

Sam R-4436-A

in the center.

CASE No.
4849

Application,
Transcripts,
Small Exhibits

ETC.

dearnley, meier & associates

209 SIMMS BLDG., P.O. BOX 1092, PHONE 243-6391, ALBUQUERQUE, NEW MEXICO 87103
1216 FIRST NATIONAL BANK BLDG. EAST, ALBUQUERQUE, NEW MEXICO 87108

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
OIL CONSERVATION COMMISSION CONFERENCE ROOM
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
Wednesday, November 14, 1973

IN THE MATTER OF:

In the matter of Case No. 4849 being
reopened pursuant to the provisions
of Order No. R-4436 which order
established temporary special rules
for the Humble City-Atoka Pool, Lea
County, New Mexico, including a
provision for 80-acre spacing.

Case No. 4849

BEFORE: DANIEL S. NUTTER
Examiner

TRANSCRIPT OF EXAMINER HEARING

1 MR. NUTTER: Call Case Number 4849.

2 MR. DERRYBERRY: Case 4849, (Reopened), in the
3 matter of Case No. 4849 being reopened pursuant to the
4 provisions of Order No. R-4436 which order established
5 temporary special rules for the Humble City-Atoka Pool,
6 Lea County, New Mexico, including a provision for
7 80-acre spacing.

8 MR. HINKLE: Clarence Hinkle of the firm of
9 Hinkle, Bondurant, Cox and Eaton, on behalf of Harding
10 Oil Company. We have one witness and five exhibits.
11 Here are the official copies.

12 MR. DERRYBERRY: Are there any other appearances
13 in this case?

14 ROY C. WILLIAMSON, JR.,

15 a Witness, having been first duly sworn according to law,
16 upon his oath testified as follows:

17 MR. HINKLE: Ready?

18 MR. NUTTER: Yes, sir, please.

19 DIRECT EXAMINATION

20 BY MR. HINKLE:

21 Q State your name, your residence, and your profession.

22 A I'm Roy C. Williamson, Jr. from Midland, Texas; and I
23 am President of the consulting firm of Sipes, Williamson
24 & Aycock.

25 Q Have you previously testified before the Oil Conservation

1 Commission?

2 A Yes, sir. I have.

3 Q And qualified as a petroleum geologist?

4 A Yes.

5 Q Were you one of the principal witnesses in this case
6 about a year ago when special pool rules were adopted?

7 A Yes.

8 Q Have you made a continuing study or additional study
9 since that time?

10 A I have.

11 Q Of this area? Have you prepared or has there been
12 prepared under your direction certain exhibits for
13 introduction in this case?

14 A Yes. There have been.

15 Q And they are the ones that have been marked Exhibits
16 1 through 5?

17 A That's correct.

18 MR. HINKLE: Mr. Examiner, are the witness'
19 qualifications acceptable?

20 MR. NUTTER: Yes, sir. They are.

21 Q Refer to Exhibit Number 1 and explain what this is and
22 what it shows.

23 A Exhibit Number 1 is a structure map contoured on top
24 of the Atoka pay. We have two contour intervals, minus
25 7800 feet and minus 7900 feet depicted on the map.

Also shown on the map are the completion intervals of the various wells in this area. You will notice that the only two wells completed in the Atoka are in the southern portion of Section 11 which is the Harding Oil Company Shipp Number 4 shown by the orange dot and the Tipco Byers Number 1 in the southwest corner of Section 12 also shown by an orange dot.

Q Which one of these wells was drilled subsequent to the Hearing a year ago?

A The Tipco Byers Number 1.

Q Go ahead.

A The other well locations are shown just for a matter of interest the green being the Strawn completion wells, the red being a Wolfcamp completion well, and the blue a Yeso Bank well.

I might further mention that the Atoka zone was invested in all of these other zones, and I'll make further comment later on those.

Q Is Harding drilling any wells at the present time in the general area?

A Yes, they are. In the northeast quarter of Section 15, Range 37 East, 17 South, they are drilling the Shaw Number 1.

Q Is that projected to test the Atoka formation?

A Yes.

1 MR. NUTTER: Mr. Williamson, is Harding drilling
2 that or is Mesa?

3 THE WITNESS: Well, this is a farm-out from Mesa,
4 and Harding will own or earn by drilling so --

5 MR. NUTTER: So Harding is drilling the well
6 although it's labeled as Mesa?

7 THE WITNESS: Right.

8 MR. HINKLE: Mesa absorbed Pupco and Pupco was the
9 owner of this acreage at the time of this other Hearing.

10 THE WITNESS: They actually don't get the acreage
11 until the well is drilled.

12 Q (By Mr. Hinkle) Refer to Exhibit Number 2 and explain
13 what this is.

14 A Exhibit Number 2 contains the two logs on the two Atoka
15 completions, the Byers Number 1 and the Shipp Number 4.
16 Depicted in the yellow box in the center of the log are
17 the perforated intervals in both of the wells, and we
18 can see here that the Atoka zone in the Byers Number 1
19 Well appears to be somewhat thicker than the Atoka zone
20 in the Shipp Number 4.

21 However, other available logs on the Byers Number 1,
22 the microlog to be specific, indicates that the lower part
23 of that zone has very little permeability and probably
24 is not contributing to production as we will see from the
25 performance of these wells on the subsequent exhibits.

1 Q Refer to Exhibit 3 and explain that.

2 A Exhibit Number 3 is a graphical representation of the
3 oil and gas production on a semi-log scale versus time
4 for the Harding Oil Company Shipp Number 4 Well. The
5 top curve labeled "Oil" refers to the left margin
6 scale and the gas curve refers to the right margin
7 scale.

8 Q Refer to Exhibit 4 and explain that.

9 A Exhibit 4 is a similar type of plot of oil and gas
10 production for the Tipco Byers Number 1.

11 Q Now, refer to Exhibit 5 and explain this exhibit.

12 A Exhibit 5 contains various data pertinent to the field
13 and to these two wells in particular. Item number 1
14 shows that the Harding Oil Company Shipp Number 4 Well
15 was completed in August of 1972. The original bottomhole
16 pressure was obtained from a drill stem test build-up
17 and amounted to 3,620 pounds.

18 The Tipco Byers Number 1 Well was completed in
19 January of 1973, some five months later, and also
20 had a drill stem test pressure; and the extrapolated
21 build-up pressure in this well was 3,384 pounds
22 which indicates that a 236 pound loss occurred in the
23 reservoir in the time between the two wells being
24 drilled.

25 So it is my conclusion that the Harding Shipp

1 Number 4 created a pressure loss indicated in the
2 Tipco Byers Number 1. The Harding --

3 Q What about your test there in 6-73?

4 A The Harding Shipp Number 4 was tested again after a
5 seventy-five hour shut-in time in June of 1973 and
6 recorded a pressure of 2,400 pounds. We have no
7 subsequent tests in the Byers Number 1 with which to
8 compare this pressure.

9 Q Okay.

10 A Item Number 2, the ultimate recovery was determined
11 from the two decline curves, Exhibit Number 3 and Number
12 4 and was obtained by extrapolating the production
13 decline trend already exhibited.

14 We see then that the Shipp Number 4 has indicated
15 ultimate recovery of 48,000 barrels of oil and the
16 Byers Number 1 has indicated an ultimate recovery of
17 19,000 barrels of oil.

18 Item number 3 is a calculation of the barrels of
19 oil required to pay out to the drilling and completion
20 costs. The well cost to drill and complete to the
21 Atoka, \$268,600. The pumping unit estimated to be
22 required later in the life will cost an estimated
23 \$10,000. A battery will cost \$12,500 for a total
24 cost of \$291,100.

25 In the economic calculations here, I have

1 utilized an oil price of \$6.31 which I understand is
2 not actually being received in this field, but has been
3 offered I know by Atlantic Richfield; and it's presumed
4 that subsequent wells will receive this price.

5 The gas price is 25 cents per mcf. Operating costs
6 per well per month were estimated at \$300. An
7 assumed productive life of five years was utilized for
8 the payout calculations.

9 Utilizing these above data, we see that to pay out
10 the total cost of this well, the pumping unit, and the
11 battery will require 59,215 barrels of oil.

12 Now, most operators or investors would like to
13 receive around a two-to-one return on their initial
14 investment as sort of a rock-bottom situation. So I
15 took the initial cost of the well, \$268,600, times two
16 and divided by the net price per barrel of oil, and that
17 would require 102,912 barrels of oil.

18 Item number 4 is the calculation of the drainage
19 area required to generate a two-to-one return on the
20 initial investment utilizing the reservoir data from the
21 Shipp Number 4 and the Byers Number 1 Wells.

22 These two wells have approximately 14 feet of net
23 pay and the reservoir calculations indicate that 70
24 barrels of oil per acre foot is recoverable. So utilizing
25 this expression here, we can calculate that it would

1 require a drainage area of 105 acres to recover under
2 these conditions approximately 103,000 barrels of oil.

3 Q Exhibit Number 5 shows in effect that neither one of
4 these wells will pay out; is that right --

5 A That is correct.

6 Q -- drilled on 80 acres; and it would be an economic loss
7 to drill additional wells on 40 acres; would it not?

8 A That is correct. I might mention that it was the initial
9 testimony in the original Hearing that the Atoka is
10 a stratigraphic pay section. It is obviated by the
11 other wells here that have tested the Atoka and have
12 not found commercial production. It's very irradic.

13 I might mention that the Mesa Number 2 Well which
14 is immediately west of the Harding Shipp Number 4 in
15 Section 11 has been a Strawn producer; but in visiting
16 with the operator, they are planning within the very
17 near future to recomplete that well as an Atoka
18 well.

19 They did test that well, production tested it, and
20 did get a full test; but the Strawn, they decided to
21 plug back and complete the Strawn first.

22 I understand that well is now dead, and they will
23 either install pumping equipment or recomplete. I don't
24 know what they will do.

25 Q What is your recommendation to the Commission with

1 respect to the present rules?

2 A I recommend that the present rules be extended and to

3 be made permanent. I think the pressure information

4 from the Harding Shipp 4 and the Tipco Byers Number 1

5 indicates that the reservoir, at present, will drain

6 over an 80-acre area.

