

CASE 5574: FILON EXPLORATION
CORPORATION FOR POOL CREATION,
ASSIGNMENT OF DISCOVERY ALLOWABLE
SPECIAL POOL RULES, SANDOVAL CO.

CASE NO.

5574

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.



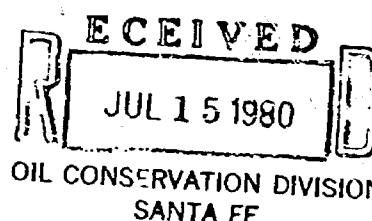
BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

July 11, 1980

1000 RIO BRAZOS ROAD
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(505) 334-6178



R-5118

Case 5574

Mr. J.R. Harrison
Petro-Lewis Corporation
P.O. Box 507
Levelland, Texas 79336

Re: Water Cut and Fluid Level Reports, Certain Entrada Pools

Dear Mr. Harrison:

Orders R-4713, R-4822, and R-5118, directed that you submit water cut and/or fluid level reports on wells which you operate in certain Entrada pools. It now appears that these tests have served their purpose and may be discontinued.

These test requirements may be reinstituted at any time that the Division feels that they are necessary.

If you have any questions, please contact this office.

Yours truly,

Frank Chavez
District Supervisor

FC/ls

Xc: OCD Santa Fe
Reading File
U.S.G.S. Farmington



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
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July 2, 1980

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Mr. Frank T. Chavez
Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

Re: Water Cut and Fluid Level Reports,
Certain Entrada Pools

Dear Frank:

We have reviewed the statistics relating to oil and water production in the Media-Entrada, Southwest Media-Entrada, and Eagle Mesa-Entrada Oil Pools and concur with your opinion that the producing characteristics in these reservoirs have been well enough established that continuation of the monthly fluid level tests and water cut reports is unnecessary.

These tests were required when the operators in said pools were granted a special 750-BOPD allowable in order to lift large volumes of water to keep the oil moving in the reservoir. At the time there was some apprehension that water coning and subsequent loss of oil would result.

It now appears that the tests have served their purpose and may be discontinued, and you may so notify the operators in the subject pools.

Very truly yours,

JOE D. RAMEY,
Director

JDR/DSN/dr

cc: ✓ Case File 5574
Case File 5262
Case File 5152

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Phone (505) 982-9212

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
October 22, 1975

EXAMINER HEARING

IN THE MATTER OF:

Application of Filon Exploration) CASE
Corporation for pool creation, assign-) 5574
ment of a discovery allowable, and)
special pool rules, Sandoval 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 Conservation Commission: Thomas Derryberry, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant: R. W. Sullivan, Esq.
Attorney at Law
Denver, Colorado

L. C. White, Esq.
WHITE, KOCH, KELLY & MCCARTHY
Attorneys at Law
220 Otero Street
Santa Fe, New Mexico

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1 MR. NUTTER: We will call Case 5574.

2 MR. DERRYBERRY: Case 5574, application of Filon
3 Exploration Corporation for pool creation, assignment of a
4 discovery allowable, and special pool rules, Sandoval County,
5 New Mexico.

6 MR. SULLIVAN: Mr. Nutter, I am R. W. Sullivan,
7 Attorney at Law, Denver, Colorado, representing the Applicant,
8 Filon Exploration Corporation. Mr. L. C. White of White, Koch
9 Kelly and McCarthy of this city has entered an appearance
10 in this matter also.

11 I would like to ask the Examiner, certain matters
12 that were included in our Form C-109 filed in this matter
13 may prove to be repetitive of items that will be testified
14 to here this morning. I just wondered whether or not you
15 took notice of the material that is contained in that Form
16 or whether we should make a point of attempting to reiterate
17 it all as sworn testimony?

18 MR. NUTTER: I think it should be reiterated for
19 the purpose of this record.

20 MR. SULLIVAN: Thank you, sir.

21 I have a witness, Mr. Borgerding.

22 (THEREUPON, the witness was duly sworn.

23 JAMES H. BORGERDING

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

DIRECT EXAMINATION

BY MR. SULLIVAN:

Q Please state your name?

A James H. Borgerding.

Q Where do you reside?

A Casper, Wyoming.

Q By whom are you employed, Mr. Borgerding?

A I'm employed by Minerals Management, Incorporated
as a petroleum engineer.

Q Have you previously appeared before this Commission
as a witness?

A No, I have not appeared before this Commission.

Q Will you briefly then outline for the Commission what
your educational and professional experience has been?

A I graduated from the Missouri School of Mines in
1956 with a Bachelor of Science degree in engineering and
at that time I took on employment with Texaco until January
of 1973, at which time I accepted employment with Minerals
Management, Incorporated.

Q And in what capacity were you employed by Texaco?

A By Texaco I was employed as a petroleum engineer
and I held various assignments throughout the Rocky Mountain
area.

Q What function does Minerals Management, Inc.
generally serve to other industry entities, Mr. Borgerding?

1 A. Minerals Management is an operating company for oil
2 and gas properties. We do consulting engineering and in our
3 association with Filon we have overseen the drilling of wells
4 and we have also completed these wells and furthermore we
5 continue looking over the operations and in addition to this
6 we advise concerning engineering problems, reservoir engineer-
7 ing problems, et cetera.

8 Q. Now when you have referred in your last answer to
9 these wells, are you referring to the wells that are mentioned
10 in the application in this matter, and for the purposes of
11 this Hearing, in the interim, Mr. Nutter, may we refer to it
12 as the Eagle Mesa Pool? Are you referring to the wells referred
13 to in the application in the Eagle Mesa Pool in Sandoval
14 County?

15 A. Yes, sir.

16 Q. So that you have overseen and supervised the drilling
17 of the wells, the completion of the wells and the production
18 of them to this date, is that correct?

19 A. That is correct.

20 Q. And that includes the water disposal well?

21 A. Yes, sir.

22 Q. Mr. Borgerding, and if you may just in an expository
23 fashion, will you please detail for the Examiner and for the
24 record, the characteristics in the various data that you
25 have collated and accumulated with regard to the drilling, the

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1 completion and the production history of three existing wells
2 in the Eagle Mesa Pool?

3 A Yes, sir. First of all, the Eagle Mesa field is
4 located in Township 19 North, Range 4 West, Sandoval County,
5 New Mexico.

6 Geologically it is situated on the southeast flank
7 of the San Juan Basin. The nearest oil production to Eagle
8 Mesa occurs at the Southwest Media Field which is located
9 four and a half miles east, southeast of Eagle Mesa.

10 Exhibit One is a well status and lease ownership
11 map which shows the lease-ownership picture in the area.

12 Filon Exploration drilled and completed the Federal
13 12-1 Well for oil production in the Entrada in August of 1975.

14 Filon next drilled and completed the Federal 11 C-1
15 and the Federal 13 C-1 in September and October respectively.

16 The Federal 14 C-1 is currently drilling. The
17 Federal 11 C-2 as shown on the Exhibit was drilled in September
18 1975 to a total depth of three thousand seven hundred feet
19 for the specific purpose of water disposal. It was completed
20 in the Gallup formation from the interval three thousand
21 forty-eight feet to three thousand five hundred and ninety-
22 six feet for water disposal and currently accepts all of the
23 produced water.

24 The lessees of record are shown on the map, Exhibit
25 One. Filon Exploration is the designated operator of the

1 Federal 12-1 which is owned by Tom Jordon, Junior of Trend
2 Exploration.

3 The lease upon which the 11 C-1 is located is
4 owned jointly by Filon, Trend and Tom Jordon, Junior.

5 As concerns the Union Oil leases in Section 13 and
6 14, Filon has been assigned a fifty percent working interest
7 in all of those leases. This, however, is not yet a matter of
8 record.

9 Also I would like to point out on Exhibit One that
10 the only other wells, other than these that I have mentioned,
11 that have been drilled in the area and that is one well in
12 Section 22, which was drilled to the Gallup formation at a
13 TD of three thousand, seven hundred and eighty-four feet.
14 That well was drilled and abandoned.

15 I have Exhibit Two.

16 Q Before we go on to that, let us go back and examine
17 more in detail the information that was contained on our
18 C-109 Form that was filed with the Commission, if we may, and
19 fill in that data at this point, Mr. Borgerding.

20 What were the perforations in your well, Federal
21 12 Number 1, what were the depths of the perforations from
22 which that well is producing, or do you intend to outline
23 that later?

24 A I intend to cover that on Exhibit Two if this
25 would be satisfactory.

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1 Q All right, go ahead then.

2 A Exhibit Two is a log cross section and completion
3 data for the Eagle Mesa Entrada Pool. This cross section
4 shows a number of things. First of all I would like to point
5 out that as per the note there, there were no logs, or rather
6 I should say that logs were run only into the top few feet of
7 the Entrada on the Federal 11 C-1 Well. Therefore, we see
8 no log represented for that particular well.

9 This cross section shows the top of the Entrada
10 formation, the structural datum of those tops; it shows the
11 density log porosity; it shows the deep induction log. And
12 while we are focused on these logs, I would like to draw your
13 attention to the character of the deep induction log which
14 shows a nearly constant reading from the top of the Entrada
15 on down for some thirty feet, plus or minus, at which time
16 you will see the resistivity log moved to the left, and then
17 after some distance it continues on down. This shows the
18 oil-water contact within the Entrada formation.

19 The completion data is shown beneath each of these
20 schematics. I would like to just briefly cover this data.
21 For the Federal 12-1, the well was drilled to a TD of five
22 thousand, seven hundred and thirty-five feet.

23 Q That is your discovery well, is it not?

24 A That is a discovery well, yes, sir.

25 Q Continue.

1 A. It was then completed by setting seven inch casing
2 at five thousand, seven hundred and twenty-four feet and
3 completed on August 25th, 1975 through perforations five
4 thousand, four hundred and eighty-three feet to five thousand,
5 four hundred and ninety-three feet. A small acid job was given
6 the well and the reported IP is ninety-seven barrels of oil
7 per day, four thousand, three hundred barrels of water per
8 day.

9 The Federal 11 C-1 was the next well drilled and
10 completed. It was drilled to a TD of five thousand, four
11 hundred and eighty-four feet, that is eight feet into the
12 Entrada formation and it was completed open hole from five
13 thousand, four hundred and sixty-five feet to five thousand,
14 four hundred and eighty-four feet. The reported IP on that
15 well is two hundred and forty-six barrels of oil per day,
16 eight barrels of water per day.

17 The third well drilled and completed was the
18 Federal 13 C-1, drilled to a TD of five thousand, six hundred
19 and seventy feet. Seven inch casing was set at five thousand,
20 five hundred and seventy-five feet. The well is completed
21 over the interval five thousand, four hundred and twenty-four
22 to five thousand, four hundred and forty-two feet by means
23 of a selective completion tool. That well has a reported IP
24 of a hundred and ninety-five barrels of oil per day and
25 zero barrels of water per day.

1 The thickness of the pay within the Entrada as
2 concerns the 12-1 is approximately thirty-five feet. The
3 Federal 13 C-1 is the same at thirty-five feet. The 11 C-1
4 although it was not drilled through the oil-water contact, nor
5 was it logged, obviously, to the contact, we estimate
6 approximately twenty-five feet of pay in that particular
7 well.

8 We have a situation at this particular pool of
9 a tilted oil-water contact which is evident on the cross
10 section when we inspect the logs and see that the oil-water
11 contact at the 13 C-1 Well is below the datum at which it is
12 found at the 12-1 Well.

13 Exhibit Three lists the important rock and fluid
14 properties of the Eagle Mesa Entrada. The Entrada reservoir
15 rock is a sandstone. It is light gray to white, very fine
16 grained, clean and well sorted. Natural fractures are few
17 to non-existent. The rock and fluid properties are as
18 follows: The depth to the Entrada, based on an average of
19 three wells, is five thousand, four hundred and sixty feet.
20 The porosity averages twenty-four point nine six percent,
21 based on an average of thirty-four samples taken from the
22 oil column of 12-1. The permeability over that interval
23 averages four hundred and ninety-three millidarcies to air.
24 Temperature of the reservoir is estimated at one hundred and
25 fifty degrees Fahrenheit. Oil gravity at sixty degrees

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1 Fahrenheit is thirty-two point five degrees API. Oil viscosity
2 at reservoir temperature is estimated at four centipoise. The
3 oil pour point is eighty degrees Fahrenheit. Gas in solution
4 is nil to zero. Water salinity in terms of total dissolved
5 solids has been measured at eight thousand seven hundred and
6 eighteen quarts per million. Water viscosity at reservoir
7 temperature is estimated to be point five centipoise.

8 Based on this data gathered at Eagle Mesa, it is an
9 analogy with the Entrada at the Media Field and the early well
10 performance at Eagle Mesa. It is apparent that a highly
11 active water drive will exist during the producing life of this
12 field.

13 Q Now then, Mr. Borgerding, what about the individual
14 well performances that you observed in each of the wells since
15 the discovery well was completed; would you please detail that
16 for the Examiner?

17 A Exhibit Four shows a production performance of the
18 discovery well, the Filon Federal 12-1. I would like to
19 discuss this exhibit. It shows on the horizontal axis the
20 days, the vertical axis on the left is barrels of oil per
21 day, the vertical axis on the right is the barrels of fluid,
22 that is oil and water. This particular well upon completion
23 was placed on production by means of a beam pumping unit.
24 It was produced an average rate of three hundred and six
25 barrels of fluid a day during a seven-day period. Along with

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1 that fluid production the well produced an average of one
2 point three barrels of oil per day which translates into a
3 oil cut of zero point four percent. The well was then shut
4 in to install submersible pumping equipment and at that time
5 production was increased from the rate I have previously
6 mentioned to some ninety to a hundred barrels of oil per day
7 as shown on Exhibit Four.

8 This well is producing some four thousand barrels
9 of fluid per day. As we look at Exhibit Four we see a period
10 there with no production. That was the result of well down
11 time because of repairs to the generator and on return of the
12 well to production, it produced approximately one hundred and
13 twenty barrels of oil per day and four thousand plus barrels of
14 fluid per day.

15 There is another day or so of down time on the well.
16 It was returned to production and it produced nearly the same
17 as before and then we see on the last two points that I
18 have plotted that production was forty-one barrels per day,
19 along with that forty-one barrels per day was some load oil.
20 I should have said that we did a workover on that well in
21 terms of an oil flush and subsequent to that workover the
22 well produced over two hundred barrels of oil per day. The
23 well has a working fluid level of one thousand two hundred
24 and nine feet from the surface that was measured on October
25 21st when pumping two hundred and seventy-four barrels of

1 oil per day and three thousand eight hundred and fifty barrels
2 of water per day. Based on this working fluid level I
3 estimate that reservoir-wise this particular well has a
4 capacity of approximately one thousand four hundred and fifty
5 barrels of oil per day.

6 There is a conclusion that I draw from the performance
7 of that particular well, and that is that the Entrada
8 production performance can be improved by virtue of pumping
9 these wells at a higher rate. Witnessed by the fact that the
10 oil production or I should say the oil cut increased from
11 the point four percent on low volume pumping equipment to
12 approximately two and a half percent following installation of
13 the large volume pumping equipment and following the recent
14 workover of the well the oil cut has been further increased.

15 The next well that I will discuss is the Federal 11
16 C-1, the well which was the second well drilled and completed.
17 It is shown on Exhibit Five. That particular well was placed
18 on production on September 22nd, 1975. It produced by means
19 of a beam unit with maximum rates of about two hundred and
20 fifty barrels per day. On September the 26th, the well
21 produced two hundred and forty-six barrels of oil per day and
22 eight barrels of water per day.

23 As shown on Exhibit Five, we see days plotted on
24 the horizontal scale, barrels of oil per day on the vertical
25 scale on the left and barrels of fluid per day on the vertical

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1 scale on the right, and we see the fluid production rate on
2 the bottom of that curve by the dashed line, above that is
3 the oil production and uppermost curve in the dashed line
4 is a plot of the oil cut on this particular well.

5 The well initially produced clean oil and after
6 some five days a water cut developed and has been increasing
7 at the rate shown on this Exhibit Five by the oil cut. In
8 other words the oil cut is decreasing as we see there.

9 I would like to point out that this well was placed
10 on submersible pump on October 12th, 1975 and on that date
11 the oil production on a daily basis was tested at one thousand
12 seven hundred and ninety-four barrels of oil per day. On the
13 thirteenth and fourteenth the well was shut in because of
14 the bad oil, high BS&W content. It returned to production and
15 on the fifteenth that well produced one thousand eight hundred
16 and forty barrels of oil per day; the sixteenth it produced
17 one thousand, three hundred and thirteen barrels of oil per
18 day, on the seventeenth one thousand four hundred barrel of
19 oil per day, and the eighteenth one thousand two hundred and
20 thirty-four barrels of oil per day, and on the twentieth one
21 thousand three hundred and five barrels of oil per day and
22 the twenty-first nine hundred and thirty-four barrels of oil
23 per day.

24 On the twenty-first the working fluid level was
25 measured at one thousand one hundred and forty-seven feet to

1 fluid and based on that measured working fluid level I
2 estimate that the maximum oil rate possible from this well is
3 four thousand five hundred and seventy-five barrels of oil per
4 day.

5 Referring again to Exhibit Five I would like to call
6 your attention to the fact that -- let me first state this:
7 I have the oil cut plotted on Exhibit Five for the period
8 through the twentieth and that includes this submersible
9 pump production, the oil production and the water production,
10 the fluid production is not plotted, it is off scale, but
11 I was --

12 MR. NUTTER: When did you say you measured your
13 fluid level on that one?

14 A. October the twenty-first.

15 Q. (Mr. Sullivan continuing.) And the last date you
16 mentioned, the twentieth, you were referring to October 20th,
17 were you not?

18 A. That is correct, yes.

19 Q. The last date prior to this mention of October 21st?

20 A. Right.

21 Q. Go ahead.

22 A. The oil cut as shown has had a certain trend and
23 while on low-volume beam unit and this trend appears to remain
24 intact when placed on high-volume pumping equipment.

25 I have production performance in terms of oil-

1 water ratio performance for this Federal 11 C-1 Well shown
2 on Exhibit Six. That particular exhibit shows oil-water ratio
3 on the vertical scale on the left and cumulative oil production
4 on a horizontal scale. While producing this well at an
5 average rate of two hundred and twenty-five barrels of fluid
6 per day, we see that there was developed a certain trend of
7 water ratio versus cumulative oil. The well was placed on
8 high-volume lift equipment and while producing an average of
9 three thousand nine hundred and ninety-nine barrels of fluid
10 per day, we also see a trend which is less steep than the
11 previous trend. From this data I conclude that the well's
12 performance was improved by placement on high-volume lift
13 equipment.

14 Q You might explain that a little further, Mr.
15 Borgerding, what you mean by the well's performance was
16 improved, in what respects?

17 A Yes, another way of presenting that data is to
18 consider that the trend prior to placement of this well on
19 high-volume lift equipment, that trend could be extrapolated
20 and the well would have recovered less cumulative oil at a
21 certain oil-water ratio as compared to extrapolation of the
22 trend while on high-volume lift equipment.

23 The third well drilled and completed was the
24 13 C-1 Well and it was placed on production October 15th.
25

1 I do not have a production plot of that particular well,
2 simply because it has no large amount of history. I would
3 like to point out that over a period of seven days that well
4 produced an average of two hundred and seventy-five barrels
5 of oil per day. The first six days of that production there
6 was no water production with the oil. The seventh day the
7 well produced three barrels of water per day. It is, of
8 course, on beam pumping equipment.

9 The working fluid level in that well was measured
10 at two thousand feet to fluid on October 21st, and based on
11 that working fluid level I estimate that this well has a
12 capacity of six hundred and nineteen barrels of oil per day.

13 I would like to point out that we feel there are
14 definite indications that this particular well is restricted
15 as to the sand phase because of selective completion tool
16 which has two ports into the tool from the formation, we feel
17 that these ports are probably plugged to a certain extent and
18 we will probably be re-perforating or perforating this well
19 to remove any possible restriction.

20 Q Now Mr. Borgerding, based upon the statistics that
21 you have presented and your observations of the wells as
22 they have been operated and produced to this time, do you
23 have a conclusion with regard to whether or not high rates
24 of total fluid recovery, one, enhance total oil recovery
25 from each of the wells or individually?

1 A Yes, sir.

2 Q And what is that opinion?

3 A It is my opinion that high rates of production will
4 enhance the ultimate recovery from the individual wells and
5 the --

6 Q Ultimate recovery of oil?

7 A Ultimate recovery of oil from the individual wells
8 and also from the pool as a whole.

9 Q And do you have an opinion, Mr. Borgerding, as to
10 what rates of oil recovery are possible in each of these wells
11 based upon your observations so far?

12 A The rates of production are as I mentioned. The
13 maximum efficient rate, in my opinion, is that at which the
14 wells are completely drawn down. The limiting factor here
15 becomes the size of the equipment that one could install in
16 these wells.

17 Q Do you have an opinion, Mr. Borgerding, with
18 regard to whether such unusually high rates of fluid recovery
19 may be ultimately harmful to the reservoir in any way?

20 A In my opinion the high rates of fluid production
21 will not be harmful to the reservoir.

22 Q Or result in waste, as that term is used in the
23 New Mexico Conservation statute?

24 A In my opinion this will not result in waste.

25 Q Do you have an opinion with regard to whether high

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1 rates of fluid recovery from these wells would enhance or
2 deteriorate ultimate recovery of oil from the reservoir?

3 A In my opinion the high rate should ultimately
4 enhance the ultimate oil recovery.

5 Q Have you stated earlier in your testimony an opinion
6 as to the size, the areal extent of the reservoir which we
7 are referring to here as the Eagle Mesa pool?

8 A No, sir, I have not.

9 Q Would you do so, please, if you can?

10 A Yes. There are several things I have not mentioned
11 yet. At this point I would like to state that the entrapment
12 mechanism here at the Eagle Mesa Entrada pool is structural.
13 We believe that the ultimate size proven here at Eagle Mesa
14 areally will be probably less than three hundred acres, and
15 also I would like to point out that at this time we have no
16 evidence on which to recommend a well-spacing pattern different
17 from the normal statewide forty-acre spacing. We will
18 continue to study the field performance and if a different
19 spacing appears optimum, such will be recommended in the
20 future.

21 Q Current wells are all located on regular typical
22 forty-acre spacing, is that correct?

23 A Correct.

24 There is another point I would like to mention at
25 this time and that regards the oil marketing and I would like

1 to state that Petro-Lewis is currently purchasing the crude
2 oil from the Federal 12-1 and 11 C-1 Wells, whereas Union
3 Oil has caught all of the oil from the 13 C-1 Well.

4 Q Does your current agreement with those purchasers
5 have any limitations as to quantity of oil what they will take
6 from your property, or from this pool?

7 A To my knowledge there are no limitations.

8 Q And you are basing these statements on information
9 furnished to you by executives of Filon?

10 A This is correct.

11 Q You do not have any direct connection with the
12 marketing yourself?

13 A Correct.

14 Q Have you experienced so far any problems with
15 transportation of oil from the premises?

16 A There have been no transportation problems that
17 I am aware of.

18 Q Do you have any recommendations to make to the
19 Examiner and to the Commission, Mr. Borgerding, with regard
20 to production rates for the well and recommended allowables
21 for the well, since the application requests two different
22 types of allowables?

23 A Yes, sir, I would recommend that the Eagle Mesa
24 Entrada pool be assigned a special depth bracket allowable
25 of two thousand barrels of oil per day per well, and just in

1 review of some of the points I made, I would like to again
2 point out that the actual test rates from the 11 C-1 Well is
3 one thousand one hundred and forty barrels of oil per day.
4 The 13 C-1 Well will be placed on high-volume pumping equipment
5 and all of the information that I have available to me, I
6 would conclude that the 13 C-1 Well should perform better than
7 the 11 C-1 Well.

8 We are currently drilling the 14 C-1 Well and
9 geological data that I have reviewed would lead me to conclude
10 that this 14 C-1 Well should be one of the better wells
11 within the field.

12 Also I would like to point out that we have increased
13 oil production by virtue of a workover, we have also experienced
14 a situation whereby on each successive well we feel we have
15 a better completion capable of producing each successive
16 well at higher rates, so it is my conclusion that a special
17 depth allowable be assigned of two thousand barrels of oil
18 per day that the field can be produced at the maximum efficient
19 rate.

20 Q You have referred a time or two to the 14 C-1 Well,
21 is that the well that is located on your Exhibit One in the
22 northeast quarter, northeast quarter of Section 14?

23 A That is correct.

24 Q I would like to go back and pick up for the record,
25 if you will, Mr. Borgerding, to corroborate the information

1 that was contained on the Applicant's Form C-109, which
2 you completed. Do you have a copy?

3 A Yes, sir, I have a copy.

4 Q What are the depth of the perforations in your
5 Federal 12 C-1 well?

6 A The perforations are at a depth of five thousand
7 four hundred and eighty-three feet to five thousand four
8 hundred and ninety-three feet?

9 Q And those are in the Entrada formation?

10 A That is correct, yes, sir.

11 Q What is the date that well was spudded?

12 A That particular well was spudded on July the 28th,
13 1975.

14 Q And the date it was completed?

15 A It was completed on August 25th, 1975.

16 Q And what total depth, sir?

17 A The well was drilled to a total depth of five
18 thousand seven hundred and thirty-five feet and it was
19 plugged back to a depth of five thousand five hundred and
20 seventy-four feet.

21 Q Was there a casing shoe set in the well?

22 A The casing shoe is set at five thousand seven
23 hundred and twenty-four feet.

24 Q Tubing depth?

25 A Tubing was run to a depth of two thousand five

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1 hundred and twenty-one feet on completion.

2 Q And what is the elevation of the well at the
3 surface?

4 A The elevation of the well at the surface is shown
5 on the -- this is the rotary table of six thousand seven
6 hundred and ten feet.

7 Q What was it initially potentialized at?

8 A It was potentialized at ninety-seven barrels of oil
9 per day and four thousand three hundred barrels of water per
10 day, based on a twenty-four hour test period.

