

CASE 5917: HANAGAN PET. CORP. FOR AN
UNORTHODOX GAS WELL LOCATION, EDDY
COUNTY, NEW MEXICO

Case Number

5917

Application

Transcripts

Small Exhibits

ETC.



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501



DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO
June 15, 1977

STATE GEOLOGIST
EMERY C. ARNOLD

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

Re: CASE NO. 5917
ORDER NO. R-5461

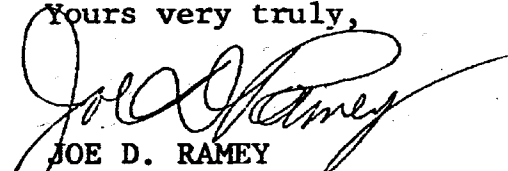
Applicant:

Hanagan Petroleum Corporation

Dear Sir:

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

Yours very truly,


JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC X
Artesia OCC X
Aztec OCC

Other Owen Lopez

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. 5917
Order No. R-5461

APPLICATION OF HANAGAN PETROLEUM
CORPORATION FOR AN UNORTHODOX GAS
WELL LOCATION, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 25, 1977,
at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 14th day of June, 1977, 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, Hanagan Petroleum Corporation,
seeks approval of an unorthodox gas well location for its Round
Mountain Well No. 1 to be located 2310 feet from the North
line and 660 feet from the East line of Section 34, Township
21 South, Range 25 East, NMPM, to test the Morrow formation,
Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico.

(3) That All of said Section 34 is to be dedicated to
the well.

(4) That all of said Section 34 may reasonably be presumed
to be productive of gas in the Catclaw Draw-Morrow Gas Pool.

(5) That a well at said unorthodox location will better
enable applicant to produce the gas underlying the proration
unit.

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Case No. 5917
Order No. R-5461

(6) That an offset operator with interests in the Catclaw Draw-Morrow Gas Pool in Section 35, Township 21 South, Range 25 East, NMPM, Eddy County, New Mexico, has objected to the proposed location.

(7) That a well at the proposed location is at a standard location relative to the North and South lines of said Section 34.

(8) That a well at the proposed location is 60 percent closer to the East line of said Section 34 than permitted by the Special Pool Rules for said Catclaw Draw-Morrow Gas Pool.

(9) That a well at the proposed location will have an area of drainage in the Morrow formation which extends 109 net acres into said Section 35, more than a well located at a standard location in said pool.

(10) That to offset the advantage gained over the protesting offset operator, production from the well at the proposed unorthodox location should be limited from the Morrow formation.

(11) That such limitation should be based upon the variation of the location from a standard location and the 109 net-acre encroachment described in Finding No. (9) above, and may best be accomplished by assigning a well at the proposed location an acreage factor of 0.74 (100 percent North/South factor plus 40 percent East/West factor plus 83 percent net-acre factor divided by 3).

(12) That approval of the subject application subject to the above limitation 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 will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That an unorthodox gas well location for the Morrow formation is hereby approved for the Hanagan Petroleum Corporation Round Mountain Well No. 1 to be located at a point 2310 feet from the North line and 660 feet from the East line of Section 34, Township 21 South, Range 25 East, NMPM, Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico.

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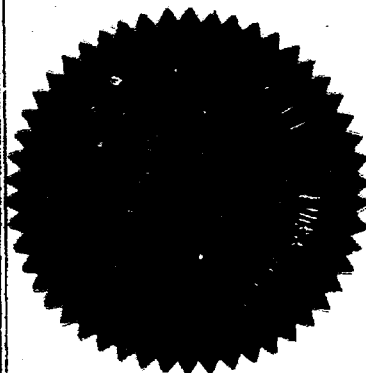
Case No. 5917
Order No. R-5461

(2) That All of said Section 34 shall be dedicated to the above-described well.

(3) That said well is hereby assigned an acreage factor of 0.74 in the Morrow formation, and the operator of the well, upon completion and connection thereof to a gas pipeline, shall notify the gas purchaser of said acreage factor.

(4) 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

Phil R. Lucero
PHIL R. LUCERO, Chairman

Emery C. Arnold
EMERY C. ARNOLD, Member

Joe D. Ramey
JOE D. RAMEY, Member & Secretary

S E A L

dr/

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
May 25, 1977

EXAMINER HEARING

IN THE MATTER OF:

Application of Hanagan Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. CASE 5917

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission: Lynn Teschendorf, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant: Owen M. Lopez, Esq.
MONTGOMERY, ANDREWS & HANNAHS
Attorneys at Law
325 Paseo de Peralta
Santa Fe, New Mexico

For Union Oil Company: W. Thomas Kellahin, Esq.
KELLAHIN & FOX
Attorneys at Law
500 Don Gaspar
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EXHIBIT INDEX

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1 MR. STAMETS: We will call now Case 5917.

2 MS. TESCHENDORF: Case 5917, application of Hanagan
3 Petroleum Corporation for an unorthodox gas well location,
4 Eddy County, New Mexico.

5 MR. LOPEZ: If the Examiner please, my name is Owen
6 Lopez with the Montgomery law firm in Santa Fe appearing on
7 behalf of the applicant. I have one witness to be sworn.

8 MR. KELLAHIN: Tom Kellahin of Kellahin and Fox
9 appearing on behalf of Union Oil Company of California.

10 MR. STAMETS: Do you have any witnesses?

11 MR. KELLAHIN: Yes, sir, I have one.

12 MR. STAMETS: Any other appearances in this case?

13 Would all of the witnesses stand and be sworn at this
14 time, please?

15 (THEREUPON, the witnesses were duly sworn.)

16
17 HUGH HANAGAN

18 called as a witness, having been first duly sworn, was examined
19 and testified as follows:

20
21 DIRECT EXAMINATION

22 BY MR. LOPEZ:

23 Q Would you please state your name, residence, by whom
24 you are employed and in what capacity?

25 A My name is Hugh Hanagan, I live in Roswell, New Mexico

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1 and I'm Vice President of the Hanagan Corporation.

2 Q Are you familiar with the application in Case Number
3 5719?

4 A Yes, I am.

5 Q Have you previously testified before the Commission
6 and had your qualifications accepted as a matter of record?

7 A Yes, I have.

8 MR. LOPEZ: Are the witness' qualifications
9 acceptable?

10 MR. STAMETS: Yes, they are.

11 Q (Mr. Lopez continuing.) Mr. Hanagan, what does the
12 applicant hope to obtain by this application?

13 A Hanagan Petroleum Corporation asked for an unorthodox
14 well location in the Catclaw Draw-Morrow Field of Eddy County,
15 New Mexico.

16 Q Turning to what has been marked as Exhibit A would you
17 please identify it?

18 A Exhibit A is a land ownership map of the area and it
19 shows the offset operators and so forth.

20 The green outlined area is the Catclaw Draw Unit area
21 which is a Federal and State approved unit. Hanagan Petroleum
22 Corporation is the operator of that unit.

23 The yellow outlined acreage is the six hundred and
24 forty acres to be dedicated to the subject well. The proposed
25 well which would be called the Hanagan Petroleum Corporation

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1 Round Mountain is colored in red.

2 The offset operators, from this map you can see that
3 to the south of the proposed gas unit in Section 3 of 22, 25,
4 Allied Chemical owns the east half, Texas Pacific Oil Company
5 owns the west half. In Section 4 which would be the diagonal,
6 Gulf Oil Corporation owns the northeast quarter and also the
7 northeast of the northwest quarter. In Section 33 which would
8 be the west offset acreage Amoco is the record title holder of
9 that lease. In Section 28, the diagonal northwest offset is
10 also Amoco, the record title owner. The north offset in
11 Section 27 is held by several, Union Oil Company is the record
12 title owner. In the southeast quarter in the west half of the
13 northeast quarter of which Hanagan Petroleum owns three-quarter
14 of that lease. Shell Oil Company owns most of the rest of
15 the section, again with Hanagan Petroleum owning three-quarters
16 Sorenson owns two forty-acre tracts of which Hanagan Petroleum
17 is an interest owner there.

18 In Section 26, again we find Union Oil as being the
19 record title owner in part of the west half of that section.
20 There are several owners in there but that is in the unit area
21 and that section has been communitized with Hanagan Petroleum
22 Corporation as the operator.

23 The east offset is in Section 25. It is also in the
24 Catclaw Draw Unit and it has been unitized into the Catclaw
25 Draw Unit.

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1 I think I said Section 26 was communitized. It is
2 actually unitized and, of course, in Section 2 of 22, 25, the
3 southeast offset is owned by Hanagan and Hanagan.

4 MR. STAMETS: You may have said Section 25 instead
5 of 35. I heard 25, my ears could have been wrong but I'm sure
6 you meant Section 35.

7 A That is correct Section 35 is the east offset,
8 Section 35 of 21, 25.

9 Q (Mr. Lopez continuing.) Is the Catclaw Draw Unit
10 developed on six hundred and forty acre spacing?

11 A Yes, it is.

12 Q Turning to Exhibit B, would you please identify it?

13 A Exhibit B is labeled subsurface contoured map on the
14 base of the Morrow sand. It is a subsurface structure map of
15 the Catclaw Draw Field and the surrounding areas.

16 The color code on it is similar to the Exhibit A in
17 that the proposed six hundred and forty acre gas unit on the
18 proposed well is outlined in yellow. The proposed location is
19 outlined in red, a red circle. The Catclaw Draw Field is --
20 the present productive limits of the Catclaw Draw Field is out-
21 lined in pink and the Catclaw Draw Field is on special rules and
22 regulations which is set up by Case Number 4548, Order R-4157,
23 dated June 21st, 1971 and among its special provisions includes
24 six hundred and forty acre spacing which is under Rule Two and
25 that no well shall be located no nearer than sixteen hundred and

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1 fifty feet to the outer boundary of the section and no nearer
2 than three hundred and thirty feet to the quarter-quarter
3 section line. This is under Rule Four.

4 And Hanagan Petroleum is asking for an exception to
5 the first part of Rule Four of the special field rules.

6 Also on the map you can see that the normal sixteen
7 hundred and fifty foot location is colored green and the normal
8 location would be sixteen fifty feet feet from the north line
9 and sixteen fifty feet from the east line. The unorthodox
10 location as staked would be twenty-three hundred and ten feet
11 from the north line and six hundred and sixty feet from the
12 east line.

13 Also on the map is the wavy green line which is the
14 outline of the Catclaw Draw Unit area.

15 The wells, the productive Morrow wells in the field
16 are colored yellow. The only exception is two wells on the
17 southwest of the field in the Revelation Morrow that we
18 have also colored yellow.

19 The solid blue wells are wells that are dry and
20 abandoned in the Morrow formation. The double circle blue wells
21 are dry Morrow wells drilled by Hanagan Petroleum Corporation.
22 As you can see, we have four dry holes on the west side of the
23 field, one on the south side and one on the east side. So you
24 can see that we have taken our chances in the area and have
25 come up with some production but we have also come up with six

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1 dry holes in the Morrow.

2 The Catclaw Draw Field itself, as indicated on this
3 map, is a structural trap and it is definitely on nosing,
4 north-south generally trending nosing. You do have east dip
5 and you do have west dip so it is definitely a structural trend
6 and superimposed on this structure map in dashed lines is what
7 we term our anticlinal axis. It is colored orange on the map.
8 This anticlinal axis is very important, not only to this
9 discussion but in our hopes of obtaining production from the
10 proposed well.