7 Q In your opinion, will the continuation of these rules

8 or making it permanent be in the interest of conservation,

9 prevention of waste, and protect correlative rights?

10 A Yes, they will.

11 MR. HINKLE: We'd like to offer into evidence

12 Exhibits 1 through 5.

13 MR. NUTTER: Applicant's Exhibits 1 through 5 will

14 be admitted into evidence.

15 MR. HINKLE: That's all of our case.

16 CROSS-EXAMINATION

17 BY MR. NUTTER:

18 Q Mr. Williamson, what is the cumulative production to

19 date from these two wells?

20 A I have that right here. The Shipp Number 4 has

21 cumulated 38,591 barrels through September of '73.

22 Q 38,591?

23 A Right. And the Tipco Byers Number 1 through August

24 has cumulated 16,055 barrels.

25 Q So apparently those operators aren't going to get that

1 two-to-one return on those?

2 A No, sir. They surely aren't. They are going to have
3 to find the reservoir a little better developed to
4 make it an economic success.

5 MR. NUTTER: Are there any further questions of
6 Mr. Williamson? He may be excused. Do you have anything
7 further, Mr. Hinkle?

8 MR. HINKLE: That's all.

9 MR. NUTTER: Does anyone have anything they wish
10 to offer?

11 MR. DERRYBERRY: Mr. Examiner, I have a telegram
12 from Texas International Petroleum Company by Robert
13 Burkett, Division Manager. It reads as follows:
14 "Refers docket Number 4948," which we determined was
15 4849, "in the matter of the rehearing for R-4436,
16 temporary spacing rules for the Humble City-Atoka
17 Field. This is to advise that Texas International
18 Petroleum Corporation supports the continuance of
19 80-acre proration units. Based on production data
20 to date from Tipco Number 1 Byers Well in the Humble
21 City-Atoka Field we cannot economically justify any
22 further development on any spacing pattern less than
23 80 acres per well. Respectfully, Texas International."

24 MR. HINKLE: Mr. Examiner, do you have also a
25 letter from Mesa Petroleum?

1 MR. NUTTER: No, sir. That's the only correspondence
2 we received.

3 MR. HINKLE: I would like to offer a letter here
4 which you will undoubtedly receive. This is dated
5 November the 12th, 1973, addressed to the New Mexico
6 Oil Conservation Commission. "Attention: Mr. Nutter.
7 Mesa Petroleum Company. In the matter of Case 4849 being
8 reopened pursuant to the provision of Order R-4436,
9 which order established a temporary special ruling for
10 the Humble City-Atoka Pool in Lea County, New Mexico,
11 including a provision for 80-acre spacing, Mesa
12 Petroleum Company supports Harding Oil Company's
13 request that the temporary provision for 80-acre spacing
14 be made permanent."

15 MR. NUTTER: Thank you, Mr. Hinkle. Is there
16 anything further in Case 4849? We will take the case
17 under advisement.

18 * * * * *

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C E R T I F I C A T E

I, JANET RUSSELL, a Court Reporter, in and for the
County of Bernalillo, State of New Mexico, do hereby certify
that the foregoing and attached Transcript of Hearing before
the New Mexico Oil Conservation Commission was reported by me;
and that the same is a true and correct record of the said
proceedings to the best of my knowledge, skill and ability.

Janet Russell
COURT REPORTER

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I N D E X

WITNESS:

ROY C. WILLIAMSON, JR.

Direct Examination by Mr. Hinkle

Cross-Examination by Mr. Nutter

PAGE

2

10

E X H I B I T S

Applicant's Exhibits 1 - 5

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
Wednesday, November 1, 1972

EXAMINER HEARING

IN THE MATTER OF:

Application of Harding Oil Company for
pool creation, special rules therefore,
and discovery allowable, Lea County,
New Mexico.

Case No. 4849

BEFORE: Elvis A. Utz,
Examiner

TRANSCRIPT OF HEARING

dearnley, meier & mc cormick

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1 MR. UTZ: Case 4849, the application of Harding
2 Oil Company for pool creation, special pool rules therefore,
3 and discovery allowable, Lea County, New Mexico.

4 MR. HINKLE: Clarence Hinkle of Hinkle, Bondurant,
5 Cox and Eaton of Roswell appearing on behalf of the Harding
6 Oil Company.

7 We have two witnesses we'd like to have sworn, they
8 have five exhibits.

9 MR. UTZ: Have you the exhibits marked?

10 MR. HINKLE: Yes.

11 MR. UTZ: Are there other appearances in this case?

12 (No response.)

13 MR. UTZ: If there are none, these are your two
14 witnesses?

15 MR. HINKLE: Yes.

16 RICHARD F. SPENCER,
17 a witness, having been first duly sworn according to law,
18 upon his oath, testified as follows:

19 DIRECT EXAMINATION

20 BY MR. HINKLE:

21 Q State your name, your residence, and by whom you are
22 employed.

23 A I am Richard F. Spencer, I live in Midland, Texas, and
24 I'm self-employed by the partnership of Spencer and
25 Hudson.

- 1 Q That's consulting geologists?
- 2 A That's correct.
- 3 Q Have you been employed in connection with this case by
- 4 Harding Oil Company?
- 5 A Yes.
- 6 Q Have you previously testified before the Oil Conservation
- 7 Commission?
- 8 A Yes, sir, I have.
- 9 Q And your qualifications as a petroleum geologist are a
- 10 matter of record with the Commission?
- 11 A Yes, sir.
- 12 Q Are you familiar with the application of Harding in this
- 13 case?
- 14 A Yes, sir.
- 15 Q What is Harding Oil Company seeking to accomplish?
- 16 A Harding Oil Company seeks the creation of a new pool for
- 17 the production of oil from the Atoka formation for it's
- 18 Shipp No. 4 Well, located in Unit 1 of Section 11,
- 19 Township 17 South, Range 37 East, Lea County, New Mexico,
- 20 and the promulgation of special rules therefore,
- 21 including a provision for 80 acre spacing and proration
- 22 units. Applicant further seeks the assignment of a
- 23 discovery allowable of approximately 58,310 barrels of
- 24 oil to said well.
- 25 Q Have you made a study of this area where the discovery

1 well is located?

2 A Yes, sir, I have.

3 Q Are you familiar with all the wells that have been drilled
4 in the area?

5 A Yes, sir.

6 Q Have you prepared, or has there been prepared under your
7 direction, exhibits for introduction into this case?

8 A Yes, sir.

9 Q They are the ones that have been marked 1 through 3?

10 A 1 through 3, yes, sir.

11 Q Refer to Exhibit Number 1 and explain what this is, and
12 what it shows.

13 A Exhibit Number 1 is a structure map on top of the Atoka
14 formation. This map shows the localized area for the
15 Humble City Strawn Field together with the Lomm Atoka
16 Well that we will be discussing this morning. This,
17 again, is located in Township 17 South, Range 37 East,
18 Lea County, New Mexico.

19 The wells within this field area are color coded as
20 shown on the legend on the left-hand side of the map.
21 As you can see within the field area there are two wells
22 that are producing from the Strawn formation, colored
23 in green. The well shown in orange, is the Atoka Well,
24 the Shipp No. 4. The well shown in blue on the west-hand
25 side of the map in Section 10 is a recent discovery from

1 the Yeso formation by TIPCO, Texas International
2 Petroleum Company. The other field shown up here to the
3 upper right-hand side is a Devonian Field. The other
4 wells shown back on the northwestern side of the map,
5 the Lovington and the Lovington East Field with the
6 Strawn produces colored in green.

7 This map is a structure map, as I said before, on
8 top of the Atoka formation, and what this map shows,
9 that I was generally speaking of, it dips to the south
10 and southeast from the Shipp No. 1 Well and the Pubco
11 No. 2 Well down to the Harding Shipp No. 4 Well. There
12 is a dip down to the southeast with the Harding Shipp No.
13 4 Well being the lowest well, structurally speaking, in
14 the area. I might point out from this map that the
15 Atoka formation that is productive in the Shipp No. 4
16 that we will discuss further is a stratigraphic-type
17 disposition with the structure having very little bearing
18 on the entrapment of hydrocarbons in this formation.

19 Q Does Exhibit Number 1 show the ownership of the acreage
20 in the area?

21 A Yes, sir, it does.

22 Q What is that that is shown in yellow?

23 A This is a checkerboard of the acreage that can be earned
24 by Harding Oil Company by virtue of a firm out
25 agreement between the Harding Oil Company and Pubco.

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1 Q And they have earned the 80 acres upon which the Atoka,
2 or Shipp No. 4 Well, is located?

3 A Yes, sir, that's correct. Plus, the 80 acres shown there
4 by the green well on the extreme western side there, the
5 first well, the Harding Shipp No. 1, those two 80-acre
6 tracts.

7 Q Give briefly the history of the Shipp No. 4 Well.

8 A This well, I'd like to refer to Exhibit Number 2, which
9 is a log from that well. This is a density log, showing
10 the lower part of this well. The Harding Shipp No. 4 was
11 spudded July 22, 1972, it reached a total depth in the
12 Atoka formation at 11,740 feet to 11,660 feet on August
13 26, 1972. The two drill-stem tests were taken in this
14 well, one in the Strawn formation, comparable
15 stratigraphic zone to the pay in the two wells shown in
16 green. A summary of the drill-stem test indicated that
17 the Strawn was tight and nonproductive in this particular
18 well. The Atoka was encountered at 11,660 feet,
19 approximately. At this point, a sand comprised of
20 primarily fine, medium-grain sand, fairly tight in
21 character, representing what we believe to be a stream-
22 type deposit with approximately one foot of porosity, by
23 log, was encountered. A drill-stem test was taken across
24 this particular unit from 11,636 feet to 11,713 feet.
25 During this drill-stem test, gas and oil flowed to the

1 surface. Water blanked-off was reversed out as well as
2 5,500 feet of oil.

3 As the result of this drill-stem test, a completion
4 attempt was made in the Atoka formation, and on this
5 log you will see the perforated interval just below the
6 depth there of 11,660 feet. As I said before, it appears
7 that we have some 12 feet of pay in this well, by sample
8 description and by log character. This well was
9 potential flowing 362 barrels of oil per day, and the
10 initial production started on September 8, 1972.