11 Q Was there any gas detectable in the oil production?

12 A The gas production was zero.

13 Q And the water?

14 A The water production was four thousand three hundred
15 barrels per day.

16 Q And what is the nearest production to this Well in
17 the Entrada formation, Mr. Borgerding?

18 A The nearest production to this Federal 12-1 occurs
19 at the Southwest Media pool which is located some four and
20 a half miles east southeast of the Federal 12-1.

21 Q And what is the top of the pay zone and the bottom
22 of the pay zone in that field?

23 A Yes, the top of the pay occurs at five thousand
24 three hundred and forty-six, the bottom occurs at five
25 thousand three hundred and seventy-six and that is in the

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1 Petro-Lewis Bowling Federal Well Number 5.

2 Q So that is the nearest comparable production to
3 the Eagle Mesa Field, is that correct?

4 A That is the nearest production to the Eagle Mesa and
5 that production is also from the Entrada.

6 MR. SULLIVAN: That concludes the direct testimony,
7 Mr. Nutter.

8
9 CROSS EXAMINATION

10 BY MR. NUTTER:

11 Q Mr. Borgerding, your recommendation there for a two
12 thousand barrel special depth bracket allowable, if we take
13 your Well Number 12-1, apparently at the present time is
14 producing with about a two and a half percent oil cut, is
15 that correct?

16 A The 12-1 is producing at approximately five percent
17 oil cut. It was two and a half percent when we were producing
18 a hundred barrels per day rate. The workover increased it
19 to two hundred barrels of oil, above two hundred barrels of
20 oil.

21 Q On your exhibit here you have only got one day's
22 production at that rate, haven't you though?

23 A Yes, sir, that is all that is shown on the
24 exhibit. I have one day subsequent to that and that was
25 on the 21st of October, on which date the well produced two

1 hundred and seventy-four barrels of oil per day and three
2 thousand eight hundred and fifty barrels of water per day,
3 so that figure there would translate into something above
4 five percent.

5 Q Okay, what is the capacity of these high volume
6 pumps; what have you got Reda pumps on there?

7 A We've got Reda pumps in, yes, sir.

8 Q What is the volume capacity of those pumps?

9 A They are rated approximately four thousand barrels
10 of fluid per day?

11 Q Four thousand?

12 A Four thousand.

13 Q At an oil percent cut of five percent even, you
14 wouldn't be able to pump two thousand barrels of oil per
15 day from this well, would you?

16 A From this particular well, no, sir, we would have
17 to install larger pumping equipment.

18 Q You would have to move at least twenty-five to
19 thirty thousand barrels of fluid at a five percent cut to
20 get two thousand barrels a day of oil?

21 A At five percent we would have to move, yes, those
22 volumes of fluid. Now what I think one could reasonably
23 expect to find out when installing still larger pumping
24 equipment is that the oil cut would increase at that
25 particular time as we have witnessed in the Federal 11, or

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1 excuse me, we witnessed in the Federal 12-1.

2 Q The oil cut is going down in the Federal 11 C,
3 isn't it?

4 A Yes, sir. Yes, sir, but at the time that we
5 installed the four thousand barrel fluid per day Reda, it
6 increased from the point four percent to two and a half
7 percent oil cut.

8 Q Now what is your theory here, that the oil and
9 the water are segregated from each other with a defined
10 water-oil contact in the reservoir?

11 A Yes, sir, they would be, from all available
12 information, very sharply defined oil-water contact. We
13 feel, of course, that we have some coning. In fact calcula-
14 tions will show that coning will commence at rates as low
15 and lower than ten barrels of fluid per day, and I see just
16 no way to circumvent this coning, so with that in mind, it
17 is my opinion that this coning phenomena is responsible for
18 the early water cuts that we see. But nevertheless, on
19 high volume lift I believe that we will have better
20 performance, even recognizing that this coning does exist.

21 Q Well, what is going to happen, Mr. Borgerding,
22 after the coning occurs, isn't the relative permeability
23 of the oil to water going to go down as more water produc-
24 tion is encountered?

25 A This may be true, however, we have to recognize

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1 that we have this oil reservoir and anything that is done
2 or occurs to restrict this oil flow, we will naturally expect
3 to see the pressure build up within the oil portion of the
4 reservoir and then there will be a tendency for the oil to
5 flow into the wellbore, and reduce any so-called restriction
6 as you mentioned.

7 Q Now your estimate of capacity of oil production
8 from these wells, I think you mentioned for the 11-C that
9 you expected that it could produce forty-five hundred and
10 seventy-five barrels of oil per day. That is simply based
11 on a measurement of the fluid level below the surface of
12 the earth and also a percentage of that fluid level would be
13 oil and you are talking about pumping the well down, is that
14 it?

15 A Yes, sir, that is correct.

16 Q And these Reda pumps that you are using, are they
17 pumping up through the casing or are they pumping through
18 tubing, or what?

19 A They are pumping through the tubing.

20 Q I see, and where do you have the tubing set on
21 these various wells?

22 A All of these wells have tubing at approximately
23 two thousand five hundred feet.

24 Q Have you obtained an exception to Rule 107-D
25 which requires that tubing be set no more than two hundred

1 and fifty feet above the top of the pay for the wells?

2 A I can't answer that, sir, I don't know.

3 Q Now you stated that you felt that this reservoir
4 was similar to the Media Entrada Pool and to the Southwest
5 Media Entrada Pool which are a few miles to the east, I think?

6 A Correct.

7 Q What is the special depth bracket allowable that
8 has been established by the Commission for those fields, do
9 you know?

10 A In my notes I have a figure of seven hundred and
11 fifty barrels of oil per day that was initially granted on
12 the special depth allowable.

13 Q As far as you know, will there be additional
14 locations drilled after this Number 14 one is completed?

15 A There could be. Right at the moment as we under-
16 stand the reservoir, we can see that we are going to implement
17 additional study of that reservoir and one particular thing
18 that we need to answer and that is whether or not we should
19 return the produced water to the Entrada, so we want to
20 determine exactly what the results of re-injecting into the
21 Entrada are, and the decision there will determine the route
22 of further development. In other words, should the field
23 be unitized at this particular time to allow that and these
24 are some of the questions that we don't as yet have the
25 answers to.

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1 Q What is the disposal zone in the 11-C 2, the
2 Gallup formation?

3 A Right.

4 Q Do you have any calculations or estimates as to
5 how much water per day this well will take in the Gallup?

6 A I don't have any calculations. I have talked to
7 our operating personnel in Farmington and they have told me
8 that this well is accepting all of the produced water at this
9 moment.

10 Q Is it requiring pressure to put it in there?

11 A The pressure apparently is only minimal. At least
12 I was told sometime several weeks back that it was like less
13 than a thousand pounds, but I do not have an exact figure on
14 that.

15 Q And there would be a possibility that eventually
16 this water may be returned to the Entrada formation as some
17 kind of a pressure maintenance thing or something like that?

18 A Yes, sir.

19 Q Do you have any idea in which direction, in the
20 event that another well would be drilled, in which direction
21 the exploration would occur, or is that premature?

22 A I can't answer that. We are looking at a relatively
23 small domal structure.

24 Q You mentioned that you thought it would not exceed
25 three hundred and twenty acres, more or less in the form of

1 a circle?

2 A. There is probably some elongation here based on the
3 seismic and geological data that I have.

4 Q. Do you have any idea which direction the trend of
5 the longitudinal axis would be, in which direction?

6 A. If memory serves me right, it would be north-south
7 generally.

8 Q. North and south?

9 A. Yes, sir.

10 MR. NUTTER: Are there any further questions of
11 Mr. Borgerding? He may be excused.

12 (THEREUPON, the witness was excused.)

13 MR. NUTTER: Do you have anything further, Mr.
14 Sullivan?

15 MR. SULLIVAN: Mr. Nutter, only this and that is
16 that we further request that in the event that a special
17 depth bracket allowable be granted that you give consideration
18 to the possibility of making it retroactive to the date of
19 completion of each of the wells in light of the production
20 history and the fact that we will have to make up the test
21 allowable that is currently being used up. History and
22 indication according to the testimony of Mr. Borgerding is
23 that these wells in effect, the harder you push them the
24 better their performance and we would like to take full
25 advantage of that if we can.

1 MR. NUTTER: Now included in the application here
2 today was an application for a discovery allowable for the
3 discovery well and the perforations top out at fifty-four
4 eighty-three. I believe, Mr. Borgerding, that would calculate
5 out about twenty-seven thousand four hundred and fifteen
6 barrels of discovery allowable, is that right?

7 MR. BORGERDING: I have not calculated the exact
8 magnitude, but that sounds approximately right.

9 MR. KENDRICK: May I make an observation?

10 MR. NUTTER: Yes, sir.

11 MR. KENDRICK: If the 12-1 Well will not make any
12 special depth bracket allowable assigned, the discovery
13 allowable will not be assigned to that well. The discovery
14 allowable has to be produced from the discovery well if that
15 well is incapable of making the special depth bracket
16 allowable.

17 MR. NUTTER: Over and above its regular allowable?

18 MR. KENDRICK: It would have to make the discovery
19 allowable over and above that allowable, so if the well is
20 not capable of making that allowable the discovery allowable
21 would go by the wayside.

22 MR. SULLIVAN: Well, if we make a substantial percentage
23 of the special depth bracket allowable, I daresay we will
24 be gratified.

25 Mr. Nutter, I move the admission into evidence

1 of Applicant's Exhibits numbered One through Six.

2 MR. NUTTER: Filon's Exhibits One through Six will
3 be admitted into evidence.

4 If there are no further questions of the witness
5 he may be excused. I think he already has been.

6 Did you have anything further now?

7 MR. SULLIVAN: No, sir.

8 MR. NUTTER: Does anybody have anything they wish
9 to offer in Case 5574?

10 We will take the Case under advisement and
11 take a fifteen minute recess.

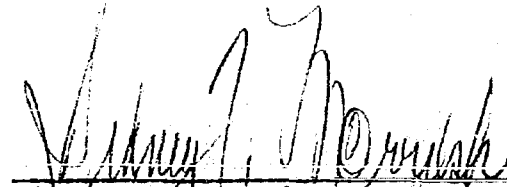
12 (THEREUPON, the Hearing was in recess.)
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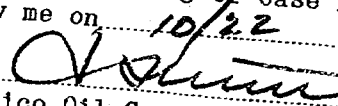
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REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a court 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, Court Reporter

I do hereby certify that the foregoing is
 a complete record of the proceedings in
 the Examiner hearing of Case No. 5574
 heard by me on 10/22, 1975.

 Examiner
 New Mexico Oil Conservation Commission

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
October 27, 1976

EXAMINER HEARING

IN THE MATTER OF:

Case 5574 being reopened pursuant to
the provisions of Order No. R-5118 which
order established a temporary special
depth bracket allowable of 750 barrels
of oil for the Eagle Mesa-Entrada Oil
Pool, Sandoval County, New Mexico.

CASE
5574 (Reopened)

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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

For the Applicant: Jason W. Kellahin, Esq.
KELLAHIN & FOX
Attorneys at Law
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I N D E X

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<u>JOHN DOUGLAS LANG</u>	
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EXHIBIT INDEX

	<u>Offered</u>	<u>Admitted</u>
Petro-Lewis Exhibit One, Structure Map	5	11
Petro-Lewis Exhibit Two, Tabulation	6	11
Petro-Lewis Exhibit Three, Plot	9	11

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1 MR. NUTTER: We will call the next Case 5574.

2 MS. TESCHENDORF: Case 5574 in the matter of Case
3 5574 being reopened pursuant to the provisions of Order
4 No. R-5118 which order established a temporary special depth
5 bracket allowable of seven hundred and fifty barrels of oil
6 per day for the Eagle Mesa-Entrada Oil Pool, Sandoval County,
7 New Mexico.

8 MR. KELLAHIN: If the Examiner please, Jason Kellahin
9 Kellahin and Fox, Santa Fe, appearing on behalf of Petro-Lewis
10 Corporation. We will present a case in support of the existing
11 order.

12 We have one witness to be sworn.

13 (THEREUPON, the witness was duly sworn.)

14
15 JOHN DOUGLAS LANG

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

18
19 DIRECT EXAMINATION

20 BY MR. KELLAHIN:

21 Q Would you state your name, please?

22 A I'm John Douglas Lang.

23 Q By whom are you employed and in what position,
24 Mr. Lang?

25 A I'm a Project Engineer for Petro-Lewis Corporation

1 in Denver, Colorado.

2 Q And have you testified before the Oil Conservation
3 Commission and made your qualifications a matter of record?

4 A Yes, I have.

5 MR. KELLAHIN: Are the witness' qualifications
6 acceptable?

7 MR. NUTTER: Yes, they are.

8 Q (Mr. Kellahin continuing.) Mr. Lang, in the first
9 place has Petro-Lewis Corporation taken over the operation of
10 the Eagle Mesa-Entrada Oil Pool?

11 A Yes, we have.

12 Q When did they take that over?

13 A I believe it was in January of 1976.

14 Q Now, are you familiar with that pool?

15 A Yes, I am.

16 Q Are the operations in that pool under your direction?

17 A Yes, they are.

18 Q And are you familiar with the case that is presently
19 before this Commission?

20 A Yes, sir.

21 Q Mr. Lang, where is the Eagle Mesa-Entrada Oil Pool
22 located in relation to the Southwest Media and the Media-
23 Entrada Pools?

24 A The Eagle Mesa Pool is located approximately five
25 miles west of the Media-Entrada and Southwest Media Pools.

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1 Q And the completion interval is the Media-Entrada
2 formation, is this correct?

3 A Yes, sir.

4 Q Referring to what has been marked as Petro-Lewis
5 Exhibit Number One, would you identify that exhibit, please?

6 A Yes, I will. Exhibit One is a structure map of
7 the Eagle Mesa Field, contoured on top of the Entrada sandstone
8 which is the producing formation.

9 The map shows the location of the four wells completed
10 in the Entrada, which produce in the Entrada, being the
11 Federal 11-C 1, 12-C 1 and the Navajo 13-C 1 and 14-C 1. We
12 have one salt water disposal well, the Federal 11-C 2, which is
13 completed in the Gallup formation, which accepts all of the
14 produced water.

15 Q Is that your disposal interval at the present time?

16 A Yes, it is.

17 Q Do you produce high volumes of water from this pool?

18 A Yes, we do.

19 Q Do you have an indication of an active water drive?

20 A Very active.

21 Q Could you locate approximately the oil-water contact
22 as you find it in this area?

23 A It's not marked on this structure map but if it was
24 to be marked it would roughly follow the contours of the twelve
25 hundred foot contour line. All of our contact is a tilted

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1 contact due to the movement of water in the Entrada sandstone
2 as a hydrodynamic gradient. The oil-water contact tilts to
3 the southwest, approximately fifty feet per mile. Up in the
4 northeast section of the field the oil-water contact is
5 approximately twelve hundred feet above sea level. In the
6 southwest part of the field it occurs at about eleven, fifty
7 above sea level.

8 Q Now, is that a similar situation to that found in
9 the other Media-Entrada Pools?

10 A That is correct, it also has a tilted oil-water
11 contact.

12 Q At approximately the same gradient?

13 A Yes.

14 Q Now, referring to what has been marked as Exhibit
15 Number Two, will you identify that exhibit, please?

16 A Exhibit Two is a tabulation of the oil and water
17 production from the Eagle Mesa Field. It is a complete
18 tabulation of the Federal Well No. 12 which was a discovery
19 well completed in September of 1975.

20 You can see from this tabulation the oil and water
21 production from the individual wells and I also might point
22 out the increase in the fluid withdrawal we have obtained by
23 replacing our beam pumping equipment with submersible equipment.

24 In the Federal 11 C-1 Well this submersible equipment
25 was installed in October of 1975. In the Navajo 13 and 14

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1 Wells the submersible equipment was installed in March of
2 1976.

3 The Federal 12 C-1 Well also has submersible equip-
4 ment in it. You can't see the increase in production obtained
5 by the equipment, though, because it was installed just seven
6 days after the well was completed.

7 Q Now, you have had an allowable of seven hundred and
8 fifty barrels of oil per day per well, have you achieved that
9 allowable?

10 A We have at the present time. Our last test of the
11 maximum oil production was three hundred and forty barrels a
12 day from our Navajo 13 Well. The increase in water cuts have
13 decreased the oil, the percentage, has decreased the oil
14 producing rates and in order to achieve this seven hundred and
15 fifty barrel oil allowable we would probably have to put in
16 new equipment.

17 Q Do you plan to put in new equipment?

18 A Yes, we will, probably.

19 Q In your opinion, is production of this pool at high
20 volumes essential to the greatest ultimate recovery of oil?

21 A Yes, it is.

22 Q For what reason?

23 A We have found from examining the production data
24 that on all of these wells we have already seen a drastic
25 decrease in oil cut initially, when the well is completed.

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1 We found that with increasing the fluid withdrawal rates which
2 we have done by using submersible equipment that we have
3 managed to decrease the steep decline in oil cut and the effect
4 it has had is to stabilize the oil cut which we feel is an
5 increase in our recovery.

6 Q Is that going to result in a greater ultimate
7 recovery of oil from this pool?

8 A Yes, it is.

9 Q And would it constitute waste if you were not able to
10 produce at these high volumes?

11 A Yes, it would.

12 Q And in your opinion is it essential that the seven
13 hundred and fifty barrel of oil allowable be continued for
14 the pool?

15 A Yes.

16 Q Have you made any study of the ability of one well
17 to drain up to a hundred and sixty acres?

18 A Yes, I have in reference to the Media Field. I might
19 point out that this Eagle Mesa Field in the Entrada direction
20 here is just almost identical to what we have seen at the
21 Media Field and the Media Field being an older field has had
22 more extensive work done on it. This Entrada sandstone is a
23 good, clean sandstone, we have porosities in the range of
24 twenty-five percent, permeability three hundred to four hundred
25 millidarcy and with this active water drive, I feel confident

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1 that the well we have here will effectively drain the whole
2 reservoir.

3 Q Now, referring to what has been marked as Exhibit
4 Number Three, would you identify that exhibit?

5 A Exhibit Three is a plot of the percent oil cut
6 versus cumulative oil production for our Federal 11 C-1. This
7 shows graphically what I just discussed concerning the decrease
8 or the increase in the oil cut percentage that we obtained by
9 using submersible equipment.

10 As shown on the graph the well is initially equipped
11 with a beam pump and averaged two hundred and fifty barrels
12 of fluid per day production and you see the steep decline in
13 the oil cut we experienced.

14 In October of '75 after producing roughly twelve
15 thousand barrels of oil we installed this submersible equipment
16 which increased the fluid withdrawal rates to twenty-three
17 hundred barrels per day average and the effect of that has
18 been to arrest the decline and to stabilize this oil cut.

19 Q Now, with the production at the higher rates have
20 you found any evidence of the coning of water?

21 A No, we haven't.

22 Q Is that precluded by the existence of the active
23 water drive?

24 A Were you asking me?

25 Q I'm asking you if the active water drive prevents

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1 coning in this area in your opinion, why don't you have
2 coning?

3 A. I can't say -- I guess why we don't have coning is
4 it goes back to what the reservoir characteristics are. As
5 I mentioned, it's good reservoir rock and good porosity and
6 permeability and results in a very good PI's on these wells.
7 The ones we have calculated show that the PI's may range from
8 five to six barrels per day per psi, therefore, to get these
9 high fluid withdrawal rates, the draw down we have seen in the
10 reservoir is really minimal compared to the reservoir pressure,
11 so I don't think we have the basis for any bad coning problems.
12 And also the data we have seen hasn't indicated it.

13 Q. Do you have any problem with disposal of your produced
14 water?

15 A. No, we don't.

16 Q. You say it is going into the Gallup?

17 A. Yes, we have one salt water disposal well completed
18 in the Gallup and it takes all of the water.

19 Q. What kind of pressures are you encountering on your
20 disposal well?

21 A. We have a water injection station there and it
22 discharges three to four hundred pounds. That would be the
23 surface pressure.

24 Q. That's the surface pressure. Were Exhibits One,
25 Two and Three prepared by you or under your supervision?

1 A. Yes, they were.

2 MR. KELLAHIN: At this time we would like to offer
3 into evidence Exhibits One, Two and Three.

4 MR. NUTTER: Petro-Lewis Exhibits One through Three
5 will be admitted into evidence.

6 (THEREUPON, Petro-Lewis Exhibits One through
7 Three were admitted into evidence.)

8 MR. KELLAHIN: That's all we have, Mr. Nutter.

9
10 CROSS EXAMINATION

11 BY MR. NUTTER:

12 Q Mr. Lang, you mentioned that you could increase
13 production by the installation of additional equipment, is
14 the equipment more or less identical on each of these four wells
15 at the present time, submersible equipment?

16 A. Yes, it is. The fluid withdrawal rates we are
17 seeing now range from about twenty-three hundred barrels per
18 day in this No. 11 Well up to about thirty-seven hundred
19 barrels in the No. 12 Well. Yes, I would say it is similar
20 equipment.

21 Q And then you mentioned that you could increase the
22 productivity by improving the equipment, what would you do,
23 install higher capacity?

24 A. We would increase the size of the equipment, yes.

25 Q To what size, what capacity?

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1 A. I don't believe we would go over -- equipment that
2 would produce more than, say, four thousand to forty-five
3 hundred barrels of fluid. That's the maximum rates that we
4 have produced out of the Media Field and I don't believe we
5 could go any higher than that. I don't know what size of
6 equipment that would equate to.

7 Q. Well, with a ten percent oil cut on that that would
8 only be four hundred to four hundred and fifty barrels of oil
9 per day allowable necessary, wouldn't it?

10 A. That's right. If we didn't see any increase in this
11 oil cut, if it just stablized or decreased slightly that may
12 be all we could get.

13 Q. Now, is the oil here similar to the oil in the
14 Media-Entrada in that it is a very heavy, viscous oil?

15 A. The viscosity range is about eight centipoise at
16 reservoir temperature. The problem we have with the oil is
17 the pour point, it is relatively high from fifty to eighty
18 degrees.

19 Q. You have to keep it warm in order to move it?

20 A. Well, our equipment is insulated and we have to
21 keep it warm.

22 Q. The same oil you've got over there? Now, at one
23 time they were having a marketing problem out of that area,
24 how about this area?

25 A. We do have the same problem and it is all tied in

1 together. We are real close and I'm getting a new purchaser
2 lined up here. In the past we just trucked our oil to
3 refiners in the area. Our negotiations now are with Continental
4 and Union who both want our oil and this will be a deal where
5 we will get to put it into the Texas-New Mexico Pipeline and
6 this will solve our marketing problems both in the Media and
7 this Eagle Mesa.

8 I didn't mention on this tabulation of productions
9 Exhibit Two, the lack of production since June was due to
10 this marketing problem.

11 Q Well, I was going to get to that. Well No. 11 hasn't
12 produced since the small amount of production in June, nor
13 has 12, nor has 13, nor has 14, except that 13 did produce
14 some in September. Is that all marketing problems here?

15 A Yes, it is. Plateau was taking our oil from Eagle
16 Mesa Field. In June they quit taking the oil and all of the
17 wells were shut in for July and August. In September they
18 began taking oil again. Initially all they took was from our
19 storage tanks and then finally we had a chance to put No. 13
20 back on at the end of the month.

21 Q But you haven't got your new sales contract quite
22 lined up yet?

23 A No, I'm not actually involved in that. I checked
24 at the office yesterday and they are expecting within three
25 weeks, is what they are hoping, and then we will be on line.

sid morrish reporting service

General Court Reporting Service
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Phone (505) 982-9212

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Phone (505) 982-9212

1 Q In your opinion is this pool fairly well defined
2 now or will there be some additional wells drilled?

3 A No, we haven't seen anything that would indicate
4 that additional wells would need to be drilled.

5 Q It's apparently similar to the Media area where you've
6 just got a small pimple, so to speak?

7 A Right, it's actually a combination of stratigraphic
8 and structural trap. There is a domal structure there but
9 what actually trapped the oil was this Todilto limestone
10 formation that overlies the Entrada and it is a little bit
11 thinner there and that combined with the -- which allows the
12 Entrada to be thicker and that combined with the normal
13 structure has trapped the oil and down to the southwest there
14 is a spill over point where the oil-water contact is.

15 Q The discovery well was the Federal 12 C-1?

16 A Yes, sir.

17 Q And it received an oil discovery allowable. Is
18 this its total production, this listed here on Exhibit Number
19 Two?

20 A Yes, it is.

21 Q Approximately what does that add up to, do you
22 know offhand what its cumulative production has been?

23 A No, not offhand.

24 MR. NUTTER: Well, let's not bother with that.

25 Mr. Kellahin, there is no spacing involved in this

1 hearing, it's simply the discovery allowable, is that it?

2 MR. KELLAHIN: It's a seven hundred and fifty
3 barrel allowable and I believe --

4 MR. NUTTER: It's a special depth bracket allowable?

5 MR. KELLAHIN: Yes, sir.

6 MR. NUTTER: No spacing is involved?

7 MR. KELLAHIN: I don't believe so.

8 MR. NUTTER: Are there any further questions of
9 this witness?

10 MR. KENDRICK: Yes, sir.

11 MR. NUTTER: Excuse me, Mr. Kendrick.

12 MR. KENDRICK: I'm A. R. Kendrick, District Supervisor
13 for the Oil Commission in that District.

14
15 CROSS EXAMINATION

16 BY MR. KENDRICK:

17 Q Are the wells spotted on your Exhibit One all of the
18 wells contained in that proximity that penetrated this
19 formation?

20 A Yes, I believe they are.

21 Q I was wondering with those few wells how you got
22 control over some of the squiggles in these lines?

23 A There has also been some seismic data that has
24 been used to construct these maps that is not shown on here.

25 Q Do you have any reason to believe that your oil cut

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Page 16

1 will increase, the percent of cut would increase with increased
2 productivity?