11 This anticlinal structure is well controlled regionally.
12 It can be traced all the way from the north end of the Catclaw
13 Draw Field southwestward through the Revelation Field and on
14 Down southwestward another eight miles into the Rock Tank Field.

15 Notice that parallel to this anticlinal axis to the
16 west is a pronounced negative area or synclinal axis. This
17 synclinal axis, as you can see in the north part of the field
18 that is running roughly north-south, the same as the anticlinal
19 structure is in the north end of the field. In the south end
20 of the field, though, we start getting a difference. Notice
21 at the north end of the field the dip is much flatter,
22 particularly on the east side, all the way to just roughly the
23 north half of the field. In the south part of the field you
24 can see that the dip changes and is almost double east across
25 the Sections 25 and 26, Sections 36 and 35. In that area you

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1 can definitely see that there is definitely a change in the
2 rate of dip across those sections compared to the north end of
3 the field. In this area is where we think the change in the
4 direction of this structure begins, changes from the north-
5 south direction to a southwesterly direction. This anticlinal
6 trend was in what was probably one reason that got us more,
7 among other reasons, but most recent reasons to decide to
8 drill this well was the recent development in that Revelation-
9 Morrow Field southwest of us, located in Sections 4 and 9 of
10 22, 25.

11 There have been two wells drilled recently and made
12 Morrow wells. The operator down there is Belco Petroleum
13 Corporation. They have completed two Morrow wells just south
14 of the two Morrow wells shown there in yellow in Section 16.
15 They are in the process of completing the third well. The most
16 southerly well is a dry hole, very recent, and it is my under-
17 standing that they may have a rig in drilling the location in
18 Section 10 at the present time but you can see that they are
19 also on a structural position. The old well drilled by
20 Pennzoil in Section 8 immediately west and just barely on
21 the plat there colored in blue, you can see they are consider-
22 ably west dip and also to the east of us, not much shown here
23 but there are some wells in the vicinity there that shows east
24 dip so that trend is very muchly in evidence in the Revelation
25 area. And, of course, as you go on down to Medicine Rock the

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1 same thing happens, you have extremely steep dip on the west
2 side of the Rock Tank Field and as I pointed out earlier,
3 the structural trend that I have set up here is parallel to
4 that synclinal trend that lies immediately to the west and
5 can be substantiated by regional well control.

6 Now, getting down to the offset wells offsetting
7 our proposed location. The north offset to the proposed
8 location in Section 27 which was the Hanagan Petroleum
9 Corporation No. 1. I take it back, No. 10, Catclaw Draw Unit
10 well. It was drilled and it is, of course, a dry hole and it
11 was drilled to the Morrow and is dry. The No. 10 Well, as you
12 can see, we have as interpreted there, that we have a little
13 possible nosing structure northwest, immediately northwest of
14 that well. That is based on dip meter information which we
15 did run a dip meter on that well.

16 The main Catclaw Draw pay sand, which is what we
17 call the "C" zone or Lower Morrow zone, the zone that is
18 productive in the two offset wells to it, one directly east
19 of the No. 10 Well and one southeast was, of course, dry. We
20 recovered water in one sand and the other sand was tight in
21 the Lower "C" zone so the "C" zone as such did not prove too
22 good in that particular location.

23 The northeast offset to the proposed well in Section
24 26 is a discovery well. That's where the discovery well of
25 the Catclaw Draw Field was drilled and it is the No. 1 Hanagan

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1 Petroleum Corporation No. 1 Catclaw Draw Unit Well. That well
2 is completed in what we call the field pay or the Lower Morrow
3 sands or Lower "C" zone. It is a tight well, it's a low
4 volume producer even though it's not a bad well but it is a
5 less permeable well and, therefore, a low volume producing
6 well.

7 The east offset to the proposed location in
8 Section 35 is Hanagan Petroleum Corporation's No. 9 Catclaw
9 Draw Unit. This well has been an exceptionally good well, a
10 very very good well, a high volume well. It has produced in
11 excess of five billion cubic feet of gas. It is presently
12 shut in due to overproduction. It has been shut in since the
13 last of August of '76. Hopefully we can get it on production
14 in another month or two but at any rate it is a high volume
15 well. It is producing out of the same sand, the Lower Morrow
16 sands or "C" sands that are productive in the well to the
17 north, the No. 1 Well.

18 The southeast offset to the proposed location in
19 Section 2 of 22 South, 25 East, there are two dry holes in
20 that same section. The southeasterly most well located in
21 the southeast quarter was drilled by Tom Brown several years
22 ago, in fact, it was drilled before the Catclaw Draw Field
23 was discovered and it was plugged after penetrating the Morrow
24 zones.

25 The northernmost well in the section, located in

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1 the northeast of the northwest quarter of Section 2 is
2 Hanagan Petroleum Corporation's No. 1 North Fork Well. It is
3 presently a shut in Wolfcamp gas well. This well was drilled
4 to the Morrow and again was dry in the Lower "C" sands and in
5 all of the Morrow but particularly in the Lower "C" sand that
6 is productive in the No. 9 Well.

7 As to the proposed location, there are no direct
8 south offsets or west offsets to the well.

9 As you can see on this structure map as we have it
10 interpreted right now, the proposed location lies on or very
11 near the crest of this structural trend. The No. 9 Well is
12 located also very close to the structural crest of the
13 structural anticlinal trend that we show through there.

14 As we have it interpreted these two wells structurally
15 would be flat with even the possibility as it is contoured
16 here, the proposed location could be fifty feet structurally
17 higher than the No. 9 Well. If this interpretation is correct,
18 and we feel like there is sufficient evidence to say that that
19 structural trend does go through that acreage and we are
20 betting another well on it, then it brings up the question of
21 drainage and as the owners of the east offset under Section 35
22 where the Catclaw Draw No. 9 Well is, which is a very good well
23 in fact, it is so good that we are somewhat asking ourselves
24 where the gas is coming from. The reason for that wondering
25 is this: We have examined already the offset wells to the

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1 proposed location, let's examine the offset wells to the
2 Catclaw No. 9 and I think you'll see that there is a question
3 as to just where that gas is coming from.

4 The north offset again is the No. 1 Y Well which is
5 a tight, low permeable well producing out of the same zone as
6 the No. 9. The northeast offset which is in Section 25 is the
7 Catclaw Draw No. 5 Well. It is nonproductive in the equivalent
8 zone the Catclaw Draw No. 9 is producing in. The fact of the
9 matter is that it doesn't produce from the Lower Morrow zone
10 at all.

11 The east offset to it, which is Inexco's well in
12 Section 30 of 21, 26, it was dry in the Lower Morrow zone
13 altogether. The "C" zone was never productive in it. It
14 produced out of the Middle Morrow zone and is now plugged and
15 abandoned. By the way, what the color code is there on two
16 wells that are colored yellow with the little blue whiskers
17 on it, there are two wells in the Catclaw Draw field that
18 were originally completed in the Morrow and are now plugged and
19 abandoned. This is one of them.

20 Okay, getting back to the No. 9 Well and its offsets,
21 let's look at the two offset wells in Section 36. The one with
22 the whiskers on it in the northwest quarter of 36, the
23 Catclaw Draw No. 3 Well which is plugged and abandoned in the
24 Morrow. The second well shown and it is producing from the
25 Morrow presently is our No. 11 Catclaw Draw Well. That well is

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1 not producing from the same zone as the No. 9 Well is. It is
2 producing from the Upper "C" sand and is a poorer well, a very
3 poor well.

4 The south offset to the No. 9 Well, which is our
5 North Fork Well in Section 2 of 22, 25, is a dry Morrow well.

6 I think that the Commission can see that here is a
7 well that is surrounded on two side, the south side and the
8 east side and, in fact, in the northeast side also they are
9 surrounded by wells that are not productive in the zone that
10 the Catclaw 9 is producing in.

11 The north well, which is the only well that is
12 producing, offsetting them at the present time in the equivalent
13 zone, is a tight well.

14 Now, let's get to the structure part of it. Look at
15 our North Fork well which is in a minus -- between a minus
16 seventy-two fifty and a minus three hundred. Going northeast-
17 ward along those contours, seventy-two hundred, seventy-two
18 fifty, seventy-three hundred, those two contours right between
19 them, and go northeastward and you can see that that acreage
20 could be in question.

21 There is no gas coming from the wells in Section 36
22 to help the No. 9 out and there is certainly no help from the
23 south offset which is in Section 2, it's dry. The northeast
24 one is water and the north one is low permeable oil. Therefore,
25 that leaves a question, same question that the opposition is

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1 going to point out in our proposed location. How much area are
2 we draining? We pose the same question. How much area is
3 the No. 9 Well draining?

4 Secondly our contention is that part of the present
5 gas the No. 9 has produced came from Section 34. That is the
6 area where the gas is, in Section 34 and 35.

7 Q What is the approximate cost of one of these wells?

8 A Well, it started out about two hundred and twenty-
9 five thousand, now they are up to about five hundred and
10 twenty-five thousand.

11 Q Would you drill a well at an orthodox location in
12 Section 34?

13 A At an orthodox location?

14 Q Yes.

15 A No, we would not. As I pointed out earlier, we are
16 picking what we think is the best geological structure, the
17 best geological location which is the highest on the structure.
18 We are drilling between two dry holes just like the No. 9 Well
19 is between two dry holes. We have taken our chances on that
20 west side. As you can see it is a high risk area. We have
21 three wells lying straight due north-south of that location that
22 are dry holes. We have a southeast offset to our proposed
23 location and a south offset to the No. 9 Well that was dry,
24 so to reduce the risk, to obtain the best geological part of
25 what we think is the best location for that well, we would like

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1 to drill where we propose.

2 Q If your proposed unorthodox location were granted in
3 this case would you drill at that location if your allowable
4 were curtailed in any way?

5 A No, I don't believe I would because the allowables
6 in that field have been so low anyway, the last several months
7 have been terrible, in fact. When you have your allowables
8 running anywhere from forty thousand a month to wells that
9 are capable of producing a hundred and twenty-five or better
10 a month then I would say it is pretty poor economics.

11 The field is prorated and what I'm saying is this,
12 the field is prorated, as of this date we feel like every well
13 has been getting its share of the allowable whatever it is, low
14 high or what but we also feel that the amount of allowable
15 has been low enough where no one has been hurt in that field
16 and if the allowables are retained as they are now there isn't
17 going to be a whole lot of drainage going on except over a long
18 period of years so prorationing itself will help protect the
19 offset operators.

20 Q Do you have anything further to offer on this
21 particular exhibit?

22 A No, I can't think of anything, I believe that's all
23 right now.

24 Q Turning to Exhibit C would you please identify it?

25 A Exhibit C is just a copy of the letter sent by Hanagan

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1 Petroleum sent to the offset operators. Attached to Exhibit C
2 is the list of the people it was sent to and you will notice
3 that it just advises them of the case number and the docket
4 number and the date of the hearing and which you can see was
5 wrong. We mistakenly typed it up as May 16th when it was
6 originally scheduled for May 11th so there was a wrong date on
7 that letter. We still believe that the hearing could have been
8 held then, it was legally advertised as far as that goes but
9 upon the request of Union Oil of California we postponed it
10 until today.

