

CRIME 4227: Application of POWER
M. POWER FOR AN APPLICATION
LOCATION, CHASE COUNTY, N. D.

CASE No.

4827

Application,

Transcripts,

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
CONFERENCE HALL, STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
September 13, 1972

EXAMINER HEARING

IN THE MATTER OF:

Application of Robert N. Enfield
for an unorthodox location, Chaves
County, New Mexico.

CASE 4827

BEFORE: Daniel S. Nutter
Examiner

TRANSCRIPT OF HEARING

dearnley, meier & mc cormick

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1 MR. NUTTER: Case 4827.

2 MR. HATCH: Application of Robert N. Enfield for
3 an unorthodox location, Chaves County, New Mexico.

4 MR. MORRIS: I am Richard Morris of Montgomery,
5 Federici, Andrews, Hannahs & Morris, appearing on behalf of
6 the Applicant.

7 We have one witness, Mr. Ralph Gray, we'd ask that
8 he be sworn at this time.

9 * * * * *

10 RALPH GRAY,
11 appeared as a witness and, having been duly sworn according
12 to law, testified as follows:

13 DIRECT EXAMINATION

14 BY MR. MORRIS:

15 Q Mr. Gray, will you please state your name and where
16 you reside?

17 A Ralph Gray, Artesia, New Mexico.

18 Q What is your profession, Mr. Gray?

19 A Consulting engineer.

20 Q Have you been engaged to represent Mr. Enfield in
21 connection with this Case 4827, as a consulting
22 engineer?

23 A Yes, I have.

24 Q What is sought by Mr. Enfield's Application in this
25 Case?

- 1 A The Applicant proposes to drill a gas well in the
2 Buffalo Valley-Pennsylvanian Gas Pool, which location
3 would be an unorthodox pattern. The location is, as
4 proposed, 1,980 feet from the north and east lines
5 of Section 11, Township 15 South, Range 27 East.
- 6 Q What do the field rules for the Buffalo Valley-
7 Pennsylvanian Gas Pool provide, with respect to standard
8 locations?
- 9 A The field rules provide that a well shall be drilled
10 in either the NW/4 or the SE/4 of a Section and
11 located no closer than 990 feet from a lease line.
- 12 Q So Mr. Enfield's application is unorthodox in the
13 sense that it is off-pattern, but it is not closer
14 to the lease line than as permitted under the special
15 rules?
- 16 A Yes, that's correct.
- 17 Q All right. Would you refer to Exhibit 1 and point out
18 the features shown on that Exhibit?
- 19 A Exhibit 1 is an ownership plat of the Buffalo Valley-
20 Pennsylvanian Gas Pool area. The scale of the map is
21 1 inch equals every 2,000 feet. The proposed location
22 is shown on the map in Section 11 with a red circle
23 and the proposed 320 acre drilling unit is indicated
24 by the yellow boundary line. The gas wells are
25 indicated on the map in this pool.

1 Q The map shows a well in the SE/4 of Section 11, within
2 the proposed proration unit? I am referring to the
3 Pan American Federal 1 "D", was that well drilled to
4 the Pennsylvanian formation?

5 A Yes, this well was drilled to the Pennsylvanian and,
6 actually, on drill stem tests, the well produced
7 116,000 cubic feet of gas per day; but the operator
8 declined to attempt completion of it.

9 Q All right. Please refer to your Exhibit Number 2 and
10 give the pertinent well data concerning this Pan
11 American Well, as well as the other two wells that
12 are shown on that Exhibit.

13 A Exhibit 2 shows pertinent well information for three
14 wells surrounding the proposed location. The Pan
15 American Federal Com. C Number 1 well, which is located
16 to the west of the proposed location, was drilled to
17 a total depth of 8,413 feet with 5 and 1/2 inch casing
18 set at this depth and it was perforated from 8,232 to
19 8,257. This well's calculated absolute open-flow
20 was 800,000,000 MCF daily. The Read & Stevens-Hurd
21 Number 1 well is an east offset to the proposed
22 location and this well was drilled to a depth of
23 8,699 feet, was perforated from 8,484 to 8,515 feet,
24 and on test, had 8,000,000 cubic feet per day. The
25 Pan American Federal Com B Number 1 south of the

1 proposed location, but located on the same drilling
2 unit, was drilled to a depth of 8,603 feet, it was
3 cored from 8,341 to 8,452 feet and the drill stem
4 tested in two intervals, one from 8,224 to 8,524 feet.
5 This was the interval that produced 16,000 cubic feet
6 of gas per day. And the test from 8,252 to 8,352,
7 from a straddling packer recovered mud.

8 Q Please refer to your Exhibit Number 3, which is a two-
9 page Exhibit showing the monthly and cumulative
10 production in the Buffalo Valley-Pennsylvanian Gas
11 Pool, for 12 wells in the pool. Would you point out
12 the pertinent features of this Exhibit?

13 A Exhibit Number 3 shows monthly gas and distillate
14 production for each producing well in this pool, from
15 January through June of 1972, and shows cumulative
16 figures for gas and distillate for each well as of
17 July 1, 1972. Of course, these wells were drilled
18 over a period of several years and the cumulative
19 figures vary considerably, due to the differences in
20 completion times and productivity of the wells. Most
21 of the wells up to this time have recovered anywhere
22 from approximately one billion to almost four billion
23 cubic feet of gas.

24 Q Please refer to your Exhibit Number 4 and state what
25 it is, what it shows.

- 1 A Exhibit Number 4 is a table showing shut-in surface
2 pressures for the gas wells in this pool. The initial
3 shut-in tubing pressure for the Cities Service Baetz
4 A Number 1 Well which was drilled as Carper Baetz Number
5 1 was indicated to be approximately 2,400 PSI. These
6 pressures have declined over the years and at the
7 present time the wells which are located in the NW/2,
8 approximately, of the field, these shut-in pressures
9 vary from about 1,100 to 1,200 pounds, although there
10 is one indicated at 1,420, indicating that this portion
11 of the field is substantially depleted. The wells
12 located in the SE/2, approximately, of the pool, have
13 substantially higher shut-in tubing pressures and
14 you will note that these, most of these, vary from
15 a range of 2,000 to 2,200, although there is one of
16 2,498, which is a dually completed well.
- 17 Q Mr. Gray, I'll ask you to refer back to these Exhibits
18 a few minutes, in connection with your structural map
19 that we will present later. Now, would you please
20 refer to your Exhibit 5, the cross-section. Please
21 point out the wells that you have shown here and the
22 relationship of this cross-section to the proposed
23 location.
- 24 A Exhibit 5 is a west-east cross-section extending from
25 the Pan American Federal "C" Number 1 through the

1 proposed location and terminating in the Read & Stevens-
2 Hurd Number 1 Well.

3 Q So this just goes from the west offset through the
4 proposed location to the east offset?

5 A Yes, sir, that's correct. Exhibit Number 5 just shows
6 a portion of the electric log. On these two wells,
7 it shows the producing formations, the perforations
8 and it appears from the study of the two logs that
9 a well drilled in between these should encounter a
10 well in the same pay zones and somewhere between the
11 two elevations, the Pan American "C", of course, is
12 higher structurally, and it's anticipated that the
13 proposed location will fall in between someplace.

14 Q All right. Now, do you also have a log section from
15 the Pan American Well that is the south offset to the
16 proposed location?