3 A. We haven't seen it on the production data that we
4 have obtained here at Eagle Mesa. At Media on a couple of the
5 wells increased productivity did actually increase the oil cut.
6 Here at Eagle Mesa it is just more or less stablized but like
7 I say, at Media it has increased it.

8 Q. Were any of these wells shown on Exhibit One drilled
9 to penetrate the entire Entrada formation?

10 A. I believe the No. 12 Well was.

11 Q. So you have some semblance of the thickness of the
12 formation in that area and the amount of water below the oil?

13 A. Yes, sir, the Entrada is approximately two hundred
14 feet thick in this area. The net pay for these wells, the oil
15 column, brings us from about twenty to thirty feet underlain
16 by the water.

17 Q. What is the relative mobility ratio between oil
18 and water?

19 A. I don't have the information with me, I believe I
20 can supply it, though.

21 Q. You don't think you can give us a reasonable guess
22 on the relative mobility?

23 A. No, I'm not real sure, I couldn't say.

24 Q. Would you mail a copy of that to me and to this
25 case file, please?

1 A. Yes, sir.

2 Q. Thank you, that's all I have.

3 MR. NUTTER: Are there any further questions of this
4 witness? He may be excused.

5 (THEREUPON, the witness was excused.)

6 MR. NUTTER: Do you have anything further, Mr.
7 Kellahin?

8 MR. KELLAHIN: Nothing further, thank you.

9 MR. NUTTER: Does anyone have anything they wish
10 to offer in Case Number 5574?

11 We will take the case under advisement and a fifteen
12 minute recess.

13 (THEREUPON, the hearing was in recess.)
14
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25

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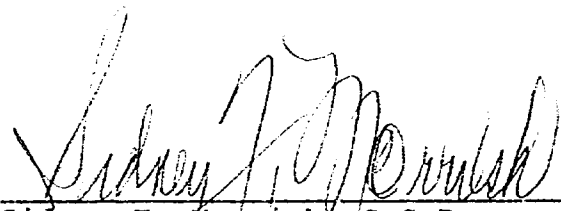
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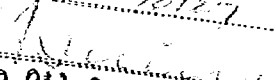
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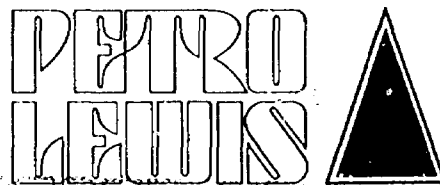
Page 18

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. 5574
heard by me on 10/27, 19 76.
, Examiner
New Mexico Oil Conservation Commission



1600 Broadway
P.O. Box 2250

Denver Colorado 80201
303/892-6010

Petro-Lewis Corporation
Oil and Gas Producers

NOV - 1 1976

OIL CONSERVATION COMMISSION
Santa Fe

October 29, 1976

Mr. Daniel S. Nutter, Examiner
Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87503

REFERENCE: Case 5574
Examiner Hearing - October 27, 1976

*File
Case 5574*

Dear Mr. Nutter:

During my testimony at the above referenced hearing, I was questioned regarding the mobility ratio for the Eagle Mesa Field. I did not have that information at the time and stated that I would furnish it.

As I pointed out in my testimony, the reservoir rock qualities and fluid characteristics in the Eagle Mesa Field are nearly identical to those in the Media Entrada Field. In his annual evaluation of the Media Field dated July 1, 1976, Mr. D. M. Madden, Consulting Petroleum Engineer in Casper, Wyoming, calculated a mobility ratio of 1.2. His calculation was made using correlation charts published by C. S. Matthews and D. G. Russell, "Pressure Buildup and Flow Tests in Wells", and correlation charts published by F. F. Craig, Jr., "The Reservoir Engineering Aspects of Waterflooding". My own calculation of the mobility ratio for the Eagle Mesa Field indicates that it is greater than 1.2, possibly as high as 8. I believe, therefore, that the mobility ratio for the Eagle Mesa Field is in the range of 1.2 to 8.

A mobility ratio greater than one, which indicates that the water is more mobile than the oil, is generally considered unfavorable. I believe that at Eagle Mesa the effect of the unfavorable mobility ratio will be to increase the volume of water that will have to be produced. Petro-Lewis Corporation is aware of this and is prepared to handle large volumes of water throughout the life of the field.

I do not believe that the increased fluid withdrawal rates associated with the special depth bracket allowable of 750 BO/D will increase the mobility ratio nor cause a decrease in the ultimate recovery from the Eagle Mesa Field. On the contrary, production data from the field shows that the increased withdrawal rates help to maintain the oil cut and will result in a greater ultimate recovery. The higher allowable should also improve the economics of handling the large volumes of water that will have to be produced.

Very truly yours,

PETRO-LEWIS CORPORATION

J. Douglas Lang
J. Douglas Lang
Project Engineer

cc: Mr. A. R. Kondrick

*File
Cs 5493*

TEXAS WEST OIL & GAS CORPORATION
STATEMENT OF PAYOUT

RECEIVED
NOV 15 1976
OIL CONSERVATION COMM.
DATE: November 15, 1976
Santa Fe

Lease No. : 24060
Well Name & No. : Madera #1
Location : Section 5-24 S-34 E
County/Parish & State: Lea County, New Mexico
Period Covered : July thru September, 1976

PRIOR BALANCE TO BE RECOVERED

\$ 3,541,434.33

CURRENT EXPENDITURES

Intangible:

Dripping & Completion	\$ -0-	x	250	% *	\$ -0-
Equipment	\$ -0-	x	250	% *	\$ -0-
Lease Operating Expense	\$ 6,796.88	x	100	% *	\$ 6,796.88
Total Current Expenditures					\$ <u>6,796.88</u>

CURRENT REVENUE

<u>347</u>	Bbls. Gross Value	\$ 4,265.52
<u>1,074,244</u>	MCFs Gross Value	\$ 1,346,475.68
	Total Gross Value	\$ <u>1,350,741.20</u>

Less:	Production Taxes	\$ 92,333.68
	Overriding Royalties	\$ 178,083.93
	Transportation, Etc.	\$ -0-

Total Current Revenue (\$ 1,080,323.59)

CURRENT MONTH BALANCE

\$ 3,548,231.21

CURRENT BALANCE TO BE RECOVERED

\$ 2,467,907.62

*Percent Recovery Per NMOCC Order #R-5039-B

DISTRIBUTION:

Payout File

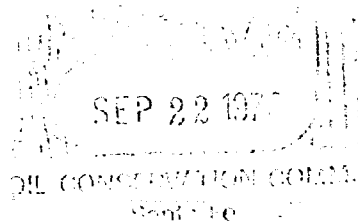
- * Reversionary Interest (x) Conoco, et al
- * Working Interest (x) Exxon, et al
- NMOCC-Santa Fe; Attn: Mr. Joe Ramey

TWO&G 104b

Lease No. : 24060
Well Name & No. : Madera #1
Location : Section 5-24S-34E
County/Parish & State : Lea County, New Mexico
Date : July thru September, 1976

LEASE OPERATING EXPENSES

Pumper/Operator Wages	\$ 405.00	
Waste Water Disposal Costs	3,192.97	
General Lease Labor	1,190.83	
Electric Costs	-0-	
Equipment Repairs & Maintenance	370.24	
Overhead	750.00	
Tools & Equipment	60.07	
Surface Rentals	-0-	
Gas Compression	-0-	
Well Stimulation	-0-	
Supervision	-0-	
General Lease Supplies	16.18	
Miscellaneous Expense	811.59	\$ 6,796.88
TOTAL		\$ 6,796.88



Union Oil and Gas Division: Central Region

Union Oil Company of California
Route One, Tatum Highway, Lovington, New Mexico 88260
Telephone (505) 396-3608



*File
Case 3872*

September 21, 1976

Mr. Joe D. Ramey, Secretary-Director
Oil Conservation Commission
State of New Mexico
P. O. Box 2088
Santa Fe, New Mexico

Gentlemen:

Corrosion rate in the salt water
disposal system, Federal "A" No. 1,
Morton (Wolfcamp) Field, Lea County,
New Mexico

Please be advised that a corrosion rate of 0.03 MPY was measured, using
coupons, for the third quarter of 1976 on the subject salt water disposal
system. This system was authorized by order No. R-3531.

Yours very truly,

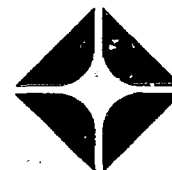
D. K. Spradlin
Area Superintendent

DKS/mrf
cc: J. Tyler

~~Atlantic Richfield Company~~

North American Producing Division

New Mexico-Arizona District
Post Office Box 1710
Hobbs, New Mexico 88240
Telephone 505 393 7163



RECEIVED
OCT - 4 1976
NEW MEXICO OIL CONSERVATION COMMISSION

October 1, 1976

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

Attention: Mr. J. Ramey, Jr.
Secretary-Director

Re: Produced water samples required by
Commission Order R-2969 entered in
Case No. 3302 concerning Atlantic
Richfield Company - Swearingen -
Shugart Waterflood Project

File →

Gentlemen:

As per the above order, we submit the results
of laboratory analysis of the latest produced
water sample from the Swearingen Shugart water-
flood project.

Yours very truly,

L. C. Hudry
L. C. Hudry

LCH/rd
Attachment

cc: New Mexico Oil Conservation Commission
P. O. Drawer DD
Artesia, NM 88210

New Mexico State Engineer's Office
State Capitol
Santa Fe, NM 87501

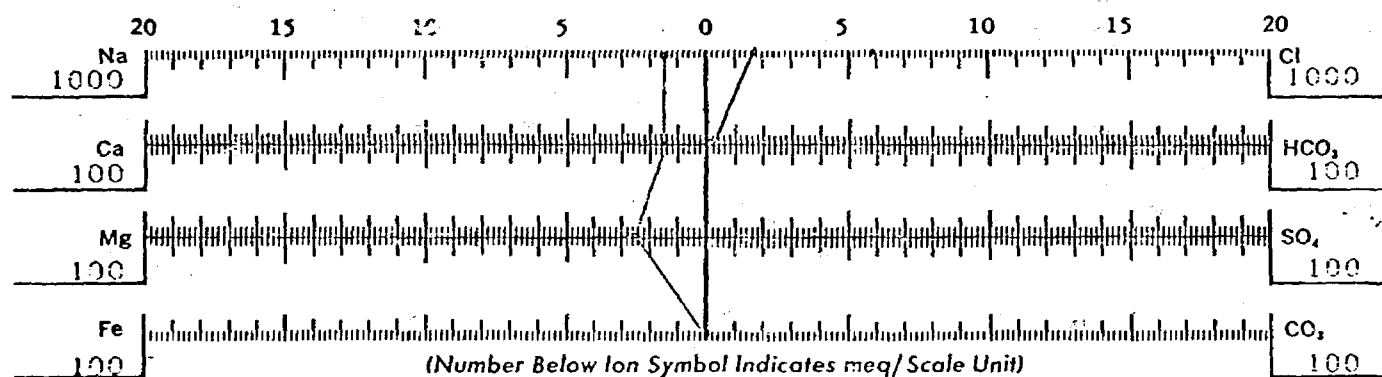
PRODUCTION PROFITS, INC.
Petroleum Service Laboratory
DALLAS, TEXAS

Client Atlantic Richfield Company
Field Shugart County Eddy State New Mexico
Lease Well No.
Formation Depth Perf.
Source of Sample Swearingen Waterflood
Date Collected by

REPORT OF WATER ANALYSIS

Lab. Number 6-6570 Specific Gravity 1.0752 pH 7.2
Total Dissolved Solids 100951 Resistivity (Ohmmeters at 68° F.) .115 Hydrogen Sulfide PRESENT

DISSOLVED MINERAL ANALYSIS PATTERN



DISSOLVED SOLIDS ANALYSIS

	mg/l	meq/l
Total Solids (Calc.)	100951	
Sodium (Calc.)	32200	1400.4
Iron (Dissolved)	0	0.
Barium	0	0.
Calcium	2640	121.7
Magnesium	2870	235.9
Chloride	61800	1742.8
Bicarbonate	1050	17.9
Carbonate	0	0.
Sulfate	251	7.3

TOTAL IRON 6

SOLUBILITY CALCULATIONS

Calcium Carbonate Stability Index at 77° F	<u>.86</u>	Scaling Tendency	<u>POS.</u>
Calcium Sulfate Stability at 95° F			
Concentration <u>7.22</u> meq/l.	Calc. Solubility <u>59.82</u> meq/l.	Percent Saturation	<u>12.16</u>
Barium Sulfate Stability at 95° F			
Concentration <u> </u> meq/l.	Calc. Solubility <u> </u> meq/l.	Percent Saturation	<u> </u>

REMARKS

PRECIPITATED AND SUSPENDED SOLIDS ANALYSIS

	mg/l
Total Undissolved Solids	<u> </u>
Oil (Solvent Soluble)	<u> </u>
Acid Solubles	<u> </u>
Iron	<u>as</u>
Calcium	<u>as</u>
Magnesium	<u>as</u>
Sulfate	<u>as</u>
Organic (Ignition Loss)	<u> </u>
Acid Insolubles	<u> </u>
Sand & Clay	<u> </u>
Barium Sulfate	<u> </u>
(Quan.)	<u> </u>
(Qual.)	<u> </u>



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
1000 RIO BRAZOS RD. - AZTEC

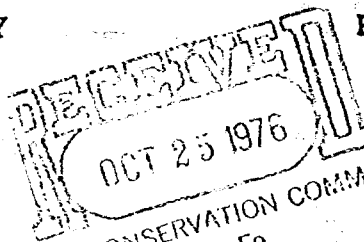
87410

DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO



STATE GEOLOGIST
EMERY C. ARNOLD



OCT 25 1976
OIL CONSERVATION COMM. October 22, 1976
Santa Fe

J. Gregory Merrion & Robert L. Bayless
P. O. Box 507
Farmington, New Mexico

Re: J. Gregory Merrion & Robert L. Bayless
Canyon Largo Unit NP #185
K-3-24N-6W

Gentlemen:

This letter shall confirm our oral agreement for allocation of production to the Gallup and Dakota zones of the subject well after downhole commingling as approved by Order R-4997.

Gas 100% Basin Dakota
Liquid 100% Otero Gallup

If there are further questions please contact us.

Yours very truly,

A. R. Kendrick
A. R. Kendrick
Supervisor, District #3

ARK:mc

occ, Santa Fe

File 7
Case 5441
Nutter
Examiner

sid morrish reporting service

General Court Reporting Service
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Phone (505) 982-9212

Page. 1

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
October 13, 1976

EXAMINER HEARING

IN THE MATTER OF:

Case 5774 being reopened pursuant to
the provisions of Order No. R-5118 for
the Eagle Mesa-Entrada Pool, Sandoval
County, New Mexico.

CASE
~~5774~~ 5574
(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:

Lynn Teschendorf
Law Clerk for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant:

Jason W. Kellahin, Esq.
KELLAHIN & FOX
Attorneys at Law
500 Don Gaspar
Santa Fe, New Mexico

sid morrison reporting service
General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

Page 2

1 MR. STAMETS: We will call at this time Case 5574.

2 MS. TESCHENDORF: Case 5574, in the matter of

3 Case 5574 being reopened pursuant to the provisions of

4 Order No. R-5118 which order established a temporary special

5 depth bracket allowable of seven hundred and fifty barrels of

6 oil per day for the Eagle Mesa-Entrada Oil Pool, Sandoval

7 County, New Mexico.

8 MR. KELLAHIN: If the Examiner please, Jason Kellahin,

9 Kellahin and Fox, Santa Fe.

10 The operating rights of this pool were transferred,

11 I believe effective January 1st to Petro-Lewis Corporation

12 and I have just called them and they were not aware of this

13 hearing and we ask that the case be continued to the hearing

14 on the twenty-seventh.

15 MR. STAMETS: Case Number 5574 will be continued

16 to the October 27th Examiner Hearing.

17 MR. KELLAHIN: Thank you.

18 MR. STAMETS: Thank you.

19

20

21

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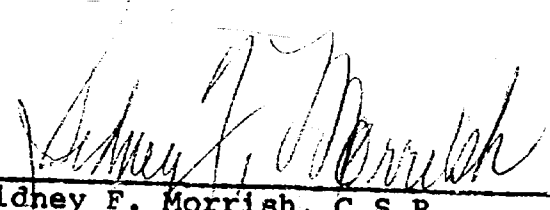
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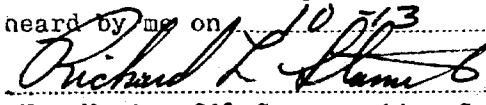
Page 3

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. 5704
heard by me on 10/13, 19 76.


Richard L. Ham, Examiner
New Mexico Oil Conservation Commission

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. 5574
Order No. R-5118-A

IN THE MATTER OF CASE 5574 BEING REOPENED
PURSUANT TO THE PROVISIONS OF ORDER NO. R-5118
WHICH ORDER ESTABLISHED A TEMPORARY SPECIAL DEPTH
BRACKET ALLOWABLE OF 750 BARRELS OF OIL PER DAY
FOR THE EAGLE MESA-ENTRADA OIL POOL, SANDOVAL
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 27, 1976, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 4th day of November, 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-5118, dated November 17, 1975, a temporary special depth bracket allowable of 750 barrels of oil per day was established for the Eagle Mesa-Entrada Oil Pool, Sandoval County, New Mexico.

(3) That pursuant to the provisions of Order No. R-5118, this case was reopened to permit all interested parties to appear and show cause why said special depth bracket allowable should remain in effect.

(4) That the evidence presented at the hearing indicates that high volume pumping of oil wells in the Eagle Mesa-Entrada Oil Pool generally results in a lower water-oil cut, thereby improving the producing efficiency of the reservoir.

(5) That retention of the special depth bracket allowable for wells in the subject pool should improve reservoir producing efficiency and result in the ultimate recovery of additional oil, thereby preventing waste.

-2-

Case No. 5574

Order No. R-5118-A

(6) That retention of the special depth bracket allowable for wells in the subject pool will not cause waste nor impair correlative rights, and should be approved.

IT IS THEREFORE ORDERED:

(1) That the special depth bracket allowable of 750 barrels of oil per day for the Eagle Mesa-Entrada Oil Pool, Sandoval County, New Mexico, shall remain in full force and effect until further order of the Commission.

(2) That the operator of the Eagle Mesa-Entrada Unit Area shall report monthly to the Aztec District Office of the Commission the previous month's water-oil cut for each producing well in the Eagle Mesa-Entrada Oil Pool.

(3) That the Secretary-Director of the Commission may, at any time that it appears that premature water encroachment or water coning is occurring, or other evidence of reservoir damage is apparent, rescind the provisions of this order and cause the top unit allowable for the Eagle Mesa-Entrada Oil Pool to revert to 107 barrels of oil per day.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman

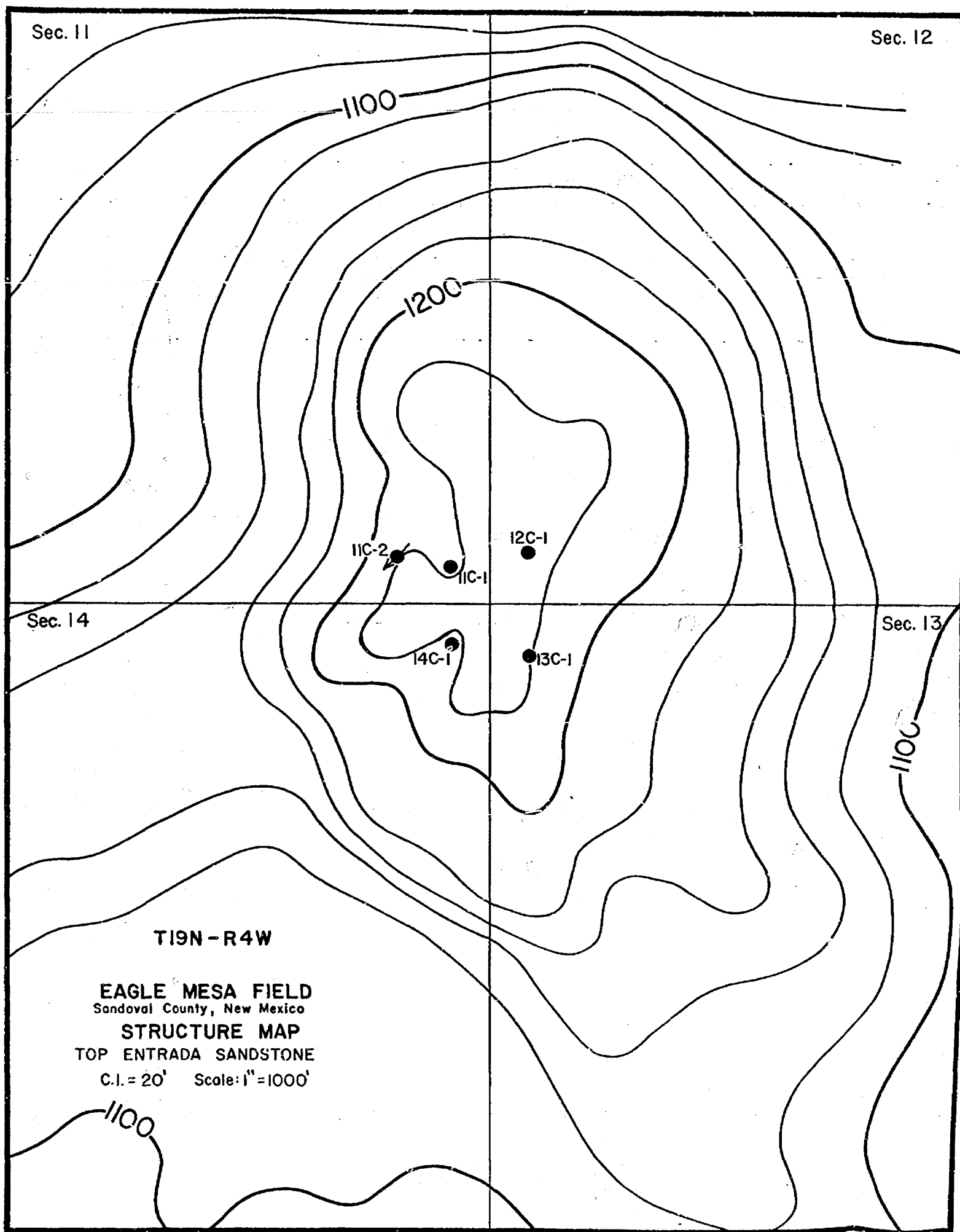


EMERY C. ARNOLD, Member

JOE D. RAMEY, Member & Secretary

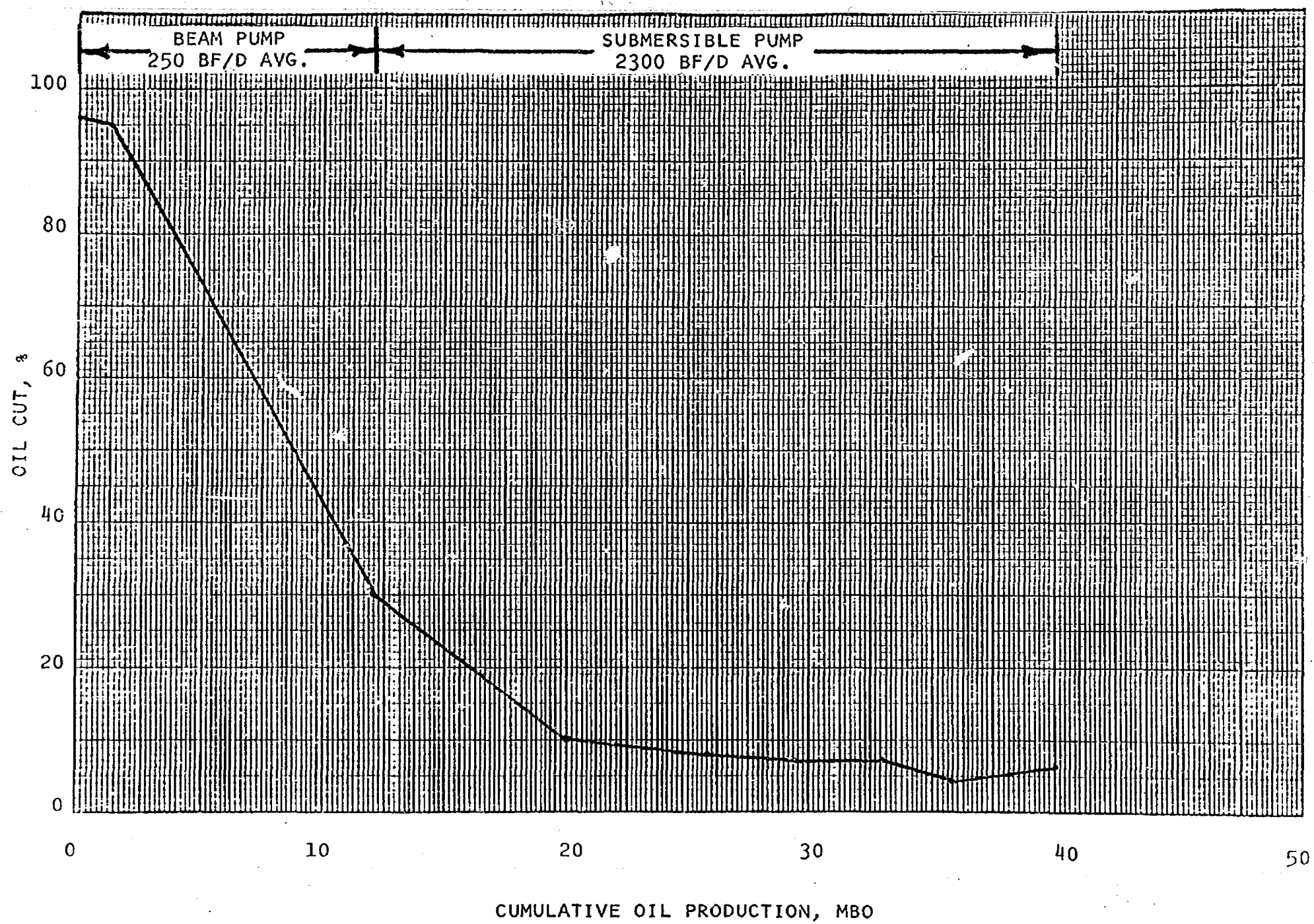
S E A L

jr/



EAGLE MESA ENTRADA PRODUCTION
(BARRELS PER MONTH)