11 Q In your opinion would the granting of your application
12 prevent waste and protect correlative rights?

13 A Yes, I do, I think it would.

14 Q Were Exhibits A through C prepared by you or under
15 your supervision?

16 A Yes, they were.

17 MR. LOPEZ: Mr. Examiner, I would like to offer
18 Applicant's Exhibits A through C.

19 MR. STAMETS: Is there objection? They will be
20 admitted.

21 (THEREUPON, Applicant's Exhibits A through
22 C were admitted into evidence.)

23 Q (Mr. Lopez continuing.) Do you have anything further
24 to offer, Mr. Hanagan?

25 A I can't think of anything.

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1 MR. STAMETS: At this time we will take a fifteen
2 minute recess.

3 (THEREUPON, the hearing was in recess.)
4

5 MR. STAMETS: The hearing will please come to order.
6

7 CROSS EXAMINATION

8 BY MR. STAMETS:

9 Q Mr. Hanagan, you indicated that the No. 10 Well was
10 dry in the Morrow, why was that dry, was the well wet in the
11 "C" zone, was there no porosity or what was the situation?

12 A Yes, there were two zones in the "C" in that Lower
13 "C", one of them was wet and we recovered water on drill stem
14 test and the bottom-most zone was tight. They were both fairly
15 thin sands.

16 Q What about the well that is located in the northwest
17 quarter of Section 2 to the south of you?

18 A That is the No. 1 North Fork, well, we ran pipe on the
19 Morrow and attempted completion but it was to no avail. The
20 "C" sand in that well had almost completely disappeared. There
21 was only about, this is from memory, but less than ten foot of
22 sand and we recovered twelve hundred feet of water in it.

23 Q Now, on your Exhibit B you indicated a normal
24 sixteen hundred and fifty foot location in the northeast
25 quarter of Section 34. Now, if we would project a normal

1 location at sixteen hundred and fifty feet from the south and
2 east lines of Section 34 that would appear to be just somewhat
3 down dip of the seventy-one fifty contour line?

4 A Yes, it would be lower than the proposed location.

5 Q And you would consider that not to be as geologically
6 advantageous as the proposed location?

7 A Well, you can see at that location you would be
8 further away from production from the No. 9 than you would at
9 the normal location in the northeast quarter. Footage wise you
10 would be further away yet from the production, so in other words,
11 you would be stepping out further by that location.

12 MR. STAMETS: Any other questions of the witness?

13 Mr. Kellahin?

14
15 CROSS EXAMINATION

16 BY MR. KELLAHIN:

17 Q Look in Section 36 in the southwest quarter, there is
18 a well there, I don't have the name of it. What is that well?

19 A That would be our No. 11 Catclaw.

20 Q You are the operator of that well too, aren't you?

21 A Yes.

22 Q What is the footage location for that well?

23 A That well -- I would have to look at it here -- it
24 is an unorthodox location due to topography. It's nineteen
25 fifteen feet from the south and three thirty from the west line.

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1 Q Three thirty from the west line?

2 A Yes, sir.

3 Q In that same section, the well in the northwest
4 quarter, that appears to be a standard location, is it not?

5 A No, it is not.

6 Q Is it an unorthodox location?

7 A Yes, sir.

8 Q What is the footage on that one?

9 A I don't have that with me but it is roughly a thousand
10 feet from the north and west lines. That's due to topography
11 too. That section is a very rough area, you've got a group of
12 hills running through there, and narrow steep gullies and
13 canyons in there.

14 Q In your well in the northwest quarter of Section 2,
15 what's the location of that well?

16 A Section 2 is nineteen eighty from the west and six
17 sixty from the north line. That is a normal location and I'll
18 tell you why. A year or two, I've forgotten when it was, but
19 a year or two ago there was a problem involved particularly up
20 on the east side of the Catclaw Draw Field where you had the
21 production due east of the Catclaw Draw Unit there which is
22 the Avalon-Morrow Gas Field, you had that development going on
23 and there was a hearing concerning where the Catclaw Draw Field
24 limits were on the east side and at the time there were also
25 limits set for the field as such. In other words, anything

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1 outside of those limits that were set didn't fall under the
2 Catclaw Draw Field special rules. Now, in doing that the
3 two sections on the southwest side of the field was thought to
4 be possibly productive, which were Section 34 where our
5 proposed well is, that Section and Section 3 of 22, 25, in other
6 words, the west section from the North Fork, those two sections
7 appeared to be in the ball park and so they were deemed as being
8 under those rules. Any other sections outside of the unit area
9 were deemed to be under -- they would not be under the Catclaw
10 Field rules.

11 Q You are the operator of the No. 9 Well in Section 35?

12 A Yes.

13 Q When did you complete that well?

14 A Well, I don't have the completion date in front of
15 me. It was logged 4-1-76. I would say probably, guessing,
16 ninety days after that date. In other words, the early part
17 of -- I'm going to take that back, that '76 is the North Fork.

18 Q How about '73?

19 A '73, the No. 9, yes, that's right.

20 Q August 13th, 1973?

21 A Yes, that's probably right. These logs were run
22 7-28-73.

23 Q And it has been producing since that date from the
24 Morrow?

25 A Yes, that is correct.

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1 Q Now, when did you acquire Section 34 as the operator?

2 A Well, of course, the original Catclaw Draw Unit
3 encompassed --

4 Q It included 34?

5 A It included 34 and all of the sections north of there
6 In other words, it had just been contracted within the last,
7 probably ninety days or somewhere in that neighborhood. It
8 originally encompassed Sections 34, 27, let's see, 22.

9 Q In any event you have taken Section 34 out of the Unit?

10 A We did not, the USGS did. They have taken all of
11 those west sections out of the unit area, yes.

12 Q Your ownership between Sections 35 and 34 is
13 different, is it not?

14 A Yes and as I understand that as far as working
15 interest is concerned in the unit area, the working interest
16 unit, the unit area, is not the working interest. The working
17 interest is not spread out throughout the unit.

18 Q I understand that.

19 A The working interest is proved six hundred and forty
20 acres.

21 Q This pool is based on six hundred and forty acres?

22 A Yes, sir.

23 Q Let's look at Exhibit B that you presented. Mr.
24 Stamets asked you if you moved your proposed location to the
25 south following the same contour line that eventually you will

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1 approach a standard orthodox location that at least on the
2 structural contour would appear to be just as advantageous as
3 your proposed location, except for the fact that you are moving
4 farther away from the No. 9 Well?

5 A No, it is my understanding -- I think where the
6 sixteen fifty would fall it would be lower than the proposed
7 location structurally.

8 Q How many feet lower?

9 A Well, I would say the normal location in green there,
10 you can see that it would be at about a minus seventy-one
11 eighty. I would say that in -- and, of course, the proposed
12 location would be around seventy-one forty, for example. Thirty
13 to forty, somewhere in that neighborhood. It is falling awful
14 close to the seventy-one fifty contour. Now, the southeast,
15 if you would move sixteen fifty, I would have to say that
16 structurally you would be , I think we're splitting hairs here,
17 but --

18 Q Twenty or thirty feet difference?

19 A Yes.

20 Q So then --

21 A Plus moving farther away, though.

22 Q That's my point, isn't that the only reason then to
23 crowd the subject well, put it closer to the No. 9 Well, isn't
24 that right?

25 A The only reason?

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1 Q Yes, sir.

2 A No, the only reason is that it is geologically
3 situated better. It is situated on the crest of that trend
4 that we have proposed through there.

5 Q Only by some twenty feet you say?

6 A Yes, about twenty, but then we've also got to consider
7 that Morrow production is not controlled entirely by structure.
8 Your assumption is or your question leads us to believe that
9 the structure is the most controlling, or the only controlling
10 thing.

11 Q That is the only exhibit you have given, Mr. Hanagan,
12 so I don't know what else you are basing your decision on.

13 A I think that the stratigraphy also plays a part in
14 the accumulation of gas.

15 Q You indicated in response to Mr. Lopez' question
16 earlier that you were moving in an easterly direction to reduce
17 your risk, what risk are you talking about?

18 A I'm talking about the risk of a dry hole. Our
19 information says that it will not be a dry hole but you can
20 see, backed up by six dry holes that we have already drilled
21 that we are not one hundred percent right all of the time.

22 Q Wouldn't that also indicate to you then that a
23 substantial portion of 34 is unproductive?

24 A Not more than Section 34. We are questioning how
25 much of that is.

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1 Q Well, now, wait, we are on Section 34, I'm asking you
2 doesn't your testimony indicate that a substantial portion of
3 the six hundred and forty acres to be dedicated to your well
4 is going to be nonproductive?

5 A No, I did not.

6 Q Why not?

7 A It's structurally higher than the dry hole to the
8 north. Every bit of it except the extreme northwest corner of
9 that six forty is structurally higher than the dry hole.

10 Q Wouldn't a standard location out of the northeast
11 corner put you a hundred and fifty feet higher to the No. 10
12 dry hole?

13 A It sure would if we are correct.

14 Q And it still would be only fifty feet below the crest
15 of the anticline, wouldn't it?

16 A That is correct if we are correct.

17 Q So you have a standard location either out of the
18 northeast corner or one out of the southeast corner that ought
19 to be productive?

20 A That's what we say, yes, but it is not the best
21 geological location.

22 Q Only because you want to crowd the No. 9 Well and
23 if you do so shouldn't you be penalized?

24 A Not any more than the No. 9 should be penalized.

25 Q The No. 9 is at a standard location, is it not,

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1 Mr. Hanagan?

2 A. Yes, it is.

3 Q All right, sir, and you propose to drill a non-
4 standard location and you propose that it not be penalized?

5 A. That is correct?

6 Q. Why?

7 A. Because we do not feel that we should be penalized.

8 MR. KELLAHIN: I have no further questions.

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

11 MR. KELLAHIN: I have one witness, Mr. Stamets.

12 MR. STAMETS: You may proceed.

13
14 J. B. JORDAN

15 called as a witness, having been first duly sworn, was examined
16 and testified as follows:

17
18 DIRECT EXAMINATION

19 BY MR. KELLAHIN:

20 Q Would you please state your name, by whom you are
21 employed and in what capacity?

22 A J. B. Jordan, I'm employed by Union Oil Company of
23 California in Midland, Texas as Development Geologist.

24 Q Mr. Jordan, have you previously testified before our
25 Commission?

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1 A. Yes, I have.

2 Q. Have you made a study of and are you familiar with
3 the facts surrounding Mr. Hanagan's application here?

4 A. Yes, I am.

5 MR. KELLAHIN: If the Examiner please, are the witness'
6 qualifications acceptable?

7 MR. STAMETS: Yes, they are.

8 Q. (Mr. Kellahin continuing.) Mr. Jordan, would you
9 refer to what I have marked as Exhibit Number One on behalf of
10 Union Oil Company, identify it and tell us what information it
11 contains?

12 A. Exhibit Number One is a structure contour map contoured
13 on top of the Lower Morrow as identified by the type log and it
14 has the production color coded thereon and shows the structural
15 interpretations of the Catclaw Draw area as I see it.

16 Q. You've indicated a cross section on this contour map,
17 to what does that now refer, is that your Exhibit Number Two?

18 A. Exhibit Number Two, yes.

19 Q. Let's look at that at the same time as we look at
20 Number one. Okay, would you begin with Union Exhibit Number
21 Two and commence with the well labeled A, identify it and
22 explain your exhibit?