17 A Yes. Exhibit 6 shows a portion of the electric log
18 on the Pan American Federal "D" Gas Com. Number 1 and
19 this Exhibit is presented to show the intervals which
20 were drilled and tested and also the interval that
21 was cored in this well. The gas recovered on the
22 drill stem test is indicated in the lower interval
23 tested.

24 Q All right. Please refer to your Exhibit 7 and point
25 out the features shown on that Exhibit.

1 A Exhibit Number 7 is really not a structural map, but
2 it's a contour map, contoured on the top of pay as
3 reported by the various operators. In attempting to
4 use the information that was reported by the individual
5 operators, it became evident that these operators
6 picked different points. Without having access to
7 all the electric logs in making that detailed study,
8 it was very difficult to prepare any kind of a structure
9 map that we would rely on. So we attempted to show
10 the reservoir conditions by contouring on top of the
11 reported pays. I would like to state at this point
12 that the geology in this area is apparently rather
13 complicated and, in discussing with other operators, we
14 found that there were several differences of opinion
15 as to the conditions which exist in the reservoir. In
16 our case, it appears that one interpretation would
17 to be to locate a fault, which would run in a generally
18 NE/SW direction, which would more or less separate the
19 pool into two areas. In talking to other operators,
20 we found that they did not draw a fault, but they
21 merely contoured the northwestern portion structurally
22 with rather flat contour lines and then they came to
23 this area, to which we show a fault line, and they
24 indicated sharply dipping contours there in that area
25 and they then straightened out again. In a third case

1 we know of operators that prefer to think in terms
2 of more than one formation being productive in this
3 area. So, we wish to point out that it is a
4 complicated area, geologically, and all of these
5 features haven't actually been determined to the same
6 degree, and so we are presenting this as a possibility
7 and we are not saying it's necessarily the right one,
8 but it's one interpretation of the conditions.

9 Q Would this be a possible explanation, Mr. Gray, of
10 the pressure differentials that you showed to exist
11 back on Exhibit Number 4?

12 A Yes, that was one reason why we prefer to think in terms
13 of a fault through here. First of all, there is a
14 displacement of roughly 200 feet across this area;
15 secondly, you will note that all of the pressures of
16 wells located on what we show as the downthrown side
17 of the fault, all of these pressures are high above
18 2,000 PSI and without exception, all of the pressures
19 on wells which would be on the upthrown side of the
20 fault, are substantially lower in the neighborhood of
21 1,100 to 1,200 PSI. So, the existence of those
22 pressure differentials is one basis for our thinking
23 that perhaps there is a fault through there, some
24 kind of a separation.

25 Q Were the initial pressures on both sides of this area

1 that you have shown as a fault approximately the
2 same?

3 A Yes, they are indicated to be within reasonable limits
4 between 2,400 and 2,500 PSI surface pressures.

5 Q Based upon this interpretation, Mr. Gray, and on
6 the other information you have presented here, do you
7 have an opinion as to whether the entire E/2 of
8 Section 11 is productive gas from the Pennsylvanian
9 formation?

10 A I think it's reasonable to assume that it's essentially
11 entirely productive. We know that it's productive
12 of gas down to the point of the Pan American "D" 1
13 well inasmuch as they did produce some gas on drill
14 stem test. There is a completed gas well in the SE/4
15 of Section 12, just east of this well, and we don't
16 really have any data to use that the gas does not
17 cover this unit.

18 Q If you will refer back to Exhibit Number 1, the
19 ownership plat, are there other wells completed and
20 producing from the Buffalo Valley-Pennsylvanian gas
21 pool which are unorthodox in the sense that they are
22 off-pattern?

23 A Yes, there are several wells in this pool that are
24 off of the established pattern. The Read & Stevens
25 Midwest Number 1 Well is located in the SW/4 of Section

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1 6 of Township 15 South, Range 27 East, and, of course,
2 this is off-pattern.

3 Q Excuse me, would that be 27 East and/or 28 East?

4 A 28 East.

5 Q All right.

6 A And the Clinton Oil, others, Southwestern Production,
7 Buffalo Valley Com Gas Well Number 2 in Section 35 of
8 Township 14 South, Range 27 East, is located in the
9 NE/4 of the Section. So it's not on-pattern. And,
10 of course, in the case of the discovery well, the
11 well Number 1, this well was located in the SW/4 of
12 Section 35 of the same township and range as the
13 Southwestern Well. So, actually, there are three
14 wells in the pool which do not conform to the pool
15 rules.

16 Q Now, this is a prorated pool, is it not?

17 A Yes.

18 Q Have you consulted the proration schedule to determine
19 whether any of these unorthodox locations or off-
20 pattern locations have penalized allowables?

21 A Yes, I have consulted the schedule and there are no
22 cases where any of these wells have been penalized.

23 MR. MORRIS: In this connection, Mr. Examiner,
24 I would like to just offer for information a copy of the
25 Commission Order Number R-3974, dated June 10, 1970, which

1 approved the unorthodox location for the Read & Stevens Well
2 in Section 6 of 15 South, 28 East. I do not offer this as an
3 Exhibit, but simply for the Examiner's information.

4 Q (By Mr. Morris) Mr. Gray, what effect does the
5 drilling of a well at the proposed unorthodox location
6 have upon the correlative rights of offset operators?
7 And while we are talking about correlative rights, also
8 the correlative rights of operators having an interest
9 in the E/2 of Section 11?

10 A Well, the well has been drilled in the regular pattern,
11 which would be the SE/4 of Section 11, and, of course,
12 as we pointed out although there was some gas
13 encountered, the operator declined to attempt a
14 completion. But it appears to me that in order for
15 the operator that owns these mineral rights to have
16 a fair chance of recovery, the gas that's under their
17 tract, that it behooves them to drill a well in the
18 NE/4 of Section 11, in order to get into a permeability
19 and to permit them to recover this gas within a reasonable
20 period of time. Now, as to correlative rights, I'd
21 like to point out that, the Exhibit Number 4 shows the
22 present shut-in tubing pressures whereas the original
23 pressure was in the neighborhood of 2,400 to 2,500
24 pounds on the downthrown side of these. These things,
25 these pressures, are now depleted down in the

1 neighborhood of 2,000 to 2,100 pounds, so there
2 already has been substantial drainage away from the
3 middle of the acreage which has been produced by the
4 wells drilled prior. In the case of the upthrown side
5 of this plot, these pressures are even lower, so in
6 those cases, the acreage has been drained even more.
7 So, I've looked at this thing with the fact that the
8 Applicant has penalized himself by delaying drilling
9 until this time because they have lost some gas to
10 the older wells in the pool. So I don't think this
11 would be jeopardizing anyones correlative rights. I
12 don't think anyone would be hurt by the drilling at
13 the proposed location and I do feel that it's necessary
14 that the Applicant should drill in this quarter section
15 north to permit them to reasonably recover their
16 fair share of the gas.

17 Q You referred earlier to the off-pattern location of
18 the Read & Stevens Well in Section 6. Was that well,
19 the off-pattern well, drilled after the well had been
20 drilled in the NW/4 of Section 6 at an orthodox
21 location? In other words, a situation similar to what
22 we have in this situation?

23 A Yes, sir.

24 Q Mr. Gray, I would read to you from the Order that
25 approved the Read & Stevens well, that Order Number

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1 R-3974 where the Commission made a finding that the
2 evidence indicates that a well drilled at the proposed
3 non-standard location in the SW/4 of said Section 6
4 should encounter a thicker and more prolific pay
5 section of the Pennsylvanian sand than a well drilled
6 at a standard location in the NW/4 of said section
7 and should, therefore, result in greater ultimate
8 recovery of gas, thereby preventing waste. Would the
9 same situation be true with respect to the proposed
10 location in Section 11 compared to a standard location
11 in the SW/4 of that Section?