11 Q Do you have any further comments with respect to Exhibit
12 Number 1?

13 A No, sir.

14 Q Or 2?

15 A No.

16 Q Now, turn to Exhibit Number 3 and explain what this is
17 and what it shows?

18 A Exhibit Number 3 is a structural cross section, A-A'.

19 This cross section, if you will refer back --

20 Q A and A' were shown on Exhibit 1?

21 A Yes, sir, that's correct. Starting on the left-hand
22 side of the cross section, it's the Texas International
23 No. 1 Nicholson Well in Section 10 going to the Harding
24 Oil Company No. 1 Shipp Well in Section 11, then to the
25 Pubco No. 2 Shipp Well in Section 11 and ending up on the

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1 right-hand side of the cross section the Harding No. 4
2 Shipp Well. This cross section is a stick section
3 portraying the stratigraphic units from the Yeso bank,
4 below minus 5,000 feet, down to the Atoka producing
5 zone that we are talking about today in the Harding No.
6 4 Shipp Well.

7 This cross section shows primarily, if you will see
8 the two producing wells in the Strawn, the Harding No. 1
9 and the Pubco No. 2 Shipp Wells, showing the zonation of
10 the Strawn that's productive, that it definitely tightens
11 up, is nonproductive in the Harding No. 4 Well in the
12 right-hand side of the cross section, and it's believed
13 to be tight in the Texas International No. 1 Nicholson
14 Well in the left. What this shows is that the zone is
15 stratigraphic, that it is illusive, and that the 80 acres
16 that were allotted to this was proper and that you could
17 very easily miss this type of a zone with too large a
18 spacing.

19 Now, coming down the hole in the Harding No. 4 Shipp
20 Well on the right-hand side, you will see the units there
21 designated the Atoka Pay Zone. This is the 12 feet of
22 sand that is productive in this well. This sand was not
23 present in the Harding No. 1 Shipp Well, the second well
24 on the cross section. The sand had shaled out in that
25 particular well, the Pubco No. 2 Shipp Well, it's unknown

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1 whether that sand is present or not because that log has
2 been withheld from the industry. However, a test was
3 taken someplace in the Atoka and the well flowed 156
4 barrels of oil with a rate decreasing throughout the
5 test, indicating that the Atoka apparently was
6 nonproductive in that particular well.

7 I'd like to also point out, which is an inference
8 here on our part, the original zones which show lenses
9 in the Atoka Morrow, older in age than the Atoka Zone
10 we are talking about today. And why we show these sands
11 is that we feel the Atoka Morrow in this particular area
12 is very typical of the northern part of the Delaware
13 Basin, that is to say that the Atoka Morrow represents,
14 for the most part, stream-type deposits; they are very
15 lenticular in nature, and very erratic and elusive, that
16 they are not easily found and can be easily missed, a
17 zone that could contain commercial hydrocarbons, wells
18 that the Atoka seem present in; and Shipp No. 4 Well is
19 just such one of those particular type of deposits that
20 it is a stream-type deposit and that it is going to be
21 very difficult to follow. We feel that any one well on
22 80-acre spacing could pickup additional zones, but by the
23 same token on additional spacing of 160 or greater, you
24 could miss zones that could have commercial hydrocarbons.

25 So, just in summary, these zones are stratigraphic,

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very lenticular, and elusive; yet at the same time they can hold commercial quantities of hydrocarbons and we feel that 80 acres would be adequate spacing for drainage at the same time giving us the proper acreage to find additional zones that could be as productive as what we've found in the Harding No. 4 Shipp.

Q And, in your opinion, would the Atoka Zone, as found in the Shipp No. 4 Well, extend over any considerable area, or is it likely to be rather limited?

In other words, could it extend down south considerably from the well?

A It's possible that it could, but in our feeling, from our studies of the Atoka Morrow, we feel that it would be limited.

Q Isn't it true that it could thicken up in places over the 12 feet that you have testified to and you found in the No. 4?

A Yes, sir, this is correct. From our studies in the area, from other areas in the northern part of the Delaware Basin, these sands, being the type of deposits that they are, thin and thicken.

Q Do you have anything further to state with respect to Exhibit Number 3?

A No, sir.

MR. HINKLE: We offer into evidence Exhibits 1, 2,

1 and 3.

2 MR. UTZ: Without objection, Exhibits 1, 2, and
3 3 will be admitted into this case.

4 MR. HINKLE: The other witness will cover the
5 engineering features of this.

6 BY MR. UTZ:

CROSS EXAMINATION

7 Q Mr. Spencer, you made other drill-stem tests in this well,
8 did you not?
9 A In the Harding Shipp No. 4?

10 Q Yes, sir.

11 A Yes, sir.

12 Q And with no other productive in the well?
13 A No, sir. We had a test in the Strawn and that drill-stem

14 test, it's shown here in Exhibit 3, the result of that
15 test, it recovered 15 feet of drilling mud, indicating the
16 zone to be tight and nonproductive. This is the same
17 correlative zones that are productive in the Shipp No. 1
18 and the Pubco No. 2 Shipp.

19 Q And the Yeso was also tested?
20 A The Yeso was indicated by logs and samplings to be tight

21 and nonproductive.
22 Q To the best of your knowledge, that's the only two zones
23 other than the Atoka that would be productive in this area?

24 A Yes, sir.
25

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209 SIMMS BLDG., P.O. BOX 1092, PHONE 243-6691, ALBUQUERQUE, NEW MEXICO 87103
1216 FIRST NATIONAL BANK BLDG., EAST ALBUQUERQUE, NEW MEXICO 87108

1 MR. UTZ: Are there any other questions of the
2 witness?

(No response.)

3 MR. UTZ: The witness may be excused. You may call
4 your next witness.

ROY WILLIAMSON,

6 a witness, having been first duly sworn according to law,
7 upon his oath, testified as follows:

DIRECT EXAMINATION

9 BY MR. HINKLE:

10 Q You've been sworn, have you not?

11 A Yes, sir, I have.

12 Q State your name, your residence and by whom you are
13 employed.

14 A I'm Roy Williamson, I live in Midland, Texas, and I am
15 the president of the firm of Sipes, Williamson, and
16 Runyan, here representing Harding Oil Company.

17 Q You are a petroleum engineer?

18 A Yes, sir.

19 Q You have previously testified before the Commission, or
20 Examiner?

21 A Yes, sir, I have.

22 Q And qualified as a petroleum engineer?

23 A Yes, sir.

24 Q Are you familiar with the application of Harding in this
25

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1 case?

2 A Yes, I am.

3 Q And have you made a study of the area that's involved,

4 all the wells that have been drilled in the area?

5 A I have.

6 Q Have you prepared, or has there been prepared under your

7 direction, certain exhibits for introduction into this

8 case?

9 A Yes, they have.

10 Q And they are marked 4 and 5?

11 A That is correct.

12 Q Refer to Exhibit Number 4 and explain what this is and

13 what it shows.

14 A Exhibit Number 4 is a calculation of reserves

15 attributable to the Shipp No. 4 Well by means of the

16 material balance method. This was in the early stages

17 of production in the well, and consequently the data may

18 not be quite as accurate as we would like, but it's all

19 we have. We do feel it to be quite representative,

20 although there could be some slight change after additional

21 production.

22 The original bottom hole pressure on drill-stem

23 test in the Atoka Zone in the Shipp No. 4 was 3,931

24 pounds per square inch. After the production of some

25 6,937 barrels of oil from this well, a pressure build-up

test was conducted. The test was started at 5:20 on October 20, 1972, and the test was terminated 71 hours later at approximately 4:30 P.M., on October 23. The pressure data obtained in this test was recorded and entrapment made to what is the current bottom hole pressure as evidenced by this test, of 3,620 pounds.

By utilizing the material balance equation above the bubble point we are able to calculate, as shown through several items here, which I won't go through, and the oil in-place figure as represented by this pressure response of about 705,000 barrels of oil in-place. Taking an assumed recovery of 20 per cent of this oil in-place, we have recoverable oil of 141,000 barrels of oil.

That's based solely on the present information that's available?

That is correct. And this, the bottom hole pressure measure, we felt to be very representative. There is some indication that the pressure test was increasing toward the end of the test, which could indicate a slightly higher pressure and therefore slightly higher reserves, but we feel that this is certainly representative of what this well should recover.

Now, refer to Exhibit 5 and explain this.

The Exhibit 5 is titled "Completion of Development" and the purpose of this exhibit is to show that this well,

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1 that the recovery that is currently expected from it,
2 will result in an economic endeavor. The estimated
3 drill and completion costs, as furnished by the operator,
4 is \$183,000.00.

5 Utilizing the oil prices, the gas prices, estimated
6 taxes, and estimated operating cost, we can calculate
7 that payout of the well, including the operating costs,
8 will require approximately 73,000 barrels of oil. So,
9 we do show by this that the well is certainly economic.

10 Q Now, of your study and the matters you've testified to,
11 what conclusions do you reach?

12 A Well, I believe that, of course, the thing that we are
13 most concerned with here is that the 80-acre proration
14 unit is preferable in this field because of the erratic
15 nature of the porosity, and the permeability development.
16 Also, the pay is stratigraphic, rather than structural,
17 and I feel like that the dry-hole risk would escalate if
18 we would go to a larger spacing unit than the 80 acres.
19 I think we can see throughout the area that the spacing
20 has been designed so as to stay as close to production
21 as possible, not take any large step-outs, because we do
22 have quite a number of dry holes scattered among very
23 productive, very economic wells.

24 I might point out that the East Lovington Penn is
25 still on 40-acre spacing, and our evaluation of the

1 reserves that could be attributed to a well draining
2 80 acres show that with great porosity, permeability
3 development, a well draining 80 acres is certainly an
4 economic well.

5 Q In your opinion, will the Shipp No. 4 Well drain the 80
6 acres on which it is situated?

7 A Yes, sir.

8 Q What are your recommendations to the Commission with
9 respect to the adoption of special pool rules?

10 A Well, I think that the 80-acre spacing should be adopted
11 in the interest of conservation of hydrocarbons, the
12 prevention of underground waste, and to protect
13 correlative rights, and that furthermore the rules
14 should be adopted for the Atoka, similar to those adopted
15 for the Humble City Strawn. We might suggest a field
16 name here of Spencer-Hudson Atoka, if this would be in
17 order.

