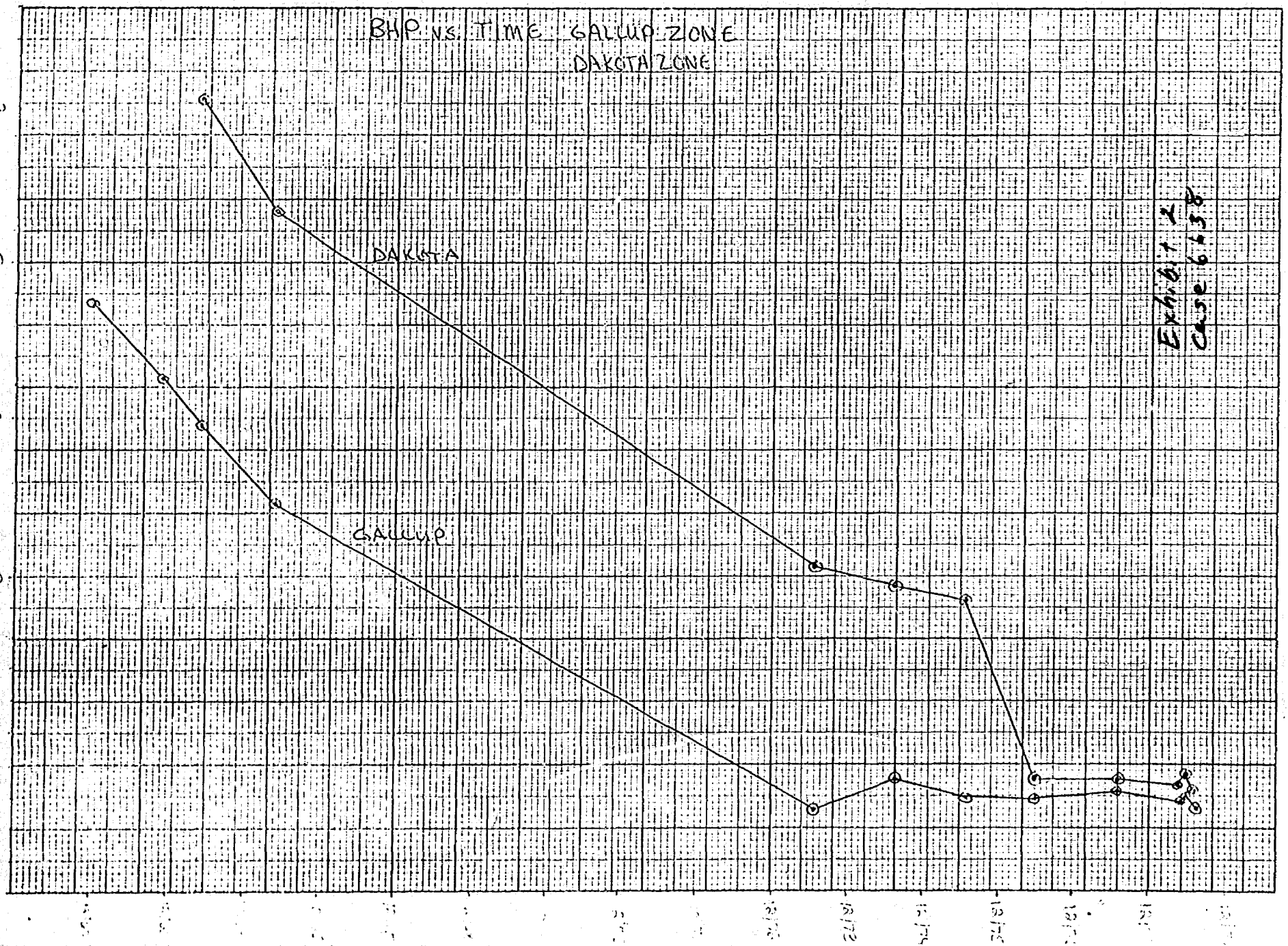


Exhibit 1
Case 6638

BHP VS. TIME GALUP ZONE
DAKOTA ZONE

Exhibit 12
Case 6438



46 1240

20 X 20 TO THE INCH 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

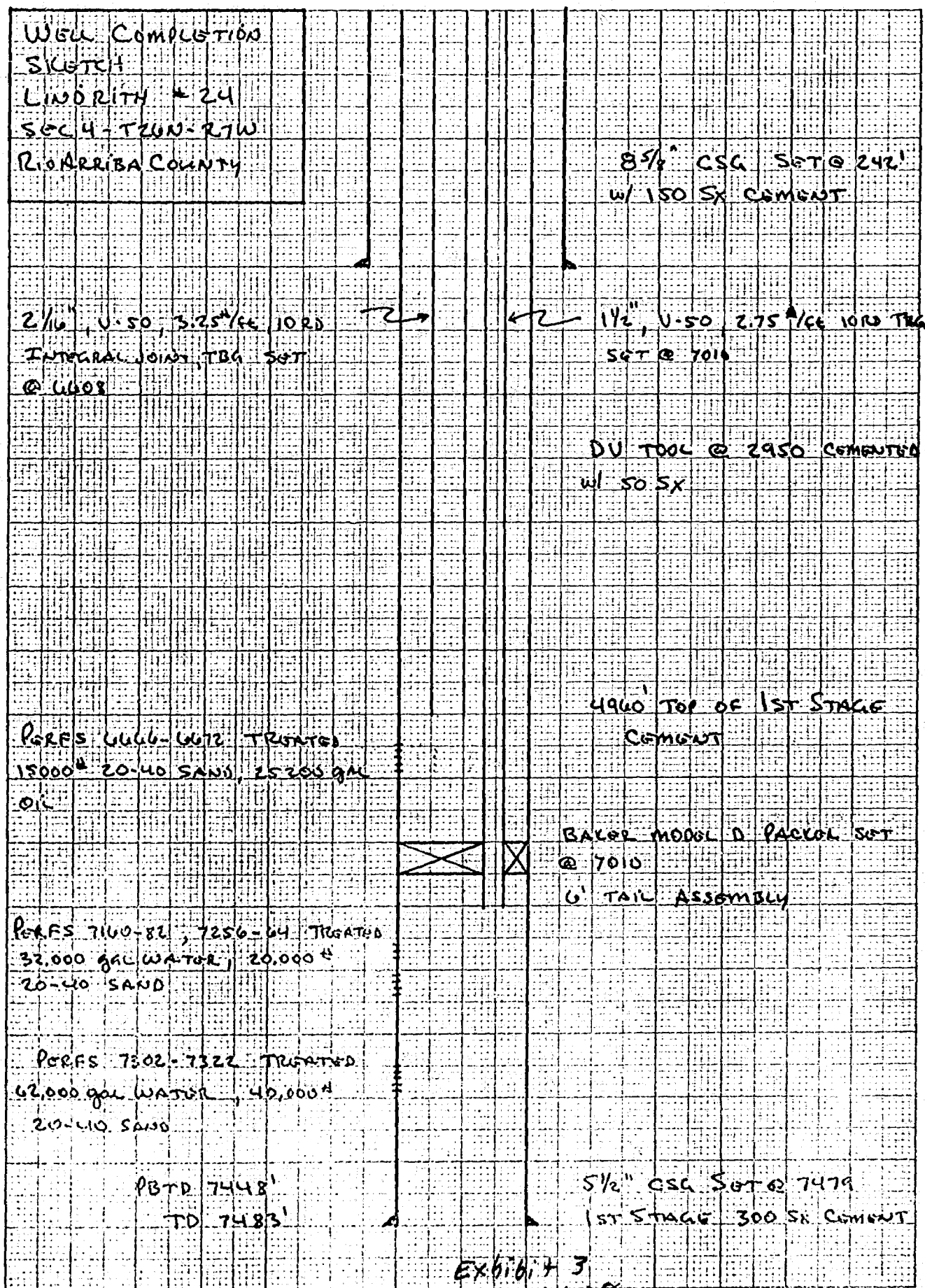


EXHIBIT 3
Case 6638

FIELD: Largo (6a) COUNTY: Bio Arriba STATE: New Mexico DISTRICT: _____
 LEASE: El Indio ID NUMBER: _____ WELL NUMBER: 24 OPERATOR: Ladd Petroleum Corp
 RESERVOIR: Gallop LPC INTEREST: _____ DATE COMPLETED: _____

MONTH	NO. PROD. WELLS	OIL PRODUCTION — BBLs.		GAS — MCF		WATER — BBLs.		REMARKS
		MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	
JAN.		87		16,201				
FEB.		115		11,057				
MAR.		132		11,991				
APRIL		110		8,086				
MAY		118		7,556				
JUNE		133		15,778				
JULY		84		8,636				
AUG.		151		15,540				
SEPT.		108		11,740				
OCT.		55		3,982				
NOV.		146		16,361				
DEC.		164		17,843				
1978		1,403		144,771	3,476,389			
JAN.		126		16,767				
FEB.		113		10,135				
MAR.		180		16,292				
APRIL		89		8,069				
MAY		69		8,589				
JUNE		94		15,827				
JULY		15		2,743				
AUG.		0		0				
SEPT.		15		0				
OCT.		84		13,631				
NOV.		82		19,694				
DEC.		12		6,049				
1979		879		117,796	3,594,185			
JAN.		13		976				
FEB.		138		13,802				
MAR.		17		2,663				
APRIL		83		8,796				
MAY		60		9,452				
JUNE		25		2,055	363,179			
JULY								
AUG.								
SEPT.								
OCT.								
NOV.								
DEC.								