	<u>Federal 11 C-1</u>		<u>Federal 12 C-1</u>		<u>Navajo 13 C-1</u>		<u>NAVAJO 14 C-1</u>	
	<u>Oil</u>	<u>Water</u>	<u>Oil</u>	<u>Water</u>	<u>Oil</u>	<u>Water</u>	<u>Oil</u>	<u>Water</u>
1975								
September	1255	69	632	29907	-	-	-	-
October	11281	26928	2286	72904	2850	16	-	-
November	8230	76925	2093	52525	5001	2548	2654	1547
December	5351	65716	1043	25747	3668	3000	1852	3699
1976								
January	2924	38250	2538	73856	3344	2750	1291	2856
February	757	0	3138	79680	2765	2375	1160	1000
March	3389	41850	2391	55800	14894	38925	7377	44775
April	3063	75000	2698	114000	13080	66800	6392	58957
May	3369	77381	2030	104400	8650	62900	5341	67200
June	645	10000	1402	77604	1810	25240	1843	24200
July	-	-	-	-	-	-	-	-
August	-	-	-	-	-	-	-	-
September	-	-	-	-	1716	20800	-	-



FEDERAL
EAGLE
SANDOVAL

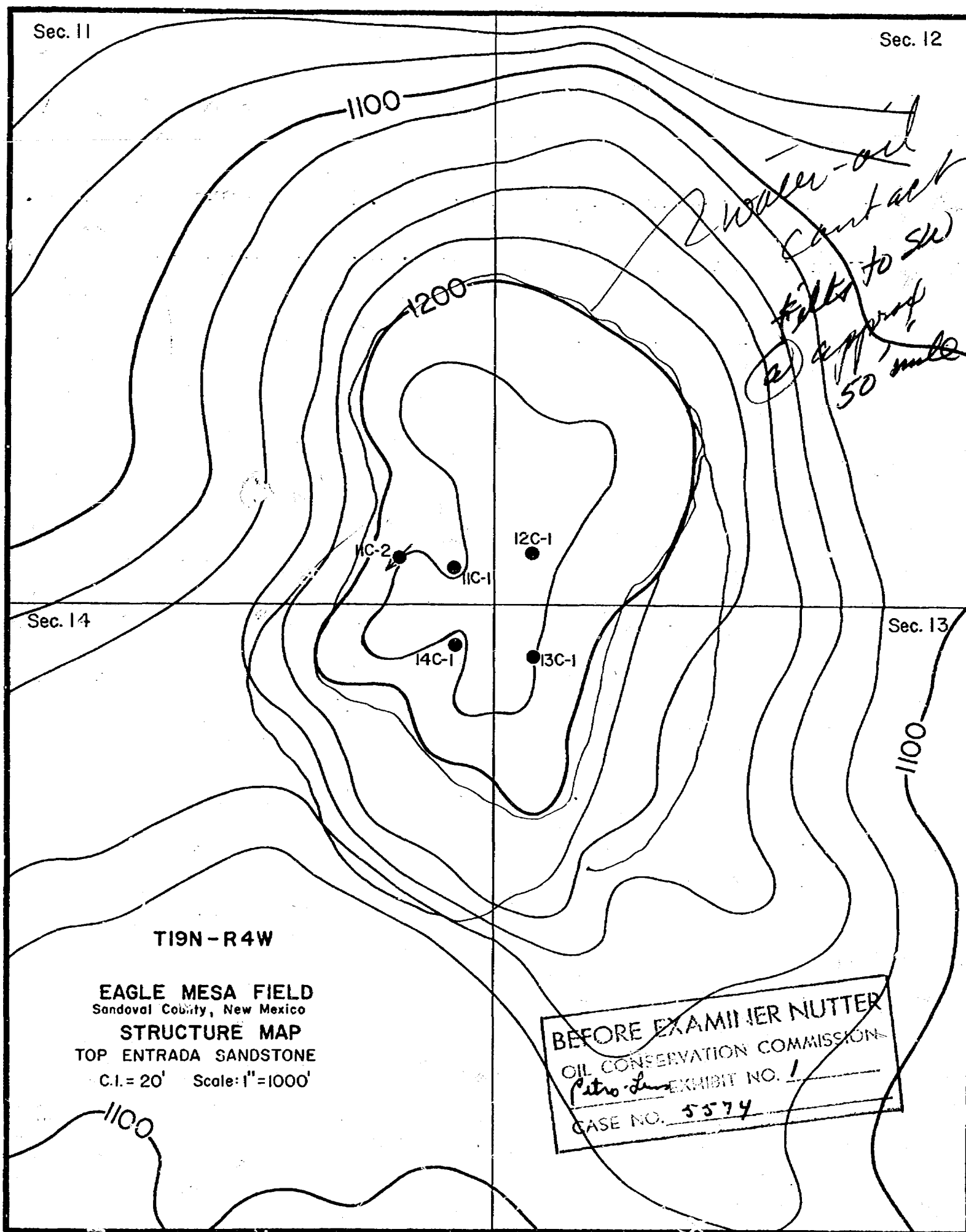
CUMULATIVE

SUBMERSIBLE PUMP
2300 BF/D AVG.

FEDERAL 11 C-1
EAGLE MESA FIELD
SANDOVAL COUNTY, NEW MEXICO

OIL CUT
VS
CUMULATIVE OIL PRODUCTION

20 30 40 50
CUMULATIVE OIL PRODUCTION, MBO



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. 5574
Order No. R-5118

APPLICATION OF FILON EXPLORATION
CORPORATION FOR POOL CREATION,
ASSIGNMENT OF A DISCOVERY ALLOWABLE,
AND SPECIAL POOL RULES, SANDOVAL
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 22, 1975, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 17th day of November, 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, Filon Exploration Corporation, has discovered a new common source of supply for the production of oil from the Entrada formation in its Federal 12 Well No. 1, located in Unit M of Section 12, Township 19 North, Range 4 West, NMPM, Sandoval County, New Mexico, said well being completed to produce from the Entrada formation August 25, 1975, through casing perforations from 5,483 feet to 5,493 feet.

(3) That the applicant seeks the creation and designation of a new oil pool for said Federal 12 Well No. 1, the promulgation of special rules for said pool including the assignment of a special depth bracket allowable, and the assignment of an oil discovery allowance to the discovery well.

(4) That having made a bona fide discovery of a new common source of supply, the discovery well, applicant's Federal 12 Well No. 1 is eligible for and should be assigned an oil discovery allowable of five barrels for each foot of depth from the surface of the ground to the top of the perforations at 5,483 feet, or 27,415 barrels.

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Case No. 5574
Order No. R-5118

(5) That a new pool for said discovery well should be created and designated the Eagle Mesa-Entrada Oil Pool, and the vertical limits of said pool should be the Entrada formation and the horizontal limits should comprise:

TOWNSHIP 19 NORTH, RANGE 4 WEST, NMPM

Section 11: SE/4 SE/4

Section 12: SW/4 SW/4

Section 13: NW/4 NW/4

Section 14: NE/4 NE/4

(6) That the aforesaid oil pool produces from the Entrada formation with a high water-oil cut, apparently as the result of a high connate water saturation and an active water-drive mechanism.

(7) That tests have shown that high-volume pumping of wells in the subject pool appears to reduce the water-oil cut and should result in the recovery of additional quantities of oil, thereby preventing waste.

(8) That the applicant proposes a special depth bracket allowable of 2,000 barrels of oil per day for the subject pool.

(9) That the water-oil cuts encountered in the wells completed in said pool to date, even when reduced by high-volume pumping, would result in the production of excessive volumes of fluid beyond the physical capacity of the available producing equipment or disposal facilities, if production were such as to justify a 2,000 barrel-per-day oil allowable.

(10) That production of such excessive quantities of fluid as would be necessary to even approach 2,000 barrels of oil per day would greatly increase the hazard of water coning and subsequent loss of oil production, thereby causing waste.

(11) That the Entrada formation in the subject pool bears close resemblance to the Entrada formation in the Media-Entrada Oil Pool, which is located some five miles to the east-southeast.

(12) That the reservoir characteristics and the well-producing characteristics in the subject pool and said Media-Entrada Oil Pool appear to be almost identical.

(13) That a special depth bracket allowable of 750 barrels of oil per day has been in effect in said Media-Entrada Oil Pool for quite some time and has proven to be efficient and in the interest of conservation.

(14) That until more is known of the actual characteristics of the reservoir and the fluid mechanics in the subject pool, it appears to the Commission to be unwise to establish a depth bracket allowable for the subject pool which exceeds the depth bracket allowable previously established for a very similar oil pool.

(15) That the applicant's proposed 2,000 barrel-per-day depth bracket allowable should be denied.

(16) That temporary special pool rules should be adopted for the subject pool which provide for a depth bracket allowable of 750 barrels of oil per day per well.

(17) That creation of a new pool, assignment of a discovery allowable, and the promulgation of temporary special pool rules, all as described in Findings Nos. (5), (4), and (16) above are in the interest of conservation, will prevent waste, and will not impair correlative rights, and should be approved.

(18) That this case should be reopened at an examiner hearing in October, 1976, at which time the operators in the subject pool should appear and show cause why the temporary special depth bracket allowable should be made permanent.

IT IS THEREFORE ORDERED:

(1) That effective November 1, 1975, a new pool for the production of oil from the Entrada formation in Sandoval County, New Mexico, is hereby created and designated as the Eagle Mesa-Entrada Oil Pool with vertical limits comprising the Entrada formation and horizontal limits as follows:

TOWNSHIP 19 NORTH, RANGE 4 WEST, NMPM

Section 11: SE/4 SE/4

Section 12: SW/4 SW/4

Section 13: NW/4 NW/4

Section 14: NE/4 NE/4

(2) That the discovery well for said pool, the Filon Exploration Corporation Federal 12 Well No. 1 located in Unit M of Section 12, Township 19 North, Range 4 West, NMPM, Sandoval County, New Mexico, is hereby assigned an oil discovery allowable of 27,415 barrels of oil, to be produced within 730 days after the effective date of this order.

(3) That applicant's request for a 2,000 barrel-per-day special depth bracket allowable is hereby denied.

(4) That a temporary special depth bracket allowable of 750 barrels of oil per day is hereby established for the Eagle Mesa-Entrada Oil Pool, Sandoval County, New Mexico.

(5) That this case shall be reopened at an examiner hearing in October, 1976, at which time the operators in the subject pool may appear and show cause why the temporary special depth bracket allowable should not be rescinded.

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Case No. 5574
Order No. R-5118

(15) That the applicant's proposed 2,000 barrel-per-day depth bracket allowable should be denied.

(16) That temporary special pool rules should be adopted for the subject pool which provide for a depth bracket allowable of 750 barrels of oil per day per well.

(17) That creation of a new pool, assignment of a discovery allowable, and the promulgation of temporary special pool rules, all as described in Findings Nos. (5), (4), and (16) above are in the interest of conservation, will prevent waste, and will not impair correlative rights, and should be approved.

(18) That this case should be reopened at an examiner hearing in October, 1976, at which time the operators in the subject pool should appear and show cause why the temporary special depth bracket allowable should be made permanent.

IT IS THEREFORE ORDERED:

(1) That effective November 1, 1975, a new pool for the production of oil from the Entrada formation in Sandoval County, New Mexico, is hereby created and designated as the Eagle Mesa-Entrada Oil Pool with vertical limits comprising the Entrada formation and horizontal limits as follows:

TOWNSHIP 19 NORTH, RANGE 4 WEST, NMPM
Section 11: SE/4 SE/4
Section 12: SW/4 SW/4
Section 13: NW/4 NW/4
Section 14: NE/4 NE/4

(2) That the discovery well for said pool, the Filon Exploration Corporation Federal 12 Well No. 1 located in Unit M of Section 12, Township 19 North, Range 4 West, NMPM, Sandoval County, New Mexico, is hereby assigned an oil discovery allowable of 27,415 barrels of oil, to be produced within 730 days after the effective date of this order.

(3) That applicant's request for a 2,000 barrel-per-day special depth bracket allowable is hereby denied.

(4) That a temporary special depth bracket allowable of 750 barrels of oil per day is hereby established for the Eagle Mesa-Entrada Oil Pool, Sandoval County, New Mexico.

(5) That this case shall be reopened at an examiner hearing in October, 1976, at which time the operators in the subject pool may appear and show cause why the temporary special depth bracket allowable should not be rescinded.

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Case No. 5574
Order No. R-5118

(6) That the Secretary-Director of the Commission may, at any time it appears that premature water encroachment or water coning is occurring, or other evidence of reservoir damage is apparent, rescind the provisions of this order and cause the top unit allowable for the Eagle Mesa-Entrada Oil Pool to revert to 107 barrels of oil per day.

(7) That each month the applicant shall take production fluid level tests on each producing well in the pool and shall report the results of these tests along with other pertinent monthly well production data to the Aztec district office of the Commission.

(8) 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

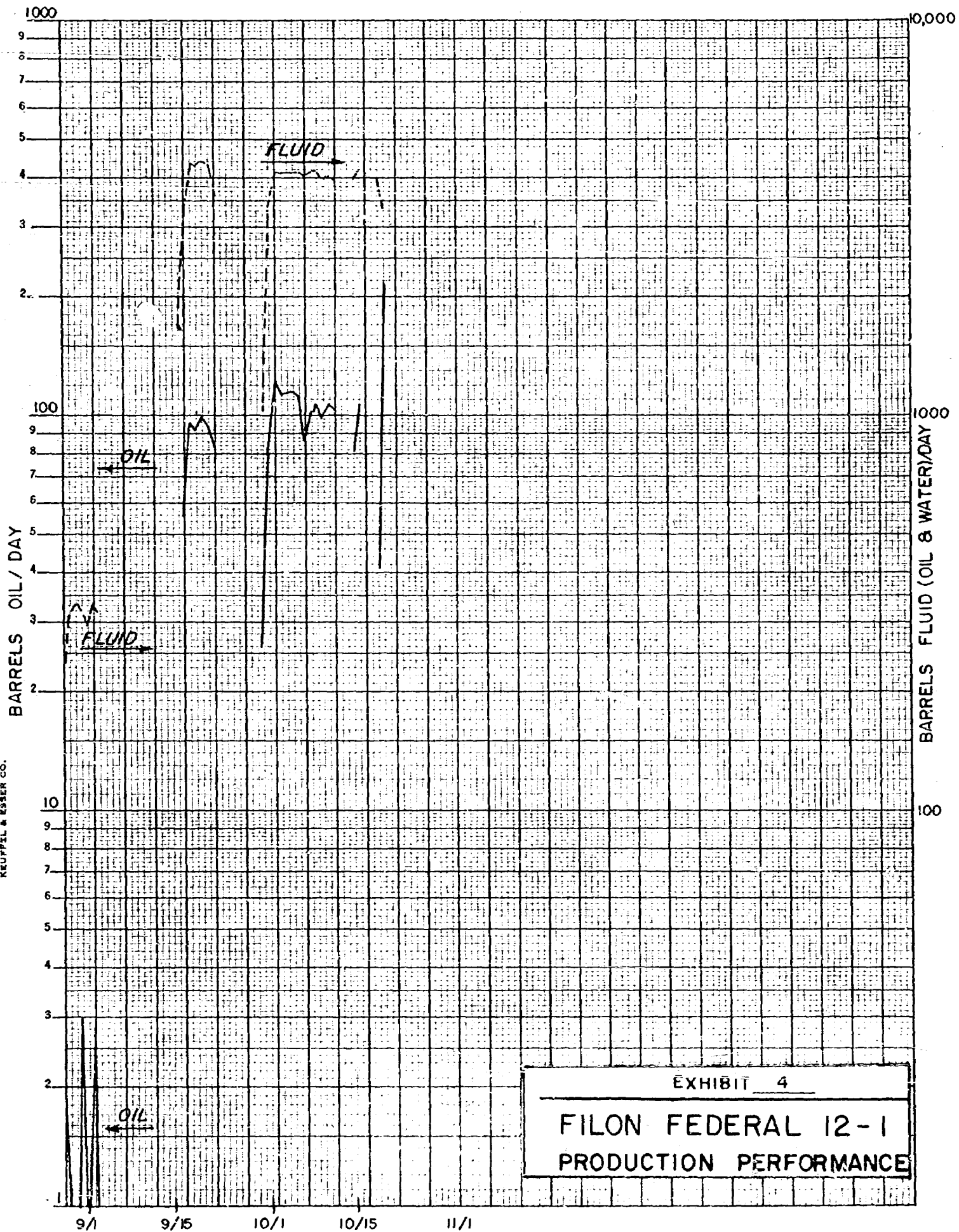
S E A L

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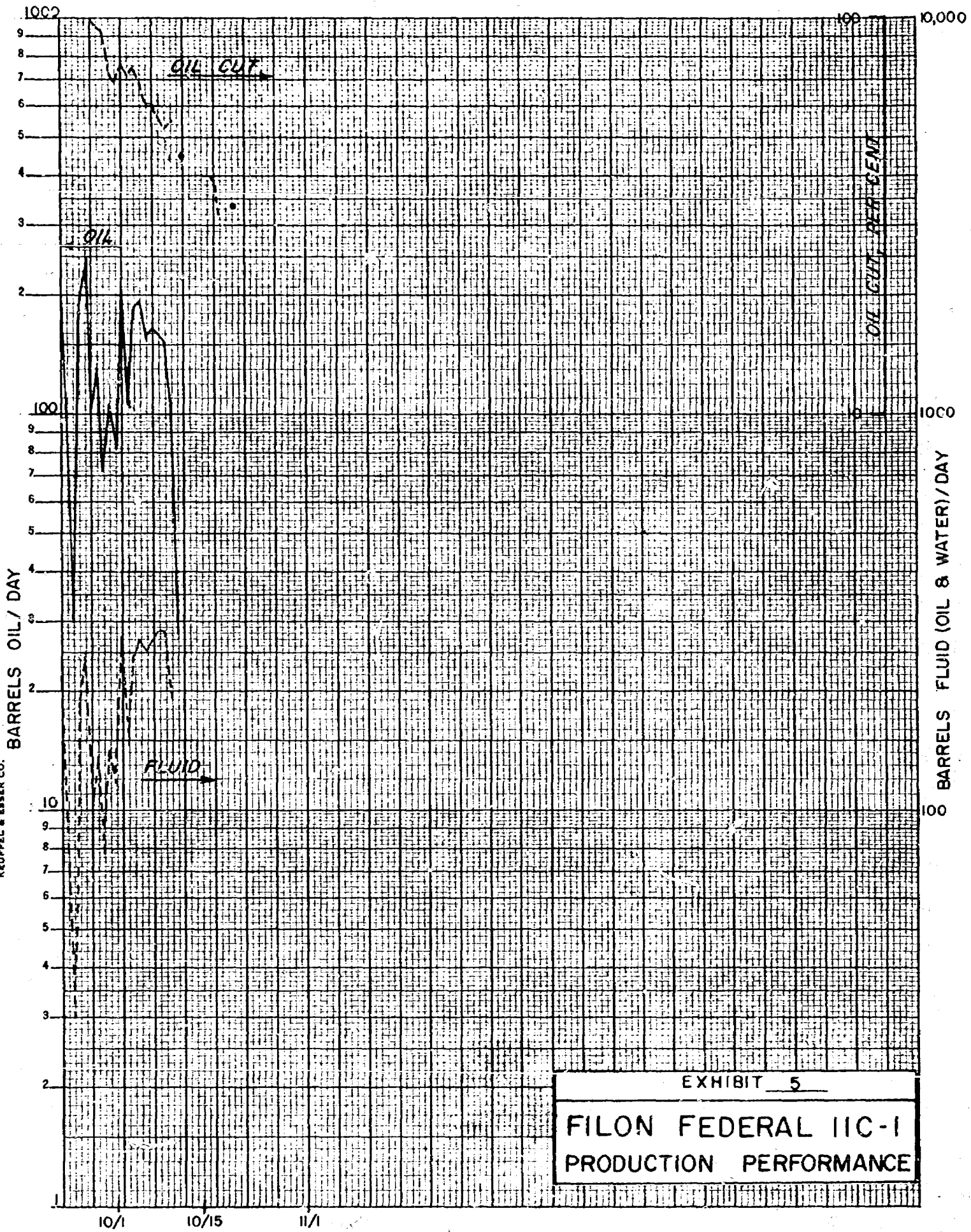
ROCK & FLUID PROPERTIES
EAGLE MESA - ENTRADA
 SANDOVAL CO., NEW MEXICO

Depth to Entrada (Average 3 Wells) - - - - -	5460 feet
Porosity (Avg. of 30 Core Samples in Oil Column of 12-1) -	24.96%
Permeability (Arith. Avg. of Above 30 Samples) - - - - -	493 md. (to air)
Reservoir Pressure (Original From DST 12-1 @ +1227) - - -	2190 psig
Temperature of Reservoir - - - - -	150° F
Oil Gravity @ 60° F - - - - -	32.5° API
Oil Viscosity @ Reservoir Temp (est) - - - - -	4.0 cp
Oil Pour Point - - - - -	80° F
Gas in Solution - - - - -	nil
Water Salinity (Total Dissolved Solids-Fed. 12-1) - - - -	8,718 PPM
Water Viscosity @ Reservoir Temp. (est) - - - - -	0.5 cp

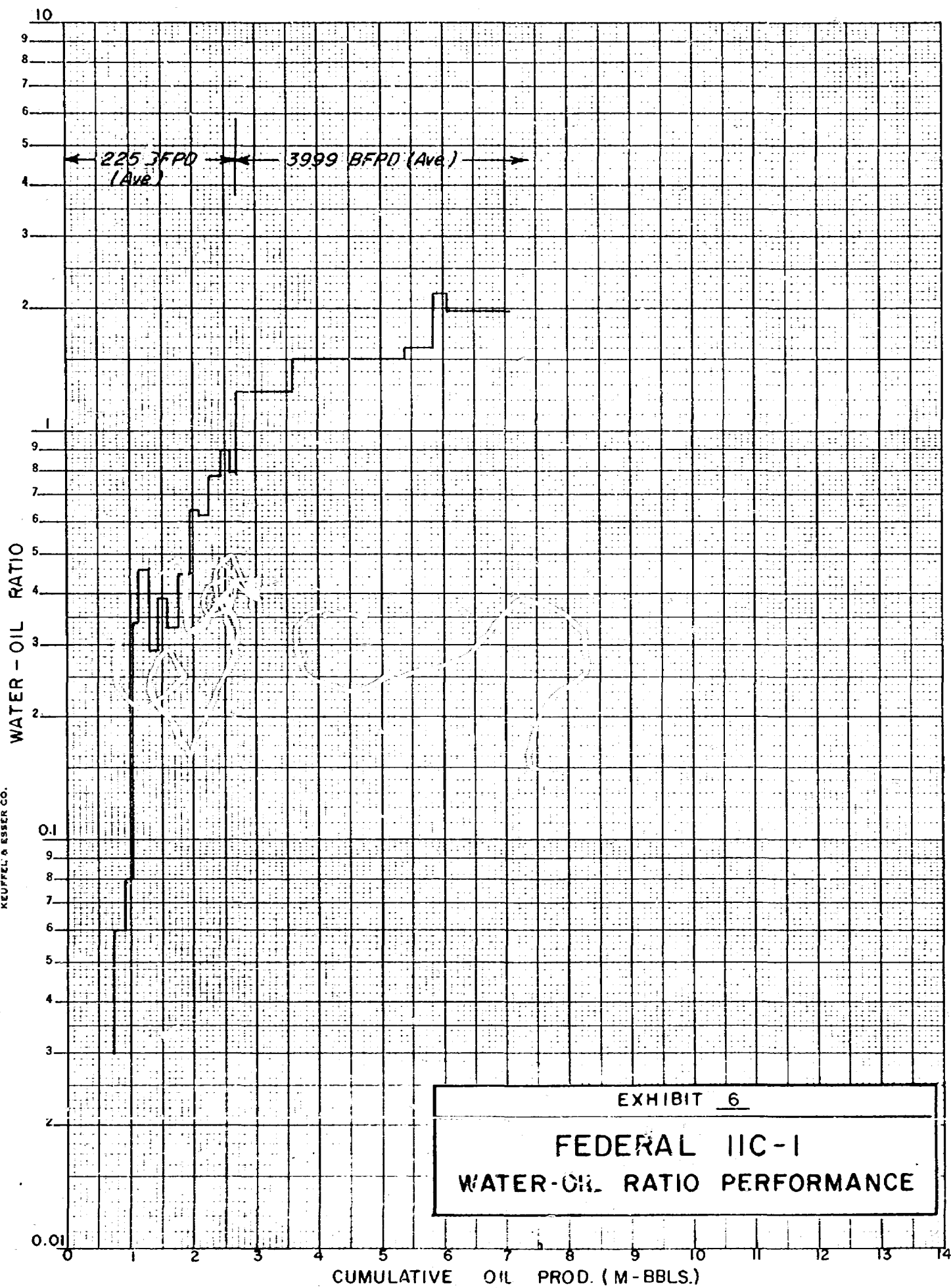
K.W. SEMI-LOGARITHMIC 46 5813
 3 CYCLES X 140 DIVISIONS
 MADE IN U.S.A.
 KEUFFEL & ESSER CO.



K&E SEMI-LOGARITHMIC 46 5813
3 CYCLES X 140 DIVISIONS MADE IN U.S.A.
KEUFFEL & ESSER CO.



K&E SEMI-LOGARITHMIC 46 5813
3 CYCLES X 140 DIVISIONS
MADE IN U.S.A.
KEUFFEL & ESSER CO.