18 Q Has this pool been designated by the Commission?

19 A As far as I know, it has not.

20 Q What acreage would you recommend be considered in
21 designation of the pool?

22 A Well, at this time, we don't know the extent of it,
23 probably we would certainly recommend from our geological
24 interpretation, the 80 acres that surround the Shipp No.
25 4, and possibly the 80 acres that would extend to the

1 east and possibly to the south and southeast. At this
2 time, we, of course, don't know how far this might
3 extend.

4 Q In your opinion, will the adoption of these special pool
5 rules be in the interest of conservation and prevention
6 of waste?

7 A Yes, sir.

8 Q And also will tend to protect correlative rights?

9 A That is my opinion.

10 Q Do you have any further testimony that you would like to
11 give to the Commission?

12 A Not at this point.

13 MR. HINKLE: We would like to offer in evidence
14 Exhibits 4 and 5.

15 MR. UTZ: Without objection, Exhibits 4 and 5 will
16 be entered into the record of this case.

17 CROSS EXAMINATION

18 BY MR. UTZ:

19 Q Does the material balance calculation on Exhibit 4 give
20 you any indication of the areal extent of this pool?

21 A Yes, it does, in that, of course, I might point out one
22 thing. This well has not been treated, it has not been
23 artificially stimulated. We feel like that if the
24 pressure build-up test is representative, however, it
25 may not be giving us the full pressure, the material

1 balance data in conjunction with what limited
2 volumetric data that we can draw from the single
3 penetration that we have here, indicates that this field
4 could not be much larger than, say, 160 acres because
5 the volumetric number fit very well with the material
6 balance number. However, if our pressure measurement is
7 not completely representative of reservoir, it could be
8 possible that the reservoir could be larger than this
9 would indicate. Of course, the operator will plan to
10 treat this well at sometime in the future, if required;
11 however, this pay is very touchy and we do not want to
12 put any sort of treatment into it that would bring a
13 permeability block of any nature.

14 Q Now, Pubco, at this time, has one Strawn well?

15 A That is correct. Their No. 2, they drilled a dry hole,
16 their No. 3.

17 Q That is a dry hole?

18 A Right, from what we know. The log has been held tight
19 from us, but we understand that it has no productive
20 zones in it. I think this further points out the
21 lenticularity of the pay zone and step-outs could
22 certainly overstep a productive zone.

23 Q It might indicate that the productive zone goes south
24 instead of north.

25 A Right, it certainly might.

1 MR. UTZ: Are there other questions of the witness?

2 (No response.)

3 MR. UTZ: You may be excused.

4 This case will be taken under advisement.

5 Are there any statements in the case?

6 (No response.)

7 MR. UTZ: There are none.

8 MR. HINKLE: Thank you very much. We have two
9 letters we'd like to put in the record.

10 MR. UTZ: All right, sir. We have two communications
11 from H. D. L. Brown, Junior, who supports this application;
12 and a letter from Pennzoil Company, who also supports the
13 application. If you will enter those into the record, please.

14 MR. HINKLE: Thank you.

15
16 STATE OF NEW MEXICO)
) ss
17 COUNTY OF BERNALILLO)

18 I, JOHN DE LA ROSA, Court Reporter, in and for the County
19 of Bernalillo, State of New Mexico, do hereby certify that the
20 foregoing and attached Transcript of Hearing before the New
21 Mexico Oil Conservation Commission was reported by me; and that
22 the same is a true and correct record of the said proceedings
23 to the best of my knowledge, skill and ability.

24
25 *John De La Rosa*
COURT REPORTER

I N D E X

WITNESS

PAGE

RICHARD F. SPENCER

Direct Examination by Mr. Hinkle

3

Cross Examination by Mr. Utz

12

ROY WILLIAMSON

Direct Examination by Mr. Hinkle

13

Cross Examination by Mr. Utz

18

E X H I B I T S

ADMITTED

OFFERED

Exhibits #1, #2, and #3

12

11 & 12

Exhibits #4 and #5

13

18



OIL CONSERVATION COMMISSION

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

December 3, 1973

L. R. TRUJILLO
CHAIRMAN

**LAND COMMISSIONER
ALEX J. ARMJO
MEMBER**

**STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR**

Mr. Clarence Hinkle
Hinkle, Bondurant, Cox & Eaton
Attorneys at Law
Post Office Box 10
Roswell, New Mexico 88201

Re: CASE NO. 4849
ORDER NO. R-4436-A
Applicant:
Harding Oil Company

Dear Sir:

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

Very truly yours,

A. L. Porter, Jr.
A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC _____ x
Artesia OCC _____
Aztec OCC _____

Other

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 4849
Order No. R-4436-A

IN THE MATTER OF CASE NO. 4849 BEING
REOPENED PURSUANT TO THE PROVISIONS
OF ORDER NO. R-4436 WHICH ORDER ESTAB-
LISHED TEMPORARY SPECIAL RULES FOR THE
HUMBLE CITY-ATOKA POOL, LEA COUNTY, NEW
MEXICO, INCLUDING A PROVISION FOR 80-ACRE
SPACING.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 14, 1973, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 30th day of November, 1973, 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 by Order No. R-4436, dated November 13, 1972, temporary Special Rules and Regulations were promulgated for the Humble City-Atoka Pool, Lea County, New Mexico, establishing 80-acre spacing units for a period of one year.

(3) That pursuant to the provisions of Order No. R-4436, this case was reopened to allow the operators in the subject pool to appear and show cause why the Humble City-Atoka Pool rules should remain in effect.

(4) That the evidence establishes that one well in the Humble City-Atoka Pool can efficiently and economically drain and develop 80 acres.

(5) That the Special Rules and Regulations promulgated by Order No. R-4436 have afforded and will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the oil in the pool.

-2-

Case No. 4849

Order No. R-4436-A

(6) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-4436 should be continued in full force and effect until further order of the Commission.

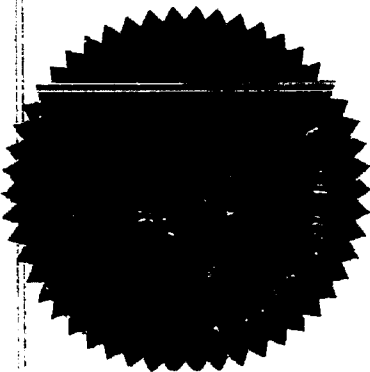
IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the Humble City-Atoka Pool, Lea County, New Mexico, promulgated by Order No. R-4436, are hereby continued in full force and effect until further order of the Commission.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



I. R. Trujillo
I. R. TRUJILLO, Chairman

ALEX J. ARMIJO, Member

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

S E A L

dr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 4849
Order No. R-4436

APPLICATION OF HARDING OIL COMPANY
FOR POOL CREATION, SPECIAL RULES
THEREFOR, AND DISCOVERY ALLOWABLE,
LEA COUNTY, NEW MEXICO.

NOMENCLATURE

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 1, 1972, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 13th day of November, 1972, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Harding Oil Company, seeks the creation of a new oil pool for Atoka production in Lea County, New Mexico, and the assignment of an oil discovery allowable in the amount of approximately 58,310 barrels to the discovery well.

(3) That the applicant also seeks the promulgation of special rules for said pool, including a provision for 80-acre proration units.

(4) That the evidence presently available indicates that the Shipp Well No. 4, located in Unit I of Section 11, Township 17 South, Range 37 East, NMPM, Lea County, New Mexico, has discovered a separate common source of supply which should be designated the Humble City-Atoka Pool; that the vertical limits of said pool should be the Atoka formation as found on the log of said Shipp Well No. 4 from 11,661 feet to 11,676 feet, and that the horizontal limits of said pool should be the E/2 of said Section 11.

-2-

Case No. 4849
Order No. R-4436

(5) That the discovery well for the aforesaid pool, Shipp Well No. 4, located in Unit I of Section 11, Township 17 South, Range 37 East, NMPM, Lea County, New Mexico, is entitled to and should receive a bonus discovery oil allowable in the amount of 58,310 barrels, based upon the top perforations in said well at 11,662 feet, to be assigned over a two-year period.

(6) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 80-acre spacing units should be promulgated for the Humble City-Atoka Pool.

(7) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

(8) That the temporary special rules and regulations should be established for a one-year period in order to allow the operators in the subject pool to gather reservoir information to establish the area that can be efficiently and economically drained and developed by one well.

(9) That this case should be reopened at an examiner hearing in November, 1973, at which time the operators in the subject pool should be prepared to appear and show cause why the Humble City-Atoka Pool should not be developed on 40-acre spacing units.

IT IS THEREFORE ORDERED:

(1) That a new pool in Lea County, New Mexico, classified as an oil pool for Atoka production, is hereby created and designated the Humble City-Atoka Pool, with vertical limits comprising the Atoka formation as found on the log of the Harding Oil Company Shipp Well No. 4, located in Unit I of Section 11, Township 17 South, Range 37 East, from 11,661 feet to 11,676 feet, and horizontal limits comprising the following-described area:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM
Section 11: E/2 of SE/4

(2) That the aforesaid discovery well is hereby authorized an oil discovery allowable of 58,310 barrels to be assigned to said well at the rate of 80 barrels per day in accordance with Rule 509 of the Commission Rules and Regulations.

(3) That temporary Special Rules and Regulations for the Humble City-Atoka Pool, Lea County, New Mexico, are hereby promulgated as follows:

-3-

Case No. 4849
Order No. R-4436

SPECIAL RULES AND REGULATIONS
FOR THE
HUMBLE CITY-ATOKA POOL

RULE 1. Each well completed or recompleted in the Humble City-Atoka Pool or in the Atoka formation within one mile thereof, and not nearer to or within the limits of another designated Atoka oil pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well shall be located on a standard unit containing 80 acres, more or less, consisting of the N/2, S/2, E/2, or W/2 of a governmental quarter section; provided however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit comprising a governmental quarter-quarter section or lot, or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Land Surveys. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located within 150 feet of the center of a governmental quarter-quarter section or lot.