EXHIBIT 4
Case 6638

FIELD: Largo (Ga) FILE WI 80.2116 %; NI. 589555
LEASE: Lindrieth COUNTY: Rio Arriba
RESERVOIR: Gallup WELL NO.: 24 (1)
PERFS: _____

STATE: New Mexico
OPERATOR: Ladd
DATE COMPLETED: _____

MONTH	MONTH. ALLOW.	OIL PRODUCTION - BBLs.			GAS - MCF		WATER - BBLs.			G. O. R.	PRESSURE			DAYS PROD.	REMARKS
		DAILY	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	%		CSO.	TBG.	BHP.		
1971															
JAN.			63		23243										
FEB.			141		17566										
MAR.			147		24366										
APR.			127		27323										
MAY			138		23293										
JUNE			145		13013										
JULY			129		21341										
AUG.			91		15747										
SEP.			105		17761										
OCT.			75		10432										
NOV.			131		16743										
DEC.			175		20217										
			1514		236060										
1972															
JAN.			167		19205										
FEB.			193		13253										
MAR.			211		13724										
APR.			213		13538										
MAY			170		17294										
JUNE			177		16022										
JULY			136		15074										
AUG.			115		11136										
SEP.			170		15841										
OCT.			244		12894										
NOV.			212		15598										
DEC.			177		14202										
			2135		187362										
1973															
JAN.			88		13066										
FEB.			34	25,100	6677										
MAR.			67		3412										
APR.			149		20393										
MAY			128		18571										
JUNE			101		17658										
JULY			27		16739										
AUG.			64		9480										
SEP.			101		17439										
OCT.			66		17169										
NOV.			57		13818										
DEC.			108		12677										
			1050		117139										

1972 Deliverability Test (Flow
test 2/12/72 to 2/26/72, STTP
8/23/72) = FTP 146" STTP
267", STCP 267", Gas
Qty. 0.747, Deliverability
811 MCFG PD

FIELD: Basin (OK) COUNTY: Bta Arriba STATE: New Mexico DISTRICT:
 LEASE: Lynarith ID NUMBER: WELL NUMBER: 24 OPERATOR: Ladd Petroleum Corp
 RESERVOIR: Dakota LPC INTEREST: DATE COMPLETED:

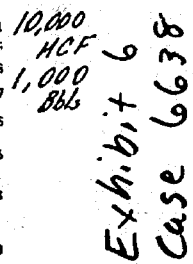
MONTH 1977	NO. PROD. WELLS	OIL PRODUCTION — BBLs.		GAS — MCF		WATER — BBLs.		REMARKS
		MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	
JAN.		12		2718				
FEB.		13		2372				
MAR.		5		2268				
APRIL		14		1978				
MAY		22		3452				
JUNE		0		2459				
JULY		0		1553				
AUG.		0		2287				
SEPT.		0		1609				
OCT.		0		2053				
NOV.		0		1852				
DEC.		0		935				
1978		66		25,536	1,354,516			
JAN.		3		1,000				
FEB.		3		617				
MAR.		2		678				
APRIL		0		1,202				
MAY		0		1,484				
JUNE		0		416				
JULY.		1		361				
AUG.		0		438				
SEPT.		0		344				
OCT.		0		827				
NOV.		0		43				
DEC.		0		45				
1979		9		7395	1,361,911			
JAN.		0		86				
FEB.		0		350				
MAR		0		129				
APRIL		0		1531				
MAY		0		1664				
JUNE		0		484	1366185			
JULY								
AUG.								
SEPT.								
OCT.								
NOV.								
DEC.								

EXHIBIT 5
Case 6638

STATE: New Mexico
OPERATOR: LADD
DATE COMPLETED: _____

MONTH	MONTH. ALLOW.	OIL PRODUCTION - BBLs.			GAS - MCF		WATER - BBLs.			G. O. R.	PRESSURE			DAYS PROD.	REMARKS
		DAILY	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	%		CSO.	TBC.	BHP.		
1974						1,095,819									
JAN.			-0-		6056										
FEB.			5		4344										
MAR.			33		6412										
APR.			37		6340										
MAY			0		6,381										
JUNE			40		4,489										
JULY			34		2,647										
AUG.			28		6,326										
SEP.			59		7,913										
OCT.			45		6,856										
NOV.			30		3,095										
DEC.			54		7,370										
			364		68,249	1,164,068									
1975															
JAN.			50		6,132										Del Test: Flow Test (912/hrs - 412/hrs) ST Test (57/hrs); FTP 242, STTP 822; Del. 208 MCF/GPD
FEB.			22		3,065										
MAR.			46		5,492										
APR.			0		4,926										
MAY			44		5,117										
JUNE			17		4,824										
JULY			13		5,230										
AUG.			15		4,439										
SEP.			19		2,830										
OCT.			33		3,837										
NOV.			16		3,900										
DEC.			47		4,221										
			322		54,013	1,272,094									
1976															
JAN.			36		3,824										
FEB.			23		1,696										
MAR.			27		3,108										
APR.			45		3,970										
MAY			32		3,216										
JUNE			10		2,190										
JULY			3		2,755										
AUG.			0		2,565										
SEP.			0		2,222										
OCT.			4		2,722										
NOV.			7		1,774										
DEC.			16		2,308										
			203		32,350	1,304,444									

EL PASO



1 1000
2 MCF
3 1000
7 Bbls

1014-100
10

~~Federal Lindrith (N.W.) No. 2-4~~ (Dakota)