12 A I think it would reasonably be expected that this Case
13 would be similar.

14 Q Were Exhibits 1 through 7 prepared by you or under
15 your direction and supervision?

16 A Yes, sir.

17 MR. MORRIS: We offer Exhibits 1 through 7 into
18 evidence.

19 MR. NUTTER: Without objections, these Exhibits
20 will be admitted into evidence.

21 (Whereupon, Applicant's Exhibits Numbers 1

22 through 7 were marked and admitted into evidence.)

23 MR. MORRIS: That's all we have on Direct

24 Examination of this witness.

25 MR. NUTTER: Are there any questions of the witness?

(No response.)

* * * * *

CROSS-EXAMINATION

BY MR. NUTTER:

Q Mr. Gray, when we've got a location similar to this, we can look at the proposed location as being subject to receiving a penalty for two reasons, one being the unorthodoxness of the location and the other being the non-productivity of the acreage attributed to the well.

Now, we don't have any structure maps that go down here to show the structure in the S/2 of Section 11. We know that one well has recovered mud and 116,000 cubic feet of gas. Do we have any reason to believe that there is productivity south of the Pan American location there in the SE/4?

A I think you couldn't rule out the presence of gas south of the location. The character of the formation in this area is such that it is hard to anticipate the thickness of the formation and the thickness and the characteristics within the formation itself can vary substantially from well to well. It isn't the type of geological condition where you have a rather uniform formation disposed over a large area. The conditions here are a formation of sand and limestones

1 within thick-shell bodies and the type of geological
2 condition results in a rather erratic condition of
3 the producing formation itself. And so, even though
4 you have a tight section indicated in the SE/4 of
5 Section 11, I wouldn't necessarily expect that that
6 would condemn everything south of the location, even,
7 because it's possible to have these tight spots and
8 have a continuation on past that. So, we don't really
9 have any control to show that there isn't gas down
10 in that point. Of course, we don't have anything to
11 show that it is past, but the fact that this well did
12 recover that much gas shows you that the gas is down
13 that far and you might go, for example, to the eastern
14 portion of this unit, for example, might be highly
15 prolific. There is no telling what the porosity and
16 permeability conditions would be even a few feet from
17 the wellbore. So, I don't see any basis of penalizing
18 this drilling unit because we can't really say that
19 this thing terminates at that point.

20 Q You are proposing a location that is set in here in
21 the middle of three wells which are on-pattern, the
22 west offset, the north offset, and this east offset.
23 They are all on-patterns. Now, this well that Read
24 & Stevens drilled, that was in the SW/4 of Section 6,
25 at the time it was drilled, was the east well to the

1 east of it in existence?

2 A I'll have to refer back to my completion cards here.

3 Q You mentioned at one point it was a recent completion.

4 A The Hurd Number 1 well was completed in March, 1970.

5 Q Well, I'm talking about the Read & Stevens Well in
6 Section 6.

7 A That's the Midwest. The Midwest Number 1 was completed
8 in July of 1970.

9 Q All right. When was that Midwest Company well fully
10 completed?

11 A The Midwest New Mexico State "B" Number 1 well was
12 completed in February of 1971.

13 Q Now, do you have any data as to any drill stem tests
14 or any other indication of productivity in this well,
15 which is the NW/4 of Section 6?

16 A I guess it's Ard Drilling Company.

17 MR. MORRIS: Mr. Examiner, while Mr. Gray is
18 looking for that information, it might be pertinent to bring
19 out at this time that at this point in time that, in connection
20 with the effect of correlative rights here, the Application
21 before us is supported by Pan American Petroleum, which will
22 be a partner in the well to the extent of their interest in
23 the SE/4 of Section 11. And, I think the Commission has a
24 telegram of support in that regard and we also anticipate that
25 Read & Stevens will support the Application.

1 MR. NUTTER: All right.

2 A Mr. Nutter, the completion card on the Ard Drilling
3 Company, Sinclair State Number 6 Well located 1,640
4 feet from the north and 990 feet from the west line
5 of Section 6 of 15 South, 28 East, shows that there
6 was open hole from 8,502 to 8,542 and then acidized
7 with 2,000 gallons. The completion card just records
8 that a small amount of gas was recovered from this
9 open hole section, but it doesn't state how much.

10 Q It doesn't? Okay. So, as far as your card there is
11 concerned, that's the only indication of productivity
12 is just a small amount of gas?

13 A Yes, sir.

14 Q But at any rate, you are not proposing any penalty to
15 be established for this proposed location?

16 A No, we don't think there is any basis for any
17 penalty to be assessed inasmuch as there is no evidence
18 to show that there is less than 320 acres that is
19 productive. Also, the fact that other wells have been
20 drilled in this pool as exceptions, unorthodox
21 locations, these have been allowed without penalty
22 to themselves and the fact that there already has been
23 substantial amount of gas drained by the offset
24 operators so that I don't see any basis for showing
25 that anyone is going to be hurt offsetting this location.

1 So, I think that if there were any thought to
2 penalizing this well, that you would have to go back
3 and take a look at all of the wells in the pool. If
4 this fault situation exists, you'd even have to look
5 at the acreages that are along this fault plane that
6 cut off some of the acreage from some of the wells.
7 That would reduce their size. So, if you are going to
8 penalize one well, in all fairness, you would have to
9 look at all of the wells in a pool that would be
10 treated similarly.

11 Q Well, now, with respect to Exhibit 7, Mr. Gray, you
12 said that you didn't have the logs of all the wells,
13 so what are these points picked on, then?

14 A They are picked on the top of pay that the operators
15 reported on the completion cards. In other words, in
16 the absence of a uniform formation top used by all the
17 operators, we have resorted to using the top of pay
18 as they report.

19 Q Well, now, do you know whether all the wells are
20 completed in the same pay or not?

21 A Well, the logs that we have examined indicate to us
22 that there is no basis for saying that there is more
23 than one pay in this particular area. I couldn't state
24 definitely that there may not be other pays existing
25 because we haven't seen the logs in these other areas

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1 and we haven't made that full a study on this thing.

2 Q Well, all the logs you've seen showed the same one
3 pay that you've shown on this cross-section?

4 A That's our interpretation.

5 Q And that's where these two wells are perforated?

6 A Yes, sir.

7 Q In this same pay here?

8 A Yes, sir.

9 Q Now, did you have a top pay for that Read well immediately
10 north of your proposed location?

11 A Yes, we do. That well didn't quite fit there and
12 if we would have used the top of pay we would have
13 drawn a little localized high right around that one
14 well there.

15 Q That would be the only one there, so you just left
16 it off?

17 A It looked so questionable in the absence of something
18 to confirm that figure, that we just left it off.
19 That was the only point that didn't conform to the
20 pattern. But, if that point is right, well, these
21 contours would be adjusted in order to provide a
22 very local structural high, or a top pay high right
23 at this one well there.

24 MR. RUTTER: Are there any further questions
25 of Mr. Gray?

1 (No response.)

