

CASE 6716: ALPHA TWENTY-ONE PRODUCTION Co.
COMPANY FOR TWO NON-STANDARD PRORATION
UNITS AND APPROVAL OF INFILL DRILLING,
LEA COUNTY, NEW MEXICO

Case Number

6716

Application

Transcripts.

Small Exhibits

ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
14 November 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Alpha Twenty-One Pro-
duction Company for two non-standard
proration units and approval of infill
drilling, Lea County, New Mexico.

CASE
6716

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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I N D E X

WILLIAM P. AYCOCK

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1 MR. NUTTER: Call Case Number 6716.

2 MR. PADILLA: Application of Alpha Twenty-
3 one Production Company for two non-standard proration units
4 and approval of infill drilling, Lea County, New Mexico.

5 MR. CARR: May it please the Examiner, I'm
6 William F. Carr, Campbell and Black, P. A., Santa Fe, ap-
7 pearing on behalf of the applicant. I have one witness who
8 needs to be sworn.

9
10 (Witness sworn.)

11
12 WILLIAM P. AYCOCK
13 being called as a witness and having been duly sworn upon
14 his oath, testified as follows, to-wit:

15
16 DIRECT EXAMINATION

17 BY MR. CARR:

18 Q Will you state your full name and place
19 of residence?

20 A William P. Aycock, Midland, Texas.

21 Q Mr. Aycock, by whom are you employed and
22 in what capacity?

23 A By Alpha Twenty-one Production Company in
24 connection with this application under Case Number 6716.

25 Q Have you previously testified before this

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1 Commission and had your credentials accepted and made a
2 matter of record?

3 A. Yes, sir, I have.

4 Q. Are you familiar with the application in
5 this case?

6 A. Yes, sir, I am.

7 MR. CARR: Are the witness' qualifications
8 acceptable?

9 MR. NUTTER: Yes, they are.

10 Q. (Mr. Carr continuing.) Mr. Aycock, will
11 you please refer to what has been marked for identification
12 as Applicant's Exhibit Number One and review the data con-
13 tained thereon for the Examiner?

14 A. Exhibit Number One is a land map of Sec-
15 tion 8, Township 25 South, Range 37 East, and the immediately
16 surrounding sections that serves to illustrate the essence
17 of the applicant's position and request, and that is that
18 the northwest quarter of the southeast quarter of Section 8
19 be designated a gas proration unit and assigned to the ex-
20 isting El Paso Well, and that the remainder of the southeast
21 quarter of Section 8, comprising the east half and southwest
22 quarter of said southeast quarter, be assigned to a new well,
23 the proposed location of which is indicated on Exhibit One,
24 being in the southwest quarter of the southeast quarter of
25 Section 8, comprising a 120-acre proration unit.

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1 Q Now, Mr. Aycock, the applicant has obtained
2 its interest in this non-standard proration unit through a
3 farmout from El Paso Natural Gas, is that correct?

4 A That's correct.

5 Q Will you please refer to Exhibit Number
6 Two and review this for the Examiner?

7 A Exhibit Number Two is a structure map on
8 the top of the Yates formation, which is the uppermost zone
9 that's included in the Jalmat Field. It has a Jalmat Pool
10 designation that serves to illustrate the structural configu-
11 ration in the immediate vicinity of the Section 8, the sub-
12 ject of this application. It shows that the structure is
13 basically not featureless, but does not have decided features
14 and we don't anticipate that the geological position of the
15 area has any great affect upon what will be realized from
16 drilling the proposed well.

17 Q And what does the yellow area on this ex-
18 hibit reflect?

19 A The yellow area reflects the proration
20 unit that is requested to be divided from the existing pro-
21 ration unit, the 120 acres, and assigned to the proposed
22 well.

23 The proposed well location is not shown
24 on Exhibit Two as it is on Exhibit One, Mr. Examiner, and
25 the reason for that, it was just cluttered.

1 Q Mr. Aycock, will you now refer to the
2 letter which has been marked Exhibit Number Three and review
3 the data contained therein?

4 A Exhibit Number Three is a letter directed
5 to Alpha Twenty-one Production Corporation that describes
6 the situation with regard to the recovery of the existing
7 wells and the anticipated possible recovery for the proposed
8 well, as compared by both a statistical analysis of the
9 characteristics of the existing wells and a volumetric cal-
10 culation based upon the statistical analysis of volumetric
11 parameters in the immediate vicinity of the proposed loca-
12 tion, in which I have attempted to provide Alpha Twenty-one
13 with the limits, the upper and lower limits, of what I be-
14 lieve that the recovery could be.

15 It seems apparent from the work that I've
16 done, that there is a substantial volume of unrecovered re-
17 serves underlying the tract that is proposed to be assigned
18 to the well that's the subject of this application; depending
19 upon which -- in which way the data is viewed, the amount
20 of gas can range from near the lower limit; the statistical
21 parameter compares pretty much in order of magnitude with
22 the volumetric calculation, and of course, if the pressure
23 should be considerably higher than is anticipated, it could
24 range up towards the mean indicated -- estimated additional
25 recovery for the proposed well.

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1 Basically, the letter goes into that as-
2 pect and describes the pressure information that's available,
3 initial pressures that were available, and the calculated
4 effective drainage areas for the wells in the immediate
5 vicinity, and I would particularly call the Examiner's at-
6 tention to the fact that the El Paso Natural Gas Langlie
7 Federal 3, which is the well that is in the existing proration
8 unit, has an estimated effective drainage area of only 28
9 acres, which is considerably less than that acreage that's
10 presently assigned to it.

11 Attached also to the letter is a summary
12 of individual well information for nine wells that are in
13 the immediate vicinity of the acreage that's the subject of
14 this application, in which all of the pertinent data are
15 listed for each of the wells.

16 It simply serves as a back-up for the dis-
17 cussion that's contained in the letter itself.

18 Q Will you now refer to your cross section
19 A-A', which has been marked Exhibit Four, and review this?

20 A Exhibit Four is cross section A-A', which
21 runs basically in a north/south direction through the pro-
22 ration unit that is the subject of the application, and in-
23 cludes the wells that are pertinent to the application,
24 particularly the El Paso No. 3 Langlie Federal, which is
25 the second well from the righthand side of this exhibit.

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1 Once again we show where all the wells have
2 been completed. I would call the Examiner's attention to
3 the fact that basically of the zones that are included in
4 the Jalmat Pool designation, the operators have chosen to
5 concentrate on the Upper Yates formation in the north/south
6 direction as the reservoir in which they've chosen to com-
7 plete.

8 Q Would you now review Exhibit Number Five?

9 A Exhibit Number Five is an east/west cross
10 section that also includes the well that is -- El Paso Langlie
11 Federal 3, that is the well to which the entire 160-acre
12 proration unit in the Jalmat Pool is presently assigned,
13 and once again it attempts to show what the practice has
14 been and what the reservoir configurations are, and once
15 again, I'll call the Examiner's attention to the fact that
16 the Upper Yates formation has been the object of the vast
17 majority of the effective completions that have been attempted
18 in the area.

19 In our opinion, the fact that the lower
20 zones have not been adequately tested could well indicate
21 that in the Lower Yates, as well as in the Seven Rivers
22 formation, there are substantial undrained reserves, and that
23 is part of the reason for the ambiguity in the additional
24 recovery estimates that were presented in the previous testi-
25 mony with the Exhibit Number, what, Three, the letter?

1 Q Now, Mr. Aycock, Exhibit Number Six con-
2 sists of a number of graphs. Would you explain the signifi-
3 cance of these to the Examiner?

4 A These graphs are a combination of gas
5 production rate in Mcf per month as a function of time and
6 shut-in wellhead pressure in psig as a function of cumulative
7 gas production for selected wells that are in the immediate
8 vicinity of the proposed location, and they are provided the
9 Commission as a further attempt to document the data and
10 the discussion as presented on Exhibit Number Three.

11 I would particularly call the Commission's
12 attention to the fact that there is both a rate/time curve
13 and pressure/cumulative curve for the El Paso Langlie No. 3,
14 which is the well to which the existing 160-acre proration
15 unit is assigned, and a combination of intermittent pro-
16 duction during the past two years, relatively low flow rates,
17 and apparently increasing pressures, would indicate that
18 the difficulty associated with the performance of this
19 well may be one of water production rather than of simple
20 pressure depletion.

21 In an attempt to further define that sit-
22 uation we have tried to find the Commission's copy of the
23 well file for this well, but it is not in the file and we
24 were not able to refer to it to see if there were any
25 filings that had been made with the Commission that would

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1 illuminate this situation further.

2 MR. NUTTER: What file were you looking

3 for?

4 A. The well -- this El Paso No. 3 Langlie,
5 the file is not in your file room this morning.

6 MR. NUTTER: Okay.

7 A. We spent a bunch of time looking for it
8 and got some help from the file custodian and were not able
9 to find it.

10 MR. NUTTER: You don't know whether they
11 have a file in the Hobbs office?

12 A. No, sir, I don't.

13 Q. Mr. Aycock, will you refer to what has
14 marked for identification as Applicant's Exhibit Number
15 Seven and identify this for the Examiner?

16 A. Yes, sir, these are the notifications to
17 the offset operators that this hearing had been requested
18 and included on the lower part of the copies of the letters
19 are the return receipts, showing that they were received by
20 each of the offset operators, including Gulf Oil Corporation,
21 Amoco Production Company, Reserve Oil, Inc., ARCO Oil and
22 Gas Company, Union Texas Petroleum Corporation, and Doyle
23 Hartman.

24 MR. NUTTER: I guess that's the only copy
25 you've got of that. We don't have it over here.

1 MR. CARR: Okay, I'll make a copy avail-
2 able.

3 Q. Mr. Aycock, do you believe that the pro-
4 posed well is necessary to effectively and efficiently drain
5 the non-standard proration unit?

6 A. Yes, sir, I believe it is. Whether the
7 difficulty with the performance of the well to which the
8 proration unit is currently assigned is one resulting from
9 production problems, pressure depletion, or water production,
10 it would appear based upon the analysis of the data from
11 surrounding wells, in addition to the one to which the pro-
12 ration unit is assigned, that there should be substantial
13 additional reserves available for the proposed well. Whether
14 those are as low as 100 to 200 million or as high as a
15 billion to a billion and a half, remains to be seen, but
16 there would appear to be a valid and reasonable reason for
17 drilling the proposed well.

18 I believe, further, that the proposed well,
19 if the indications that are available are correct, that
20 there is substantial additional gas that could be recovered;
21 that the proposed well would both prevent the waste of a
22 substantial portion of that gas, as well as protect the
23 correlative rights of the minimum working interest owners
24 of the tract. It seems quite apparent that with a calculated
25 effective drainage of 28 acres for the well to which 160

1 acres is presently assigned, that there is little likelihood
2 that -- that an adequate amount of gas would be drained
3 under normal criteria for a gas well.

4 Q Do you believe that granting this applica-
5 tion would be in the interest of conservation, the prevention
6 of waste, and the protection of correlative rights?

7 A Yes, sir, I do.

8 MR. CARR: At this time, Mr. Examiner, we
9 would offer into evidence Applicant's Exhibits One through
10 Seven.

11 MR. NUTTER: Applicant's Exhibits One
12 through Seven will be admitted in evidence.

13 MR. CARR: I have nothing further on
14 direct.

15
16 CROSS EXAMINATION

17 BY MR. NUTTER:

18 Q Mr. Aycock, looking at your Exhibit Number
19 One, I see the red outlined area and then the remaining 40
20 acres that would be dedicated to the El Paso Well.

21 Now, in the northeast quarter of the south-
22 east quarter there's a well that's shown to be a gas well,
23 No. 82. What formation was that well producing from?

24 A Those are -- that's an erroneous indication.
25 Mr. Nutter. We pulled all the files and those are all in

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1 the Langlie Mattix Pool. I have them here if you'd like for
2 me to go over them well by well, but 81, 82, 85, and 86 are
3 all in the Langlie Mattix Pool.

4 Q Okay. 82 is not a Jalmat.

5 A No, sir. None of those other four wells
6 that are on that 160 acres are Jalmat. They're all in the
7 Langlie Mattix.

8 Q Well, I've only got two other wells. Okay,
9 the No. 85 is not a Jalmat.

10 A No, sir.

11 Q Now where are the other two wells you're
12 talking about?

13 A Well, 81 is indicated as being plugged on
14 here. It was a Jalmat well.

15 Q I don't see that one.

16 A It's just the immediate -- in the 40 acres
17 immediately west of 82. It's in the northwest of the south-
18 east of 8.

19 MR. CARR: These are shown on Exhibit
20 Number Two.

21 Q Oh, okay. I was looking at Exhibit One.
22 But Exhibit One shows two gas wells on the red colored
23 acreage.

24 A Yes, sir.

25 Q And neither one of those is a Jalmat gas

1 well.

2 A No, sir, those are both Langlie Mattix
3 wells, according to the Commission's files.

4 Q Okay, so on the 160 acres, being the
5 southeast quarter of Section 8, there's only one Jalmat gas
6 well --

7 A Yes, sir.

8 Q -- and that's the El Paso Langlie Federal
9 3.

10 A Yes, sir.

11 Q And applicant proposes to drill the well
12 in the southwest of the southeast of Section 8.

13 A Yes, sir.

14 Q Okay. Now, referring to your Exhibit
15 Number Three, Mr. Aycock, when I write an order on this case
16 I've got to tell FERC that approval of this infill drilling
17 is necessary in order to recover a certain amount of gas
18 from the proration unit that cannot be drained by the
19 existing well on this proration unit.

20 How much gas can I tell FERC you're going
21 to produce from this new well?

22 A Well, the safest number would be between
23 132 and 200 million, Mr. Nutter, in my opinion.

24 Q Now, what's that derived from?

25 A That's derived from the volumetric calcu-

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1 lation that's summarized on page two as well as the minimum
2 recovery from -- based upon a statistical analysis of the
3 performance of surrounding wells.

4 Q And you said between 132 and what?

5 A And 200.

6 Q Where is that on here?

7 A Page two, the 200 number is in the -- in
8 the first discussion there, estimated increased recovery,
9 I have mean, minimum, and maximum, and you notice 200 million
10 is the second number. Immediately below that there's a
11 paragraph that discusses using the mean volumetric parameters
12 as extracted from my study of the surrounding wells, and it
13 mentions the volume 132 million in that paragraph.

14 Q Well, it's not included in a table, though.

15 A No, sir. Included in the table is a sum-
16 mary of the -- of the parameters that were used to get there
17 for your use or edification if you were interested in how
18 I got it.

19 Q Now how do you derive the mean on these
20 various things, Mr. Aycock?

21 A It's a qualitative statistical approach,
22 Mr. Nutter. I simply add up the number of estimated ulti-
23 mates that I have and divide by that number, and the reason --

24 Q Well, that's an average then, not a mean,
25 isn't it?

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1 A. Well, no. In statistical terms there is
2 no such thing as an average. The mean is the -- what is
3 called sometimes by a layman the arithmetic mean or the
4 average is in proper statistical terms referred to as the
5 mean value, which means that you can represent the entire
6 statistical probability curve by one value that would sum-
7 marize it all. Frequently, in natural systems with popula-
8 tions such as this, we find that the mean does not adequately
9 represent it and that's why I've attempted to give a maximum,
10 a minimum, and in some of the work that I've done that's
11 been presented to you, I've gone further than that, and
12 shown a median and a standard deviation as well, so that
13 you would not get the idea that I'm trying to represent to
14 you that I have assurances that I can adequately really give
15 you a single value number for an approach such as this. I
16 do not think in all conscience I could really do that.

17 Q. But a mean is divided as the mid-point.

18 A. Yes, sir.

19 Q. And this is not the mid-point. This is
20 an arithmetic average, actually, isn't it?

21 A. Well, it is -- they are -- they are coin-
22 cident values if you have a normal statistical probability
23 variation.

24 Q. But in order to arrive, for instance, at
25 the -- let's find one of our -- okay, in taking your statis-

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1 tical analysis on Exhibit Number -- well, it's the last
2 page of Exhibit Number Three. Now, if we go to page two of
3 Exhibit Number Three, we have the minimum of the surrounding
4 seven wells for acreage drained, and that's 45, and that's
5 the lowest value on the bottom line of the last page there,
6 right?

7 A. Yes, sir.

8 Q. Then we have the maximum, which is given
9 as 700.

10 A. That's correct.

11 Q. And that's for the ARCO Woolworth 1.

12 A. Yes, sir.

13 Q. Then we have the mean of these seven sur-
14 rounding wells. Have you taken all of these wells across
15 here --

16 A. Yes, sir.

17 Q. -- and added them up --

18 A. That's correct.

19 Q. -- and divided by seven?

20 A. Yes, sir, and I've attempted to show you
21 the tremendous variation that you observe in trying to do
22 work of this type, at least in this area. Once again, to
23 indicate to you that I don't -- in all conscience I can't
24 come before you having sworn to tell the truth and the whole
25 truth, and indicate to you that I can give you a single value

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1 other than a very qualitative number, recognizing the degrees
2 of uncertainty that are inherently present in this type of
3 approach.

4 Q Now, all of these wells that are shown on
5 here, are they shown on Exhibit One?

6 A Yes, sir, I believe they are.

7 Q Okay, now the third one there on your
8 statistical -- your summary sheet.

9 A Yes, sir.

10 Q This thing.

11 A Oh, yes, sir, okay.

12 Q The third well there.

13 A Yes, sir.

14 Q Now that's the El Paso Jal "G" 3.

15 A Uh-huh.

16 Q Now where do I find that well? It says
17 8-R.

18 A Well, let me be sure that --

19 Q Is that supposed to be a "B", maybe?

20 A I suspect it is. Let me check and see if
21 it's not. I'm sure it is; sure that it was -- it's just
22 a typographical error. I'm positive it should have been a
23 "B", Mr. Nutter. I can't find my well file right now, but
24 you're correct. It's a typographical error. It should have
25 been a "B".

1 Q Okay, I was just -- I'm trying to identify
2 these wells --

3 A Yes, sir.

4 Q -- on the exhibit and point out where they
5 are on here.

6 A That's correct, it should have been a --

7 Q I think I've spotted most of the others.

8 A Of course the "R", there isn't any such
9 unit, anyway, because "P" is as high as you go, so that's
10 just a typo that we overlooked in proofing the thing.

11 Q Okay, and now, over here to the far right,
12 this well that's identified as the El Paso Langlie "A" No.
13 2 in "J" of 17, would be this No. 1-A, I presume, down
14 here in "J" of 7.

15 A Yes, sir.

16 Q So all of the wells that are shown on here
17 are on this exhibit, then?

18 A Yes, sir.

19 Q Okay.

20 A We've attempted to concentrate on an area
21 that we felt was adequate to give you a feel for the data
22 that was available and not go so far afield that anything
23 we came up with couldn't reasonably be applied to the area
24 for which the application was being made.

25 Q Now, do you know whether El Paso has done

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1 any workover work on this Langlie No. 3? You know, you men-
2 tioned the increase in pressures with the last few hundred
3 thousand Mcf.

4 A. Yes, sir.

5 Q. And then the production chart has some
6 gaps in it. Have -- did they take the well off production
7 to do work or did they just take the well off production and
8 leave it fallow for awhile and then the pressures came up?

9 A. That I can't tell you, Mr. Nutter, and
10 that's why I'd hoped to find a copy of their file.

11 I would have to adjudge with these last
12 two years, the pressures being that much higher than they
13 had been for the previous six, that in all likelihood
14 they're feeling the effects of -- of some sort of water in-
15 flux in at least that immediate area; that, plus the fact
16 that as you'll notice, there have been three months in --
17 one month in '77 and two months in '78 that the well was not
18 on production at all, and --

19 Q. Well, that's the corresponding time that
20 pressures went up, too, in '77 and '78.

21 A. Yes, that's correct.

22 Q. So it sounds like maybe if it was off
23 production, that was just a migration of gas into the area
24 and a build-up of pressure, possibly.

25 A. I have a hard time envisioning of suffi-

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1 cient magnitude to essentially almost double the pressure;
2 1-1/2 to 2 times that much. That's entirely possible, how-
3 ever, without -- without knowing specifically what the situ-
4 ation was, of course, I can't -- I can't tell you, but during
5 the time that the well has been on production, and basing
6 it upon that trend, I have to estimate that the well has
7 already produced 278 million and at the maximum it's going
8 to produce -- 271 million, pardon me, and that the estimated
9 ultimate is about 440 million, so -- and at 440 million it
10 still would be only effectively draining 28 acres.

11 Q Well, the nearest well to it is a good
12 half mile away, according to Exhibit Number One, and if it's
13 only draining 80 acres, it certainly, if it were shut-in for
14 awhile, it would have plenty of acreage to contribute gas
15 to it.

16 A Yes, sir, that's true, but the performance
17 of it indicates that it's not effectively draining whatever
18 it could be draining. It's not effectively draining anything
19 as large as it should be. Now whether that's due to pro-
20 duction problems, inefficient completion, or what, I'm not
21 in a position to give you any more than a suppositional
22 answer, unfortunately.

23 MR. NUTTER: Are there any further ques-
24 tions of Mr. Aycock?

25 MR. CARR: Nothing further.

1 MR. NUTTER: He may be excused.

2 Do you have anything further, Mr. Carr?

3 MR. CARR: No, sir, Mr. Nutter.

4 MR. NUTTER: Does anyone have anything
5 they wish to offer in Case Number 6716?

6 We'll take the case under advisement.

7
8 (Hearing concluded.)
9

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REPORTER CERTIFICATE

I, SALLY W. BOYD, a Certified Shorthand 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. 6716,
heard by me on 11/14 1977.

[Signature], Examiner
Oil Conservation Division

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ENERGY AND MINERALS DEPARTMENT
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EXAMINER HEARING

IN THE MATTER OF:

Application of Alpha Twenty-One Pro-) CASE
duction Company for two non-standard) 6716
proration units and approval of infill)
drilling, Lea County, New Mexico.)

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

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For the Applicant:

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WILLIAM P. AYCOCK

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1 MR. NUTTER: Call Case Number 6716.

2 MR. PADILLA: Application of Alpha Twenty-
3 one Production Company for two non-standard proration units
4 and approval of infill drilling, Lea County, New Mexico.

5 MR. CARR: May it please the Examiner, I'm
6 William F. Carr, Campbell and Black, P. A., Santa Fe, ap-
7 pearing on behalf of the applicant. I have one witness who
8 needs to be sworn.

9
10 (Witness sworn.)

11
12 WILLIAM P. AYCOCK
13 being called as a witness and having been duly sworn upon
14 his oath, testified as follows, to-wit:

15
16 DIRECT EXAMINATION

17 BY MR. CARR:

18 Q Will you state your full name and place
19 of residence?

20 A William P. Aycock, Midland, Texas.

21 Q Mr. Aycock, by whom are you employed and
22 in what capacity?

23 A By Alpha Twenty-one Production Company in
24 connection with this application under Case Number 6716.

25 Q Have you previously testified before this

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1 Commission and had your credentials accepted and made a
2 matter of record?

3 A Yes, sir, I have.

4 Q Are you familiar with the application in
5 this case?

6 A Yes, sir, I am.

7 MR. CARR: Are the witness' qualifications
8 acceptable?

9 MR. NUTTER: Yes, they are.

10 Q (Mr. Carr continuing.) Mr. Aycock, will
11 you please refer to what has been marked for identification
12 as Applicant's Exhibit Number One and review the data con-
13 tained thereon for the Examiner?

14 A Exhibit Number One is a land map of Sec-
15 tion 8, Township 25 South, Range 37 East, and the immediately
16 surrounding sections that serves to illustrate the essence
17 of the applicant's position and request, and that is that
18 the northwest quarter of the southeast quarter of Section 8
19 be designated a gas proration unit and assigned to the ex-
20 isting El Paso Well, and that the remainder of the southeast
21 quarter of Section 8, comprising the east half and southwest
22 quarter of said southeast quarter, be assigned to a new well,
23 the proposed location of which is indicated on Exhibit One,
24 being in the southwest quarter of the southeast quarter of
25 Section 8, comprising a 120-acre proration unit.

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1 Q Now, Mr. Aycock, the applicant has obtained
2 its interest in this non-standard proration unit through a
3 farmout from El Paso Natural Gas, is that correct?

4 A That's correct.

5 Q Will you please refer to Exhibit Number
6 Two and review this for the Examiner?

7 A Exhibit Number Two is a structure map on
8 the top of the Yates formation, which is the uppermost zone
9 that's included in the Jalmat Field. It has a Jalmat Pool
10 designation that serves to illustrate the structural configura-
11 tion in the immediate vicinity of the Section 8, the sub-
12 ject of this application. It shows that the structure is
13 basically not featureless, but does not have decided features
14 and we don't anticipate that the geological position of the
15 area has any great affect upon what will be realized from
16 drilling the proposed well.

17 Q And what does the yellow area on this ex-
18 hibit reflect?

19 A The yellow area reflects the proration
20 unit that is requested to be divided from the existing pro-
21 ration unit, the 120 acres, and assigned to the proposed
22 well.

23 The proposed well location is not shown
24 on Exhibit Two as it is on Exhibit One, Mr. Examiner, and
25 the reason for that, it was just cluttered.

1 Q Mr. Aycock, will you now refer to the
2 letter which has been marked Exhibit Number Three and review
3 the data contained therein?

4 A Exhibit Number Three is a letter directed
5 to Alpha Twenty-one Production Corporation that describes
6 the situation with regard to the recovery of the existing
7 wells and the anticipated possible recovery for the proposed
8 well, as compared by both a statistical analysis of the
9 characteristics of the existing wells and a volumetric cal-
10 culation based upon the statistical analysis of volumetric
11 parameters in the immediate vicinity of the proposed loca-
12 tion, in which I have attempted to provide Alpha Twenty-one
13 with the limits, the upper and lower limits, of what I be-
14 lieve that the recovery could be.

15 It seems apparent from the work that I've
16 done, that there is a substantial volume of unrecovered re-
17 serves underlying the tract that is proposed to be assigned
18 to the well that's the subject of this application; depending
19 upon which -- in which way the data is viewed, the amount
20 of gas can range from near the lower limit; the statistical
21 parameter compares pretty much in order of magnitude with
22 the volumetric calculation, and of course, if the pressure
23 should be considerably higher than is anticipated, it could
24 range up towards the mean indicated -- estimated additional
25 recovery for the proposed well.

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1 Basically, the letter goes into that as-
2 pect and describes the pressure information that's available,
3 initial pressures that were available, and the calculated
4 effective drainage areas for the wells in the immediate
5 vicinity, and I would particularly call the Examiner's at-
6 tention to the fact that the El Paso Natural Gas Langlie
7 Federal 3, which is the well that is in the existing proration
8 unit, has an estimated effective drainage area of only 28
9 acres, which is considerably less than that acreage that's
10 presently assigned to it.

11 Attached also to the letter is a summary
12 of individual well information for nine wells that are in
13 the immediate vicinity of the acreage that's the subject of
14 this application, in which all of the pertinent data are
15 listed for each of the wells.

16 It simply serves as a back-up for the dis-
17 cussion that's contained in the letter itself.

18 Q Will you now refer to your cross section
19 A-A', which has been marked Exhibit Four, and review this?

20 A Exhibit Four is cross section A-A', which
21 runs basically in a north/south direction through the pro-
22 ration unit that is the subject of the application, and in-
23 cludes the wells that are pertinent to the application,
24 particularly the El Paso No. 3 Langlie Federal, which is
25 the second well from the righthand side of this exhibit.