Lindrith No. 24
Basin (Dakota) Field

Rio Arriba County, New Mexico

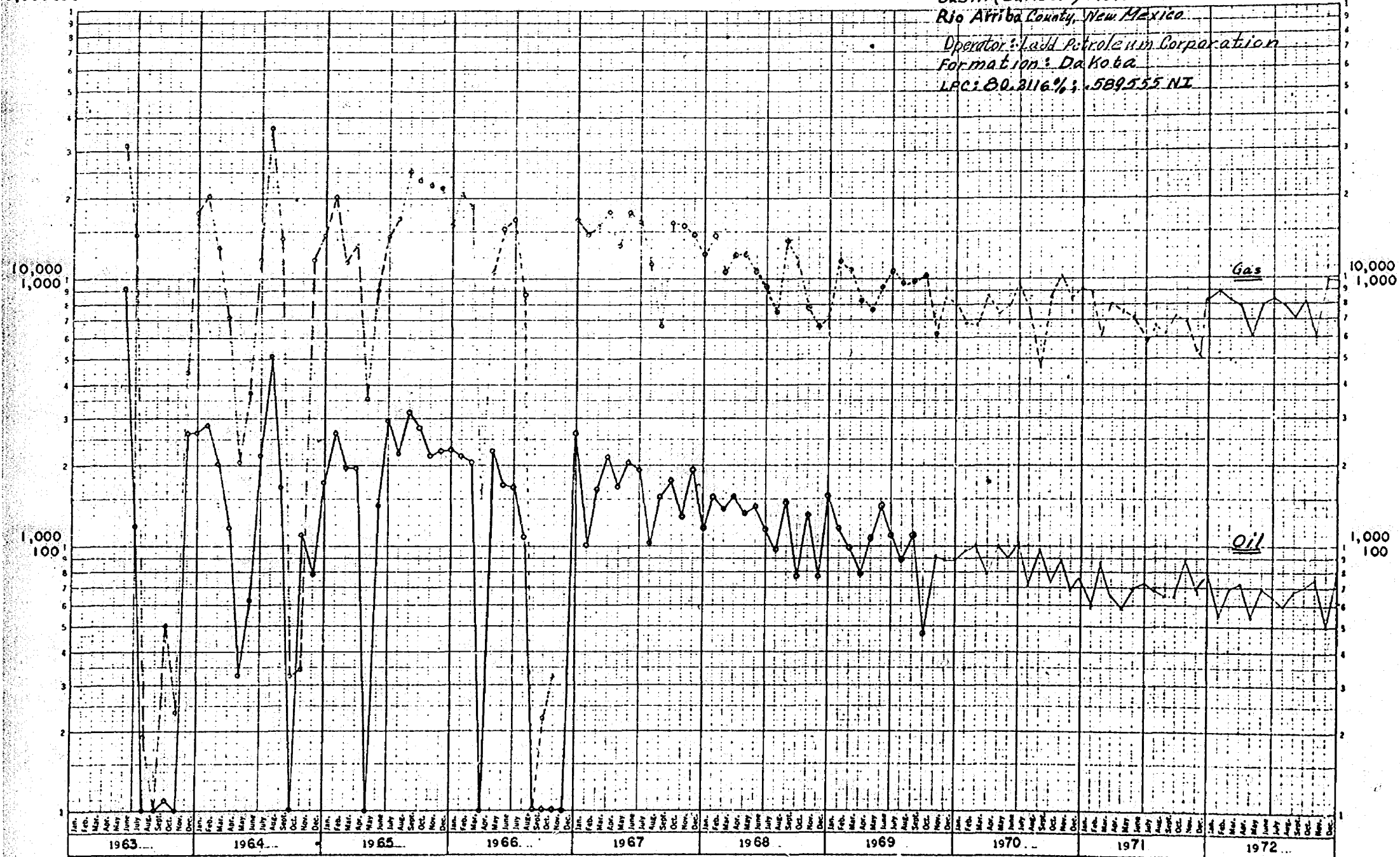
Operator: Ladd Petroleum Corporation

Formation: Dakota

LFC: 80.3116%; .589555 NI

10,000 mcf
10,000 bbls

100,000 mcf
10,000 bbls



LEASE: LINDRITH #24
 FIELD: BASIN (DAKOTA)
 COUNTY: SAN JUAN
 STATE: NEW MEXICO
 FORMATION: DAKOTA - mostly sand, silted
 LPC INTEREST: .8021156 NI .5895549