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

RULE 6. Top unit allowable for a standard proration unit (79 through 81 acres) shall be based on a depth bracket allowable of 445 barrels per day, and in the event there is more than one well on an 80-acre proration unit, the operator may

-4-

Case No. 4849

Order No. R-4436

produce the allowable assigned to the unit from the wells on the unit in any proportion.

The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80 acres.

IT IS FURTHER ORDERED:

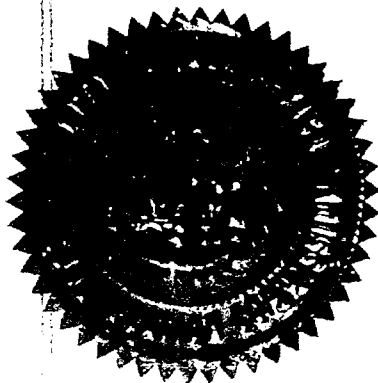
(1) That the locations of all wells presently drilling to or completed in the Humble City-Atoka Pool or in the Atoka formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before November 25, 1972.

(2) That each well presently drilling to or completed in the Humble City-Atoka Pool or in the Atoka formation within one mile thereof shall receive a 40-acre allowable until a Form C-102 dedicating 80 acres to the well has been filed with the Commission.

(3) That this case shall be reopened at an examiner hearing in November, 1973, at which time the operators in the subject pool should be prepared to appear and show cause why the Humble City-Atoka Pool should not be developed on 40-acre spacing units.

(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

Bruce King
BRUCE KING, Chairman

Alex J. Armijo
ALEX J. ARMIJO, Member

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

S E A L

dr/

DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 14, 1973

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:

CASE 5044: (Continued from the October 3, 1973, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Sycor Newton, Peru Milling Company, R. E. Deming and Aetna Life and Casualty Company and all other interested parties to appear and show cause why the State L 6350 Well No. 1 located in Unit M of Section 10, Township 23 South, Range 11 West, Luna County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5098: Application of R. J. Zonne for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a Morrow gas pool for his Federal Well No. 1 located in Unit G of Section 20, Township 22 South, Range 32 East, Lea County, New Mexico, and the promulgation of special rules therefor, including a provision for 640-acre spacing.

CASE 4849: (Reopened)

In the matter of Case No. 4849 being reopened pursuant to the provisions of Order No. R-4436 which order established temporary special rules for the Humble City-Atoka Pool, Lea County, New Mexico, including a provision for 80-acre spacing. All interested parties may appear and show cause why said pool rules should remain in effect.

CASE 5099: Application of Pennzell Company for a pool creation, special pool rules and an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a Wolfcamp gas pool for its Moore Com Well No. 1 located at an unorthodox Wolfcamp location 2310 feet from the South line and 660 feet from the East line of Section 23, Township 22 South, Range 26 East, Eddy County, New Mexico, and the promulgation of special pool rules therefor, including a provision for 320-acre spacing.

CASE 5100: Application of Estill Production Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the W/2 of Section 21, Township 18 South, Range 33 East, South Corbin-Morrow Gas Pool, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location for said unit. Also to be considered will be the cost of drilling and completing said well and the allocation of such costs, as well as actual operating costs and charges for supervision. Also to be considered is the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

- CASE 5101: Application of Southern Union Production Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox gas well location for its McKittrick-Federal Well No. 1 at a point 2390 feet from the North line and 830 feet from the East line of Section 14, Township 22 South, Range 24 East, Eddy County, New Mexico, the E/2 of said Section 14 to be dedicated to the well.
- CASE 5102: Application of Anne Burnett Tandy dba Windfohr Oil Company for two waterflood projects, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute two waterflood projects by the injection of water into the Grayburg and San Andres formations through 6 wells on its Jackson "B" Lease and through 3 wells on its Gissler "B" Lease, located in Sections 1 and 11, respectively, Township 17 South, Range 30 East, Square Lake Pool, Eddy County, New Mexico.
- CASE 5103: Application of David Fasken for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox gas well location at a point 1000 feet from the North and West lines of Section 32, Township 20 South, Range 25 East, Indian Hills-Morrow Gas Pool, Eddy County, New Mexico.
- CASE 5104: Application of El Paso Natural Gas Company for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Rocky Arroyo "C" Well No. 1 located in Unit F of Section 8, Township 22 South, Range 22 East, Rocky Arroyo Field, Eddy County, New Mexico, in such a manner as to produce gas from the Canyon formation and gas from the Morrow formation through the casing-tubing annulus and through the tubing, respectively.
- CASE 5105: Application of Stallworth Oil and Gas for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox oil well location at a point 760 feet from the North line and 860 feet from the West line of Section 11, Township 9 South, Range 33 East, Vada-Pennsylvanian Pool, Lea County, New Mexico, as an exception to the provisions of Rule 4 of Order No. R-3179-A.
- CASE 5106: Application of Read & Stevens, Inc. for an unorthodox gas well location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox gas well location for its Harris Federal Well No. 2 at a point 990 feet from the North line and 2310 feet from the West line of Section 24, Township 15 South, Range 27 East, Buffalo Valley-Pennsylvanian Gas Pool, Chaves County, New Mexico, as an exception to Rule 2 of Order No. R-1670-H, the N/2 of said Section 24 to be dedicated to said well.

Examiner Hearing - Wednesday - November 14, 1973

Docket No. 32-73
-3-

CASE 5107: Southeastern nomenclature case calling for the extension of certain pools in Lea County, New Mexico.

(a) Extend the Antelope Ridge-Atoka Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 34 EAST, NMPM
Section 2: S/2

(b) Extend the Blinebry Oil Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 36 EAST, NMPM
Section 1: SE/4
Section 12: NE/4

(c) Extend the Blinebry Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 36 EAST, NMPM
Section 1: SE/4
Section 12: NE/4

(d) Extend the Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
Section 12: SW/4

(e) Extend the South Eunice-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 2: SE/4

(f) Extend the Flying "M"-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 33 EAST, NMPM
Section 7: SE/4
Section 8: SW/4
Section 17: N/2 NW/4

(g) Extend the West Garrett-Devonian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 38 EAST, NMPM
Section 31: SE/4

Examiner Hearing - Wednesday - November 14, 1973

Docket No. 32-73
-4-

(h) Extend the High Plains-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 34 EAST, NMPM
Section 26: NW/4

CASE 5114: Application of Texaco Inc. and Perry R. Bass for compulsory pooling and an unorthodox location, Lea County, New Mexico. Applicants, in the above-styled cause, seek an order pooling all mineral interests underlying the W/2 of Section 32, Township 20 South, Range 33 East, South Salt Lake-Morrow Gas Pool, Lea County, New Mexico, to be dedicated to the well currently being drilled by Amini Oil Company at an unorthodox location for said 320-acre unit at a point 990 feet from the South line and 1980 feet from the West line of said Section 32.



OIL CONSERVATION COMMISSION

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

**GOVERNOR
BRUCE KING
CHAIRMAN**

**LAND COMMISSIONER
ALEX J. ARMJO
MEMBER**

**STATE GEOLOGIST
A. L. PORTER, JR.**

SECRETARY - DIRECTOR

November 13, 1972

DOCKET MAILED

Date 11-1-73

Mr. Clarence Hinkle
Hinkle, Bondurant, Cox & Eaton
Attorneys at Law
Post Office Box 10
Roswell, New Mexico 88201

Re: Case No. 4849
Order No. R-4436
Applicant:
Harding Oil Company

Dear Sir:

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

Very truly yours,

A. L. Porter

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC _____ x
Artesia OCC _____
Aztec OCC _____

Other _____



MEC : rw

Telegram

Western Union

WU TL ABQ
WU MGR SANA

V
WU TL ABQ

WU MGR SANA

PKQTTPKWAQTTITPE316)PD 11/12/73 1550

ICS IPMBNGZ CSP

9156829741 TDBN MIDLAND TX 77 11-12 0350P EST

FMS NEW MEXICO OIL CONSERVATION COMMISSION, PLEASE DLR IMMY, DLR
ATTN DAN S MUTTER STATE LAND OFFICE BLDG

SANTE FE NM 87501

REFERENCE DOCKET NUMBER 4945 IN THE MATTER OF THE REHEARING
FOR 24436, TEMPORARY SPACING RULES FOR THE HUMBLE CITY, ATOKA
FIELD, THIS IS TO ADVISE THAT TEXAS INTERNATIONAL PETROLEUM
CORPORATION SUPPORTS THE CONTINUANCE OF 80 ACRE PRORATION UNITS.
BASED ON PRODUCTION DATA TO DATE FROM TIPCO NUMBER ONE BYERS
WELL IN THE HUMBLE CITY ATOKA FIELD WE CAN NOT ECONOMICALLY JUSTIFY
ANY FURTHER DEVELOPMENT ON ANY SPACING PATTERN LESS THAN 80
ACRES PER WELL RESPECTFULLY

TEXAS INTERNATIONAL PETROLEUM BY ROBERT O BURKETT DIVISION
MANAGER

11-12-73

Case No

4849

Docket No. 32-73

Docket No. 25-72

DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 1, 1972

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

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

CASE 4835: (Continued from the September 27, 1972, Examiner Hearing)

Application of Texas Oil & Gas Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface of the ground down to and including the Pennsylvanian formation underlying the S/2 of Section 13, Township 22 South, Range 26 East, South Carlsbad Field area, Eddy County, New Mexico, to be dedicated to a well to be drilled 1980 feet from the South and East lines of said Section 13. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.

CASE 4849: Application of Harding Oil Company for pool creation, special rules therefor, and discovery allowable, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new pool for the production of oil from the Atoka formation for its Shipp Well No. 4 located in Unit I of Section 11, Township 17 South, Range 37 East, Lea County, New Mexico, and the promulgation of special rules therefor, including a provision for 80-acre spacing and proration units. Applicant further seeks the assignment of a discovery allowable of approximately 58,310 barrels of oil to said well.

