

CASE 5473: MESA PETROLEUM CO. FOR POOL
CREATION AND SPECIAL POOL RULES, LEA
COUNTY, NEW MEXICO.

1961
New Mexico
County

CASE No.

5473

Application,

Transcripts,

Small Exhibits

ETC.

NEW MEXICO OIL CONSERVATION COMMISSION

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EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date

MAY 26, 1976

TIME: 9:00 A.M.

NAME	REPRESENTING	LOCATION
DON DENT	MESA PETRO CO.	AMARILLO, TX
MIKE DAUGHERTY	"	"
LES CARNES	"	"
Chas. H. Hulse	"	"
DAN KERNAGHAN	Oil & Rubb. Co.	Reswell
R. N. Williams	ANADARKO PROD. CO.	Houston
BARRY ANTWEIL	Morris R. Antweil	Hubbs
TOM PORTER	"	"
DICK PRENTICE	ATLANTIC RICHFIELD CO.	Midland
J. Raney	ATLANTIC RICHFIELD	"
Jose Kellahi	Pennzoil Co.	Midland
	Anadarko	Santa Fe

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
May 26, 1976

EXAMINER HEARING

IN THE MATTER OF:

Case 5473 being reopened pursuant to the provisions of Order No. R-5029, which order established special rules and regulations for the West-Knowles-Drinkard Pool, Lea County, New Mexico.

CASE
5473
(Reopened)

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: William F. Carr, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant: Don Dent, Esq.
Legal Counsel for Mesa Petroleum
Amarillo, Texas

Clarence Hinkle, Esq.
HINKLE, BONDURANT, COX & EATON
Attorneys at Law
Hinkle Building
Roswell, New Mexico

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1 MR. STAMETS: The Hearing will please come to
2 order. We will call first Case 5473.

3 MR. CARR: Case 5473, in the matter of Case 5473
4 being reopened pursuant to the provisions of Order. No.
5 R-5029, which order established special rules and regulations
6 for the West Knowles-Drinkard Pool, Lea County, New Mexico,
7 including a provision for eighty-acre spacing and proration
8 units.

9 MR. HINKLE: Mr. Examiner, Clarence Hinkle of
10 Hinkle, Bondurant, Cox and Eaton, appearing on behalf of
11 Mesa and we are associated with Mr. Don Dent, general attorney
12 for Mesa, who will handle the case.

13 MR. STAMETS: Any other appearances?

14 MR. DENT: Mr. Examiner, we will have two
15 witnesses.

16 MR. STAMETS: If they will stand and be sworn,
17 please?

18 (THEREUPON, the witnesses were duly sworn.)

19 MR. DENT: Mr. Examiner, I would like to hand each
20 of you a set of exhibits.

21 I would like to call at this time Mr. Les Carnes.

22

23

L. M. CARNES

24

called as a witness, having been first duly sworn, was

25

examined and testified as follows:

DIRECT EXAMINATION

BY MR. DENT:

Q Will you state your name, please, sir?

A L. M. Carnes.

Q Mr. Carnes, for whom are you employed and in what capacity?

A Mesa Petroleum, Amarillo, Texas, Manager of Reservoir Engineering.

Q Have you testified before the Commission?

A Yes, I have.

Q As a matter of fact, did you not testify in the hearing held for the temporary rules established in the Drinkard Field?

A Yes, sir, I did.

Q Which was the results of that hearing, was the Order of the Commission dated May 25, 1975, setting the special rules, temporary rules for the Drinkard Field in Lea County, New Mexico.

A Yes, I did.

Q Have you again made a study of this field in preparation for this hearing?

A Yes, sir.

Q I will ask you to look at what has been marked as Mesa's Exhibit Number One and explain this Exhibit, please?

A Exhibit One is a structure map of the Drinkard

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Page_____5_____

1 formation, contoured on top of the Drinkard "B" porosity. It
2 has one-hundred-foot contour intervals. It shows four key
3 things, one, a dip of about six hundred feet per mile to the
4 southeast. Two, it shows the wells that are producing from
5 the various horizons in this area, including the Drinkard,
6 Paddock, Lower Yeso and Strawn. They are color coded with
7 red circles being the Drinkard producers.

8 It also shows the three units that have been formed,
9 the Myers Unit, the Ship Unit and the West Knowles Unit of
10 which Mesa is the operator.

11 These are color coded with the Myers Unit with a
12 yellow boundary; the Ship Unit in brown; and the Mesa operated
13 West Knowles Unit in red.

14 Q Would you point out, please, the discovery well in
15 the Drinkard?

16 A Right, the discovery well for this West Knowles-
17 Drinkard Pool is West Knowles No. 1, located in the southeast-
18 southeast of Section 34.

19 Q How many wells have been completed to date?

20 A There have been eight Drinkard wells completed in
21 this reservoir, there are seven currently producing. One of
22 the wells which is located in the northwest-northwest of
23 Section 3 was recompleted in the Paddock and produced only
24 fifteen hundred barrels of oil out of the Drinkard, so there
25 are currently seven Drinkard producers.

1 Q Have you also prepared an isopach map for the --

2 A Yes. let me say one further thing about the structure
3 map, if I could. It shows to the southeast the oil-water
4 contact established by the Gulf Well in the northwest of
5 Section 2 and the oil-water contact is at a subsea depth of
6 forty-six, thirty-two.

7 Q I believe you marked as an exhibit your isopachous
8 map which is Number Two, would you please explain this
9 exhibit?

10 A Exhibit Two is an isopach map of the Drinkard "B"
11 porosity in excess of four percent. The contour intervals
12 are twenty-five feet and it shows the size of the reservoir,
13 slightly greater than the five hundred and fifty to six
14 hundred acres and I might point out one thing that it is not
15 a net pay, a net hydrocarbon pay, because it does reflect the
16 porosity, the water-bearing porosity, in the Gulf Well of
17 about ten feet, down there to the southeast part of the
18 reservoir. But it does represent the Drinkard "B" porosity
19 in excess of four percent with a maximum thickness of a
20 hundred and sixteen feet in the C & K operated Ship No. 1-34
21 Well.

22 Q Do you have any other comments about this exhibit?

23 A Yes, I might just add that it is also color coded,
24 showing the boundaries of the units, as well as the producing
25 horizons in the wells.

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1 Q Based on this exhibit, is it your opinion the
2 reservoir has been developed adequately and efficiently?
3
4 A Yes, I think it has been adequately developed on
5 these eighty-acre spacing.

6 Q Is there a location available here in Section 3?
7
8 A I don't feel that would be a commercial location.

9 It is located between two wells that have been plugged, the
10 Gulf Well encountering water and the Mesa Myers No. 2 located
11 in the northeast of the northwest of Section 3 did not have
12 any Drinkard "B" porosity.

13 Q Were these Exhibits One and Two prepared by you or
14 under your supervision?

15 A Yes, sir, they were.

16 MR. DENT: Mr. Examiner, I would like at this time
17 to offer Exhibits One and Two.

18 MR. STAMETS: These exhibits will be admitted.
19 (THEREUPON, Mesa's Exhibit's One and Two
20 were admitted into evidence.)

21 MR. DENT: I would like at this time to call our
22 next witness, Mr. Mike Daugherty, please.

23 MIKE LES DAUGHERTY
24 called as a witness, having been first duly sworn, was
25 examined and testified as follows:

DIRECT EXAMINATION

BY MR. DENT:

Q For the record, will you please state your name?

A Mike Les Daugherty.

Q Mr. Daugherty, for whom are you employed and in what capacity?

A Mesa Petroleum as a Reservoir Engineer.

Q Have you previously testified before this Commission?

A No, sir.

Q Would you briefly state your educational and professional background?

A I graduated from Texas Tech with a BS in Mechanical Engineering in 1967. I spent three years in the army as an officer and got out as a Captain. I worked five years and four months for Amoco Production Company; I'm a registered Professional Engineer; and I went to work for Mesa two weeks ago.

MR. DENT: Are there any questions about his qualifications?

MR. STAMETS: During the five years with Amoco were you doing reservoir work?

THE WITNESS: Yes, that is correct.

MR. STAMETS: Of the same general nature as you will be testifying about here today?

THE WITNESS: Yes, sir, that is correct.

MR. STAMETS: The witness is considered qualified.

Q (Mr. Dent continuing.) Since your employment with Mesa have you made a study of the West Knowles area and the Drinkard Pools?

A. Yes, sir.

Q What has been the nature of this study?

A. We made a study to determine if the eighty-acre spacing and the wells that have been drilled in this pool will adequately drain the Drinkard Pool.

Q Have you prepared certain exhibits as a result of this study?

A. Yes, sir, I have.

Q I believe you have marked as Exhibit Three an exhibit which is labeled Historical Data?

A. Yes, sir.

Q Will you briefly review this exhibit?

A. Exhibit Number Three is historical data on the Drinkard Pool. The Knowles, I have all seven wells listed, I have completion data, pressure history and production history. The Knowles No. 1 Well was a discovery well. The discovery pressure or the virgin pressure of the reservoir was around thirty-two hundred and twenty-three pounds. We have drilled six wells, or seven wells, one of them was a dry hole and we have recovered fifteen hundred barrels. We drilled those wells subsequent to the No. 1 Well.

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1 If you will look at the pressure history, as we go
2 across, the original pressure histories, as time elapsed the
3 pressure in the reservoir declined. The No. 3 Well was drilled
4 about two months after the original No. 1 Well and the pressure
5 declined about eighty pounds. The Ship No. 1 Well, the
6 pressure declined to slightly over three thousand pounds. The
7 Ship No. 2 Well was drilled in July, which is five months
8 after the discovery well. However, if you will look on the
9 map it is located over on the edge of the reservoir. The
10 reservoir is very tight there. The No. 2 Well has about eight
11 millidarcy feet of total capacity and we have about thirty-five
12 feet of pay, so, the permeability is less than one millidarcy.

13 The Knowles No. 5 Well, the pressure had declined to
14 twenty-five hundred and fifty pounds, in the central part of
15 the reservoir in July.

16 MR. STAMETS: Excuse me, the Exhibit says twenty-four,
17 fifty, which is the correct figure?

18 A. I meant to say twenty-four, fifty, if I didn't.

19 MR. STAMETS: Okay.

20 A. The No. 6 Well was drilled on the eastern flank of
21 the field and its pressure was twenty-one hundred and thirty
22 pounds in August.

23 MR. STAMETS: Twenty-one, thirty or twenty-five,
24 thirty?

25 A. I'm sorry, twenty-five, thirty-one.

1 Now, we have taken some subsequent bottom-hole
2 pressures. We took a pressure build-up test in March of
3 1975 or the end of March, in the Knowles No. 1 Well and the
4 reservoir pressure at that area had declined to three thousand
5 and eighty pounds.

6 In August of 1975 we ran four bottom-hole pressure
7 build ups. We shut the entire field in and ran these build
8 ups in the wells shown. At that time the No. 3 Well had a
9 bottom-hole pressure of twenty-one hundred and ninety-two
10 pounds and the Ship No. 1-34 had a bottom-hole pressure of
11 twenty-one hundred and seventy-three pounds and the Knowles
12 No. 5 was slightly over twenty-two hundred pounds and the
13 Knowles No. 6 was twenty-four hundred and seventy pounds.

14 The average bottom-hole pressure, based on pay
15 thickness, is twenty-two hundred and thirty pounds. That will
16 be on the next exhibit and I'll get to that.

17 The production history at the time of the August
18 test, gives the cumulative production for each of the wells.
19 The total cumulative production for the field was one hundred
20 and thirty-five thousand, two hundred and sixteen barrels of oil.

21 Q (Mr. Dent Continuing.) Have you also prepared an
22 exhibit which would show the reservoir performance data and
23 also make calculations as to the recovery expected from this
24 pool?

25 A Yes, sir, I have.

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1 Q Will you please look at what has been marked as
2 Exhibit Number Four and explain your calculations there and
3 the data shown?

4 A Based on the bottom-hole pressure in the No. 1 Well
5 of thirty-two hundred and twenty pounds and the average
6 bottom-hole pressure obtained in August 13th, 1975 of twenty-
7 two hundred and thirty pounds, there was reduction in bottom-
8 hole pressure of the entire reservoir of nine hundred and
9 ninety pounds.

10 The cumulative production as of August 13th was
11 one hundred and thirty-five thousand, two hundred and sixteen
12 barrels.

13 The reservoir data, average reservoir data, the
14 porosity is six point five percent; average pay thickness is
15 forty-eight feet; the original connate water saturation is
16 twenty-seven point five feet; the reservoir volume factor over
17 this pressure drop was one point three six; the bubble-point
18 pressure is fifteen point eight, four pounds per square inch.

19 Based on this reservoir data and the cumulative
20 production at that time and the pressure drop, I calculated
21 the original oil in place to be six million, five hundred
22 and ninety-one thousand, seven hundred and eighty-seven barrels
23 of oil. The original oil in place, per acre-foot, on a
24 volume basis, I calculated to be two hundred and sixty-nine
25 barrels per acre-foot.

1 Dividing the original oil in place by the original
2 oil in place per acre-foot, I found the size of the reservoir
3 from the material balance calculations to be twenty-four
4 thousand acre-feet, slightly over twenty-four thousand
5 acre-feet, twenty-four thousand, five hundred and four acre-
6 feet.

7 The drainage area is seventy-three acres per well.

8 Q I believe your exhibit points out that the bubble-
9 point pressure is fifteen, eighty-four?

10 A Yes, sir, that is correct.

11 Q And that you have established from your computations
12 that the drainage area around the average well or a well that
13 is based on these computations is slightly less than eighty
14 acres?

15 A That's correct.

16 Based on ARPS published nomograph, the recovery from
17 this type of reservoir with water saturation and porosity,
18 should be eighteen point one percent. That is what we
19 predict.

20 Q Have you prepared another exhibit on which you have
21 made certain computations as to drainage areas around certain
22 wells?

23 A Yes, sir, I have.

24 Q Would you please explain this exhibit?

25 A Based on our prediction of ultimate recovery, based

on performance decline analysis, I found the total field recovery to be one million, two hundred thousand, one hundred and forty-four barrels of oil. Basing, or dividing that by the forty-eight feet of average pay thickness and the recoverable oil by volume per acre-foot and that is based on the eighteen point one percent recovery of the ARPS nomograph, I determined the drainage area to be five hundred and twenty acres. Since we have seven wells at eighty-acre spacing the total volume that we should be draining is five hundred and sixty.

I made a similar analysis on the No. 5 Well. The ultimate recovery for the No. 5 Well should be two hundred and twenty-nine thousand, nine hundred and ninety-three barrels of oil. The pay thickness in the No. 5 Well is forty-five feet, dividing by the forty-eight barrels of recoverable per acre-foot, we have a drainage area of a hundred and six acres. The No. 5 Well is one of the better wells in the field.