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1 Once again we show where all the wells have
2 been completed. I would call the Examiner's attention to
3 the fact that basically of the zones that are included in
4 the Jalmat Pool designation, the operators have chosen to
5 concentrate on the Upper Yates formation in the north/south
6 direction as the reservoir in which they've chosen to com-
7 plete.

8 Q Would you now review Exhibit Number Five?

9 A Exhibit Number Five is an east/west cross
10 section that also includes the well that is -- El Paso Langlie
11 Federal 3, that is the well to which the entire 160-acre
12 proration unit in the Jalmat Pool is presently assigned,
13 and once again it attempts to show what the practice has
14 been and what the reservoir configurations are, and once
15 again, I'll call the Examiner's attention to the fact that
16 the Upper Yates formation has been the object of the vast
17 majority of the effective completions that have been attempted
18 in the area.

19 In our opinion, the fact that the lower
20 zones have not been adequately tested could well indicate
21 that in the Lower Yates, as well as in the Seven Rivers
22 formation, there are substantial undrained reserves, and that
23 is part of the reason for the ambiguity in the additional
24 recovery estimates that were presented in the previous testi-
25 mony with the Exhibit Number, what, Three, the letter?

1 Q Now, Mr. Aycock, Exhibit Number Six con-
2 sists of a number of graphs. Would you explain the signifi-
3 cance of these to the Examiner?

4 A These graphs are a combination of gas
5 production rate in Mcf per month as a function of time and
6 shut-in wellhead pressure in psig as a function of cumulative
7 gas production for selected wells that are in the immediate
8 vicinity of the proposed location, and they are provided the
9 Commission as a further attempt to document the data and
10 the discussion as presented on Exhibit Number Three.

11 I would particularly call the Commission's
12 attention to the fact that there is both a rate/time curve
13 and pressure/cumulative curve for the El Paso Langlie No. 3,
14 which is the well to which the existing 160-acre proration
15 unit is assigned, and a combination of intermittent pro-
16 duction during the past two years, relatively low flow rates,
17 and apparently increasing pressures, would indicate that
18 the difficulty associated with the performance of this
19 well may be one of water production rather than of simple
20 pressure depletion.

21 In an attempt to further define that sit-
22 uation we have tried to find the Commission's copy of the
23 well file for this well, but it is not in the file and we
24 were not able to refer to it to see if there were any
25 filings that had been made with the Commission that would

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1 illuminate this situation further.

2 MR. NUTTER: What file were you looking
3 for?

4 A The well -- this El Paso No. 3 Langlie,
5 the file is not in your file room this morning.

6 MR. NUTTER: Okay.

7 A We spent a bunch of time looking for it
8 and got some help from the file custodian and were not able
9 to find it.

10 MR. NUTTER: You don't know whether they
11 have a file in the Hobbs office?

12 A No, sir, I don't.

13 Q Mr. Aycock, will you refer to what has
14 marked for identification as Applicant's Exhibit Number
15 Seven and identify this for the Examiner?

16 A Yes, sir, these are the notifications to
17 the offset operators that this hearing had been requested
18 and included on the lower part of the copies of the letters
19 are the return receipts, showing that they were received by
20 each of the offset operators, including Gulf Oil Corporation,
21 Amoco Production Company, Reserve Oil, Inc., ARCO Oil and
22 Gas Company, Union Texas Petroleum Corporation, and Doyle
23 Hartman.

24 MR. NUTTER: I guess that's the only copy
25 you've got of that. We don't have it over here.

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1 MR. CARR: Okay, I'll make a copy avail-
2 able.

3 Q Mr. Aycock, do you believe that the pro-
4 posed well is necessary to effectively and efficiently drain
5 the non-standard proration unit?

6 A Yes, sir, I believe it is. Whether the
7 difficulty with the performance of the well to which the
8 proration unit is currently assigned is one resulting from
9 production problems, pressure depletion, or water production,
10 it would appear based upon the analysis of the data from
11 surrounding wells, in addition to the one to which the pro-
12 ration unit is assigned, that there should be substantial
13 additional reserves available for the proposed well. Whether
14 those are as low as 100 to 200 million or as high as a
15 billion to a billion and a half, remains to be seen, but
16 there would appear to be a valid and reasonable reason for
17 drilling the proposed well.

18 I believe, further, that the proposed well,
19 if the indications that are available are correct, that
20 there is substantial additional gas that could be recovered;
21 that the proposed well would both prevent the waste of a
22 substantial portion of that gas, as well as protect the
correlative rights of the minimum working interest owners
of the tract. It seems quite apparent that with a calculated
drainage of 28 acres for the well to which 160

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1 acres is presently assigned, that there is little likelihood
2 that -- that an adequate amount of gas would be drained
3 under normal criteria for a gas well.

4 Q Do you believe that granting this applica-
5 tion would be in the interest of conservation, the prevention
6 of waste, and the protection of correlative rights?

7 A Yes, sir, I do.

8 MR. CARR: At this time, Mr. Examiner, we
9 would offer into evidence Applicant's Exhibits One through
10 Seven.

11 MR. NUTTER: Applicant's Exhibits One
12 through Seven will be admitted in evidence.

13 MR. CARR: I have nothing further on
14 direct.

15
16 CROSS EXAMINATION

17 BY MR. NUTTER:

18 Q Mr. Aycock, looking at your Exhibit Number
19 One, I see the red outlined area and then the remaining 40
20 acres that would be dedicated to the El Paso Well.

21 Now, in the northeast quarter of the south-
22 east quarter there's a well that's shown to be a gas well,
23 No. 82. What formation was that well producing from?

24 A Those are -- that's an erroneous indication,
25 Mr. Nutter. We pulled all the files and those are all in

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1 the Langlie Mattix Pool. I have them here if you'd like for
2 me to go over them well by well, but 81, 82, 85, and 86 are
3 all in the Langlie Mattix Pool.

4 Q Okay. 82 is not a Jalmat.

5 A No, sir. None of those other four wells
6 that are on that 160 acres are Jalmat. They're all in the
7 Langlie Mattix.

8 Q Well, I've only got two other wells. Okay,
9 the No. 85 is not a Jalmat.

10 A No, sir.

11 Q Now where are the other two wells you're
12 talking about?

13 A Well, 81 is indicated as being plugged on
14 here. It was a Jalmat well.

15 Q I don't see that one.

16 A It's just the immediate -- in the 40 acres
17 immediately west of 82. It's in the northwest of the south-
18 east of 8.

19 MR. CARR: These are shown on Exhibit
20 Number Two.

21 Q Oh, okay. I was looking at Exhibit One.
22 But Exhibit One shows two gas wells on the red colored
23 acreage.

24 A Yes, sir.

25 Q And neither one of those is a Jalmat gas

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1 well.

2 A. No, sir, those are both Langlie Mattix
3 wells, according to the Commission's files.

4 Q. Okay, so on the 160 acres, being the
5 southeast quarter of Section 8, there's only one Jalmat gas
6 well --

7 A. Yes, sir.

8 Q. -- and that's the El Paso Langlie Federal
9 3.

10 A. Yes, sir.

11 Q. And applicant proposes to drill the well
12 in the southwest of the southeast of Section 8.

13 A. Yes, sir.

14 Q. Okay. Now, referring to your Exhibit
15 Number Three, Mr. Aycock, when I write an order on this case
16 I've got to tell FERC that approval of this infill drilling
17 is necessary in order to recover a certain amount of gas
18 from the proration unit that cannot be drained by the
19 existing well on this proration unit.

20 How much gas can I tell FERC you're going
21 to produce from this new well?

22 A. Well, the safest number would be between
23 132 and 200 million, Mr. Nutter, in my opinion.

24 Q. Now, what's that derived from?

25 A. That's derived from the volumetric calcu-

1 lation that's summarized on page two as well as the minimum
2 recovery from -- based upon a statistical analysis of the
3 performance of surrounding wells.

4 Q And you said between 132 and what?

5 A And 200.

6 Q Where is that on here?

7 A Page two, the 200 number is in the -- in
8 the first discussion there, estimated increased recovery,
9 I have mean, minimum, and maximum, and you notice 200 million
10 is the second number. Immediately below that there's a
11 paragraph that discusses using the mean volumetric parameters
12 as extracted from my study of the surrounding wells, and it
13 mentions the volume 132 million in that paragraph.

14 Q Well, it's not included in a table, though.

15 A No, sir. Included in the table is a sum-
16 mary of the -- of the parameters that were used to get there
17 for your use or edification if you were interested in how
18 I got it.

19 Q Now how do you derive the mean on these
20 various things, Mr. Aycock?

21 A It's a qualitative statistical approach,
22 Mr. Nutter. I simply add up the number of estimated ulti-
23 mates that I have and divide by that number, and the reason --

24 Q Well, that's an average then, not a mean,
25 isn't it?

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1 A Well, no. In statistical terms there is
2 no such thing as an average. The mean is the -- what is
3 called sometimes by a layman the arithmetic mean or the
4 average is in proper statistical terms referred to as the
5 mean value, which means that you can represent the entire
6 statistical probability curve by one value that would sum-
7 marize it all. Frequently, in natural systems with popula-
8 tions such as this, we find that the mean does not adequately
9 represent it and that's why I've attempted to give a maximum,
10 a minimum, and in some of the work that I've done that's
11 been presented to you, I've gone further than that, and
12 shown a median and a standard deviation as well, so that
13 you would not get the idea that I'm trying to represent to
14 you that I have assurances that I can adequately really give
15 you a single value number for an approach such as this. I
16 do not think in all conscience I could really do that.

17 Q But a mean is divided as the mid-point.

18 A Yes, sir.

19 Q And this is not the mid-point. This is
20 an arithmetic average, actually, isn't it?

21 A Well, it is -- they are -- they are coin-
22 cident values if you have a normal statistical probability
23 variation.

24 Q But in order to arrive, for instance, at
25 the -- let's find one of our -- okay, in taking your statis-

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1 tical analysis on Exhibit Number -- well, it's the last
2 page of Exhibit Number Three. Now, if we go to page two of
3 Exhibit Number Three, we have the minimum of the surrounding
4 seven wells for acreage drained, and that's 45, and that's
5 the lowest value on the bottom line of the last page there,
6 right?

7 A. Yes, sir.

8 Q. Then we have the maximum, which is given
9 as 700.

10 A. That's correct.

11 Q. And that's for the ARCO Woolwerth 1.

12 A. Yes, sir.

13 Q. Then we have the mean of these seven sur-
14 rounding wells. Have you taken all of these wells across
15 here --

16 A. Yes, sir.

17 Q. -- and added them up --

18 A. That's correct.

19 Q. -- and divided by seven?

20 A. Yes, sir, and I've attempted to show you
21 the tremendous variation that you observe in trying to do
22 work of this type, at least in this area. Once again, to
23 indicate to you that I don't -- in all conscience I can't
24 come before you having sworn to tell the truth and the whole
25 truth, and indicate to you that I can give you a single value

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1 other than a very qualitative number, recognizing the degrees
2 of uncertainty that are inherently present in this type of
3 approach.

4 Q Now, all of these wells that are shown on
5 here, are they shown on Exhibit One?

6 A Yes, sir, I believe they are.

7 Q Okay, now the third one there on your
8 statistical -- your summary sheet.

9 A Yes, sir.

10 Q This thing.

11 A Oh, yes, sir, okay.

12 Q The third well there.

13 A Yes, sir.

14 Q Now that's the El Paso Jal "G" 3.

15 A Uh-huh.

16 Q Now where do I find that well? It says

17 8-R.

18 A Well, let me be sure that --

19 Q Is that supposed to be a "B", maybe?

20 A I suspect it is. Let me check and see if
21 it's not. I'm sure it is; sure that it was -- it's just
22 a typographical error. I'm positive it should have been a
23 "B", Mr. Nutter. I can't find my well file right now, but
24 you're correct. It's a typographical error. It should have
25 been a "B".

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1 Q Okay, I was just -- I'm trying to identify
2 these wells --

3 A Yes, sir.

4 Q -- on the exhibit and point out where they
5 are on here.

6 A That's correct, it should have been a --

7 Q I think I've spotted most of the others.

8 A Of course the "R", there isn't any such
9 unit, anyway, because "P" is as high as you go, so that's
10 just a typo that we overlooked in proofing the thing.

11 Q Okay, and now, over here to the far right,
12 this well that's identified as the El Paso Langlie "A" No.
13 2 in "J" of 17, would be this No. 1-A, I presume, down
14 here in "J" of 7.

15 A Yes, sir.

16 Q So all of the wells that are shown on here
17 are on this exhibit, then?

18 A Yes, sir.

19 Q Okay.

20 A We've attempted to concentrate on an area
21 that we felt was adequate to give you a feel for the data
22 that was available and not go so far afield that anything
23 we came up with couldn't reasonably be applied to the area
24 for which the application was being made.

25 Q Now, do you know whether El Paso has done

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1 any workover work on this Langlie No. 3? You know, you men-
2 tioned the increase in pressures with the last few hundred
3 thousand Mcf.

4 A Yes, sir.

5 Q And then the production chart has some
6 gaps in it. Have -- did they take the well off production
7 to do work or did they just take the well off production and
8 leave it fallow for awhile and then the pressures came up?

9 A That I can't tell you, Mr. Nutter, and
10 that's why I'd hoped to find a copy of their file.

11 I would have to adjudge with these last
12 two years, the pressures being that much higher than they
13 had been for the previous six, that in all likelihood
14 they're feeling the effects of -- of some sort of water in-
15 flux in at least that immediate area; that, plus the fact
16 that as you'll notice, there have been three months in --
17 one month in '77 and two months in '78 that the well was not
18 on production at all, and --

19 Q Well, that's the corresponding time that
20 pressures went up, too, in '77 and '78.

21 A Yes, that's correct.

22 Q So it sounds like maybe if it was off
23 production, that was just a migration of gas into the area
24 and a build-up of pressure, possibly.

25 A I have a hard time envisioning of suffi-

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1 client magnitude to essentially almost double the pressure;
2 1-1/2 to 2 times that much. That's entirely possible, how-
3 ever, without -- without knowing specifically what the situ-
4 ation was, of course, I can't -- I can't tell you, but during
5 the time that the well has been on production, and basing
6 it upon that trend, I have to estimate that the well has
7 already produced 278 million and at the maximum it's going
8 to produce -- 271 million, pardon me, and that the estimated
9 ultimate is about 440 million, so -- and at 440 million it
10 still would be only effectively draining 28 acres.

11 Q Well, the nearest well to it is a good
12 half mile away, according to Exhibit Number One, and if it's
13 only draining 80 acres, it certainly, if it were shut-in for
14 awhile, it would have plenty of acreage to contribute gas
15 to it.

16 A Yes, sir, that's true, but the performance
17 of it indicates that it's not effectively draining whatever
18 it could be draining. It's not effectively draining anything
19 as large as it should be. Now whether that's due to pro-
20 duction problems, inefficient completion, or what, I'm not
21 in a position to give you any more than a suppositional
22 answer, unfortunately.

23 MR. NUTTER: Are there any further ques-
24 tions of Mr. Aycock?

25 MR. CARR: Nothing further.

1 MR. NUTTER: He may be excused.

2 Do you have anything further, Mr. Carr?

3 MR. CARR: No, sir, Mr. Nutter.

4 MR. NUTTER: Does anyone have anything
5 they wish to offer in Case Number 6716?

6 We'll take the case under advisement.

7
8 (Hearing concluded.)
9

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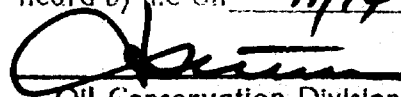
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REPORTER CERTIFICATE

I, SALLY W. BOYD, a Certified Shorthand 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. 6716
heard by me on 11/14 1979.

 , Examiner
Oil Conservation Division

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 6716
Order No. R-6188

APPLICATION OF ALPHA TWENTY-ONE
PRODUCTION COMPANY FOR TWO NON-
STANDARD PRORATION UNITS AND APPROVAL
OF INFILL DRILLING, LEA COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on November 14, 1979, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 28th day of November, 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, Alpha Twenty-One Production Company, seeks approval of a 40-acre non-standard gas proration unit comprising the NW/4 SE/4 of Section 8, Township 25 South, Range 37 East, NMPM, Jalmat Gas Pool, to be dedicated to El Paso Natural Gas Company's Langlie Federal Well No. 3 located thereon, and also a 120-acre unit comprising the E/2 SE/4 and SW/4 SE/4 of said Section 8 to be dedicated to a well to be drilled by applicant at a standard location in the center of the SW/4 SE/4 of said Section 8.

(3) Applicant further seeks a finding that the drilling of said well is necessary to effectively and efficiently drain that portion of an existing proration unit which cannot be so drained by the existing well.

-2-

Case No. 6716
Order No. R-6188

(4) That the evidence presented demonstrated that said El Paso Langlie Federal Well No. 3 cannot effectively and efficiently drain the 160-acre proration unit presently assigned to it.

(5) That the evidence presented further demonstrated that the drilling and completion of applicant's said new well should result in the production of between 132 and 200 million additional cubic feet of gas from the SE/4 of said Section 8 which would not otherwise be recovered.

(6) That such additional recovery will result in said unit being more efficiently and economically drained.

(7) That said new well is to be drilled as an "infill" well on the existing 160-acre non-standard proration unit, but said unit would be split into a 40-acre non-standard unit and a 120-acre non-standard unit.

(8) That in order to permit the drainage of a portion of the reservoir covered by said 160-acre non-standard proration unit which cannot be effectively and efficiently drained by the existing well thereon, the subject application for infill drilling should be approved.

(9) That approval of the subject application will afford the applicant the opportunity to produce his just and equitable share of the gas in the Jalmat Gas Pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the 160-acre non-standard gas proration unit comprising the SE/4 of Section 8, Township 25 South, Range 37 East, NMPM, Jalmat Gas Pool, Lea County, New Mexico, is hereby cancelled, and a new 40-acre non-standard gas proration unit in the Jalmat Gas Pool comprising the NW/4 SE/4 of said Section 8 is hereby established and dedicated to El Paso Natural Gas Company's Langlie Federal Well No. 3 located thereon, and also a new 120-acre unit comprising the E/2 SE/4 and SW/4 SE/4 of said Section 8 to be dedicated to a well to be drilled by applicant at a standard location thereon in the center of the SW/4 SE/4 of said Section 8.

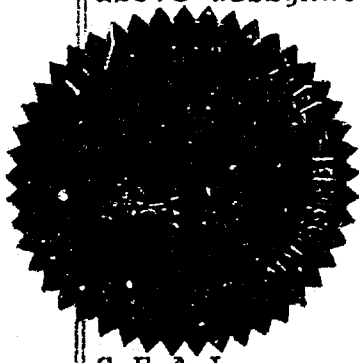
-3-

Case No. 6716

Order No. R-6188

(2) 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.

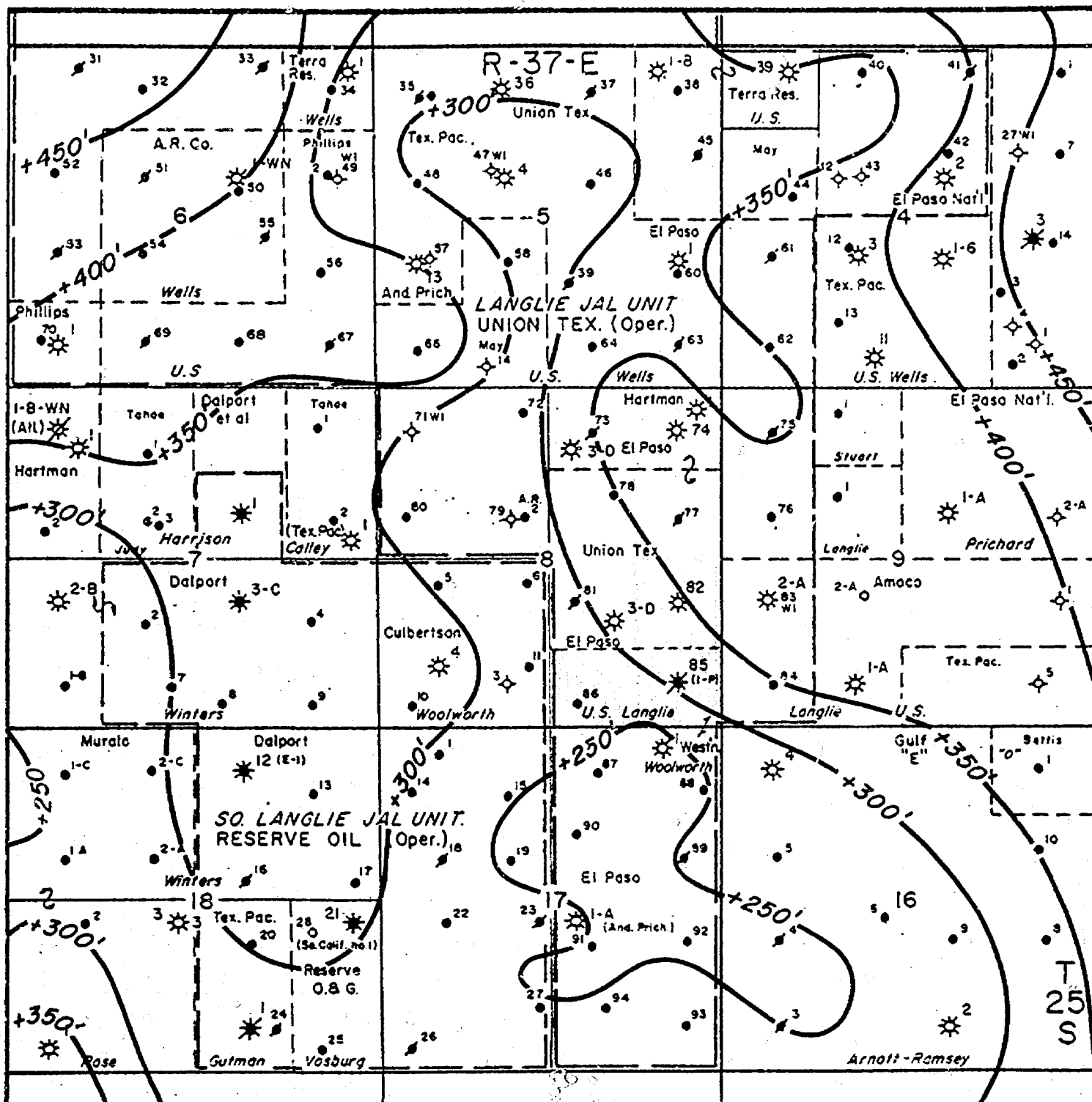


SEAL

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Joe D. Ramey
JOE D. RAMEY
Director

fd/



STRUCTURE
TOP OF YATES
C.I. = 50'

FIELD JALMAT		County LEA		State N. MEX.	
Engineer W. P. A.		Drawn By H's	Date 9-26-79	File ALPHA 21 CORP.	
RADTKE, AYCOCK & ASSOC., INC.				Ref. No.	EXHIBIT NO.
310 WALL TOWERS WEST			MIDLAND, TEXAS		

RADTKE, AYCOCK, & ASSOCIATES, INC.

Petroleum Engineering Consultants

310 WALL TOWERS WEST

MIDLAND, TEXAS 79701

TELEPHONE 915/684-8044

November 12, 1979

Alpha 21 Production Co.
2100 First National Bank Building
Midland, Texas 79701

Attention Mr. Tom Phipps

Subject: Application for NGPA Infill Gas
Development Well, Section 8,
T-25-S, R-37-E, Jalmat Pool
Lea County, New Mexico

Gentlemen:

Attached are the following that have been prepared in accordance
with your instructions:

1. Structure Map of Area
2. Cross-Sections A-A' and B-B'
3. Letter of explanation, including reserve estimate
for proposed well.
4. Rate-Time Production Graphs for active wells near
the proposed location.
5. Graph of shut-in wellhead pressure as a function of
cumulative gas recovery for selected nearby wells.

We trust that this material will suffice to complete this applica-
tion; however, we should be pleased to render whatever additional
service you may require in this connection. As always, we appre-
ciate the continued opportunity of serving you professionally.

Very truly yours,

Wm. P. Aycock

Wm. P. Aycock, P. E.

WPA/bw

Attachments

BEFORE EXAMINER NUTTER	
OIL CONSERVATION DIVISION	
Alpha 21	EXHIBIT NO. 3
CASE NO.	6716

RADTKE, AYCOCK, & ASSOCIATES, INC.

Petroleum Engineering Consultants

310 WALL TOWERS WEST
MIDLAND, TEXAS 79701
TELEPHONE 915/684-8044

November 12, 1979

Alpha 21 Production Co.
2100 First National Bank Building
Midland, Texas 79701

Attention Mr. Tom Phipps

Subject: Application for Administrative
Approval of Infill Gas Development
Well, SE/4 & S/2, NE/4 Section 8,
T-25-S, R-37-E, Jalmat Pool
Lea County, New Mexico

Gentlemen:

This letter is being furnished to you as a part of the captioned application, as required by Section 10, "Special Rules and Regulations, Natural Gas Policy Act Infill Findings Administrative Procedure". These rules were promulgated by the Conservation Division, State of New Mexico, Energy and Mineral Department on June 7, 1979, Case No. 6526, Order No. R-6013.

As you are aware, the El Paso Natural Gas Co. Langlie Fed. 3 is situated in Unit J, 8-25S-37E. As of April 1, 1979, this well had produced 279 MMCF of gas, and the estimated ultimate recovery of this well is 562 MMCF. The seven of the eight Jalmat gas wells surrounding the El Paso Natural Gas Co. Langlie Fed. 3 have produced 18,664 MMCF of gas, for a mean recovery of 2,666 MCF of gas on April 1, 1979. The eighth of the surrounding wells (the Gulf Oil Co. Arnott Ramsey "E"-1) was completed 7-13-37 and never produced before being plugged and abandoned. The estimated ultimate recovery for the seven of the surrounding wells that have been produced is 21,068 MMCF, for a mean estimated ultimate recovery of 3009 MMCF. The respective maximum gas recovery at April 1, 1979, and minimum estimated ultimate gas recovery for these seven wells are 9463 MMCF and 638 MMCF. The gas recovery information derived from the attached table can be summarized as follows:

	Gas Recoveries - MMCF	
	Effective April 1, 1979	
	<u>Cumulative</u>	<u>Estimated Ultimate</u>
EPNG Langlie Fed. 3	279	438
Mean of Seven		
Surrounding Jalmat Gas Wells	2,666	3,009
Minimum of Seven		
Surrounding Jalmat Gas Wells	85	638
Maximum of Seven		
Surrounding Jalmat Gas Wells	9,463	10,245

Alpha 21 Production Co.
November 12, 1979
Page 2

The volume of increased gas recovery for an infill development well can then be reasonably estimated as follows:

<u>Basis for Seven Surrounding Jalmat Gas Wells</u>	<u>Estimated Increased Recovery, MMCF</u>
Mean	2,571
Minimum	200
Maximum	9,807

By using the mean values of the volumetric reservoir and pressure parameters for the three wells located nearest the proposed location for which complete data are available (El Paso NG Langlie Fed. 3; El Paso NG Jal "D" 3 and Doyle Hartman Langlie Jal Fed. 1), the estimated ultimate gas recovery for the proposed well is 132 MMCF. The parameters incorporated into this estimate are as follows:

Porosity, % Bulk Volume	15.8
Connate Water Saturation, % NEPS	30.4
Net Effective Pay, feet	73.5
Effective Drainage Area, acres	78.
Initial BHP/Z, psia	262.8
Abandonment BHP/Z, psia	184.3

These estimates, utilizing analogous comparisons, are reasonably verified by the observation that in spite of well completion dates between 7-25-49 and 11-22-66, the observed initial tubing pressures were as follows:

<u>Well</u>	<u>Location</u>	<u>Date</u>	<u>Tubing Pressure</u>
EPNG Jal "D"-3	8B-25S-37E	7-25-49	900
EPNG Langlie "A" Fed. 1	17J-25S-37E	6-18-52	830
EPNG Wells Fed. 11	4N-25S-37E	12-15-57	300
EPNG Langlie Fed. 3	8J-25S-37E	11-22-66	425

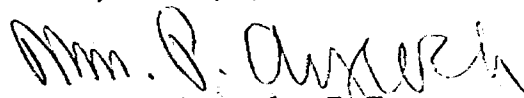
It is also consequential that the calculated drainage area for the El Paso Natural Gas Co. Langlie Fed. 3 is abnormally low, as can be demonstrated by the following that have been extracted from the attached table:

<u>Well</u>	<u>Estimated Drainage Area, Acres</u>
EPNG Langlie Fed. 3	28
Mean of Seven Surrounding Wells	204
Minimum of Seven Surrounding Wells	45
Maximum of Seven Surrounding Wells	700

Alpha 21 Production Co.
November 12, 1979
Page 3

Because of all of the above, we believe that the drilling of the proposed well is justified by the Natural Gas Policy Act criteria, as promulgated by NMOCC Order No. R-6013. We should be pleased to render whatever supplemental information you might require in this connection.