2 MR. NUTTER: He may be excused.

3 MR. KELLAMIN: If it please the Examiner, Thomas
4 Kellahin of Kellahin and Fox, appearing for Read & Stevens,
5 of Roswell, New Mexico. Read & Stevens is the offsetting
6 interest owner to the north and to the east of the Applicant's
7 proposed unorthodox location. Read and Stevens supports
8 Applicant's request for an unorthodox location without
9 penalized allowable.

10 MR. NUTTER: Thank you.

11 Do you have anything further, Mr. Morris?

12 MR. MORRIS: No, sir.

13 MR. NUTTER: Does anyone have anything they
14 wish to offer in Case Number 4827?

15 MR. HATCH: The Commission has received a
16 telegram from Amoco Production Corporation supporting the
17 Application.

18 MR. MORRIS: Does that support the Application
19 without a penalty, Mr. Hatch?

20 May I ask, just for the record, that it be read?

21 MR. HATCH: "Amoco Production Company is an
22 interest owner adjacent to the well to be drilled at an
23 unorthodox location by Robert Infield and is an operator
24 and interest owner in other wells in the Buffalo Valley-
25 Pennsylvanian Gas Pool. Amoco Production believes the entire

1 E/2 of Section 11 has been proven productive of gas for
2 the drill stem test of the Pennsylvanian and the well drilled
3 in the SE/4 of that section. First, that a well should be
4 located at the approved point, unorthodox location, to
5 effectively drain the reserves in the E/2 of Section 11,
6 therefore, Amoco Production strongly urges the Commission to
7 approve the drilling of the well at the unorthodox location
8 requested in Case 4827 and permit production from that well
9 without allowable penalty.

10 MR. NUTTER: Thank you, Mr. Hatch. If there is
11 nothing further, we will take the case under advisement and
12 call Case 4577 again, which is in the matter of Case 4577
13 reopened pursuant to the provisions of Order Number R-4181.
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dearnley, meier & mc cormick

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1 STATE OF NEW MEXICO)
2 COUNTY OF BERNALILLO) ss

3 I, JOHN DE LA ROSA, a Court Reporter, in and for the
4 County of Bernalillo, State of New Mexico, do hereby certify
5 that the foregoing and attached Transcript of Hearing
6 before the New Mexico Oil Conservation Commission was
7 reported by me; and that the same is a true and correct record
8 of the said proceedings to the best of my knowledge, skill
9 and ability.

10 John De La Rosa
11 COURT REPORTER
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I N D E X

PAGE

WITNESS:

RALPH GRAY

3

Direct Examination by Mr. Morris

16

Cross-Examination by Mr. Nutter

E X H I B I T S

OFFERED

ADMITTED

APPLICANT'S

Robert N. Enfield

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Exhibit Number 1

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Exhibit Number 2

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Exhibit Number 3

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Exhibit Number 4

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Exhibit Number 5

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Exhibit Number 6

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Exhibit Number 7



OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO
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P. O. BOX 2088 - SANTA FE
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October 16, 1972

**GOVERNOR
BRUCE KING
CHAIRMAN
LAND COMMISSIONER
ALEX. J. ARMJO
MEMBER
STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR**

Re: Case No. 4827
Order No. R-4420
Hannah Applicant: Field

Mr. Richard S. Morris
Montgomery, Federici,
& Morris
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico

Dear Sir:

Dear Sir:

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

Very truly yours,

H. P. [Signature]

very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

ALP/ir
copy of order also sent to:

COPI

Hobbs	OCC	<u>X</u>
ia	OCC	<u>X</u>

Hobbs OCC _____
Artesia OCC _____ **x**

Azteco OCC _____

Other

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 4827
Order No. R-4420

APPLICATION OF ROBERT N. ENFIELD
FOR AN UNORTHODOX LOCATION,
CHAVES COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 23, 1972, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 16th day of October, 1972, the Commission, a quorum being present, 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 Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Robert N. Enfield, seeks, as an exception to Rule 2 of the Special Rules and Regulations for the Buffalo Valley-Pennsylvanian Pool, approval of an off-pattern unorthodox gas well location 990 feet from the North line and 990 feet from the East line of Section 11, Township 15 South, Range 27 East, NMPH, Chaves County, New Mexico.
- (3) That the E/2 of said Section 11 is to be dedicated to the well.
- (4) That a well drilled at the proposed location should encounter the subject formation structurally higher than a well drilled at a standard location.
- (5) That approval of the subject application will afford the applicant the opportunity to produce his just and equitable share of the gas in the subject 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.

-2-

Case No. 4827
Order No. R-4420

IT IS THEREFORE ORDERED:

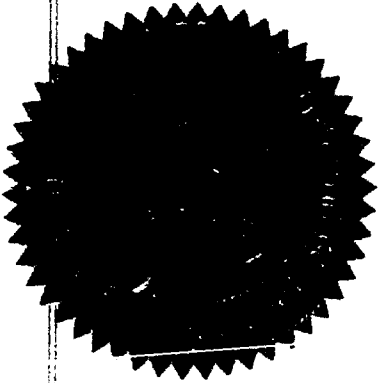
(1) That the applicant, Robert N. Enfield, is hereby authorized to drill a gas well at an off-pattern unorthodox location 990 feet from the North line and 990 feet from the East line of Section 11, Township 15 South, Range 27 East, NMPM, Buffalo Valley-Pennsylvanian Pool, Chaves County, New Mexico, as an exception to Rule 2 of the Special Rules and Regulations for said pool.

(2) That the E/2 of said Section 11 is to be dedicated to the above-described well.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



Bruce King
BRUCE KING, Chairman

Alex J. Armejo
ALEX J. ARMEJO, Member

A. L. Porter, Jr.
A. L. PORTER, Jr., Member & Secretary

S E A L

dr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 4361
Order No. R-3974

APPLICATION OF READ & STEVENS, INC.,
FOR AN UNORTHODOX GAS WELL LOCATION,
CHAVES COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 27, 1970,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 10th day of June, 1970, the Commission, a
quorum being present, 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 Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, Read & Stevens, Inc., seeks authority
to drill a gas well at an unorthodox gas well location 990 feet
from the South line and 990 feet from the West line of Section 6,
Township 15 South, Range 28 East, NMPM, Buffalo Valley-Pennsyl-
vanian Gas Pool, Chaves County, New Mexico, to be dedicated to a
gas proration unit comprising the W/2 of said Section 6, in excep-
tion to the provisions of Rule 2 of Order No. R-1670-II.

(3) That the Special Rules and Regulations governing the
Buffalo Valley-Pennsylvanian Gas Pool provide that each well
completed or recompleted in said pool shall be located in the
northwest quarter or the southeast quarter of the section and
shall be located no nearer than 990 feet to the outer boundary
of the quarter section nor nearer than 330 feet to any govern-
mental quarter-quarter section line.

-2-

CASE No. 4361
Order No. R-3974

(4) That the proposed location, in the southwest quarter of said Section 6, is an off-pattern quarter section location.

(5) That the evidence indicates that a well drilled at the proposed non-standard location in the southwest quarter of said Section 6 should encounter a thicker and more prolific pay section of the Pennsylvanian sand than a well drilled at a standard location in the northwest quarter of said section and should, therefore, result in greater ultimate recovery of gas, thereby preventing waste.

(6) That approval of the proposed unorthodox location will not violate correlative rights and will afford the applicant the opportunity to produce its just and equitable share of the gas in the subject 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 otherwise prevent waste.