I also looked at one of the poor wells in the field, the No. 2 Well, West Knowles No. 2. The ultimate recovery of that well based on production or performance decline analysis is a hundred and ten thousand, one hundred and sixty-four barrels. There is thirty-two feet of pay in the well, forty-eight barrels of recovery per acre-foot and the drainage area is seventy-two acres.

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1 Q In addition to your volumetric and material
2 balance calculations, did you make a study of the production
3 and pressure in connection with your study for this hearing?

4 A Yes, sir, I did.

5 Q Have you prepared certain exhibits which show
6 the production and performance history for the wells in the
7 Drinkard Pool?

8 A Yes, sir. In Exhibit Number Six, first I have
9 a performance for the entire field. This is all of the wells
10 that have been completed in the field and there is a line
11 drawn on there demonstrating the decline analysis on semi-log
12 paper.

13 Following that exhibit -- if there are no questions
14 I will go on to the next one. The Knowles No. 1 Well
15 performance is shown. The No. 2 Well in which I calculated
16 the pressure decline on it, I drew the line on there that
17 demonstrated the decline analysis. The No. 3 Well and the
18 No. 5 Well, which is one of the better wells in the field, I
19 drew in a decline analysis on it.

20 The Myers No. 1 Well recovered about fifteen
21 hundred barrels of oil and was recompleted into the Paddock.

22 The Ship No. 1 and 2 Well, the production for those
23 two wells is combined.

24 The Knowles No. 6 Well is the last part of that
25 exhibit.

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1 Q Refer to your graph for the Knowles No. 5. How do
2 you explain the increase in production in the last couple of
3 months rather than a continued decline?

4 A Based on the cumulative production to date, which
5 is three hundred and sixty thousand barrels, about three
6 hundred and sixty-two thousand, two hundred and twenty barrels
7 in material balance calculations, I judged that we are below
8 the bubble-point pressure at this time and we are starting to
9 see gas breaking out of the oil in solution.

10 Q Is that the same reason for the Knowles No. 1, say
11 for the last two months?

12 A Yes, sir. I judge that the entire reservoir is
13 below the bubble-point pressure.

14 Q So that is free-gas saturation?

15 A Yes, sir.

16 Q Do you have any other comments as far as these
17 exhibits?

18 A No, sir.

19 Q Mr. Daughtery, is it your opinion, based on your
20 study of the production and the pressure performance and the
21 drainage area, that each well in the West Knowles Unit, in
22 the Drinkard "B" zone will effectively and efficiently drain
23 eighty acres?

24 A Yes, sir.

25 Q Is there, based on your study, a pressure communication

1 throughout the reservoir?

2 A. Yes, sir.

3 Q In your opinion will waste occur if this well is
4 continued on the special rules providing for eighty-acre
5 spacing as compared to, say, forty-acre spacing?

6 A. No, sir, I believe eighty-acre spacing is
7 appropriate.

8 Q Under the existing order is it your opinion that
9 no waste is occurring and that the correlative rights of all
10 interest owners in the pool are being protected?

11 A. Yes, I believe they are.

12 MR. DENT: Mr. Examiner, I have no further evidence.
13 We would like to offer the exhibits, I'm sorry, if you have
14 some questions then we will --

15 MR. STAMETS: Okay, I don't have any questions on
16 the exhibits themselves. The exhibits will be admitted into
17 evidence.

18 MR. DENT: We will offer at this time Exhibits
19 Three through Six and in addition, I have marked in your set
20 there Exhibit Number Seven, which is a letter from C & K
21 Petroleum to Mesa and it is just a letter supporting Mesa's
22 application. Can you accept that as an exhibit? I thought
23 maybe they sent a copy to you?

24 MR. STAMETS: We will accept Exhibits One through
25 Seven in this case.

1 (THEREUPON, Mesa's Exhibits Three through
2 Seven were admitted into evidence.)

3 MR. STAMETS: I've got just a few questions here
4 and I'm not sure if Mr. Carnes is the appropriate one to
5 answer them or Mr. Daughtery, either one can.

6
7 CROSS EXAMINATION

8 BY MR. STAMETS:

9 Q What is the nature of the reservoir rock here, is
10 it continuous or discontinuous between wells, are there
11 isolated zones or is it a single deposit?

12 A There are a couple of isolated -- there are two,
13 one the "A" sand and then a "B" sand but they seem to be
14 continuous between the different wells.

15 Q So the productive horizon is continuous across
16 the reservoir?

17 A Yes, sir.

18 MR. CARNES: It is a carbonate, I might add. We
19 refer to things, you know, as productive sand just as a
20 common thing but this is a carbonate, a dolomite, a fractured
21 dolomite so that the "B" zone porosity is continuous. We
22 have seen excellent pressure communication, yet the reservoir,
23 as Mike testified in Exhibit Three, is a very important one
24 to show that each subsequent well had lower and lower pressure
25 and we can correlate that geologically with the logs, that

1 "B" zone throughout the reservoir.

2 MR. STAMETS: What about secondary recovery, is that
3 a possibility in this reservoir?

4 MR. CARNES: We are going to make a water-flood
5 feasibility study, or I should say secondary recovery
6 feasibility study and embark upon that in the next few weeks.

7 MR. STAMETS: Will this eighty-acre spacing permit
8 secondary recovery?

9 MR. CARNES: I think we can communicate throughout
10 the reservoir. We may need some more injection points and
11 have to do some additional drilling for injection wells but it
12 will depend upon what our study shows as to the magnitude of
13 the recovery under an enhancery recovery scheme and right off
14 the bat I would say that I would be very interested in using
15 the Gulf dry hole that had some water in it as a possible
16 injection point but we may have to do some additional drilling
17 not a complete in-field program of forty acres for injectional
18 purposes but for just injection points. But we can communicate
19 throughout the reservoir, we can make something happen. It may
20 be bad if we inject water and it communicates directly across
21 to the well but I think there is good pressure communication
22 in the reservoir.

23 MR. STAMETS: Do you anticipate any additional
24 primary drilling in the reservoir?

25 MR. CARNES: No, I don't.

1 MR. STAMETS: Are there any other questions of the
2 witnesses? They are both excused.

3 (THEREUPON, the witnesses were excused.)

4 MR. STAMETS: Is there anything further in this
5 case? We will take the case under advisement.

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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.

new Mexico Oil Conservation Commission
the foregoing is a true and correct record
of the hearing at Santa Fe, New Mexico
heard by me on May 1, 1976

New Mexico Oil Conservation Commission

I hereby certify that the foregoing is
a true and correct record of the proceedings

May 1, 1976

Richard L. Kamm, Executive
New Mexico Oil Conservation Commission

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
May 12, 1976

EXAMINER HEARING

IN THE MATTER OF:

Case 5473 being reopened pursuant to)	CASE
the provisions of Order No. R-5029,)	5473
which order established special rules)	(Reopened)
and regulations for the West Knowles-)	
Drinkard Pool, Lea County, New Mexico.)	

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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

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1 MR. NUTTER: We will call Case Number 5473, reopened.

2 MR. CARR: Case 5473, in the matter of Case 5473
3 being reopened pursuant to the provisions of Order No. R-5029,
4 which order established special pool rules and regulations
5 for the West Knowles-Drinkard Pool, Lea County, New Mexico,
6 including a provision for eighty-acre spacing and proration
7 units.

8 Mr. Examiner, we have received a request that this
9 case be continued to the May 26th Examiner Hearing.

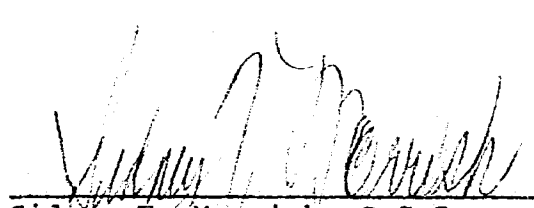
10 MR. NUTTER: Case Number 5473 will be continued to
11 the Examiner Hearing scheduled to be held at this same place
12 at nine o'clock A.M., May 26, 1976.

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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.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5473 (sup)
heard by me on 5/12, 1976.


Examiner
New Mexico Oil Conservation Commission

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
14 May 1975

EXAMINER HEARING

IN THE MATTER OF:)

)
Application of Mesa Petroleum Co. for)
pool creation and special pool rules,)
Lea County, New Mexico. Applicant,)
in the above-styled cause, seeks the)
creation of a new oil pool for)
Drinkard production for its West)
Knowles Well No. 1 located in Unit P)
of Section 34, Township 16 South,)
Range 37 East, Lea County, New Mexico,)
and for the promulgation of special)
rules therefore, including a provision)
for 80-acre spacing units.)

NO. 5473

BEFORE: Daniel S. Nutter, Examiner.

For the New Mexico Oil
Conservation Commission:

William F. Carr, Esq.
Legal Counsel for the Com-
mission
State Land Office Building
Santa Fe, New Mexico 87501

For the Applicant
Mesa Petroleum Co.:

Paul Eaton, Esq.
HINKLE, BONDURANT, COX & EATON
Roswell, New Mexico

I N D E X

Testimony of Dennis Crowley

Direct Examination by Mr. Eaton
Questions by Mr. Nutter

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Testimony of L. M. Carnes

Direct Examination by Mr. Eaton
Questions by Mr. Nutter

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E X H I B I T S

Exhibit One

9

Exhibit Two

9

Exhibit Three

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MR. NUTTER: Case 5473.

MR. CARR: Case 5473. Application of Mesa Petroleum Company for pool creation and special pool rules, Lea County, New Mexico.

MR. EATON: Paul Eaton representing the applicant.
I will have two witnesses.

(Witnesses sworn.)

DENNIS CROWLEY,

being called as a witness and being duly sworn
upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. EATON:

Q Please state your name, by whom you are employed
and in what capacity?

A My name is Dennis Crowlev. I am employed by
Mesa Petroleum Company as a geologist, in Midland, Texas.

Q Have you previously testified before this Com-
mission in that capacity?

A Yes, I have.

Q Mr. Crowlev, what does Mesa seek by its appli-
cation?

A Well, Mesa is making application for special

pool rules to allow for 80-acre spacing in its undesignated Drinkard pool in Sections 34 and 35 of Township 16 South, Range 37 East, Lea County, New Mexico.

Q Now you are aware, are you not, that the application also sought creation of a new pool?

A - Yes.

Q Now was that taken care of earlier today in Docket Case Number 5484?

A Best of my knowledge, yes, that's taken care of; we went through it.

Q I refer you to what has been marked for identification as Exhibit Number One and ask you to state what this exhibit shows.

A This is a structure map of a portion of Lea County in Township 16 South, Range 37 East, 16 South 37. It's a structure map on top of the Drinkard formation; has a scale of one inch to two thousand feet; with structural contour values of on hundred foot increments. The production is shown within a two mile radius of the well on here, the green being Paddox Wells; the red are the Drinkard; yellow would be the lower Yeso, or the orange, that is; the Wolfcamp is brown; Strawn is blue; and Atoka is yellow. The Humble City Strawn Field is shown to the

south of us about a mile and a half. The large field that you see on the west side of the map there is the Lovington Field, which primarily produces from the San Andres-Paddox-Abo formations.

The area where we are seeking this -- application for special rules, we have found some Drinkard production in here, which is a stratigraphic trap producing from a Drinkard bank. The bank, as you can see, is on the general east or southeast dipping flank of the Lovington high or trend in there.

Q Where is the location of your Number One West Knowles?

A The Number One West Knowles is located 660 from the south and east of Section 34. Upon successful completion of that well we moved to the 1980 from the south and 660 from the west of Section 35; that would be a northeast diagonal offset there, and drilled the Number Two.

Q Excuse me. In your application you stated that you were in the process of completing this Number Two Well in Section 35, is that right?

A Yes, sir.

Q That has not been completed, is that correct?

A Yes, sir, that was completed for initial production of 279 barrels of oil and 115 barrels of water per day.

Q All right.

A Then we drilled the Number Three, since this application was first made, and that was drilled 1980 from the south and east of Section 34, Township 16 South, Range 37 East, and it was completed for 602 barrels of oil per day, no water. We're currently drilling the Number Four, which is up at the north part of the Section 34, 1980 from the east and 660 from the north, and as it is a designated Strawn test, it is a south offset of the C & K Number 1-27 Strawn discovery just north of us there in Section 27. Also drilling in this area at the time there's a -- C & K is drilling their Number 1-34 Shipp, which is a west offset to the Number 3 West Knowles Unit Well that Mesa has drilled and about two weeks ago Gulf Oil completed their - or had a dry hole in their Number J. R. Holt Well, which was 660 from the north and west of Section 2 in 17 South, 37 East. And also I believe that C & K has staked a location southwest, 660 from the south and west of Section 34. Mesa has also staked locations for our Number Five West Knowles Unit Well to be drilled, it

will be 1980 from the north and 660 from the east of 34.

Q All right. Now, do all these wells including the staked wells conform to an 80-acre spacing pattern?

A They do now, yes, sir.

Q All right. Now will you refer to what has been marked as EXhibit Number Two and state what that exhibit reflects?

A All right. Exhibit Number Two is a structural cross section shown as AA Prime on this structural map which I have, is on Exhibit Number One. It's an east-west cross section going from AA Prime going to Getty Number One live Well up in Section 33, east to the Number Three Mesa Well, and southeast to the Number One Mesa West Knowles Unit. The exhibit is primarily to graphically show the structural relation of the newly found Drinkard Pool, a structural relationship of it to the one well, Tidewater - Nava Well that is producing up on the west side of the Lovington Field.

MR. NUTTER: Is that the only Drinkard Well over in that area?

A Yes, it is right here. There is one more Drinkard well, which is carried as a Nava well, I believe, under oil and gas production records. It's in Section 6.

But this well is carried as a Tubb producer; it's called Tubb. This cross section shows you your Tubb zone or sand or-- zone, and coming down I've broken the Drinkard into three separate units, A, B, and C. These breaks, stratigraphic breaks were based upon sample descriptions that we have in control wells to the southeast of our -- what we're drilling. We have sand units in between these limestone units, or rather dolomite units, and we show that the production that we are -- have in Mesa unit, working interest unit, is all one reservoir for all practical purposes; it's all one.

Q Mr. Crowley, in your opinion what lands as depicted on the first exhibit are proven, originally proven to be productive of oil and gas?

A You mean described by quarter sections?

Q Yes, sir.

A Well, in the Drinkard right now, of course, it's the southeast quarter of Section 34, the southwest quarter of Section 35. I believe that the southwest quarter of Section 34 will be productive. I also believe that the northeast quarter of Section 34 may have a well; could be productive; of Section 33, I beg your pardon, Section 3, 17 south.

Q What about the northeast quarter of Section 3?