Very truly yours,


Wm. P. Aycock, P.E.

WPA/bw

Attachment

ALPHA 21 PRODUCTION CO.
SUMMARY OF INDIVIDUAL WELL INFORMATION
Vicinity of Proposed Location in N/2, SE/4, 8-25s-37E
Jalmat (Tansill-Yates-Seven Rivers) Pool, Lea County, New Mexico

	El Paso NG Langlie Fed. 3	ARCO Woolworth 1	El Paso NG Jal "D" 3	Phillips Woolworth 4	D. Hartman Langlie Jal. Fed. 1	Gulf Oil ArnottRamsey "E" - 1	AMOCO Langlie "C" Fed. 1	El Wel
Location of Well	8J-25S-37E	17B-25S-37E	8R-25S-37E	8M-25S-37E	8A-25S-37E	16O-25S-37E	9N-25S-37E	4N-
Completion Date	11-22-66	5-13-39	7-25-49	3-27-51	4-16-77	7-13-37	8-1-78	12
Init. CAOP, MCF/day	447	8400	30,000	9,000	1,938	274	279	1
Dist. & Direction from proposed location	332' W	1980' SSE	2833' NNW	3000' WSW	3350' NNE	3000' SE	3375' ESE	53
Cum. Gas Production, MCF @ 4-1-79	270,704	9,462,768	3,666,609	1,198,484	359,620	Never Prod.	85,253	3,1
Completion Interval	2900-2945 2955-3148	2962-2975 3075-3909	2930-3043	2906-2964	2875-3177	3400-3430	2986-3130	307
Volumetric Analysis Results								
Mean Eff. Por, % Bulk Vol.	17.1	-	7.04	-	19.1	-	19.0	
Mean Con. Wtr. Stn, % NEPS	25.	-	45.	-	28.	-	50.	
Net Eff. Pay, ft.	52.	-	81.	-	77.	-	64.	
Orig. Gas-in-place, MMCF/ac	19.8	0	9.33	-	4.26	-	18.2	
Est. Orig. GIP, MMCF	562	12,400	4,570*	1,490*	796*	-	1030*	4
Est. Ult. Gas Rec., MMCF	438	10,245	3,667	1,198	638	Never Prod.	823	3
Est. Gas Rec. Fact, % OGIP	77.9	82.5	-	-	-	-	-	
Est. Drainage Area, Ac	28	700**	260**	84**	45**	-	50**	2

*With OGIP = EUR/0.802

**With OGIP/Ac = 17.7 MMCF/ac: estimated from statistical analysis of available information.

ALPHA 21 PRODUCTION CO.

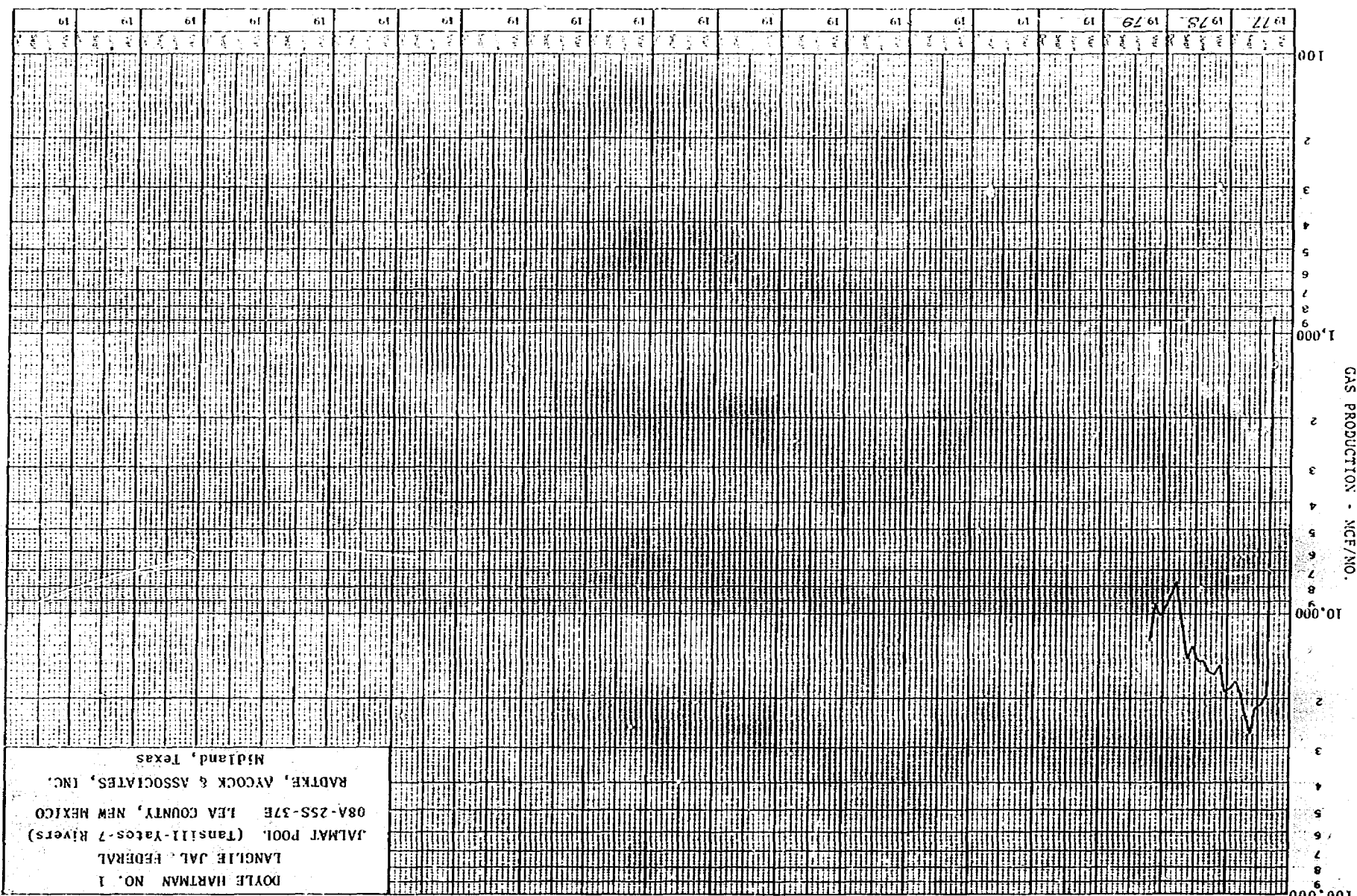
SUMMARY OF INDIVIDUAL WELL INFORMATION

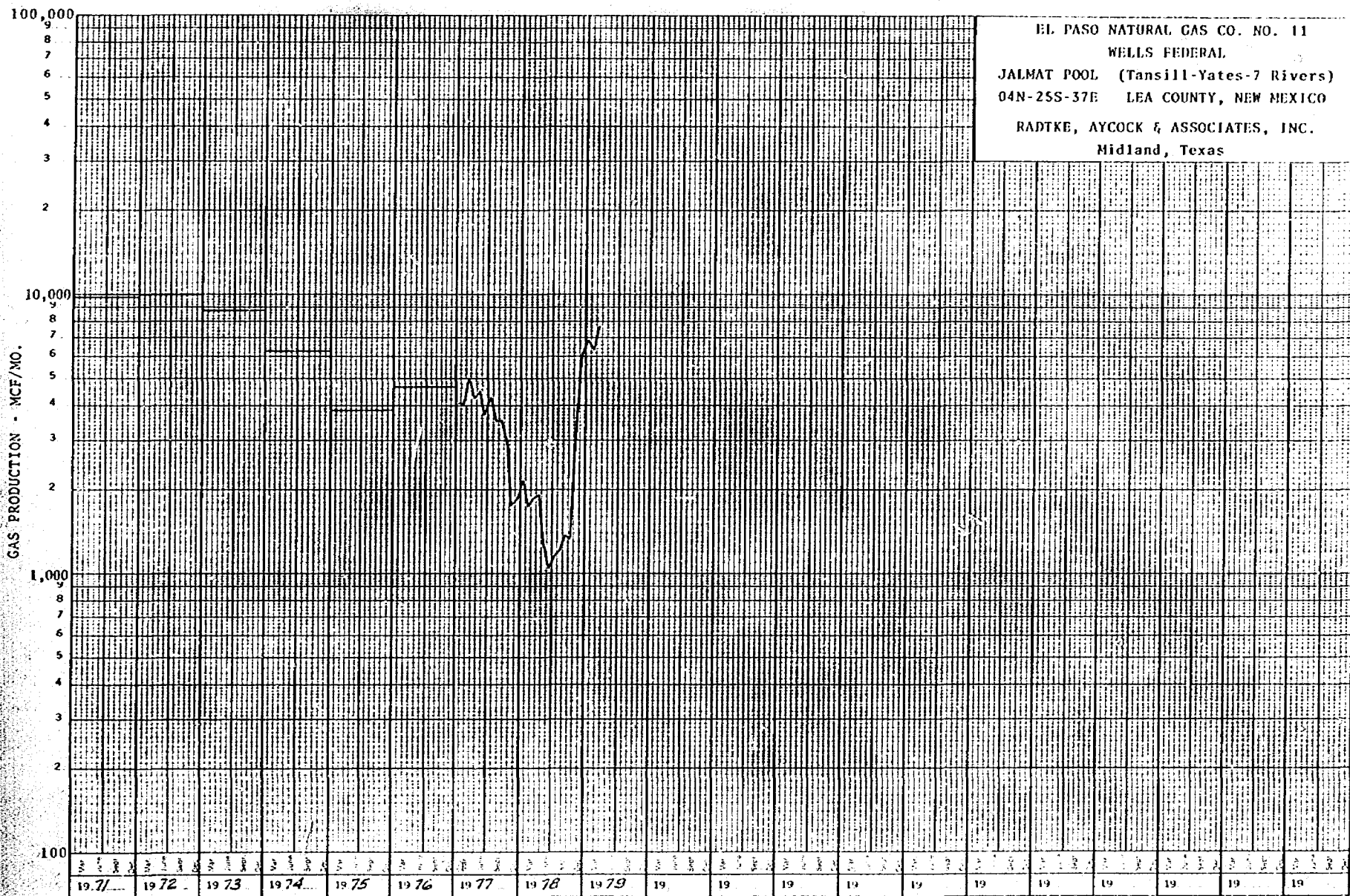
Vicinity of Proposed Location in N/2, SE/4, 8-25s-37E
Jalmat (Tansill-Yates-Seven Rivers) Pool, Lea County, New Mexico

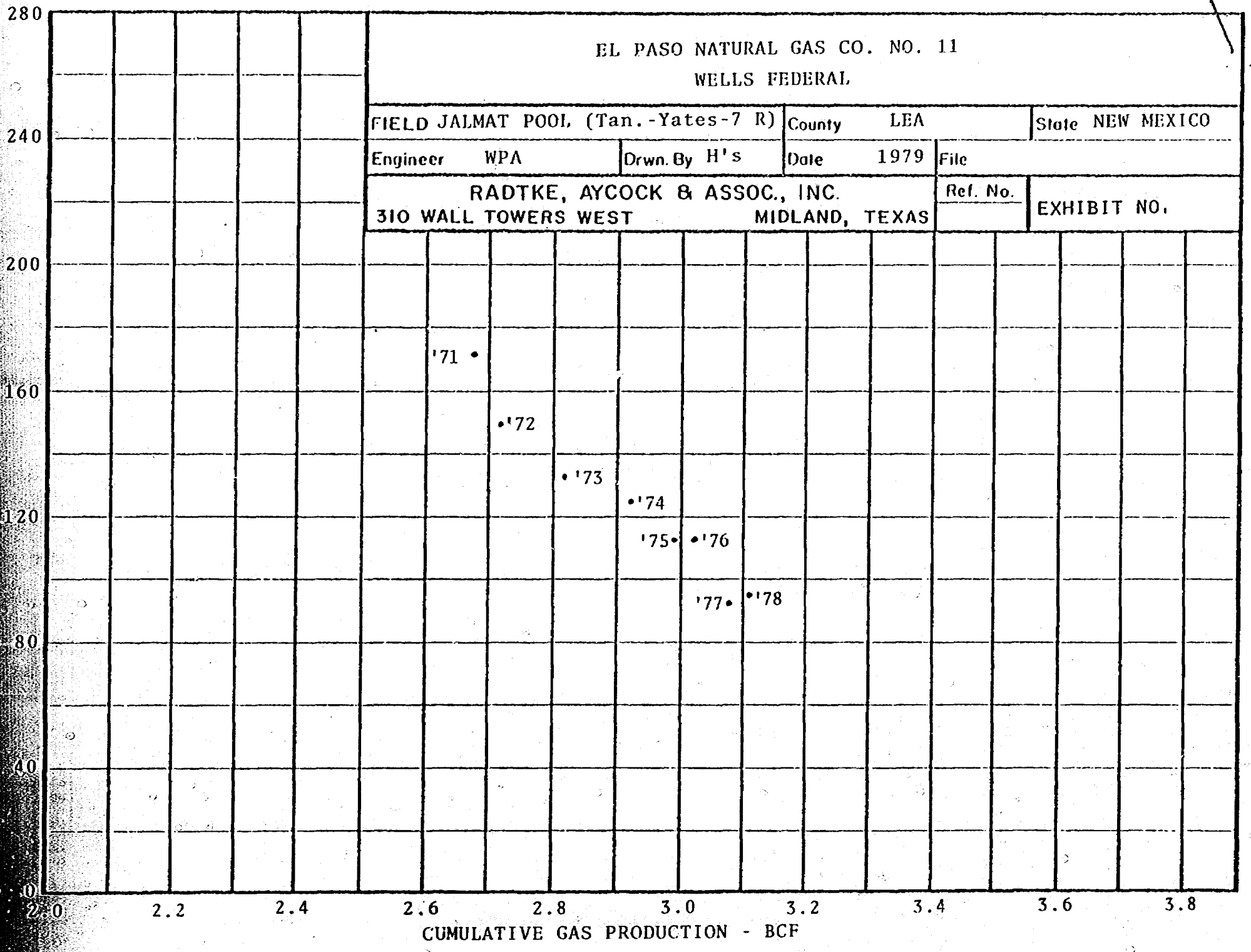
El Paso NG Langlie Fed. 3	ARCO Woolworth 1	El Paso NG Jal "D" 3	Phillips Woolworth 4	D. Hartman Langlie Jal. Fed. 1	Gulf Oil Arnott-Ramsey "E" - 1	AMOCO Langlie "C" Fed. 1	El Paso NG Wells Fed. 11	El Paso NG Langlie "A" Fed. 1
25S-37E	17B-25S-37E	8R-25S-37E	8M-25S-37E	8A-25S-37E	160-25S-37E	9N-25S-37E	4N-25S-37E	17J-25S-37E
22-66 447	5-13-39 8400	7-25-49 30,000	3-27-51 9,000	4-16-77 1,938	7-13-37 274	8-1-78 279	12-15-57 10,000	6-18-52 13,750
32' W	1980' SSE	2833' NNW	3000' WSW	3350' NNE	3000' SE	3375' ESE	5370' NE	5150' SSW
0,704	9,462,768	3,666,609	1,198,484	359,620	Never Prod.	85,253	3,153,118	737,714
0-2945 5-3148	2962-2975 3075-3909	2930-3043	2906-2964	2875-3177	3400-3430	2986-3130	3070-3140	2480-2640 2921-2980
7.1	-	7.04	-	19.1	-	19.0	-	13.3
25.	-	45.	-	28.	-	50.	-	25.
32.	-	81.	-	77.	-	64.	-	116.
19.8	0	9.33	-	4.26	-	18.2	-	34.4
562	12,400	4,570*	1,490*	796*	-	1030*	4,060	920*
438	10,245	3,667	1,198	638	Never Prod.	823	3,759	738
77.9	82.5	-	-	-	-	-	92.5	-
28	700**	260**	84**	45**	-	50**	229**	52**

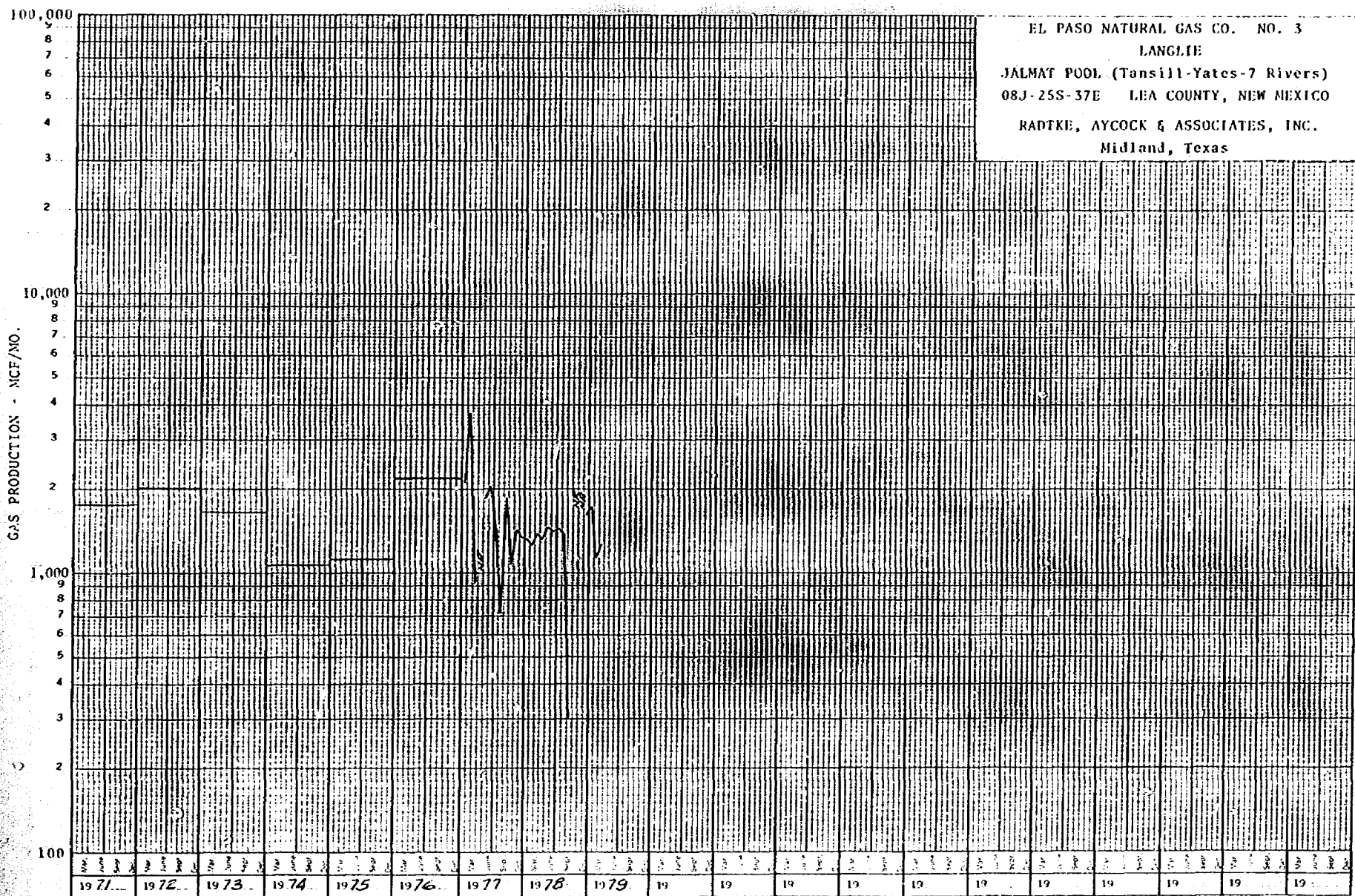
* Estimated from statistical analysis of available information.

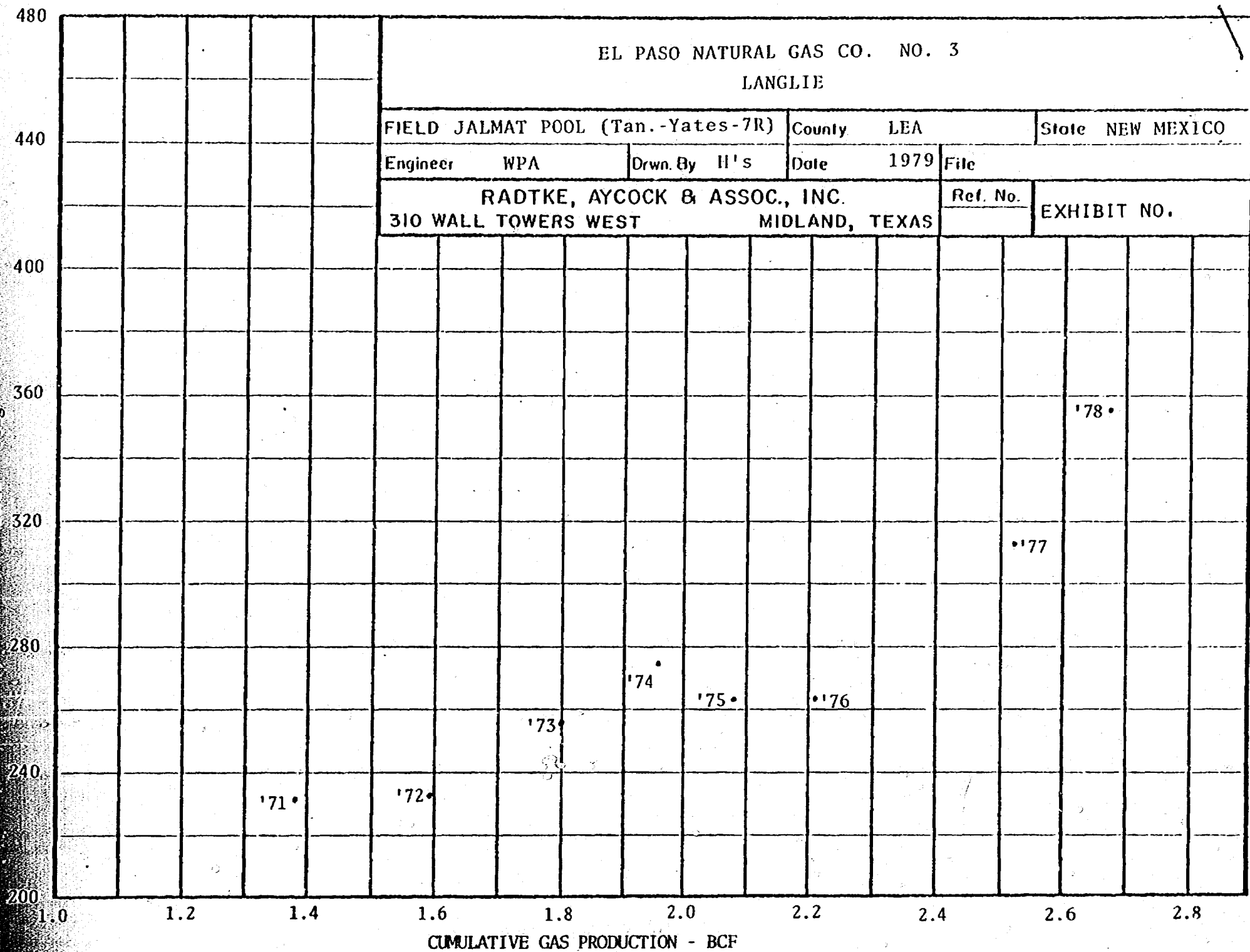
GAS PRODUCTION - MCF/NO.