IT IS THEREFORE ORDERED:

(1) That the applicant, Read & Stevens, Inc., is hereby authorized to drill a gas well at an unorthodox location 990 feet from the South line and 990 feet from the West line of Section 6, Township 15 South, Range 28 East, NMPM, Buffalo Valley-Pennsylvanian Gas Pool, Chaves County, New Mexico, to be dedicated to a gas proration unit comprising the W/2 of said Section 6.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

ALEX J. ARMIJO, Member

S E A L

A. L. PORTER, Jr., Member & Secretary

csr/

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 13, 1972

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

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

ALLOWABLE: (1) Consideration of the allowable production of gas for October, 1972, from seventeen prorated pools in Lea, Eddy, Chaves and Roosevelt Counties, New Mexico;

(2) Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico, for October, 1972.

CASE 4808: Application of Skelly Oil Company for a waterflood expansion and dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks to expand its Grayburg-Jackson Skelly Unit Waterflood Project, Grayburg-Jackson Pool, Eddy County, New Mexico, by the injection of water through its Unit Well No. 114 located in Unit D of Section 14, Township 17 South, Range 31 East. Said Well No. 114 to be completed as a dual completion in such a manner as to permit the production of oil from the Fren-Sevens Rivers Pool and the injection of water into the Grayburg-Jackson Pool.

CASE 4809: Application of Saturn Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Antebellum Unit Area comprising 3,840 acres, more or less, of State and Federal lands in Township 23 South, Range 34 East, Lea County, New Mexico.

CASE 4810: In the matter of the application of the Oil Conservation Commission on its own motion to consider the revision of the special rules for the Devils Fork Gallup Associated Pool and the Escrito Gallup Associated Pool, Rio Arriba and San Juan Counties, New Mexico, promulgated by Orders Nos. R-1670-B and R-1793-A, respectively, to permit taking of gas-oil ratio and bottom-hole pressure tests on an annual basis rather than quarterly and semi-annually, as is now required.

CASE 4747: (Continued from the July 26, 1972, Examiner Hearing)

Application of Union Texas Petroleum, a Division of Allied Chemical Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests below the base of the Devonian formation underlying the N/2 of Section 33, Township 25 South, Range 37 East, Crosby Field, Lea County, New Mexico. Said acreage to be dedicated to its well to be located 1650 feet from the North line and 2310 feet from the East line of said Section 33. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.

CASE 4577: (Reopened)

In the matter of Case 4577 being reopened pursuant to the provisions of Order No. R-4181, which order established special rules and regulations for the Parkway-Wolfcamp Pool, Eddy County, New Mexico, including a provision for 160-acre spacing units. All interested persons may appear and show cause why said pool should not be developed on 40-acre or 80-acre spacing units.

CASE 4811: Application of Atlantic Richfield Company for a non-standard proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 120-acre non-standard gas proration unit comprising the N/2 SE/4 and NE/4 SW/4 of Section 36, Township 21 South, Range 37 East, Blinbry Gas Pool, Lea County, New Mexico, to be dedicated to its State 367 Well No. 3 located in Unit K of said Section 36.

CASE 4812: Application of Midwest Oil Corporation for an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks as an exception to Rule 104, authority to drill a wildcat gas well to test the Morrow formation at an unorthodox location 1320 feet from the South and East lines of Section 1, Township 18 South, Range 28 East, Eddy County, New Mexico, with the S/2 of said Section 1 to be dedicated to the well.

CASE 4813: Application of Inexco Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Sitting Bull Unit Area comprising 6,665 acres, more or less, of Federal lands in Sections 28, 29, 31, 32, and 33 of Township 23 South, Range 22 East, and Sections 4 through 9 of Township 24 South, Range 22 East, Eddy County, New Mexico.

CASE 4814: Application of Inexco Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Four Forks Unit Area comprising 3,133 acres, more or less, of Federal and Fee lands in Sections 3, 10, 11, 14 and 15 of Township 22 South, Range 25 East, Eddy County, New Mexico.

CASE 4815: Application of Inexco Oil Company for pool creation and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Strawn gas pool for its well located 1980 feet from the South and West lines of Section 18, Township 21 South, Range 26 East, Eddy County, New Mexico. Applicant further seeks the promulgation of special rules therefor, including a provision for 640-acre spacing units.

CASE 4816: Application of Penroc Oil Corporation for a special gas-oil ratio limitation increase, Lea County, New Mexico. Applicant, in the above-styled cause, seeks amendment of the special rules and regulations for the Hobbs-Drinkard Pool promulgated by Order No. R-3811, as amended,

(Case 4816 continued from Page 2)

to establish a limiting gas-oil ratio limitation of 6,000 cubic feet of gas per barrel of oil in said pool.

- CASE 4817: Application of Phillips Petroleum Company for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Drag "B" Well No. 1 located in Unit K of Section 18, Township 23 South, Range 27 East, Eddy County, New Mexico, in such a manner as to produce gas from the South Carlsbad-Morrow Gas Pool through tubing and an undesignated Canyon gas pool through the casing-tubing annulus.
- CASE 4818: Application of Tipperary Land and Exploration Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the North Bagley-Pennsylvanian Pool by the injection of water into the Strawn and possibly other formations by the injection of water through its Bess Well No. 1 located 660 feet from the North line and 1980 feet from the East line of Section 20, Township 11 South, Range 33 East, Lea County, New Mexico.
- CASE 4819: Application of D. L. Hannifin for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in and under the S/2 of Section 24, Township 22 South, Range 26 East, South Carlsbad Field, Eddy County, New Mexico, to be dedicated to a well to be drilled 1980 feet from the South and East lines of said Section 24. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.
- CASE 4820: Application of Anadarko Production Company for the creation of an associated pool, special rules therefor, downhole and surface commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new associated pool for the production of oil and gas from the Yates and Seven Rivers formations for its Loco Hills Federal "B" Wells Nos. 1 and 8 located, respectively, in Units P and K of Section 9, Township 17 South, Range 30 East, Eddy County, New Mexico, and the promulgation of special rules therefor including provisions for the classification of oil and gas wells, oil and gas well spacing, and an unlimited gas-oil ratio.
- Applicant further seeks authority to commingle in the well-bore of said Well No. 1 the Yates-Seven Rivers production from the newly created pool and the Grayburg-Jackson Pool and to commingle on the surface the Yates-Seven Rivers production from said Well No. 8 with production from the Grayburg-Jackson Pool.
- CASE 4821: Application of Getty Oil Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks as an exception

(Case 4821 continued from Page 3)

to Rule 303 of the Commission Rules and Regulations, authority to commingle production from the North Vacuum-Abo, Vacuum-Wolfcamp, and Vacuum-Pennsylvanian Pools in the wellbore of its State "BA" Well No. 8 located in Unit B of Section 36, Township 17 South, Range 34 East, Lea County, New Mexico.

CASE 4822: Application of Getty Oil Company for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location for its State "BA" Well No. 9 located 660 feet from the North line and 2310 feet from the East line of Section 36, Township 17 South, Range 34 East, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico. Said well being nearer than 660 feet to another well capable of producing from the same pool.

CASE 4823: Application of Getty Oil Company for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location for its A. B. Coates "C" Well No. 28 located 1820 feet from the North and West lines of Section 24, Township 25 South, Range 37 East, Justis Blinebry Pool, Lea County, New Mexico. Said well being located nearer than 660 feet to another well capable of producing from the same pool.