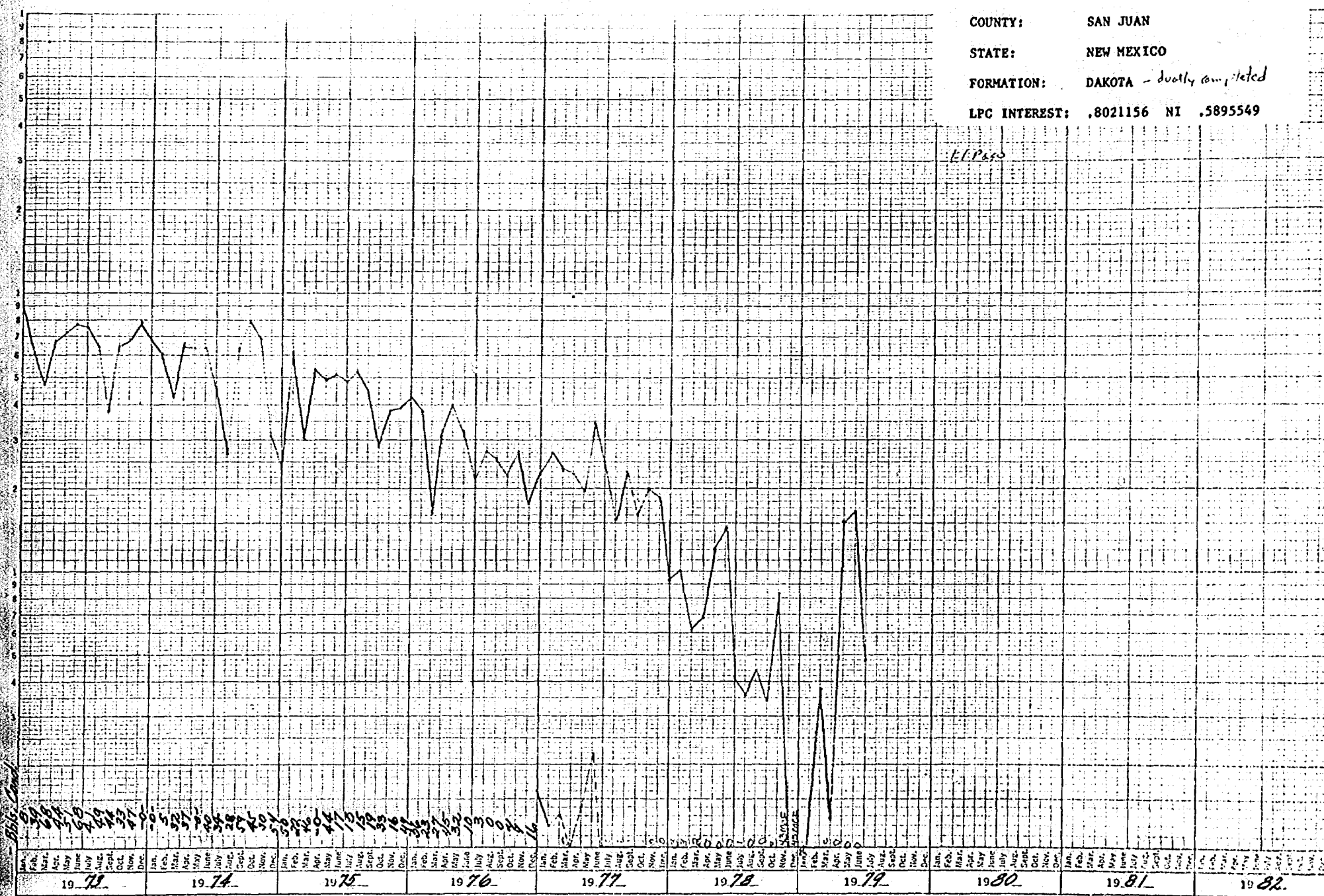


Exhibit 7
 Case 6638

~~Federal Indrith (N.W.) No. 2-4 (Kq Gollup)~~

Lindrith No. 24

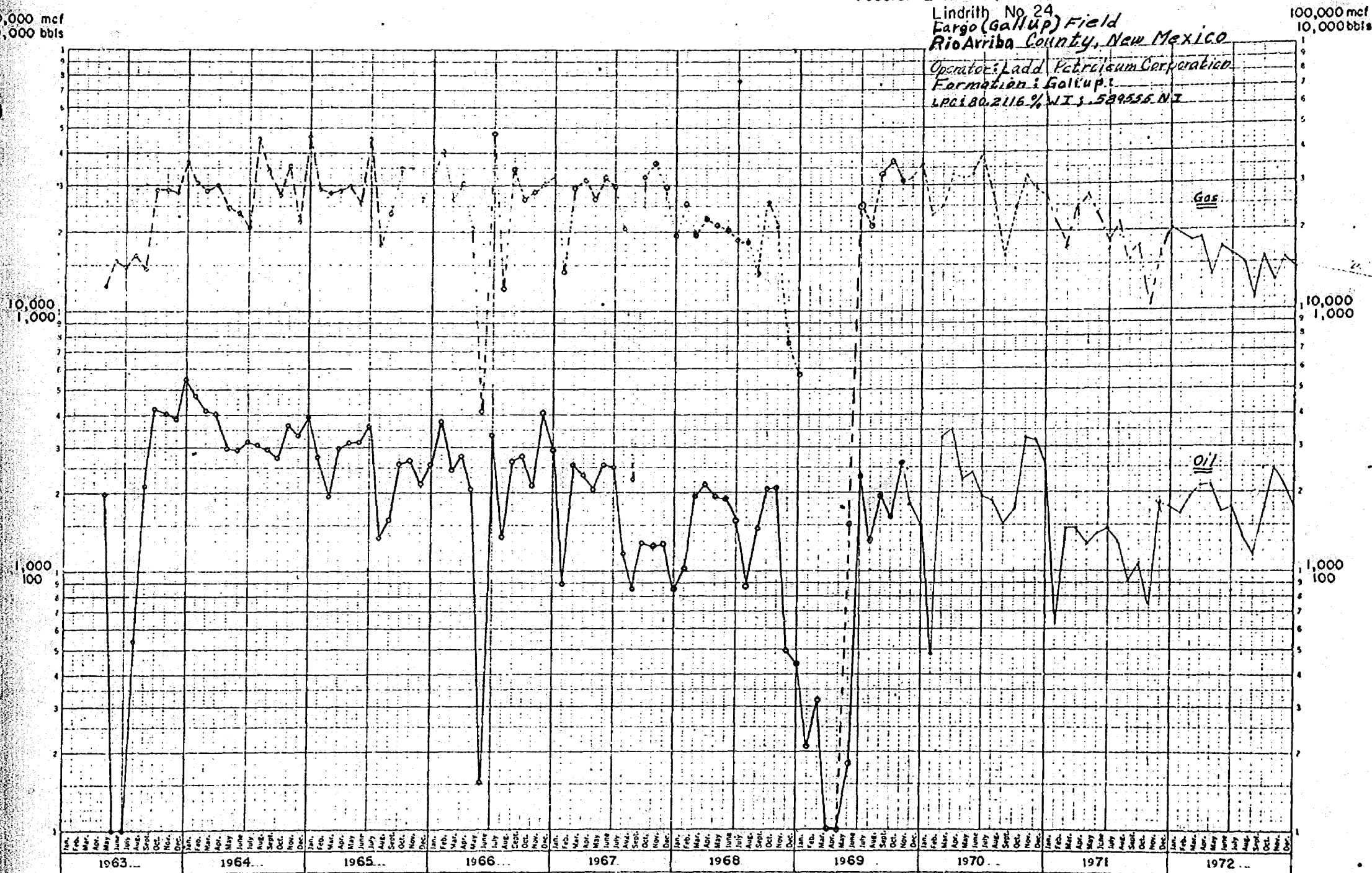
Lindrith No. 24
Fargo (Gallup) Field

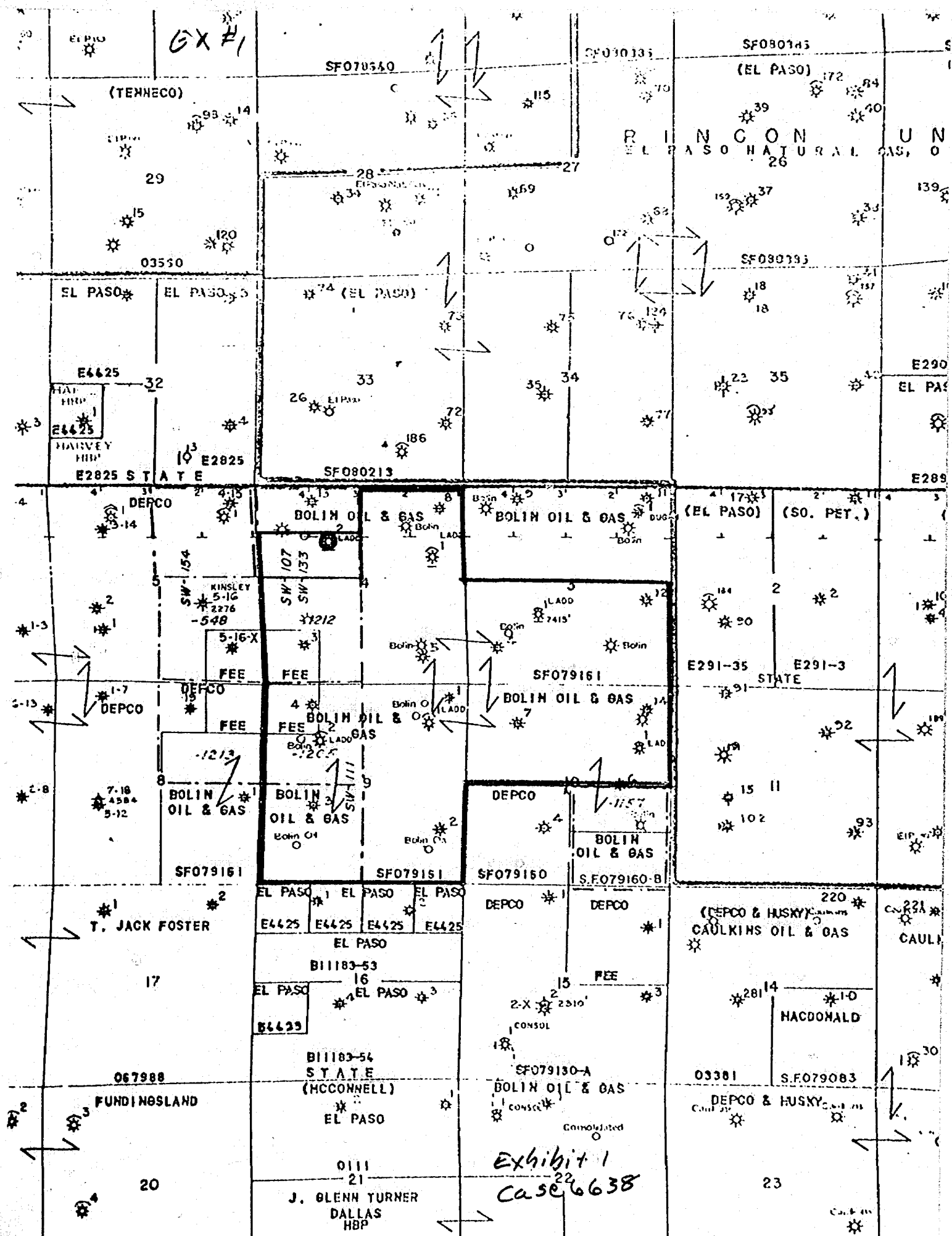
Fargo (Gallup) Field
Rio Arriba County, New Mexico

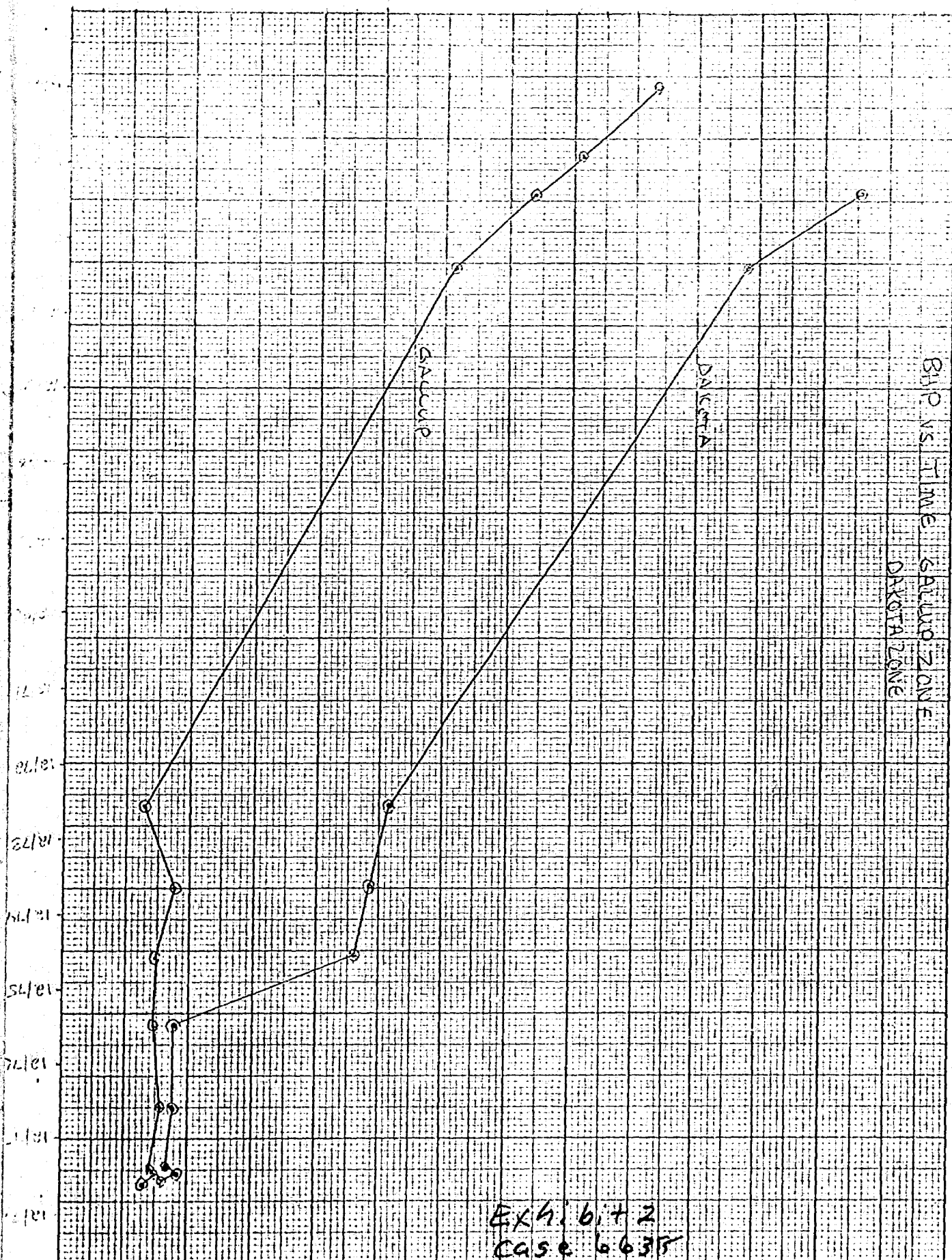
Operator: Ladd Petroleum Corporation

Formation: Goliup.