CASE 4850: Application of Dalport Oil Corporation for amendment of pool rules, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Rule 2 (a) and Rule 7 of the special rules governing the Double L-Queen Associated Pool, Chaves County, New Mexico, to increase the size of a standard gas well proration unit from 160 acres to 320 acres and a corresponding increase in the gas allowable.

CASE 4843: (Continued from the October 17, 1972, Examiner Hearing)

Application of Dalport Oil Corporation for designation of a special gas area and special rules therefor, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the designation of the Southeast Chaves Queen Gas Area comprising all of Townships 12 and 13 South, Ranges 30 and 31 East, Township 14 South, Ranges 29, 30 and 31 East, and Township 15 South, Ranges 29 and 30 East.

Applicant further seeks the promulgation of special rules for said area including a provision for 320-acre spacing for gas

wells, location of gas wells in conformance with the Southeast New Mexico 320-acre gas well location rules, and classification of wells as gas wells at a gas-liquid ratio of 30,000 or more. Oil wells in said area would be governed by the statewide rules.

CASE 4851: Application of Texaco Inc. for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a unit area comprising 1400 acres, more or less, of state lands in Sections 1, 2, 11, and 12, Township 18 South, Range 34 East, Lea County, New Mexico.

CASE 4852: Application of Texaco Inc. for a pressure maintenance project and special rules therefor, Lea County, New Mexico. Applicant, in the above-styled cause, seeks to institute a pressure maintenance project in the Vacuum Grayburg-San Andres Pool by the injection of water through 8 wells at orthodox and unorthodox locations in Sections 1 and 2, Township 18 South, Range 34 East, Lea County, New Mexico. Applicant further seeks authority to drill 8 producing wells within the boundaries of said project at unorthodox locations and the assignment of a bonus allowable to said project.

CASE 4853: Application of El Paso Natural Gas Company for amendment of gas well testing procedures, San Juan Basin, New Mexico. Applicant, in the above-styled cause, seeks the amendment of the gas well testing procedures for the San Juan Basin, New Mexico, promulgated by Order No. R-333-F, as amended, to remove the requirement for annual deliverability and shut-in pressure tests for marginal wells.

CASE 4854: Application of Dugan Production Corporation to commingle gas production prior to metering, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle gas produced from wells located in Sections 25, 26, 35, and 36, Township 28 North, Range 15 West, undesignated Pictured Cliffs gas pool, San Juan County, New Mexico, prior to metering said gas, as an exception to Rule 403 of the Commission Rules and Regulations.

PENNZOIL COMPANY



WESTERN DIVISION OFFICE • WALL TOWERS WEST - MIDLAND, TEXAS • PHONE (915) 682-7316
MAILING ADDRESS: P. O. DRAWER 1828 MIDLAND, TEXAS 79701

F. CLINTON EDWARDS
VICE PRESIDENT

October 25, 1972

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Docket No. 2572
Case No. 4849
Hearing Date November 1, 1972

Gentlemen:

Harding Oil Company has made application for 80-acre spacing and discovery allowable for their Shipp No. 4 well in the Atoka formation of the Humble City Strawn Field, Section 11, Township 17 South, Range 37E, Lea County, New Mexico. Please be advised that Pennzoil Company supports their application for both spacing and discovery allowable for the Atoka formation.

Yours very truly,

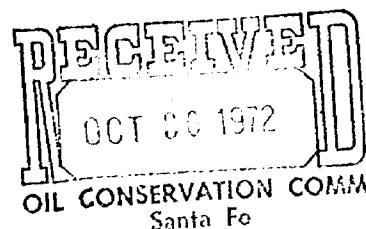
F. Clinton Edwards
F. Clinton Edwards

FCE:f
cc: Mr. James O. Justice
Harding Oil Company
4317 Oak Lawn
Dallas, Texas 75219

Telegram
western union

XTHBMGLPWOLMPOXLZGLWBLKA003 NSAO95
NS MDA032 PB PD MIDLAND TEX 30 31OP CDT
NEW MEXICO OIL CONSERVATION COMM.
STATE LAND OFFICE BLDG SANTA FE NMEX
SUBJECT DOCKET #25-72 CASE 4849. THIS IS TO ADVISE THAT H.
L. BROWN JR. IS IN SUPPORT OF THE 80 ACRE SPACING
AND PRORATION UNITS APPLIED FOR BY HARDING OIL CO. FOR THE
ATOKA FORMATION IN THE HUMBLE CITY STRAWN FIELD
H L BROWN JR BY BILOXXXBY BILL D BAKER PETROLEUM ENGINEER.

#25-72 4849 80.
(353).



The log plot displays two primary data series against depth:

- Gamma Ray & Calder:** Represented by a solid line on the left-hand scale, ranging from 10 to 100 API.
- Porosity Scale:** Represented by a solid line on the right-hand scale, ranging from 0 to 100%.

The depth scale is marked on the left side of the plot, with major intervals at 400, 11350, 11600, and 11700 feet. The plot area is overlaid with a grid for easier data reading.

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

Harding EXHIBIT NO. 5

CASE NO. 4849

HUMBLE CITY (ATOKA) FIELD

LEA COUNTY, NEW MEXICO

RE-HEARING - NOVEMBER 14, 1973

I. Bottom-Hole Pressure Data:

Date	Original BHP, psig
Harding Oil Co. - Shipp #4) 8-72	3,620 (extrapolated from DST build-up)
) 6-73	2,004 (75 hr. pressure)
TIPCO - Byers #1) 1-73	3,384 (extrapolated from DST build-up)

II. Ultimate Recovery From Decline Curve:

Well	Ultimate Recovery, BO
Shipp #4	48,000
Byers #1	19,000

III. Barrels of Oil Required to Payout Drilling and Completion Costs:

Well cost to drill and complete, \$	268,600
Pumping Unit, \$	10,000
Battery, \$	12,500
TOTAL	\$291,100

Oil Price, \$/BBL.	6.31
Gas Price, \$/MCF	0.25
Operating Costs, \$/well/mo.	300.00

Assume producing life of 5 years for payout calculations.

To payout total cost:

$$\frac{\$291,100 + \$18,000 \text{ opr. costs}}{[(\$6.31/\text{BO}) + (2\text{MCF}/\text{BO})(\$0.25/\text{MCF})] (0.944)(0.8125)} = \frac{\$309,100}{\$5.22/\text{BO}} = 59,215 \text{ BO}$$

To generate a 2 to 1 return on initial investment only:

$$\frac{\$(268,600)(2)}{\$5.22/\text{BO}} = 102,912 \text{ BO}$$

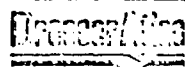
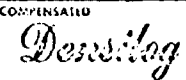
IV. Drainage Area Required to Generate a 2 to 1 Return on Initial Investment Utilizing Reservoir Data From Shipp #4 and Byers #1 Wells:

$$102,912 \text{ BO} = (70 \text{ BO}/\text{AF})(14' \text{ Net Pay})(X)$$

$$X = 105 \text{ Acres}$$

SIPES, WILLIAMSON & AYCOCK, INC.
1100 GIRLS TOWER WEST MIDLAND, TEXAS 79701
ROY C. WILLIAMSON, JR., P. E./lm 11-14-73

EXHIBIT NO. _____

		COMPENSATED 	
FILE NO.	COMPANY HARDING OIL COMPANY		
	WELL SHEPP NO. 4		
	FIELD UNDESIGNATED (ATOKA)		
	COUNTY LEA STATE NEW MEXICO		
	LOCATION 1930' FSL & 760' FEL		
SEC 11 TWP 12-S. RGE. 37-E		Other Services IEL	
Permanent Datum		GROUND LEVEL Elev. 3735.4	
Log Measured from		K. B. 12.4 ft. Above Permanent Datum	
Drilling Measured from		K. B. 3735.4	
Cable		8-26-72	
Run No.		ONE	
Depth—Driller		11760	
Depth—Logger		11760	
Bottom Logged Interval		11759	
Top Logged Interval		SURFACE	
Casing—Driller		8 5/8 4800	
Casing—Logger		4788	
Bit Size		7 7/8"	
Type Fluid in Hole		CHEM. GEL	
Density and Viscosity		9.0 55	
API and Fluid Loss		11 5.0	
Source of Sample		CIRCULATED	
Run 1 Meas. Temp		1.5 70	
Run 2 Meas. Temp		1.1 70	
Run 3 Meas. Temp		2.1 70	
Source of Ref. Temp		MEAS. MEAS.	
Run 1 Meas.		.64 165	
Time Since Cor.		4 HOURS	
Max. Rec. Temp. Day		165	
Equip. No. and Location		6029 HOBBS	
Recorded By		MC ATEE	
Witnessed By		MR. BICKING & MR. MOORE	

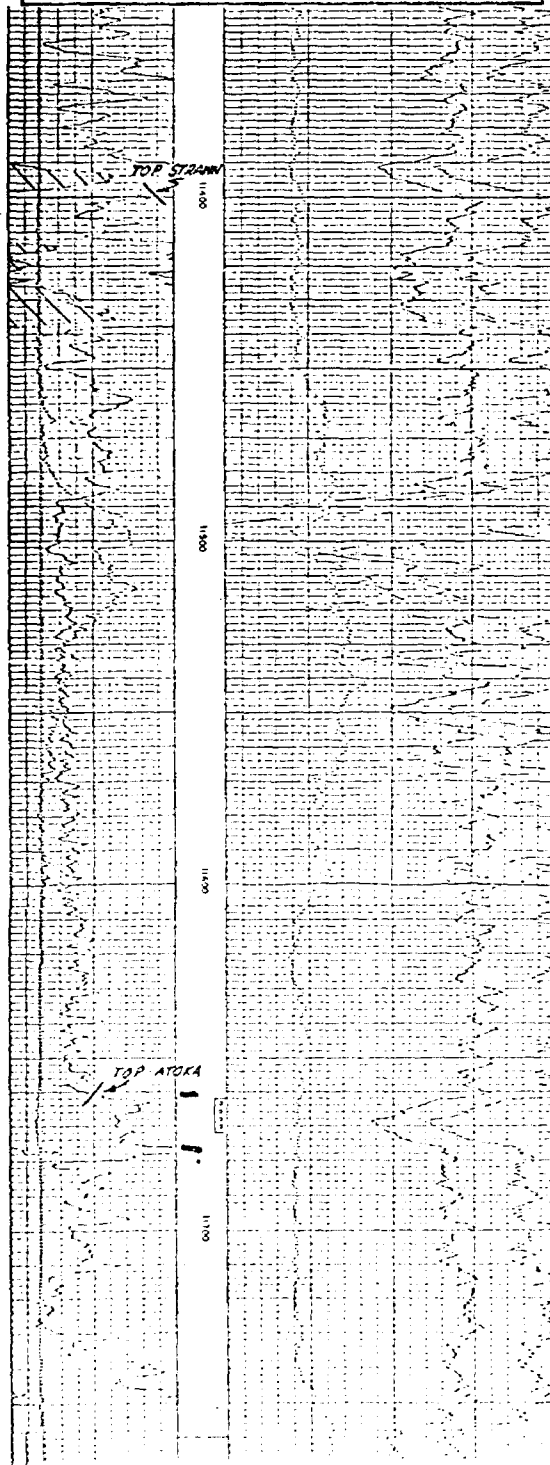


EXHIBIT NO.