A That's the one, the northeast quarter of Section 3; I'll correct that.

Q Were these exhibits prepared by you?

A Yes, they were.

Q Do you have anything else you wish to bring out?

A Not at this time.

MR. EATON: We offer Exhibits One and Two into evidence.

MR. NUTTER: Exhibits One and Two will be admitted in evidence.

MR. EATON: We have no further questions of this witness.

QUESTIONS BY MR. NUTTER:

Q What did you say the potential on the Number Two well was, please?

A Well Number Two?

Q Yes, sir.

MR. EATON: We'll have that information for you.

MR. NUTTER: He mentioned it. I just didn't --

A Yes, I -- it was potential for 279 barrels of oil and 115 barrels of water a day.

Q And the other two wells were both water free,
is that correct?

A The Number One was potential for 606 barrels
of oil per day and is water free, yes.

Q And the Number Three?

A The Number Three is 602.

Q Water free?

A Yes, sir.

Q Are there further questions of the witness?

(No response.)

MR. NUTTER: He may be excused.

L. M. CARNES,

being called as a witness and being duly sworn

upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. EATON:

Q Please state your name, by whom you are
employed, and in what capacity?

A L. M. Carnes, Reservoir Engineer with Mesa Pet-
roleum Company in Amarillo, Texas.

Q Have you previously testified before this Com-
mission in that capacity?

A Yes, I have.

Q Mr. Carnes, referring to what has been marked as Mesa Exhibit Number Three, please state what this exhibit reflects.

A Exhibit Three is a tabulation of initial completion data and pressure production history for the three Drinkard producers that Mesa has drilled and completed. It shows the initial completion data, which includes the date of potential tests, the oil, water, and gas production, the gas-oil ratio, the flowing tubing pressure, choke size, and perforations. The perforations represent the gross interval of the Drinkard pay in these wells. Our previous witness has testified to the initial potential of the wells. The discovery well I'll just state again, was 606 barrels of oil per day flowing at a pressure of 225 on a 30/64th choke. Only the Number Two well potential for less than the regular 310 barrels per day 80-acre allowable at this depth. Under the pressure history, part of this exhibit, we show the original pressure for each of the three Mesa-Drinkard Wells. This is based on extrapolated drill stem test data corrected to the same sub-C depth of 4591, which represents the mid-perforations of the discovery well. On the Number One West Knowles Well

we see the original pressure was 3223 on December, 1974. The original pressure on Number Two was 3242 on March 1st, '75, and on the Number Three Well some 70 pounds lower than the discovery well; the pressure is 3154 on March 29, 1975. We have subsequent pressure data from the original DST pressure on these three wells, on the West Knowles Number One. This pressure is based on 174 hour bottom hole pressure build-up and indicated that the pressure on March 31st, '75, had declined to 3080 pounds on the discovery well after the well had produced 11,206 barrels of oil. Now I want to call your attention then to the original pressure on Number Three, which I mentioned was 3154 as of the 29th of March of '75, only two days prior to obtaining this build-up pressure in our discovery well. It is 69 pounds lower than the original pressure in the discovery well, indicating to me that there's been pressure communication between those two wells on 80-acres, since that one well would have drained at least 80 acres.

At the bottom of the exhibit under production history relates the cumulative production as of March 31, '75 and as of April 30, '75. I've already mentioned the 11,206 barrels from the discovery well as of that time. In addition West Knowles Number Two had produced a cumu-

lative oil volume of 2233 as of March 31st, '75. The April production is shown and the average daily rate based on the number of producing days in April is also shown. It indicates that West Knowles Number One and Number Three are capable of producing the 80-acre allowable.

Q What was the cost of digging these wells; the average cost of completing them?

A Approximately \$360,000 for a completed well. The dry hole cost is some \$230,000.

Q Now I believe Mr. Crowley did state that all the wells that have been drilled or staked in the area so far do conform to an 80-acre spacing, is that correct?

A Yes, that's right.

Q If further development in the pool and the production history of the wells established that they cannot effectively drain 80 acres, can the pool be subsequently developed on a 40-acre spacing pattern?

A Yes, it could.

Q If special pool rules provide for 80-acre spacing will they avoid the drilling of, in your opinion, of unnecessary wells?

A Yes.

Q Would they result in the reduction of any risk

caused by an excessive number of wells?

A Yes, they would.

Q In your opinion, would such special pool rules otherwise prevent waste and protect correlative rights?

A Yes, it would.

MR. EATON: We offer applicant's Exhibit Number Three into evidence.

MR. NUTTER: Exhibit Number Three will be admitted in evidence.

MR. EATON: I have no further questions of the witness.

QUESTIONS BY MR. NUTTER:

Q Mr. Carnes, the previous witness stated that Wells Number One and Three had been completed water free. Are they still producing water free?

A Yes, they are.

Q What was the status of the Gulf dry hole? Did it -- was it a water producer or just nothing, or what?

A Based on a drill stem test, it recovered I think about 600 feet of mud and 600 feet of salt water; therefore it was considered water-bearing and plugged and abandoned.

Q And it's structurally lowest of all these wells

in here?

A Yes, sir, yes, sir, it sure is.

Q It's dipping to the southeast?

A That's right.

Q Okay, now as part of Paragraph (m) of the previous Case Number 5484, the assignment of an oil discovery allowable was included. Is this Well Number One here capable of producing that oil discovery allowable?

A Yes, sir, in my opinion it is. The discovery allowable then when added to the normal 80-acre depth allowable of 310 would bring the allowable to 367 and it's capable of over 400 barrels a day. We have pinched back on it during those thirty days in April since it had produced approximately 300 barrels a day but it's capable of at least 367.

Q And you think that you could produce this amount of oil from the well without possible damage to the well by pulling water up-structure in there.

A Yes, I do at this time.

Q What's your estimate that at this time as to the reservoir mechanism here?

A I feel it's solution gas drive. It's so early in life that we really cannot determine if the water down-

structure would be effective as a displacement mechanism.

Q What are the GOR's on these wells?

A Approximately 650 to 700 cubic feet per barrel.

Q And you think that is the solution GOR also?

A Yes, I do. I base that on static grading surveys we took in the Number One Well, which indicated that we were under saturated, at original pressure.

MR. NUTTER: Are there any further questions of Mr. Carnes?

(No response.)

MR. NUTTER: He may be excused. Do you have anything further, Mr. Eaton?

MR. EATON: No, sir.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 5473?

(No response.)

MR. NUTTER: We'll take the case under advisement.

(Hearing concluded.)

CASE 5473

Page 17

STATE OF NEW MEXICO)
COUNTY OF SANTA FE)

ss

REPORTER'S CERTIFICATE

I, Sally Walton Boyd, Notary Public and General Court Reporter, Santa Fe, New Mexico, DO HEREBY CERTIFY that the facts stated in the caption hereto are true and correct; that I reported the captioned proceedings; that the foregoing 16 pages, numbered 1 through 16 are a true, full and correct transcript of my notes taken during the hearing.

WITNESS my hand this 22nd day of May, 1975, at Santa Fe, New Mexico.

Sally Walton Boyd
Sally Walton Boyd
Notary Public and General Court
Reporter

My Commission expires:
10 September 1975

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5473
heard by me on 5/14, 1975.

[Signature] Examiner
New Mexico Oil Conservation Commission

THE NYE REPORTING SERVICE
STATE-WIDE DEPOSITION NOTARIES
225 JOHNSON STREET
SANTA FE, NEW MEXICO 87501
TEL. (505) 982-0386



OIL CONSERVATION COMMISSION

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

May 22, 1975

I. R. TRUJILLO
CHAIRMAN

**LAND COMMISSIONER
PHIL R. LUCERO
MEMBER**

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

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

Re: CASE NO. 5473
ORDER NO. R-5029

Applicant:

Mesa Petroleum Co.

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	<u> x </u>
Artesia OCC	<u> </u>
Aztec OCC	<u> </u>

Other _____



DIRECTOR
JOE D. RAMEY

OIL CONSERVATION COMMISSION

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

LAND COMMISSIONER
PHIL R. LUCERO
June 2, 1976



STATE GEOLOGIST
EMERY C. ARNOLD

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

Re: CASE NO. 5473
ORDER NO. R-5029-A

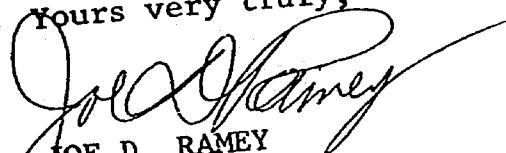
Applicant:

Mesa Petroleum Company

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
Aztec OCC

Other Don Dent

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. 5473
Order No. R-5029-A

IN THE MATTER OF CASE 5473 BEING REOPENED
PURSUANT TO THE PROVISIONS OF ORDER NO.
R-5029, WHICH ORDER ESTABLISHED SPECIAL
RULES AND REGULATIONS FOR THE WEST KNOWLES-
DRINKARD POOL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 26, 1976,
at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 1st day of June, 1976, 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-5029, dated May 22, 1975, temporary
special rules and regulations were promulgated for the West
Knowles-Drinkard Pool, Lea County, New Mexico, establishing
temporary 80-acre spacing units and proration units and limited
well locations.

(3) That pursuant to the provisions of Order No. R-5029,
this case was reopened to allow the operators in the subject pool
to appear and show cause why the Special Rules and Regulations
for the West Knowles-Drinkard Pool should not be rescinded.

(4) That the evidence establishes that one well in the
West Knowles-Drinkard Pool can efficiently and economically
drain and develop 80-acres.

(5) That the Special Rules and Regulations promulgated by
Order No. R-5029 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 and gas in the pool.

(6) That the Special Rules and Regulations for the West
Knowles-Drinkard Pool should be made permanent.

-2-

Case No. 5473
Order No. R-5029-A

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the West Knowles-Drinkard Pool, promulgated by Order No. R-5029, shall remain 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.

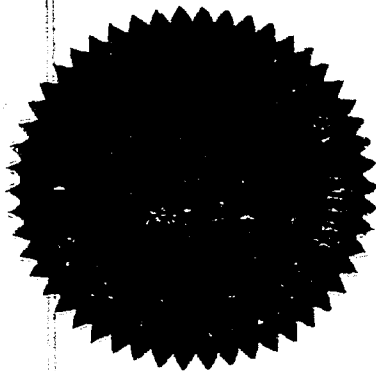
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

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

jr/

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. 5473
Order No. R-5029

APPLICATION OF MESA PETROLEUM CO.
FOR POOL CREATION AND SPECIAL
POOL RULES, LEA COUNTY, NEW MEXICO.

NOMENCLATURE

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 14, 1975, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 22nd day of May, 1975, 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, Mesa Petroleum Co., seeks the creation of a new oil pool for Drinkard production in Lea County, New Mexico.

(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 West Knowles Well No. 1, located in Unit P of Section 34, Township 16 South, Range 37 East, NMPM, Lea County, New Mexico, has discovered a separate common source of supply which should be designated the West Knowles-Drinkard Pool; that the vertical limits of said pool should be the Drinkard formation as found on the log of said West Knowles Well No. 1 from 8200 to 8600 feet, and that the horizontal limits of said pool should be as follows:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 34: SE/4
Section 35: SW/4

-2-

Case No. 5473
Order No. R-5029

(5) 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 West Knowles-Drinkard Pool.

(6) 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.

(7) 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.

(8) That this case should be reopened at an examiner hearing in May, 1976, at which time the operators in the subject pool should be prepared to appear and show cause why the West Knowles-Drinkard 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 Drinkard production, is hereby created and designated the West Knowles-Drinkard Pool, with vertical limits comprising the Drinkard formation as found on the log of the West Knowles Well No. 1, located in Unit P of Section 34, Township 16 South, Range 37 East, NMPM, from 8200 feet to 8600 feet, and horizontal limits comprising the following-described area:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 34: SE/4
Section 35: SW/4

(2) That temporary Special Rules and Regulations for the West Knowles-Drinkard Pool, Lea County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
WEST KNOWLES-DRINKARD POOL

RULE 1. Each well completed or recompleted in the West Knowles-Drinkard Pool or in the Drinkard formation within one mile thereof, and not nearer to or within the limits of another designated Drinkard 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 310 barrels per day, 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.

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Case No. 5473
Order No. R-5029

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the West Knowles-Drinkard Pool or in the Drinkard 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 July 1, 1975.

(2) That, pursuant to Paragraph A. of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing wells in the West Knowles-Drinkard Pool shall have dedicated thereto 80 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 80 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the West Knowles-Drinkard Pool or in the Drinkard formation within one mile thereof shall receive no more than one-half of a standard allowable for the pool.

(3) That this case shall be reopened at an examiner hearing in May, 1976, at which time the operators in the subject pool should be prepared to appear and show cause why the West Knowles-Drinkard 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

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

Phil R. Lucero
PHIL R. LUCERO, Member

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

dr/

EXHIBIT NO. _____
 MESA PETROLEUM CO.
 HISTORICAL DATA
 WEST KNOWLES DRINKARD POOL
 LEAS COUNTY, NEW MEXICO

BEFORE EXAMINER STAMETS
 OIL CONSERVATION COMMISSION

EXHIBIT NO. 3
 CASE NO. 5473
 Submitted by MESA
 Hearing Date 5-26-76

SHIPP #2-34 W. KNOWLES #5 W. KNOWLES #6

W. KNOWLES #1
COMPLETION DATA
 Date of Potential Test 2/26/75
 BOPD 606
 BWPD 0
 MCFD 371
 GOR 621
 FTP 225
 CHOKER SIZE, INC. 30/64
 PERFORMANCES - FT. 8330-412

W. KNOWLES #2
 4/7/75
 276
 115
 192
 688
 65
 34/64
 8360-413

W. KNOWLES #3
 4/17/75
 602
 0
 395
 656
 150
 26/64
 8212-310

SHIPP #1-34
 6/1/75
 531
 0
 690
 1,300
 210
 24/64
 8148-8274

7/6/75
 110
 0

 Pump test

 8102-8397

7/7/75
 752
 0

 225
 36/64
 8240-8320

8/13/75
 250
 0
 162
 648
 60
 32/64
 8297-374

PRESSURE HISTORY
 DATUM DEPTH, FT. 4591
 Sub-Sea 8371
 Actual KB
ORIGINAL PRESS
 Date 2/19/75
 BHP-PSIG 3223
 Source EXTRP DST
SUBSEQUENT PRESS
 Date 3/31/75
 BHP-PSIG 3080
 Source BHP-B.U.

4591
 8368
 3/1/75
 3242
 EXTRP DST
 NONE

4591
 8373
 3/29/75
 3154
 EXTRP DST
 8/13/75
 2192
 BHP-B.U.