LPG: 80.2116% WI: 589555 NI







46 1240

K&W
20 X 20 TO THE INCH - 7 X 10 INCHES
KIEFFEL & ESSER CO. MADE IN U.S.A.

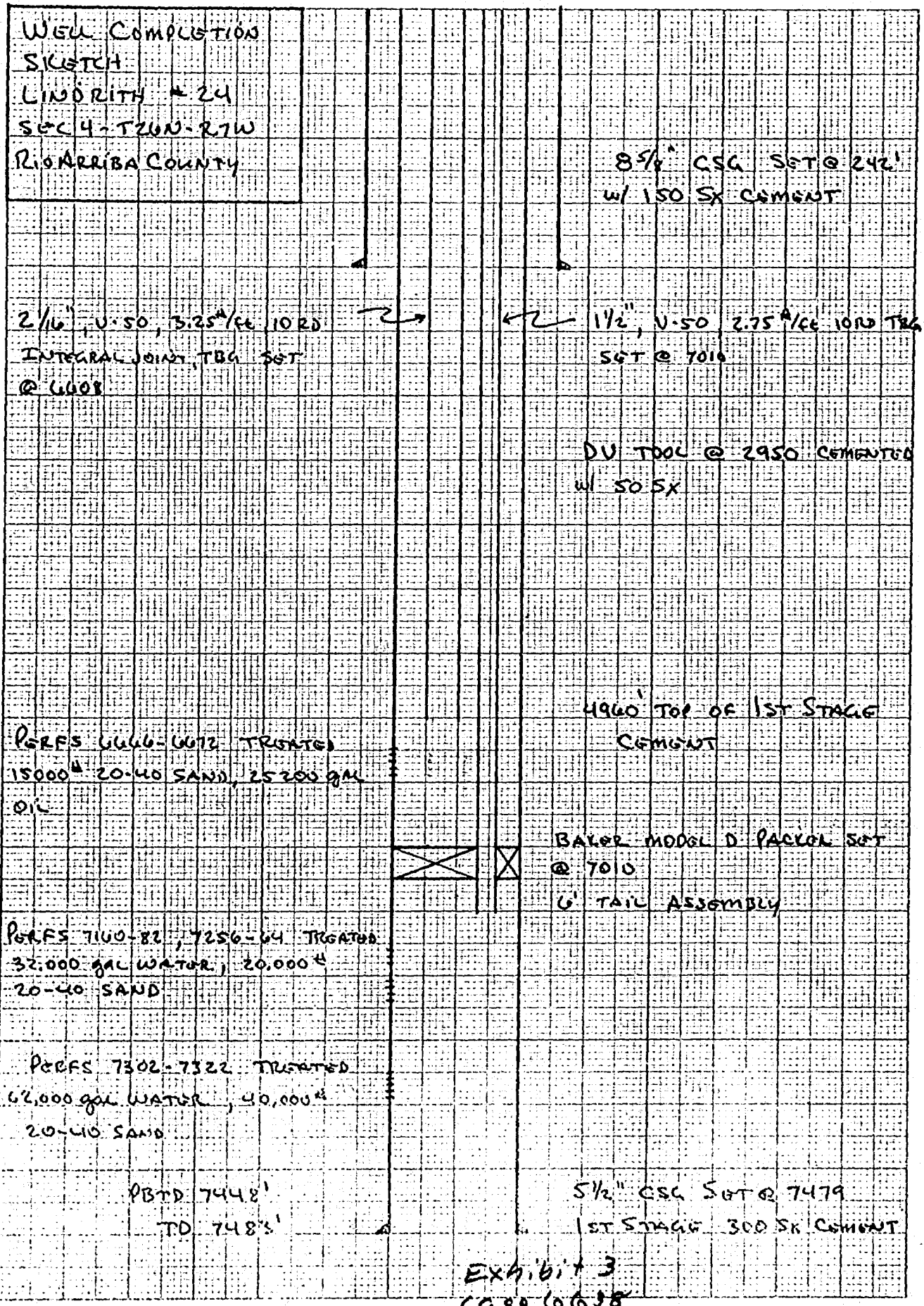


EXHIBIT 3
CASE 6638

FIELD: Largo (Ga) COUNTY: San Arriba STATE: New Mexico DISTRICT: _____
 LEASE: Clindrith ID NUMBER: _____ WELL NUMBER: 24 OPERATOR: Ladd Petroleum Corp
 RESERVOIR: Gallup LPC INTEREST: _____ DATE COMPLETED: _____

MONTH 19 <u>71</u>	NO. PROD. WELLS	OIL PRODUCTION --- BBLs.		GAS --- MCF		WATER --- BBLs.		REMARKS
		MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	
JAN.		87		16,201				
FEB.		115		11,057				
MAR.		132		11,991				
APRIL		110		8,086				
MAY		118		7,556				
JUNE		133		15,778				
JULY		84		8,636				
AUG.		151		15,540				
SEPT.		108		11,740				
OCT.		55		3,982				
NOV.		146		16,361				
DEC.		164		17,843				
1978		1,403		144,771	3,476,389			
JAN.		126		16,767				
FEB.		113		10,135				
MAR.		180		16,292				
APRIL		89		8,069				
MAY		69		8,589				
JUNE		94		15,827				
JULY		15		2,743				
AUG.		0		0				
SEPT.		15		0				
OCT.		84		13,631				
NOV.		82		19,694				
DEC.		12		6,049				
1979		879		117,796	3,594,185			
JAN.		13		926				
FEB.		138		13,802				
MAR.		17		2,663				
APRIL		82		8,796				
MAY		60		9,452				
JUNE		25		2,055	363,172			
JULY								
AUG.								
SEPT.								
OCT.								
NOV.								
DEC.								

Exhib. 4
Case 9638

FIELD: Largo (Ga) FILE WI 80.2116 %; NI. 589555 COUNTY: Rio Arriba STATE: New Mexico
 LEASE: Lindrieth WELL NO.: 24 OPERATOR: Ladd
 RESERVOIR: Gallup PERFS: (1) DATE COMPLETED: _____