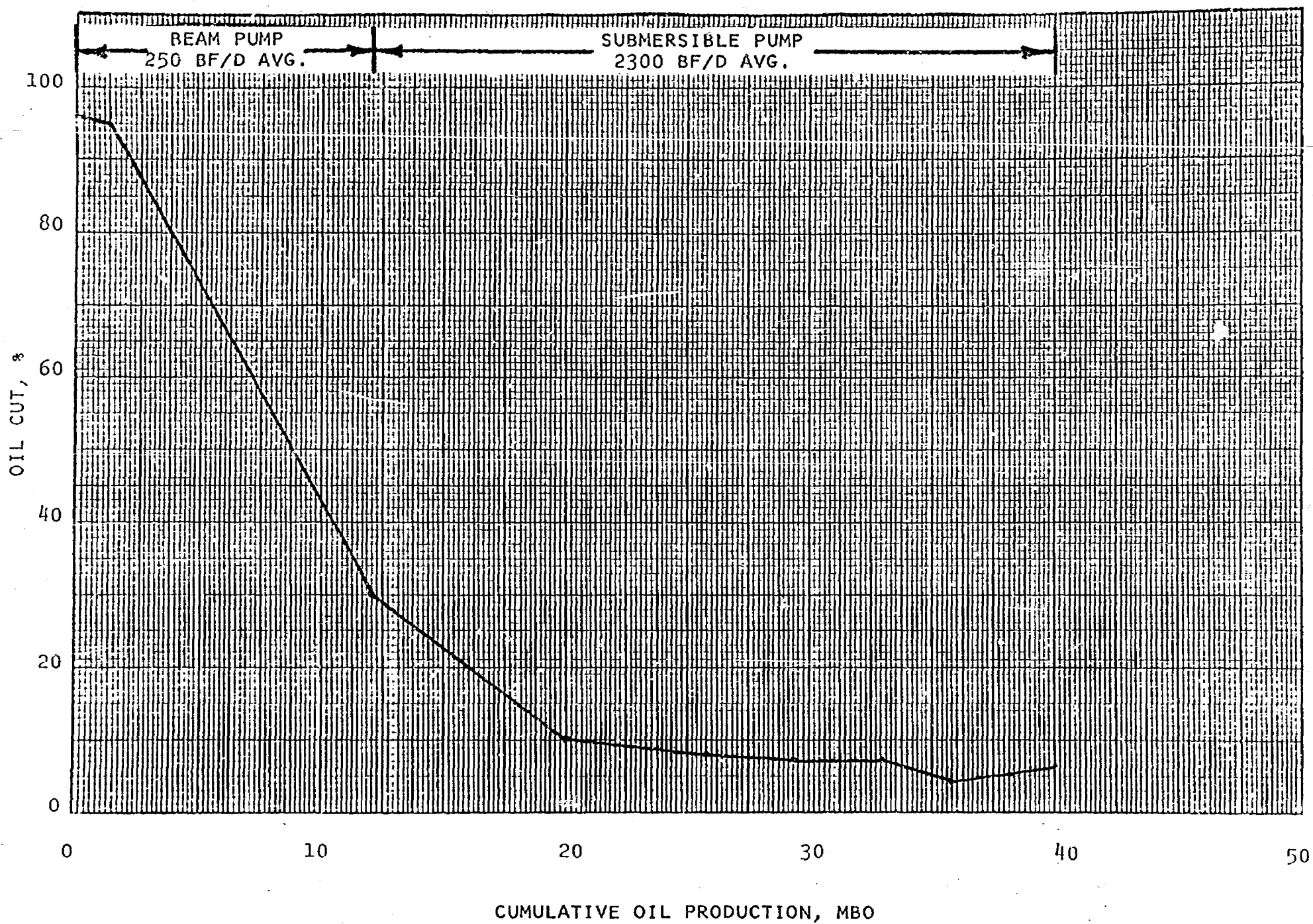
**EAGLE MESA ENTRADA PRODUCTION
(BARRELS PER MONTH)**

	<u>Federal 11 C-1</u>		<u>Federal 12 C-1</u>		<u>Navajo 13 C-1</u>		<u>NAVAJO 14 C-1</u>	
	<u>Oil</u>	<u>Water</u>	<u>Oil</u>	<u>Water</u>	<u>Oil</u>	<u>Water</u>	<u>Oil</u>	<u>Water</u>
1975								
September	1255	69	632	29907	-	-	-	-
October	11281	26928	2286	72904	2850	16	-	-
November	8230	76925	2093	52525	5001	2548	2654	1547
December	5351	65716	1043	25747	3668	3000	1852	3699
1976								
January	2924	38250	2538	73856	3344	2750	1291	2856
February	757	0	3133	79680	2765	2375	1160	1000
March	3389	41850	2391	55800	14894	38925	7377	44775
April	3063	75000	2698	114000	13080	66800	6392	58957
May	3369	77381	2030	104400	8650	62900	5341	67200
June	645	10000	1402	77604	1810	25240	1843	24200
July	-	-	-	-	-	-	-	-
August	-	-	-	-	-	-	-	-
September	-	-	-	-	1716	20800	-	-

114000
2700
3 116700
3890

submersible
egpt
inst.

BEFORE EXAMINER NOTTER	
OIL CONSERVATION COMMISSION	
Petro. Lewis	EXHIBIT NO. 2
CASE NO. 5574	



FEDER
EAGLE
SANDOVAL CO

CUMULATIVE

BEFORE E
OIL CONCE
Petro-Plus
CASE NO.

SUBMERSIBLE PUMP
2300 BF/D AVG.

FEDERAL 11 C-1
EAGLE MESA FIELD
SANDOVAL COUNTY, NEW MEXICO

OIL CUT
VS
CUMULATIVE OIL PRODUCTION

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Petro-Plus EXHIBIT NO. 3
CASE NO. 5574

CUMULATIVE OIL PRODUCTION, MBO

Dockets Nos. 31-76 and 32-76 are tentatively set for hearing on November 10 and November 23, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 27, 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:

CASE 5768: (Continued from September 29, 1976, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Service Drilling Company, The Traders Indemnity Company, and all other interested parties to appear and show cause why the Gonzales-Pittman Well No. 1, located in Unit M of Section 24, Township 21 North, Range 21 East, Mora County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5785: (Continued from October 13, 1976, Examiner Hearing)

Application of Doyle Hartman for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Seven Rivers-Queen formation underlying the NE/4 NE/4, NW/4 NE/4, SW/4 NE/4, and SE/4 NE/4 of Section 19, Township 24 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico, to form four 40-acre proration units to be dedicated to four oil wells to be drilled at standard locations on said tracts. Also to be considered will be the cost of drilling and completing said wells 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 wells and a charge for risk involved in drilling said wells.

CASE 5574: (Reopened) (Continued from October 13, 1976, Examiner Hearing)

In the matter of Case 5574 being reopened pursuant to the provisions of Order No. R-5118 which order established a temporary special depth bracket allowable of 750 barrels of oil per day for the Eagle Mesa-Entrada Oil Pool, Sandoval County, New Mexico. All interested parties may appear and show cause why said special depth bracket allowable should not be rescinded.

CASE 5789: Application of Amoco Production Company for salt water disposal well, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Fusselman formation through the perforated interval from 8313 feet to 8538 feet in its Swearingen "C" Well No. 2 located in Unit M of Section 18, Township 5 South, Range 33 East, Petersen-Fusselman Pool, Roosevelt County, New Mexico.

CASE 5790: Application of Dome Petroleum Corporation for pool creation and assignment of a discovery allowable, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Entrada production and the assignment of approximately 58,770 barrels of oil discovery allowable to the discovery well, being the Federal 21 Well No. 1 located in Unit K of Section 21, Township 20 North, Range 5 West, McKinley County, New Mexico.

CASE 5791: Application of Texaco Inc. for a non-standard gas proration unit and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 320-acre non-standard Eumont gas proration unit comprising the E/2 SE/4, SW/4 SE/4, and SE/4 SW/4 of Section 23; the W/2 NW/4 of Section 25; and the E/2 NE/4 of Section 26, all in Township 19 South, Range 36 East, Lea County, New Mexico, to be simultaneously dedicated to applicant's William Weir Wells Nos. 1 and 2 at unorthodox locations in Unit E of said Section 25 and Unit N of said Section 23, respectively.

CASE 5792: Application of Dugan Production Corporation for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Angels Peak-Gallup and Basin-Dakota production in the wellbore of its McAdams Well No. 3 located in Unit H of Section 34, Township 27 North, Range 10 West, San Juan County, New Mexico.

CASE 5793: Application of Dugan Production Corporation for an unorthodox gas well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Sherman Edward Well No. 2A, to be drilled at a point 2500 feet from the North line and 510 feet from the West line of Section 3, Township 29 North, Range 5 West, Blanco Melaverde Gas Pool, Rio Arriba County, New Mexico, the N/2 of said Section 3 to be dedicated to the well.

CASE 5776: (Continued & Readvertised)

Application of Continental Oil Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its James Ranch Unit Well No. 8 to be drilled at a point 1980 feet from the North line and 660 feet from the West line of Section 31, Township 22 South, Range 31 East, Los Medanos-Morrow Gas Pool, Eddy County, New Mexico, the N/2 of said Section 31 to be dedicated to the well.

CASE 5794: Application of Continental Oil 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 31, Township 22 South, Range 31 East, Los Medanos Field, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location in Unit L of said Section 31. 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 5795: Application of Continental Oil Company for an exception to the provisions of Order No. R-1670, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 21(A) of the General Rules and Regulations for the prorated gas pools of Northwestern New Mexico contained in Order No. R-1670, to permit the reporting of Basin Dakota production from wells on its Northeast Haynes Lease in Township 24 North, Range 5 West, Rio Arriba County, New Mexico, without the necessity of separately measuring the production from each well.

CASE 5777: (Continued & Readvertised)

Application of Gifford & Mitchell and M. B. Wisenbaker for pool creation, pool rules, and a non-standard gas spacing unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new gas pool for Pennsylvanian production for its Horse Back Well No. 1 located 1000 feet from the South line and 1980 feet from the East line of Section 33, Township 26 South, Range 36 East, Lea County, New Mexico, the promulgation of pool rules therefor, including a provision for 640-acre spacing and approval for a 529.52-acre non-standard gas spacing unit comprising all of partial Sections 33 and 34 of the aforesaid township.

Docket No. 30-76

Dockets Nos. 31-76 and 32-76 are tentatively set for hearing on November 10 and November 23, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - THURSDAY - NOVEMBER 4, 1976

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

CASE 5743: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit John W. Adams, Executor of Estates of R. W. and June Adams; and Ruth McGahey, Fred McGahey and David McGahey dba Adams & McGahey, American Employers' Insurance Company, and all other interested parties to appear and show cause why the following wells located in Township 21 North, Range 30 East, Harding County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program:

Gonzales Well No. 2, located in Unit P of Section 9; Adams & McGahey Well No. 1, located in Unit B of Section 16; and Gonzales "A" Well No. 1, located in Unit H of Section 32.

Upon application of John W. Adams, this case will be heard De Novo pursuant to the provisions of Rule 1220.

Docket No. 27-76

Dockets Nos. 29-76 and 30-76 are tentatively set for hearing on October 27 and November 10, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 13, 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. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

- ALLOWABLE: (1) Consideration of the allowable production of gas for November, 1976, from seventeen prorated pools in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.
- (2) Consideration of the allowable production of gas for November, 1976, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 5773: (Continued from September 29, 1976, Examiner Hearing)

Application of Yates Petroleum Corporation for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the North Millman Unit Area comprising 2,017 acres, more or less, of State lands in Township 19 South, Range 28 East, Eddy County, New Mexico.

CASE 5783: Application of Palmer Oil and Gas Company for an unorthodox gas well location and a non-standard proration unit, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 335.66-acre non-standard proration unit, comprising all of Sections 6 and 7, Township 26 North, Range 2 West, Blanco Mesaverde Pool, Rio Arriba County, New Mexico, to be dedicated to a well to be drilled at an unorthodox location 1850 feet from the South line and 700 feet from the West line of said Section 7.

CASE 5784: Application of Atlantic Richfield Company for four unorthodox locations and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to simultaneously dedicate a previously approved 320-acre Jalmat gas proration unit comprising the NW/4, SW/4 NE/4, E/2 NE/4, NE/4 SE/4 of Section 35, Township 23 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico, to its John P. Combust Wells Nos. 1, 2, 3, and 4 located at unorthodox locations in Units H, G, A, and E, respectively, of said Section 35.

CASE 5785: Application of Doyle Hartman for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Seven Rivers-Queen formation underlying the NE/4 NE/4, NW/4 NE/4, SW/4 NE/4, and SE/4 NE/4 of Section 19, Township 24 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico, to form four 40-acre proration units to be dedicated to four oil wells to be drilled at standard locations on said tracts. Also to be considered will be the cost of drilling and completing said wells 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 wells and a charge for risk involved in drilling said wells.

CASE 5786: Application of Texaco Inc. for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project on its New Mexico "BZ" State Lease, Langlie-Mattix Pool, Lea County, New Mexico, by the injection of water into the Seven Rivers-Queen formation through seven injection wells located in Unit L of Section 15 and Units B, D, F, H, J, and P of Section 16, Township 23 South, Range 37 East.

CASE 5787: Application of Boyd Operating Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Grayburg-Jackson Pool, Eddy County, New Mexico, by the injection of water into the Grayburg-San Andres formation through its Robinson Well No. 8 located in Unit H of Section 25 and its Brinson Wells Nos. 2 and 3 located, respectively, in Units A and G of Section 36, Township 16 South, Range 31 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 orthodox and unorthodox locations.

CASE 5574: (Reopened)

In the matter of Case 5574, being reopened pursuant to the provisions of Order No. R-5118 which order established a temporary special depth bracket allowable of 750 barrels of oil per day for the Eagle Mesa-Entrada Oil Pool, Sandoval County, New Mexico. All interested parties may appear and show cause why said special depth bracket allowable should not be rescinded.

CASE 5780: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Northwest Production Corporation, Federal Insurance Company, and all other interested parties to appear and show cause why the Blanco 30-12 Well No. 1, located in Unit A of Section 4, Township 30 North, Range 12 West, San Juan County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5781: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Petroleum Development Corporation, American Employers Insurance Company, and all other interested parties to appear and show cause why the San Luis Federal Well No. 1, located in Unit J of Section 21, Township 18 North, Range 3 West, Sandoval County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5782: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit U. S. Frigidice, Inc., Fireman's Fund Indemnity Company, and all other interested parties to appear and show cause why the U. S. Frigidice Well No. 1, Clyde Berlier (Kayser), located in Unit A of Section 14, Township 19 North, Range 21 East, Mora County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5783: Southeastern New Mexico nomenclature case calling for the creation, contraction, extension and abolishment of certain pools in Lea, Eddy, and Roosevelt Counties, New Mexico:

a) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Angell Ranch-Morrow Gas Pool. The discovery well is the Penroc Oil Corporation Wright Federal Well No. 1 located in Unit O of Section 6, Township 20 South, Range 28 East, NMFM. Said pool would comprise:

TOWNSHIP 20 SOUTH, RANGE 28 EAST, NMFM
Section 6: All

b) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Strawn production and designated as the West Burton Flat-Strawn Gas Pool. The discovery well is the David Fasken El Paso Federal Well No. 3 located in Unit H of Section 1, Township 21 South, Range 26 East, NMFM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 26 EAST, NMFM
Section 1: Lots 1 through 8

c) CREATE a new pool in Roosevelt County, New Mexico, classified as a gas pool for Canyon production and designated as the North Chaverco-Canyon Gas Pool. The discovery well is the Union Oil Company of California Roberts Well No. 1, located in Unit D of Section 9, Township 7 South, Range 33 East, NMFM. Said pool would comprise:

TOWNSHIP 7 SOUTH, RANGE 33 EAST, NMFM
Section 9: W/2

d) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Foster Ranch-Morrow Gas Pool. The discovery well is the Mark Production Company Foster Well No. 1 located in Unit J of Section 21, Township 20 South, Range 24 East, NMFM. Said pool would comprise:

TOWNSHIP 20 SOUTH, RANGE 24 EAST, NMFM
Section 21: E/2

e) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Cherry Canyon production and designated as the Nash Draw Cherry-Canyon Pool. The discovery well is the Mesa Petroleum Company Nash Unit Well No. 4, located in Unit A of Section 13, Township 23 South, Range 29 East, NMFM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 29 EAST, NMFM
Section 13: NE/4

f) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Strawn production and designated as the Ojo Chisco-Strawn Gas Pool. The discovery well is the American Quasar Petroleum Company of New Mexico Ojo Chiso Unit Well No. 1, located in Unit E of Section 23, Township 22 South, Range 34 East, NMFM. Said pool would comprise:

TOWNSHIP 22 SOUTH, RANGE 34 EAST, NMFM
Section 23: W/2

g) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Cisco production and designated as the North Vacuum-Cisco Gas Pool. The discovery well is the Marathon Oil

Company State Section 7 Com Well No. 1, located in Unit G of Section 7, Township 17 South, Range 35 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM
Section 7: E/2

h) CONTRACT the vertical limits of the Kemnitz-Pennsylvanian Pool in Lea County, New Mexico, to the Cisco formation only, redesignating said pool the Kemnitz-Cisco Pool and redefining said pool to comprise:

TOWNSHIP 16 SOUTH, RANGE 33 EAST, NMPM
Section 13: N/2 and SE/4

i) CONTRACT the vertical limits of the Sombrero-Pennsylvanian Gas Pool in Lea County, New Mexico, to the Atoka formation only, redesignating said pool the Sombrero-Atoka Gas Pool and redefining said pool to comprise:

TOWNSHIP 16 SOUTH, RANGE 33 EAST, NMPM
Section 12: W/2
Section 13: W/2 and SE/4

j) ABOLISH the East Shugart-Queen Pool in Lea County, New Mexico, described as:

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

k) ABOLISH the Watkins-Seven Rivers Pool in Eddy and Lea Counties, New Mexico, described as:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
Section 36: E/2

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM
Section 31: All

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM
Section 6: N/2

l) EXTEND the vertical limits of the Watkins-Grayburg Pool in Lea County, New Mexico, to include the Yates, Seven Rivers, and Queen formations, redesignating said pool the Watkins Yates-Seven Rivers-Queen-Grayburg Pool and redefining said pool to comprise:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
Section 31: NW/4 and S/2

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM
Section 6: N/2

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

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM
Section 18: SE/4

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

TOWNSHIP 21 SOUTH, RANGE 26 EAST, NMPM
Section 1: S/2

o) EXTEND the North Burton Flats-Wolfcamp Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 28 EAST, NMPM
Section 10: W/2
Section 15: W/2
Section 16: E/2

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

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM
Section 20: E/2

TOWNSHIP 24 SOUTH, RANGE 26 EAST, NMPM
Section 3: W/2

- q) EXTEND the North Dagger Draw-Upper Pennsylvanian Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM
Section 30: SE/4

- r) EXTEND the Dayton-San Andres Pool in Eddy County, New Mexico, to include therein:

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

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

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM
Section 27: NE/4 and N/2 NW/4

- t) EXTEND the Hoag Tank-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 24 EAST, NMPM
Section 23: All

- u) EXTEND the Middle Lynch Yates -Seven Rivers Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 34 EAST, NMPM
Section 28: N/2 N/2

- v) EXTEND the Maljamar-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 33 EAST, NMPM
Section 32: W/2

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

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM
Section 20: SW/4

- x) EXTEND the Red Lake Queen - Grayburg - San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 27 EAST, NMPM
Section 13: SE/4 SE/4
Section 24: NE/4

- y) EXTEND the Sawyer-San Andres Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM
Section 13: SW/4

- z) EXTEND the Shugart Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
Section 26: NW/4
Section 27: NE/4

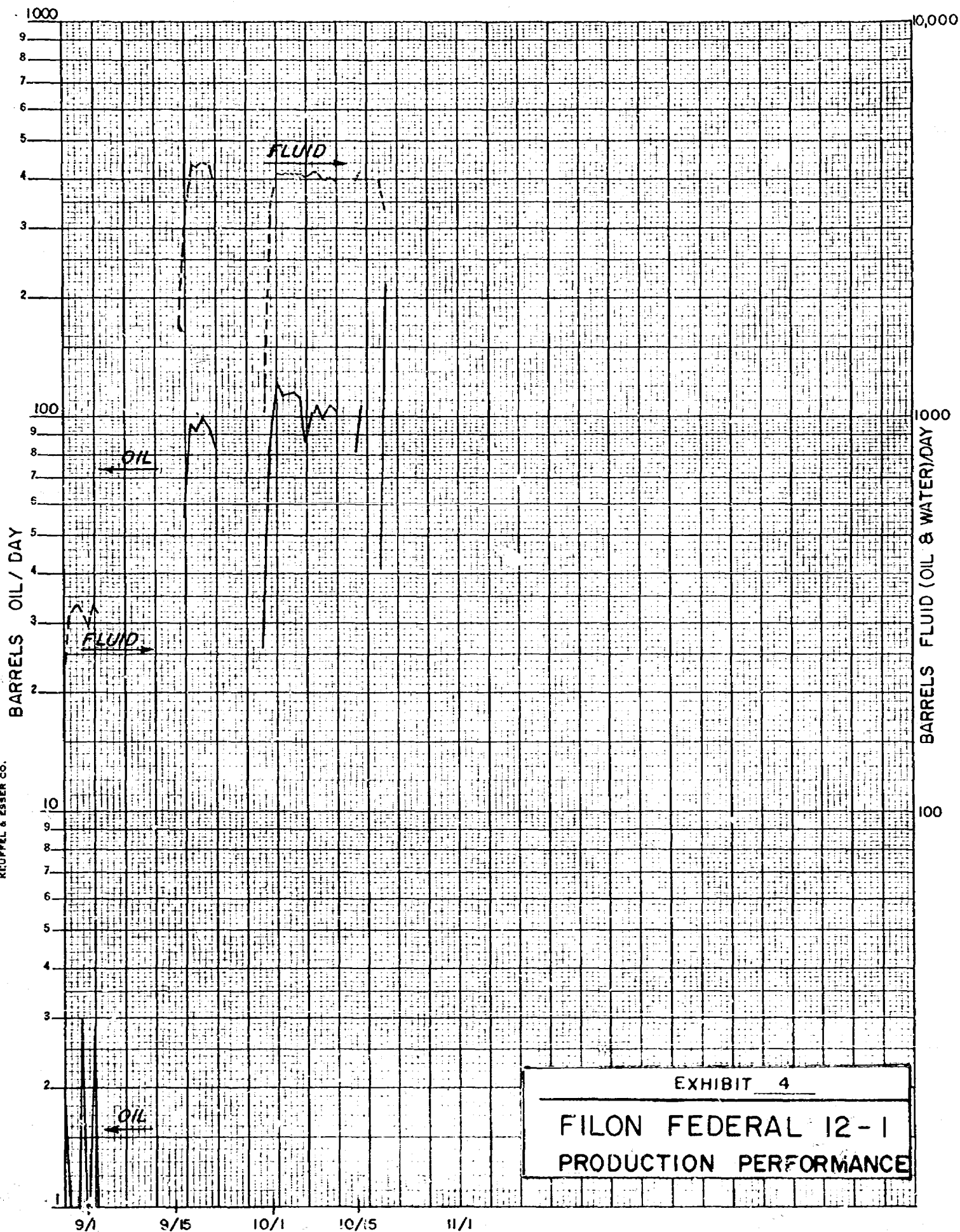
- aa) EXTEND the Vacuum-Queen Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 2: SW/4
Section 3: SE/4

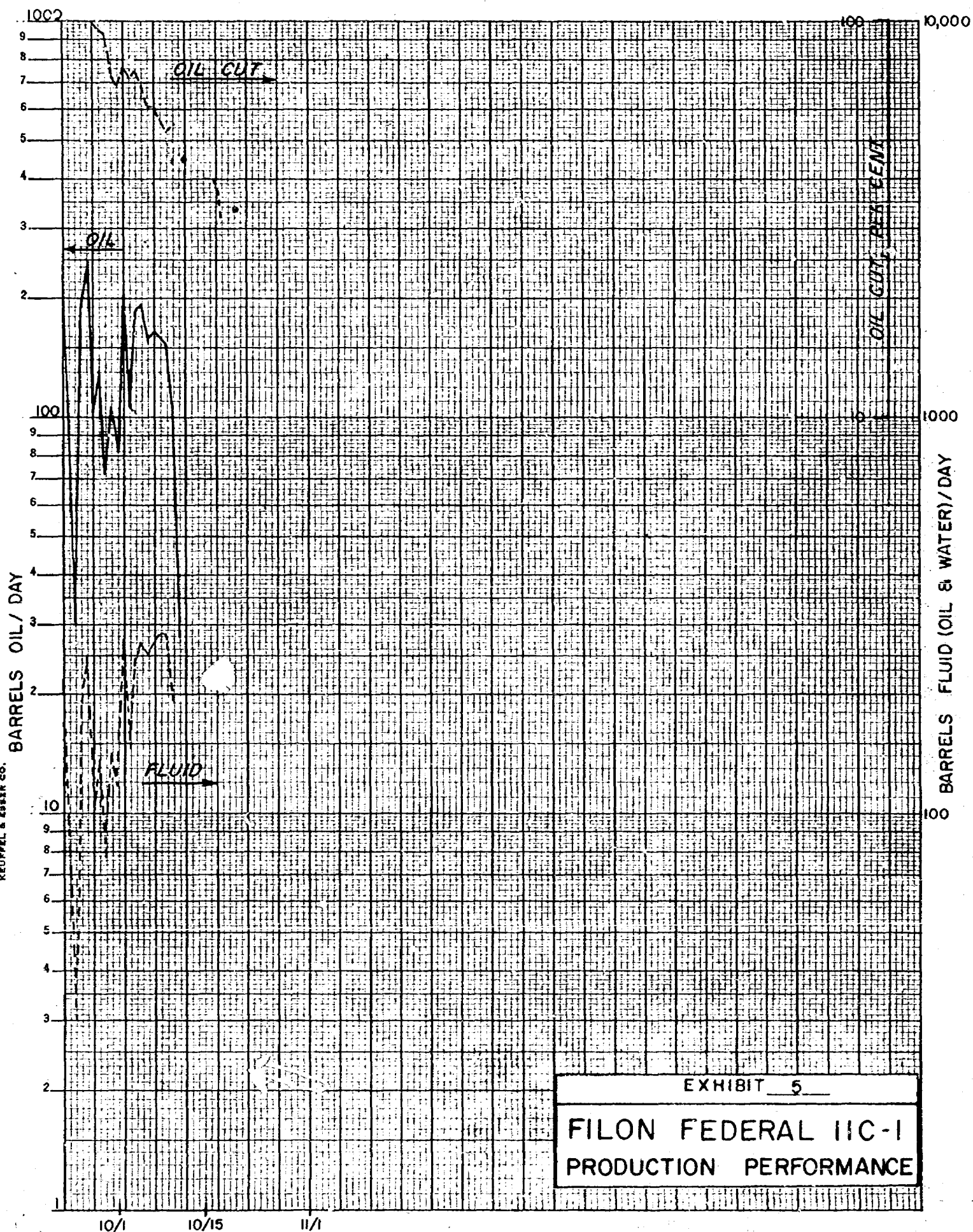
ROCK & FLUID PROPERTIES
EAGLE MESA - ENTRADA
SANDOVAL CO., NEW MEXICO

Depth to Entrada (Average 3 Wells) - - - - -	5460 feet
Porosity (Avg. of 30 Core Samples in Oil Column of 12-1) -	24.96%
Permeability (Arith. Avg. of Above 30 Samples) - - - - -	493 md. (to air)
Reservoir Pressure (Original From DST 12-1 @ +1227) - - -	2190 psig
Temperature of Reservoir - - - - -	150° F
Oil Gravity @ 60° F - - - - -	32.5° API
Oil Viscosity @ Reservoir Temp (est) - - - - -	4.0 cp
Oil Pour Point - - - - -	80° F
Gas in Solution - - - - -	nil
Water Salinity (Total Dissolved Solids-Fed. 12-1) - - - -	8,718 PPM
Water Viscosity @ Reservoir Temp. (est) - - - - -	0.5 cp