4591
 8377
 6/1/75
 3008
 EXTRP DST
 8/13/75
 2173
 BHP-B.U.

4591
 8377
 6/18/75
 3226
 EXTRP DST
 NONE

 8/13/75
 2202
 BHP-B.U.

4591
 8376
 7/10/75
 2450
 BHP-BU
 8/13/75
 2470
 BHP-B.U.

PRODUCTION HISTORY
 Cum Oil Prod. 11,206
 3/31/75 51,614
 8/13/75 86,951
 5/1/76
 Avg Prod. Rate-BOPD 107
 4/76

2,233
 11,425
 41,697
 63

34,510
 64,468
 114

18,883
 66,408
 173

2,821
 9,172
 25

13,882
 68,871
 204

2,081
 33,285
 100

EXHIBIT NO. _____
 MESA PETROLEUM CO.
 RESERVOIR AND PERFORMANCE DATA
 WEST KNOWLES DRINKARD POOL
 LEA COUNTY, NEW MEXICO

ORIGINAL BOTTOM HOLE PRESSURE (2-19-75)

3220 PSI

AVERAGE BOTTOM HOLE PRESSURE
 FROM PRESSURE BUILD UP DATA
 OBTAINED ON 8-13-75

2230 PSI

CUMULATIVE PRODUCTION ON 8-13-75
 " " TO 5-1-76

135,216 Bbl. Oil
 362,220 Bbl. Oil

RESERVOIR DATA:

AVERAGE POROSITY
 AVERAGE PAY THICKNESS
 AVERAGE CONATE WATER SATURATION
 RESERVOIR VOLUME FACTOR
 BUBBLE POINT PRESSURE

6.5%
 48 Ft.
 27.5%
 1.36
 1584 PSI

ORIGINAL OIL IN PLACE BASED ON
 MATERIAL BALANCE CALCULATION
 ABOVE BUBBLE POINT (N) ;

$$N = \frac{N_p}{\Delta P \times C_e}$$

$$N = \frac{135,216}{990 \times 20.72 \times 10^{-6}}$$

$$N = 6,591,787$$

ORIGINAL OIL IN PLACE PER
 ACRE - FOOT (N_v) ;

$$N_v = \frac{7758 \times \phi \times (1 - S_w)}{B_o}$$

$$N_v = \frac{7758 \times .065 \times (1 - .275)}{1.36}$$

$$N_v = 269 \text{ Bbl./Ac-Ft.}$$

BEFORE EXAMINER STAMETS
 OIL CONSERVATION COMMISSION

EXHIBIT NO. 4

CASE NO. 5473

Submitted by MESA

Hearing Date 5-26-76

EXHIBIT NO. _____
MESA PETROLEUM CO.
ULTIMATE RECOVERY DETERMINED FROM
PERFORMANCE DECLINE
WEST KNOWLES DRINKARD POOL
LEA COUNTY, NEW MEXICO

TOTAL FIELD

Ultimate Oil Recovery = 1,200,144 Bbls.
48 Ft. Pay
48 Bbl./Ac-Ft. (18.1 % of OOIP)
Drainage Area = 520 Acres

WEST KNOWLES NO. 5

Ultimate Oil Recovery = 229,993 Bbls.
45 Ft. Pay
48 Bbl. Recovery/Ac-Ft. (18.1%)
Drainage Area = 106 Acres

WEST KNOWLES NO. 2

Ultimate Oil Recovery = 110,164 Bbls.
32 Ft. Pay
48 Bbl. Recovery/Ac-Ft. (18.1%)
Drainage Area = 72 Acres

MSD:td
5-25-76

BEFORE EXAMINER STAMETS	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	5
CASE NO.	5473
Submitted by	MESA
Hearing Date	5-26-76

EXHIBIT NO. _____
PAGE 2
MESA PETROLEUM CO.
RESERVOIR AND PERFORMANCE DATA
WEST KNOWLES DRINKARD POOL
LEA COUNTY, NEW MEXICO

DRAINAGE VOLUME (V) ;

$$V = \frac{N}{N_v}$$
$$V = \frac{6,591,787}{269}$$

$$V = 24,504 \text{ AC-Ft.}$$

DRAINAGE AREA (A) ;

$$A = \frac{V}{\text{Ft. of Pay}}$$

$$A = \frac{24,504}{48}$$

$$A = 510 \text{ Acres}$$

$$A/\text{Well} = \frac{510}{7}$$

$$A/\text{Well} = 73 \text{ Acres}$$

ULTIMATE RECOVERY DETERMINED
USING ARP'S NOMOGRAPH
FOR ESTIMATED RECOVERY BY
SOLUTION GAS DRIVE (BELOW
BUBBLE POINT) AND MATERIAL
BALANCE ABOVE BUBBLE POINT

$$\text{ULTIMATE RECOVERY} = 1,194,085 \text{ Bbl. Oil}$$

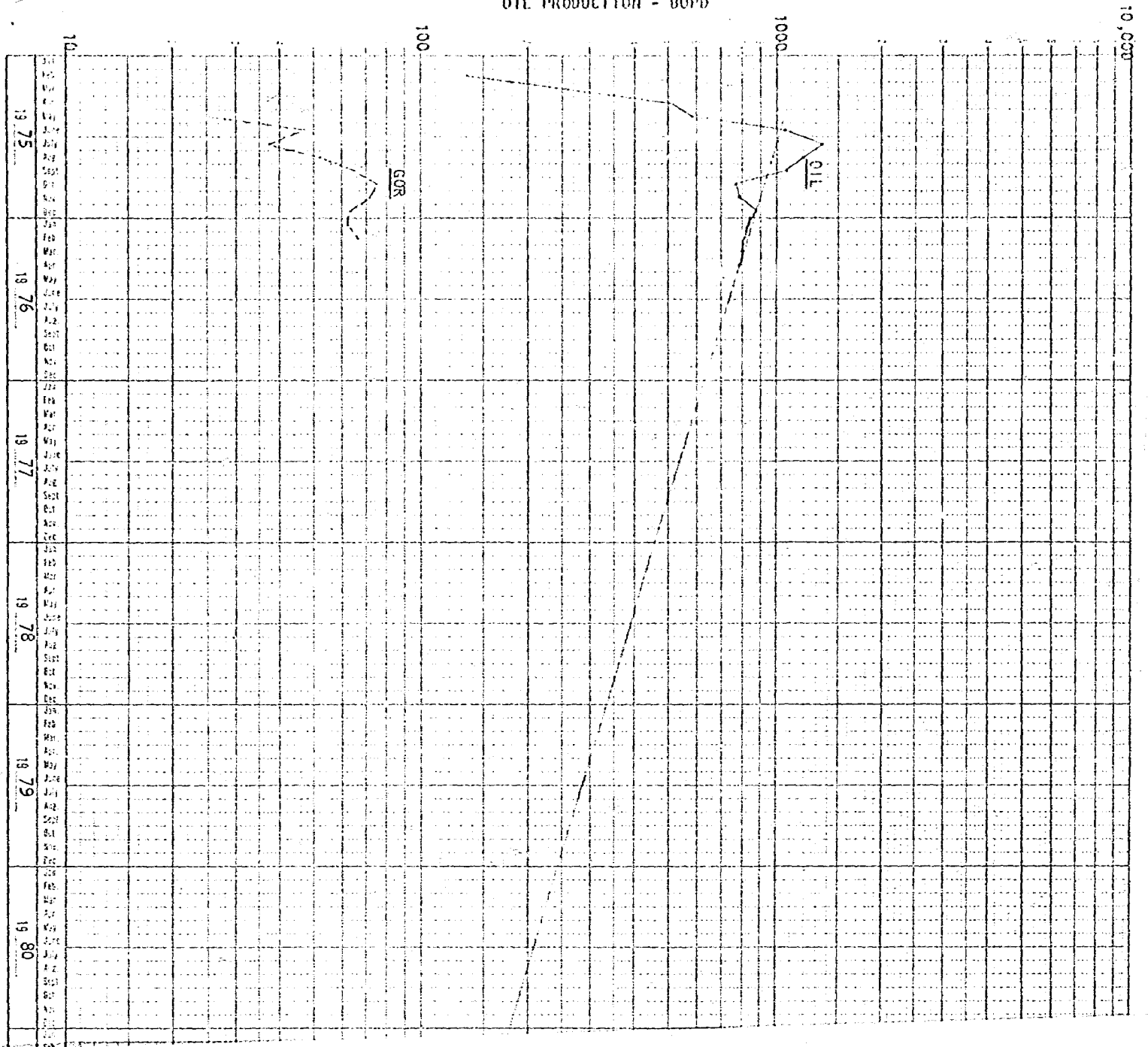
$$\text{RECOVERY FACTOR} = 18.1\%$$

MSD:td
5-25-76

EXHIBIT NO. _____
MESA PETROLEUM CO.
PERFORMANCE CURVES
WEST KNOWLES DRINKARD POOL
LEA COUNTY, NEW MEXICO

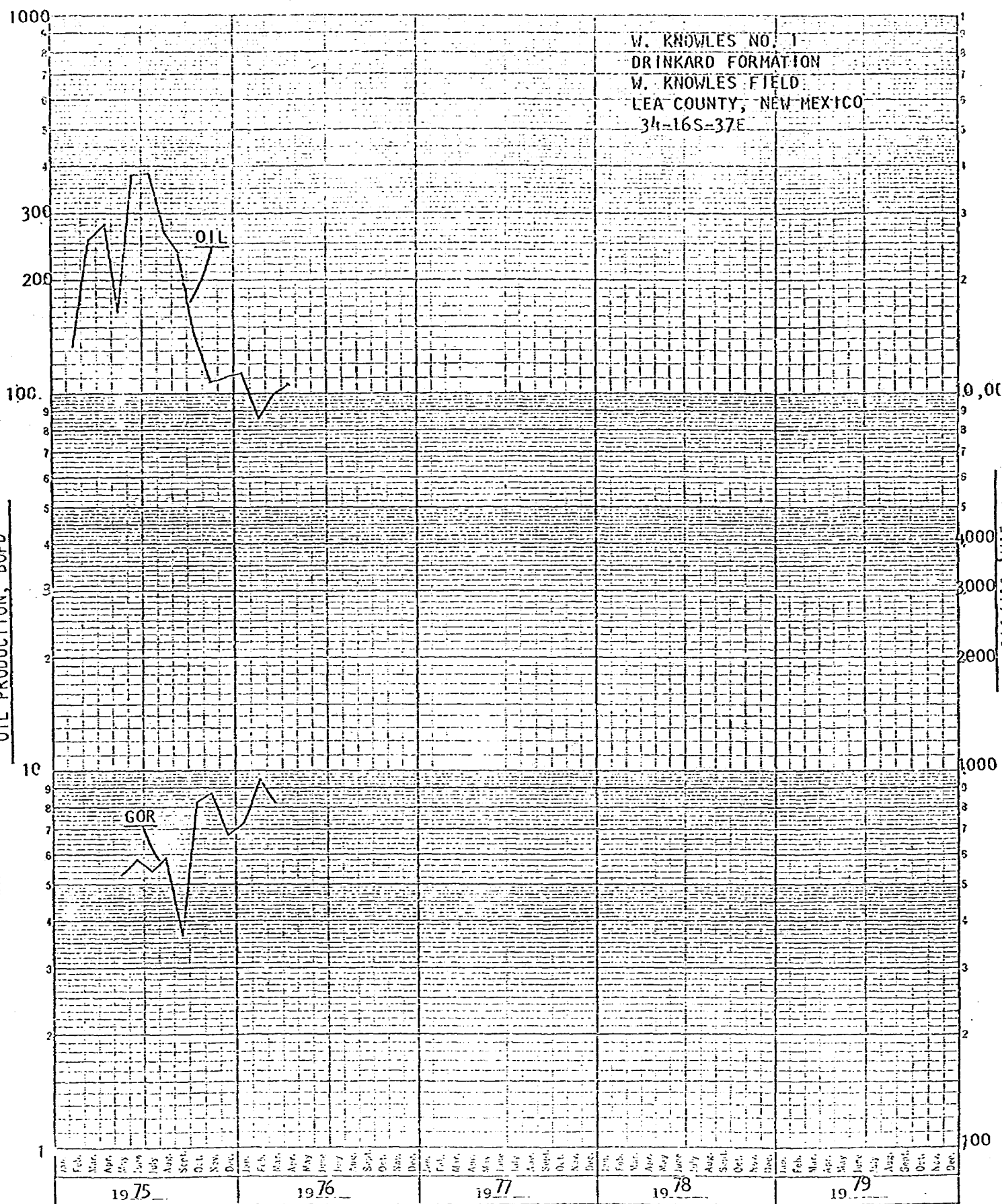
BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 6
CASE NO. 5073
Submitted by MESA
Hearing Date 5/26/76

OIL PRODUCTION - OOPD



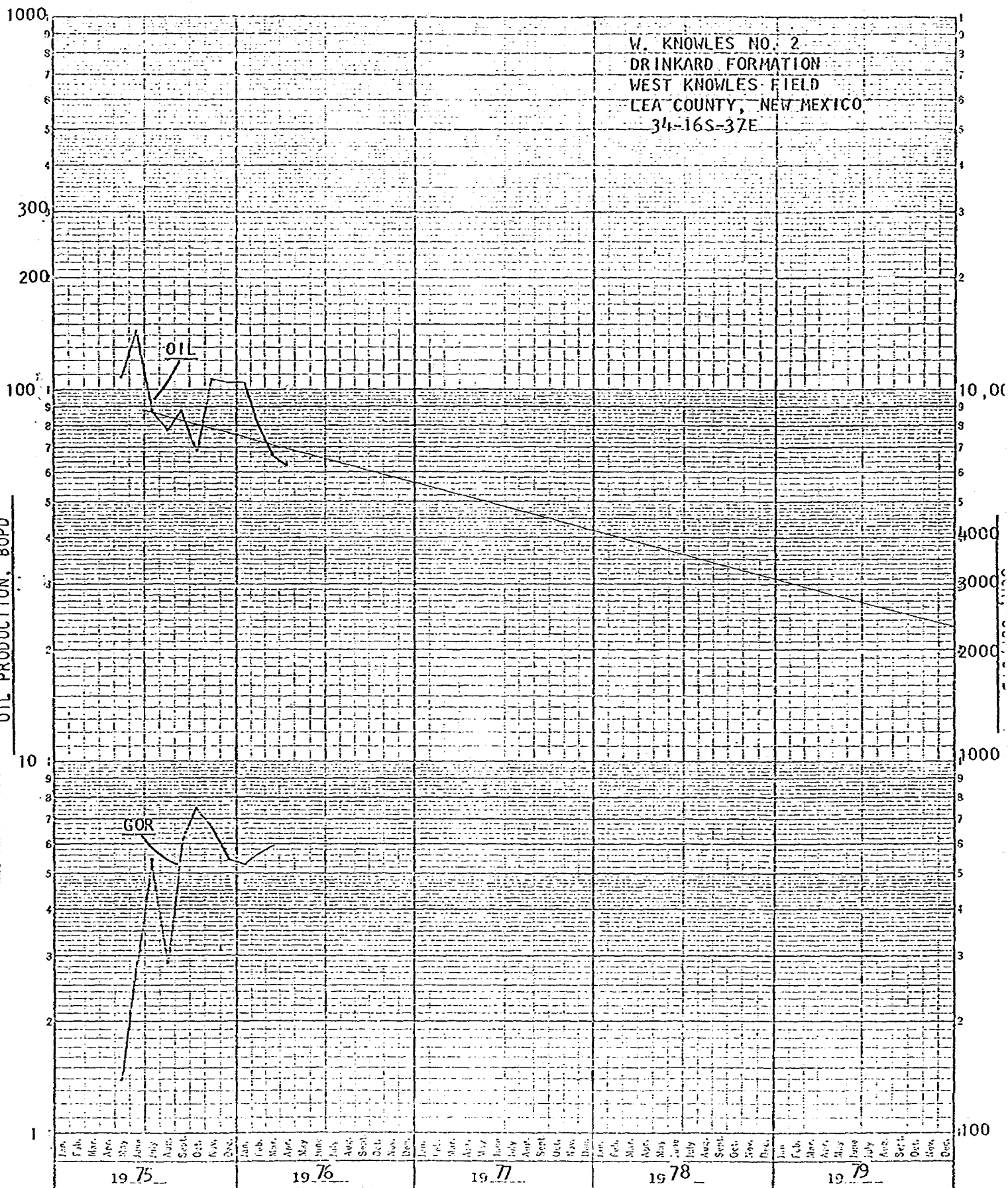
5 YEARS BY MONTHS 4C 6690
X 3 LOG CYCLES
MADE IN U.S.A.
KLUFFEL & ESSER CO.