23 A. Exhibit Number Two is a cross section, AA prime which
24 goes from the Hanagan No. 10 Catclaw Draw in Section number 27,
25 the dry hole, through Hanagan's No. 9 Catclaw Draw in 35 to

1 Hanagan's No. 11 Catclaw Draw in Section 36.

2 This section is set up on the sea level datum so
3 you can get the structural relation between the wells.

4 In the Morrow the Hanagan No. 10 Catclaw Draw ran
5 four drill stem tests. As noted on the cross section the
6 top one recovered fifty-five hundred and forty-six feet of
7 salt water. The second one, two hundred and ninety feet of
8 gas cut salt water. The third one, seven hundred and twenty
9 feet of salt water and the bottom one only recovered one hundred
10 and ninety feet of gas cut mud which indicates that the bottom
11 zone which appears to be equivalent to the producing zone in
12 the No. 9, as shown by the red perforated interval to the left
13 of the log on the No. 9. This log of the No. 9 shows the
14 producing zone and also shows the drill stem test which blew
15 out on the well and produced gas at the rate of forty-three
16 hundred MCF and the other zones colored red are zones which
17 we believe may be productive in that well also.

18 The first log on the right which is the No. 11 shows
19 the same thing. The top zone in the blue did not actually test
20 water but by logs it is indicated to be water and the producing
21 perforations are shown in red. Other zones were perforated in
22 there as shown according to the records, were squeezed.

23 MR. STAMETS: The red that you are referring to, the
24 perforations, would be along the left-hand margin?

25 A Along the left-hand margin, right.

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1 Q (Mr. Kellahin continuing.) I refer you back to
2 Exhibit Number One. Mr. Hanagan has testified in his Exhibit B
3 that there is an anticline that runs through this area, through
4 Sections 23, 26 and 35. I show you what has been introduced as
5 Applicant Exhibit B and ask you to relate the anticline as shown
6 by Mr. Hanagan to where you believe that anticline to lie?

7 A Well, the anticline as shown by Mr. Hanagan is shifted
8 to the west of where I show the axis in Section 23, especially
9 it is noticeable there and also down through 34 he pulls this
10 structure out into there and shifts his anticlinal axis in the
11 other direction. I continue somewhat straight down, showing
12 steep dip on the west side of the anticline, dipping into a
13 syncline.

14 The No. 10 Catclaw Draw ran a dip meter which
15 according to my interpretation showed a southeast dip and for
16 that reason I put the No. 10 Catclaw Draw as a dry hole.
17 Across the syncline to the west, coming down off of your some-
18 what eastern dip and regional dip.

19 Q With regards now to the syncline, Mr. Hanagan's
20 geology in Section 34 shows that syncline drawn out in a
21 westerly direction and you have shown the syncline moving
22 farther east than he has?

23 A Right. He shows it, oh, three quarters of a mile or
24 a mile west of where I show it.

25 Q Okay. Why have you chosen to show it where you have,

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1 Mr. Jordan?

2 A. Because of the steep dips encountered on the west
3 side of the structure, the No. 10 Catclaw Draw the complete
4 absence of any gas shows, I feel that had it been on the west
5 side of the structure you should have some kind of shows with
6 the good sands you had.

7 Q In your opinion, Mr. Jordan, is there a portion of
8 Section 34 that is nonproductive?

9 A That is correct.

10 Q Do you have an estimate or an opinion as to what
11 percentage of Section 34 is nonproductive in the Morrow?

12 A Well, from my work there it appears that about seventy-
13 five percent of Section 34 is nonproductive.

14 Q Do you have a recommendation to the Oil Commission
15 with regard to a penalty to be assessed against Mr. Hanagan's
16 well for its unorthodox location?

17 A Yes, I believe that a seventy-five percent penalty
18 would be in order.

19 Q Now, upon what do you base that percentage factor,
20 Mr. Jordan?

21 A That is the portion of Section 34 which does not
22 appear to be productive according to my work.

23 Q In your opinion will a well located at the proposed
24 unorthodox location interfere with the production from the
25 Unit Well No. 9?

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1 A. I believe that it will.

2 Q. All right. Were Exhibits One and Two prepared
3 by you directly or under your direction and supervision?

4 A. Yes, they were.

5 Q. In your opinion, Mr. Jordan, will the granting of
6 this application impair the correlative rights of Union Oil
7 Company of California in its interest in the Catclaw Draw No. 9
8 Well?

9 A. I think it will.

10 MR. KELLAHIN: I move the introduction of Exhibits
11 One and Two.

12 MR. STAMETS: Without objection they will be
13 admitted.

14 (THEREUPON, Union's Exhibits One and
15 Two were admitted into evidence.)

16 MR. KELLAHIN: That concludes our examination of
17 this witness.

18

19

CROSS EXAMINATION

20 BY MR. STAMETS:

21 Q. Mr. Jordan, besides the differences in Applicant's
22 Exhibit B and your Exhibit Number One which have been mentioned
23 relative to this geosynclinal feature, let's take a look just
24 for the moment at, say, Sections 19 and 30 of Township 21 South
25 Range 26 East, I believe. Right, Range 26 East. Now, just

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1 looking at the two maps here, there seems to be considerable
2 difference in interpretation in those two sections.

3 A Well, of course, I have mapped on a different
4 horizon than Mr. Hanagan, however, they should roughly coincide
5 but though his mapping on the sand, if he gets a considerably
6 thicker sand, which I think some of them will do down there it
7 might give you an indication of a loose structure out there.

8 Q On your cross section, AA prime, could you show me
9 what you have mapped on or is your mapping horizon on there?

10 A Right, the top of the Lower Morrow is indicated, the
11 line just above where it is labeled there.

12 Q Okay.

13 MR. STAMETS: I think we need to clarify at this
14 point what Mr. Hanagan mapped on.

15 Mr. Hanagan, could you identify on Exhibit Number Two
16 your mapping horizon?

17 MR. HANAGAN: It would be the horizon that he's got
18 marked as the top of the Chester.

19 MR. STAMETS: The top of the Chester.

20 MR. HANAGAN: We don't call it that but that would be
21 the marker. That's what we call the base of the Morrow sand.

22 MR. STAMETS: Is that a uniform horizon which is not
23 going to change significantly because of thickening or thinning
24 of the sands in the area?

25 MR. HANAGAN: It will change but so will all of the

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1 markers in there. I don't know of a marker in the Morrow unless
2 it would be the base of the Massive that -- even then it gets --
3 if you are talking about a regional basis it can change.

4 Q (Mr. Stamets continuing.) Mr. Jordan, now knowing
5 what Mr. Hanagan's map is on and what your map is on, would
6 that account in your mind for the big differences we see in
7 Section 19 and --

8 A Well, without isopaching that interval I couldn't
9 really tell you, you know, whether there is that much change
10 to account for the difference or not.

11 Q But, again, that could be one of the reasons for the
12 differences in those two sections?

13 A That's a possibility, however, there is quite a lot
14 of difference there.

15 Q Could the difference simply be an interpretation of
16 geologic structure?

17 A I think that maybe the difference could possibly be
18 that maybe some of the wells in that area didn't pin this
19 marker down real good, what I call the top of the Chester. I
20 don't know that without looking at the logs but a lot of the
21 wells will just penetrate. For instance the log on the No. 9,
22 it isn't shown by the log. That is indicated off of the drilling
23 time.

24 Q Okay, so what you have said then, depending on what
25 you pick and how you interpret it, you can have considerably

1 different maps produced by competent geologists?

2 A Well, that's the name of the game, you know, if all
3 of them interpreted it the same way then we wouldn't need too
4 many of them.

5 Q All right, so let's move back to Section 34 now. I
6 don't expect you to change the way you have drawn your line on
7 here but could a competent geologist move that geosyncline to
8 some other location?

9 A Well, in light of the dip meter on the Catclaw Draw 10,
10 I just believe that you would have to honor that the way I did
11 with a southeast dip, you couldn't dip it off your anticline
12 there.

13 Q Well, if you refer back to Applicant's Exhibit B, he
14 has shown the Catclaw No. 10 with a southeast dip?

15 A Well, that's questionable, I mean, he's got it right
16 at the bottom there, that little reentrance.

17 Q This would be another way of interpreting this informa-
18 tion?

19 A Right, I wouldn't quibble at all if you wanted to
20 pull out that contour line off down to the No. 10. However, I
21 believe that that syncline runs through there very near the way
22 I have it.

23 Q What it boils down to is that I have Mr. Hanagan's
24 interpretation of the geology and I have your interpretation of
25 the geology and they don't say the same thing but they both

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1 appear to be based on the facts and the interpretation of the
2 facts?

3 A Well, according to Mr. Hanagan's map there I believe
4 he could drill a standard location and he would be less than
5 fifty foot, he admitted a twenty foot low there to an orthodox
6 so --

7 Q That wasn't my question. My question was that the
8 Examiner now has two different maps, both based on the same
9 data, or both based on the same wells and interpretations of the
10 same data but they are different maps.

11 A The difference is that he swung the axis of his
12 syncline to the west.

13 Q He interpreted it one way and you have interpreted
14 it another?

15 A I have interpreted it another, yes.

16 Q It would appear that you do agree with Mr. Hanagan
17 that there is probably some recoverable gas in Section 34?

18 A Right, I think that there probably is.

19 Q Do you feel that that gas will be recovered if a well
20 is not drilled in Section 34?

21 A It will be recovered by the No. 9?

22 Q Well, by any well.

23 A Or by any one? Well, certainly if you don't drill it,
24 no, it won't be recovered.

25 Q So we do need a well in Section 34 to recover the gas

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1 that is in there?

2 A. Well, yeah, if you want to drill it for as little as
3 I have shown there.

4 Q. Let's go back to Mr. Hanagan's map. Do you have that
5 there in front of you?

6 A. Yes, sir, I have a copy in front of me.

7 Q. Now, I would like you just for a moment to assume
8 that Mr. Hanagan has been given the wisdom to draw these
9 contours exactly as you would find them in the ground and I'm
10 not trying to say that he has but let's just assume for the
11 moment that he has. In your opinion how much of Section 34
12 would then be productive of gas?

13 A. Well, let's see, just eyeballing it.

14 MR. KELLAHIN: I'm sorry, I didn't understand that,
15 would you repeat it, please?

16 MR. STAMETS: I'm asking your witness to assume that
17 Mr. Hanagan has drawn the contour lines correctly and if he
18 has an opinion I would like for him to express it for me of
19 how much of the acreage in Section 34 would be productive of
20 gas.

21 A. We have to make a couple of assumptions on that, one
22 or the other. One, we have to assume that the oil-water
23 contact in those sands is at the datum on the well in Section
24 27. We know that it's no lower than that and it could be
25 higher, you see, but assuming the same water table, well, the

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1 bigger part of this section would be productive but if you
2 assume, well, it's fifty foot higher, why probably three-
3 fourths of it.

4 Q So it is conceivable then that essentially all of
5 Section 34 could be productive?

6 A The most of it, assuming that water table and his
7 interpretation.

8 Q Does Union have acreage in here now which would be
9 drained by a well, by the proposed well, in Section 34?

10 A Union has a twenty-five percent working interest in
11 Section 35, where the No. 9 is located.

12 Q So Union's acreage is the well which is currently
13 being developed by Well No. 9?

14 A Right, it is.

15 Q And you have no acreage north?

16 A We have acreage to the north, we participated
17 in the No. 10 which was dry. We participated in the one in
18 Section 22 which is dry and also in two or three others within
19 the unit to a lesser extent than in Section 35.

20 Q Now, as far as the contraction of this unit is
21 concerned, perhaps Mr. Hanagan may answer this, when was
22 Section 34 deleted from the unit?