CASE 4824: Application of Getty Oil Company for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location for its H. D. McKinley Well No. 11 located 760 feet from the North line and 550 feet from the East line of Section 30, Township 18 South, Range 38 East, Hobbs Grayburg-San Andres Pool, Lea County, New Mexico. Said well being nearer than 660 feet to another well capable of producing from the same pool.

CASE 4825: Application of Hanagan Petroleum Corporation for dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Catclaw Draw Unit Well No. 3 located in Unit D of Section 36, Township 21 South, Range 25 East, Eddy County, New Mexico, in such a manner as to produce gas from an undesignated Strawn gas pool through tubing and from the Catclaw Draw-Morrow Gas Pool through the casing-tubing annulus.

CASE 4826: Application of Hanagan Petroleum Corporation for pool creation, special pool rules, and an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Strawn gas pool for its well located 920 feet from the North and West lines of Section 36, Township 21 South, Range 25 East, Eddy County, New Mexico, and the promulgation of special rules therefor, including a provision for 640-acre spacing units. Applicant further seeks approval of an unorthodox location for the above-described well.

CASE 4827: Application of Robert N. Enfield for an unorthodox location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks

Examiner Hearing - Wednesday - September 13, 1972
-5-

Docket No. 20-72

(Case 4827 continued from Page 4)

authority to drill a gas well at an off-pattern unorthodox location 990 feet from the North and East lines of Section 11, Township 15 South, Range 27 East, Buffalo Valley-Pennsylvanian Gas Pool, Chaves County, New Mexico, with the E/2 of said Section 11 to be dedicated to the well.

CASE 4828: Application of Inexco Oil Company for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority for the dual completion of its McMinn State Well No. 1 located 1980 feet from the South and West lines of Section 18, Township 21 South, Range 26 East, Eddy County, New Mexico, in such a manner as to produce gas from the Strawn formation and the Morrow formation adjacent to the Catclaw Draw-Morrow Gas Pool.



Telegram

1972 SEP 13 AM 9 55 (1131)

KA012 CTA069

CT GIA102 PDB 2 EXTRA=TDG! HOUSTON TEX 13 1116A EDT=
OIL CONSERVATION COMMISSION=

STATE LAND OFFICE BLDG SANTA FE NMEX=
RE CASE 4827 EXAMINER HEARING DOCKET, WEDNESDAY,
SEPTEMBER 13, 1972=

AMOCO PRODUCTION COMPANY IS AN INTEREST OWNER
UNIT TO BE ASSIGNED TO THE WELL TO BE DRILLED AT AN
UNORTHODOX LOCATION BY ROBERT N ENFIELD AND IS AN
OPERATOR AND INTEREST OWNER IN OTHER WELLS IN THE
BUFFALO VALLEY PENNSYLVANIAN GAS POOL=

AMOCO PRODUCTION COMPANY BELIEVES THE ENTIRE EAST ONE
HALF OF SECTION ELEVEN HAS BEEN PROVEN PRODUCTIVE OF GAS

WU 1201 (R 5-69)

RECEIVED
SEP 13 1972
OIL CONSERVATION COMMISSION
Santa Fe



Telegram

BY THE DRILL STEM TEST IN THE PENNSYLVANIAN IN THE WELL
DRILLED IN THE SOUTHEAST ONEQUARTER OF THAT SECTION=
FURTHER, THAT A WELL SHOULD BE LOCATED AT THE APPLIED
FOR UNORTHODOX LOCATION TO EFFECTIVELY DRAIN THE RESERVES
IN THE EAST HALF OF SECTION ELEVEN=THEFORE, AMOCO
PRODUCTION COMPANY STRONGLY URGES THE COMMISSION TO
APPROVE THE DRILLING OF THE WELL AT THE UNORTHODOX
LOCATION REQUESTED IN CASE 4827 AND PERMIT PRODUCTION
FROM THAT WELL WITHOUT ALLOWABLE PENALTY=

D L RAY AMOCO PRODUCTION COMPANY HOUSTON TEXAS==

4827 13 1972 4827=

WU 1201 (R 5-69)

WELL DATA

PAN AMERICAN - FEDERAL COM. "C" #1

Location: 990' f. N. & 1650' f. W. - Sec. 11-15S-27E.
Completed: Nov. 7, 1968
Total Depth: 8413'. Elevation: 3493 KB.
Top of Pay: 8232
Casing: 5 $\frac{1}{2}$ " at 8413 w/350 sx.
Perforated: 8232-57.
IP - CAOF - 8,000 MCF/D.
Acidized with 500 and 2,000 gallons.

*west offset
to proposed
location*

South offset

PAN AMERICAN - FEDERAL COM. "D" #1

Location: 1650' f. S. & E. - Sec. 11-15S-27E.
Plugged and Abandoned May 19, 1969.
Total Depth: 8603'. Elevation: 3553 KB.
Cored: 8341-8452.
DST: 8424-8524, tool open 2 hrs. Gas to surface in 14 min.
Flowed 116,000 c.f./d. Recov. 534' mud. FP - 96-105 psi.
ISIP - 2509 psi./45 min. FSIP - 2586/2 hrs.
DST: 8252-8352 (strad. pkr.) Open 1 hr. Recov. 534' mud.
FP 212-251 psi. ISIP - 463 psi./45 min. FSIP - 656 psi./2 hrs.

*lower
DST
upper
DST*

READ & STEVENS - HURD #1

Location: 990' f. N. & 1661' f. W. - Sec. 12-15S-27E.
Completed: March 22, 1970
Total Depth: 8699 Elevation: 3563 DP.
Top of Pay: 8484
Casing: 4 $\frac{1}{2}$ " at 8699 w/350 sx.
Perforated: 8484-8515.
IPF: 8,000 MCF/D.
Acidized w/500 gallons.

east offset

EXHIBIT NO.	2
CASE NO.	4807
Submitted by	1776
Hearing Date	12-11-70

Exhibit #2

MONTHLY & CUMULATIVE PRODUCTION
BUFFALO VALLEY PENN GAS POOL

YEAR & MONTH	AMOCO PRODUCTION C-11-15-27 FEDERAL "C" #1		CITIES SERVICE N-35-14-27 BAETZ "A" #1		CLINTON OIL CO. H-35-14-27 BUFFALO VALLEY #2		D-1-15-27 CLEMENTS BUFFALO #1		HANSON OIL CO. P-26-14-27 MILLER #1		MIDWEST OIL CORP. O-6-15-28 N. MEX. STATE V #1	
	OIL	GAS	OIL	GAS	OIL	GAS	OIL	GAS	OIL	GAS	OIL	GAS
Cumulative	10,812	870,887	22,127	3,526,442	1,537	232,015	57,391	3,574,684	225	18,219	15,453	392,082
1972												
Jan.	156	27,635	77	40,835	11	5,901	443	66,203			1,880	63,499
Feb.	27	8,086	40	37,758	30	4,749	429	60,516			1,672	61,283
Mar.	52	10,745	108	38,838	19	4,279	444	66,727			2,812	125,665
Apr.	129	20,133	124	41,658	73	20,873	396	64,535			2,437	116,456
May	58	174	14	5,435	82	23,794	412	63,550			1,977	121,800
June	68	16,794	188	35,484	8	21,153	347	60,702			1,513	111,398
Total	490	83,567	551	200,008	223	80,749	2,471	382,233			12,291	600,101
Cumulative	11,302	954,454	22,678	3,726,450	1,760	312,764	59,862	3,956,917	225	18,219	27,744	992,183