RESERVE CALCULATION MATERIAL BALANCE METHOD

I. Material Balance Calculations:

1. Original Bottom Hole Pressure, psig
2. Bubble Point Pressure, psig
3. BHP at cumulative production of 6,937 BO, psig
4. N_p , barrels of oil produced to date of pressure build-up test
5. B_{oi} , RVB/STB at 3,931 psig
6. B_o , RVB/STB at 3,620 psig
7. Neglecting rock and water compressibilities, the Material Balance equation for production above the bubble point is:

$$\frac{N_p}{N} = \frac{B_o - B_{oi}}{B_o}$$

8. Re-arranging:

$$N = \frac{(N_p)(B_o)}{B_o - B_{oi}} = \frac{(6,937 \text{ BO})(1.728 \text{ RVB/STB})}{(1.728 \text{ RVB/STB} - 1.711 \text{ RVB/STB})}$$

9. Estimated recovery of BSTOIP, %
10. Therefore (705,126 BSTOIP)(.20) = Barrels of Oil Recoverable from the Reservoir

SIPES, WILLIAMSON & RUNYAN, INC.
1100 GIHLS TOWER WEST
ROY C. WILLIAMSON, JR., P. E./pw
MIDLAND, TEXAS 79701
10/30/72

3,931

-

3,620

6,937

1.711

1.728

20

141,025

EXHIBIT NO. 11

ECONOMICS OF DEVELOPMENT

1. Estimated Drill and Complete Cost, \$	183,000
2. Oil Price, \$/Barrel (Before Severance and Ad Valorem Taxes)	3.44
3. Gas Price, \$/MCF (Before Severance and Ad Valorem Taxes)	0.22
4. Average GOR, Cubic feet/Barrel of Oil	1,000
5. Revenue Interest for Acreage Earned by Harding	0.75
6. Severance and Ad Valorem Tax (Estimated), %	5.4
7. Operating Costs (Estimated), \$/Barrel of Oil	0.10
8. Barrels of Oil Required to Payout Drill and Complete Costs, After Severance and Ad Valorem Taxes and Operating Costs:	
$\frac{\$183,000}{(\$3.44 + \$0.22)(.946)(.75) - 0.10}$	= 73,295

SIPES, WILLIAMSON & RUNYAN, INC.
1100 GIHLS TOWER WEST MIDLAND, TEXAS 79701
ROY C. WILLIAMSON, JR., P. E./pw 10/30/72

EXHIBIT NO. 5

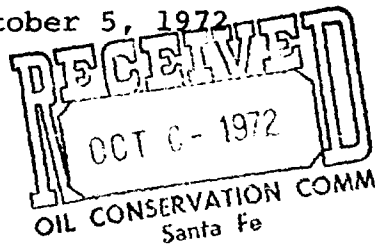
CLARENCE E. HINKLE
W. E. BONDURANT, JR.
LEWIS C. COX, JR.
PAUL W. EATON, JR.
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.
STUART D. SHANOR
C. D. MARTIN
PAUL J. KELLY, JR.
J. M. LITTLE

LAW OFFICES
HINKLE, BONDURANT, COX & EATON
600 HINKLE BUILDING
POST OFFICE BOX 10
ROSWELL, NEW MEXICO 88201

TELEPHONE (505) 622-6510

MIDLAND, TEXAS OFFICE
521 MIDLAND TOWER
(915) 683-4691

October 5, 1972



Case 4849

Mr. George Hatch
Oil Conservation Commission
Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Hatch:

When I was in Santa Fe on September 27 I handed you the application of Harding Oil Company for 80 acre spacing because of its discovery in the Atoka formation in Section 11, Township 17 South, Range 37 East, Lea County. I advised you at that time that Exhibit "A" would be sent to you later and the same is enclosed herewith in triplicate.

Please attached the enclosed to the application. We understand that this matter will appear on the examiner's docket for November 1.

Yours sincerely,

HINKLE, BONDURANT, COX & EATON

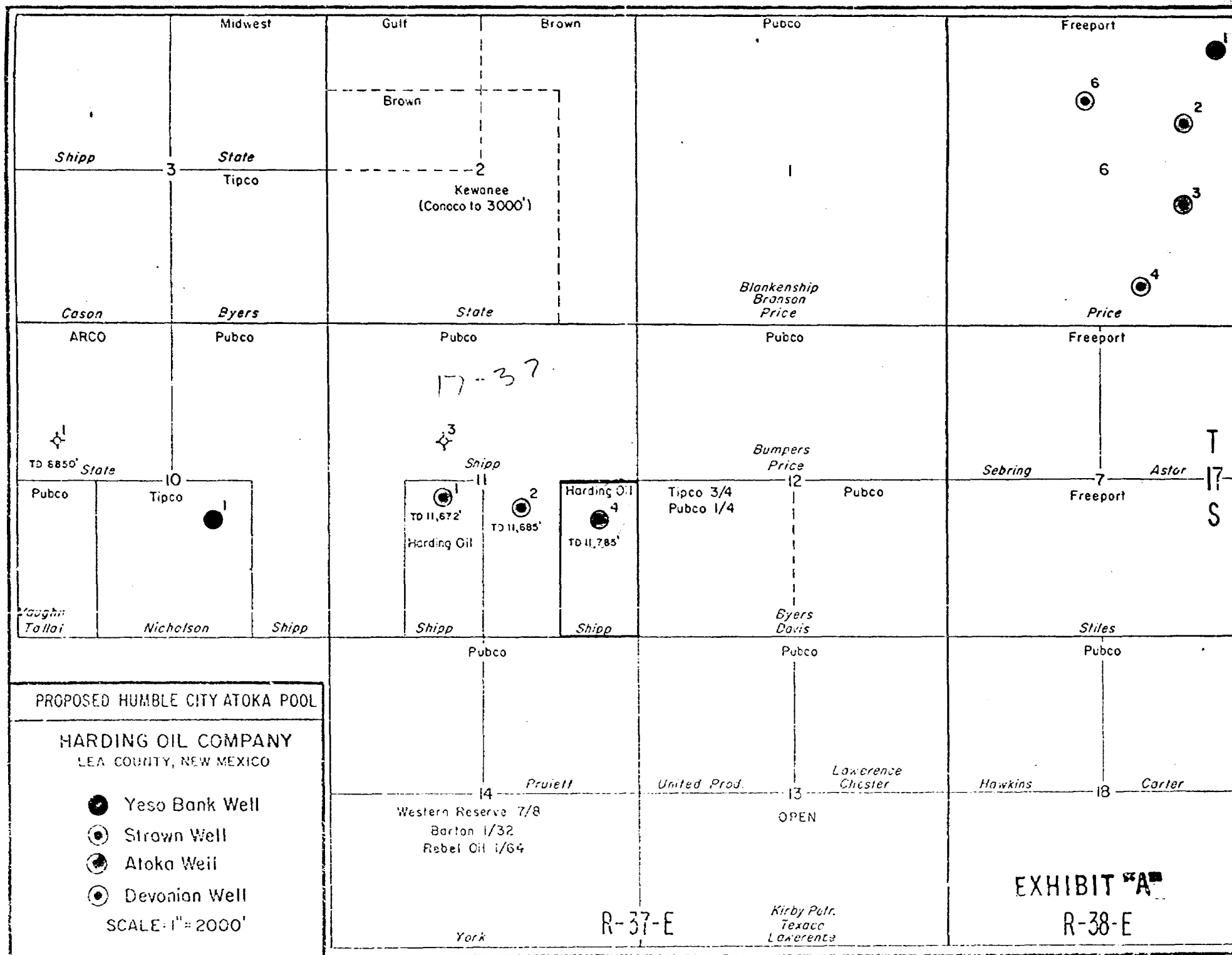
By *Clarence E. Hinkle*
ed

CEH:cs
Enc.

DUPLICATE MAILED

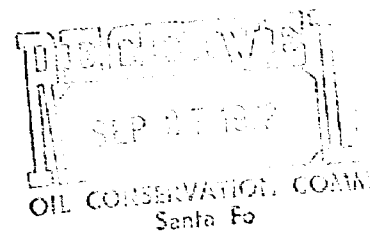
11-18-72

Case 4849



BEFORE THE OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

APPLICATION OF HARDING OIL COMPANY
FOR THE PROMULGATION OF SPECIAL
FIELD RULES ON A TEMPORARY BASIS
BECAUSE OF A NEW OIL DISCOVERY IN
ITS SHIPP NO. 4 WELL LOCATED IN UNIT
I, 1980 FEET FROM THE SOUTH LINE AND
660 FEET FROM THE EAST LINE OF SECTION
11, TOWNSHIP 17 SOUTH, RANGE 37 EAST,
LEA COUNTY, INCLUDING 80 ACRE SPACING
AND PRORATION UNITS. SAID WELL IS
COMPLETED IN THE ATOKA FORMATION THROUGH
PERFORATIONS FROM 11,662 FEET TO 11,672
FEET. APPLICANT ALSO SEEKS THE CREATION
OF A NEW POOL AND A DISCOVERY ALLOWABLE
FOR SAID WELL.