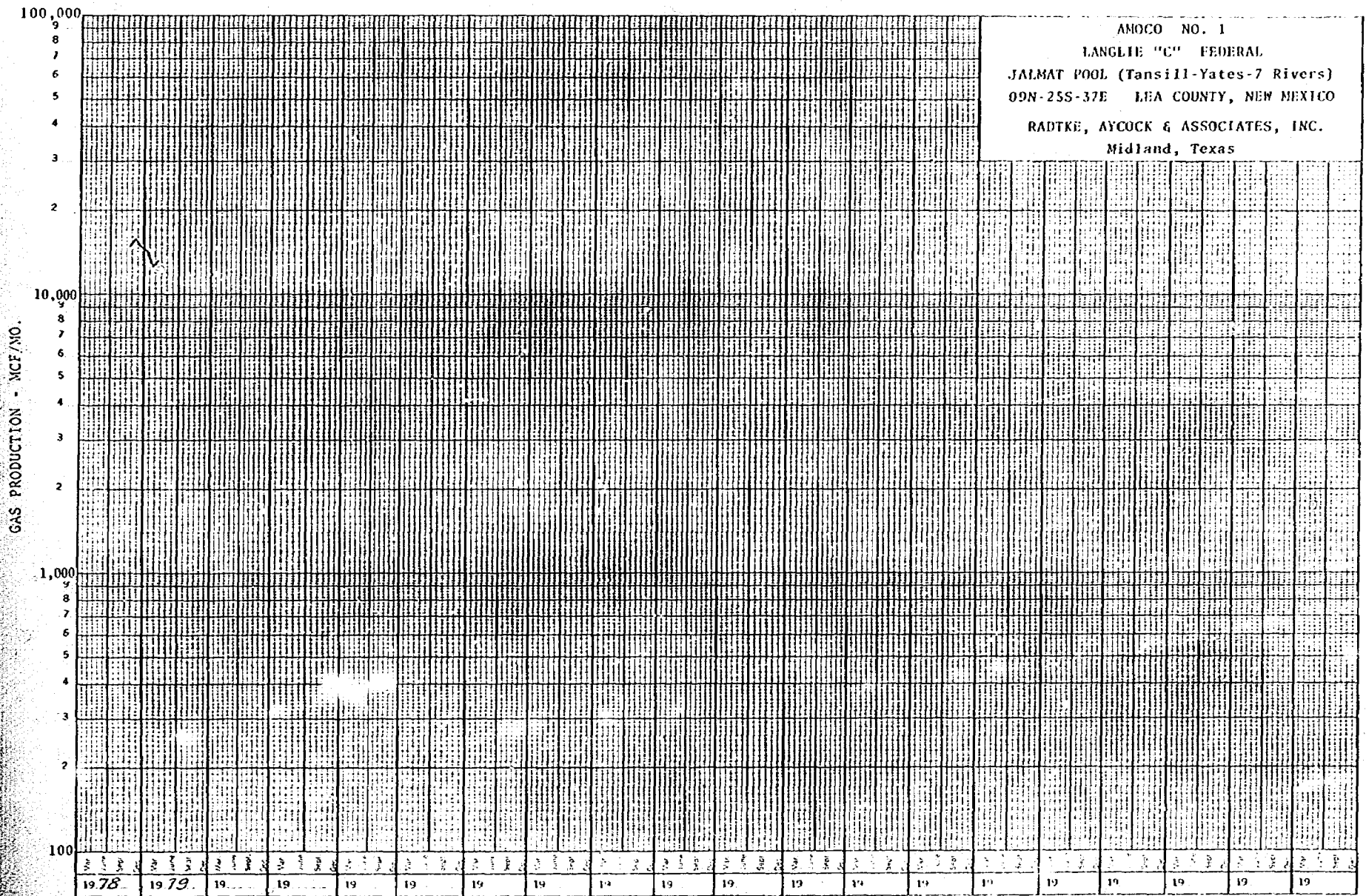


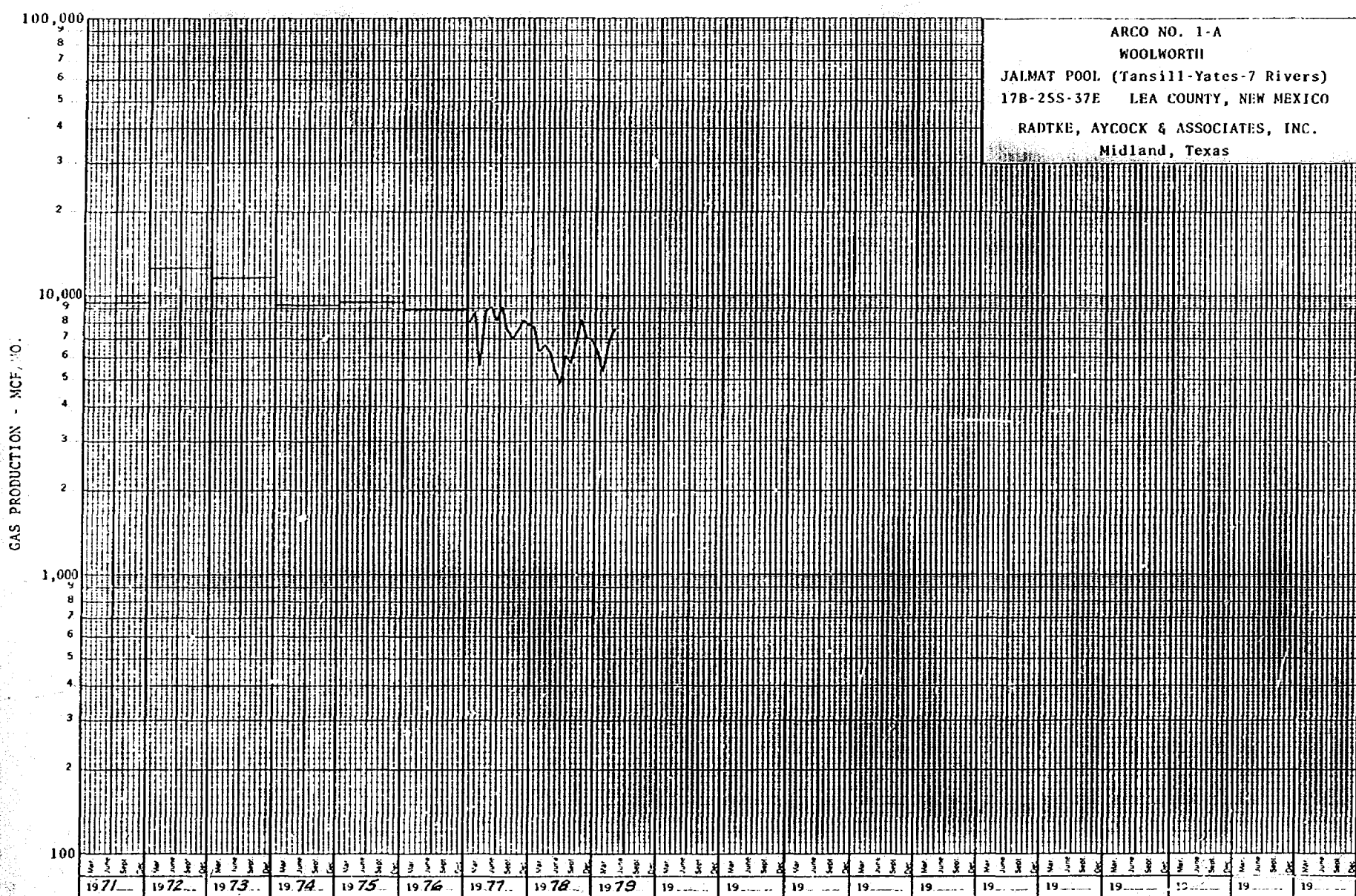




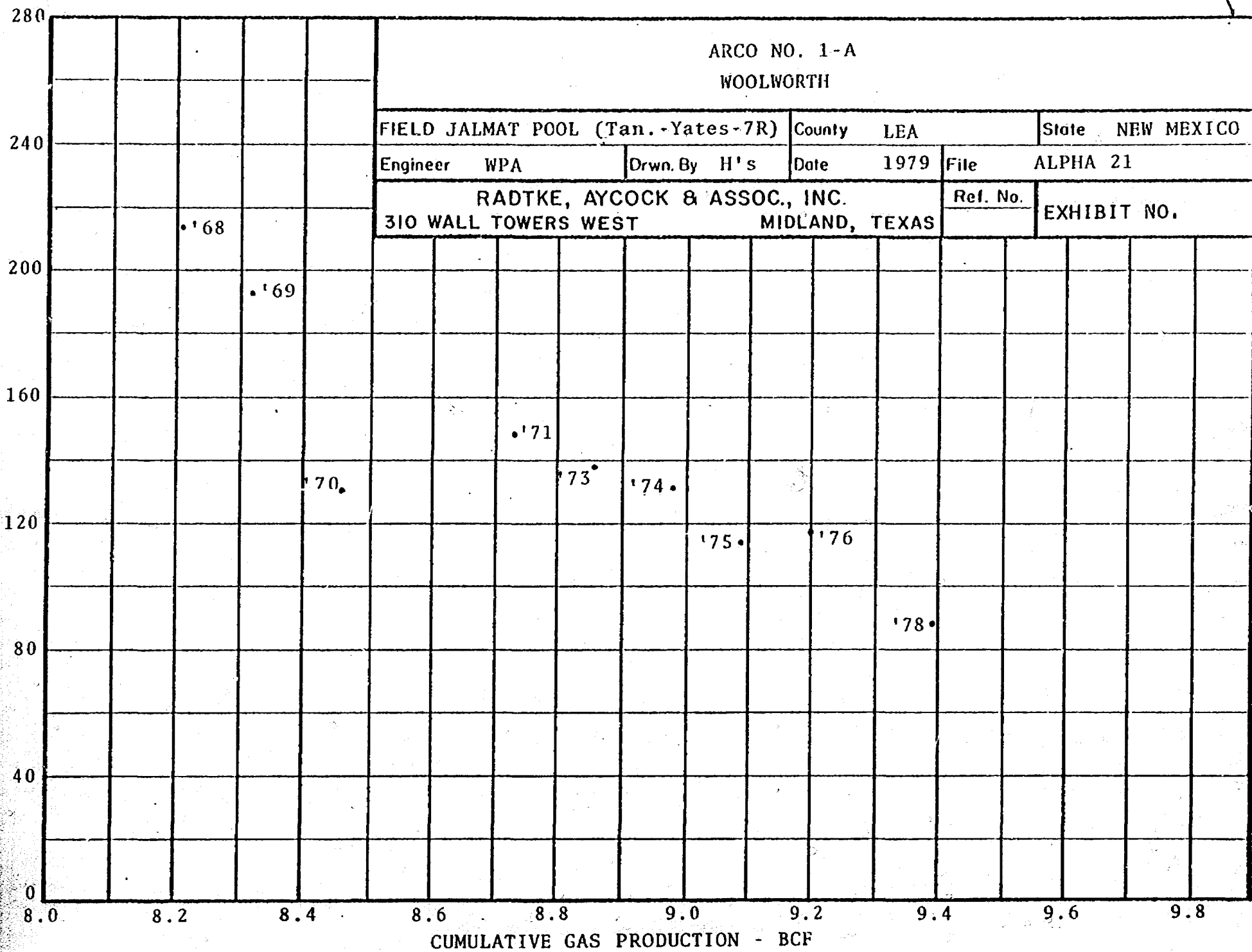








SIWHP - Psig



BEFORE EXAMINER NUTTER

OIL CONSERVATION DIVISION

Alpha 21 EXHIBIT NO. 6

CASE NO. 6716



ALPHA TWENTY-ONE PRODUCTION COMPANY

2100 FIRST NATIONAL BANK BUILDING
MIDLAND, TEXAS 79701

915/683-5384

November 6, 1979

Gulf Oil Corporation
Box 670
Hobbs, New Mexico 88240

Re: El Paso - Ruby Federal No. 1
1880' FEL, 660' FSL, Sec. 8,
T-25-S, R-37-E, Lea County,
New Mexico

Gentlemen:

This is notification to offset operators that Alpha Twenty-One Production Company has requested a hearing before the Oil Conservation Division seeking approval for two non-standard proration units. One proration unit of 40 acres comprising the NW/4 SE/4 Section 8, T-25-S, R-37-E, Jalmat Gas Pool to be dedicated to El Paso Natural Gas Company's existing Langlie Federal Well No. 3. The other proration unit of 120 acres comprising the E/2 SE/4 and SW/4 SE/4 of the same Section is to be dedicated to the captioned well to be drilled in the Jalmat Gas Pool.

The hearing will take place November 14, 1979.

Very truly yours,

Tommy Phipps
Executive Vice President

TP:rn

Certified Mail No. P00 7350218
Return Receipt

PS Form 3811, Aug. 1978

● SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one).
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☐ RESTRICTED DELIVERY
Show to whom and date delivered.
☐ RESTRICTED DELIVERY.
Show to whom, date, and address of delivery. \$
(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Gulf Oil Corporation
Box 670
Hobbs, New Mexico 88240

3. ARTICLE DESCRIPTION:
REGISTERED NO. CERTIFIED NO. INSURED NO.
P00 7350218

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☒ Addressee ☐ Authorized agent
L. A. Brandt

4. DATE OF DELIVERY
11-8-79

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:

CLERK'S INITIALS

POSTMARK
NOV 8 1979
HOBBS NM

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

EX#17



ALPHA TWENTY-ONE PRODUCTION COMPANY

2100 FIRST NATIONAL BANK BUILDING
MIDLAND, TEXAS 79701

915/683-5384

November 6, 1979

Amoco Production Company
P. O. Drawer "A"
Levelland, Texas 79336

Re: El Paso - Ruby Federal No. 1
1880' FEL, 660' FSL, Sec. 8,
T-25-S, R-37-E, Lea County,
New Mexico

Gentlemen:

This is notification to offset operators that Alpha Twenty-One Production Company has requested a hearing before the Oil Conservation Division seeking approval for two non-standard proration units. One proration unit of 40 acres comprising the NW/4 SE/4 Section 8, T-25-S, R-37-E, Jalmat Gas Pool to be dedicated to El Paso Natural Gas Company's existing Langlie Federal Well No. 3. The other proration unit of 120 acres comprising the E/2 SE/4 and SW/4 SE/4 of the same Section is to be dedicated to the captioned well to be drilled in the Jalmat Gas Pool.

The hearing will take place November 14, 1979.

Very truly yours,

Tommy Phipps
Executive Vice President

TP:rm

Certified Mail No. P00 7350217
Return Receipt

Form 3811, Rev. 1078

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

SENDER: Complete items 1, 2, and 3.
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☐ Show to whom, date, and address of delivery
☐ RESTRICTED DELIVERY
Show to whom and date delivered
☐ RESTRICTED DELIVERY
Show to whom, date, and address of delivery
(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Amoco Production Company
P. O. Drawer "A"
Levelland, Texas 79336

3. ARTICLE DESCRIPTION:
REGISTERED NO. CERTIFIED NO. INSURED NO.
P00 7350217

4. (Always obtain signature of addressee or agent)
I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent
X *Heslie Bills*

4. DATE OF DELIVERY POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE CLERK'S INITIALS

U.S. POSTAL SERVICE



ALPHA TWENTY-ONE PRODUCTION COMPANY

2100 FIRST NATIONAL BANK BUILDING
MIDLAND, TEXAS 79701

915/683-5384

November 6, 1979

Reserve Oil Inc.
312 HBF Building
Midland, Texas 79701

Re: El Paso - Ruby Federal No. 1
1880' FEL, 660' FSL, Sec. 8,
T-25-S, R-37-E, Lea County,
New Mexico

Gentlemen:

This is notification to offset operators that Alpha Twenty-One Production Company has requested a hearing before the Oil Conservation Division seeking approval for two non-standard proration units. One proration unit of 40 acres comprising the SW/4 SE/4 Section 8, T-25-S, R-37-E, Jalmat Gas Pool to be dedicated to El Paso Natural Gas Company's existing Langlie Federal Well No. 3. The other proration unit of 120 acres comprising the E/2 SE/4 and SW/4 SE/4 of the same Section is to be dedicated to the captioned well to be drilled in the Jalmat Gas Pool.

The hearing will take place November 14, 1979.

Very truly yours,

Tommy Phipps
Executive Vice President

TP:ra

Certified Mail No. POO 7350216
Return Receipt

PS Form 3811, Aug. 1978

● SENDER: Complete items 1, 2, and 3. Add your address in the "RETURN TO" space on reverse.		
1. The following service is requested (check one): <input checked="" type="checkbox"/> Show to whom and date delivered. <input type="checkbox"/> Show to whom, date, and address of delivery. <input type="checkbox"/> RESTRICTED DELIVERY Show to whom and date delivered. <input type="checkbox"/> RESTRICTED DELIVERY Show to whom, date, and address of delivery. \$ (CONSULT POSTMASTER FOR FEES)		
2. ARTICLE ADDRESSED TO: Reserve Oil, Inc. 312 HBF Building Midland, Texas 79701		
3. ARTICLE DESCRIPTION: REGISTERED NO. CERTIFIED NO. INSURED NO. POO 7350216		
4. (Always obtain signature of addressee or agent) I have received the article described above. SIGNATURE <input type="checkbox"/> Addressee <input type="checkbox"/> Authorized agent DATE OF DELIVERY 11-17-79		
5. ADDRESS (Complete only if requested):		
6. UNABLE TO DELIVER BECAUSE		

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

MIDLAND, TEXAS
NOV 17 1979
SCT 7
INITIALS



ALPHA TWENTY-ONE PRODUCTION COMPANY

2100 FIRST NATIONAL BANK BUILDING
MIOLAND, TEXAS 79701

915/683-5384

November 6, 1979

Arco Oil & Gas Company
P. O. Box 1710
Hobbs, New Mexico 88240

Re: El Paso - Ruby Federal No. 1
1880' FEL, 660' FSL, Sec. 8,
T-25-S, R-37-E, Lea County,
New Mexico

Gentlemen:

This is notification to offset operators that Alpha Twenty-One Production Company has requested a hearing before the Oil Conservation Division seeking approval for two non-standard proration units. One proration unit of 40 acres comprising the NW/4 SE/4 Section 8, T-25-S, R-37-E, Jalmat Gas Pool to be dedicated to El Paso Natural Gas Company's existing Langlie Federal Well No. 3. The other proration unit of 120 acres comprising the E/2 SE/4 and SW/4 SE/4 of the same Section is to be dedicated to the captioned well to be drilled in the Jalmat Gas Pool.

The hearing will take place November 14, 1979.

Very truly yours,

CP
Tommy Phipps
Executive Vice President

TP:rn

Certified Mail No. POO 7350215
Return Receipt

PS Form 3811, Nov. 1978

● SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one).
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☐ RESTRICTED DELIVERY
Show to whom and date delivered.
☐ RESTRICTED DELIVERY
Show to whom, date, and address of delivery.
(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Arco Oil & Gas Company
P. O. Box 1710
Hobbs, New Mexico 88240

3. ARTICLE DESCRIPTION:
REGISTERED NO. CERTIFIED NO. INSURED NO.
POO 7350215

(Always obtain signature of addressee or agent)

I have received the article described above
SIGNATURE ☐ Addressee ☐ Authorized agent

4. DATE OF DELIVERY POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

NOV 11 1979



ALPHA TWENTY-ONE PRODUCTION COMPANY

2100 FIRST NATIONAL BANK BUILDING
MIDLAND, TEXAS 79701

915/683-5384

November 6, 1979

Union Texas Petroleum Corp.
1300 Wilco Building
Midland, Texas 79701

Re: El Paso - Ruby Federal No. 1
1880' FEL, 660' FSL, Sec. 8,
T-25-S, R-37-E, Lea County,
New Mexico

Gentlemen:

This is notification to offset operators that Alpha Twenty-One Production Company has requested a hearing before the Oil Conservation Division seeking approval for two non-standard proration units. One proration unit of 40 acres comprising the SW/4 SE/4 Section 8, T-25-S, R-37-E, Jalmat Gas Pool to be dedicated to El Paso Natural Gas Company's existing Langlie Federal Well No. 3. The other proration unit of 120 acres comprising the E/2 SE/4 and SW/4 SE/4 of the same Section is to be dedicated to the captioned well to be drilled in the Jalmat Gas Pool.

The hearing will take place November 14, 1979.

Very truly yours,

[Signature]
Tommy Phipps
Executive Vice President

TP:rn

Certified Mail No. P00 7350214
Return Receipt

7-Form 3811, Aug. 1978

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

SENDER: Complete items 1, 2, and 3. Add your address in the "RETURN TO" space on REVERSE.		
1. The following service is requested (check one): <input checked="" type="checkbox"/> Show to whom and date delivered <input type="checkbox"/> Show to whom, date, and address of delivery <input type="checkbox"/> RESTRICTED DELIVERY Show to whom and date delivered <input type="checkbox"/> RESTRICTED DELIVERY Show to whom, date, and address of delivery (CONSULT POSTMASTER FOR FEES)		
2. ARTICLE ADDRESSED TO: Union Texas Petroleum Corp. 1300 Wilco Building Midland, Texas 79701		
3. ARTICLE DESCRIPTION: REGISTERED NO.	CERTIFIED NO. P00 7350214	INSURED NO.
4. (Always obtain signature of addressee or agent) I have received the article described above. SIGNATURE <i>[Signature]</i> <input type="checkbox"/> Addressee <input type="checkbox"/> Authorized agent		
5. ADDRESS (Complete only if requested)		POSTMARK
6. UNABLE TO DELIVER BECAUSE		CLERK'S INITIALS



ALPHA TWENTY-ONE PRODUCTION COMPANY

2100 FIRST NATIONAL BANK BUILDING
MIDLAND, TEXAS 79701

915/683-5384

November 6, 1979

Doyle Hartman
Suite 508 C & K Petroleum Building
Midland, Texas 79701

Re: El Paso - Ruby Federal No. 1
1880' FEL, 660' FSL, Sec. 8,
T-25-S, R-37-E, Lea County,
New Mexico

Gentlemen:

This is notification to offset operators that Alpha Twenty-One Production Company has requested a hearing before the Oil Conservation Division seeking approval for two non-standard proration units. One proration unit of 40 acres comprising the NW/4 SE/4 Section 8, T-25-S, R-37-E, Jalmat Gas Pool to be dedicated to El Paso Natural Gas Company's existing Langlie Federal Well No. 3. The other proration unit of 120 acres comprising the E/2 SE/4 and SW/4 SE/4 of the same Section is to be dedicated to the captioned well to be drilled in the Jalmat Gas Pool.

The hearing will take place November 14, 1979.

Very truly yours,

Tommy Phipps
Tommy Phipps
Executive Vice President

TP:rm

Certified Mail No. P00 7350370
Return Receipt

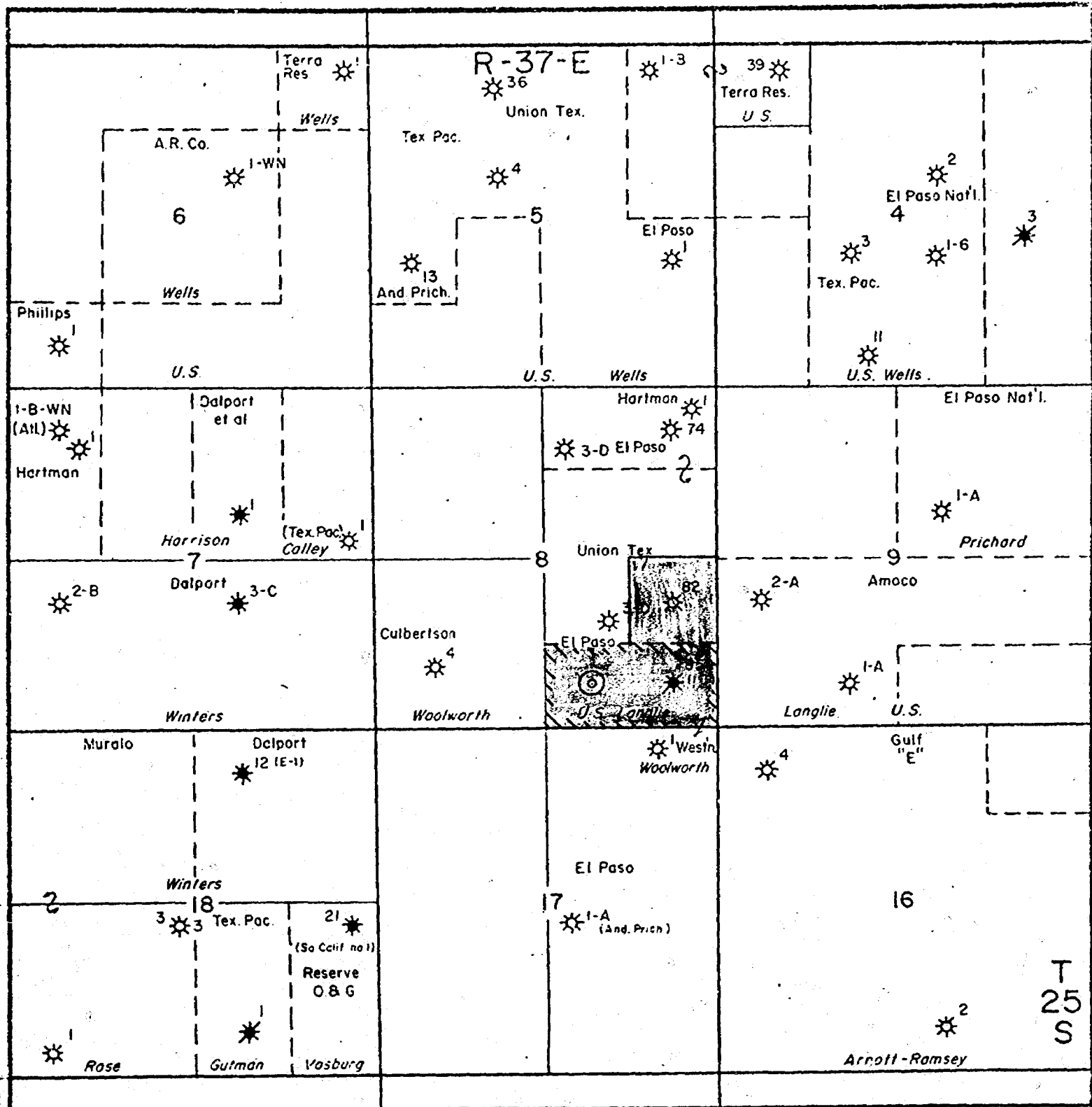
PS Form 3811, Aug. 1978

SENDER: Complete items 1, 2, and 3. Add your address in the "RETURN TO" space on reverse.		
1. The following service is requested (check one). <input checked="" type="checkbox"/> Show to whom and date delivered. <input type="checkbox"/> Show to whom, date, and address of delivery. <input type="checkbox"/> RESTRICTED DELIVERY Show to whom and date delivered. <input type="checkbox"/> RESTRICTED DELIVERY Show to whom, date, and address of delivery. (CONSULT POSTMASTER FOR FEES)		
2. ARTICLE ADDRESSED TO: Doyle Hartman Suite 508 C&K Petroleum Building Midland, Texas 79701		
3. ARTICLE DESCRIPTION: REGISTERED NO. CERTIFIED NO. INSURED NO. P00 7350370		
4. (Always obtain signature of addressee or agent) I have received the article described above. SIGNATURE <input type="checkbox"/> Addressee <input checked="" type="checkbox"/> Authorized agent		
5. ADDRESS (Complete only if requested)		POSTMASTER NOV 10 1979 SIG
6. UNABLE TO DELIVER BECAUSE		
		CLERK'S INITIALS

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

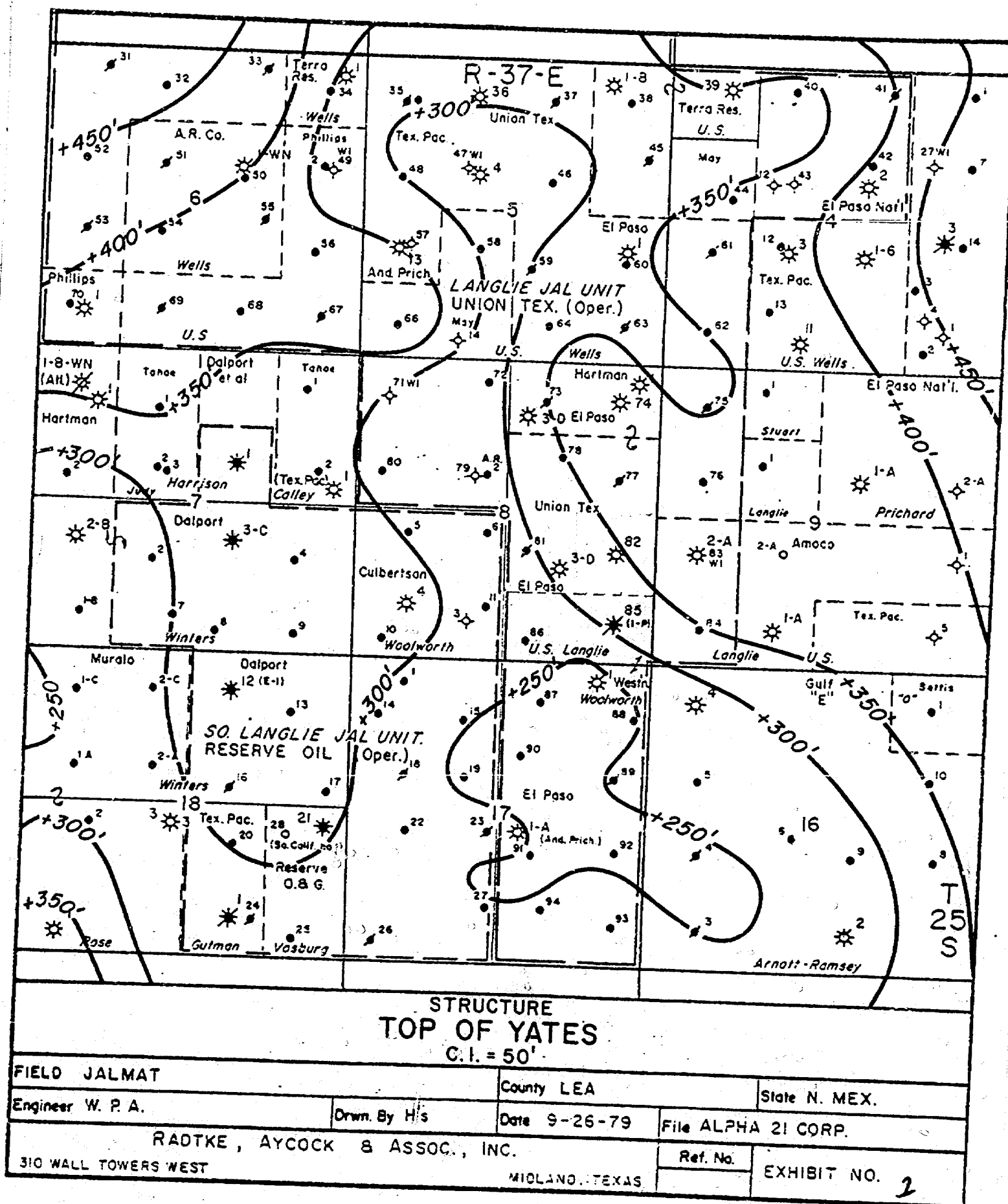
U.S. POSTAL SERVICE

94/2/22 21
6716



LAND MAP JALMAT (YATES) FIELD

FIELD JALMAT		County LEA		State N. MEX.
Engineer W. P. A.	Drwn. By H's	Date 9-26-79	File ALPHA 21 CORP.	
RADTKE, AYCOCK, & ASSOC., INC.			Ref. No.	EXHIBIT NO. 1
30 WALL TOWERS WEST			MIDLAND, TEXAS	
			Case 6716	



RADTKE, AYCOCK, & ASSOCIATES, INC.
Petroleum Engineering Consultants
310 WALL TOWERS WEST
MIDLAND, TEXAS 79701
TELEPHONE 915/684-8044

November 12, 1979

Alpha 21 Production Co.
2100 First National Bank Building
Midland, Texas 79701

Attention Mr. Tom Phipps

Subject: Application for NGPA Infill Gas
Development Well, Section 8,
T-25-S, R-37-E, Jalmat Pool
Lea County, New Mexico

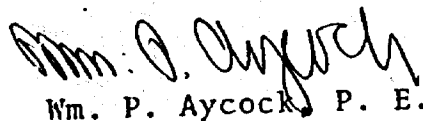
Gentlemen:

Attached are the following that have been prepared in accordance
with your instructions:

1. Structure Map of Area
2. Cross-Sections A-A' and B-B'
3. Letter of explanation, including reserve estimate
for proposed well.
4. Rate-Time Production Graphs for active wells near
the proposed location.
5. Graph of shut-in wellhead pressure as a function of
cumulative gas recovery for selected nearby wells.