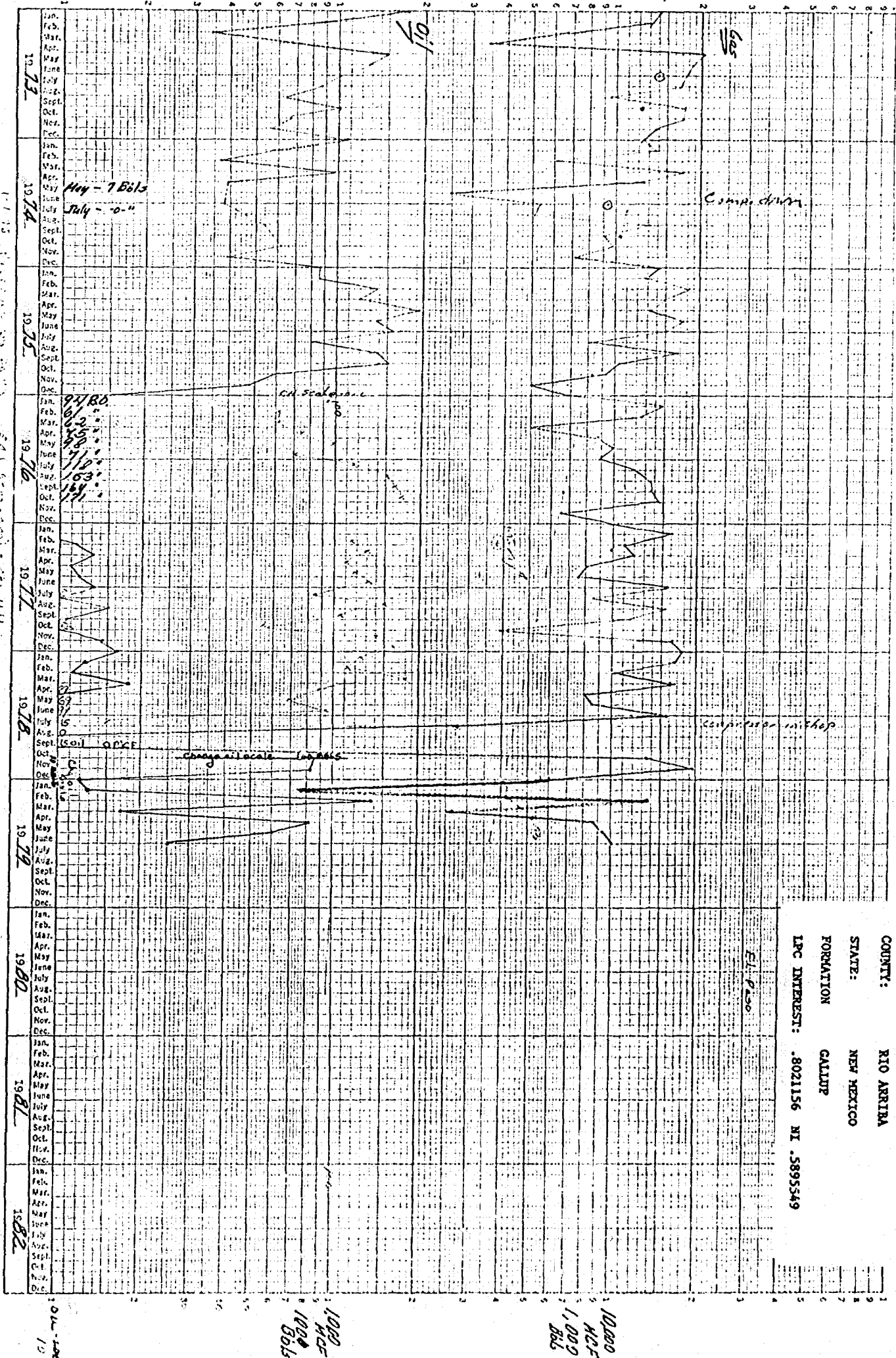
MONTH	MONTH. ALLOW.	OIL PRODUCTION - BBLs.			GAS - MCF		WATER - BBLs.			G. O. R.	PRESSURE			DAYS PROD.	REMARKS
		DAILY	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	%		CSG.	TGC.	BHP.		
1971															
JAN.			63			23218									
FEB.			141			17566									
MAR.			147			24366									
APR.			127			27328									
MAY			138			23298									
JUNE			145			18013									
JULY			129			21341									
AUG.			91			15747									
SEP.			105			17761									
OCT.			75			10432									
NOV.			131			16743									
DEC.			175			20217									
			1517			236,060									
1972															
JAN.			167			19205									
FEB.			193			18233									
MAR.			211			15724									
APR.			213			15828									
MAY			170			17244									
JUNE			177			16022									
JULY			136			15074									
AUG.			115			11136									
SEP.			170			15841									
OCT.			244			12894									
NOV.			212			15,598									
DEC.			177			14,202									
			2185			187,862									
1973															
JAN.			88			13066									
FEB.			34	25,180		6677									
MAR.			67			3412									
APR.			149			20393									
MAY			123			18571									
JUNE			101			17658									
JULY			87			16739									
AUG.			64			9480									
SEP.			101			17439									
OCT.			66			17169									
NOV.			57			13848									
DEC.			108			12677									
			1050			117,169									

1972 Deliverability Test (Flow
 Test 2/12/72 to 2/20/72, SITP
 8/22/72): FTP 146" SITP
 267", SITP 267" Gas
 Gty. 0.747, Deliverability
 811 MCFG PD

FIELD: Basin (OK) COUNTY: Rio Arriba STATE: New Mexico DISTRICT: _____
 LEASE: Lindrich ID NUMBER: _____ WELL NUMBER: 24 OPERATOR: Ladd Petroleum Corp
 RESERVOIR: Dakota LPC INTEREST: _____ DATE COMPLETED: _____

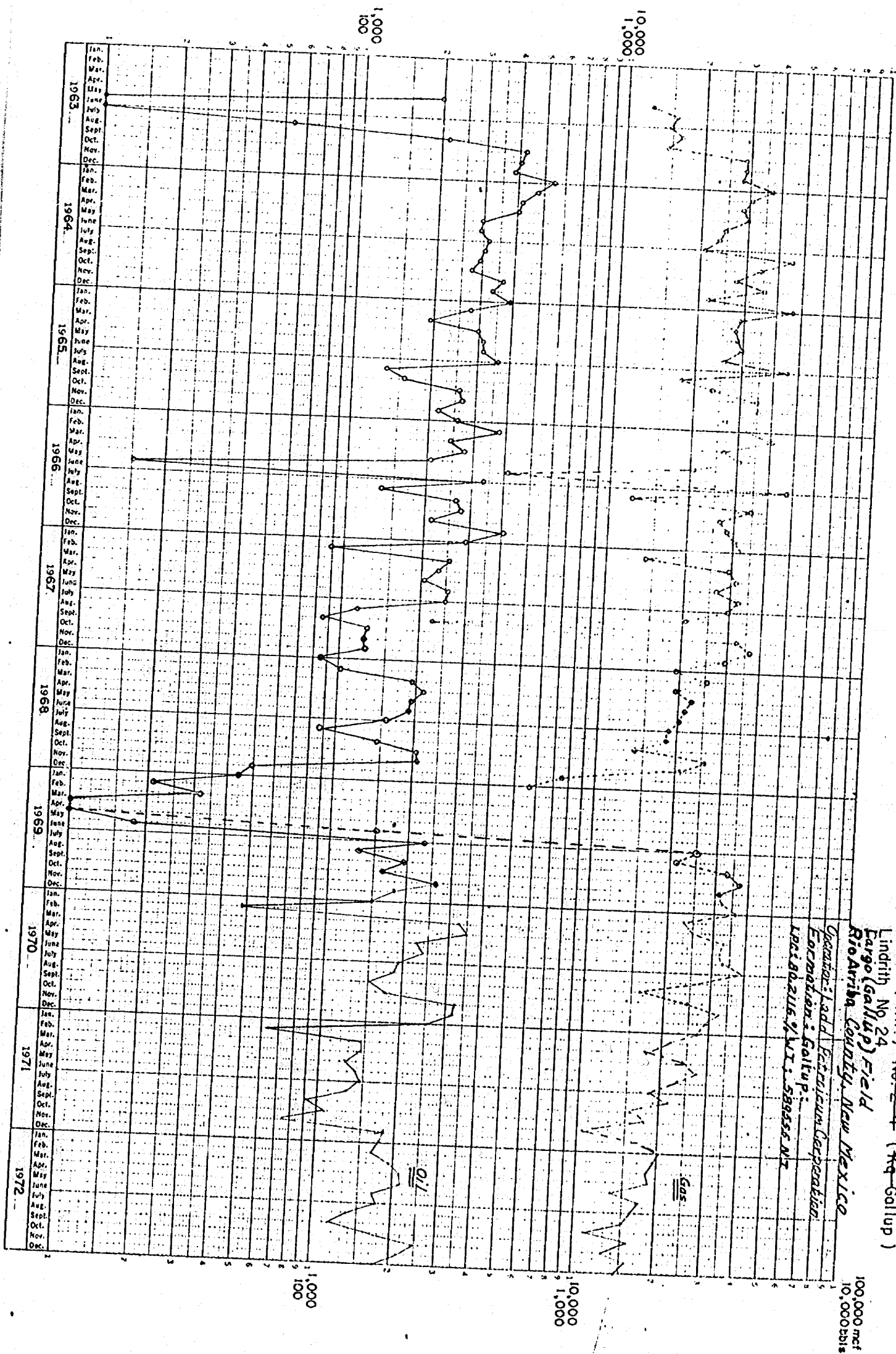
MONTH 19 <u>77</u>	NO. PROD. WELLS	OIL PRODUCTION — BBLs.		GAS — MCF		WATER — BBLs.		REMARKS
		MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	MONTHLY	CUMULATIVE	
JAN.		12		2718				
FEB.		13		2372				
MAR.		5		2268				
APRIL		14		1978				
MAY		22		3452				
JUNE		0		2459				
JULY		0		1553				
AUG.		0		2287				
SEPT.		0		1609				
OCT.		0		2058				
NOV.		0		1852				
DEC.		0		935				
1978		66		25,536	1,354,516			
JAN.		3		1,000				
FEB.		3		617				
MAR.		2		678				
APRIL		0		1,202				
MAY		0		1,484				
JUNE		0		416				
JULY		1		361				
AUG.		0		438				
SEPT.		0		344				
OCT.		0		827				
NOV.		0		43				
DEC.		0		45				
1979		9		7395	1,361,911			
JAN.		0		86				
FEB.		0		350				
MAR		0		129				
APRIL		0		1531				
MAY		0		1464				
JUNE		0		484	1366185			
JULY								
AUG.								
SEPT.								
OCT.								
NOV.								
DEC.								