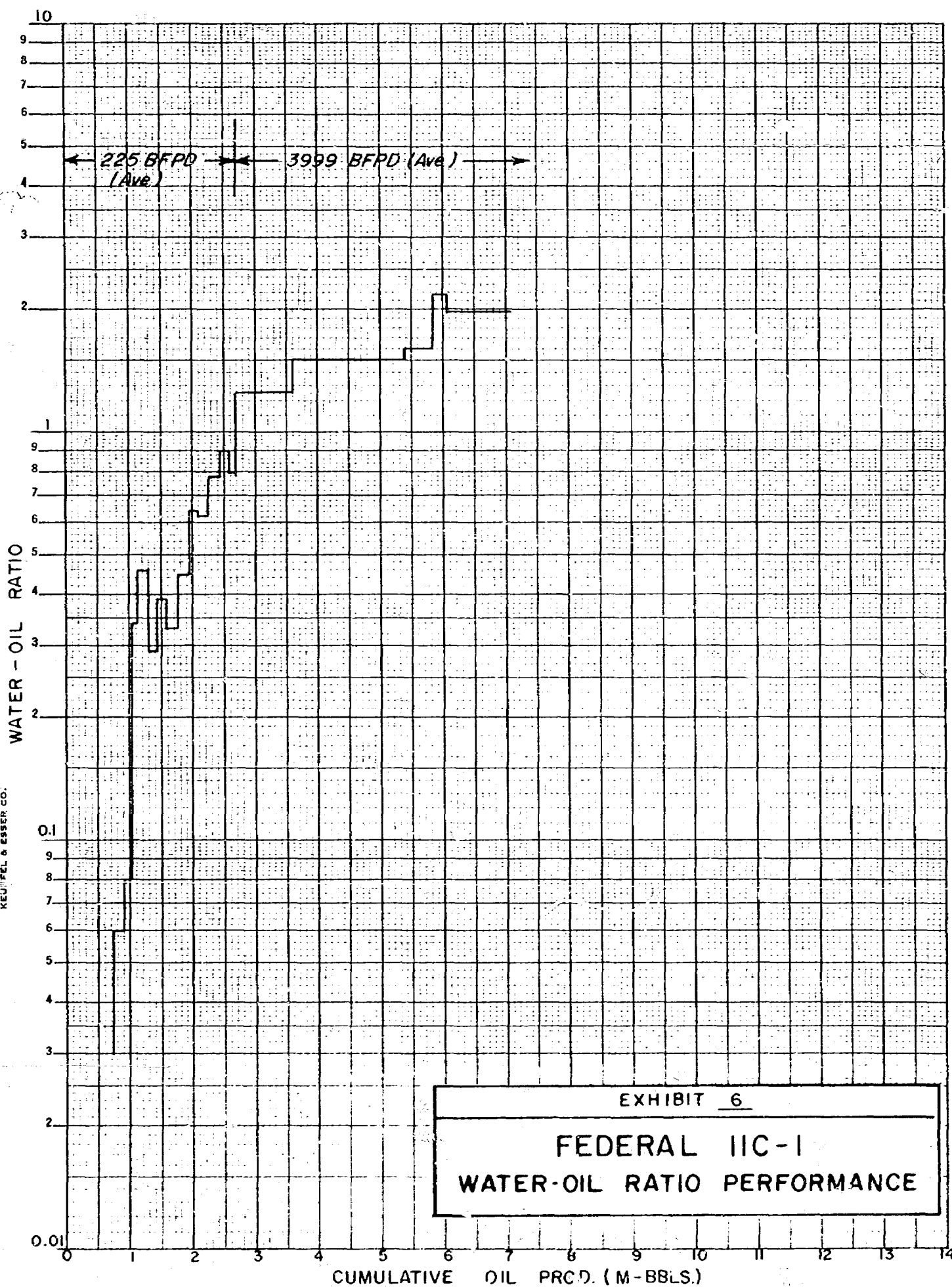
K&E SEMI-LOGARITHMIC 46 5813
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KEUFFEL & ESSER CO.



ROCK & FLUID PROPERTIES
EAGLE MESA - ENTRADA
 SANDOVAL CO., NEW MEXICO

Depth to Entrada (Average 3 Wells) - - - - - 5460 feet
 Porosity (Avg. of 30 Core Samples in Oil Column of 12-1) - 24.96%
 Permeability (Arith. Avg. of Above 30 Samples) - - - - - 493 md. (to air)
 Reservoir Pressure (Original From DST 12-1 @ +1227) - - - 2190 psig
 Temperature of Reservoir - - - - - 150° F
 Oil Gravity @ 60° F - - - - - 32.5° API
 Oil Viscosity @ Reservoir Temp (est) - - - - - 4.0 cp
 Oil Pour Point - - - - - 80° F
 Gas in Solution - - - - - nil
 Water Salinity (Total Dissolved Solids-Fed. 12-1) - - - - 8,718 PPM
 Water Viscosity @ Reservoir Temp. (est) - - - - - 0.5 cp

Exhibit 3

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
<i>Filou</i> EXHIBIT NO. <u>3</u>	
CASE NO. <u>5574</u>	

DRAFT

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:

APPLICATION OF FILON EXPLORA-
TION CORPORATION FOR POOL
CREATION, ASSIGNMENT OF A
DISCOVERY ALLOWABLE, AND
SPECIAL POOL RULES, SAN-
DOVAL COUNTY, NEW MEXICO

CASE NO. 5574

Order No. R-

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 22, 1975,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of November, 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, Filon Exploration
Corporation, has discovered a new common
source of supply for the production of oil
from the Entrada formation by its Federal
12 Well No. 1, located in Unit M of Section 12,
Township 19 North, Range 4 West, NMDM, Sandoval
County, New Mexico, said well being completed
to produce from the Entrada formation August
25, 1975, through casing perforations from
5483 feet to 5493 feet.

(3) That the applicant seeks the ~~designation~~ creation and designation of a new oil pool for said Federal 12 Well No. 1, ~~the assignment~~ the promulgation of special rules for said pool including the assignment of a special depth bracket allowance, and the assignment of an oil discovery allowance to the discovery well.

(4) That having made a bona fide discovery of a ~~new~~ new common source of supply, the discovery well, applicant's Federal 12 Well No. 1 is eligible for and should be assigned an oil discovery allowance of ~~27,415~~ barrels based on the top of the perforations which is at 5483 ^{of} feet, five barrels for each foot of depth from the surface of the ground to the top of the perforations at 5483 feet, or 27,415 barrels.

(5) That a new pool for said discovery well should be created and designated the Eagle Mesa-Entrada Oil Pool, and the vertical limits of said pool should be the Entrada formation and the horizontal limits should comprise:

TOWNSHIP 19 North, Range 4 West, NMPM

Section 11: SE/4 SE/4

Section 12: SW/4 SW/4

Section 13: NW/4 NW/4

(6) That the aforesaid oil pool ~~apparently~~ produces from the ~~Eutawda~~ Eutawda Formation with a ~~high water-oil cut~~, ~~apparently~~ as the result of a ~~high~~ high connate water saturation and an active water-drive mechanism.

(7) That tests have shown that high volume pumping of wells in the subject pool appears to reduce the water-oil cut and should result in the recovery of additional quantities of oil, thereby preventing waste.

(8) That the applicant proposes a special depth bracket allowance of 2,000 barrels of oil per day for the subject pool.

(9) That the water-oil cuts encountered in the wells completed in said pool to date, even when reduced by high volume pumping, would result in the production of excessive volumes of fluid beyond the physical capacity of the ~~the~~ ^{the} producing equipment or ~~the~~ disposal facilities, ~~and the~~ ^{the} production were such as to justify a 2000-barrel per day ^{oil} allowance.

(10) That production of such excessive quantities of fluid as would be necessary to even approach 2,000 barrels of oil per day would ~~result~~

~~in severe hazard~~

greatly increase the hazard of water coming and subsequent loss of oil production, thereby causing waste.

(11) That the Entrada formation in the subject pool bears close resemblance to the Entrada formation in the Medina Entrada Oil Pool, which is located some five miles to the east-southeast.

~~(12) That a special depth bracket allowance of 750 has been in barrels of oil per day.~~

(12) That the reservoir characteristics and the well producing characteristics in the subject pool and the said Medina Entrada Oil Pool appear to be almost identical.

(13) That a special depth bracket allowance of 750 barrels of oil per day has been in effect in said Medina Entrada Oil Pool for quite some time and has proven to be efficient and in the interest of conservation.

(14) That until more is known of the actual characteristics of the reservoir and the fluid mechanics in the subject pool, it appears to the Commission to be unwise to

TOWNSHIP 19 North, Range 4 West, NMPM

Section 11: SE/4 SE/4

Section 12: SW/4 SW/4

Section 13: NW/4 NW/4

(2) That the discovery well for said pool, the Filon Oil Exploration Corporation Federal 13 Well No. 1 located in Unit M of Section 12, Township 19 North, Range 4 West, NMPM, Sandoval County, New Mexico, is hereby assigned an oil discovery allowance of 27,415 barrels of oil, to be produced within 730 days after the effective date of this order.

(3) That a temporary special depth bracket allowable of 750 barrels of oil per day is hereby established for the ~~Media~~ Eagle Mesa-Entrada Oil Pool, Sandoval County, New Mexico.

October, 1976,

(4) That this case shall be reopened at an examiner hearing in ~~July, 1974~~, at which time the operators in the subject pool may appear and show cause why the temporary special depth bracket allowable should not be rescinded. Eagle Mesa-

107
(5) That the Secretary-Director of the Commission may, at any time it appears that premature water encroachment or water coning is occurring, or other evidence of reservoir damage is apparent, rescind the provisions of this order and cause the top unit allowable for the ~~Media~~ Entrada Oil Pool to revert to 347 barrels of oil per day.

(6) That each month the applicant shall take production fluid level tests on each producing well in the pool and shall report the results of these tests along with other pertinent monthly well production data to the Aztec district office of the Commission.

(7) 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

[Signature]
L. R. TRUJILLO, Chairman

[Signature]
ALEX. J. ARMILLO, Member

[Signature]
A. L. PORTER, Jr., Member & Secretary

S E A L

dr/

NORTHWEST EXPLORATION COMPANY



D. J. ECKELBERG
VICE PRESIDENT, EXPLORATION

ONE PARK CENTRAL, SUITE 1487
DENVER, COLORADO 80202
303-623-9303

November 26, 1975

DEC 1 - 1975
OIL CONSERVATION COMM.
Santa Fe

Ms. Florine Davidson
New Mexico Oil Conservation Commission
P. O. Box 2039
Santa Fe, NM 87501

Dear Florine:

Re: Case No. 5574
Order No. R-5118

Enclosed are the following Exhibits 1 thru 6 on the Filon Exploration Company Federal 12 Well No. 1 which you so kindly loaned us on November 18:

- No. 1 - Well Status and Lease Ownership Map
- No. 2 - Log Cross-Section and Completion
- No. 3 - Rock and Fluid Properties-Eagle Mesa-Entrada
- No. 4 - Production Performance
Filon Federal 12-1
- No. 5 - Production Performance
Filon Federal 11C-1
- No. 6 - Water-Oil Ratio Performance
Filon Federal 11C-1

Dual Induction Laterlog
Compensated Formation Density Log

It was certainly a pleasure meeting you and I want to thank you for your assistance and cooperation.

Very truly yours,

Betty Burnett
Supervisor of Contracts and Units

BB/sjm
enclosures
Certified Mail No. 571193



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 1088 - SANTA FE
87501

DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO
November 18, 1975



STATE GEOLOGIST
EMERY C. ARNOLD

L. C. White
White, Koch, Kelly &
McCarthy
Attorneys at Law
Post Office Box 787
Santa Fe, New Mexico 87501

Re: CASE NO. 5574
ORDER NO. R-5118

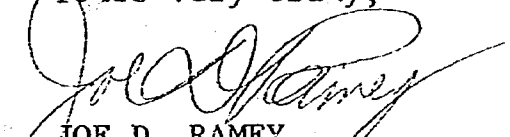
Applicant:

Filon Exploration Corp.

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

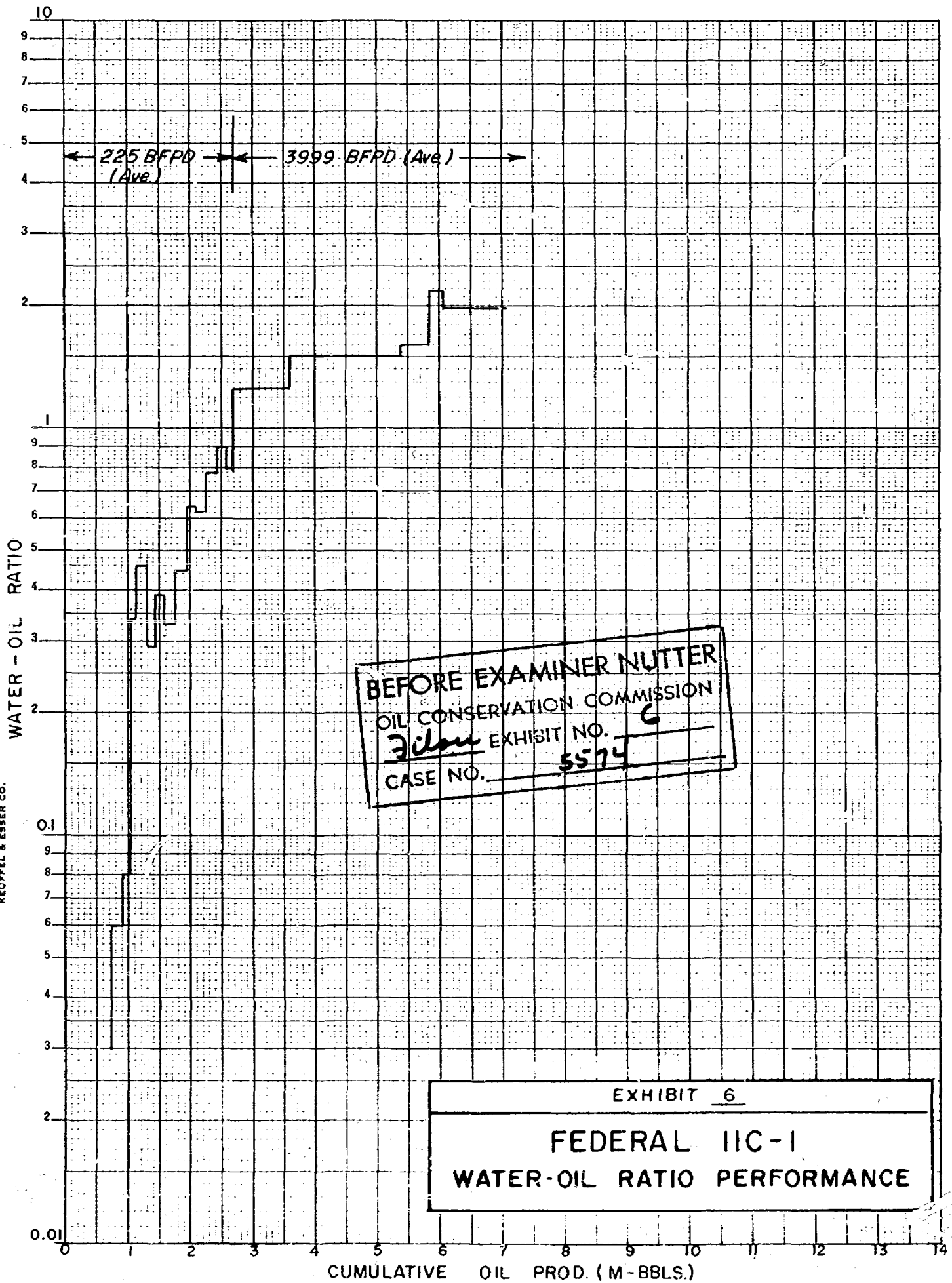
JDR/fd

Copy of order also sent to:

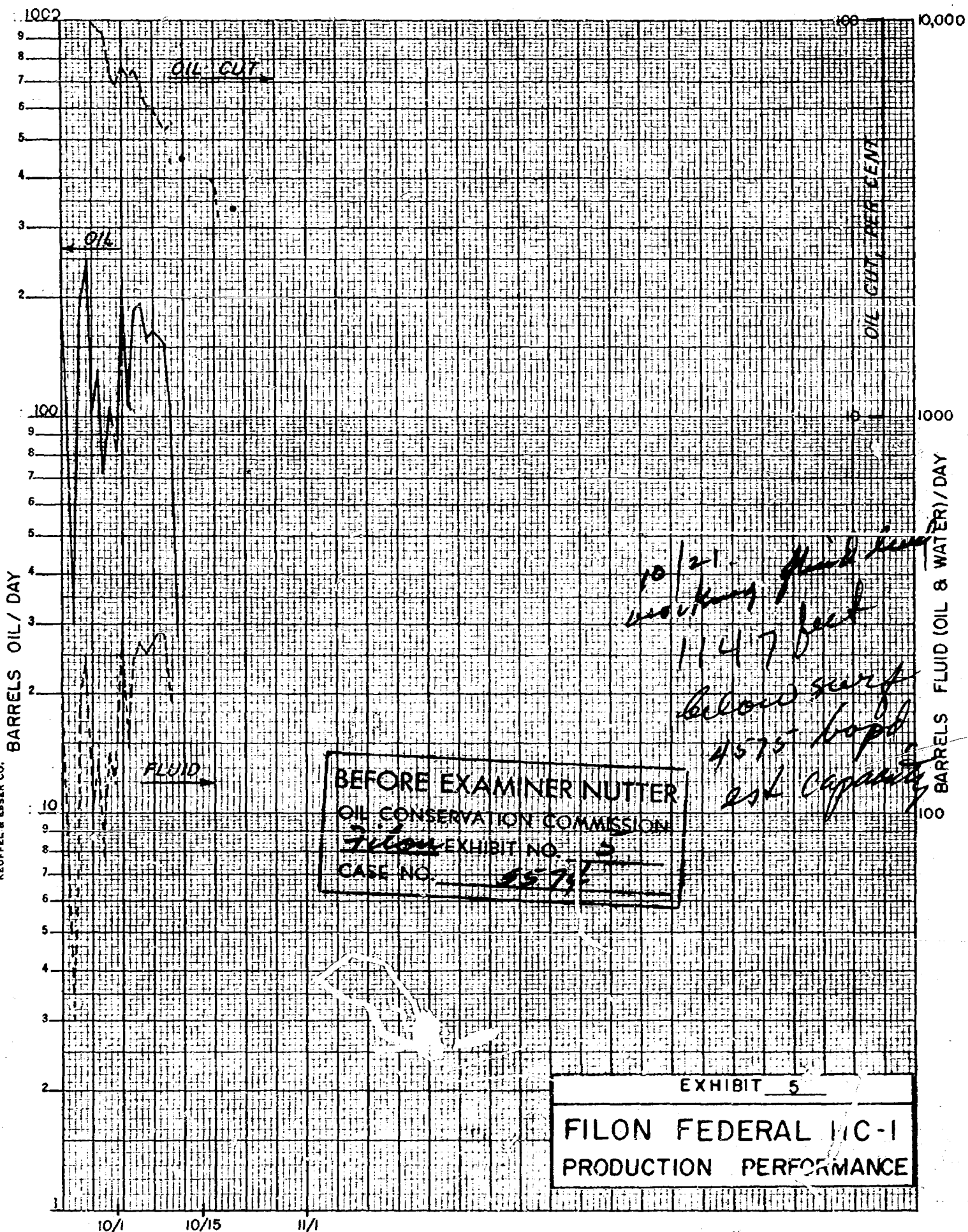
Hobbs OCC x
Artesia OCC
Aztec OCC x

Other R. W. Sullivan

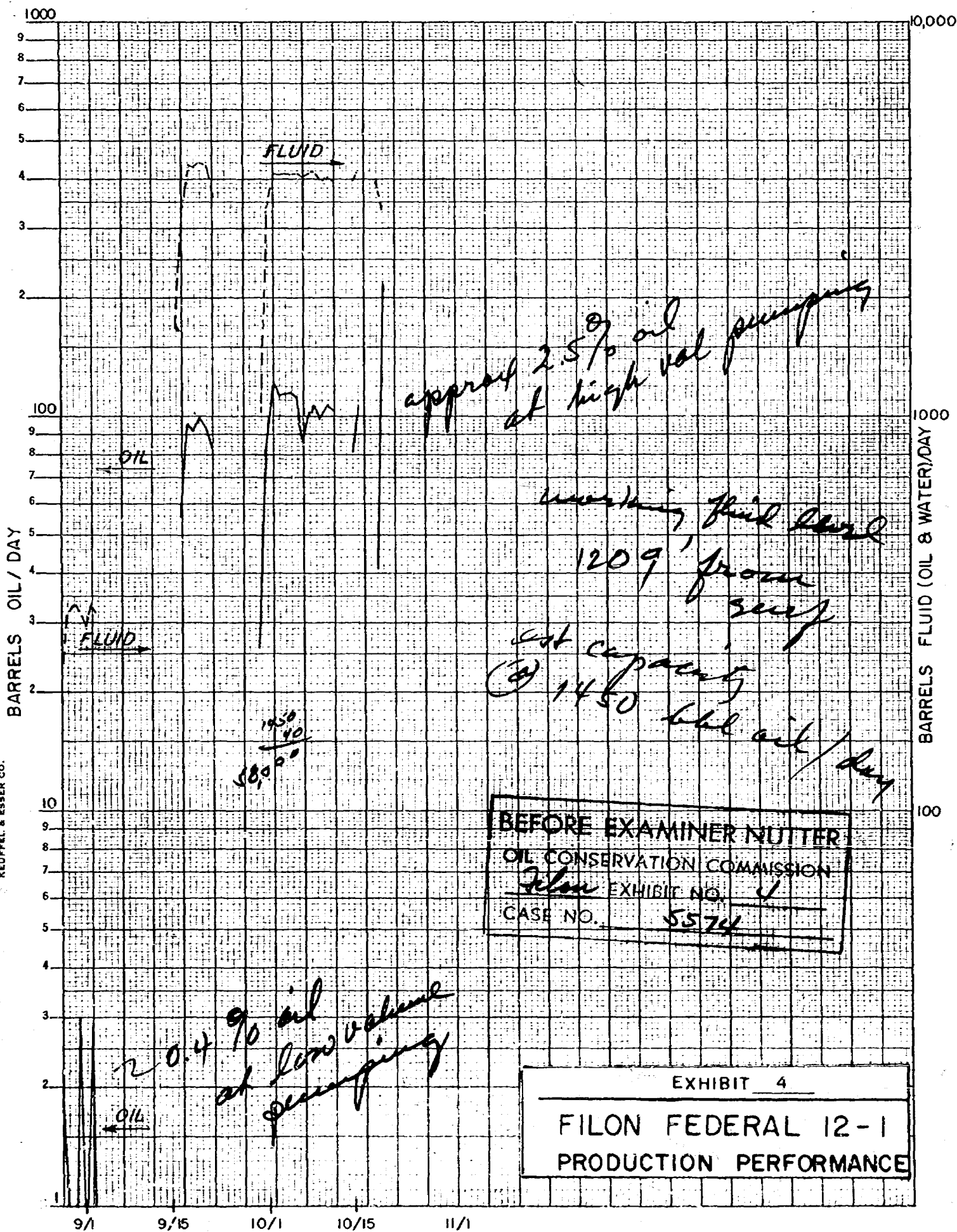
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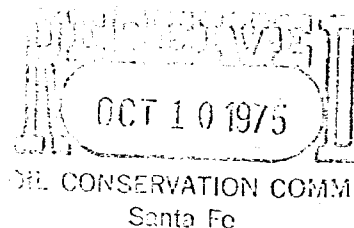


K-E SEMI-LOGARITHMIC 46 5813
 1 CYCLES X 140 DIVISIONS
 KEUFFEL & ESSER CO.