We trust that this material will suffice to complete this applica-
tion; however, we should be pleased to render whatever additional
service you may require in this connection. As always, we appre-
ciate the continued opportunity of serving you professionally.

Very truly yours,


Wm. P. Aycock, P. E.

WPA/bw

Attachments

EXH. B

RADTKE, AYCOCK, & ASSOCIATES, INC.

Petroleum Engineering Consultants

310 WALL TOWERS WEST

MIDLAND, TEXAS 79701

TELEPHONE 915/684-8044

November 12, 1979

Alpha 21 Production Co.
2100 First National Bank Building
Midland, Texas 79701

Attention Mr. Tom Phipps

Subject: Application for Administrative
Approval of Infill Gas Development
Well, SE/4 & S/2, NE/4 Section 8,
T-25-S, R-37-E, Jalmat Pool
Lea County, New Mexico

Gentlemen:

This letter is being furnished to you as a part of the captioned application, as required by Section 10, "Special Rules and Regulations, Natural Gas Policy Act Infill Findings Administrative Procedure". These rules were promulgated by the Conservation Division, State of New Mexico, Energy and Mineral Department on June 7, 1979, Case No. 6526, Order No. R-6013.

As you are aware, the El Paso Natural Gas Co. Langlie Fed. 3 is situated in Unit J, 8-25S-37E. As of April 1, 1979, this well had produced 279 MMCF of gas, and the estimated ultimate recovery of this well is 562 MMCF. The seven of the eight Jalmat gas wells surrounding the El Paso Natural Gas Co. Langlie Fed. 3 have produced 18,664 MMCF of gas, for a mean recovery of 2,666 MCF of gas on April 1, 1979. The eighth of the surrounding wells (the Gulf Oil Co. Arnott Ramsey "E"-1) was completed 7-13-37 and never produced before being plugged and abandoned. The estimated ultimate recovery for the seven of the surrounding wells that have been produced is 21,068 MMCF, for a mean estimated ultimate recovery of 3009 MMCF. The respective maximum gas recovery at April 1, 1979, and minimum estimated ultimate gas recovery for these seven wells are 9463 MMCF and 638 MMCF. The gas recovery information derived from the attached table can be summarized as follows:

	Gas Recoveries - MMCF	
	Effective April 1, 1979	
	<u>Cumulative</u>	<u>Estimated Ultimate</u>
EPNG Langlie Fed. 3	279	438
Mean of Seven		
Surrounding Jalmat Gas Wells	2,666	3,009
Minimum of Seven		
Surrounding Jalmat Gas Wells	85	638
Maximum of Seven		
Surrounding Jalmat Gas Wells	9,463	10,245

Alpha 21 Production Co.
November 12, 1979
Page 2

The volume of increased gas recovery for an infill development well can then be reasonably estimated as follows:

<u>Basis for Seven Surrounding Jalmat Gas Wells</u>	<u>Estimated Increased Recovery, MMCF</u>
Mean	2,571
Minimum	200
Maximum	9,807

By using the mean values of the (volumetric reservoir and pressure) parameters for the three wells located nearest the proposed location for which complete data are available (El Paso NG Langlie Fed. 3; El Paso NG Jal "D" 3 and Doyle Hartman Langlie Jal Fed. 1), the estimated ultimate gas recovery for the proposed well is 132 MMCF. The parameters incorporated into this estimate are as follows:

Porosity, % Bulk Volume	15.8
Connate Water Saturation, % NEPS	30.4
Net Effective Pay, feet	73.5
Effective Drainage Area, acres	78.
Initial BHP/Z, psia	262.8
Abandonment BHP/Z, psia	184.3

These estimates, utilizing analogous comparisons, are reasonably verified by the observation that in spite of well completion dates between 7-25-49 and 11-22-66, the observed initial tubing pressures were as follows:

<u>Well</u>	<u>Location</u>	<u>Date</u>	<u>Tubing Pressure</u>
EPNG Jal "D"-3	8B-25S-37E	7-25-49	900
EPNG Langlie "A" Fed. 1	17J-25S-37E	6-18-52	830
EPNG Wells Fed. 11	4N-25S-37E	12-15-57	300
EPNG Langlie Fed. 3	8J-25S-37E	11-22-66	425

It is also consequential that the calculated drainage area for the El Paso Natural Gas Co. Langlie Fed. 3 is abnormally low, as can be demonstrated by the following that have been extracted from the attached table:

<u>Well</u>	<u>Estimated Drainage Area, Acres</u>
EPNG Langlie Fed. 3	28
Mean of Seven Surrounding Wells	204
Minimum of Seven Surrounding Wells	45
Maximum of Seven Surrounding Wells	700

Alpha 21 Production Co.
November 12, 1979
Page 3

Because of all of the above, we believe that the drilling of the proposed well is justified by the Natural Gas Policy Act criteria, as promulgated by NMOCC Order No. R-6013. We should be pleased to render whatever supplemental information you might require in this connection.

Very truly yours,

Wm. T. Aycock
Wm. T. Aycock, P.E.

WPA/bw

Attachment

ALPHA 21 PRODUCTION CO.
SUMMARY OF INDIVIDUAL WELL INFORMATION
Vicinity of Proposed Location in N/2, SE/4, 8-25s-37E
Jalmat (Tansill-Yates-Seven Rivers) Pool, Lea County, New Mexico

	El Paso NG Langlie Fed. 3	ARCO Woolworth 1	El Paso NG Jal "D" 3	Phillips Woolworth 4	D. Hartman Langlie Jal. Fed. 1	Gulf Oil Arnett Ramsey "E" - 1	AMOCO Langlie "C" Fed. 1	El We
Location of Well	8J-25S-37E	17B-25S-37E	8R-25S-37E	8M-25S-37E	8A-25S-37E	160-25S-37E	9N-25S-37E	4N
Completion Date	11-22-66	5-13-39	7-25-49	3-27-51	4-16-77	7-13-37	8-1-78	1
Init. CAOP, MCF/day	447	8400	30,000	9,000	1,938	274	279	
Dist. & Direction from proposed location	332' W	1980' SSE	2833' NNW	3000' WSW	3350' NNE	3000' SE	3375' ESE	5
Cum. Gas Production, MCF @ 4-1-79	270,704	9,462,768	3,666,609	1,198,484	359,620	Never Prod.	85,253	3,
Completion Interval	2900-2945 2955-3148	2962-2975 3075-3909	2930-3043	2906-2964	2875-3177	3400-3430	2986-3130	30
Volumetric Analysis Results								
Mean Eff. Por, % Bulk Vol.	17.1	-	7.04	-	19.1	-	19.0	
Mean Con. Wtr. Stn, % NEPS	25.	-	45.	-	28.	-	50.	
Net Eff. Pay, ft.	52.	-	81.	-	77.	-	64.	
Orig. Gas-in-place, MMCF/ac	19.8	0	9.33	-	4.26	-	18.2	
Est. Orig. GIP, MMCF	562	12,400	4,570*	1,490*	796*	-	1030*	
Est. Ult. Gas Rec., MMCF	438	10,245	3,667	1,198	638	Never Prod.	823	
Est. Gas Rec. Fact, % OGIP	77.9	82.5	-	-	-	-	-	
Est. Drainage Area, Ac	28	700**	260**	84**	45**	-	50**	

*With OGIP = EUR/0.802

**With OGIP/Ac = 17.7 MMCF/ac. estimated from statistical analysis of available information.

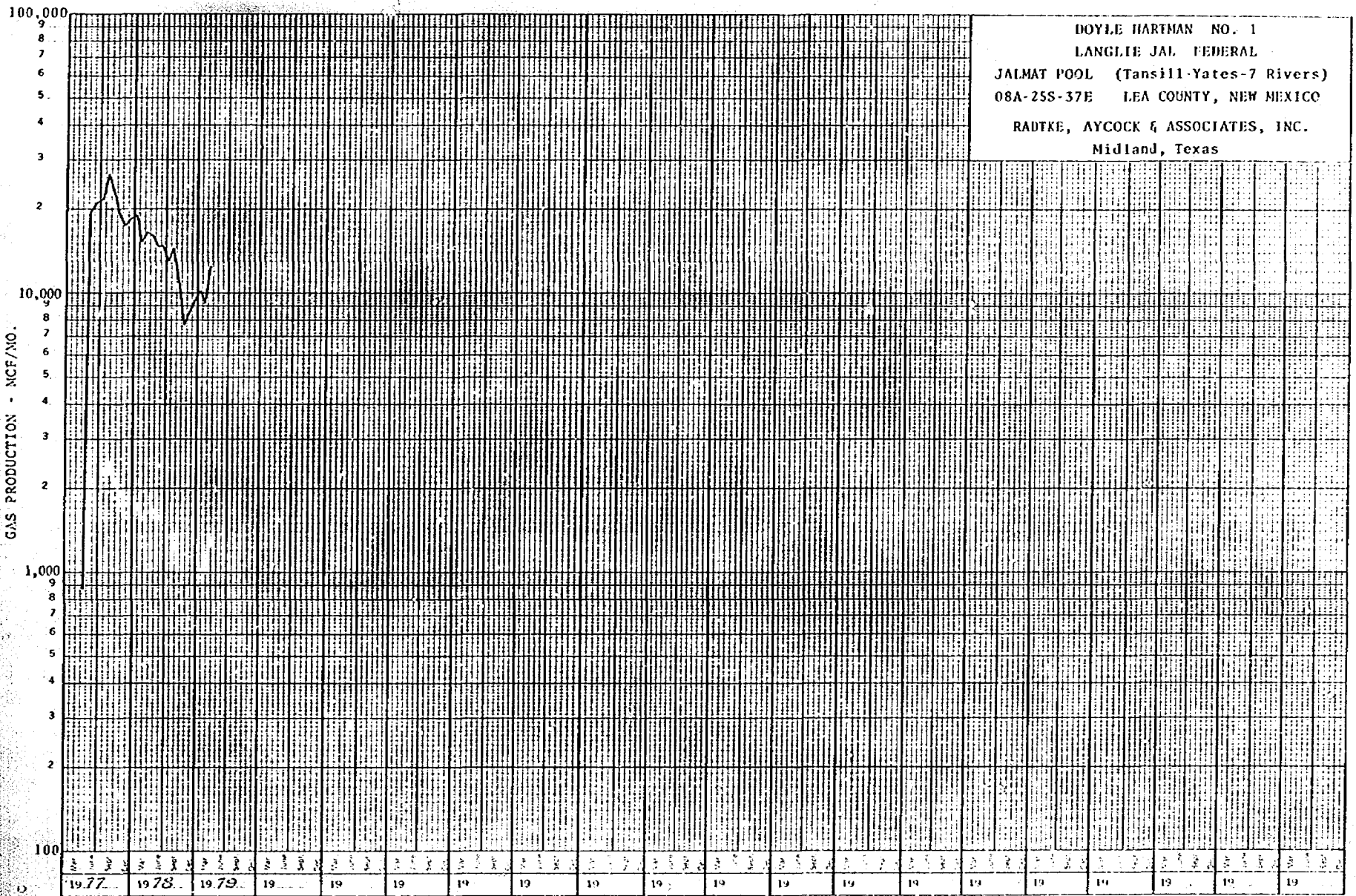
ALPHA 21 PRODUCTION CO.

SUMMARY OF INDIVIDUAL WELL INFORMATION

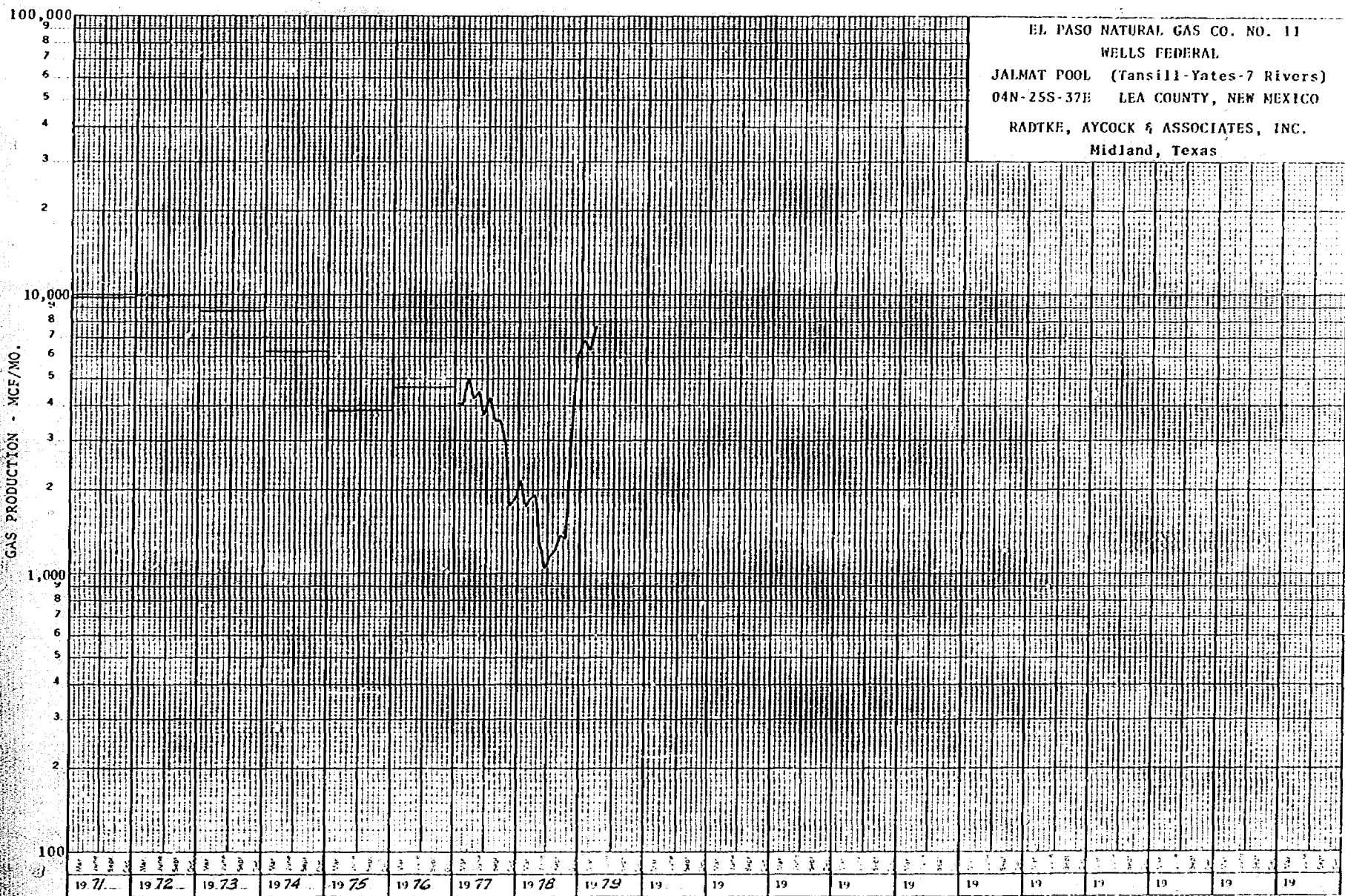
Vicinity of Proposed Location in N/2, SE/4, 8-25s-37E
Jalmat (Tansill-Yates-Seven Rivers) Pool, Lea County, New Mexico

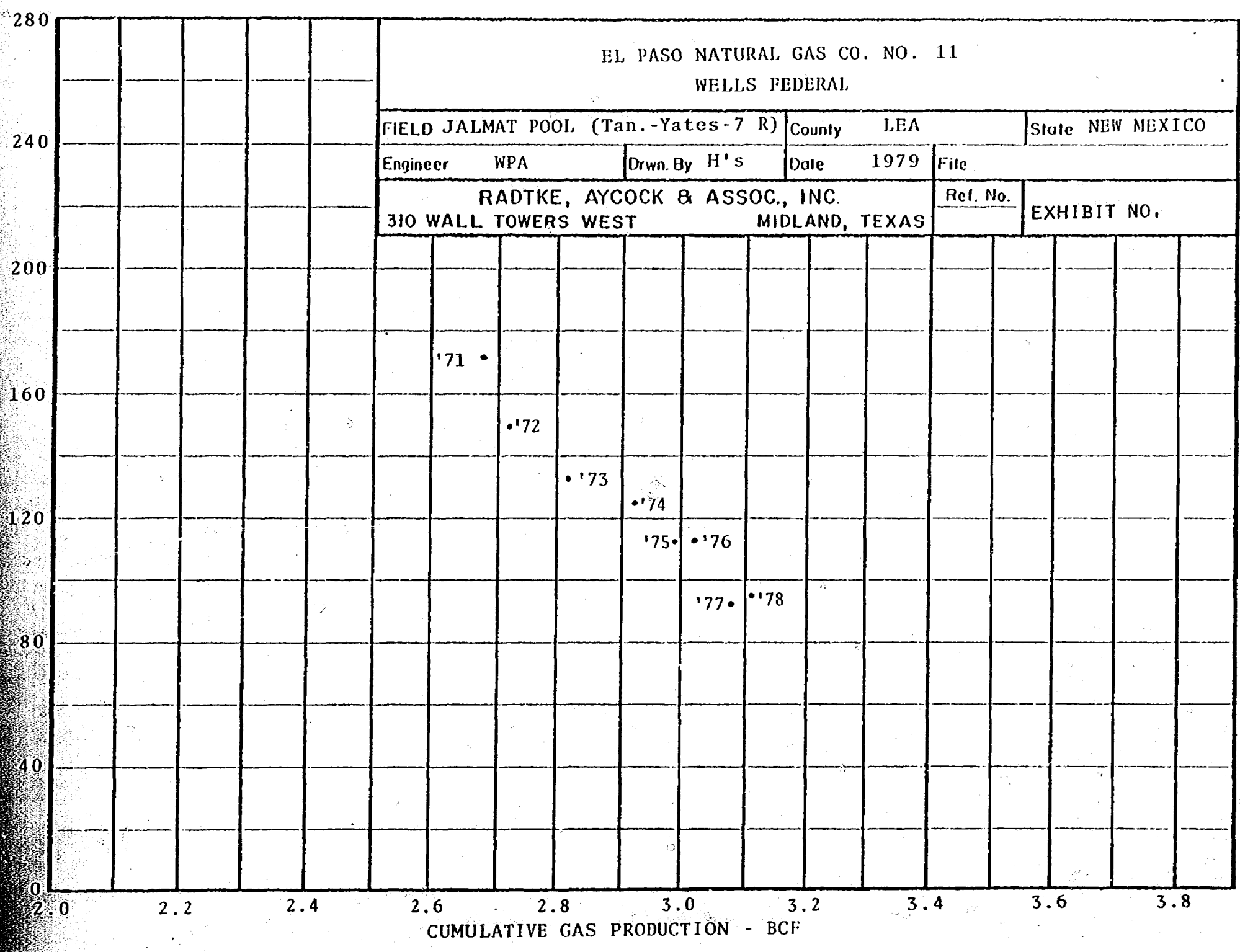
El Paso NG Langlie Fed. 3	ARCO Woolworth 1	El Paso NG Jal "D" 3	Phillips Woolworth 4	D. Hartman Langlie Jal. Fed. 1	Gulf Oil Arnott Ramsey "E" - 1	AMOCO Langlie "C" Fed. 1	El Paso NG Wells Fed. 11	El Paso NG Langlie "A" Fed. 2
25S-37E	17B-25S-37E	8R-25S-37E	8M-25S-37E	8A-25S-37E	160-25S-37E	9N-25S-37E	4N-25S-37E	17J-25S-37E
22-66 447	5-13-39 8400	7-25-49 30,000	3-27-51 9,000	4-16-77 1,938	7-13-37 274	8-1-78 279	12-15-57 10,000	6-18-52 13,750
52' W	1980' SSE	2833' NNW	3000' WSW	3350' NNE	3000' SE	3375' ESE	5370' NE	5150' SSW
0,704	9,462,768	3,666,609	1,198,484	359,620	Never Prod.	85,253	3,153,118	737,714
0-2945 5-3148	2962-2975 3075-3909	2930-3043	2906-2964	2875-3177	3400-3430	2986-3130	3070-3140	2480-2640 2921-2980
7.1	-	7.04	-	19.1	-	19.0	-	13.3
5.	-	45.	-	28.	-	50.	-	25.
2.	-	81.	-	77.	-	64.	-	116.
9.8	0	9.33	-	4.26	-	18.2	-	34.4
52	12,400	4,570*	1,490*	796*	-	1030*	4,060	920*
38	10,245	3,667	1,198	638	Never Prod.	823	3,759	738
7.9	82.5	-	33	-	-	-	92.5	-
28	700**	260**	84**	45**	-	50**	229**	52**

Estimated from statistical analysis of available information.