23 MR. HANAGAN: Well, I don't know the date, Dick, but
24 it has just been recently like I said. When it was deleted
25 that whole west tier of sections was deleted at the same time.

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1 I would say it was within the last sixty to ninety days.

2 MR. STAMETS: Did the various interest owners in
3 the unit have any opportunity to call upon you to develop a
4 well in Section 34 before this acreage was deleted?

5 MR. HANAGAN: According to the operating agreement
6 they have that call coming.

7 MR. STAMETS: Did any operator call on you to
8 develop Section 34?

9 MR. HANAGAN: No, sir, not to my knowledge.

10 MR. STAMETS: I don't know of anyone here with
11 Union who could respond.

12 MR. KELLAHIN: We have no interest in Section 34.

13 MR. STAMETS: So as far as anyone knows here, Union
14 made no call?

15 MR. KELLAHIN: We would have no right to make a call.

16 MR. JORDAN: When this unit was formed every
17 parcel stood on its own. In other words, if you had some
18 acreage in Section 35 you participated, if you didn't, you
19 didn't participate even though you belonged to the unit so
20 there would have been no reason for Union to say anything about
21 34.

22 Q (Mr. Stamets continuing.) Union would not have
23 shared in the production?

24 A Right, we would not have shared in the production.

25 Q So Union as an interest owner then in the Catclaw

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1 Draw Unit is concerned about being drained by this well off-
2 setting the unit?

3 A. Right.

4 Q. Let's just for the moment think about the potential
5 for drainage here. If a well were located at a standard
6 location then Union nor anyone else would have any objection,
7 any legal type of objection?

8 A. That's right if he located his well at a standard
9 location there would be no objection whatsoever.

10 Q. So in that case there would be no allowable restric-
11 tions?

12 A. Right.

13 Q. Okay. If this well were located one foot inside of
14 Section 35, one foot west of the line of Section 35, then that
15 well which is proposed would have no rights to produce from
16 Section 34, would that be correct?

17 A. Run that by again.

18 Q. Okay. Let's move this well eastward, not only
19 toward the section line of 34 but across the section line of
20 34 into Section 35. The moment that well gets over into
21 Section 35 it no longer has the right to produce gas from
22 Section 34, does it?

23 A. Well, I don't know what New Mexico holds but we hold
24 that they can produce out of a, you know, a circle with that
25 radius which would be the proration unit but I would say if it

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1 wasn't 35 it wouldn't have any right to produce it.

2 Q So at one location we have one hundred percent
3 and at the other location we have zero percent production
4 rights?

5 Now, we can look at this another way too. We can
6 say that a well located at a standard proration unit would have
7 a six hundred and forty acre drainage radius since this is a
8 six hundred and forty acre pool and it would be allowed to
9 drain part of Section 35 and part of any other section that
10 this six hundred and forty acre drainage radius overlapped.

11 A I think that's probably the rules that New Mexico
12 works under.

13 Q So that if the well then were moved toward a non-
14 standard location that radius of drainage might tend to
15 encroach still further into these other sections, Section 35,
16 Section 26, other productive sections and there would be some
17 ratio of additional drainage?

18 A Yes.

19 Q Now, Mr. Jordan, in addition to or perhaps even in
20 substitute for your proposed seventy-five percent penalty,
21 do you think that perhaps these other factors could be taken
22 into consideration if a penalty factor were considered for this
23 particular well?

24 A Well, I suppose it could.

25 MR. STAMETS: Okay. Any other questions of this

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1 witness?

2 MR. LOPEZ: If the Examiner please.

3 CROSS EXAMINATION

4 BY MR. LOPEZ:

5 Q Mr. Jordan, in developing your synclinal trend, I
6 believe you noted that your contour structure map differs
7 significantly from Mr. Hanagan's in that you developed this
8 trend to be more north-south than northeast-southwest. Isn't
9 it true that in developing your trend or your contour map as
10 you have it on Exhibit One that you completely ignored the
11 production to the southwest, for example, the Belco well and
12 other productions even as far south as the Rock Tank field?

13 A Anything below the Belco well doesn't appear on my
14 map and it is out of my map area but the fact that the Belco
15 well did produce doesn't mean that it is on the structure. We
16 have a lot of stratigraphic Morrow.

17 Q Wouldn't it be considered competent geology to take
18 in the regional attributes in developing a synclinal trend
19 and consider further production in the Morrow zone no matter
20 where they might be located?

21 A Now, run that by again.

22 Q Wouldn't it be competent geology to consider a
23 regional synclinal trend as well as taking into consideration
24 the production in other Morrow zones, no matter where it might
25 be located?

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1 A. Well, yeah, if you are mapping on a regional basis but
2 even with the control just within the map area if you will look
3 up to the -- in Sections 10 and 15, from 15 down to the well
4 in 10 you are dipping in there from the well in Section 11 you
5 are dipping towards the one in 10, so you've got to bring
6 that in there somewhere right in there.

7 Q. Well, looking to these wells on Mr. Hanagan's
8 Exhibit B, two Morrow producers, I believe they must be in
9 Section 8 of the Revelation-Morrow field. Do you have any
10 quarrel with his indication there of a west dip as he shows
11 his anticlinal dip towards, for example, the dry hole just
12 outside of Section 8 at about seventy-two hundred feet?

13 A. Well, of course, I mean it is a valid interpretation
14 but I did not interpret it that way.

15 Q. Isn't it true that your contour map shows that dry
16 hole to be higher rather than lower than it actually is if we
17 adopt your interpretation?

18 A. Which well is that?

19 Q. South of Section 5 if we adopt your interpretation
20 with respect to your contour map, this dry hole as indicated
21 would be at a higher rather than a lower dip structurally?

22 A. Which well?

23 Q. The dry hole which is located almost off to the
24 southwest, Section 8 of 22, 25.

25 MR. STAMETS: Okay, that's at the southwest corner

1 of your Exhibit B.

2 MR. HANAGAN: That's the westernmost well down there.

3 A. Yeah, according to my interpretation, well, of course
4 I don't project the contours down there in the first place.

5 If you want to project them why, it would be higher.

6 Q. (Mr. Lopez continuing.) Your structure map, at
7 least your contours, go within a half a mile of the location
8 of that well, do they not?

9 A. Yeah, but getting back, this area here is not part of
10 it, it's off my map.

11 Q. I would like to go back to one of the questions
12 that Mr. Stamets asked you and turn to the No. 9 Well located
13 in Section 35. If we accept your interpretation on your
14 structure contour map and assuming that we have six hundred and
15 forty acre spacing, which we do, how much of Section 35 is
16 not being drained by the No. 9 well or is not productive?

17 A. How much of Section 35 is --

18 Q. Is nonproductive?

19 MR. KELLAHIN: We would object to that question. It
20 is totally irrelevant, the Commission has found that on a
21 straight acreage basis that one well will drain six hundred
22 and forty acres and I don't believe that's a relevant question.

23 MR. LOPEZ: Mr. Examiner, I believe that we are
24 trying to show that the No. 9 Well is producing from somewhere
25 and even by the witness' own map he shows a significant portion

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1 of Section 35 to be nonproductive and may well be draining
2 gas in Section 34 as we have suggested.

3 MR. KELLAHIN: That's not relevant. It's producing
4 gas at a standard location which it is allowed to do.

5 MR. STAMETS: I will sustain the objection.

6 MR. KELLAHIN: I have a couple questions for
7 Mr. Jordan.

8
9 REDIRECT EXAMINATION

10 BY MR. KELLAHIN:

11 Q Mr. Jordan, if you will refer back to Mr. Hanagan's
12 Exhibit Number B and if we assume for the sake of argument
13 that his interpretation is correct, would in your opinion
14 there be standard location well sites from which you could
15 produce that acreage?

16 A According to Mr. Hanagan's interpretation I would
17 say very definitely so.

18 Q Now, let me go to the second question that Mr. Stamets
19 asked you about risk factors to be charged against Mr. Hanagan.
20 Under direct examination you testified as to what you believe
21 to be one method of computing a penalty factor and that was
22 the fact that there was seventy-five percent unproductive
23 acreage. Mr. Stamets then proceeded to pursue with you a
24 location type penalty and let me discuss that with you. If
25 you assume a standard location of six hundred and fifty feet

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1 and the proposed location at six hundred and sixty feet you've
2 got a mathematical difference of nine hundred and ninety feet?

3 A. Sixteen hundred and fifty feet, you mean.

4 Q. I'm sorry, sixteen hundred and fifty feet, the
5 proposed location is six sixty, the difference being nine
6 hundred and ninety feet. If you make a calculation based upon
7 how close this well is to the subject section line, then you
8 would divide one thousand six hundred and fifty into nine
9 hundred and ninety and you would come up with a penalty
10 factor of some sixty percent. Is a sixty percent penalty
11 factor, using that type of approach, acceptable to you?

12 A. I think it would be.

13 MR. KELLAHIN: No further questions.

14 MR. STAMETS: Any other questions of this witness?

15 MR. LOPEZ: Mr. Examiner, I would like to have a
16 couple of questions on redirect of my witness.

17 MR. STAMETS: Okay, this witness may be excused.

18 (THEREUPON, the witness was excused.)

19 MR. STAMETS: Was that all you had, Mr. Kellahin?

20 MR. KELLAHIN: That's all.

21 MR. STAMETS: Mr. Lopez.

22 (THEREUPON, Mr. Hanagan was recalled.)

23

24 REDIRECT EXAMINATION

25 BY MR. LOPEZ:

1 Q Mr. Hanagan, did you not testify that if your
2 application for an unorthodox well is not granted that you
3 would not drill in an orthodox location in Section 34?

4 A Would you repeat it?

5 Q Would you drill at an orthodox location in Section 34?

6 A No.

7 Q If your application is granted at the proposed
8 unorthodox location would you drill the well if a penalty
9 were assessed against the well?

10 A No.

11 Q Do you have a reason to believe that your interpre-
12 tation as regarding the syncline is more acceptable than that
13 of the previous witness?

14 A Yes, I do. I think there is enough serious doubt
15 as to the two interpretations, mainly on that synclinal trend
16 to warrant a further explanation of it. I think that is one
17 of the most important controlling factors of the presence or
18 absence of that ridge and, of course, the ridge as far as we
19 are concerned is there. Now, what we are trying to get
20 across is, let's look at the Revelation Field first and that
21 is very significant as to the establishment of that anticlinal
22 ridge through there. The Pennzoil well which was a dry hole
23 drilled in the east side of Section 8 of 22, 25 is low to the
24 producer in Section 9 and the producer in Section 4, the two
25 producing wells, so you are getting west dip. All you have to

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1 do to project the other exhibit, the structural exhibit, you
2 can project it down just another half a mile and you will show
3 that his contours have the Pennzoil well actually higher than
4 the Belco well in Section 9 by a considerable amount. It is
5 not true, it is lower. The well in Section 8 is definitely
6 lower than the well in Section 9 and projecting his subsurface
7 structure map about a mile or a half a mile south you will
8 see that those contours place this well in 8 higher than the
9 producing well in 9 which is not true.