OIL PRODUCTION, BOPD



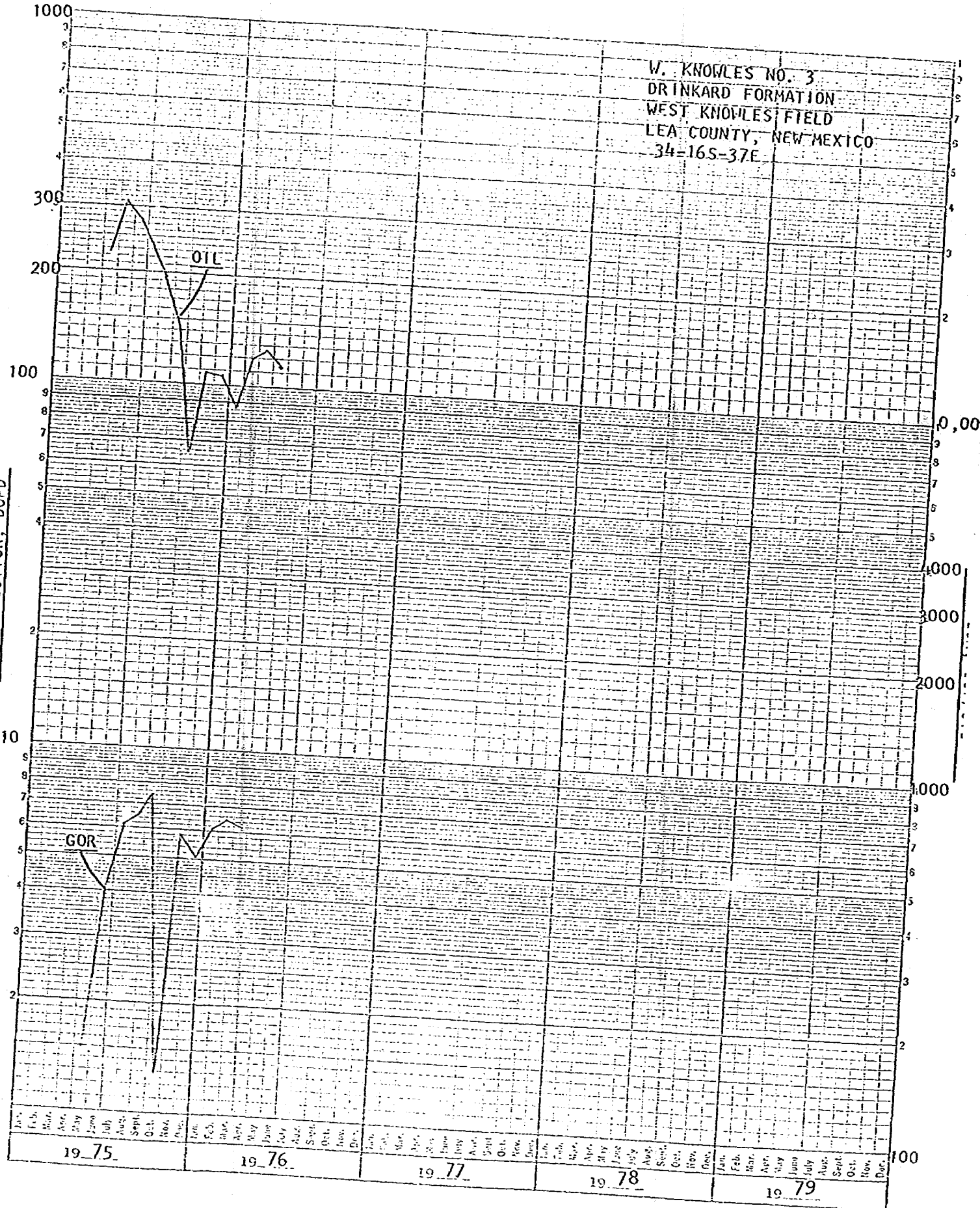
K&S 5 YEARS BY MONTHS 4G GG90
 MADE IN U.S.A.
 KEUPPEL & EUBER CO.