Case 4849

Oil Conservation Commission
Box 2088
Santa Fe, New Mexico 87501

Comes Harding Oil Company and hereby makes application for the promulgation of special field rules on a temporary basis because of a new oil discovery in its Shipp No. 4 well located in Unit I, 1980 feet from the south line and 660 feet from the east line of Section 11, Township 17 South, Range 37 East, Lea County, including 80 acre spacing and proration units. Said well is completed in the Atoka formation through perforations from 11,662 feet to 11,672 feet. Applicant also seeks the creation of a new pool and discovery allowable for said well, and in support thereof respectfully shows:

1. On September 10, 1972 applicant completed its Shipp No. 4 well located in Unit I, 1980 feet from the south line and 660 feet from the east line of Section 11, Township 17 South, Range 37 East, N.M.P.M. Lea County. Said well was drilled to a total depth of 11,785 feet and completed as an oil well producing through perforations from 11,662 feet to 11,672 feet. The well was potentialized for 362 barrels of oil per day through a 20/64 choke on a 24 hour test with 294.4 MCF of gas.
2. The Shipp No. 4 well, although a discovery in the Atoka formation, failed to encounter oil or gas in paying quantities in the Strawn formation which was encountered in the Harding Oil Company No. 1 Shipp well located in the NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 11 and the Pubco No. 2 well

11,662
58,310

located in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 11. The Shipp No. 4 well is believed to be a discovery of a substantial new pool in the Atoka formation and it is believed that in the development of the pool it will be in the interest of conservation and the prevention of waste and will tend to protect correlative rights to provide for 80 acre spacing and proration units on a temporary basis. The proration units should consists of the E $\frac{1}{4}$ or the W $\frac{1}{4}$ of each governmental quarter section, with the privilege of locating the wells in the center of either 40 acre component with a tolerance of 150 feet.

3. Applicant believes that such temporary special pool rules will prevent the possibility of economic loss resulting from the drilling of unnecessary wells and will permit the operators in the pool to gather information concerning the reservoir characteristics and future development will show conclusively that one well will effectively and efficiently drain 80 acres or more.

4. Applicant desires a discovery allowable in connection with the Shipp No. 4 well in accordance with applicable rules and regulations.

5. There is attached hereto, made a part hereof and for purposes of identification marked Exhibit "A", a plat showing the location of the Shipp No. 4 well and other wells which have been drilled in the vicinity thereof and the formations from which they are producing.

6. Applicant requests that this matter be set down for hearing at the first examiner's hearing in November, 1972.

2-1
Respectfully submitted,

HARDING OIL COMPANY

By 

Member of the Firm of
HINKLE, BONDURANT, COX & EATON
P.O. Box 10
Roswell, New Mexico 88201
Attorneys for Applicant

DRAFT

DSN/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. 4849

Order No. R-4436

APPLICATION OF HARDING OIL COMPANY
FOR POOL CREATION, SPECIAL RULES
THEREFOR, AND DISCOVERY ALLOWABLE,
LEA COUNTY, NEW MEXICO.

NOMENCLATURE

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 1, 1972,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this _____ day of November, 1972, the Commission,
a quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, Harding Oil Company, seeks the
creation of a new oil pool for Atoka production in Lea County,
New Mexico, and the assignment of an oil discovery allowable in
the amount of approximately 58,310 barrels to the discovery well.

(3) That the applicant also seeks the promulgation of special rules for said pool, including a provision for 80-acre proration units.

(4) That the evidence presently available indicates that the Shipp Well No. 4, located in Unit I of Section 11, Township 17 South, Range 37 East, NMPM, Lea County, New Mexico, has discovered a separate common source of supply which should be designated the Humble City-Atoka Pool; that the vertical limits of said pool should be the Atoka formation, and that the horizontal limits of said pool should be ^{the E/2} of said Section 11.

(5) That the discovery well for the aforesaid pool, Shipp Well No. 4, located in Unit I of Section 11, Township 17 South, Range 37 East, NMPM, Lea County, New Mexico, is entitled to and should receive a bonus discovery oil allowable in the amount of 58,310 barrels, based upon the top perforations in said well at 11,662 feet, to be assigned over a two-year period.

(6) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 80-acre spacing units should be promulgated for the Humble City-Atoka Pool.

(7) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

(8) That the temporary special rules and regulations should be established for a one-year period in order to allow the operators in the subject pool to gather reservoir information to establish the area that can be efficiently and economically drained and developed by one well.

as found on the log of said Shipp Well No. 4
from 11,661 feet to 11,676 feet,

~~11,672~~
~~58360~~
11662
~~5~~
58310

as found on the log of the Harding Oil Company Shipp Well No. 4, located in Unit I of Section 11, Township 17 South, Range 37 East, from 11,661 feet to 11,676 feet,

(9) That this case should be reopened at an examiner hearing in November, 1973, at which time the operators in the subject pool should be prepared to appear and show cause why the Humble City - Atoka Pool should not be developed on 40-acre spacing units.

IT IS THEREFORE ORDERED:

(1) That a new pool in Lea County, New Mexico, classified as an oil pool for Atoka production, is hereby created and designated the Humble City - Pool, with vertical limits comprising the Atoka formation and horizontal limits comprising the following-described area:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM

Section 11: ~~NE~~ E/2 SE/4

(2) That the aforesaid discovery well is hereby authorized an oil discovery allowable of 58,310 barrels to be assigned to said well at the rate of 80 barrels per day in accordance with Rule 509 of the Commission Rules and Regulations.

(3) That temporary Special Rules and Regulations for the Humble City - Atoka Pool, Lea County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE

HUMBLE CITY - ATOKA POOL

RULE 1. Each well completed or recompleted in the Humble City - Atoka Pool or in the Atoka formation within one mile thereof, and not nearer to or within the limits of another designated Atoka oil pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

~~230~~
~~80~~
58400

RULE 2. Each well shall be located on a standard unit containing 80 acres, more or less, consisting of the N/2, S/2, E/2, or W/2 of a governmental quarter section; provided however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit comprising a governmental quarter-quarter section or lot, or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Land Surveys. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.

✓ RULE 4. Each well shall be located within 150 feet of the center of a governmental quarter-quarter section or lot.

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all

operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

Top unit allowable for a
RULE 6. ~~A~~ standard proration unit (79 through 81 acres) *based on a depth bracket allowance of 445 barrels* shall be ~~assigned an 80-acre proportional factor of~~ *per day,* ~~allowable purposes,~~ and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80 acres.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the Humble City - Atoka Pool or in the Atoka formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before November 25, 1972

(2) That each well presently drilling to or completed in the Humble City - Atoka Pool or in the Atoka formation within one mile thereof shall receive a 40-acre allowable until a Form C-102 dedicating 80 acres to the well has been filed with the Commission.

(3) That this case shall be reopened at an examiner hearing in November, 1973, at which time the operators in the subject pool should be prepared to appear and show cause why the Humble City - Atoka Pool should not be developed on 40-acre spacing units.

-6-

CASE NO. 4849

Order No. R-

(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.

DRAFT

dr/

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:

Don
CASE NO. 4849

Order No. R-4436-A

IN THE MATTER OF CASE NO. 4849 BEING
REOPENED PURSUANT TO THE PROVISIONS
OF ORDER NO. R-4436 WHICH ORDER ESTABLISHED
TEMPORARY SPECIAL RULES FOR THE HUMBLE CITY-
ATOKA POOL, LEA COUNTY, NEW MEXICO, INCLUDING A
PROVISION FOR 80-ACRE SPACING.

rk
CHP

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 14, 1973,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of November, 1973, 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 by Order No. R-4436, dated November 13, 1972,
temporary Special Rules and Regulations were promulgated for the
Humble City-Atoka Pool, Lea County, New Mexico, establishing 80-acre
spacing units for a period of one year.

Case No. 4849
Order No. R-4436-A

(3) That pursuant to the provisions of Order No. R-4436, this case was reopened to allow the operators in the subject pool to appear and show cause why the Humble City-Atoka Pool rules should remain in effect.

(4) That the evidence establishes that one well in the Humble City-Atoka Pool can efficiently and economically drain and develop 80 acres.

(5) That the Special Rules and Regulations promulgated by Order No. R-4436 have afforded and will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the oil in the pool.

(6) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-4436 should be continued in full force and effect until further order of the Commission.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the Humble City-Atoka Pool, Lea County, New Mexico, promulgated by Order No. R-4436, are hereby continued in full force and effect until further order of the Commission.

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

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

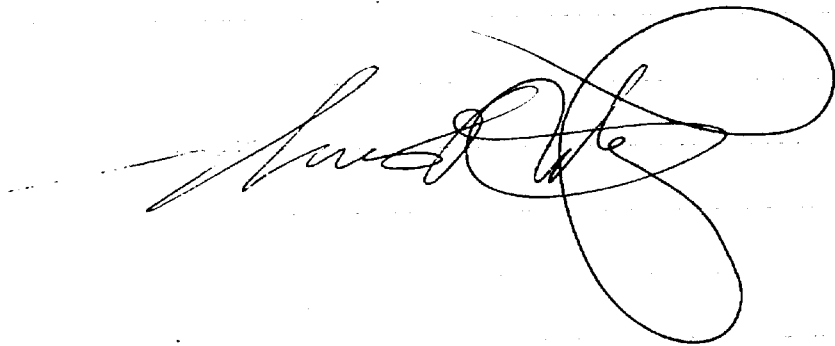
Case 4849 Grant Harding Oil Co. A
Leard. 11-1-72 (11,662) x 5 = 58,310

Rec. 11-1-72 new oil pool w/ the E/2
SE/4 11-175-37E as its pool limits.
Der. well - Harding - Shipp # 4, unit
F (1980 S/660/E 11-17537).

Wells to be located, 150' of center either
1/4 1/4 sec. std. order otherwise.

Grant. 58,310 bbls. of Discovery.
allowable. for the well.

name of pool to be Humble
City - Atoka oil Pool.

A large, stylized handwritten signature, possibly reading "Fred W.", is written in the lower right quadrant of the page.

SECRET
NO FORN DISSEM
NO UNCLASSIFIED DISSEM