WHITE,
KOCH, KELLY
&
McCARTHY

October 9, 1975



State of New Mexico
Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico 87501

Re: In the Matter of Filon Exploration
Corporation Application for Pool Creation,
Assignment of a Discovery Allowable and
Special Pool Rules, No. 5574

Gentlemen:

I have enclosed an entry of appearance to be filed
in the above-captioned matter on behalf of R. W. Sullivan
and myself for Filon Exploration Corporation.

Sincerely,

L. C. White

L. C. WHITE

LCW:m
enclosure as indicated

*L.C. White
Summer S. Koch
William Booker Kelly
John F. McCarthy, Jr.
Kenneth Bateman*

*Benjamin Phillips
Ronald M. Friedman
C. Emery Cuddy, Jr.*

Attorneys and Counselors at Law

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

IN THE MATTER OF FILON
EXPLORATION CORPORATION
APPLICATION FOR POOL CREATION,
ASSIGNMENT OF A DISCOVERY
ALLOWABLE AND SPECIAL POOL
RULES

No. 5574

ENTRY OF APPEARANCE

Comes now R. W. Sullivan, attorney at law of Denver, Colorado
and L. C. White, of White, Koch, Kelly & McCarthy, of Santa Fe,
New Mexico and herewith enter their formal appearance of record
as counsel for petitioner Filon Exploration Corporation in the
above-entitled matter.

Dated this 9th day of October, 1975.

R. W. Sullivan (LWS)

R. W. Sullivan
1217 1700 Broadway
Denver, Colorado 80202

L. C. White

L. C. White
WHITE, KOCH, KELLY & MCCARTHY
P. O. Box 787
Santa Fe, New Mexico 87501



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
1000 RIO BRAZOS RD. - AZTEC

87410

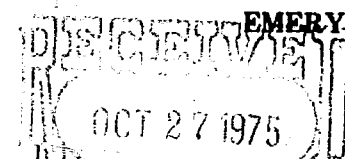
DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO



STATE GEOLOGIST
EMERY C. ARNOLD

October 24, 1975



OIL CONSERVATION COMM.
Santa Fe

Mr. Dan Nutter
Oil Conservation Commission
Box 2088
Santa Fe, New Mexico

Re: Case 5574

Dear Dan:

Please call us before you finalize the order so that we can check on the completion of the well in Section 14.

At the present time I recommended that the Eagle Mesa Entrada Oil Pool consist of the following area:

Township 19 North, Range 4 West
Section 11: SE/4 SE/4
Section 12: SW/4 SW/4
Section 13: NW/4 NW/4

If there are other questions call.

Very truly yours,

A. R. Kendrick
Supervisor, District #3

ARK/bk

Docket No. 26-75

Dockets Nos. 28-75 and 29-75 are tentatively set for hearing on November 5 and November 19, 1975. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 22, 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:

CASE 5572: Application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Blinebry and Drinkard production in the wellbore of its H. T. Mattern Wells Nos. 4 and 8, and its Harry Leonard Well No. 17, located, respectively, in Unit B of Section 1, Township 22 South, Range 36 East, Unit E of Section 6, Township 22 South, Range 37 East, and Unit C of Section 36, Township 21 South, Range 36 East, all in Lea County, New Mexico.

CASE 5573: Application of El Paso Natural Gas Company for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Blanco-Mesa-verde and Basin-Dakota production in the wellbore of its Mudge Well No. 11, located in Unit M of Section 10, Township 31 North, Range 11 West, San Juan County, New Mexico.

CASE 5574: Application of Filon Exploration Corporation for pool creation, assignment of a discovery allowable, and special pool rules, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new pool for the production of oil from the Entrada formation for its Federal 12 Well No. 1 located in Unit M of Section 12, Township 19 North, Range 4 West, Sandoval County, New Mexico, and the assignment of a discovery allowable to said well; applicant further seeks the promulgation of special pool rules for said pool, including a provision for a special depth bracket allowable.

CASE 5575: 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 Pennsylvanian formation underlying the E/2 of Section 20, Township 22 South, Range 27 East, South Carlsbad Field, Eddy County, New Mexico, to be dedicated to a well to be drilled 2030 feet from the North line and 1980 feet from the East line of said Section 20. Also to be considered will be the cost of drilling and completing said well and the allocation of such costs as well as actual operating costs and charges for supervision. Also to be considered is the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

Examiner Hearing - Wednesday - October 23, 1975

Docket No. 26-75

-2-

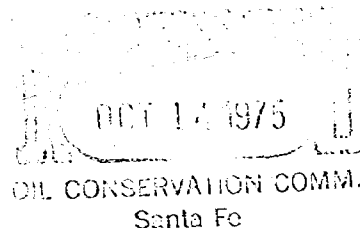
CASE 5576: Application of George D. Riggs for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Saladar-Yates Pool by the injection of water through his Hughes-Federal No. 4, Malco Well No. 2, and Mayfield-Federal No. 4 Wells located, respectively, in Units F, L, and O of Section 33, Township 20 South, Range 28 East, Eddy County, New Mexico.

CASE 5577: Application of Atlantic Richfield Company for amendment of Order No. R-4549, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-4549, as amended, which order approved the institution of the Empire-Abo Pressure Maintenance Project in the Empire-Abo Unit Area, Eddy County, New Mexico, and established rules for the operation of said project. Applicant seeks the amendment of said rules to permit the injection of non-Abo gas and to establish a separate non-Abo gas bank for said project.



MINERALS
MANAGEMENT INC.

WESTERN RESOURCES BUILDING • P. O. BOX 2919
TELEPHONE (307) 265-4960
CASPER, WYOMING 82601



October 8, 1975

Mr. Al Kendrick
New Mexico Oil Conservation Commission
1000 Rio Brazos Road
Aztec, New Mexico 87401

Re: Oil Discovery Allowable
Sandoval County, New Mexico

Dear Mr. Kendrick:

As agent for Filon Exploration Corporation we are filing from C-109 according to Rule 509 for an oil discovery allowable for the Filon Federal 12 No. 1 located in Section 12, T19N, R4W, Sandoval County, New Mexico.

Accompanying the attached Form C-109 are the following:

- (1) Well status and lease ownership map, scale 1" = 1000'
- (2) Electrical logs consisting of the formation density log and dual induction-laterlog with the top and bottom of the Entrada producing interval marked thereon.
- (3) Core analysis of Entrada from Federal 12-1
- (4) Drill stem test report, Federal 12-1
- (5) Water Analysis Report, Federal 12-1

This application is not based on horizontal separation, therefore, no detailed geological interpretations are presented.

It is requested that the attached data be retained confidential. Please advise if additional data is required at this time.

Yours very truly,

J. H. Borgerding
J. H. Borgerding
Petroleum Engineer

JHB/sb
cc: Mr. J. D. Ramey ✓
Attachments

NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION FOR DISCOVERY ALLOWABLE AND CREATION OF A NEW POOL

Form C-109
 Adopted 9-1-66

NOTE: This form is to be filed and attachments made in accordance with the provisions of Rule 509.
 If discovery is claimed for more than one zone, separate forms must be filed for each.

Operator Filon Exploration Corporation c/o Minerals Management Inc.		Address 501 Airport Drive, Suite 210 Farmington New Mexico	
Lease Name Federal 12		Well No. 1	County Sandoval
Well Location Unit Letter M ; 460 Feet from The South Line and 330 Feet From the West Line of Section 12 , Township 19 N , Range 4 W , NMPM			
Suggested Pool Names (List in order of preference)			
1. Eagle Mesa		2. _____	
Name of Producing Formation Entrada	Perforations 5483-5493	Date of Filing Form C-104 9-18-75	
Was "Affidavit of Discovery" Previously Filed For This Well in this Pool? No		Date Well was Spudded 7-28-75	Date Compl. Ready to Prod. 8-25-75
Total Depth 5735	Plugged Back Depth 5574	Depth Casing Shoe 5724	Tubing Depth 2521
		Elevation (Gr., DF, RKB, RT, etc.) 6710 RT	
Oil Well Potential (Test to be taken only after all load oil has been recovered)			
97 Bbls. Oil Per Day Based On 97 Bbls In 24 Hours;		4300 Bbls Water Per Day Based On 4300 Bbls	
In 24 Hours; Gas Production During Test: 0 MCF;		Gas-Oil Ratio: 0 Method of Producing: Pump Chk. Size	

NEAREST PRODUCTION TO THIS DISCOVERY (Includes past and present oil or gas producing areas and zones whether this discovery is based on horizontal or vertical separation): ***Petro-Lewis Boling Federal No. 5**

Pool Name Southwest Media	Name of Producing Formation Entrada	Top of Pay * 5346	Bottom of Pay * 5376	Currently Producing? Yes
Horizontal Distance and Direction from Subject Discovery Well to the Nearest Well in this Pool 4.5 miles to East-Southeast		Vertical Distance from Subject Discovery Zone to Producing Interval this Pool No producing intervals other than discovery zone		

NEAREST COMPARABLE PRODUCTION (Includes past and present oil or gas production from this pay or formation only):

Pool Name Southwest Media - Entrada	Top of Pay * 5346	Bottom of Pay * 5376	Currently Producing? Yes
Horizontal Distance and Direction from Subject Discovery Well to the Nearest Well in this Comparable Pool 4.5 miles to East - Southeast			

Is "County Deep" Discovery Allowable Requested for Subject Discovery Well? NO	If Yes, Give Name, Location, and Depth of Next Deepest Oil Production in this County
---	--

Is the Subject Well Multiple Completion? NO	Is Discovery Allowable Requested for other Zone(s)? NO	If Yes, Name all Such Formations
---	--	----------------------------------

LIST ALL OPERATORS OWNING LEASES WITHIN ONE MILE OF THIS WELL (Attach additional sheet if necessary)

NAME	ADDRESS
F.M. Beardsley	P.O. Box 9031, Denver, Colorado 80111
Mountain Fuel Supply Co.	P.O. Box 11368, Salt Lake City, Utah
Nack Group c/o Kirby Petroleum Co.	P.O. Box 1745, Houston Texas, 77001
Petro-Lewis Corporation	P.O. Box 2250, Denver, Colorado, 80201
Union Oil Co.	P.O. Box 2620, Casper Wyoming 82601

Attach evidence that all of the above operators have been furnished a copy of this application. Any of said operators who intends to object to the designation of the subject well as a discovery well, eligible to receive a discovery allowable, must notify the appropriate District Office and the Santa Fe Office of the Commission of such intent in writing within ten days after receiving a copy of this application.

Remarks: The top and bottom of pay (*) as indicated above are the perforations in Petro-Lewis Boling Federal No. **NE/4 NW/4-22-19N-3W**

CERTIFICATION

I hereby certify that all rules and regulations of the New Mexico Oil Conservation Commission have been complied with, with respect to the subject well, and that it is my opinion that a bona fide discovery of a hitherto unknown common source of oil supply has been made in said well. I further certify that the discovery allowable for the subject well, if authorized, will be produced from the subject zone in this well only. Further, that the information given herein and attached hereto is true and complete to the best of my knowledge and belief.

C. H. Bergerding
 Signature

Petroleum Engineer
 Position

October 8, 1975
 Date

A F F I D A V I T

This is to certify that I, J. H. Borgerding furnished copies of New Mexico Oil Conservation Commission Form C-109 requesting discovery allowable for the Filon Exploration Corporation Federal 12-1, Section 12, T19N, R4W, Sandoval Co., New Mexico to operators within one mile of that well by mailing copies of same by certified U. S. mail to the following:

F.M. Beardsley	P.O. Box 9031 Denver, Colo.
Mountain Fuel Supply Co.	P.O. Box 11368 Salt Lake City, Utah
Nack Group c/o Kirby Petroleum Co.	P.O. Box 1745 Houston, Texas 77001
Petro-Lewis Corporation	P.O. Box 2250 Denver, Colo. 80201
Union Oil Co.	P.O. Box 2620 Casper, Wyo. 82601

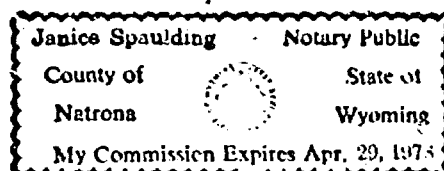
J. H. Borgerding
J. H. Borgerding

Subscribed and sworn to before me this 8th day of October, 1975.

My Commission Expires:

April 29, 1978

Janice Spaulding
Notary Public



PRELIMINARY COPY

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

Page No. 1

CORE ANALYSIS RESULTS

RECEIVED

AUG 18 1975

Company MINERALS MANAGEMENT INC.
Well NO. 1
Field _____
County _____

Formation _____

Core Type _____

Drilling Fluid _____

Elev. _____

Location _____

Minerals Management Inc.

File

Date

Report

Analysts

RP-3-2744

8-10-75

WD

Lithological Abbreviations

SAND-SH SHALE-SH LIME-LM	DOLomite-DOL CHERT-CH GYPSUM-GYP	ANHYDRITE-ANHY CONGLOMERATE-CONG FOSSILIFEROUS-FOSS	SANDY-SHY SHALY-SHY LIMY-LMY	FINE-FN MEDIUM-MED COARSE-COE	CRYSTALLINE-XLN GRAIN-GRN GRANULAR-GRNL	BROWN-BRN GRAY-GY VUGGY-VGY	FRACTURED-FRAC LAMINATION-LAM STYLOLITIC-STY	SLIGHTLY-SL/ VERY-V/ WITH-W/
--------------------------------	--	---	------------------------------------	-------------------------------------	---	-----------------------------------	--	------------------------------------

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
		(K _A)				
1	00-01	326	27.0	22.9	56.5	SS Lt Gy F-M Calc Cmt
2	01-02	268	25.0	21.1	55.1	SS Lt Gy F-M Calc Cmt
3	02-03	644	26.8	18.6	62.3	SS Lt Gy F-M Calc Cmt
4	03-04	505	24.6	20.8	57.5	SS Lt Gy F-M Calc Cmt
5	04-05	534	28.2	19.1	59.8	SS Lt Gy F-M Calc Cmt
6	05-06	372	25.3	19.9	61.9	SS Lt Gy F-M Calc Cmt
7	06-07	441	26.9	19.7	61.7	SS Lt Gy F-M Calc Cmt
8	07-08	467	26.1	16.7	59.6	SS Lt Gy F-M Calc Cmt
9	08-09	539	25.9	17.7	59.7	SS Lt Gy F-M Calc Cmt
10	09-10	410	25.3	21.1	59.3	SS Lt Gy F-M Calc Cmt
11	10-11	424	28.3	20.7	55.6	SS Lt Gy F-M Calc Cmt
12	11-12	378	26.3	17.0	57.0	SS Lt Gy F-M Calc Cmt
13	12-13	430	26.1	17.7	61.8	SS Lt Gy F-M Calc Cmt
14	13-14	415	21.8	16.6	61.7	SS Lt Gy F-M Calc Cmt
15	14-15	459	26.4	20.8	60.5	SS Lt Gy F-M Calc Cmt
16	15-16	525	25.6	21.0	59.1	SS Lt Gy F-M Calc Cmt
17	16-17	392	26.5	21.3	59.5	SS Lt Gy F-M Calc Cmt
18	17-18	135	27.2	27.2	50.1	SS Lt Gy F-M Calc Cmt
19	18-19	245	27.6	33.2	46.8	SS Lt Gy F-M Calc Cmt
20	19-20	153	25.6	37.3	40.7	SS Lt Gy F-M Calc Cmt
21	20-21	355	25.0	29.4	51.9	SS Lt Gy F-M Calc Cmt
22	21-22	375	21.7	24.7	59.8	SS Lt Gy F-M Calc Cmt
23	22-23	314	25.5	24.4	60.4	SS Lt Gy F-M Calc Cmt
24	23-24	153	24.6	29.3	55.6	SS Lt Gy F-M Calc Cmt
25	24-25	13	25.3	13.5	73.1	SS Lt Gy F-M Calc Cmt
26	25-26	199	26.8	12.6	67.1	SS Lt Gy F-M Calc Cmt
27	26-27	300	27.2	10.5	71.9	SS Lt Gy F-M Calc Cmt
28	27-28	343	26.5	6.7	79.0	SS Lt Gy F-M Calc Cmt
29	28-29	352	25.1	0.0	90.1	SS Lt Gy F-M Calc Cmt
30	29-30	343	26.2	0.0	91.3	SS Lt Gy F-M Calc Cmt
31	30-31	225	25.6	0.0	90.1	SS Lt Gy F-M Calc Cmt
32	31-32	228	25.6	0.0	89.2	SS Lt Gy F-M Calc Cmt
33	32-33	219	25.8	0.0	91.3	SS Lt Gy F-M Calc Cmt
34	33-34	280	25.3	0.0	88.8	SS Lt Gy F-M Calc Cmt
35	34-35	291	27.7	0.0	90.3	SS Lt Gy F-M Calc Cmt

* These depths measured from 5491 feet. That is, 00-01 above is 5491-92, 01-02 is 5492-93, etc. etc.

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representation, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

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Petroleum Reservoir Engineering
DALLAS, TEXAS

Page No. 2

CORE ANALYSIS RESULTS

Company MINERALS MANAGEMENT INC. Formation _____ File RP-3-2714
Well NO. 1 Core Type _____ Date Report 8-10-75
Field _____ Drilling Fluid _____ Analysts WD
County _____ State _____ Elev. _____ Location _____

Lithological Abbreviations

SAND-SD SHALE-SH LIM-LS DOLOMITE-DOL CHERT-CH GYPSUM-GYP ANHYDRITE-ANHY CONGLOMERATE-CONG FOSSIL/FEROUS-FOES SANDY-SOY SHALY-SHY LIMY-LMY FINE-FN MEDIUM-MED COARSE-CSE CRYSTAL-LNE-ELN GRAIN-GRN GRANULAR-GRNL BROWN-BRN GRAY-GT VUGGY-VGY FRACTURED-FRAC LAMINATION-LAM STYLOLITIC-STY SLIGHTLY-SL/ VERY-V/ WITH-W/

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY (K _A)	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
36	35-36	280	26.1	0.0	88.9	SS Lt Gy F-M Calc Cmt
37	36-37	303	25.2	0.0	89.3	SS Lt Gy F-M Calc Cmt
38	37-38	239	24.6	0.0	88.5	SS Lt Gy F-M Calc Cmt
39	38-39	306	25.3	0.0	90.7	SS Lt Gy F-M Calc Cmt
40	39-40	185	24.5	0.0	86.4	SS Lt Gy F-M Calc Cmt
41	40-41	150	23.7	0.0	83.1	SS Lt Gy F-M Calc Cmt
42	41-42	202	25.4	0.0	86.9	SS Lt Gy F-M Calc Cmt
43	42-43	196	22.6	0.0	86.8	SS Lt Gy F-M Calc Cmt
44	43-44	164	23.9	0.0	85.6	SS Lt Gy F-M Calc Cmt
45	44-45	288	27.0	0.0	87.6	SS Lt Gy F-M Calc Cmt

* See note on page 1.

FLUID SAMPLE DATA				Date 8-9-75		Ticket Number 109258	
Sampler Pressure		10 P.S.I.G. at Surface		Kind of Job		Halliburton District FARMINGTON	
Recovery: Cu. Ft. Gas		0		Tester		D. HOEFER	
cc. Oil		2000		Witness		ARNOLD SNELL	
cc. Water		0		Drilling Contractor			
cc. Mud		0		FOUR CORNERS DRILLING COMPANY SM S			
Tot. Liquid cc.		2000		EQUIPMENT & HOLE DATA			
Gravity		* API @		* F.		Formation Tested	
Gas/Oil Ratio		cu. ft./bbl.		Elevation		Entrada 6698' Ground level Ft.	
RESISTIVITY		CHLORIDE CONTENT		Net Productive Interval		5478-88' Ft.	
Recovery Water		@ *F. ppm		All Depths Measured From		Kelly bushing	
Recovery Mud		@ *F. ppm		Total Depth		5488' Ft.	
Recovery Mud Filtrate		@ *F. ppm		Main Hole/Casing Size		8 3/4"	
Mud Pit Sample		@ *F. ppm		Drill Collar Length		620' I.D. 2 1/4"	
Mud Pit Sample Filtrate		@ *F. ppm		Drill Pipe Length		4815' I.D. 3.826"	
Mud Weight		8.9 vis 43 cp		Packer Depth(s)		5473-5478' Ft.	
				Depth Tester Valve		5466' Ft.	
Cushion		TYPE AMOUNT		Depth Back Pres. Valve		Surface Choke	
				3/4" Adj		Bottom Choke 3/4"	
Recovered 825		Feet of oil		Meas. From Tester Valve			
Recovered 165		Feet of drilling mud					
Recovered		Feet of					
Recovered		Feet of					
Recovered		Feet of					
Remarks Tool opened for 5 minute first flow period with a weak blow. Closed tool for 14 minute first closed in pressure period. Tool reopened for 60 minute second flow period with a very weak blow which increased to fair blow. Closed tool for 91 minute second CIP period.							
TEMPERATURE		Gauge No. 6040		Gauge No. 6039		Gauge No.	
Depth: 5470 Ft.		Depth: 5484 Ft.		Depth: Ft.		TIME	
Est. *F.		24 Hour Clock		12 Hour Clock		Hour Clock	
Blanked Off NO		Blanked Off YES		Blanked Off		Tool A.M.	
Actual 128 *F.		Pressures		Pressures		Pressures	
		Field Office		Field Office		Field Office	
Initial Hydrostatic		2632 2624		2633 2641		Reported Computed	
First Period Flow Initial		66 81		79 99		Minutes Minutes	
Flow Final		92 95		105 114		5 5	
Closed in		2091 2112		2105 2133		15 14	
Second Period Flow Initial		92 115		105 136		60 60	
Flow Final		357 370		368 391		90 91	
Closed in		2170 2175		2184 2190			
Third Period Flow Initial							
Flow Final							
Closed in							
Final Hydrostatic		2632 2599		2633 2616			

Legal Location
Sec. - Twp. - Rng.

12 19 4

Field
Also
Meas. From Tester Valve

County

SANDOVAL

State

NEW MEXICO

FEDERAL 12

1

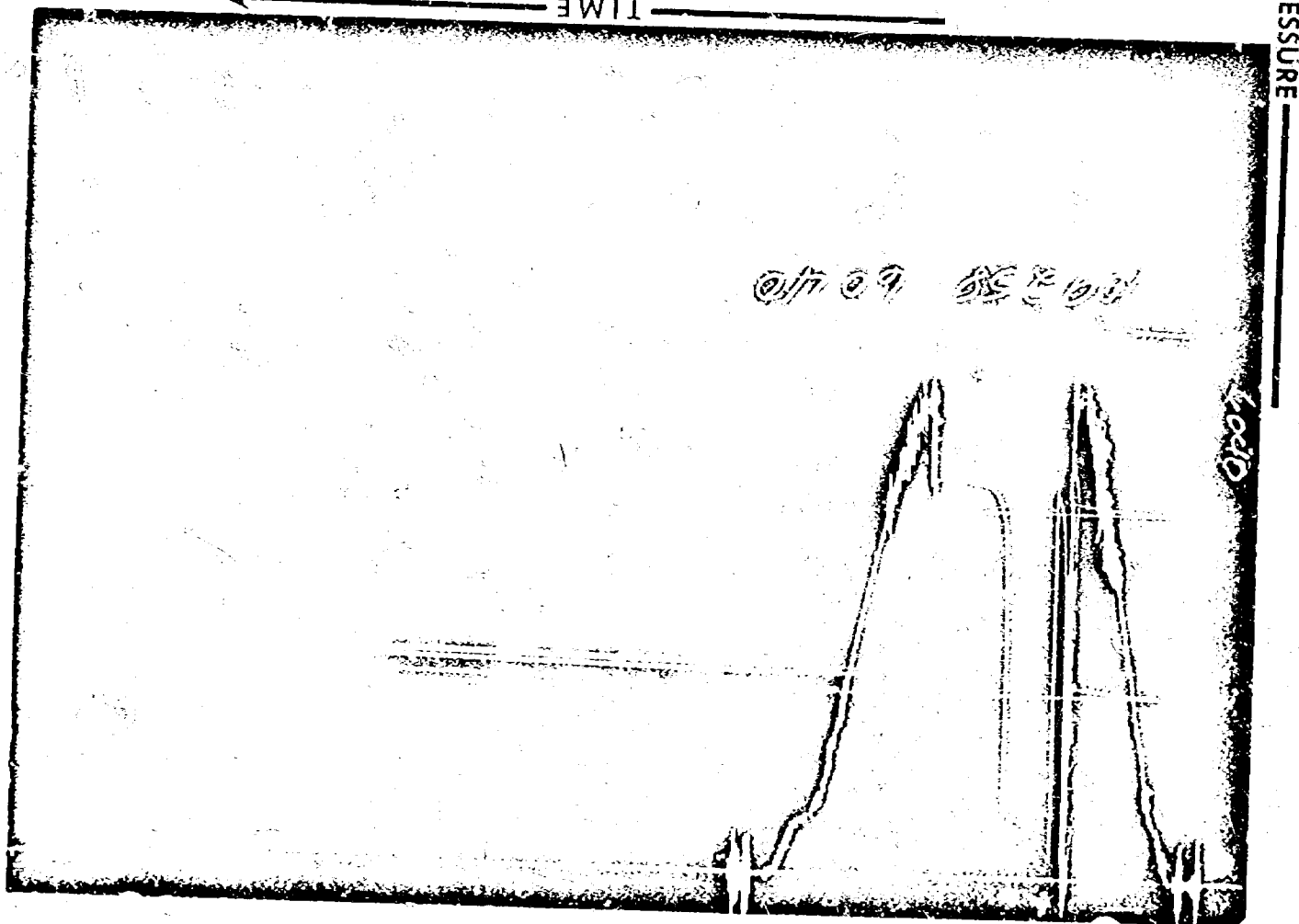
1

5478 - 5488'

FILON EXPLORATION CORPORATION

Lease Owner/Company Name

Each Horizontal Line Equal to 1000 p.s.i.