ONE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 4827
Submitted by *Hynd*
Hearing Date 7-13-72

MONTHLY & CUMULATIVE PRODUCTION (Continued)

BUFFALO VALLEY PENN GAS POOL

YEAR & MONTH	J-2-15-27 BUFFALO VALLEY #2		F-2-15-27 BUFF. VALLEY COM. #1		C-12-15-27 HURD #1		M-6-15-28 MIDWEST COM. #1		J-12-15-27 TROBATGH "A" #1		J-1-15-27 TROBATGH COM. #1	
	OIL	GAS	OIL	GAS	OIL	GAS	OIL	GAS	OIL	GAS	OIL	GAS
Cumulative	55,329	3,051,426	50,230	3,768,079	18,065	1,577,336	7,349	357,538	705	84,723	14,258	1,243,288
<u>1972</u>												
Jan.	319	43,625	193	50,897	912	96,645	35	5,331	51	10,979	891	94,545
Feb.	256	40,143	192	47,046	846	87,811	198	18,198	66	4,572	867	84,196
Mar.	312	42,512	233	53,169	889	85,313	70	11,251	14	2,516	818	89,665
Apr.	281	42,241	232	51,574	878	94,534	97	8,490	44	3,593	890	89,262
May	290	43,755	193	47,239	873	95,119	77	9,074	107	13,229	864	90,248
June	268	42,705	180	44,532	860	97,346	72	10,385	47	12,078	801	88,327
Total	1,726	254,981	1,223	294,457	5,258	556,768	549	62,729	329	46,967	5,131	536,243
Cumulative	57,055	3,306,407	51,453	4,062,536	23,323	2,134,104	7,898	420,267	1,034	131,690	19,389	1,779,531

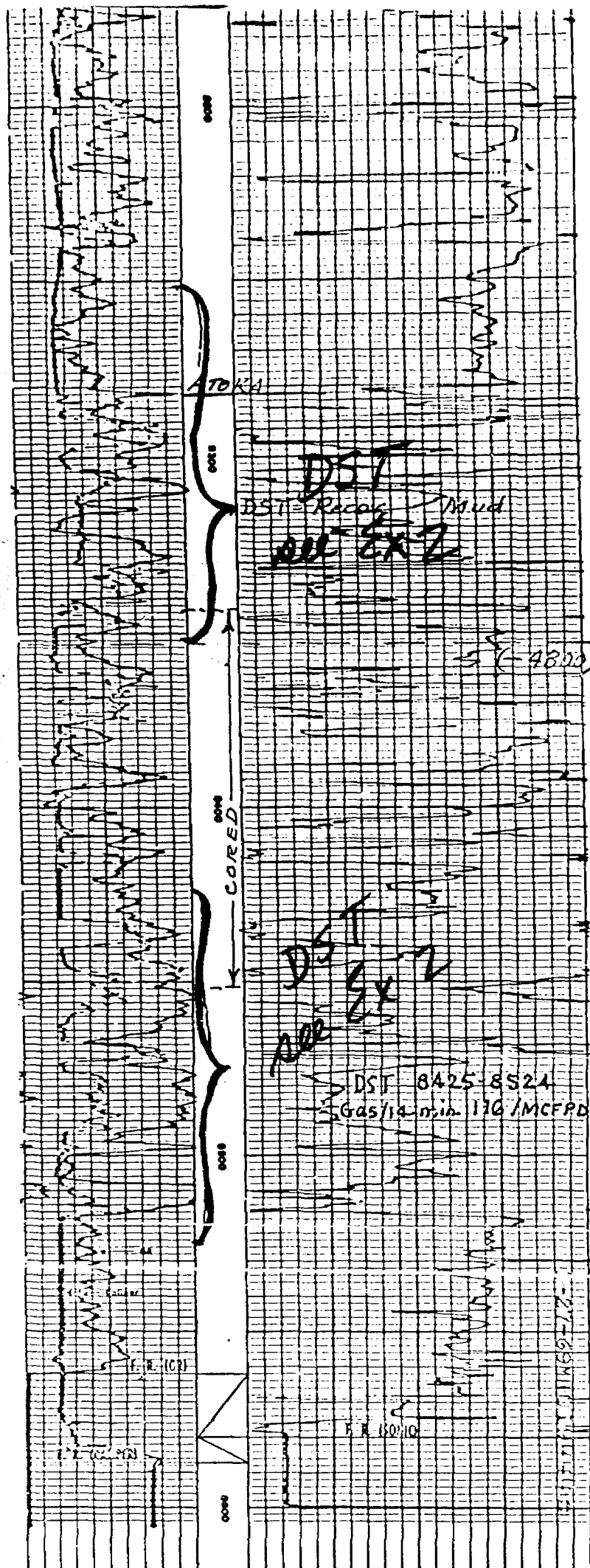
SHUT-IN SURFACE PRESSURES - BUFFALO VALLEY PENN GAS POOL

DATE	AMOCO PROD.		CITIES SERV.		CLINTON OIL CO.		READ & STEVENS					
	C-11-15-27 Federal "C" #1		N-35-14-27 Baetz "A" #1		H-35-14-27 Buffalo Valley #2	D-1-15-27 Clements Buff. #1	J-2-15-27 Buffalo Valley #2	F-2-15-27 Buff.Valley Com. #1	C-12-15-27 Hurd #1	M-6-15-28 Midwest Com. #1	J-12-15-27 Trobaugh A #1	J-1-15-27 Trobaugh Com. #1
1964				*								
1966				1863								
				1440								
1967				1566								
1968				1721			1901	2260	2130			
1969	1660		1361		1270	1100		1928	1504			
1970	1470		1468		1150	1430	1563	1225	2301			2340
1971												
May	1283		1156		1140	1120	1420	1150	2050	2498	2197	2250

* Initial SITP approximately 2400 psi.

BEFORE EXAMINER NUTTER OIL CONSERVATION COMMISSION	
EXHIBIT NO.	4
CASE NO.	4827
Submitted by	Hurd
Hearing Date	April 13-72