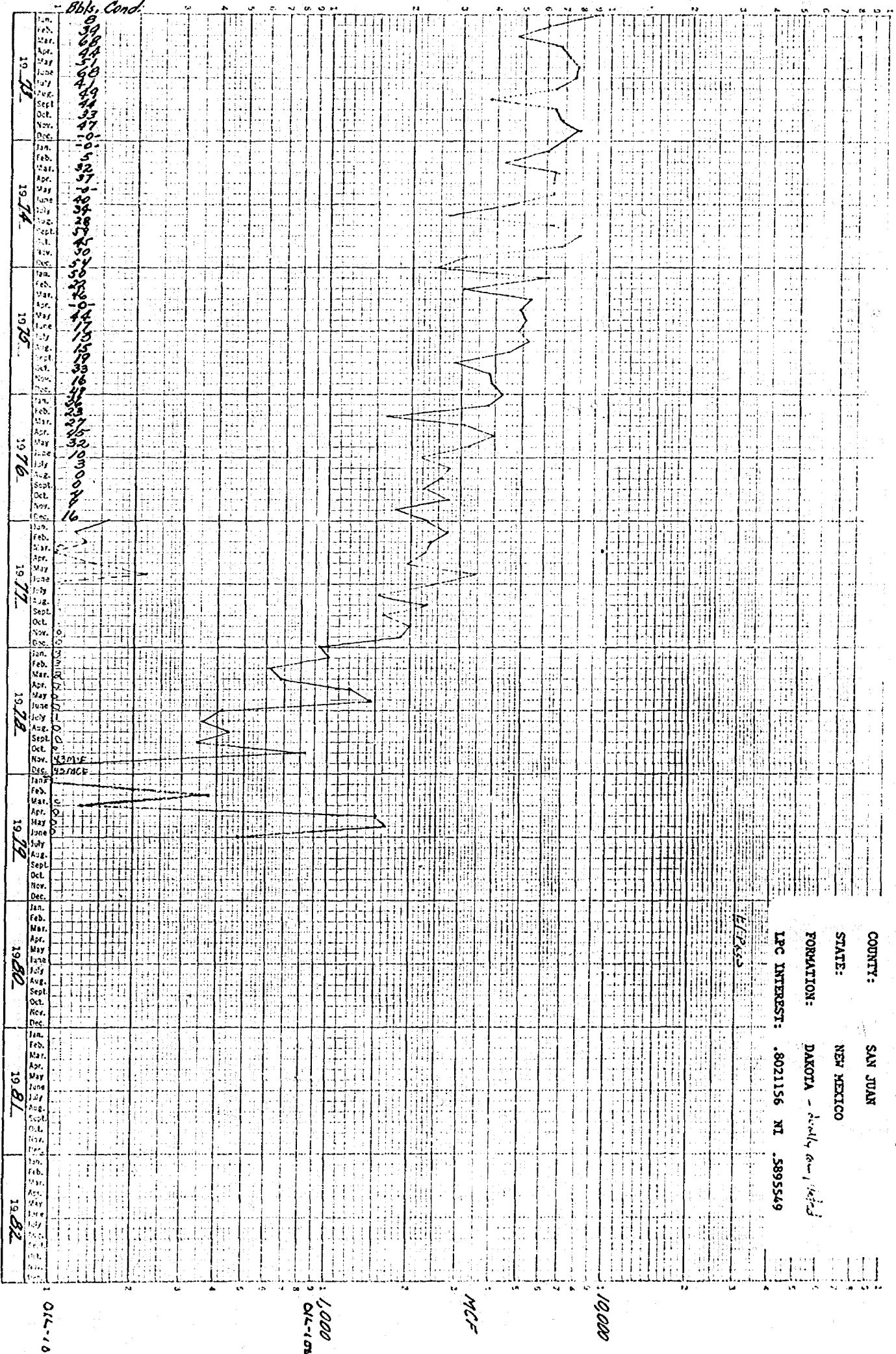
Exhibit 5
Case 6638



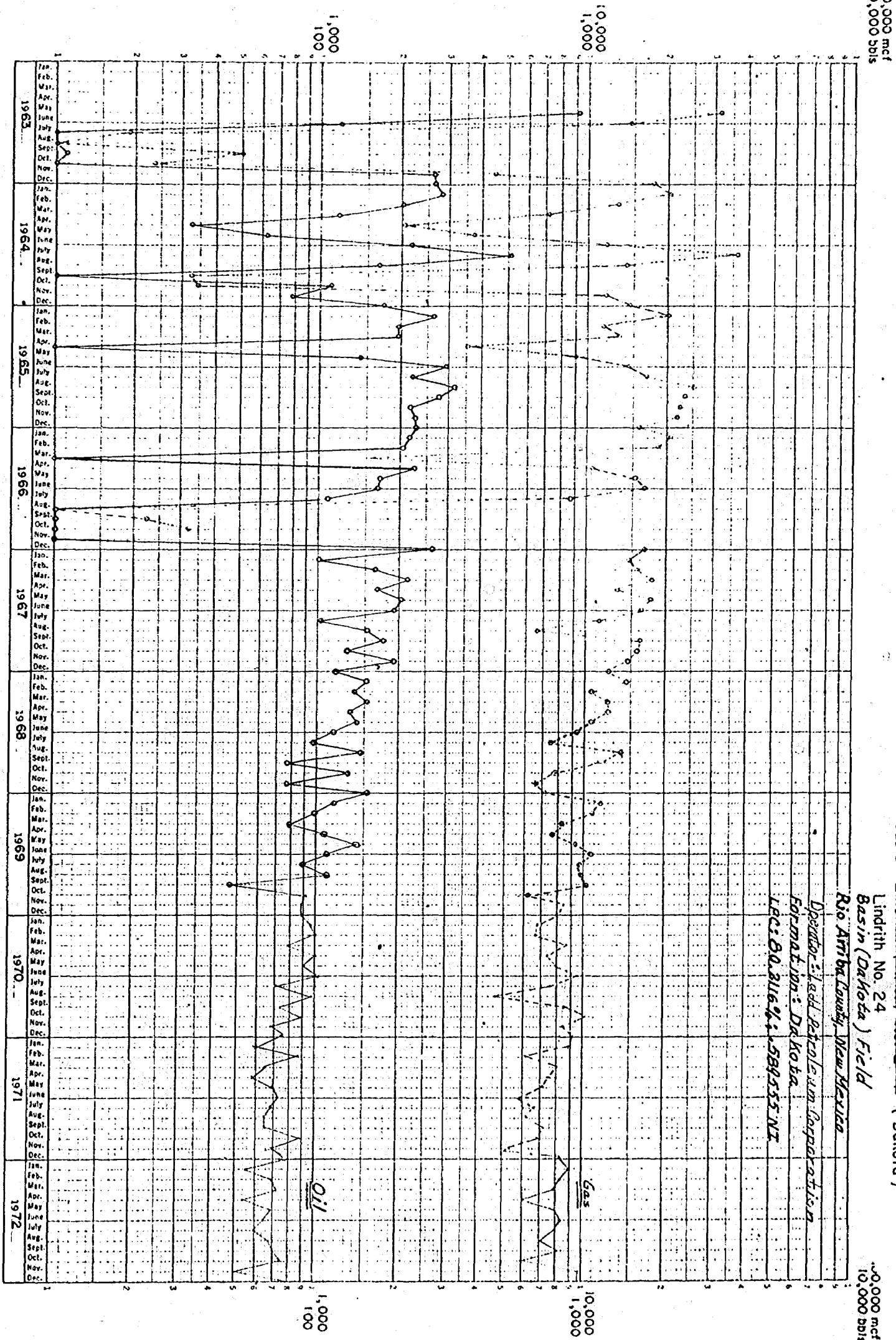
LEASE: LINDRITH #24
FIELD: LARGO (CALUPP)
COUNTY: RIO ARriba
STATE: NEW MEXICO
FORMATION: CALUPP
LPC INTEREST: .8021156 NI .5895549

Exhibit 6
Case 6638





LEASE: LINDRITH #24
FIELD: BASIN (DAKOTA)
COUNTY: SAN JUAN
STATE: NEW MEXICO
FORMATION: DAKOTA - mostly sandstone
LPC INTEREST: .8021156 NI .5895549



100,000 mcf
10,000 bbls

Federal Land (N.W.) No. 2-A (Dakota)
Lindrih No. 24
Basin (Dakota) Field
Rio Arriba County, New Mexico

Operator: Shell Petroleum Corporation
Formation: Dakota
LEC: 80.316% 1.58435 NT

10,000 mcf
10,000 bbls

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, Lea 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 Oil 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 Oil 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.
- CASE 6644: 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 proration 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. Berry 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. Antweil 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 6649: Application of Morris R. Antweil for an unorthodox 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.