OIL PRODUCTION, BOPD



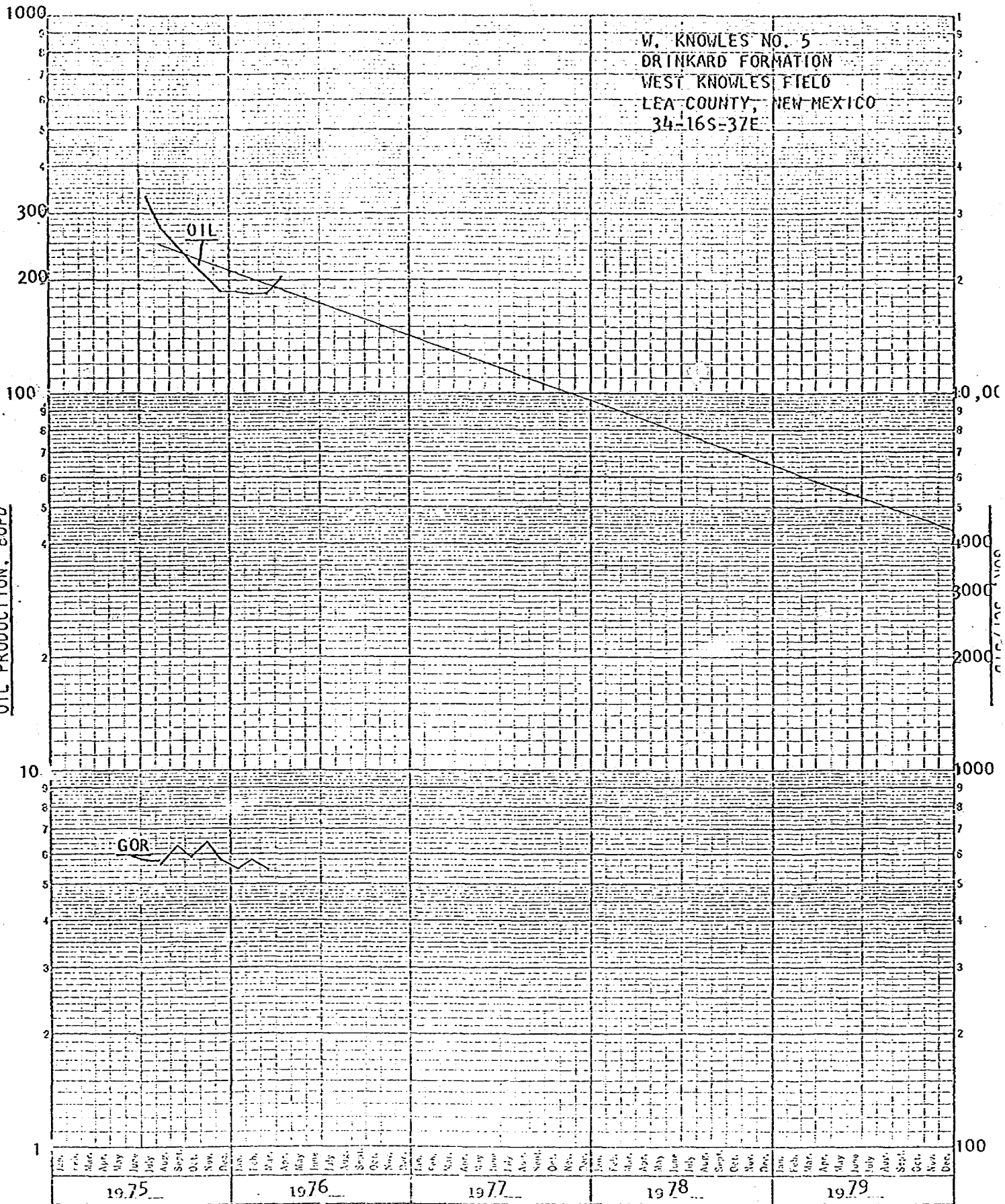
3 YEARS BY MONTHS 4G 6090
X 3 LOG CYCLES
MADE IN U.S.A.
KODAK SAFETY FILM

OIL PRODUCTION, BOPD

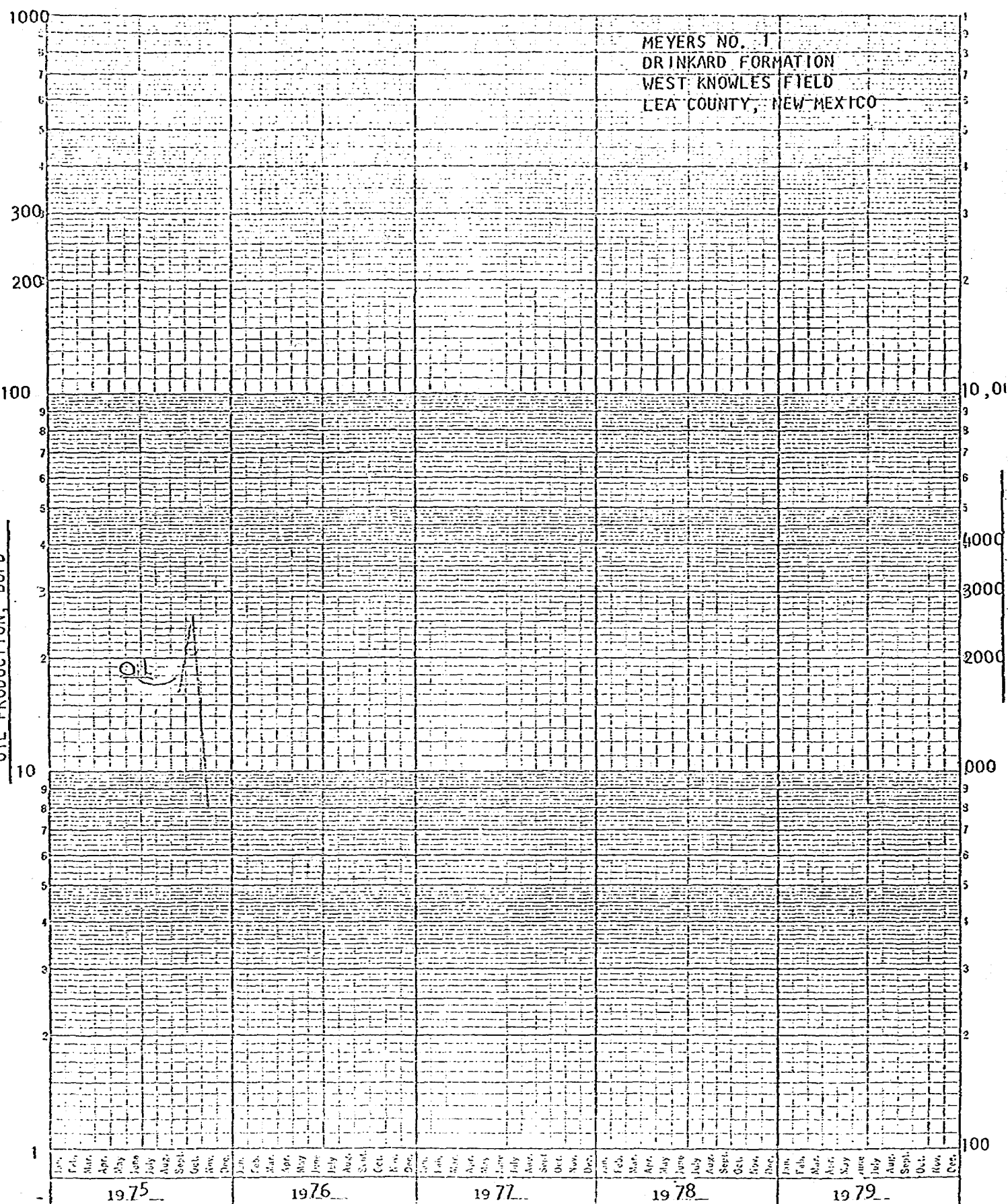


5 YEARS BY MONTHS 46 6690
 X 3 LOG CYCLES
 MADE IN U.S.A.
 KEUFFEL & PENNER CO.

OIL PRODUCTION, BOPD



OIL PRODUCTION, BOPD



OP 10-843-11

Oil Production - Barrels Per Day

SD-27728-00

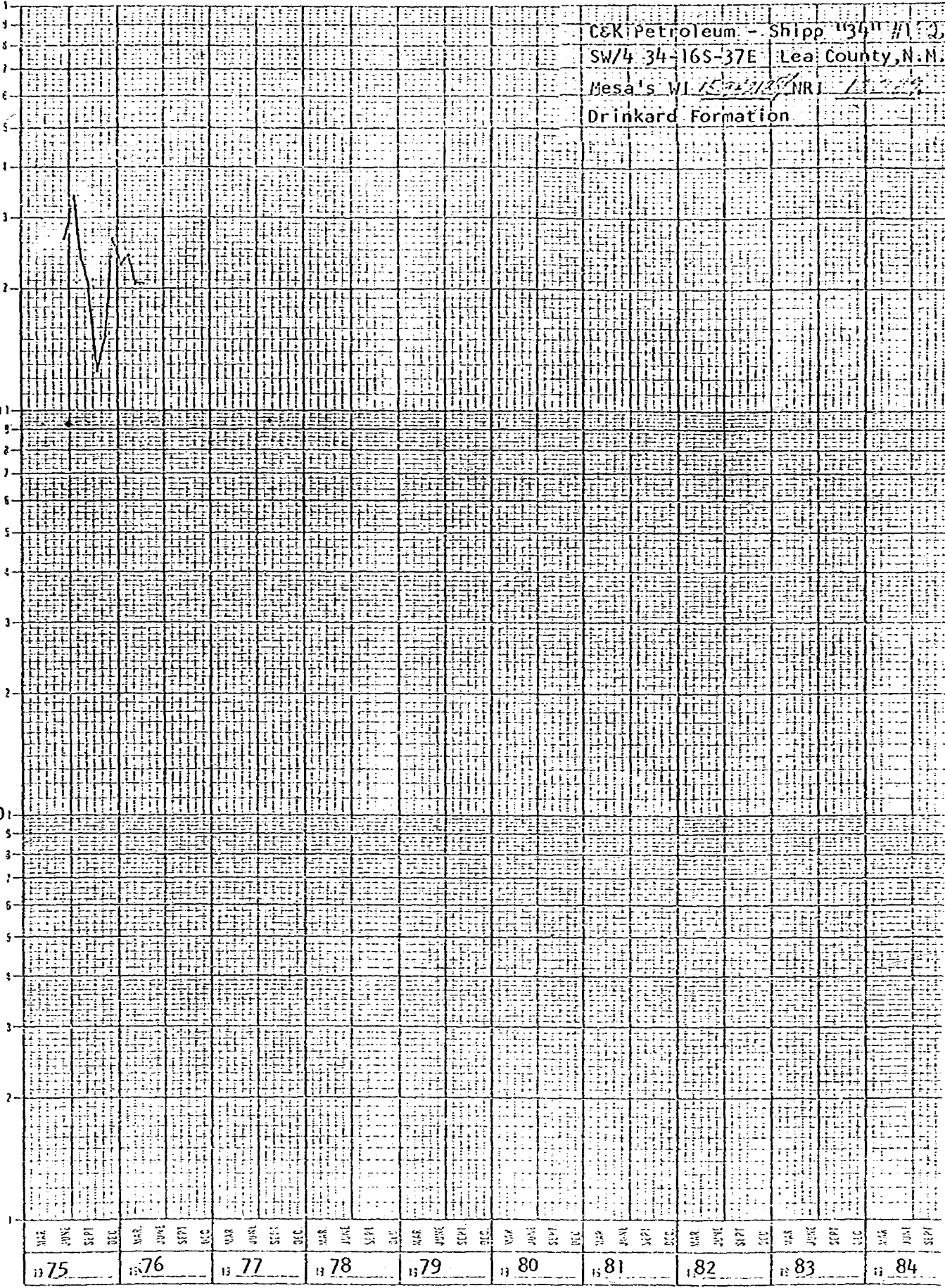
20 YEARS BY MONTHS X 3 LOG CYCLES

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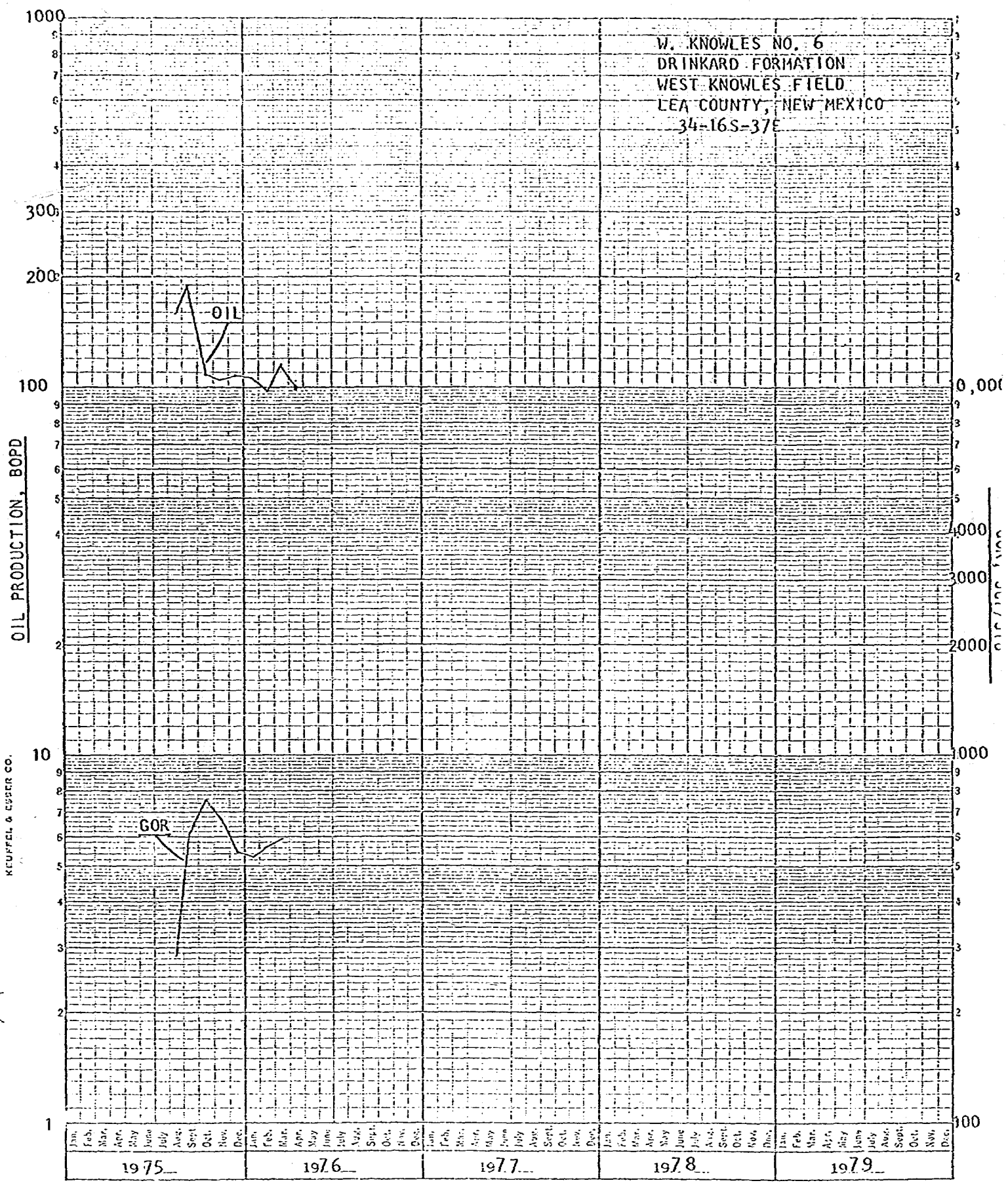
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10



C&K Petroleum - Shipp 1134" #1 2,
SW/4 34-16S-37E Lea County, N.M.
Mesa's WI 15-72-21-25 NRI 15-72-21-25
Drinkard Formation



W. KNOWLES NO. 6
DRINKARD FORMATION
WEST KNOWLES FIELD
LEA COUNTY, NEW MEXICO
34-16S-37E

OIL PRODUCTION, BOPD

5 YEARS BY MONTHS 46 6690
X 3 LOG CYCLES
KEUFFEL & ESSER CO.

Jan 1975	Feb 1975	Mar 1975	Apr 1975	May 1975	Jun 1975	Jul 1975	Aug 1975	Sep 1975	Oct 1975	Nov 1975	Dec 1975	Jan 1976	Feb 1976	Mar 1976	Apr 1976	May 1976	Jun 1976	Jul 1976	Aug 1976	Sep 1976	Oct 1976	Nov 1976	Dec 1976	Jan 1977	Feb 1977	Mar 1977	Apr 1977	May 1977	Jun 1977	Jul 1977	Aug 1977	Sep 1977	Oct 1977	Nov 1977	Dec 1977	Jan 1978	Feb 1978	Mar 1978	Apr 1978	May 1978	Jun 1978	Jul 1978	Aug 1978	Sep 1978	Oct 1978	Nov 1978	Dec 1978	Jan 1979	Feb 1979	Mar 1979	Apr 1979	May 1979	Jun 1979	Jul 1979	Aug 1979	Sep 1979	Oct 1979	Nov 1979	Dec 1979
1975												1976												1977												1978												1979											



600 C & K PETROLEUM BUILDING

MIDLAND, TEXAS 79701

(915) 683-3311

May 7, 1976

Mesa Petroleum Co.
P. O. Box 2009
Amarillo, Texas 79105

Attention: Mr. Les Carnes

Gentlemen:

C & K Petroleum, Inc. supports making permanent the temporary field rules for the West Knowles Drinkard Field, Lea Co., New Mexico, Case No. 5473.

We believe the data accumulated the past year fully justifies permanent 80-acre spacing for this field.

Yours very truly,

C & K PETROLEUM, INC.

G. C. Thompson
G. C. Thompson
Manager of Production

GCT:JLM:bmc

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION

EXHIBIT NO. 7
CASE NO. 5473
Submitted by MESA
Hearing Date 5-26-76

EXHIBIT NO. 3

MESA PETROLEUM CO.

INITIAL DRINKARD COMPLETION DATA AND PRESSURE PRODUCTION HISTORY
WEST KNOWLES AREA - SECTIONS 34 & 35-16S-37E
LEA COUNTY, NEW MEXICO

	W. Knowles No. 1	W. Knowles No. 2	W. Knowles No. 3
<u>Completion Data</u>			
Date of Potential Test	2-26-75	4-7-75	4-17-75
Oil Production - BPD	606	279	602
Water Production - BPD	0	115	0
Gas Production - MCFPD	371	192	395
GOR - CFPB	621	688	656
FTP - psig	225	65	150
Choke Size - In.	30/64	34/64	26/64
Perforations - Ft.	8330-412	8360-413	8212-310
<u>Pressure History</u>			
Datum Depth - Ft.			
Sub-sea	4,591	4,591	4,591
Actual KB	8,371	8,368	8,373
Original Pressure			
Date	12-19-74	3-1-75	3-29-75
BHP - psig	3,223	3,242	3,154
Source	Extrp. DST	Extrp. DST	Extrp. DST
Subsequent Pressure			
Date	3-31-75	None	None
BHP - psig	3,080	-	-
Source	BHP Buildup	-	-
<u>Production History</u>			
Cum. Oil Production to 3-31-75 - Bbls.	11,206	2,233	0
April 1975 Oil Production - Bbls.	8,940	5,981	6,423
Cum. Oil Production @ 4-30-75 - Bbls.	20,146	8,214	6,423
April 1975 Producing Days	30	29	16
Average April Producing Rate - BPD	298	206	401

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
MESA EXHIBIT NO. 3
CASE NO. 5473

LMC:hh
5-12-75

- CASE 5471: Application of Union Texas Petroleum for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Justis Blinbry and Justis Tubb-Drinkard production in the wellbore of its Carlson "B" Wells Nos. 1 and 2 located in Unit P of Section 23 and Unit H of Section 26, respectively, Township 25 South, Range 37 East, Lea County, New Mexico.
- CASE 5472: Application of Mesa Petroleum Co. for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox gas well location of a well to be drilled at a point 660 feet from the North and East line of Section 6, Township 26 South, Range 33 East, Red Hills Field, Lea County, New Mexico.
- CASE 5473: Application of Mesa Petroleum Co. for pool creation and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Drinkard production for its West Knowles Well No. 1 located in Unit P of Section 34, Township 16 South, Range 37 East, Lea County, New Mexico, and for the promulgation of special rules therefore, including a provision for 80-acre spacing units.
- CASE 5474: Application of Gulf Oil Company for two non-standard locations and the amendment of Order Nos. R-2904 and R-2909, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Central Drinkard Unit Wells Nos. 101 and 401 located, respectively, 554 feet from the North line and 766 feet from the East line, and 660 feet from the North and East lines of Section 28, Township 21 South, Range 37 East, Drinkard Pool, Lea County, New Mexico. Applicant further seeks the amendment of Order No. R-2904 which order approved the Central Drinkard Unit Agreement to provide that the vertical limits of the unitized formation shall include the entire Drinkard formation; application further seeks the amendment of Order No. R-4909 which approved the Central Drinkard Unit Waterflood Project to provide an administrative procedure for the approval of additional unorthodox well locations.
- CASE 5475: Application of Mobil Oil Corporation for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Lower Siluro-Devonian formation in the open-hole interval from 12,188 feet to 12,525 feet in its Santa Fe Pacific Well No. 9, located in Unit E of Section 35, Township 9 South, Range 36 East, Crossroads Siluro-Devonian Pool, Lea County, New Mexico.
- CASE 5476: Application of Cities Service Oil Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp formation underlying the NE/4 of Section 30, Township 22 South, Range 27 East, and in the Pennsylvanian formation underlying the E/2 of said Section 30, to be dedicated to a proposed gas well to be drilled at an orthodox location for both formations. 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 will be the designation of the applicant as operator of the well and a charge for the risk involved in drilling said well.

Dockets Nos. 12-75 and 13-75 are tentatively set for hearing on May 28 and June 11, 1975. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 14, 1975

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 from seventeen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico, for June, 1975.
 - (2) Consideration of the allowable production of gas from five prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico, for June, 1975.

CASE 5429: (Continued from the March 5, 1975 Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Charles M. Goad and United States Fidelity & Guaranty Company and all other interested parties to appear and show cause why the Charles M. Goad, State No. 1 Well located in Unit M of Section 28, Township 2 South, Range 26 East, De Baca County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5408: (Continued from the April 2, 1975 Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit W. E. Medlock and Reliance Insurance Company and all other interested parties to appear and show cause why the Queen Ridge No. 1 Well located in Unit M of Section 36, Township 10 South, Range 26 East, Chaves County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5469: Application of Read & Stevens for an unorthodox gas well location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox gas well location of a well to be drilled at a point 990 feet from the South and East line of Section 7, Township 15 South, Range 28 East, Chaves County, New Mexico, in exception to the Buffalo Valley-Pennsylvanian Gas Pool Rules.

CASE 5470: Application of Maralo, Inc. for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Butler Springs Unit Area comprising 3841 acres, more or less, of state and federal lands in Townships 14 and 15 South, Range 28 East, Chaves County, New Mexico.