Exhibit 4



6 16

CALIPER
HOLE DIAL IN INCHES

0 100
100 200

CAMMA RAY
API UNITS

Exhibit #6

100 70 60
100 130 100

INTERVAL TRANSIT TIME
MICROSECONDS PER FOOT

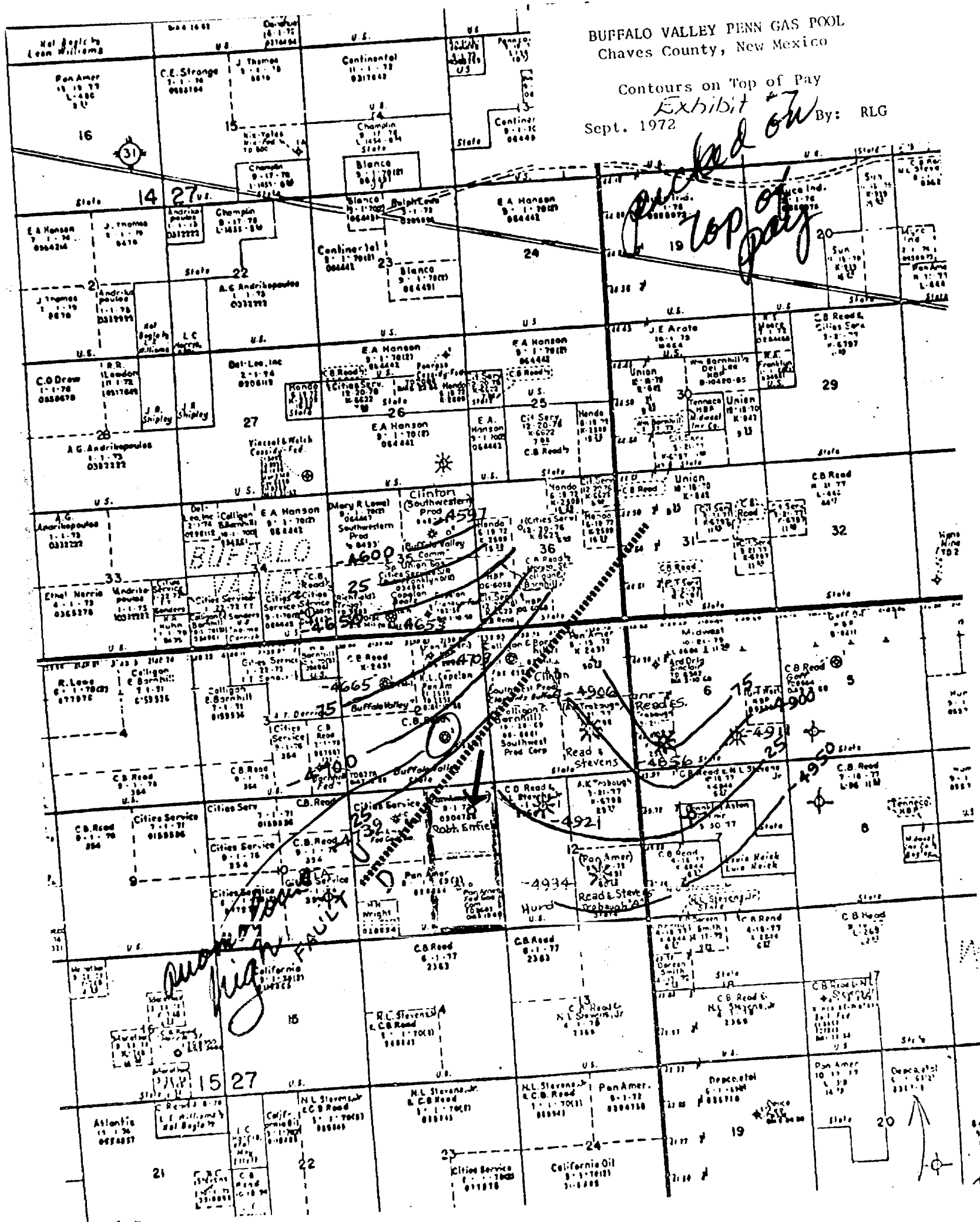
COMPANY PAN AMERICAN PETROLEUM CORPORATION
WELL FEDERAL NO. 1 GAS CON. #1
FIELD BUFFALO VALLEY PENN
COUNTY CHAYES STATE NEW MEXICO

SEAL 18-2587
SEAL TO 8287
OIL TO 1003
18-3553
DE
CA

18-2587-1003-18-3553

BUFFALO VALLEY PENN GAS POOL
Chaves County, New Mexico

Contours on Top of Pay
Exhibit #7 By: RLG
Sept. 1972



BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION
Said to

APPLICATION OF ROBERT N. ENFIELD)
FOR APPROVAL OF AN OFF-PATTERN)
WELL LOCATION, BUFFALO VALLEY-)
PENNSYLVANIAN GAS POOL, CHAVES)
COUNTY, NEW MEXICO)

Case No. 4827

APPLICATION

Comes now Robert N. Enfield and applies to the New Mexico Oil Conservation Commission for approval of an off-pattern well location in the Buffalo Valley-Pennsylvanian Gas Pool, Chaves County, New Mexico, and in support of his application states:

1. The Special Rules and Regulations for the Buffalo Valley-Pennsylvanian Gas Pool, as promulgated by Order No. R-1670-H, require that each well in that pool shall be located in the NW/4 or the SE/4 of the Section and no nearer than 990 feet to the outer boundary of the Quarter Section; the said Rules also provide for 320 acre gas proration units.

2. The applicant, Robert N. Enfield, proposes to drill a well in the Buffalo Valley-Pennsylvanian Gas Pool at a location 990 feet from the north line and 990 feet from the east line of Section 11, Township 15 South, Range 27 East, Chaves County, New Mexico, and proposes to dedicate 320 acres comprising the E/2 of said Section 11 to the said well. Applicant seeks approval of the proposed well as an off-pattern location under the Special Rules and Regulations of the Buffalo Valley-Pennsylvanian Gas Pool.

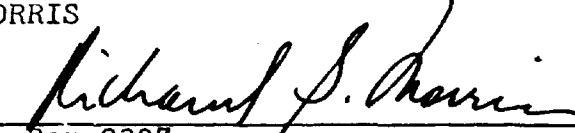
3. The proposed off-pattern location is necessitated by the fact that Pan-American Petroleum Corporation has previously drilled a well in the SE/4 of said Section 11, which well indicated the presence of gas in the Pennsylvanian Formation but which was not completed as a commercial producer.

4. Approval of this application will prevent waste and protect correlative rights.

WHEREFORE, the applicant requests that this case be set for hearing before the Commission or one of its Examiners and that the Commission enter its order approving this application.

MONTGOMERY, FEDERICI, ANDREWS, HANNAHS
& MORRIS

By


P.O. Box 2307

Santa Fe, N.M. 87501

Attorneys for Robert N. Enfield

DRAFT

GMH/dr

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 4827

Order No. R- 4420

APPLICATION OF ROBERT N. ENFIELD
FOR AN UNORTHODOX LOCATION, CHAVES
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 23, 1972
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of September, 1972, the Commission,
a quorum being present, 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 Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, Robert N. Enfield, seeks ^{an}
exception to Rule ~~2.1~~ ^{2.1 of the Commission Rules and Regulations}
~~for~~ approval of an off-pattern unorthodox gas well location 990
feet from the North line and 990 feet from the East line of
Section 11, Township 15 South, Range 27 East, NMPM, ^{Charles County, Buffalo}
Valley-Pennsylvanian Pool, to test the
formation.

(3) That the E/2 of said Section 11 is to be dedicated to the well.

(4) That a well drilled at the proposed location should encounter the subject formation structurally higher than a well drilled at a standard location.

(5) That approval of the subject application will afford the applicant the opportunity to produce ^{his} ~~its~~ just and equitable share of the gas in the subject pool ~~field~~, 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:

the applicant, Robert N. Enfield, is hereby authorized
(1) That, ~~an unorthodox gas well location for the formation~~
to drill a gas well at an off-pattern
~~formation is hereby approved for the off-~~
location
~~pattern~~ unorthodox well at a point 990 feet from the North line and 990 feet from the East line of ~~said~~ Section 11, Township 15 South, Range 27 East, NMPM, Buffalo Valley-Pennsylvanian Pool, ~~Chaparral~~ *Chaparral* County, New Mexico, as an exception to Rule ~~14~~ *2 of the* ~~of the Commission Rules and Regulations for said pool.~~
Special Rules and Regulations for said pool.
~~Commission Rules and Regulations.~~

(2) That the E/2 of said Section 11 is to be dedicated to the above-described well.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

CASE 1928: Application of EMERCO
OIL CO. FOR A WELL COMPLETION,
EDDY COUNTY, NEW MEXICO.

OK