10 Secondly this synclinal trend can be traced and
11 really proven, in my mind anyway, on a regional basis on south-
12 west of the Revelation Field, approximately six miles on
13 southwest is the Rock Tank Field, there is a pronounced
14 syncline present just west of the Rock Tank. There is a syncline
15 present just west of this Revelation Field. There is a syncline
16 present just west of the Catclaw Field and they all line up. On
17 a regional basis it makes perfectly good sense that this syncline
18 is not just a local thing around the Catclaw field, it is a
19 regional synclinal feature and very possibly to go even further
20 the original basis, one of the original bases, of drilling the
21 Catclaw Field was the possibility of a deep seated fault on the
22 west side of the field similar to the deep seated fault on the
23 west side of the Rock Tank Field and that fault system we feel
24 is a major fault and it covers quite a regional area and
25 it strikes roughly in a north-northeast direction. We feel

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1 like that this fault dies out northward of the Catclaw Draw
2 Field Unit.

3 What I'm trying to say is, I think the regional
4 geology, and this is what this is based on, it's not based on
5 just Catclaw Field structure, it's based on regional geology
6 and it is of the utmost importance to establish that syncline.
7 As far as I'm concerned it's there and I've seen it interpreted
8 there many times before and not just on my word.

9 MR. STAMETS: Mr. Kellahin, do you have a question?

10 MR. KELLAHIN: Yes, sir.

11
12 CROSS EXAMINATION

13 BY MR. KELLAHIN:

14 Q Mr. Hanagan, I assume what you have told me is all
15 reflected on Exhibit Number B, that you have taken into account
16 the business about the Belco wells, whatever?

17 A Yes, sir.

18 Q All right.

19 A I have a copy of every Belco well.

20 Q I see. All right, and you are in basic disagreement
21 with Mr. Jordan on his interpretation?

22 A Yes, sir.

23 Q Let's assume you are correct and we take Exhibit
24 Number B as the gospel truth, doesn't it simply come down to
25 this that a well using your geology located where you propose

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1 to locate it is going to drain more gas from Section 35 than
2 it is going to drain from Section 34?

3 A Not based on our geology, no, sir, based on your
4 geology, yes.

5 Q I'm looking at your geology, Mr. Hanagan.

6 A No, we will not drain more. You mean more from our
7 section than 9?

8 Q No, I'm saying that you are going to drain more from
9 Section 35.

10 A Not according to our interpretation.

11 Q On your exhibit here?

12 A Yes, sir.

13 Q How much are you going to drain from 35?

14 A We're trying to tell you in Section 35 we do not
15 believe that all of Section 35 is where the gas is coming
16 from. We are not arguing about six forty acre spacing but
17 what we are saying is that roughly half of Section 35 may be
18 nonproductive in the zone it is producing out of the No. 9
19 Well and that a good portion of the gas that is now being
20 presently produced in the No. 9 is actually coming from
21 Section 34.

22 Q Well, now, you changed your testimony on me,
23 Mr. Hanagan, because first of all you testified that this was
24 a prorated pool and because of the low allowables there was
25 no gas coming from 34 being produced in Section 9.

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1 A. Well, I'm saying that we are keeping the drainage
2 down to a minimum by prorationing, I'm certainly not saying --

3 Q. Now, answer my question now. How much gas then is
4 coming from 35 that would be drained by your proposed well?

5 A. I have no more idea than you do, nor anybody in this
6 room.

7 Q. You're the operator, Mr. Hanagan, not me, you operate
8 both of these properties.

9 A. Wait, wait, now, there wouldn't be anybody in this
10 room could answer that question without drilling a well there.

11 Q. But you do admit that there is a drillable location
12 at a standard approved location elsewhere in Section 34?

13 A. Yes, based on our interpretation, yes.

14 MR. KELLAHIN: All right, sir, no further questions.
15

16 CROSS EXAMINATION

17 BY MR. STAMETS:

18 Q. Mr. Hanagan, I would like to clarify this particular
19 point. At a standard location in Section 34 drainage, the
20 amount of acreage that is productive, none of these things
21 would be a question here today?

22 A. That's right.

23 Q. But in all likelihood there would be a certain
24 amount of drainage from Section 35 towards your well in
25 Section 34?

1 A. Yes.

2 Q Okay, now, by moving closer to Section 35 would you
3 expect there would be more drainage from Section 35 than at a
4 standard location?

5 A. Yes.

6 Q Okay, now, how can this Commission protect the
7 correlative rights of the owners in Section 35 from the harmful
8 effects of such drainage?

9 A By prorationing. Everyone is getting his fair share
10 as far as I'm concerned. Plus how are you going to set the
11 penalty as such, if you want to call it that, how are you
12 going to apply it, is it going to be ten percent, is it going
13 to be fifty percent or a hundred percent or what?

14 Q Well, the Examiner certainly has a wide range of
15 choices in the record in this particular case to set a penalty
16 which could be severe or relatively mild.

17 A That's correct and that will control whether that
18 well will be drilled or not, it will be on that basis and
19 according to our interpretation we have as much productive
20 acreage under 34 as there is in Section 35.

21 Q I would like to get back to this point on protecting
22 correlative rights. You indicated that the prorationing
23 system that we have operating there which is straight acreage,
24 that that would protect the correlative rights of the rest of
25 the owners in Section 35. How far can we stretch that? In

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1 other words you are supposed to be located sixteen hundred and
2 fifty feet from the section line and you want to locate what,
3 six sixty?

4 A Six sixty.

5 Q Okay, you want to locate at six sixty and you say
6 that our prorationing system would protect Section 35 at that
7 location, is that right?

8 A Yes.

9 Q Would it protect it at three hundred and thirty feet?

10 A Well, yes.

11 Q Would it protect it a foot over the line?

12 A I'm not going to say a hundred percent protection,
13 no. I didn't intend to say that it would protect them one
14 hundred percent, no, but it will help.

15 Q It will help to protect?

16 A Yeah, that's the purpose of prorationing as far as
17 that goes.

18 Q So at your location perhaps the correlative rights
19 are not being protected?

20 A Well, I guess that's a matter of opinion.

21 Q Sort of like these maps?

22 A Well, I think that -- of course, I did the work so
23 I think that means it's better. I really think mine is better
24 basically and I think that map is prepared strictly on a pool
25 basis and not based on regional geology and, therefore, I

1 think that I do have more of an advantage over the interpreta-
2 tion of that field, plus we have participated in every well in
3 the field with the exception of two or three so I think it's
4 possible that we have a better handle on the geology.

5 Q Do you have any estimates of what you might expect
6 to recover from the well in Section 34?

7 A A bunch.

8 Q Okay.

9 A Are you talking about all of the zones or the present
10 zones?

11 Q Reasonably what you might expect to recover from the
12 well, four billion, three billion, six billion?

13 A Well, if all of the zones behind the pipe, I'm
14 talking about ten billion, if you are talking about behind the
15 pipe, which right now you would have to -- except the one that
16 blew out up at the top, the middle zone there which has three
17 or four fairly thick sands in it and we really can't prove it
18 one way or the other at the present time but if everything
19 was productive in the Morrow, all of the indicated sands that
20 could be productive, I think you are talking about ten billion
21 or better.

22 Q You indicated that a complicating factor had been
23 the low allowables assigned to the wells in this field, is
24 that a situation which could change?

25 A No, not really, in fact, it might get worse because

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1 we are getting fewer and fewer allowable wells and the
2 combination, naturally they are going to go down as your
3 production goes down and you are going to end up eventually
4 with probably maybe the No. 9 excepting, the only allowable
5 well in the field, all of the rest of them being marginal.

6 MR. LOPEZ: Mr. Examiner, although it doesn't need
7 pointing out I would like to point it out anyway that correla-
8 tive rights are also violated when a well is not drilled in
9 Section 34.

10 MR. STAMETS: Anything further, any other questions
11 of any of the witnesses. They are all excused.

12 (THEREUPON, the witnesses were excused.)

13 MR. STAMETS: Does anyone have anything they wish to
14 add at this point?

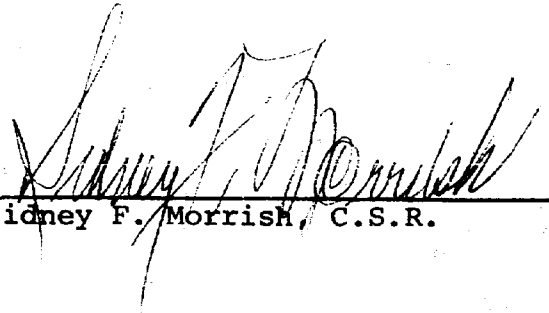
15 We will take the case under advisement and the
16 hearing is adjourned.

17 (THEREUPON, the hearing was adjourned.)
18
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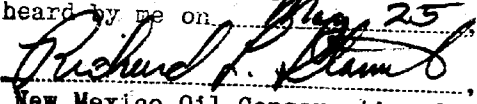
REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter,
do hereby certify that the foregoing and attached Transcript
of Hearing before the New Mexico Oil Conservation Commission
was reported by me, and the same is a true and correct record
of the said proceedings to the best of my knowledge, skill and
ability.


Sidney F. Morrish, C.S.R.

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I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5917.
heard by me on Aug. 25, 1977.

Richard P. Stam, Examiner
New Mexico Oil Conservation Commission

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
May 11, 1977

EXAMINER HEARING

IN THE MATTER OF:

Application of Hanagan Petroleum) CASE
Corporation for an unorthodox gas well) 5917
location, Eddy County, New Mexico.)

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission: Lynn Teschendorf, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

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1 MR. STAMETS: We will call next Case 5917.

2 MS. TESCHENDORF: Case 5917, application of Hanagan
3 Petroleum Corporation for an unorthodox gas well location,
4 Eddy County, New Mexico.

5 The applicant has requested that this case be
6 continued to the May 25th hearing.

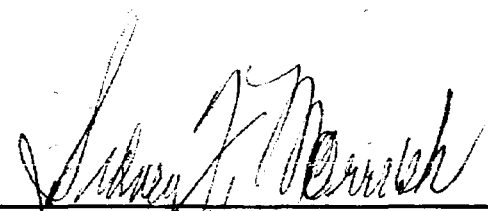
7 MR. STAMETS: Case 5917 will be so continued.