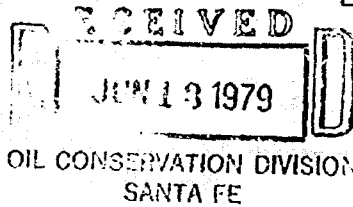
CASE 6652: Application of Shell Oil Company for statutory unitization, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order unitizing, for the purpose of a pressure maintenance project, all mineral interests in the North Hobbs Grayburg-San Andres Unit encompassing 10,650 acres, 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 H 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 tracts 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



June 11, 1979

*Set for
Hearing*

Case 6638

Mr. Ernie Padilla
State of New Mexico
Oil Conservation Division
PO 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

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

E. I. Blincoe
Operations Manager

GBM:clf

enc.

cc w/enc: see attached list

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 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

*Done - Jones
David
Richard Tubing*

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.

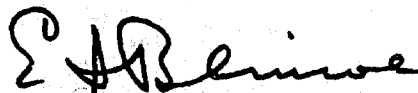
Respectfully submitted,



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
Commingle 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.

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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 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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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:

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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 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

I certify that I mailed a copy of the Application for Downhole
Commingle 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



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:

CD Crump

COMPANY: DEPCO, Inc.

TITLE: Vice President-Production

ADDRESS: 1000 Petroleum Building

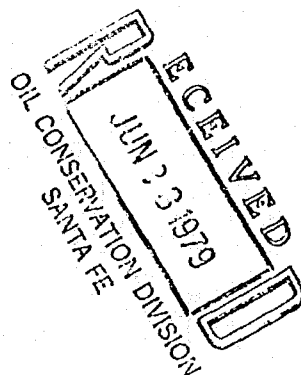
Denver, CO 80202

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
2. Mr. Jerry Long
U.S. Geological Survey
PO Box 1809
Durango, Colorado 81301
3. District Production Supt.
Consolidated Oil & Gas, Inc.
PO Box 2038
Farmington, New Mexico 87401
4. 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 Harvey, et al
PO Box 177
Wichita Falls, Texas 76301
10. Petroleum Corporation of Texas
PO Box 911
Breckenridge, Texas 76024
11. Mr. Clyde Phillips
Ladd Petroleum Corporation
PO Box 7961
Midland, Texas 79701

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

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APPROVED BY:

D.T. Stogner

COMPANY:

CONSOLIDATED OIL & GAS INC.

TITLE:

VP - OPERATIONS

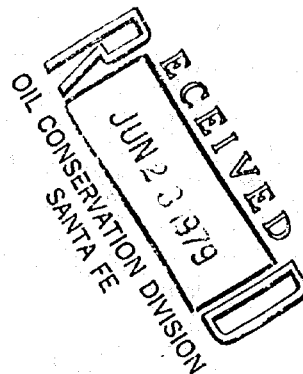
ADDRESS:

1860 LINCOLN ST

DENVER CO.

DATE:

6/26/79



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

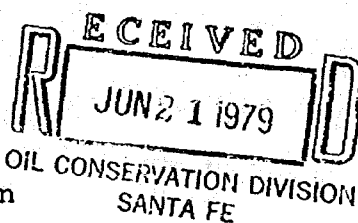
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Ladd Petroleum Corporation
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Rio Arriba County, NM

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APPROVED BY: Richard Trully
COMPANY: Dugan Production Corp.
TITLE: Landman
ADDRESS: P.O. Box 234
Farmington, NM 87401
DATE: June 22, 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

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APPROVED BY:

S. H. Lindley Jr.

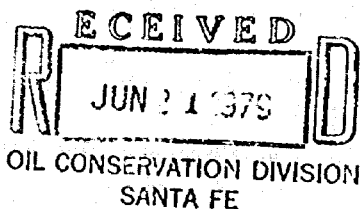
COMPANY: PETROLEUM CORPORATION OF TEXAS

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
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

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APPROVED BY: 

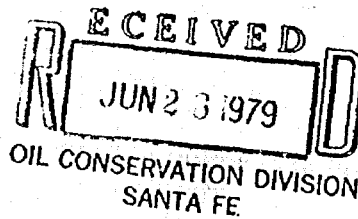
COMPANY: Bolin Oil Company

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:

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APPROVED BY:

John A. Allen

COMPANY: EL PASO NATURAL GAS COMPANY

TITLE: REGIONAL LAND MANAGER

ADDRESS: POST OFFICE BOX 990

FARMINGTON, NEW MEXICO 87401

DATE: JUNE 25, 1979



Husky Oil Company

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,

J. L. Corkill
Joint Interest Administrator

JLC:dh

Attach: (1)

cc: Ladd Petroleum Corporation

Mr. E.I. Blincoe
Operations Manager

830 Denver Club Building
Denver, Colorado 80202

RECEIVED

JUL 02 1979

OIL CONSERVATION DIVISION
SANTA FE

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

Re: Application for Downhole
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Ladd Petroleum Corporation
N.W. Lindreth #24
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APPROVED BY:

COMPANY:

TITLE:

ADDRESS:

DATE:

R. L. Council

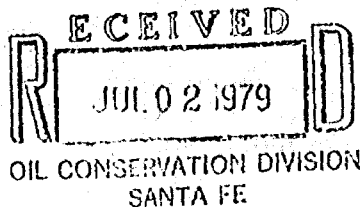
Husky Oil Co.

H. Internal Adm.

600 So. Cherry

Demer, Co 80222

June 27 '79



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:

JAR

CASE NO. 6638

Order No. ~~6638~~ 6120

APPLICATION OF LADD PETROLEUM CORPORATION
FOR DOWNHOLE COMMINGLING,
COUNTY, NEW MEXICO. RIO ARRIBA

BY THE DIVISION:

ORDER OF THE DIVISION

This cause came on for hearing at 9 a.m. on September 5
19 79, at Santa Fe, New Mexico, before Examiner Daniel S. R.L.
~~Nutter~~ Stamets

NOW, on this 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, is
the owner and operator of the Lindrieth Well No. 24
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
Largo-Gallup and Basin-Dakota production
within the wellbore of the above-described well.

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. 6638

Order No. ~~6638~~ 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 ~~August 22~~ September 5,
19 ⁷⁹, at Santa Fe, New Mexico, before Examiner Daniel S. R. L.
Nutter Stamets.

NOW, on this 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, is
the owner and operator of the Lindrith Well No. 24
~~xkxgaxGallup~~,
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
Largo-Gallup and Basin-Dakota 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.

(4) That from the Largo-Gallup zone, the subject well is capable of low ^{rates of} ~~marginal~~ production only.

(5) That from the Basin-Dakota zone, the subject well is capable of low ^{rates of} ~~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.

(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.

(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 for 7 consecutive days.

30 (10) That in order to allocate the commingled production to each of the commingled zones in the subject well, 72 percent and percent of the commingled ^{gas and oil production, respectively,} production should be allocated to the Largo-Gallup zone, and 28 percent and 70 percent of the commingled ^{respectively,} gas and oil production to the Basin-Dakota zone.

(ALTERNATE)

(9) That in order to allocate the commingled production to each of the commingled zones in the wells, applicant should consult with the supervisor of the 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 ^{respectively,} 77 percent and 30 percent of the commingled gas and oil production shall be allocated to the Largo-Gallup zone and ^{respectively,} 28 percent and 70 percent of the commingled gas and oil 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 commingled hydrocarbons through the long string of tubing by unlatching from the packer. or by perforating the tubing immediately above such packer.