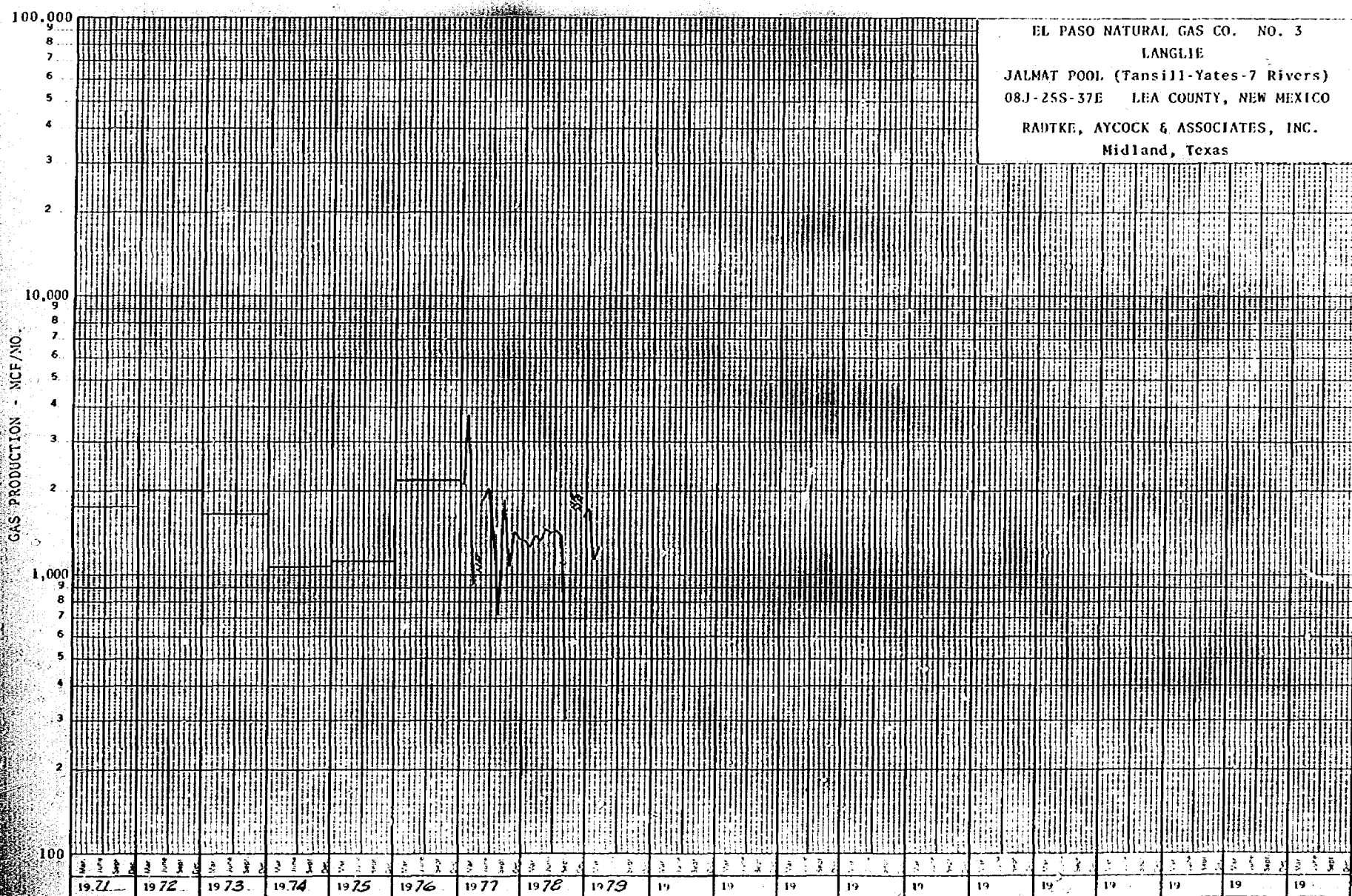


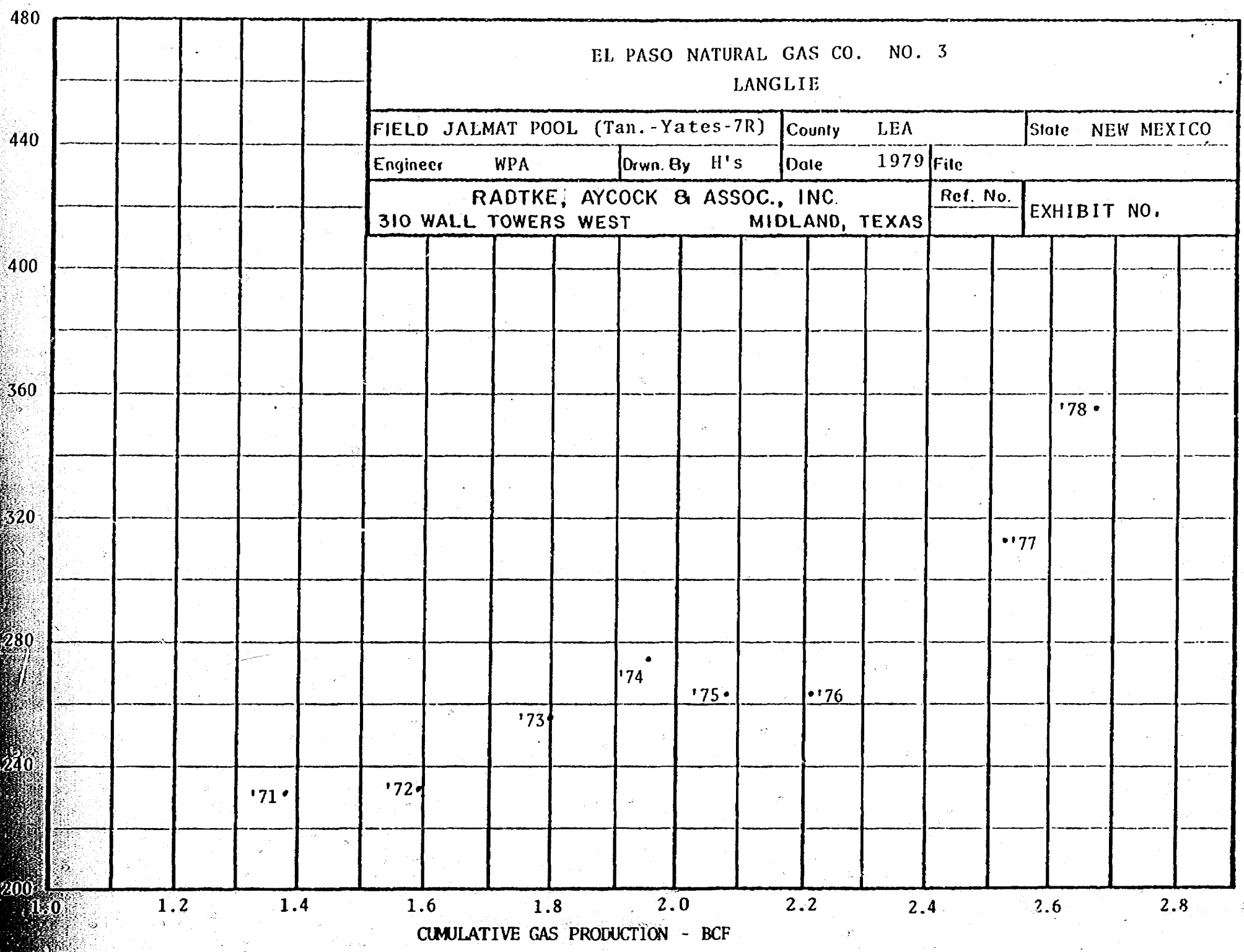
Exh. 6

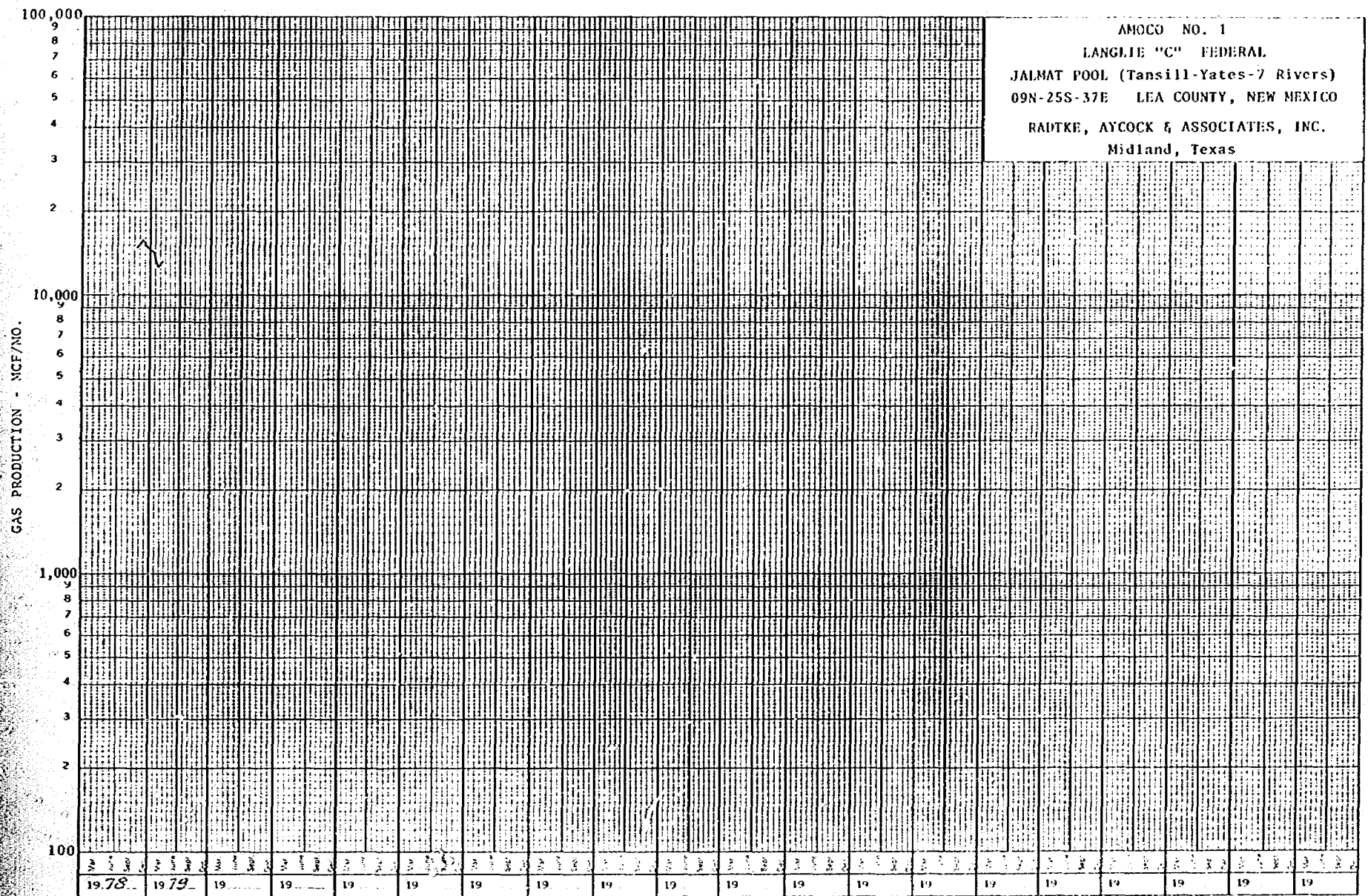




17

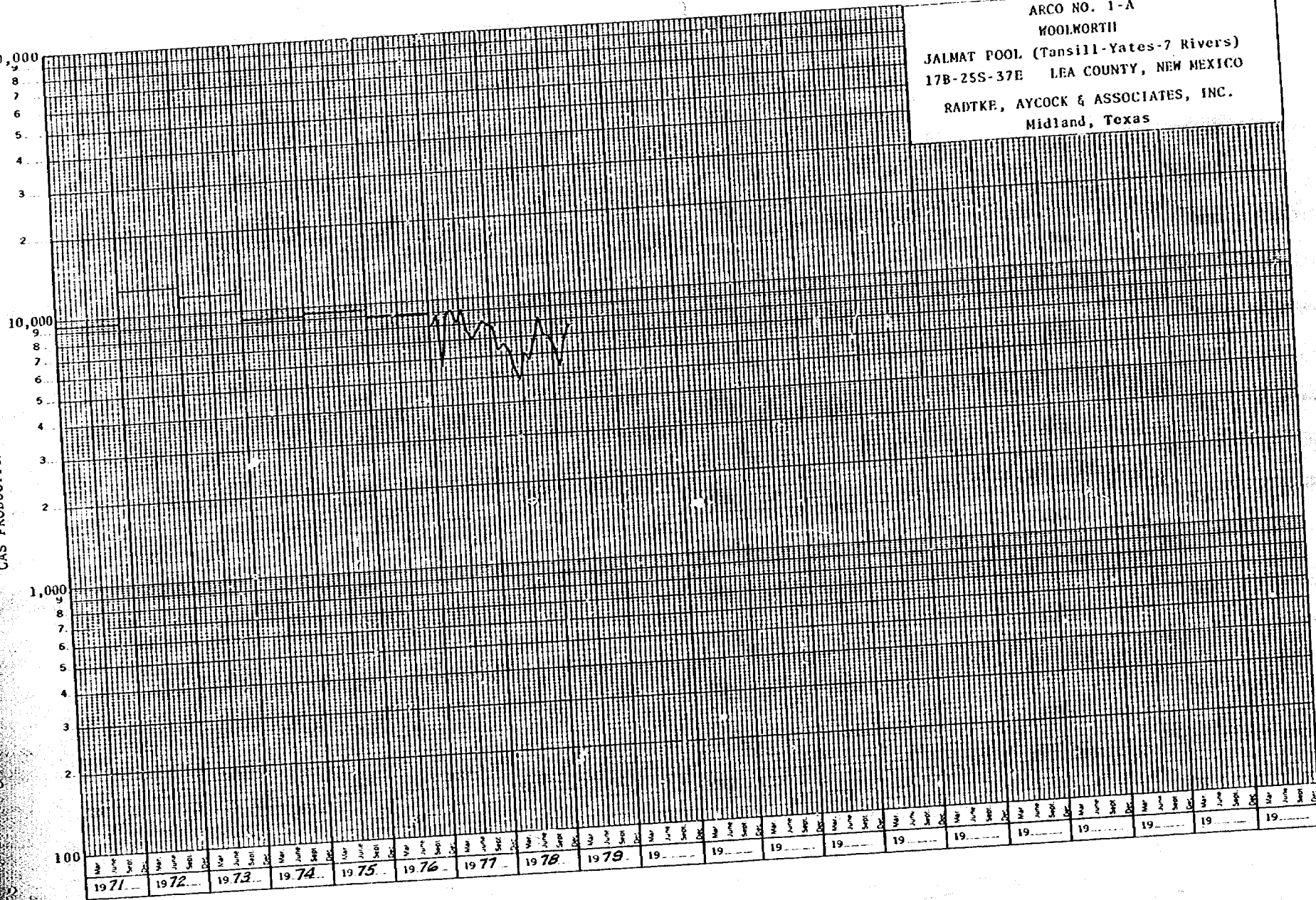


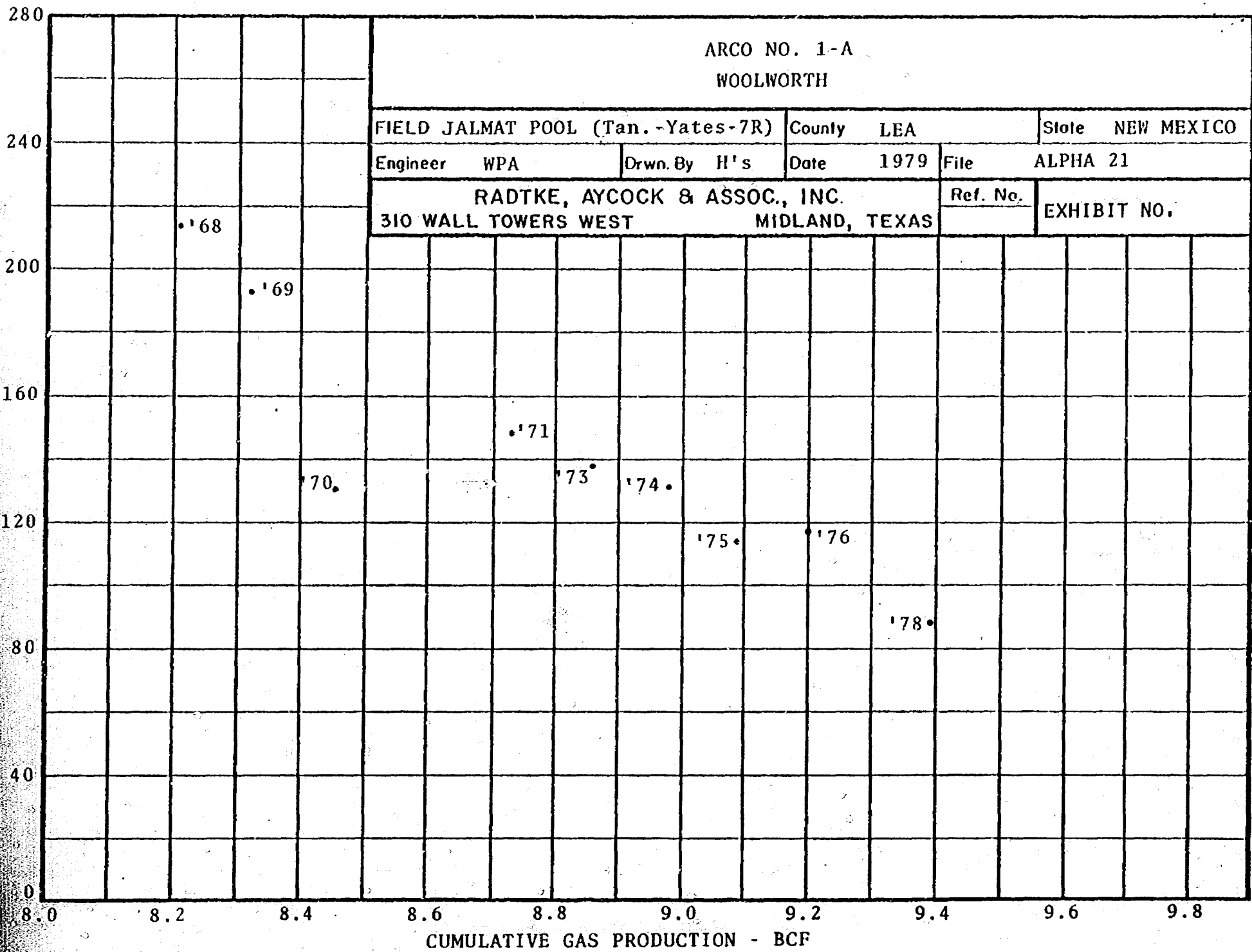


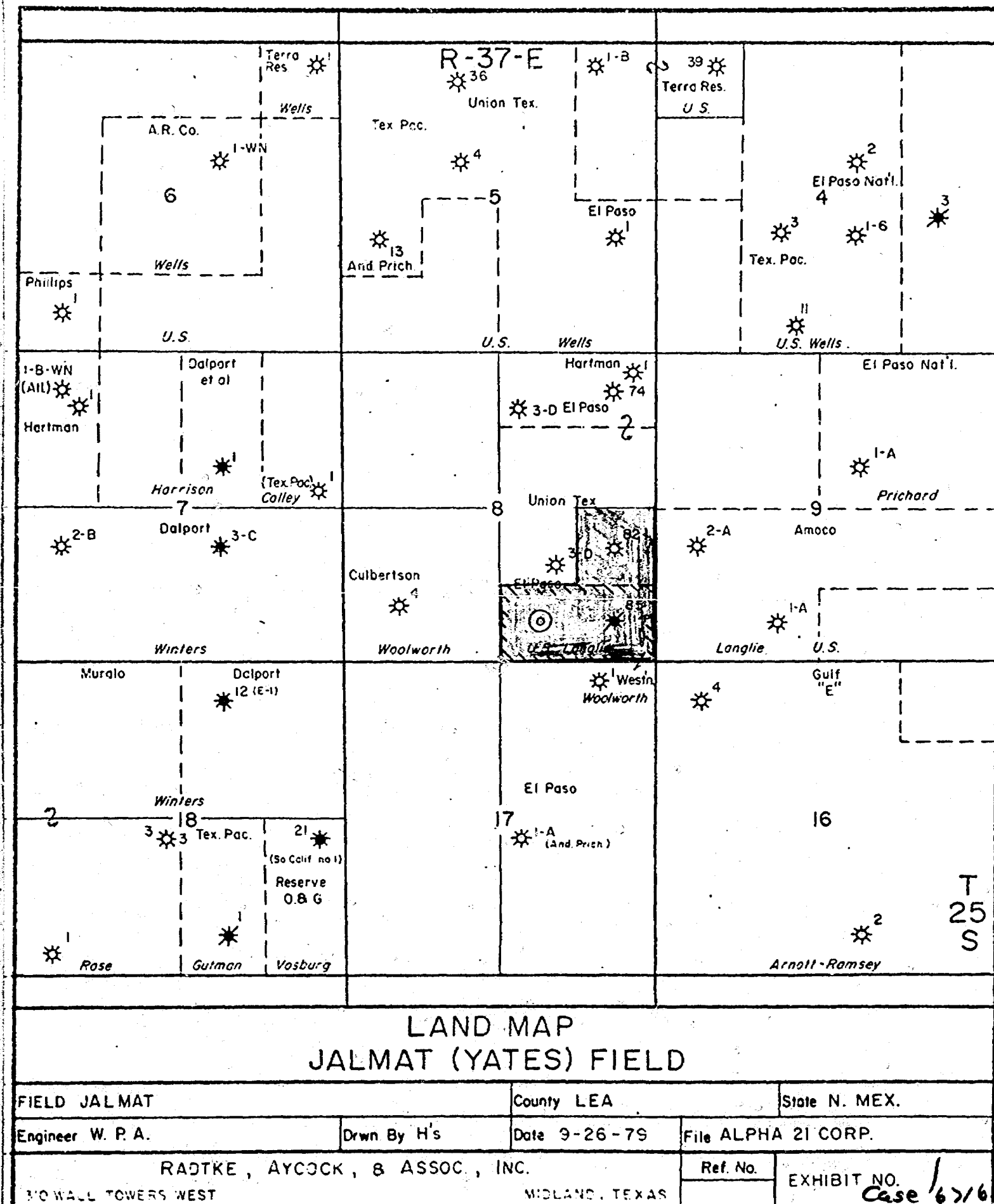


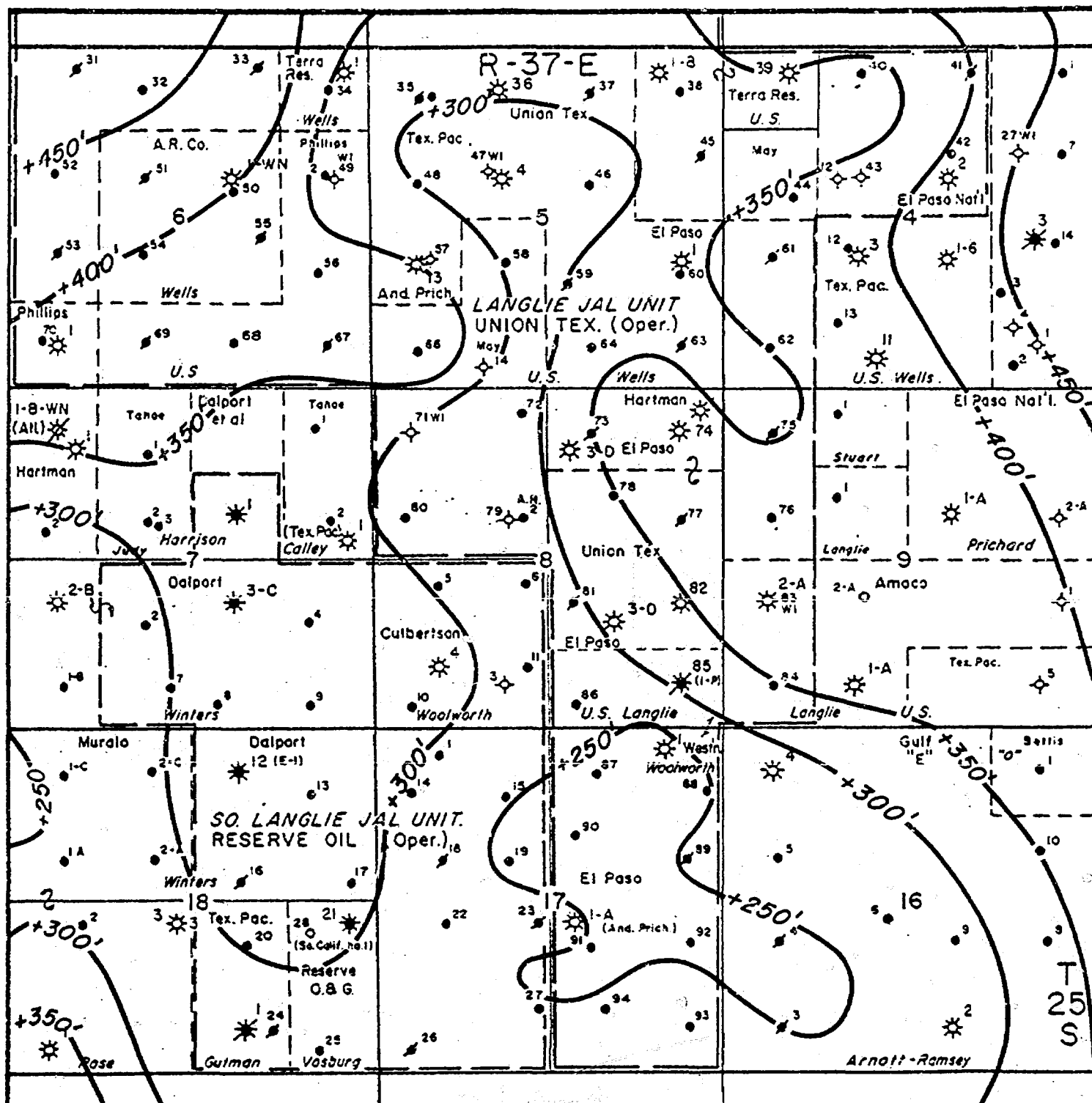
100,000
8
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ARCO NO. 1-A
WOOLMORTH
JALMAT POOL (Tansill-Yates-7 Rivers)
17B-25S-37E LEA COUNTY, NEW MEXICO
RADTKE, AYCOCK & ASSOCIATES, INC.
Midland, Texas









STRUCTURE
TOP OF YATES
C.I. = 50'

FIELD JALMAT		County LEA		State N. MEX.	
Engineer W. P. A.		Drawn By H's		Date 9-26-79	
RADTKE, AYCOCK & ASSOC., INC.		Ref. No.		EXHIBIT NO. 2	
310 WALL TOWERS WEST		MIDLAND, TEXAS			

RADTKE, AYCOCK, & ASSOCIATES, INC.
Petroleum Engineering Consultants
310 WALL TOWERS WEST
MIDLAND, TEXAS 79701
TELEPHONE 915/684-8044

November 12, 1979

Alpha 21 Production Co.
2100 First National Bank Building
Midland, Texas 79701

Attention Mr. Tom Phipps

Subject: Application for NGPA Infill Gas
Development Well, Section 8,
T-25-S, R-37-E, Jalmat Pool
Lea County, New Mexico

Gentlemen:

Attached are the following that have been prepared in accordance
with your instructions:

1. Structure Map of Area
2. Cross-Sections A-A' and B-B'
3. Letter of explanation, including reserve estimate
for proposed well.
4. Rate-Time Production Graphs for active wells near
the proposed location.
5. Graph of shut-in wellhead pressure as a function of
cumulative gas recovery for selected nearby wells.

We trust that this material will suffice to complete this applica-
tion; however, we should be pleased to render whatever additional
service you may require in this connection. As always, we appre-
ciate the continued opportunity of serving you professionally.

Very truly yours,


Wm. P. Aycock, P. E.

WPA/bw

Attachments,

RADTKE, AYCOCK, & ASSOCIATES, INC.

Petroleum Engineering Consultants

310 WALL TOWERS WEST

MIDLAND, TEXAS 79701

TELEPHONE 915/684-8044

November 12, 1979

Alpha 21 Production Co.
2100 First National Bank Building
Midland, Texas 79701

Attention Mr. Tom Phipps

Subject: Application for Administrative
Approval of Infill Gas Development
Well, SE/4 & S/2, NE/4 Section 8,
T-25-S, R-37-E, Jalmat Pool
Lea County, New Mexico

Gentlemen:

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As you are aware, the El Paso Natural Gas Co. Langlie Fed. 3 is situated in Unit J, 8-25S-37E. As of April 1, 1979, this well had produced 279 MMCF of gas, and the estimated ultimate recovery of this well is 438 MMCF. The seven of the eight Jalmat gas wells surrounding the El Paso Natural Gas Co. Langlie Fed. 3 have produced 2,666 MMCF of gas, for a mean recovery of 2,666 MCF of gas on April 1, 1979. The eighth of the surrounding wells (the Gulf Oil Co. Arnott Ramsey "E"-1) was completed 7-13-37 and never produced before being plugged and abandoned. The estimated ultimate recovery for the seven of the surrounding wells that have been produced is 3,009 MMCF, for a mean estimated ultimate recovery of 3009 MMCF. The respective maximum gas recovery at April 1, 1979, and minimum estimated ultimate gas recovery for these seven wells are 9463 MMCF and 638 MMCF. The gas recovery information derived from the attached table can be summarized as follows:

	Gas Recoveries - MMCF	
	Cumulative	Estimated Ultimate
EPNG Langlie Fed. 3	279	438
Mean of Seven		
Surrounding Jalmat Gas Wells	2,666	3,009
Minimum of Seven		
Surrounding Jalmat Gas Wells	85	638
Maximum of Seven		
Surrounding Jalmat Gas Wells	9,463	10,245

Alpha 21 Production Co.
November 12, 1979
Page 2 .