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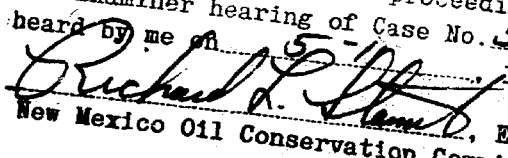
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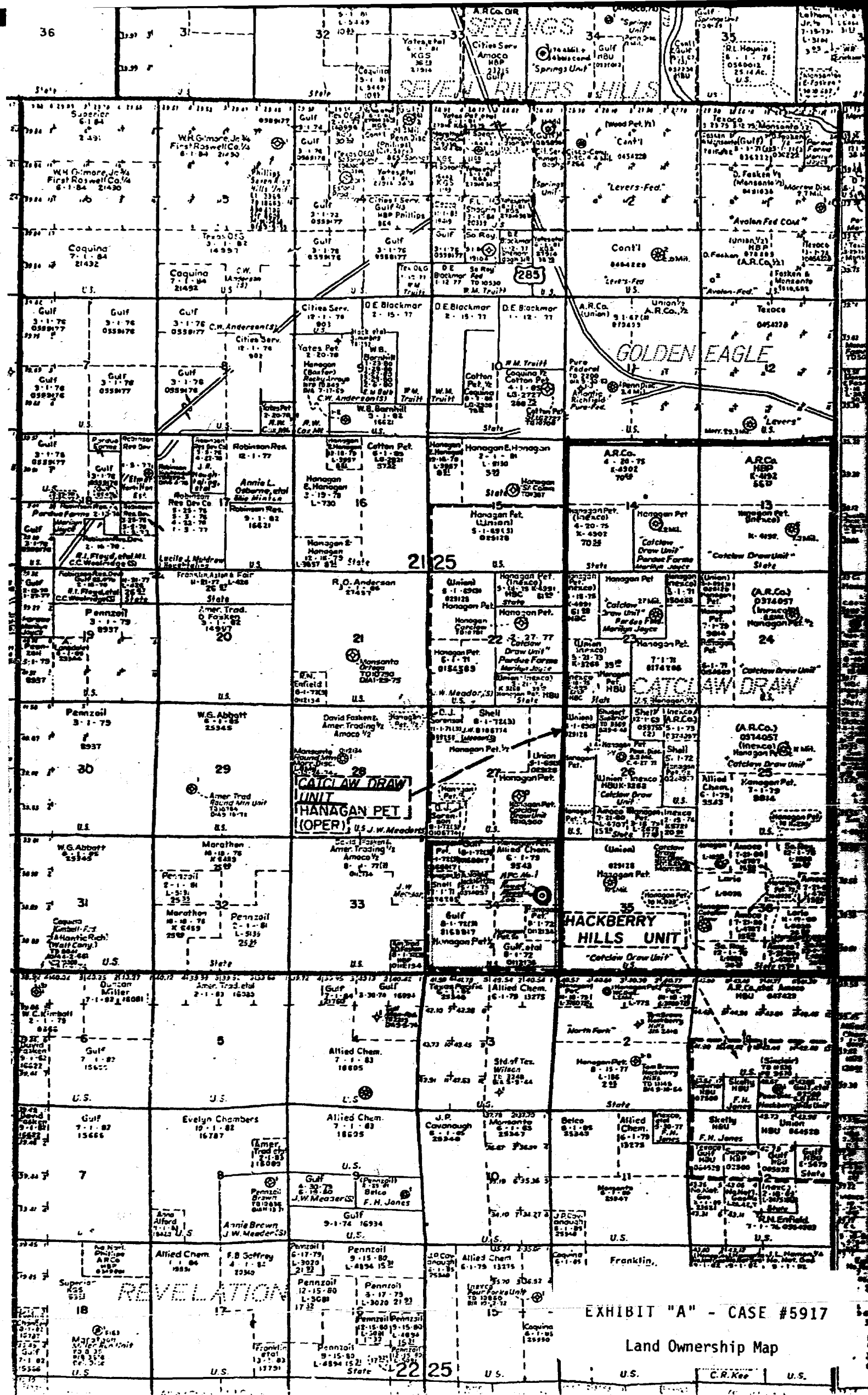
REPORTER'S CERTIFICATE

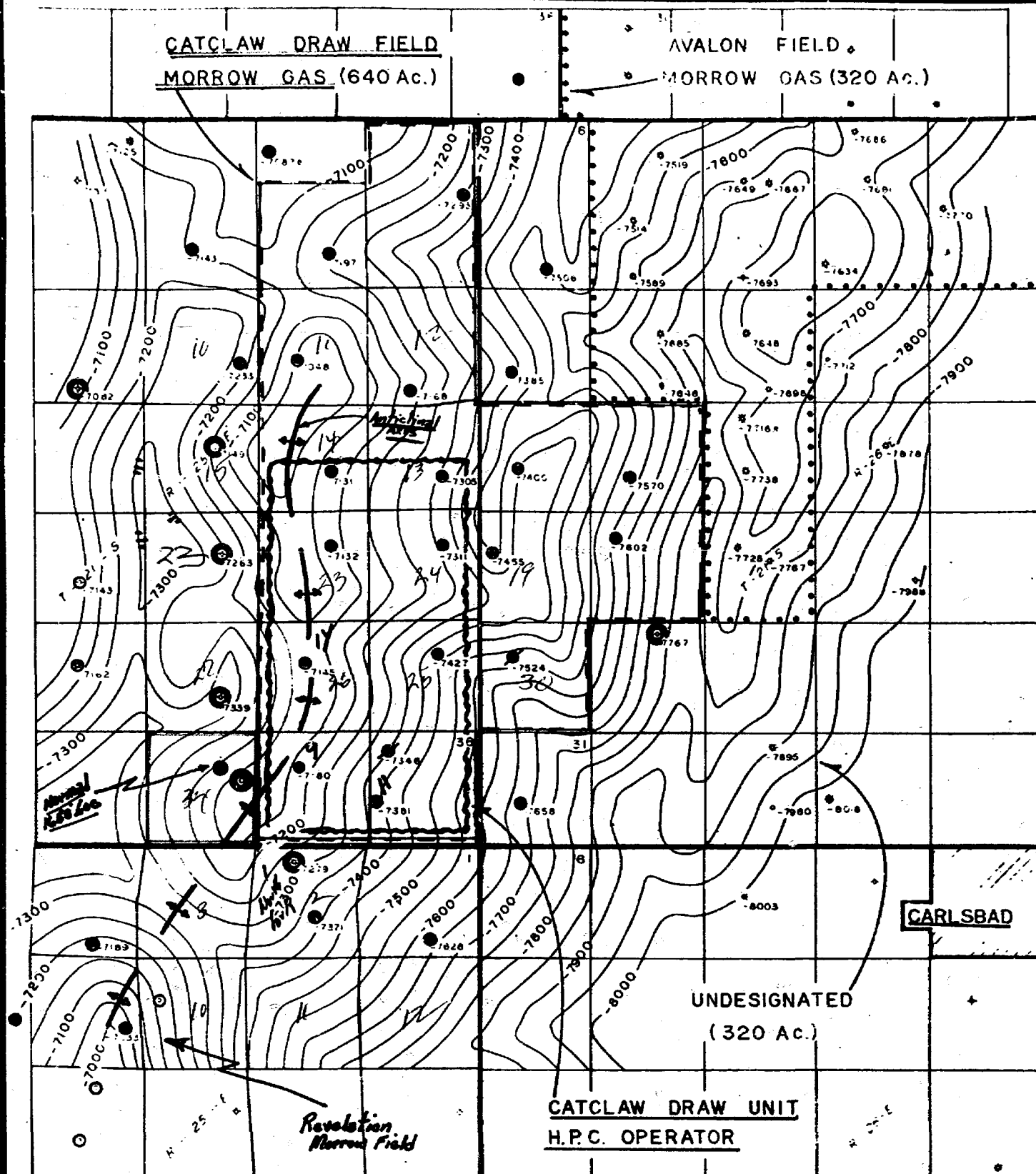
I, SIDNEY F. MORRISH, a Certified Shorthand Reporter,
do hereby certify that the foregoing and attached Transcript
of Hearing before the New Mexico Oil Conservation Commission
was reported by me, and the same is a true and correct record
of the said proceedings to the best of my knowledge, skill and
ability.


Sidney F. Morrish, C.S.R.

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I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5917
heard by me on 5-10-77.

Richard L. Sten, Examiner
New Mexico Oil Conservation Commission





HANAGAN PETROLEUM CORPORATION

STRUCTURE CONTOUR MAP ON B/ MORROW SAND
CONTOUR INTERVAL: 50 FEET
APRIL 1977



EXHIBIT "B" - CASE #5917



PHONE 805 - 823-5033
J. P. WHITE BUILDING
POST OFFICE BOX 1737
ROSWELL, NEW MEXICO
88201

April 26, 1977

Via Certified Mail-Return Receipt Requested

To: Attached list of addresses -

Offset Record Title Owners of Oil
Lease/s - Hanagan Petroleum Corporation
Round Mountain #1 - 2310' FNL & 660' FEL
Section 34, T 21 S, R 25, East, Catclaw
Draw Morrow Pool, Eddy County, New Mexico

This letter is to notify you (as an Offset Record Title Owner of Oil and Gas leasehold interest) of our desire to drill the captioned well at an unorthodox location (as captioned), with all of said Section 34 to be dedicated to this well. New Mexico Oil Conservation Commission Docket 16-77, to be conducted at Santa Fe, New Mexico on May 16, 1977, includes Case 5917, which is our application for approval to same.

A plat showing the area is attached.

Very truly yours,

HANAGAN PETROLEUM CORPORATION


Robert G. Hanagan

RGH/ww
Encls.

ADDRESSES:

Allied Chemical Corp.
13th. Floor-Wilco Bldg.
Midland, Texas 79701
Attn: Mr. Paul Fergusson

Amoco Production Company
P. O. Box 3092
Houston, Texas 77001
Attn: Joe Pulido

Gulf Energy & Minerals Co. - U.S.
P. O. Box 1150
Midland, Texas 79701
Attn: R. E. Griffith

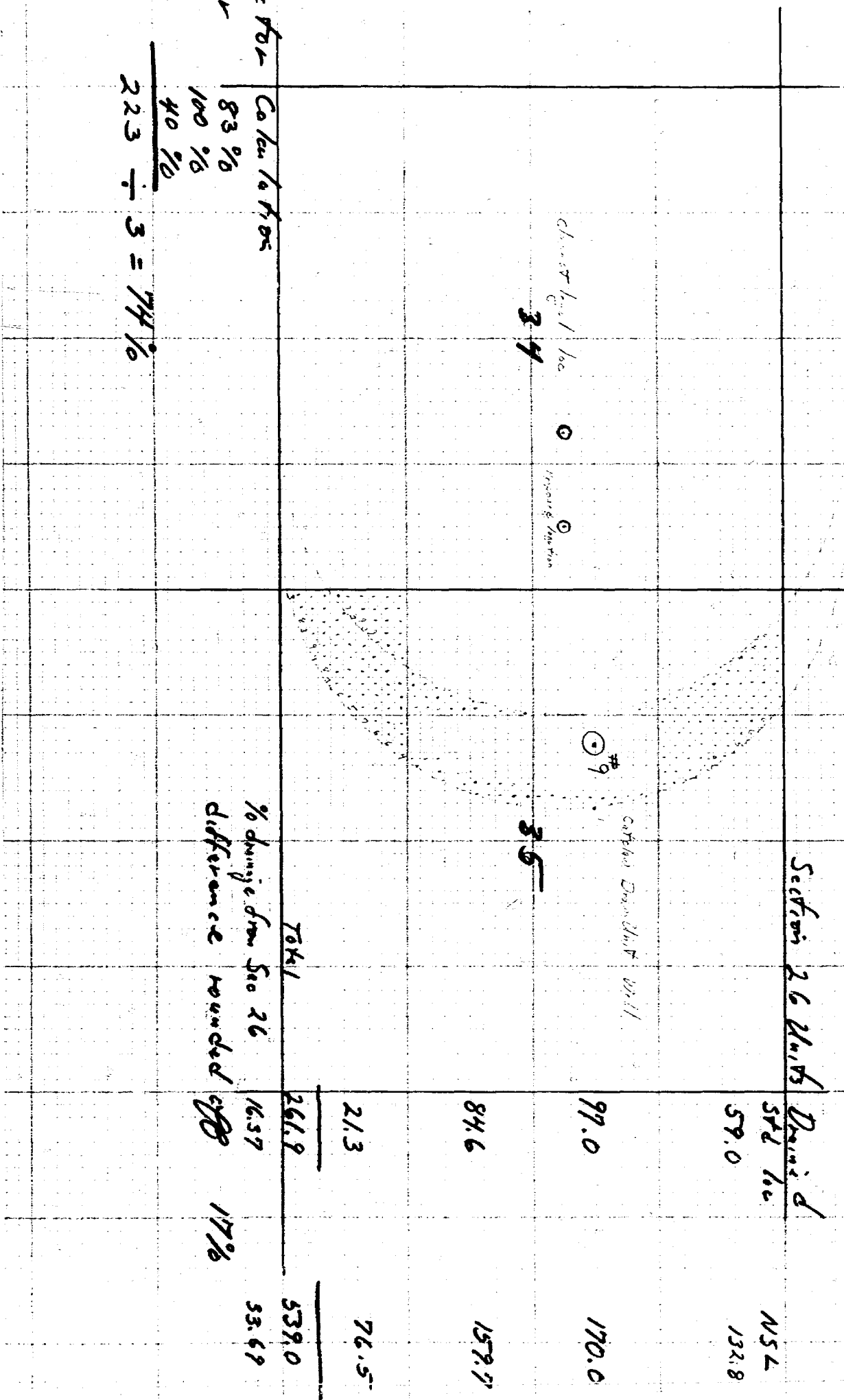
Texas Pacific Oil Company
P. O. Box 4067
Midland, Texas 79701

Union Oil Company of California
P. O. Box 671
Midland, Texas 79701
Attn: Land Dept.