- CASE 5477: Application of Cities Service Oil Company for compulsory pooling and an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the W/2 of Section 18, Township 22 South, Range 27 East, South Carlsbad Field, Eddy County, New Mexico, to be dedicated to a well to be drilled at an unorthodox location for said unit 1650 feet from the South line and 1980 feet from the West line of said Section 18. 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 will be the designation of the application as operator of the well and a charge for the risk involved in drilling said well.
- CASE 5478: Application of Continental Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Warren Unit Well No. 31 located in Unit O of Section 27, Township 20 South, Range 38 East, Lea County, New Mexico, in such a manner as to produce oil from the Blinbry Oil and Gas Pool and oil from the Warren-Tubb Gas Pool through parallel strings of tubing.
- CASE 5479: Application of Continental Oil Company for two non-standard gas proration units, two unorthodox locations, and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a non-standard gas proration unit comprising Lots 1, 2, and 3 and Lots 6 through 11 of Section 4, Township 11 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, to be dedicated to its Meyer B-4 Well No. 14 located in Unit G of said Section 4. Applicant further seeks approval of a 360-acre Eumont Gas proration unit comprising Lots 14, 15, and 16 and the SE/4 and E/2 SW/4 of said Section 4 to be simultaneously dedicated to its Meyer B-4 Well No. 4 and 29 at unorthodox locations in Units S and P, respectively, of said Section 4.
- CASE 5480: Application of Continental Oil Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Pennsylvanian formation through the perforated interval 7648 to 7690 feet in its SEMU Well No. 7 located in Unit F of Section 23, Township 20 South, Range 37 East, Cass-Pennsylvanian Gas Pool, Lea County, New Mexico.
- CASE 5481: Application of Phillips Petroleum Company for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of South Carlsbad-Atoka and South Carlsbad-Morrow gas production in the wellbore of its Tidwell-A "COM" Well No. 1 located in Unit E of Section 8, Township 23 South, Range 27 East, Eddy County, New Mexico.
- CASE 5482: Application of Phillips Petroleum Company for an unorthodox gas well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Lusk Deep Unit "A" Well No. 1 located in Unit A of Section 19, Township 19 South, Range 32 East, Lusk-Morrow Gas Pool, Lea County, New Mexico, and the simultaneous dedication of said Section 19 to the above well and to applicant's Lusk Deep Unit "A" Well No. 5 located in Unit J of said Section 19.

CASE 5483: Application of Phillips Petroleum Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval to dually complete its Lusk Deep Unit "A" Well No. 12 located in Unit G of Section 20, Township 19 South, Range 32 East, Lusk Field, Lea County, New Mexico, in such a manner as to produce oil from the Wolfcamp formation through the casing-tubing annulus and gas from the Lusk-Morrow Gas Pool through tubing.

CASE 5484: Southeastern New Mexico nomenclature case calling for the creation and extension of certain pools in Lea, Eddy, and Chaves Counties, New Mexico and for the assignment of certain oil well discovery allowables.

(a) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Wolfcamp production and designated as the East Carlsbad-Wolfcamp Gas Pool. The discovery well is the Champlin Petroleum Co. Nix-Yates Well No. 1, located in Unit G of Section 2, Township 22 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
Section 36: SW/4

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM
Section 1: NW/4
Section 2: NE/4

(b) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Wolfcamp production and designated as the Cemetary-Wolfcamp Gas Pool. The discovery well is the Read & Stevens, Inc. Allirish Well No. 1, located in Unit P of Section 30, Township 20 South, Range 25 East, NMPM. Said pool would comprise:

TOWNSHIP 20 SOUTH, RANGE 25 EAST, NMPM
Section 30: SE/4

(c) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Strawn production and designated as the Crooked Creek-Strawn Gas Pool. The discovery well is the C & K Petroleum Inc. Lowe State Well No. 1, located in Unit C of Section 16, Township 24 South, Range 24 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 24 EAST, NMPM
Section 16: N/2

(d) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for San Andres production and designated as the Dickenson-San Andres Pool. The discovery well is the Hanson Oil Corporation Santa Fe Well No. 1, located in Unit F of Section 35, Township 10 South, Range 36 East, NMPM. Said pool would comprise:

TOWNSHIP 10 SOUTH, RANGE 36 EAST, NMPM
Section 35: NW/4

(e) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the Golden Lane-Atoka Gas Pool. The discovery well is the Meadco Properties Ltd. Harris 6 Well No. 1, located in Unit I of Section 6, Township 21 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 29 EAST, NMPM

Section 6: Lots 1, 2, 7, 8, 9, 10, 15, and 16

(f) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the Grayburg-Atoka Gas Pool. The discovery well is the Horizon Oil & Gas Co. of Texas State 28 Com Well No. 2, located in Unit K of Section 28, Township 17 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM

Section 28: S/2

Section 29: E/2

(g) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Premier production and designated as the High Nitro-Premier Gas Pool. The discovery well is the McClellan Oil Corporation Hinkle Federal Well No. 1, located in Unit A of Section 9, Township 16 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 29 EAST, NMPM

Section 3: SW/4

Section 4: SE/4

Section 9: NE/4

(h) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Hoag Tank-Morrow Gas Pool. The discovery well is the Yates Petroleum Corporation Allison CQ Federal Well No. 1, located in Unit P of Section 22, Township 19 South, Range 24 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTH, RANGE 24 EAST, NMPM

Section 22: E/2

(i) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the N. W. Indian Basin-Morrow Gas Pool. The discovery well is the Charles A. Dean Northwest Indian Basin Well No. 1Y, located in Unit K of Section 28, Township 20 South, Range 23 East, NMPM. Said pool would comprise:

TOWNSHIP 20 SOUTH, RANGE 23 EAST, NMPM

Section 28: W/2

(j) CREATE a new pool in Chaves County, New Mexico, classified as an oil pool for San Andres production and designated as the Lonesome-San Andres Pool. The discovery well is the Phillips Petroleum Company Luther A Well No. 1 located in Unit N of Section 18, Township 8 South, Range 32 East, NMPM. Said pool would comprise:

TOWNSHIP 8 SOUTH, RANGE 32 EAST, NMPM

Section 18: SW/4

(k) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Wolfcamp production and designated as the South Rocky Arroyo-Wolfcamp Gas Pool. The discovery well is the El Paso Natural Gas Co. Patterson A Well No. 1, located in Unit N of Section 20, Township 22 South, Range 22 East, NMPM. Said pool would comprise:

TOWNSHIP 22 SOUTH, RANGE 22 EAST, NMPM
Section 20: SW/4

(l) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the Sheep Draw-Atoka Gas Pool. The discovery well is the Hanagan Petroleum Corp. Mary Federal Well No. 1, located in Unit H of Section 11, Township 23 South, Range 25 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 25 EAST, NMPM
Section 11: E/2

(m) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Sheep Draw-Morrow Gas Pool. The discovery well is the Hanagan Petroleum Corp. Mary Federal Well No. 1 located in Unit H of Section 11, Township 23 South, Range 25 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 25 EAST, NMPM
Section 11: E/2
Section 12: W/2

(n) CREATE a new pool in Lea County, New Mexico, classified as an oil pool and designated as the Shipp-Drinkard Pool and assign 41,650 barrels of discovery allowable to the discovery well, the Mesa Petroleum Company West Knowles Well No. 1, located in Unit P of Section 34, Township 16 South, Range 37 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 34: SE/4

(o) EXTEND the Atoka-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM
Section 2: All

(p) EXTEND the North Benson Queen-Grayburg Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM
Section 32: N/2 NE/4

- (q) EXTEND the Blinebry Oil and Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 27: SE/4

- (r) EXTEND the Buffalo Valley-Pennsylvanian Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 27 EAST, NMPM
Section 3: N/2

- (s) EXTEND the Burton Flat-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
Section 18: N/2

- (t) EXTEND the South Carlsbad-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 26 EAST, NMPM
Section 3: W/2
Section 11: All

TOWNSHIP 23 SOUTH, RANGE 27 EAST, NMPM
Section 8: All
Section 17: N/2

- (u) EXTEND the South Carlsbad-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 26 EAST, NMPM
Section 16: S/2

TOWNSHIP 24 SOUTH, RANGE 26 EAST, NMPM
Section 1: W/2

- (v) ESTABLISH a discovery allowable in the Casey-Strawn Pool in Lea County, New Mexico, and assign 56,630 barrels of discovery allowable to the discovery well, the C & K Petroleum, Inc. Shipp "27" Well No. 1, located in Unit O of Section 27, Township 16 South, Range 37 East, NMPM.

- (w) EXTEND the Cerca-Upper Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 13 SOUTH, RANGE 34 EAST, NMPM
Section 27: S/2 and NE/4

- (x) EXTEND the East Chisum San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 11 SOUTH, RANGE 28 EAST, NMPM
Section 16: NE/4 NE/4

(y) EXTEND the Double L Queen Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 29 EAST, NMPM
Section 23: NE/4

TOWNSHIP 14 SOUTH, RANGE 30 EAST, NMPM
Section 32: N/2 and SW/4

TOWNSHIP 15 SOUTH, RANGE 30 EAST, NMPM
Section 17: N/2

(z) EXTEND the Double X-Delaware Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 32 EAST, NMPM
Section 27: NE/4

(aa) EXTEND the Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM
Section 36: SW/4

(bb) EXTEND the East Empire Yates Seven Rivers Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM
Section 34: W/2 NE/4

(cc) EXTEND the Kennedy Farms-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 26 EAST, NMPM
Section 22: E/2

(dd) EXTEND the Penasco Draw-San Andres-Yeso Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM
Section 30: NW/4 SW/4

(ee) EXTEND the Ranger Lake-Bough Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 12 SOUTH, RANGE 34 EAST, NMPM
Section 23: SW/4

(ff) EXTEND the Rock Tank-Lower Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 25 EAST, NMPM
Section 18: All

(gg) EXTEND the Round Tank San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM
Section 31: NW/4 NW/4

(hh) EXTEND the vertical limits of the Sand Hills-San Andres Pool in Lea County, New Mexico, to include the Grayburg formation.

(ii) EXTEND the Sulimar Queen Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 30 EAST, NMPM
Section 18: SW/4 SW/4

(jj) EXTEND the Tres Papalotes-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 34 EAST, NMPM
Section 5: SW/4

(kk) EXTEND the Turkey Track Queen-Grayburg Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM
Section 32: NE/4 NE/4

Docket No. 15-76

Dockets Nos. 16-76 and 17-76 are tentatively set for hearing on June 9 and June 23, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 26, 1976

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

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

CASE 5473: (Reopened) (Continued from May 12, 1976 Examiner Hearing)

In the matter of Case 5473 being reopened pursuant to the provisions of Order No. R-5029, which order established special rules and regulations for the West Knowles-Drinkard Pool, Lea County, New Mexico, including a provision for 80-acre spacing and proration units. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing units.

CASE 5684: Application of Morris R. Antweil for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Pennsylvanian formations underlying the W/2 of Section 11, Township 22 South, Range 26 East, South Carlsbad Field, Eddy County, New Mexico, to be dedicated to applicant's Mesa Grande Well No. 1 to be drilled 1980 feet from the North and West lines of said Section 11. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

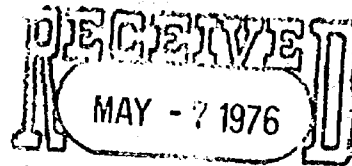
CASE 5685: Application of C & K Petroleum, Inc. for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying all of Section 15, Township 24 South, Range 26 East, White City-Pennsylvanian Gas Pool, Eddy County, New Mexico, to be dedicated to a well to be drilled at an orthodox location in Unit K of said Section 15. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 5686: Application of Anadarko Production Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Loco Hills Pool by the injection of water into the Premier Sand formation through its Federal "L" Well No. 2, located in Unit E of Section 31, Township 17 South, Range 30 East, Eddy County, New Mexico. Applicant further seeks an administrative procedure for expansion of the project by approval of additional injection and production wells at standard and non-standard locations.

CASE 5687: Application of Atlantic Richfield Company for an unorthodox gas well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to simultaneously dedicate a previously approved 160-acre non-standard gas proration unit comprising the SW/4 of Section 25, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, to its J. M. Brownlee Well No. 4, located in Unit N of said Section 25 and to its Brownlee Well No. 1, at an unorthodox gas well location 2310 feet from the South and West lines of said Section 25.



D. D. Dent, general attorney



OIL CONSERVATION COMM.
Santa Fe

May 4, 1976

Dan S. Nutter, Chief Engineer
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Rules Review Case 5473 Reopened
West Knowles-Drinkard Pool,
Lea County, New Mexico

Dear Mr. Nutter:

Due to a serious conflict of our technical witnesses, Mesa Petroleum Co. requests that Case 5473 - Reopened, set for examiner hearing on May 12, 1976, be postponed and reset at the next regular examiner hearing on May 26, 1976.

If you have any questions concerning this matter, do not hesitate to give me a call.

Yours very truly,

A handwritten signature in cursive script, appearing to read 'D. D. Dent'.

D. D. Dent

DDD:pn

Dockets Nos. 15-76 and 16-76 are tentatively set for hearing on May 26 and June 9, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 12, 1976

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, 1976, from seventeen prorated pools in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.

(2) Consideration of the allowable production of gas for June, 1976, from five prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 5676: Application of Yates 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 Federal GC Com Well to be drilled 660 feet from the South and East lines of Section 32, Township 17 South, Range 25 East, Eddy County, New Mexico, to test the Morrow formation, the E/2 of said Section 32 to be dedicated to the well.

CASE 5677: Application of Yates Petroleum Corporation for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Dunken Nose Unit Area comprising 6393 acres, more or less, of State and Fee lands in Township 17 South, Ranges 18 and 19 East, Chaves County, New Mexico.

CASE 5678: Application of Amoco Production Company for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to deviate its State "E" Tract 18 Well No. 15, the surface location of which is 330 feet from the North line and 2310 feet from the West line of Section 1, Township 17 South, Range 36 East, Lovington-Abo Pool, Lea County, New Mexico, by directionally drilling said well and bottoming it in the Abo formation within 100 feet of a point 600 feet from the North line and 2310 feet from the West line of said Section 1.

CASE 5679: Application of Amoco Production Company for approval of an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Empire South Deep Unit Well No. 9 to be drilled 660 feet from the North line and 990 feet from the West line of Section 5, Township 18 South, Range 29 East, South Empire-Morrow Gas Pool, Eddy County, New Mexico, the W/2 of said Section 5 to be dedicated to the well.

CASE 5680: Application of Amoco Production Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the W/2 of Section 21, Township 20 South, Range 25 East, Cemetery-Morrow Gas Pool, Eddy County, New Mexico, to be dedicated to David Fasken's Cemetery Federal Com Well No. 1 located in Unit L of said Section 21. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of David Fasken as operator of the well and a charge for the risk involved in drilling said well.