The volume of increased gas recovery for an infill development well can then be reasonably estimated as follows:

<u>Basis for Seven Surrounding Jalmat Gas Wells</u>	<u>Estimated Increased Recovery, MMCF</u>
Mean	2,571
Minimum	200
Maximum	9,807

By using the mean values of the volumetric reservoir and pressure parameters for the three wells located nearest the proposed location for which complete data are available (El Paso NG Langlie Fed. 3; El Paso NG Jal "D" 3 and Doyle Hartman Langlie Jal Fed. 1), the estimated ultimate gas recovery for the proposed well is 132 MMCF. The parameters incorporated into this estimate are as follows:

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Effective Drainage Area, acres	78.
Initial BHP/Z, psia	262.8
Abandonment BHP/Z, psia	184.3

These estimates, utilizing analogous comparisons, are reasonably verified by the observation that in spite of well completion dates between 7-25-49 and 11-22-66, the observed initial tubing pressures were as follows:

<u>Well</u>	<u>Location</u>	<u>Date</u>	<u>Tubing Pressure</u>
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EPNG Langlie "A" Fed. 1	17J-25S-37E	6-18-52	830
EPNG Wells Fed. 11	4N-25S-37E	12-15-57	300
EPNG Langlie Fed. 3	8J-25S-37E	11-22-66	425

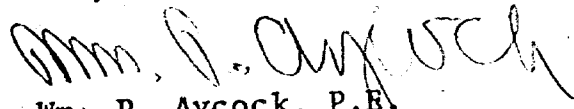
It is also consequential that the calculated drainage area for the El Paso Natural Gas Co. Langlie Fed. 3 is abnormally low, as can be demonstrated by the following that have been extracted from the attached table:

<u>Well</u>	<u>Estimated Drainage Area, Acres</u>
EPNG Langlie Fed. 3	28
Mean of Seven Surrounding Wells	204
Minimum of Seven Surrounding Wells	45
Maximum of Seven Surrounding Wells	700

Alpha 21 Production Co.
November 12, 1979
Page 3

Because of all of the above, we believe that the drilling of the proposed well is justified by the Natural Gas Policy Act criteria, as promulgated by KMOCC Order No. R-6013. We should be pleased to render whatever supplemental information you might require in this connection.

Very truly yours,


Wm. P. Aycock, P.E.

WPA/bw

Attachment

LPHA 21 PRODUCTION CO.

OF INDIVIDUAL WELL INFORMATION

Well Location in N/2, SE/4, 8-25s-37E
(Seven Rivers) Pool, Lea County, New Mexico

El Paso NG Well "D"	Phillips Woolworth 4	D. Hartman Langlie Jal. Fed. 1	Gulf Oil Arnett Ramsey "E" - 1	AMOCO Langlie "C" Fed. 1	El Paso NG Wells Fed. 11	El Paso NG Langlie "A" Fed. 2
8-37E	8M-25S-37E	8A-25S-37E	160-25S-37E	9N-25S-37E	4N-25S-37E	17J-25S-37E
5-49 1,000	3-27-51 9,000	4-16-77 1,938	7-13-37 274	8-1-78 279	12-15-57 10,000	6-18-52 13,750
NNW	3000' WSW	3350' NNE	3000' SE	3375' ESE	5370' NE	5150' SSW
6,609	1,198,484	359,620	Never Prod.	85,253	3,153,118	737,714
3043	2906-2964	2875-3177	3400-3430	2986-3130	3070-3140	2480-2640 2921-2980
04	-	19.1	-	19.0	-	13.3
	-	28.	-	50.	-	25.
	-	77.	-	64.	-	116.
33	-	4.26	-	18.2	-	34.4
170*	1,490*	796*	-	1030*	4,060	920*
167	1,198	638	Never Prod.	823	3,759	738
	-	-	-	-	92.5	-
100**	84**	45**	-	50**	229**	52**

Final analysis of available information.

ALPHA 21 PRODUCTION CO.
SUMMARY OF INDIVIDUAL WELL INFORMATION
Vicinity of Proposed Location in N/2, SE/4, 8-25s-37E
Jalmat (Tansill-Yates-Seven Rivers) Pool, Lea County, New Mexico

	E1 Paso NG Langlie Fed. 3	ARCO Woolworth 1	E1 Paso NG Jal "D" 3	Phillips Woolworth 4	D. Hartman Langlie Jal. Fed. 1	Gulf Oil Arnett Ramsey "E" - 1	AMOCO Langlie "C" Fed. 1	E1 Well
Location of Well	8J-25S-37E	17B-25S-37E	8R-25S-37E	8M-25S-37E	8A-25S-37E	160-25S-37E	9N-25S-37E	4N-
Completion Date	11-22-66	5-13-39	7-25-49	3-27-51	4-16-77	7-13-37	8-1-78	12
Init. CAOP, MCF/day	447	8400	30,000	9,000	1,938	274	279	1
Dist. & Direction from proposed location	332' W	1980' SSE	2833' NNW	3000' WSW	3350' NNE	3000' SE	3375' ESE	53
Cum. Gas Production, MCF @ 4-1-79	270,704	9,462,768	3,666,609	1,198,484	359,620	Never Prod.	85,253	3,1
Completion Interval	2900-2945 2955-3148	2962-2975 3075-3909	2930-3043	2906-2964	2875-3177	3400-3430	2986-3130	307
Volumetric Analysis Results								
Mean Eff. Por, % Bulk Vol.	17.1	-	7.04	-	19.1	-	19.0	
Mean Con. Wtr. Stn, % NEPS	25.	-	45.	-	28.	-	50.	
Net Eff. Pay, ft.	52.	-	81.	-	77.	-	64.	
Orig. Gas-in-place, MMCF/ac	19.8	0	9.33	-	4.26	-	18.2	
Est. Orig. GIP, MMCF	562	12,400	4,570*	1,490*	796*	-	1030*	
Est. Ult. Gas Rec., MMCF	438	10,245	3,667	1,198	638	Never Prod.	823	
Est. Gas Rec. Fact, % OGIP	77.9	82.5	-	-	-	-	-	
Est. Drainage Area, Ac	28	700**	260**	84**	45**	-	50**	

*With OGIP = EUR/0.802

**With OGIP/Ac = 17.7 MMCF/ac. estimated from statistical analysis of available information.

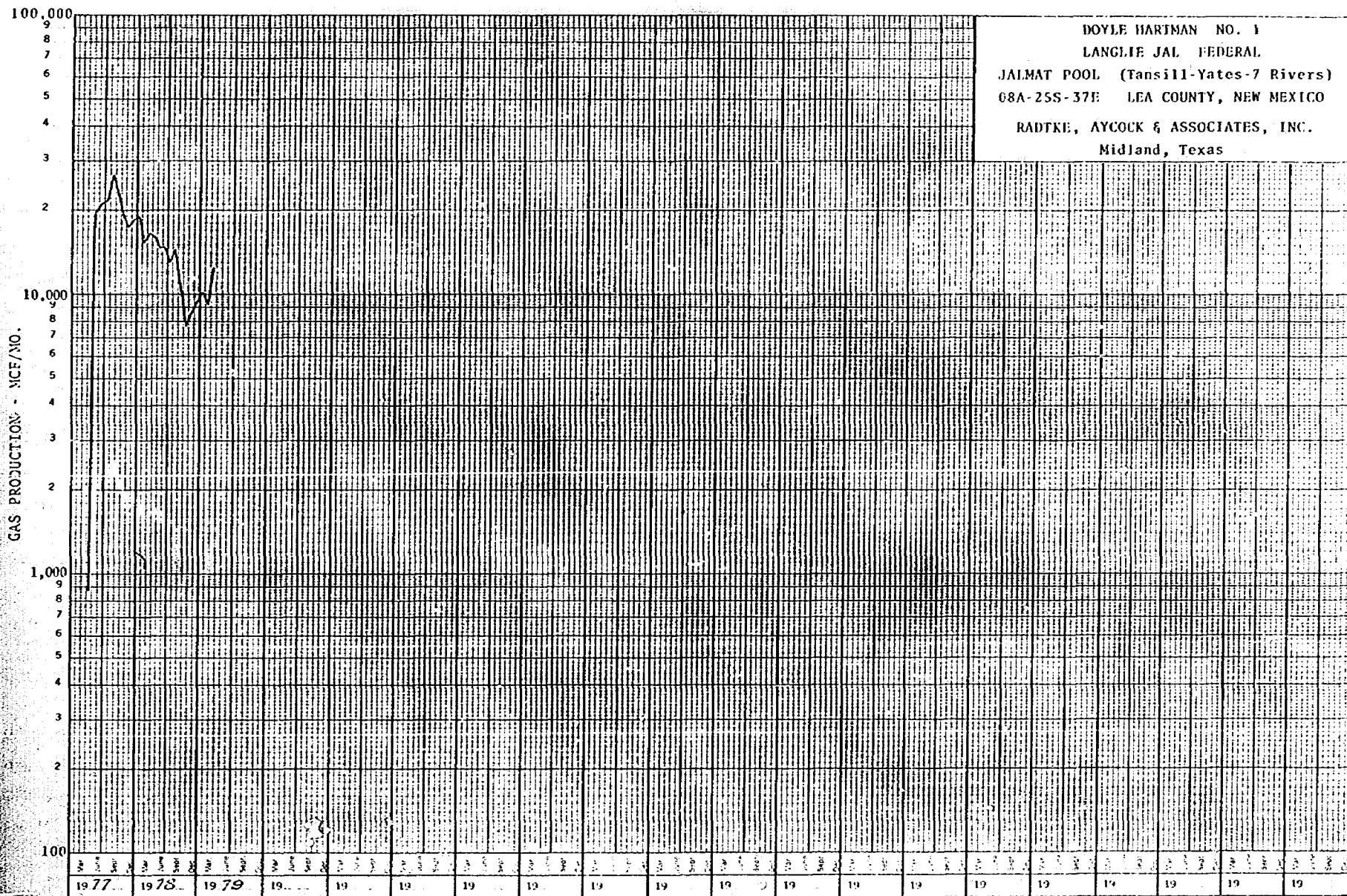
ALPHA 21 PRODUCTION CO.

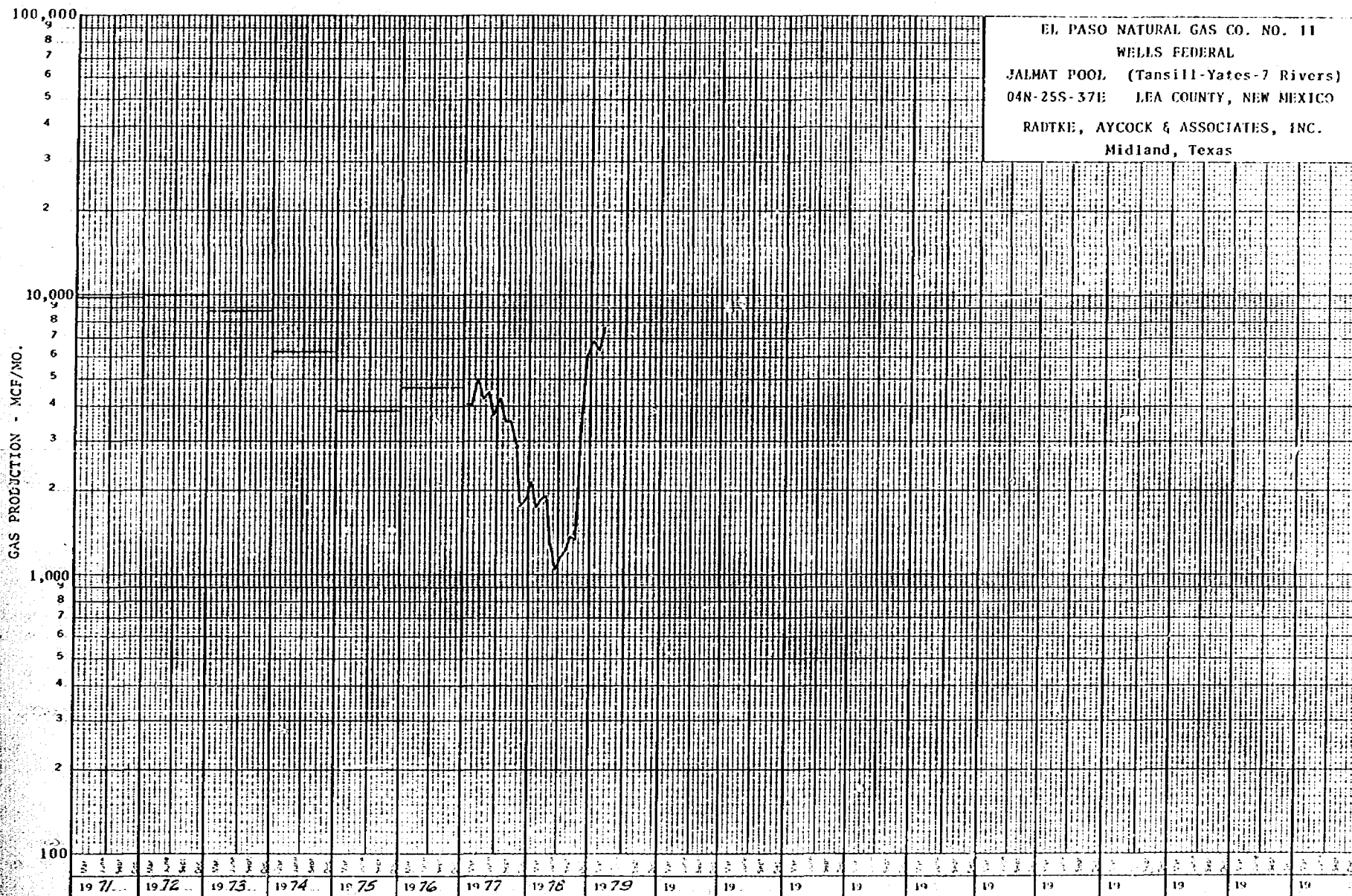
SUMMARY OF INDIVIDUAL WELL INFORMATION

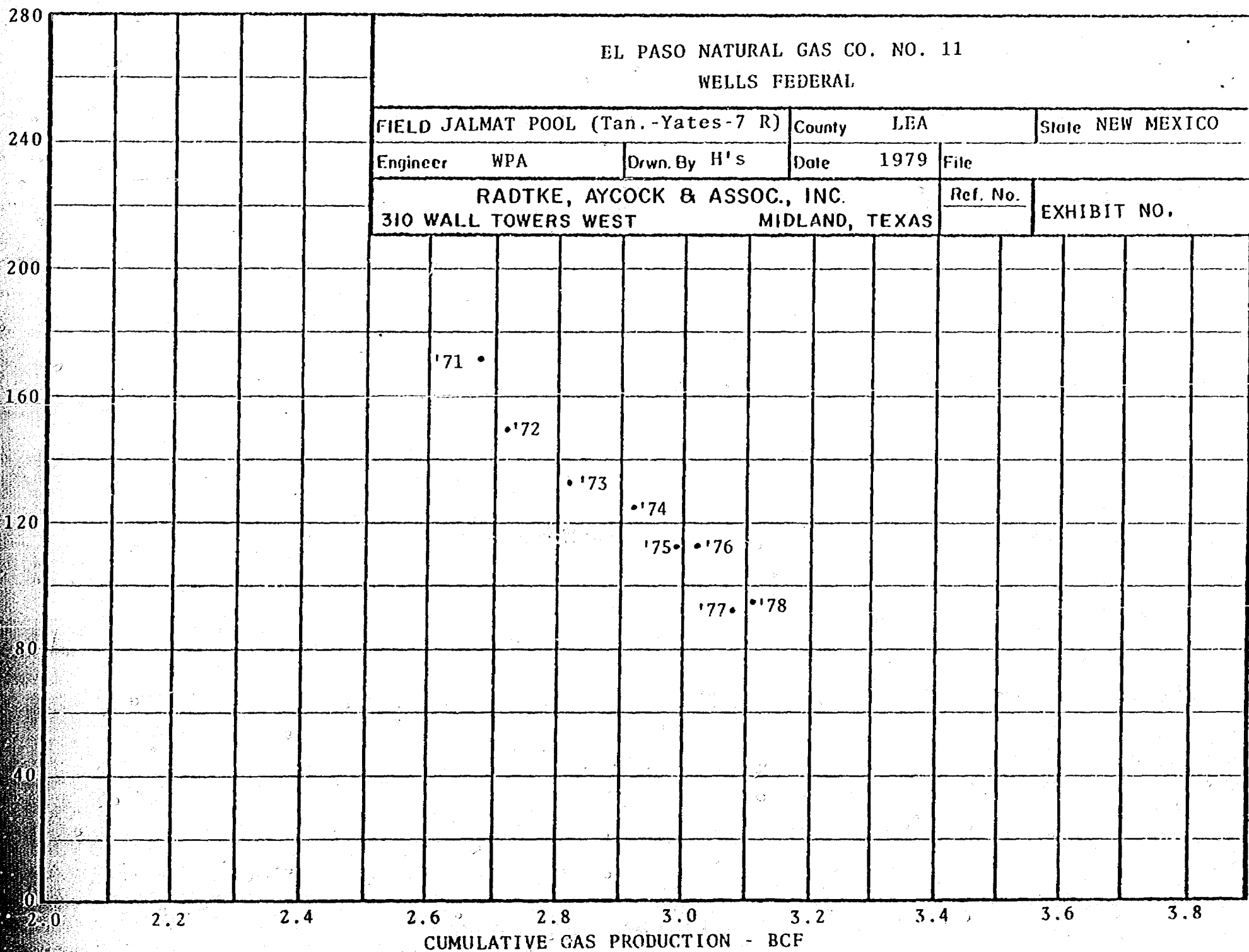
Vicinity of Proposed Location in N/2, SE/4, 8-25s-37E
Jalmat (Tansill-Yates-Seven Rivers) Pool, Lea County, New Mexico

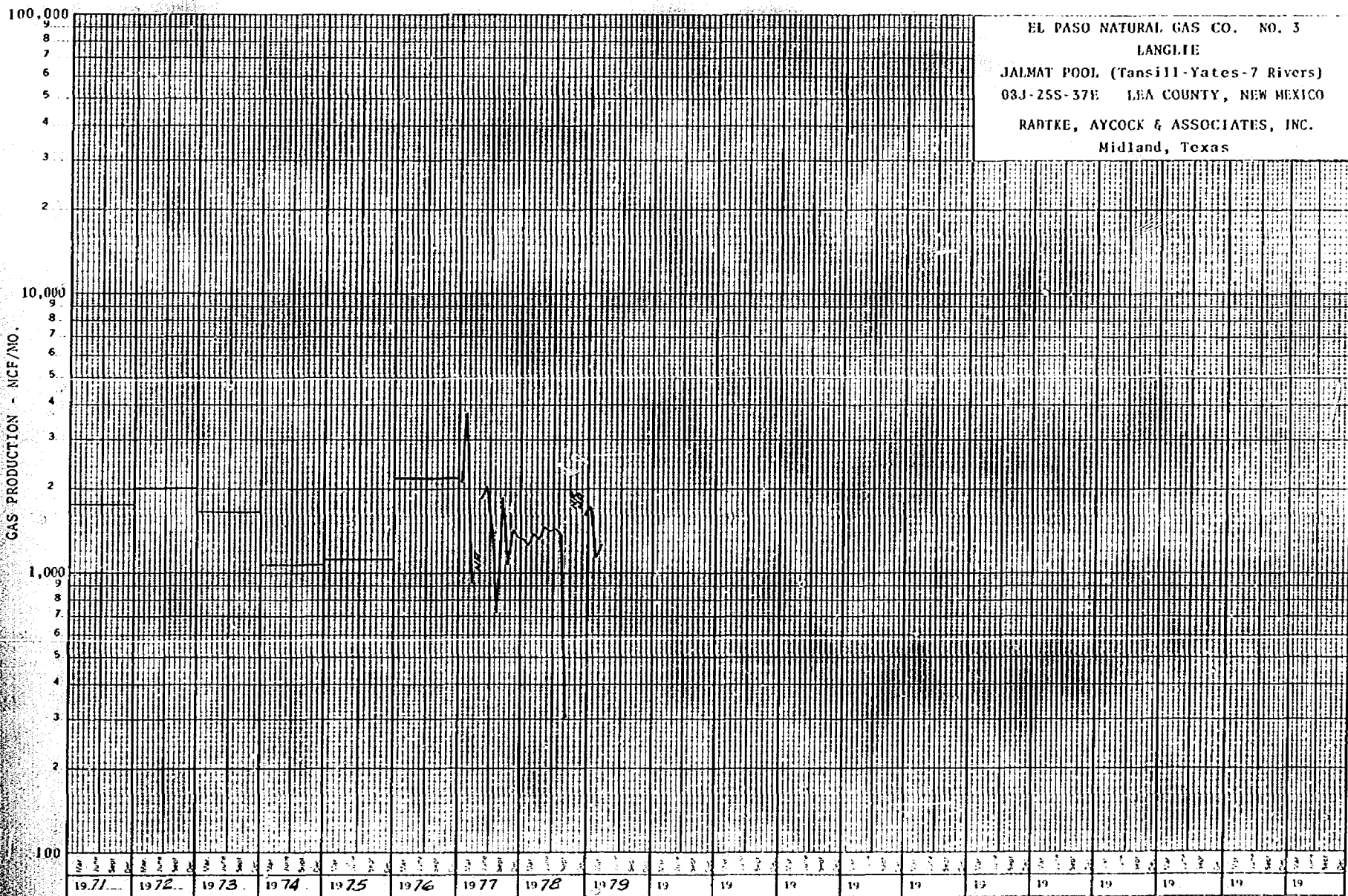
El Paso NG Langlie Fed. 3	ARCO Woolworth 1	El Paso NG Jal "D" 3	Phillips Woolworth 4	D. Hartman Langlie Jal. Fed. 1	Gulf Oil Arnott-Ramsey "E" - 1	AMOCO Langlie "C" Fed. 1	El Paso NG Wells Fed. 11	El Paso NG Langlie "A" Fed. 2
J-25S-37E	17B-25S-37E	8R-25S-37E	8M-25S-37E	8A-25S-37E	16O-25S-37E	9N-25S-37E	4N-25S-37E	17J-25S-37E
11-22-66 447	5-13-39 8400	7-25-49 30,000	3-27-51 9,000	4-16-77 1,938	7-13-37 274	8-1-78 279	12-15-57 10,000	6-18-52 13,750
332' W	1980' SSE	2833' NNW	3000' WSW	3350' NNE	3000' SE	3375' ESE	5370' NE	5150' SSW
270,704	9,462,768	3,666,609	1,198,484	359,620	Never Prod.	85,253	3,153,118	737,714
900-2945 955-3148	2962-2975 3075-3909	2930-3043	2906-2964	2875-3177	3400-3430	2986-3130	3070-3140	2480-2640 2921-2980
17.1	-	7.04	-	19.1	-	19.0	-	13.3
25. 52.	-	45. 81.	-	28. 77.	-	50. 64.	-	25. 116.
19.8	0	9.33	-	4.26	-	18.2	-	34.4
562	12,400	4,570*	1,490*	796*	-	1030*	4,060	920*
438	10,245	3,667	1,198	638	Never Prod.	823	3,759	738
77.9	82.5	-	-	-	-	-	92.5	-
28	700**	260**	84**	45**	-	50**	229**	52**

Estimated from statistical analysis of available information.

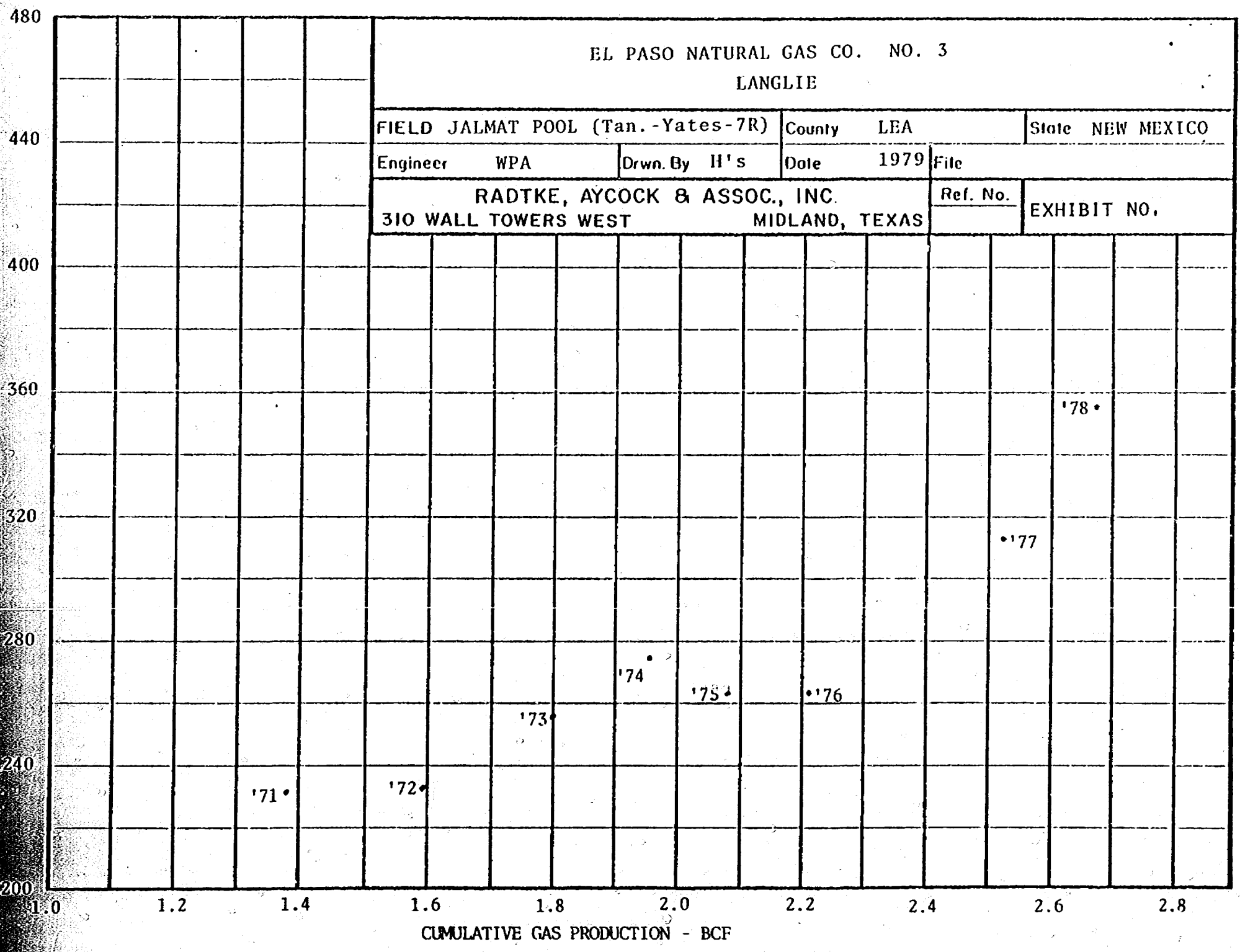








17



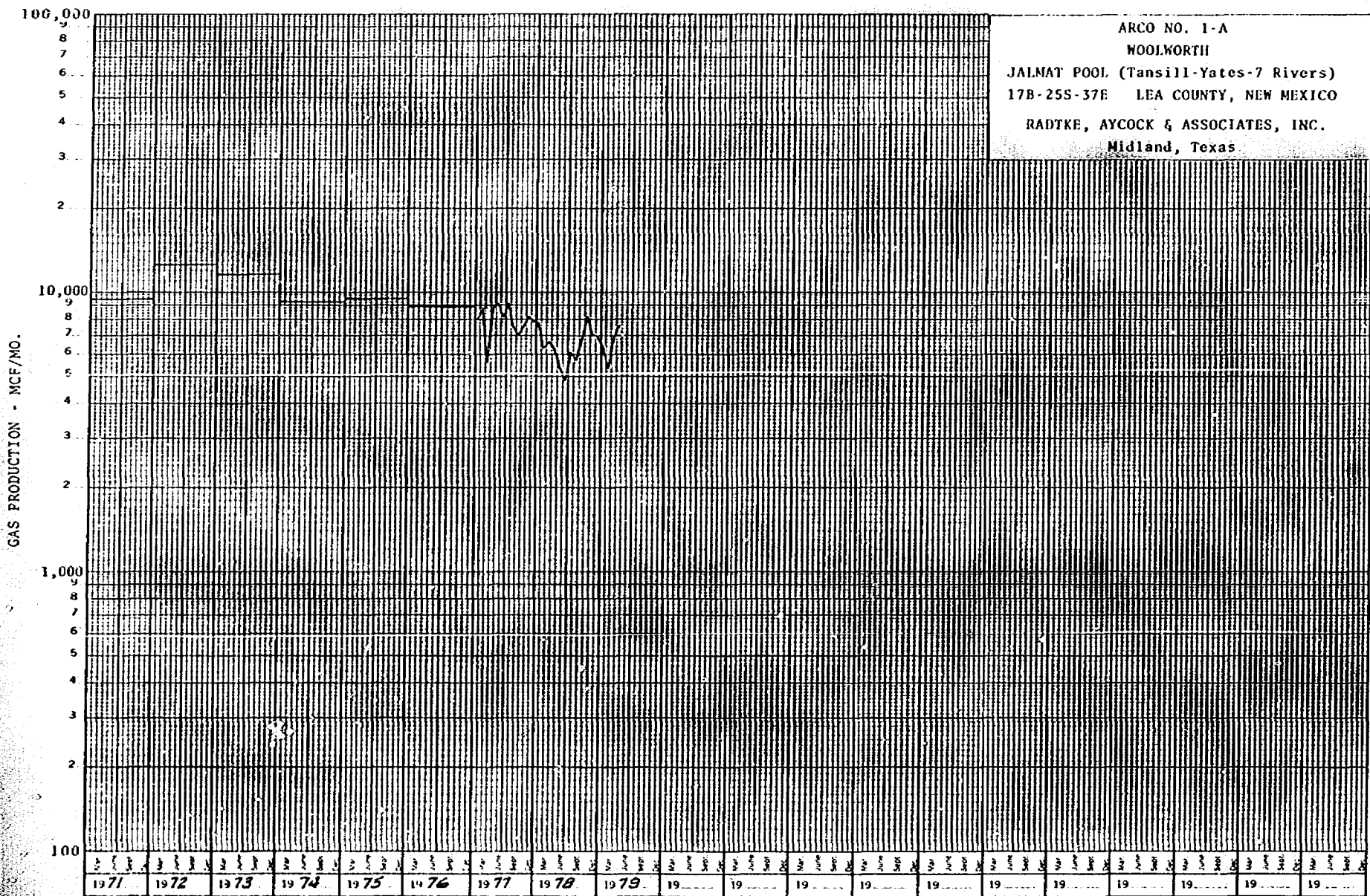
GAS PRODUCTION - MCF/NO.