Shell Oil Company
P. O. Box 991
Houston, Texas 77001
Attn: Land Dept.

D. J. Sorenson
P. O. Box 1453
Roswell, New Mexico 88201

Case 5917 Hanger R.T. Corp. NSA Catcher Draw Pool 640-acre spacing 7215-1725E
 proposed location 2310 FNL 660 FEL ... closest legal location 2310 N 1650 E



Penalty Factor
 Base Factor 83%
 NS Factor 100%
 ELW Factor 40%
 223 ÷ 3 = 74%

Total
 % damage from Sec 26
 difference rounded off

CASE 5888: (Continued from April 20, 1977 Examiner Hearing)

Application of Dalport Oil Corporation for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its A. L. Christmas Well No. 3 to be drilled 330 feet from the South line and 2310 feet from the East line of Section 25, Township 22 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico.

CASE 5910: (Continued from April 20, 1977 Examiner Hearing)

Application of Yates Petroleum Corporation for gas pool creations and downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of three Pennsylvanian gas pools in Townships 17 and 18 South, Ranges 24, 25, and 26 East, Eddy County, New Mexico, including the Richard Knob- and East Eagle Creek-Lower Penn Gas Pools with provisions in each for commingling Strawn, Atoka, and Morrow production in the wellbores of wells drilled therein, and the Eagle Creek Permo-Penn Gas Pool with provision for commingling Wolfcamp, Cisco, Canyon, and Strawn production in the wellbores of wells drilled therein.

CASE 5915: (Continued from May 11, 1977 Examiner Hearing)

Application of C. W. Trainer for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the directional drilling of his Boyd Well No. 1, the surface location of which would be 830 feet from the South line and 2130 feet from the West line of Section 13, Township 20 South, Range 32 East, Lea County, New Mexico. Applicant proposes to vertically drill said well to a depth of from 5100 feet to 7900 feet and to then directionally drill in a southerly direction, bottoming said well in the Morrow formation at a true vertical depth of approximately 13,500 feet within 200 feet of the center of Unit F of Section 24, Township 20 South, Range 32 East. The N/2 of said Section 24 would be dedicated to the well.

CASE 5917: (Continued from May 11, 1977 Examiner Hearing)

Application of Hanagan Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Round Mountain Well No. 1, to be located 2310 feet from the North line and 660 feet from the East line of Section 34, Township 21 South, Range 25 East, Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico, all of said Section 34 to be dedicated to the well.

APR 25 1917
CONSERVATION COMMISSION

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

IN THE MATTER OF THE APPLICATION OF
HANAGAN PETROLEUM CORPORATION FOR
AN UNORTHODOX WELL LOCATION, SECTION
34, TOWNSHIP 21 SOUTH, RANGE 25
EAST, EDDY COUNTY, NEW MEXICO.

CASE NO. 5917

A P P L I C A T I O N

Comes now the applicant, Hanagan Petroleum Corporation, by and through its attorneys, Montgomery, Andrews & Hannahs, and respectfully states:

1. The applicant proposes to drill its No. 1 Round Mountain well in the Cat Claw Draw Morrow Field at an unorthodox well location 2,310 feet from the North line and 660 feet from the East line, Section 34, Township 21 South, Range 25 East, Eddy County, New Mexico.

2. Pursuant to the Pool Rules of the Cat Claw Draw Morrow Field, all of Section 34, Township 21 South, Range 25 East, Eddy County, New Mexico, should be dedicated to applicant's proposed No. 1 Round Mountain well.

3. Applicant states that the proposed unorthodox well location constitutes the best geological location for the proposed well.

4. The granting of the application is in the interest of the prevention of waste and the protection of correlative rights.

WHEREFORE, the applicant respectfully requests the Commission to approve its proposed location for its proposed No. 1 Round Mountain well 2,310 feet from the North line and 660 feet from the East line, Section 34, Township 21 South, Range 25 East, Cat Claw Draw Morrow Field, Eddy County, New Mexico.

Respectfully submitted,

MONTGOMERY, ANDREWS & HANNAHS

By


P.O. Box 2307

Santa Fe, New Mexico 87501

Attorneys for Applicant

Hanagan Petroleum Corporation

Dockets Nos. 17-77 and 18-77 are tentatively set for hearing on May 25 and June 8, 1977. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - THURSDAY - MAY 5, 1977

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

CASE 5912: In the matter of the hearing called by the Oil Conservation Commission on its own motion to consider the establishment of categories of plugging bonds, including blanket bonds not exceeding \$50,000, and one-well bonds in amounts determined sufficient to reasonably pay the cost of plugging the well's covered by each bond. Also to be considered will be the exclusion from future bond forms of provisions conditioning performance on recompense for damages to livestock, range, water, crops or tangible improvements. Also to be considered will be the amendment of Rule 101 of Commission Rules and Regulations concerning the above provisions.

Docket No. 16-77

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 11, 1977

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 Richard L. Stamets, Alternate Examiner:

- ALLOWABLE: (1) Consideration of the allowable production of gas for June, 1977, from seventeen prorated pools in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.
- (2) Consideration of the allowable production of gas for June, 1977, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 5913: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Kent Shannon, American Employers' Insurance Company, and all other interested parties to appear and show cause why the following wells in Chaves County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program:

Hi Lonesome Well No. 1, located in Unit D of Section 32, Township 8 South, Range 27 East;
El Paso Well No. 1, located in Unit M of Section 36, Township 10 South, Range 26 East; and
Karma Well No. 1, located in Unit O of Section 16, Township 10 South, Range 27 East.

CASE 5914: Application of Atlantic Richfield Company for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Wimberly WN Well No. 11, to be located 990 feet from the North line and 1490 feet from the West line of Section 24, Township 25 South, Range 37 East, Justis-Fusselman Pool, Lea County, New Mexico.

CASE 5915: Application of C. W. Trainer for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the directional drilling of his Boyd Well No. 1, the surface location of which would be 830 feet from the South line and 2130 feet from the West line of Section 13, Township 20 South, Range 32 East, Lea County, New Mexico. Applicant proposes to vertically drill said well to a depth of from 5100 feet to 7900 feet and to then directionally drill in a southerly direction, bottoming said well in the Morrow formation at a true vertical depth of approximately 13,500 feet within 200 feet of the center of Unit F of Section 24, Township 20 South, Range 32 East. The N/2 of said Section 24 would be dedicated to the well.

CASE 5916: Application of Marathon Oil Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of North Vacuum-Abo, Vacuum-Wolfcamp and Vacuum Upper-Pennsylvanian production in the wellbore of its McCallister State Well No. 7 located in Unit N of Section 25, Township 17 South, Range 34 East, Lea County, New Mexico.

CASE 5917: Application of Hanagan Pet. Corp. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Round Mountain Well No. 1, to be located 2310 feet from the North line and 660 feet from the East line of Section 34, Township 21 South, Range 25 East, Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico, all of said Section 34 to be dedicated to the well.

CASE 5918: Application of Marbob Energy Corporation for an unorthodox oil well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its NG Phillips State Well No. 10 located 2645 feet from the South line and 1325 feet from the East line of Section 27, Township 17 South, Range 28 East, Artesia Queen-Grayburg-San Andres Pool, Eddy County, New Mexico.

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. 5917

Order No. R- 5461

APPLICATION OF HANAGAN PETROLEUM CORPORATION
FOR AN UNORTHODOX GAS WELL LOCATION,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 25, 1977, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this day of , 1977, 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, Hanagan Petroleum Corporation, seeks for its Round Mountain Well No. 1 to be located approval of an unorthodox gas well location/ 2310 feet from the North line and 660 feet from the East line of Section 34, Township 21 South, Range 25 East, NMPM, to test the Morrow formation, Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico.

(3) That the All of said Section 34 is to be dedicated to the well

(5) That a well at said unorthodox location will better enable applicant to produce the gas underlying the proration unit.

~~(3) That the offset operator objected to the proposed unorthodox location.~~

(4) That all of said Section 34 may reasonably be presumed to be productive of gas in the Catclaw Draw-Morrow Gas Pool

(6) That an offset operator with interests in the Catclaw Draw-Morrow Gas Pool in Section 35, Township 21 South, Range 25 East, NMPM, Eddy County, New Mexico, has objected to the proposed location.

(7) That a well at the proposed location is at a standard location relative to the North and South lines of said Section 34.

(8) That a well at the proposed location is 60 percent closer to the East line of said Section 34 than permitted by the Special Pool Rules for said Catclaw Draw-Morrow Gas Pool.

(9) That a well at the proposed location will have an area of drainage in the Morrow formation which extends 109 net acres into said Section 35, more than a well located at a standard location in said pool.

(10) That to offset the advantage gained over the protesting offset operator, production from the well at the proposed unorthodox location should be limited from the Morrow formation.

(11) That such limitation should be based upon the variation of the location from a standard location and the 109 net-acre ~~encroachment~~ encroachment described in Finding No. (9) above, and may best be accomplished by assigning a well at the proposed location an acreage factor of 0.74 (100 percent North/South factor plus 40 percent East/West factor plus 83 percent net-acre factor divided by 3).

(12) That approval of the subject application subject to the above limitation 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 will otherwise prevent waste and protect correlative rights.

-2-

Case No. _____

Order No. R- _____

(6) That approval of the subject application 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 will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

*The Hungen
Petroleum
Corporation*

(1) That an unorthodox gas well location for the Morrow ~~applicant's~~ Round Mountain Well No. 1 to be located formation is hereby approved for ~~a well to be located~~ at a point 2310 feet from the North line and 660 feet from the East line of Section 34, Township 21 South, Range 25 East NMPM, Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico.

(2) That ~~the~~ All of said Section 34 shall be dedicated to the above-described well.

(3) That said well is hereby assigned a ^{acreage} ~~ratable take~~ factor of 0.74 in the Morrow formation, and the operator of the well, upon completion and connection thereof to a gas pipeline, shall notify the gas purchaser of ~~said acreage~~ factor.

(4) 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.

Cash
5917

DAN NUTTER

for May 11, 77

Hanagun Petr. Corp.

Catchland Dr. Morrow
unorthodox location

Round Mountain #1

2310 FNL

660 FEL

34-215 2SE Eddy

acc of 34

Heath Hanagun to DSN
2PM 4/18