CASE 5681: Application of A. H. Rains for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Yates formation through the open-hole interval from approximately 550 feet to 561 feet in his Pure State Well No. 1, located in Unit J of Section 15, Township 21 South, Range 27 East, Magruder-Yates Pool, Eddy County, New Mexico.

CASE 5098: (Reopened)

In the matter of Case 5098 being reopened pursuant to the provisions of Order No. R-4682, which order established special rules for the Red Tank-Morrow Gas Pool, Lea County, New Mexico, including a provision for 640-acre spacing. All interested parties may appear and show cause why said pool should not be developed on 320-acre spacing.

CASE 5473: (Reopened)

In the matter of Case 5473 being reopened pursuant to the provisions of Order No. R-5029, which order established special rules and regulations for the West Knowles-Drinkard Pool, Lea County, New Mexico, including a provision for 80-acre spacing and proration units. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing units.

CASE 5682: Application of Champlin Petroleum Company for three non-standard gas proration units, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the three following described 160-acre non-standard gas proration units in Township 22 South, Range 27 East, East Carlsbad-Wolfcamp Gas Pool, Eddy County, New Mexico:

the NW/4 of Section 1 to be dedicated to applicant's Pecos-Federal Well No. 1, located in Unit C of said Section 1;

the NE/4 of Section 1 to be dedicated to applicant's Wilson Gas Com Well No. 1, located in Unit G of said Section 1; and

the NE/4 of Section 2 to be dedicated to applicant's Nix-Yates Well No. 1, located in Unit G of said Section 2.

CASE 5122: (Reopened)

In the matter of Case 5122 being reopened pursuant to the provisions of Order No. R-4693-A, which order extended the special pool rules for the East Lusk-Wolfcamp Oil Pool, Lea County, New Mexico, including a provision for 160-acre proration units and a limiting oil-gas ratio of 4000 to 1. All interested parties may appear and show cause why said pool should not be developed on less than 160-acre spacing and why the special oil-gas ratio should remain in effect.

CASE 5670: (Continued from the April 28, 1976 Examiner Hearing)

Application of Read & Stevens, Inc. for an unorthodox location and directional drilling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to deviate its Harris-Federal Well No. 3, the surface location of which is 660 feet from the South line and 1980 feet from the East line of Section 27, Township 15 South, Range 28 East, Chaves County, New Mexico, by directionally drilling said well from a kick-off point at approximately 6000 feet and bottoming it at an unorthodox location in the Pennsylvanian formation within 250 feet of a point 990 feet from the South line and 1650 feet from the East line of said Section 27, the S/2 of the Section to be dedicated to the well.

CASE 5683: Southeastern Nomenclature case calling for the creation and extension of certain pools in Lea and Roosevelt Counties, New Mexico:

- (a) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the West Jal-Wolfcamp Pool. The discovery well is the Skelly Oil Company West Jal "B" Well No. 1 located in Unit J of Section 17, Township 25 South, Range 36 East, NMPM. Said pool would comprise:

TOWNSHIP 25 SOUTH, RANGE 36 EAST, NMPM
Section 17: SE/4

- (b) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production and designated as the North Lusk-Morrow Gas Pool. The discovery well is the Petroleum Development Corporation McKay West Federal Well No. 1 located in Unit F of Section 34, Township 18 South, Range 32 East, NMPM. Said pool would comprise:

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM
Section 34: All

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM
Section 3: W/2

- (c) CREATE a new pool in Roosevelt County, New Mexico, classified as an oil pool for Fusselman production and designated as the Peterson-Fusselman Pool, and assign 39,205 barrels of discovery allowable to the discovery well, Amoco Production Company Swearingen "C" Well No. 1 located in Unit N of Section 18, Township 5 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM
Section 18: SW/4

- (d) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Queen production and designated as the East Shugart-Queen Pool. The discovery well is the Martindale Petroleum Corporation W. H. Peckham Well No. 1 located in Unit G of Section 6, Township 19 South, Range 32 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM
Section 6: NE/4

- (e) EXTEND the North Bagley-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 12 SOUTH, RANGE 32 EAST, NMPM
Section 1: NE/4

- (f) EXTEND the Blinebry Oil and Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 34: NE/4

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
Section 31: S/2
Section 32: W/2

- (g) EXTEND the Bluitt-Wolfcamp Gas Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 7 SOUTH, RANGE 37 EAST, NMPM
Section 34: NW/4

TOWNSHIP 8 SOUTH, RANGE 37 EAST, NMPM
Section 3: SE/4
Section 4: All
Section 9: N/2

- (h) EXTEND the Corbin-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 32 EAST, NMPM
Section 26: SE/4

- (i) EXTEND the Flying "M" Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 33 EAST, NMPM
Section 10: S/2

- (j) EXTEND the Garrett-Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 38 EAST, NMPM
Section 29: NE/4

- (k) EXTEND the Gladiola-Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 12 SOUTH, RANGE 38 EAST, NMPM
Section 5: NE/4

- (l) EXTEND the West Jal-Fusselman Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 25 SOUTH, RANGE 36 EAST, NMPM
Section 17: E/2

- (m) EXTEND the Maljamar-Grayburg San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM
Section 11: SW/4

- (n) EXTEND the North Mescalero-Cisco Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 32 EAST, NMPM
Section 11: SW/4

- (o) EXTEND the North Morton-Permo Pennsylvanian Pool in Lea County, New Mexico, to include therein:

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

- (p) EXTEND the Peterson-Pennsylvanian Associated Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM
Section 17: SW/4

- (q) EXTEND the Tulk-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 32 EAST, NMPM
Section 27: SW/4

- (r) EXTEND the North Vacuum-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM
Section 35: SW/4

- (s) EXTEND the North Vacuum-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 8: W/2 and SE/4
Section 17: E/2

- (t) EXTEND the Vada-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 34 EAST, NMPM
Section 26: N/2
Section 27: NE/4

- (u) EXTEND the Wantz-Granite Wash Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM
Section 30: NE/4

- (v) EXTEND the Warren-Tubb Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 28: SW/4

Case 5473

CLARENCE E. HINKLE
W. E. BONDURANT, JR. (914-1973)
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.
JAMES H. BOZARTH
RONALD G. HARRIS
JAMES H. ISBELL

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

TELEPHONE (505) 622-6510

MR. ISBELL LICENSED
IN TEXAS ONLY

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

April 11, 1975

Oil Conservation Commission
Box 2088
Santa Fe, New Mexico 87501

Gentlemen:

We enclose herewith in triplicate application of
Mesa Petroleum Co. for creation of a new pool in the
West Knowles Unit.

We would appreciate your placing this matter on
the examiner's docket for May 7, 1975.

Yours very truly,

HINKLE, BONDURANT, COX & EATON

By Clarence E. Hinkle
60

CEH:cs

Enc.

cc: Mr. Les Carnes
cc: Mr. Marion Causey
cc: Mr. Don Dent

10m.

Called Mr. Hinkle
& advised him the hearing
would be on May 14th & not
on May 7th

DOCKET MAILED

Date 5-2-75

John

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

APPLICATION OF MESA PETROLEUM CO.
FOR CREATION OF A NEW POOL DUE
TO THE DISCOVERY IN THE DRINKARD
FORMATION IN THE WEST KNOWLES UNIT
NO. 1 WELL LOCATED IN THE SE $\frac{1}{4}$ SE $\frac{1}{4}$
SECTION 34, TOWNSHIP 16 SOUTH,
RANGE 37 EAST, LEA COUNTY, AND FOR
TEMPORARY SPECIAL POOL RULES,
INCLUDING 80 ACRE SPACING AND PRO-
RATION UNITS.

Oil Conservation Commission
Box 2088
Santa Fe, New Mexico 87501

Comes now Mesa Petroleum Co., acting by and through the undersigned attorneys, and hereby makes application for creation of a new pool due to the discovery in the Drinkard formation in the West Knowles Unit No. 1 well located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 34, Township 16 South, Range 37 East, Lea County, and for temporary special pool rules, including 80 acre spacing and proration units, and in support thereof respectfully shows:

1. That applicant has recently completed a well in the Drinkard formation capable of producing oil and gas in paying quantities located 660 feet from the south and east lines of Section 34, Township 16 South, Range 37 East, Lea County. Said well is producing through perforations from 8,330 feet to 8,412 feet and was potentialized as capable of producing 606 barrels of oil per day with no water.

2. Applicant is in the process of completing a second well in the Drinkard formation located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 35, Township 16 South, Range 37 East. Both of these wells are located on a pattern which is conducive to 80 acre spacing.

3. From the geological information available, applicant feels that the following described lands are reasonably proven to be productive of oil and gas in paying quantities from the Drinkard formation and should be included in the original definition of the new pool to be created because of said discovery:

Township 16 South, Range 37 East, N.M.P.M.

Section 34 - SE $\frac{1}{4}$

Section 35 - SW $\frac{1}{4}$

Township 17 South, Range 37 East, N.M.P.M.

Section 2 - NW $\frac{1}{4}$

Section 3 - NE $\frac{1}{4}$

4. 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 and to otherwise prevent waste and protect correlative rights, temporary special pool rules and regulations providing for 80 acre spacing units should be promulgated for the new pool. It is proposed to dedicate the No. 1 well located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 34 to the E $\frac{1}{2}$ SE $\frac{1}{4}$ said section and to dedicate to the No. 2 well located in Section 35 the W $\frac{1}{2}$ SW $\frac{1}{4}$ said section.

5. Applicant respectfully requests that the special pool rules provide that each well shall be located on a standard unit containing 80 acres more or less, consisting of the N $\frac{1}{2}$, S $\frac{1}{2}$, E $\frac{1}{2}$ or W $\frac{1}{2}$ of a governmental quarter section and that the well may be located in either component of the 80 acre spacing unit. Also, that each well shall be located within 150 feet of the center of a governmental quarter quarter section or lot.

6. Applicant requests that this case be included on the examiner's docket for May 7, 1975.

Respectfully submitted,

MESA PETROLEUM CO.

By


HINKLE, BONDURANT, COX & EATON

Attorneys for Applicant

P.O. Box 10

Roswell, New Mexico 88201

DRAFT

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. 5473

Order No. R-5029

NOMENCLATURE

APPLICATION OF MESA PETROLEUM CO.
FOR POOL CREATION AND SPECIAL
POOL RULES, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 14, 1975,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of May, 1975, 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, Mesa Petroleum Co., seeks
the creation of a new oil pool for Drinkard production in
Lea County, New Mexico.

(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 West Knowles Well No. 1, located in Unit P of Section 34, Township 16 South, Range 37 East, NMPM, Lea County, New Mexico, has discovered a separate common source of supply which should be designated the West Knowles-Drinkard Pool; that the vertical limits of said pool should be the Drinkard formation as found on the log of said West Knowles Well No. 1 from 8200 to 8600 feet, and that the horizontal limits of said pool should be as follows: ~~the~~ of said ~~Section 34~~.

(5) 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 West Knowles-Drinkard Pool.

(6) 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.

(7) 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.

(8) That this case should be reopened at an examiner hearing in May, 1976, at which time the operators in the subject pool should be prepared to appear and show cause why the West Knowles-Drinkard Pool should not be developed on 40-acre spacing units.

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 34: SE/4
Section 35: SW/4

IT IS THEREFORE ORDERED:

(1) That a new pool in Lea County, New Mexico, classified as an oil pool for Drinkard production, is hereby created and designated the West Knowles-Drinkard Pool, with vertical limits comprising the Drinkard formation as found on the log of the West Knowles Well No. 1, located in Unit P of Section 34, Township 16 South, Range 37 East, NMPM, from 8200 feet to 8600 feet, and horizontal limits comprising the following-described area:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM

Section 34: SE 1/4

Section 35: SW 1/4

(2) That temporary Special Rules and Regulations for the West Knowles-Drinkard Pool, Lea County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
WEST KNOWLES-DRINKARD POOL

RULE 1. Each well completed or recompleted in the West Knowles-Drinkard Pool or in the Drinkard formation within one mile thereof, and not nearer to or within the limits of another designated Drinkard 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

-4-

Case No. 5473
Order No. R-

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 ³¹⁰445 barrels per day, 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 West Knowles Drinkard Pool or in the Drinkard 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 July 1, 1975.

(2) That, pursuant to Paragraph A. of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing wells in the West Knowles Drinkard Pool shall have dedicated thereto 80 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 80 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the West Knowles Drinkard Pool or in the Drinkard formation within one mile thereof shall receive no more than one-half of a standard allowable for the pool.

(3) That this case shall be reopened at an examiner hearing in May, 1976, at which time the operators in the subject pool should be prepared to appear and show cause why the West Knowles Drinkard Pool should not be developed on 40-acre spacing units.

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(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/

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. 5473

Order No. R-5029-A

IN THE MATTER OF CASE 5473 BEING REOPENED.
PURSUANT TO THE PROVISIONS OF ORDER NO. R-5029,
WHICH ORDER ESTABLISHED SPECIAL RULES AND REGULATIONS
FOR THE WEST KNOWLES-DRINKARD POOL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 26,
19 76, at Santa Fe, New Mexico, before Examiner Richard L. Stamets

NOW, on this day of June, 19 76, 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-5029, dated May 22,
19 75, temporary special rules and regulations were promulgated
for the West Knowles-Drinkard Pool, Lea
County, New Mexico, establishing temporary 80-acre spacing
units and proration units, and limited well locations,
~~and a limiting gas-oil ratio of~~
 to .

(3) That pursuant to the provisions of Order No. R-5029,
this case was reopened to allow the operators in the subject
pool to appear and show cause why the Special Rules and Regulations for the
West Knowles-Drinkard
Pool should not be rescinded developed on 40-acre spacing units with
~~and a~~
~~limiting gas-oil ratio of~~ to
standard well location requirements.

Case No. 5473
Order No. _____

(4) That the evidence establishes that one well in the West Knowles-Drinkard Pool can efficiently and economically drain and develop 80 acres.

(5) That the Special Rules and Regulations promulgated by Order R-5029 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 and gas in the pool.

(6) That ~~this case should be reopened at an examiner hearing in _____, 19____, at which time the operators in the subject pool should appear and show cause why the West Knowles-Drinkard Pool should not be developed on less than 80-acre proration units with a limiting oil-gas ratio of _____ to _____.~~
The Special Rules and Regulations for the West Knowles Drinkard Pool should be made permanent.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the West Knowles-Drinkard Pool, promulgated by Order No. R-5029, shall remain in full force and effect ^{until} ~~for an additional period of one year.~~ *further order of the Commission.*

~~(2) That this case shall be reopened at an examiner hearing in _____, 19____, at which time the operators in the subject pool shall appear and show cause why the Knowles-Drinkard West Knowles Pool should not be developed on less than 80-acre proration units with a limiting oil-gas ratio of _____ to _____.~~

(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.