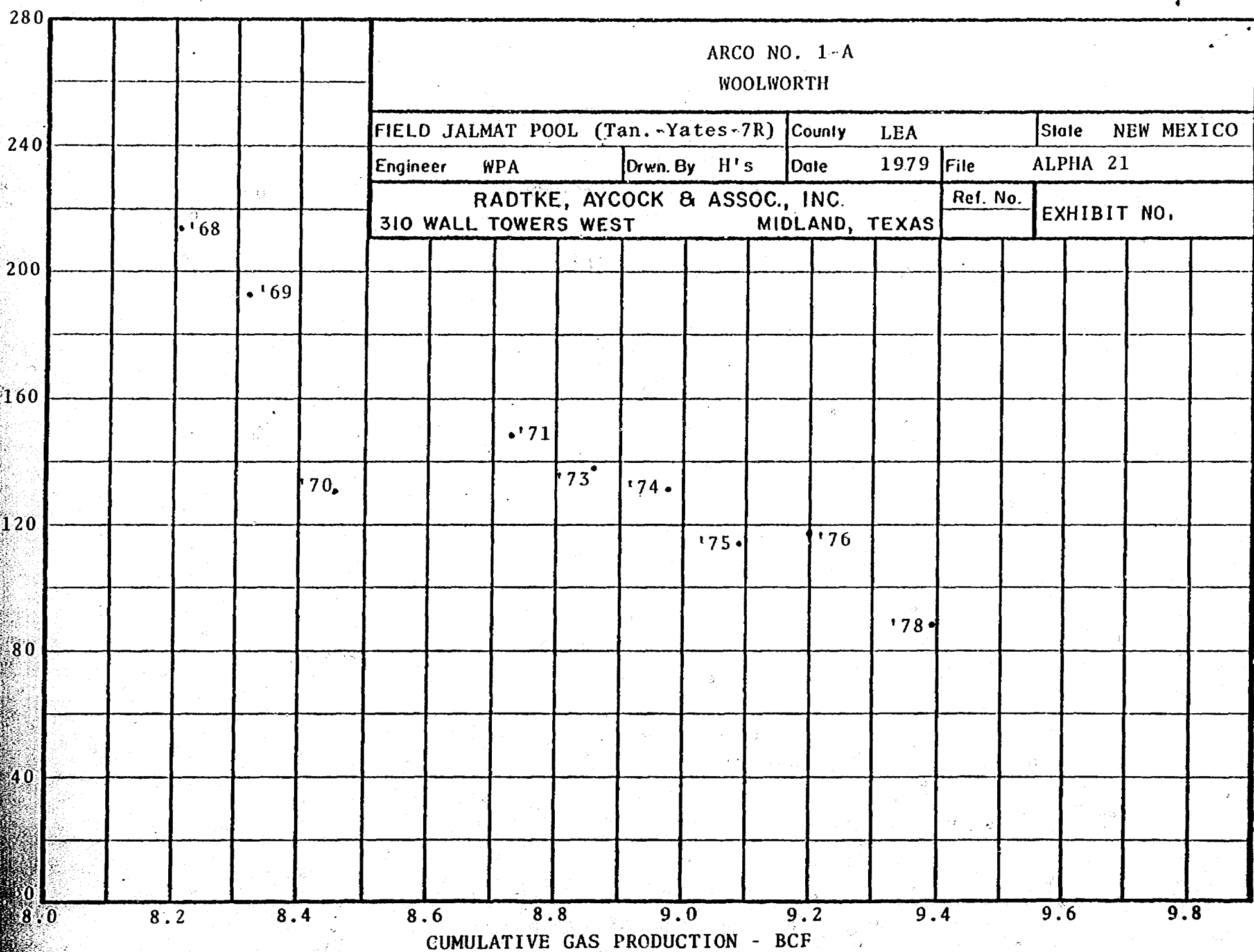
LANGLIE "C" FEDERAL

RADTKE, AYCOCK & ASSOCIATES, INC.

Midland, Texas

Midland, Texas





Dockets Nos. 43-79 and 44-79 are tentatively set for November 28 and December 12, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 14, 1979

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

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

ALLOWABLE: (1) Consideration of the allowable production of gas for December, 1979, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.

(2) Consideration of the allowable production of gas for December, 1979, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 6715: Application of Texaco Inc. for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Loomis Fed. Well No. 1 to be drilled 1600 feet from the North line and 660 feet from the West line of Section 5, Township 21 South, Range 32 East, South Salt Lake-Morrow Gas Pool, the N/2 of said Section 5 to be dedicated to the well.

CASE 6707: (Continued from October 31, 1979, Examiner Hearing)

Application of Gulf Oil Corporation for a unit agreement, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Southeast Bisti Unit Area, comprising 7,048 acres, more or less, of State and Federal lands in Townships 24 and 25 North, Range 10 West.

CASE 6716: Application of Alpha Twenty-One Production Company for two non-standard proration units and approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 40-acre non-standard proration unit comprising the NW/4 SE/4 of Section 8, Township 25 South, Range 37 East, Jalmat Gas Pool, to be dedicated to El Paso Natural Gas Company's Langlie Federal Well No. 3, and also a 120-acre unit comprising the E/2 SE/4 and SW/4 SE/4 of said Section 8 to be dedicated to a well to be drilled by applicant at a standard location thereon; applicant further seeks a waiver of existing well spacing requirements and a finding that the drilling of said well is necessary to effectively and efficiently drain that portion of an existing proration unit which cannot be so drained by the existing well.

CASE 6717: Application of O. H. Berry for a non-standard proration unit and an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 160-acre non-standard gas proration unit comprising the NE/4 of Section 15, Township 24 South, Range 36 East, Jalmat Gas Pool, to be dedicated to his Isbell Well No. 6 at an unorthodox location 418 feet from the North line and 351 feet from the East line of said Section 15.

CASE 6718: Application of Southland Royalty Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Morrow test well to be drilled 1325 feet from the North line and 2303 feet from the East line of Section 14, Township 19 South, Range 29 East, Oil-Potash Area, the E/2 of said Section 14 to be dedicated to the well.

CASE 6719: Application of Sam H. Snoddy for an amendment to Order No. R-5521, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-5521, which authorizes the directional drilling of the Federal Well No. 2 in Section 25, Township 20 South, Range 32 East, to permit the well to be bottomed at approximately 1014 feet from the South line and 1285 feet from the West line of said Section 25.

CASE 6710: (Continued from October 31, 1979, Examiner Hearing)

Application of ARCO Oil and Gas Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Blinbry and Montoya production in the wellbores of the following wells on its State Y Lease: No. 3 located in Unit B, No. 6 located in Unit H, and No. 7 located in Unit A, all in Section 25, Township 25 South, Range 37 East.

CASE 6720: Application of ARCO Oil and Gas Company to drill a horizontal drainhole, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval to drill and complete its Empire Abo Unit Well No. J-213, located in Unit E of Section 6, Township 18 South, Range 28 East, Empire-Abo Pool, with a single horizontal drainhole of about 200 feet in length in the Abo formation.

- CASE 6721:** Application of Aminoil USA, Inc. for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp-Pennsylvanian formations underlying the N/2 of Section 10, Township 24 South, Range 28 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6684:** (Continued from October 31, 1979, Examiner Hearing)
- Application of CO₂-In-Action, Inc. for creation of a new carbon dioxide gas pool and special pool rules, Harding County, New Mexico. Applicant, in the above-styled cause, seeks the creation of the North Bueyeros-Santa Rosa CO₂ Gas Pool and the promulgation of special pool rules therefor, including a provision for 40-acre spacing and proration units. Said pool would comprise all or parts of Sections 1 thru 4, Township 20 North, Range 30 East, and Sections 8, 9, 10, 15, 16, 17, 20, 21, 22, 27, 28, 32, 33 and 34, Township 21 North, Range 30 East.
- CASE 6722:** Application of Lloyd Davidson for an unorthodox oil well location, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of his Santa Fe Pacific Well No. 1, a Gallup-Entrada-Dakota test 960 feet from the South line and 1230 feet from the East line of Section 29, Township 16 North, Range 6 West, the SE/4 SE/4 of said Section 29 to be dedicated to the well.
- CASE 6723:** Application of Merrion & Bayless for compulsory pooling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pictured Cliffs formation underlying the SW/4 of Section 27, Township 24 North, Range 2 West, South Blanco-Pictured Cliffs Pool, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6713:** (Continued from October 31, 1979, Examiner Hearing)
- Application of Depco Inc. for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the White Ranch Unit Area, comprising 18,962 acres, more or less, of State, Federal, and fee lands in Townships 12 and 13 South, Ranges 29 and 30 East.
- CASE 6724:** Application of Coquina Oil Corporation for a non-standard gas proration unit and an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 660 feet from the South line and 1650 feet from the East line of Section 7, Township 19 South, Range 32 East, Lusk-Morrow Gas Pool, the S/2 of said Section 7 to be dedicated to the well as a non-standard 320-acre proration unit.
- CASE 6725:** Application of Tenneco Oil Company for three non-standard gas proration units, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 291.23-acre non-standard gas proration unit comprising the W/2 of Section 6 and the NW/4 of Section 7, a 347.58-acre unit comprising the W/2 of Section 19 and the NW/4 of Section 30, and a 375.17-acre unit comprising the SW/4 of Section 30 and the W/2 of Section 31, all in Township 29 North, Range 8 West, Basin-Dakota Pool, each unit to be dedicated to a well to be drilled at a standard location thereon.
- CASE 6726:** Application of Tesoro Petroleum Corporation for a waterflood project, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the South Hospah-Upper Sand Oil Pool by the injection of water into the Upper Hospah Sands through three wells located in Units E and M of Section 5 and Unit I of Section 8, Township 17 North, Range 8 West. Applicant further seeks an administrative procedure for expansion of said project.
- CASE 6727:** Application of Conoco Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water in its Anderson Ranch Unit Well No. 8 located in Unit I of Section 11, Township 16 South, Range 32 East, Anderson Ranch Field. Applicant would dispose into the Wolfcamp, Mississippian, and Devonian formations in the overall interval from 9775 feet to 13,620 feet through selective perforations.
- CASE 6728:** Application of Conoco Inc. for pressure maintenance expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the expansion of its Scarborough Eaves PM Project by the conversion of its Eaves "A" Well No. 7 located in Unit J of Section 19, Township 26 South, Range 37 East, to water injection in the Yates-Seven Rivers formations.

- CASE 6729: Application of Adams Exploration Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying Section 16, Township 20 South, Range 36 East, North Osudo-Morrow Gas Pool, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6730: Application of Petroleum Development Corporation to limit 640-acre spacing, Eddy and Lea Counties, New Mexico. Applicant, in the above-styled cause, seeks an order limiting the applicability of the 640-acre spacing and well location rules for the Lusk-Morrow Gas Pool to the present boundaries of said pool so that wells drilled nearby but outside the pool would be governed by Rule 104 of the Division's Rules.
- CASE 6731: Application of Petroleum Development Corporation for a non-standard gas proration unit and an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 660 feet from the North and West lines of Section 13, Township 19 South, Range 31 East, Lusk-Morrow Gas Pool, the N/2 of said Section 13 to be dedicated to the well as a non-standard 320-acre proration unit.
- CASE 6709: (Continued from October 31, 1979, Examiner Hearing)
- Application of HNG Oil Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the N/2 of Section 33, Township 16 South, Range 35 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CAMPBELL AND BLACK, P.A.
LAWYERS

JACK M. CAMPBELL
BRUCE D. BLACK
MICHAEL B. CAMPBELL
WILLIAM F. CARR
PAUL R. CALDWELL

POST OFFICE BOX 2208
JEFFERSON PLACE
SANTA FE, NEW MEXICO 87501
TELEPHONE (505) 988-4421

October 22, 1979

Mr. Joe D. Ramey
Division Director
Oil Conservation Division
New Mexico Department of Energy & Minerals
Post Office Box 2088
Santa Fe, New Mexico 87501

Case 6716

Re: Application of Alpha Twenty-One Production Company
for Unorthodox Location, Two Non-Standard Proration
Units and Infill Findings, Lea County, New Mexico

Dear Mr. Ramey:

Enclosed in triplicate is the application of Alpha Twenty-One Production Company in the above-referenced matter.

The applicant requests that this matter be included on the docket for the examiner hearing scheduled to be held on November 14, 1979.

Very truly yours,

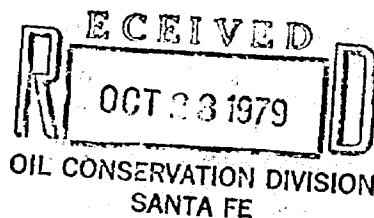
William F. Carr

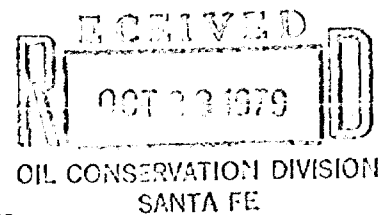
William F. Carr

WFC:lr

Enclosures

cc: Mr. Tommy Phipps





BEFORE THE
OIL CONSERVATION DIVISION

NEW MEXICO DEPARTMENT OF ENERGY AND MINERALS

out - DSN

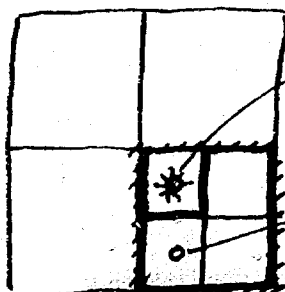
APPLICATION OF ALPHA TWENTY-ONE
PRODUCTION COMPANY FOR APPROVAL
OF ~~AN UNORTHODOX LOCATION~~, TWO
NON-STANDARD PRORATION UNITS AND
INFILL FINDINGS, LEA COUNTY,
NEW MEXICO.

CASE 6716

APPLICATION

Comes now ALPHA TWENTY-ONE PRODUCTION COMPANY, by their undersigned attorneys, and applies to the New Mexico Oil Conservation Division for approval of ~~an unorthodox location~~, two non-standard gas proration units and infill findings and in support of their application states:

1. El Paso Natural Gas Company is the operator of the SE/4 of Section 8, Township 25 South, Range 37 East, N.M.P.M., Lea County, New Mexico, which is dedicated to its Langlie-Federal No. 3 Well located 1650 feet from the South and East lines of said Section 8.
2. Applicant has received a farmout from El Paso Natural Gas Company of the E/2 SE/4 and the SW/4 SE/4 of said Section 8.
3. Applicant seeks the establishment of two non-standard gas proration units in the Jalmat Gas Pool; one comprising the NW/4 SE/4 of said Section 8 as a new forty acre proration unit to be dedicated to the El Paso Natural Gas Company Langlie Federal No. 3 Well and the other comprising the E/2 SE/4 and the SW/4 SE/4 of Section 8 as a new one hundred twenty acre proration unit to be dedicated to



El Paso's Langlie Fed #3

applicant's proposed El Paso Ruby Fed #1

- 1 -

260' FSL

1880' FEL

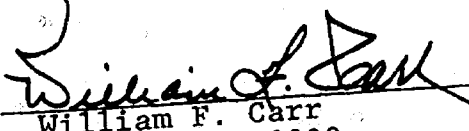
this is not an unorthodox location

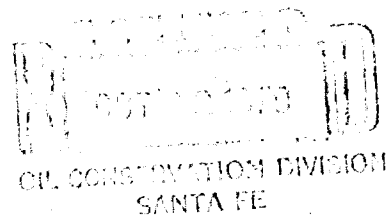
applicants proposed El Paso Ruby Federal No. 1 Well to be drilled ~~at an unorthodox location~~ 660 feet from the South line and 1880 feet from the East line of said Section 8.

4. Applicant seeks a determination pursuant to the F.E.R.C. Rules, Part 271.305 that the proposed El Paso Ruby Federal No. 3 Well is necessary to effectively and efficiently drain a portion of the Jalmat Gas Pool covered by the proposed proration units which cannot be effectively and efficiently drained by any existing well within the proration unit and will offer evidence in support of that determination.

WHEREFORE, applicant respectfully requests that this matter be set for hearing before the Commission or one of the Division's duly appointed examiners and that after notice and hearing as required by law, the Division enter its order approving the application.

Respectfully submitted,
CAMPBELL AND BLACK, P.A.

By 
William F. Carr
Post Office Box 2208
Santa Fe, New Mexico 87501
Attorneys for Applicant



BEFORE THE
OIL CONSERVATION DIVISION
NEW MEXICO DEPARTMENT OF ENERGY AND MINERALS

APPLICATION OF ALPHA TWENTY-ONE
PRODUCTION COMPANY FOR APPROVAL
OF AN UNORTHODOX LOCATION, TWO
NON-STANDARD PRORATION UNITS AND
INFILL FINDINGS, LEA COUNTY,
NEW MEXICO.

CASE 6716

APPLICATION

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1. El Paso Natural Gas Company is the operator of the SE/4 of Section 8, Township 25 South, Range 37 East, N.M.P.M., Lea County, New Mexico, which is dedicated to its Langlie-Federal No. 3 Well located 1650 feet from the South and East lines of said Section 8.
2. Applicant has received a farmout from El Paso Natural Gas Company of the E/2 SE/4 and the SW/4 SE/4 of said Section 8.
3. Applicant seeks the establishment of two non-standard gas proration units in the Jalmat Gas Pool; one comprising the NW/4 SE/4 of said Section 8 as a new forty acre proration unit to be dedicated to the El Paso Natural Gas Company Langlie Federal No. 3 Well and the other comprising the E/2 SE/4 and the SW/4 SE/4 of Section 8 as a new one hundred twenty acre proration unit to be dedicated to

applicants proposed El Paso Ruby Federal No. 1 Well to be drilled at an unorthodox location 660 feet from the South line and 1880 feet from the East line of said Section 8.

4. Applicant seeks a determination pursuant to the F.E.R.C. Rules, Part 271.305 that the proposed El Paso Ruby Federal No. 3 Well is necessary to effectively and efficiently drain a portion of the Jalmat Gas Pool covered by the proposed proration units which cannot be effectively and efficiently drained by any existing well within the proration unit and will offer evidence in support of that determination.

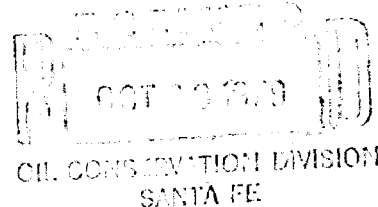
WHEREFORE, applicant respectfully requests that this matter be set for hearing before the Commission or one of the Division's duly appointed examiners and that after notice and hearing as required by law, the Division enter its order approving the application.

Respectfully submitted,
CAMPBELL AND BLACK, P.A.

By 
William F. Carr
Post Office Box 2208
Santa Fe, New Mexico 87501
Attorneys for Applicant

BEFORE THE
OIL CONSERVATION DIVISION

NEW MEXICO DEPARTMENT OF ENERGY AND MINERALS



APPLICATION OF ALPHA TWENTY-ONE
PRODUCTION COMPANY FOR APPROVAL
OF AN UNORTHODOX LOCATION, TWO
NON-STANDARD PRORATION UNITS AND
INFILL FINDINGS, LEA COUNTY,
NEW MEXICO.

CASE 6716

APPLICATION

Comes now ALPHA TWENTY-ONE PRODUCTION COMPANY, by their undersigned attorneys, and applies to the New Mexico Oil Conservation Division for approval of an unorthodox location, two non-standard gas proration units and infill findings and in support of their application states:

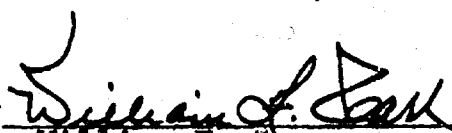
1. El Paso Natural Gas Company is the operator of the SE/4 of Section 8, Township 25 South, Range 37 East, N.M.P.M., Lea County, New Mexico, which is dedicated to its Langlie-Federal No. 3 Well located 1650 feet from the South and East lines of said Section 8.
2. Applicant has received a farmout from El Paso Natural Gas Company of the E/2 SE/4 and the SW/4 SE/4 of said Section 8.
3. Applicant seeks the establishment of two non-standard gas proration units in the Jalmat Gas Pool; one comprising the NW/4 SE/4 of said Section 8 as a new forty acre proration unit to be dedicated to the El Paso Natural Gas Company Langlie Federal No. 3 Well and the other comprising the E/2 SE/4 and the SW/4 SE/4 of Section 8 as a new one hundred twenty acre proration unit to be dedicated to

applicants proposed El Paso Ruby Federal No. 1 Well to be drilled at an unorthodox location 660 feet from the South line and 1880 feet from the East line of said Section 8.

4. Applicant seeks a determination pursuant to the F.E.R.C. Rules, Part 271.305 that the proposed El Paso Ruby Federal No. 3 Well is necessary to effectively and efficiently drain a portion of the Jalmat Gas Pool covered by the proposed proration units which cannot be effectively and efficiently drained by any existing well within the proration unit and will offer evidence in support of that determination.

WHEREFORE, applicant respectfully requests that this matter be set for hearing before the Commission or one of the Division's duly appointed examiners and that after notice and hearing as required by law, the Division enter its order approving the application.

Respectfully submitted,
CAMPBELL AND BLACK, P.A.

By 
William F. Carr
Post Office Box 2208
Santa Fe, New Mexico 87501
Attorneys for Applicant

ROUGH

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. 6716

Order No. R-6188

APPLICATION OF ALPHA TWENTY-ONE PRODUCTION
COMPANY FOR TWO NON-STANDARD PRORATION UNITS
AND APPROVAL OF INFILL DRILLING, LEA COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on November 14
19 79, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of November, 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, Alpha Twenty-One Production Company, seeks approval
of a 40-acre non-standard gas proration unit comprising the NW/4 SE/4 of
Section 8, Township 25 South, Range 37 East, NMPM, Jalmat Gas Pool, to be
dedicated to ~~the~~ El Paso Natural Gas Company's ^{located thereon,} Langlie Federal Well No. 3 and
also a 120-acre unit comprising the E/2 SE/4 and SW/4 SE/4 of said Section 8
to be dedicated to a well to be drilled by applicant at a standard location

~~thereon.~~ in the center of the NW/4 SE/4 of said Section 8.

(3) Applicant further seeks ~~a waiver of existing well spacing requirements and~~ a finding that the drilling of said well is necessary to effectively and efficiently drain that portion of an existing proration unit which cannot be so drained by the existing well.

(4) That the evidence presented demonstrated that said El Paso *Langlie* Federal Well No. 3 cannot effectively and efficiently drain ~~the~~ 160-acre proration unit *presently assigned to it.*

(5) That the evidence presented further demonstrated that the drilling and completion of applicant's said new well should result in production of *between 132 and 200 million* additional cubic feet of gas from ~~the SE 1/4 of said Section 8~~ which would not otherwise be recovered, ~~from the proration unit.~~

(6) That such additional recovery will result in said unit being more efficiently and economically drained.

(7) That said new well is to be drilled as an "infill" well on the existing 160-acre ^{non} standard proration unit, *but said unit would be split into a 40-acre non-standard unit and a 120-acre non-standard unit.*

(8) That in order to permit the drainage of a portion of the reservoir covered by said ~~160-acre non-standard~~ proration unit which cannot be effectively and efficiently drained by the existing well thereon, the subject application for infill drilling ~~and simultaneous dedication~~ should be approved.

(9) That approval of the subject application will afford the applicant the opportunity to produce his just and equitable share of the gas in the Jalmat Gas Pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That ^{the 160-acre non-standard gas proration unit comprising the SE/4 of Section 8,} ~~40-acre non-standard gas proration unit in the Jalmat Gas~~
Pool comprising the NW/4 SE/4 of ^{said} Section 8, ~~Township 25 South, Range 37 East,~~
~~NMPM, Lea County, New Mexico,~~ is hereby established and dedicated to ~~the~~
El Paso Natural Gas Company's Langlie Federal Well No. 3 ^{located thereon,} and also a ^{new} 120-acre
unit comprising the E/2 SE/4 and SW/4 SE/4 of said Section 8 to be dedicated
to a well to be drilled by applicant at a standard location thereon ^{in the center}
~~of the SW/4 SE/4 of said Section 8.~~

²
(2) 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.

Township 25 South, Range 37 East, NMPM, just from Road, Lea County, New Mexico, is hereby cancelled, and a new

Called in by Bill Carr
10/22/90

Alpha Twenty-One Production
Company

Unorthodox Location, Two Non-
Standard Proration Units, and
Approval of Infill Drilling

Lea County
Jalmat Gas Pool

40-acre NSP

NW1/4 SE1/4 8-255-37E

to be dedicated to El Paso

Natural Gas Langlie Fed. #3

1650/S + E of Sec. 8

120-acre NSP

E1/2 SE1/4 and SW1/4 SE1/4 8-25-37

to be dedicated to El Paso Ruby

Fed. #1 to be drilled 660/S

+ 1880/E of Sec. 8