Gauge No. 6040			Depth 5470'			Clock No. 13840			24 hour	Ticket No. 109258				
First Flow Period		First Closed In Pressure			Second Flow Period		Second Closed In Pressure			Third Flow Period		Third Closed In Pressure		
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
0	.0000	81		95	.0000	115	.0000		370					
1	.0034	78		1637	.0332	167	.0232*		690					
2	.0068	79		1797	.0663	231	.0430		2084					
3	.0102	83		1858	.0995	282	.0629		2121					
4	.0316	90		1941	.1327	321	.0827		2141					
5	.0170	95		1978	.1659	345	.1026		2153					
6				2004	.1990	370	.1224		2161					
7				2029			.1423		2164					
8				2050			.1621		2167					
9				2064			.1820		2170					
10				2078			.2018		2171					
11				2088			.2216		2172					
12				2099			.2415		2174					
13				2105			.2614		2174					
14				2112			.2812		2175					
15							.3010		2175					

Gauge No. 6039			Depth 5484'			Clock No. 14122			12 hour				
0	.0000	99	.0000	114	.0000	136	.0000	391					
1	.0068	95	.0067	1683	.0675	186	.0469*	2026					
2	.0136	97	.0134	1825	.1350	250	.0870	2107					
3	.0204	103	.0201	1903	.2025	300	.1272	2142					
4	.0272	111	.0268	1957	.2700	339	.1673	2161					
5	.0340	114	.0336	1996	.3375	366	.2075	2170					
6			.0403	2020	.4050	391	.2476	2177					
7			.0470	2054			.2878	2181					
8			.0527	2073			.3279	2185					
9			.0604	2090			.3681	2186					
10			.0671	2100			.4082	2187					
11			.0738	2111			.4484	2189					
12			.0805	2120			.4885	2189					
13			.0872	2127			.5287	2190					
14			.0940	2133			.5689	2190					
15							.6090	2190					

Reading Interval 1 1 10 6 Minutes

REMARKS: *First interval is equal to 7 minutes.

WICKLEY NO. 109258

	O.D.	I.C.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub	6"	2.5"	1.1'	
Water Cushion Valve				
Drill Pipe	4 1/2"	3.826"	4815'	
Drill Collars	6 1/4"	2 1/4"	620'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler	5"	2.75"		
Hydro-Spring Tester	5"	.75"	6'	5466'
Multiple CIP Sampler	5"	2.38"	5.4'	
Extension Joint				
AP Running Case	5"	3 1/2"	4'	5470'
Hydraulic Jar	5"	1.75"	6'	
VR Safety Joint	5"	1"	2.8'	
Pressure Equalizing Crossover				
Packer Assembly				
Distributor				
Packer Assembly				
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly	7 3/4"	1.53"	5'	5473'
Distributor				
Packer Assembly	7 3/4"	1.53"	5'	5478'
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor	5 3/4"	3 1/2"	5'	
Blanked-Off B.T. Running Case	5 3/4"	3 1/2"	5'	5484'
Total Depth				5488'

CHEMICAL & GEOLOGICAL LABORATORIES

P. O. Box 2794
Casper, Wyoming

J 1975

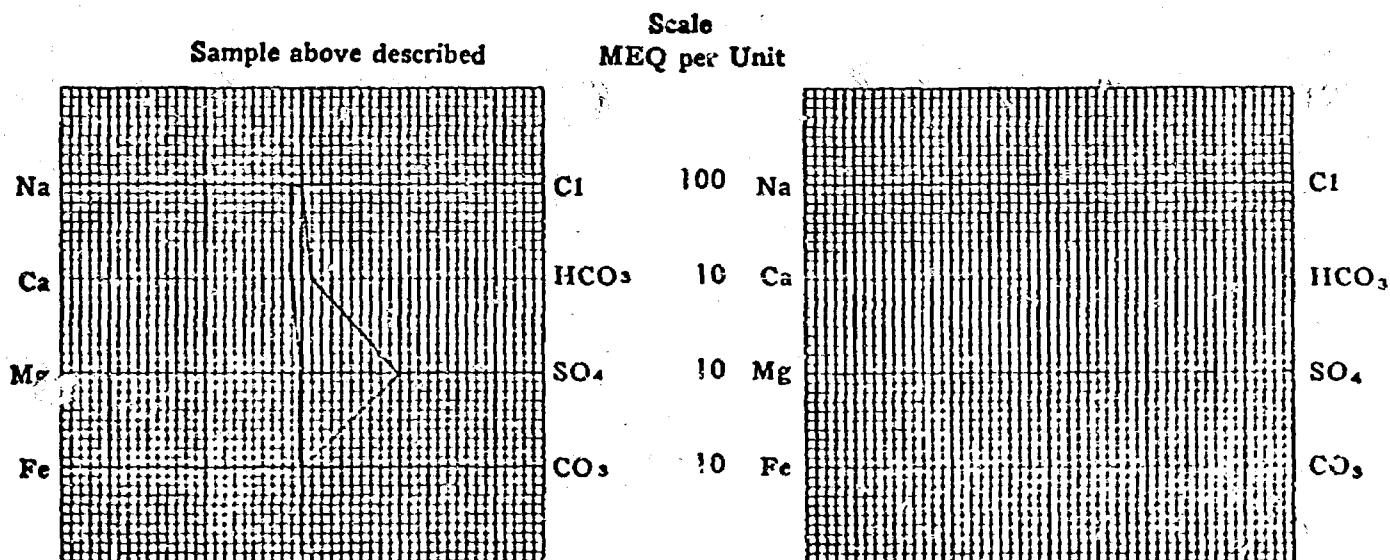
WATER ANALYSIS REPORT

OPERATOR Filon Exploration Co. DATE October 2, 1975 LAB NO. 17643
 WELL NO. Federal 12-1 LOCATION _____
 FIELD _____ FORMATION Entrada
 COUNTY _____ INTERVAL _____
 STATE _____ SAMPLE FROM Treater (9-20-75)

REMARKS & CONCLUSIONS: No other information given.

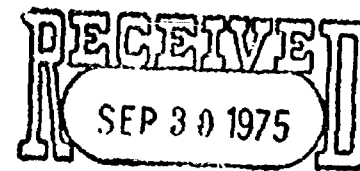
Cations			Anions		
	mg/l	meq/l		mg/l	meq/l
Sodium	2784	121.11	Sulfate	4875	101.40
Potassium	21	0.54	Chloride	730	20.59
Lithium			Carbonate		
Calcium	108	5.39	Bicarbonate	378	6.20
Magnesium	14	1.15	Hydroxide		
Iron			Hydrogen sulfide		
Total Cations		128.19	Total Anions		128.19
Total dissolved solids, mg/l			Specific resistance @ 68°F.:		
			Observed		
NaCl equivalent, mg/l			Calculated		
Observed pH					

WATER ANALYSIS PATTERN



(Na value in above graphs includes Na, K, and Li)

NOTE: Mg/l = Milligrams per liter Meq/l = Milligram equivalents per liter
Sodium chloride equivalent by Donlop & Hawthorne calculation from components



OIL CONSERVATION COMM.
Santa Fe

BEFORE THE

OIL CONSERVATION COMMISSION OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF FILON EXPLORATION CORPORATION
FOR AN ORDER FOR, CREATION OF A
NEW POOL CLASSIFIED AS AN OIL POOL
FOR ENTRADA PRODUCTION, ASSIGNMENT
OF AN OIL DISCOVERY ALLOWABLE, AND
ASSIGNMENT OF A SPECIAL DEPTH
BRACKET ALLOWABLE,
SANDOVAL COUNTY, NEW MEXICO

A P P L I C A T I O N

COMES NOW Filon Exploration Corporation, by and through its
agent, MINERALS MANAGEMENT INC., and in support of its application
respectfully represents to the New Mexico Oil Conservation
Commission as follows:

1. Applicant is the operator and has drilled and is currently
testing or producing oil from the Entrada formation at the follow-
ing wells;

a) Federal 12 No. 1, 460 feet from south line, 330 feet
from west line, Section 12, Township 19 North, Range 4 West.

b) Federal 11C No. 1, 330 feet from south line, 330 feet
from east line, Section 11, Township 19 North, Range 4 West.

*salt
water
disposal
wells*

2. Applicant seeks the creation of a new pool designated as
Eagle Mesa-Entrada Pool for production of these and other wells
that may be drilled in this one common source of supply.

3. Applicant believes the Federal 12 No. 1 well is eligible
for a discovery allowable and this application requests such be
assigned.

4. Applicant believes that reservoir conditions governing
production at the applied for pool are such that high production
rates will promote greater operational and recovery efficiency.

5. That wells drilled have the potential to produce in excess of the normal allowable without waste and, therefore, Applicant requests a special depth bracket allowable be assigned.

6. Approval of the application will result in the recovery of oil that would not otherwise be recovered, will prevent waste and protect correlative rights..

WHEREFORE this applicant respectfully requests that this application be set for hearing before the Commission or its duly appointed examiner and that after notice and hearing as required by law, the Commission enter its order granting the application as requested.

Respectfully submitted,

FILON EXPLORATION CORPORATION

By J. H. Bergerling
MINERALS MANAGEMENT INC.
P.O. BOX 3440
CASPER, WYOMING 82601

DOCKET MAILED

Date 10/14/75

NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION FOR DISCOVERY ALLOWABLE AND CREATION OF A NEW POOL

Form C-109
 Adopted 9-1-66

NOTE: This form is to be filed and attachments made in accordance with the provisions of Rule 509.
 If discovery is claimed for more than one zone, separate forms must be filed for each.

Operator Filon Exploration Corporation c/o Minerals Management Inc.		Address 501 Airport Drive, Suite 210 Farmington New Mexico	
Lease Name Federal 12		Well No. 1	County Sandoval
Well Location Unit Letter M ; 460 Feet from The South Line and 330 Feet From the West Line of Section 12 , Township 19 N , Range 4 W , NMPM			
Suggested Pool Names (List in order of preference) 1. Eagle Mesa 2. 3.			
Name of Producing Formation Entrada		Perforations 5483-5493	Date of Filing Form C-104 9-18-75
Was "Affidavit of Discovery" Previously Filed For This Well in this Pool? No		If Yes, Give Date of Filing	Date Well was Spudded 7-28-75
Total Depth 5735	Plugged Back Depth 5574	Depth Casing Shoe 5724	Tubing Depth 2521
Oil Well Potential (Test to be taken only after all load oil has been recovered) 97 Bbls. Oil Per Day Based On 97 Bbls In 24 Hours; 4300 Bbls Water Per Day Based On 4300 Bbls		Elevation (Gr., DF, RKB, RT, etc.) 6710 RT	
In 24 Hours, Gas Production During Test: 0 MCF; Gas-Oil Ratio: 0 Method of Producing: Pump Chk. Size			

NEAREST PRODUCTION TO THIS DISCOVERY (Includes past and present oil or gas producing areas and zones whether this discovery is based on horizontal or vertical separation):
***Petro-Lewis Boling Federal No. 5**

Pool Name Southwest Media	Name of Producing Formation Entrada	Top of Pay * 5346	Bottom of Pay * 5376	Currently Producing? Yes
Horizontal Distance and Direction from Subject Discovery Well to the Nearest Well in this Pool 4.5 miles to East-Southeast		Vertical Distance from Subject Discovery Zone to Producing Interval this Pool No producing intervals other than discovery zone		

NEAREST COMPARABLE PRODUCTION (Includes past and present oil or gas production from this pay or formation only):

Pool Name Southwest Media - Entrada	Top of Pay * 5346	Bottom of Pay * 5376	Currently Producing? Yes
Horizontal Distance and Direction from Subject Discovery Well to the Nearest Well in this Comparable Pool 4.5 miles to East - Southeast			

Is "County Deep" Discovery Allowable Requested for Subject Discovery Well? NO	If Yes, Give Name, Location, and Depth of Next Deeper Oil Production in this County 5483
---	--

Is the Subject Well Multiple Completion? NO	Is Discovery Allowable Requested for other Zones? NO	If Yes, Name all Such Formations 29 41 5
---	--	--

LIST ALL OPERATORS OWNING LEASES WITHIN ONE MILE OF THIS WELL (Attach additional sheet if necessary)

NAME	ADDRESS
F.M. Beardsley	P.O. Box 9031, Denver, Colorado 84111
Mountain Fuel Supply Co.	P.O. Box 11368, Salt Lake City, Utah
Nack Group c/o Kirby Petroleum Co.	P.O. Box 1745, Houston Texas, 77001
Petro-Lewis Corporation	P.O. Box 2250, Denver, Colorado, 80201
Union Oil Co.	P.O. Box 2620, Casper Wyoming 82601

Attach evidence that all of the above operators have been furnished a copy of this application. Any of said operators who intends to object to the designation of the subject well as a discovery well, eligible to receive a discovery allowable, must notify the appropriate District Office and the Santa Fe Office of the Commission of such intent in writing within ten days after receiving a copy of this application.

Remarks: The top and bottom of pay (*) as indicated above are the perforations in Petro-Lewis Boling Federal No. 5, NE/4 NW/4-22-19N-3W

CERTIFICATION

I hereby certify that all rules and regulations of the New Mexico Oil Conservation Commission have been complied with, with respect to the subject well, and that it is my opinion that a bona fide discovery of a hitherto unknown common source of oil supply has been made in said well. I further certify that the discovery allowable for the subject well, if authorized, will be produced from the subject zone in this well only. Further, that the information given herein and attached hereto is true and complete to the best of my knowledge and belief.

J. H. Bergerding
 Signature

Petroleum Engineer
 Position

October 8, 1975
 Date

A F F I D A V I T

This is to certify that I, J. H. Borgerding furnished copies of New Mexico Oil Conservation Commission Form C-109 requesting discovery allowable for the Filon Exploration Corporation Federal 12-1, Section 12, T19N, R4W, Sandoval Co., New Mexico to operators within one mile of that well by mailing copies of same by certified U. S. mail to the following:

F.M. Beardsley	P.O. Box 9031 Denver, Colo.
Mountain Fuel Supply Co.	P.O. Box 11368 Salt Lake City, Utah
Nack Group c/o Kirby Petroleum Co.	P.O. Box 1745 Houston, Texas 77001
Petro-Lewis Corporation	P.O. Box 2250 Denver, Colo. 80201
Union Oil Co.	P.O. Box 2620 Casper, Wyo. 82601

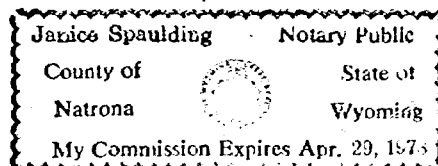
J. H. Borgerding
J. H. Borgerding

Subscribed and sworn to before me this 8th day of October,
1975.

My Commission Expires:

April 29, 1978

Janice Spaulding
Notary Public



CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

Page No. 1

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AUG 18 1975

CORE ANALYSIS RESULTS

Company	MINERALS MANAGEMENT INC.		Formation	Minerals Management Inc.	File	RP-3-2744
Well	NO. 1		Core Type		Date Report	8-10-75
Field			Drilling Fluid		Analysts	WD
County	State	Elev.	Location			

Lithological Abbreviations

SAND-SD	DOLomite-DOL	ANHYrite-ANHY	SANDY-SOT	FINE-FN	CRYSTALLINE-XLN	BROWN-BRN	FRACTURED-FRAC	SLIGHTLY-SL
SHALE-SH	CHERT-CH	CONGLOMERATE-CONG	SHALY-SHY	MEDIUM-MED	GRAIN-GRN	GRAY-G	LAMINATION-LAM	VERY-V
LIME-LM	GYPSEM-GYP	FGSILIFEROUS-FGSB	LIMY-LMY	COARSE-CSE	GRANULAR-GRNL	VUGGY-VY	STYLOLITIC-STY	WITH-W

SAMPLE NUMBER	DEPTH FEET	* PERMEABILITY MILLIDARCS	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
		(K _A)				
1	00-01	326	27.0	22.9	56.5	SS Lt Gy F-M Calc Cmt
2	01-02	268	25.0	21.1	55.1	SS Lt Gy F-M Calc Cmt
3	02-03	644	26.8	18.6	62.3	SS Lt Gy F-M Calc Cmt
4	03-04	505	24.6	20.8	57.5	SS Lt Gy F-M Calc Cmt
5	04-05	534	28.2	19.1	59.8	SS Lt Gy F-M Calc Cmt
6	05-06	372	25.3	19.9	61.9	SS Lt Gy F-M Calc Cmt
7	06-07	441	26.9	19.7	61.7	SS Lt Gy F-M Calc Cmt
8	07-08	467	26.1	16.7	59.6	SS Lt Gy F-M Calc Cmt
9	08-09	539	25.9	17.7	59.7	SS Lt Gy F-M Calc Cmt
10	09-10	410	25.3	21.1	59.3	SS Lt Gy F-M Calc Cmt
11	10-11	424	28.3	20.7	55.6	SS Lt Gy F-M Calc Cmt
12	11-12	378	26.3	17.0	57.0	SS Lt Gy F-M Calc Cmt
13	12-13	430	26.1	17.7	61.8	SS Lt Gy F-M Calc Cmt
14	13-14	415	21.8	16.6	61.7	SS Lt Gy F-M Calc Cmt
15	14-15	459	26.4	20.8	60.5	SS Lt Gy F-M Calc Cmt
16	15-16	525	25.6	21.0	59.1	SS Lt Gy F-M Calc Cmt
17	16-17	392	26.5	21.3	59.5	SS Lt Gy F-M Calc Cmt
18	17-18	135	27.2	27.2	50.1	SS Lt Gy F-M Calc Cmt
19	18-19	245	27.6	33.2	46.8	SS Lt Gy F-M Calc Cmt
20	19-20	153	25.6	37.3	40.7	SS Lt Gy F-M Calc Cmt
21	20-21	355	25.0	29.4	51.9	SS Lt Gy F-M Calc Cmt
22	21-22	375	21.7	24.7	59.8	SS Lt Gy F-M Calc Cmt
23	22-23	314	25.5	24.4	60.4	SS Lt Gy F-M Calc Cmt
24	23-24	153	24.6	29.3	55.6	SS Lt Gy F-M Calc Cmt
25	24-25	13	25.3	13.5	73.1	SS Lt Gy F-M Calc Cmt
26	25-26	199	26.8	12.6	67.1	SS Lt Gy F-M Calc Cmt
27	26-27	300	27.2	10.5	71.9	SS Lt Gy F-M Calc Cmt
28	27-28	343	26.5	6.7	79.0	SS Lt Gy F-M Calc Cmt
29	28-29	352	25.1	0.0	90.1	SS Lt Gy F-M Calc Cmt
30	29-30	343	26.2	0.0	91.3	SS Lt Gy F-M Calc Cmt
31	30-31	225	25.6	0.0	90.1	SS Lt Gy F-M Calc Cmt
32	31-32	228	25.6	0.0	89.2	SS Lt Gy F-M Calc Cmt
33	32-33	219	25.8	0.0	91.3	SS Lt Gy F-M Calc Cmt
34	33-34	280	25.3	0.0	88.8	SS Lt Gy F-M Calc Cmt
35	34-35	291	27.7	0.0	90.3	SS Lt Gy F-M Calc Cmt

* These depths measured from 5491 feet. That is, 00-01 above is 5491-92, 01-02 is 5492-93, etc. etc.

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Cline Laboratories, Inc. (all errors and omissions excepted); but Cline Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

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CL-811-1
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CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

Page No. 2

CORE ANALYSIS RESULTS

Company MINERALS MANAGEMENT INC. Formation _____ File RP-3-2714
Well NO. 1 Core Type _____ Date Report 8-10-75
Field _____ Drilling Fluid _____ Analysts WD
County _____ State _____ Elev. _____ Location _____

Lithological Abbreviations

SAND-SD SHALE-SH LIME-LM	DOLomite-DOL CHERT-CH GYPSUM-GYP	ANHYDRITE-ANHT CONGLOMERATE-CONG FOSSILIFEROUS-FOSS	SANDY-SDY SHALT-SHT LIMY-LMT	FINE-FN MEDIUM-MED COARSE-CSE	CRYSTALLINE-XLM GRAIN-GRN GRANULAR-GRNL	BROWN-BRN GRAY-GY VUGGY-VGY	FRACTURED-FRAC LAMINATION-LAM STYLOLITIC-STY	SLIGHTLY-SL/ VERY-V/ WITH-W/
--------------------------------	--	---	------------------------------------	-------------------------------------	---	-----------------------------------	--	------------------------------------

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCS (K _A)	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
36	35-36	280	26.1	0.0	88.9	SS Lt Gy F-M Calc Cmt
37	36-37	303	25.2	0.0	89.3	SS Lt Gy F-M Calc Cmt
38	37-38	239	24.6	0.0	88.5	SS Lt Gy F-M Calc Cmt
39	38-39	306	25.3	0.0	90.7	SS Lt Gy F-M Calc Cmt
40	39-40	185	24.5	0.0	86.4	SS Lt Gy F-M Calc Cmt
41	40-41	150	23.7	0.0	83.1	SS Lt Gy F-M Calc Cmt
42	41-42	202	25.4	0.0	86.9	SS Lt Gy F-M Calc Cmt
43	42-43	196	22.6	0.0	86.8	SS Lt Gy F-M Calc Cmt
44	43-44	164	23.9	0.0	85.6	SS Lt Gy F-M Calc Cmt
45	44-45	288	27.0	0.0	87.6	SS Lt Gy F-M Calc Cmt

* See note on page 1.

FLUID SAMPLE DATA				Date 8-9-75		Ticket Number 109258	
Sampler Pressure <u>10</u> P.S.I.G. at Surface Recovery: Cu. Ft. Gas <u>0</u> cc. Oil <u>2000</u> cc. Water <u>0</u> cc. Mud <u>0</u> Tot. Liquid cc. <u>2000</u> Gravity <u> </u> * API @ <u> </u> *F. Gas/Oil Ratio <u> </u> cu. ft./bbl. RESISTIVITY CHLORIDE CONTENT				Kind of Job <u>OPEN HOLE</u>		Halliburton District <u>FARMINGTON</u>	
				Tester <u>D. HOEFER</u>		Witness <u>ARNOLD SNEEL</u>	
				Drilling Contractor <u>FOUR CORNERS DRILLING COMPANY SM S</u>			
EQUIPMENT & HOLE DATA							
Recovery Water <u> </u> @ <u> </u> *F. <u> </u> ppm				Formation Tested <u>Entrada</u>			
Recovery Mud <u> </u> @ <u> </u> *F. <u> </u> ppm				Elevation <u>6698'</u> Ground level <u> </u> Ft.			
Recovery Mud Filtrate <u> </u> @ <u> </u> *F. <u> </u> ppm				Net Productive Interval <u>5478-88'</u> Ft.			
Mud Pit Sample <u> </u> @ <u> </u> *F. <u> </u> ppm				Art Depths Measured From <u>Kelly bushing</u>			
Mud Pit Sample Filtrate <u> </u> @ <u> </u> *F. <u> </u> ppm				Total Depth <u>5488'</u> Ft.			
Mud Weight: <u>8.9</u> vis <u>43</u> cp				Main Hole/Casing Size <u>8 3/4"</u>			
				Drill Collar Length <u>620'</u> I.D. <u>2 1/4"</u>			
				Drill Pipe Length <u>4815'</u> I.D. <u>3.826"</u>			
				Packer Depth(s) <u>5473-5478'</u> Ft.			
				Depth Tester Valve <u>5466'</u> Ft.			
Cushion		TYPE	AMOUNT	Depth Back Pres. Valve	Surface Choke	Bottom Choke	
					<u>3/4" Adj</u>	<u>3/4"</u>	
Recovered		<u>825</u>	Feet of	<u>oil</u>			
Recovered		<u>165</u>	Feet of	<u>drilling mud</u>			
Recovered			Feet of				
Recovered			Feet of				
Recovered			Feet of				
Remarks <u>Tool opened for 5 minute first flow period with a weak blow. Closed tool</u>							
<u>for 14 minute first closed in pressure period. Tool reopened for 60 minute</u>							
<u>second flow period with a very weak blow which increased to fair blow.</u>							
<u>Closed tool for 91 minute second CIP period.</u>							
TEMPERATURE		Gauge No. <u>6040</u>		Gauge No. <u>6039</u>		Gauge No. <u> </u>	
		Depth: <u>5470</u> Ft.		Depth: <u>5484</u> Ft.		Depth: <u> </u> Ft.	
Est. <u> </u> *F.		<u>24</u> Hour Clock		<u>12</u> Hour Clock		<u> </u> Hour Clock	
		Blanked Off <u>NO</u>		Blanked Off <u>YES</u>		Blanked Off <u> </u>	
Actual <u>128</u> *F.		Pressures		Pressures		Pressures	
		Field	Office	Field	Office	Field	Office
Initial Hydrostatic		<u>2632</u>	<u>2624</u>	<u>2633</u>	<u>2641</u>		
First Period Flow	Initial	<u>66</u>	<u>81</u>	<u>79</u>	<u>99</u>		
	Final	<u>92</u>	<u>95</u>	<u>105</u>	<u>114</u>		
	Closed in	<u>2091</u>	<u>2112</u>	<u>2105</u>	<u>2133</u>		
Second Period Flow	Initial	<u>92</u>	<u>115</u>	<u>105</u>	<u>136</u>		
	Final	<u>357</u>	<u>370</u>	<u>368</u>	<u>391</u>		
	Closed in	<u>2170</u>	<u>2175</u>	<u>2184</u>	<u>2190</u>		
Third Period Flow	Initial						
	Final						
	Closed in						
Final Hydrostatic		<u>2632</u>	<u>2599</u>	<u>2633</u>	<u>2616</u>		

Legal Location
Sec. 1-2-3-4-5-6-7-8-9-10-11-12

Lease Name

FEDERAL 12

Well No.

1

Test No.

1

Tested Interval

5478 - 5488'

Field Area

MILDCAT

County

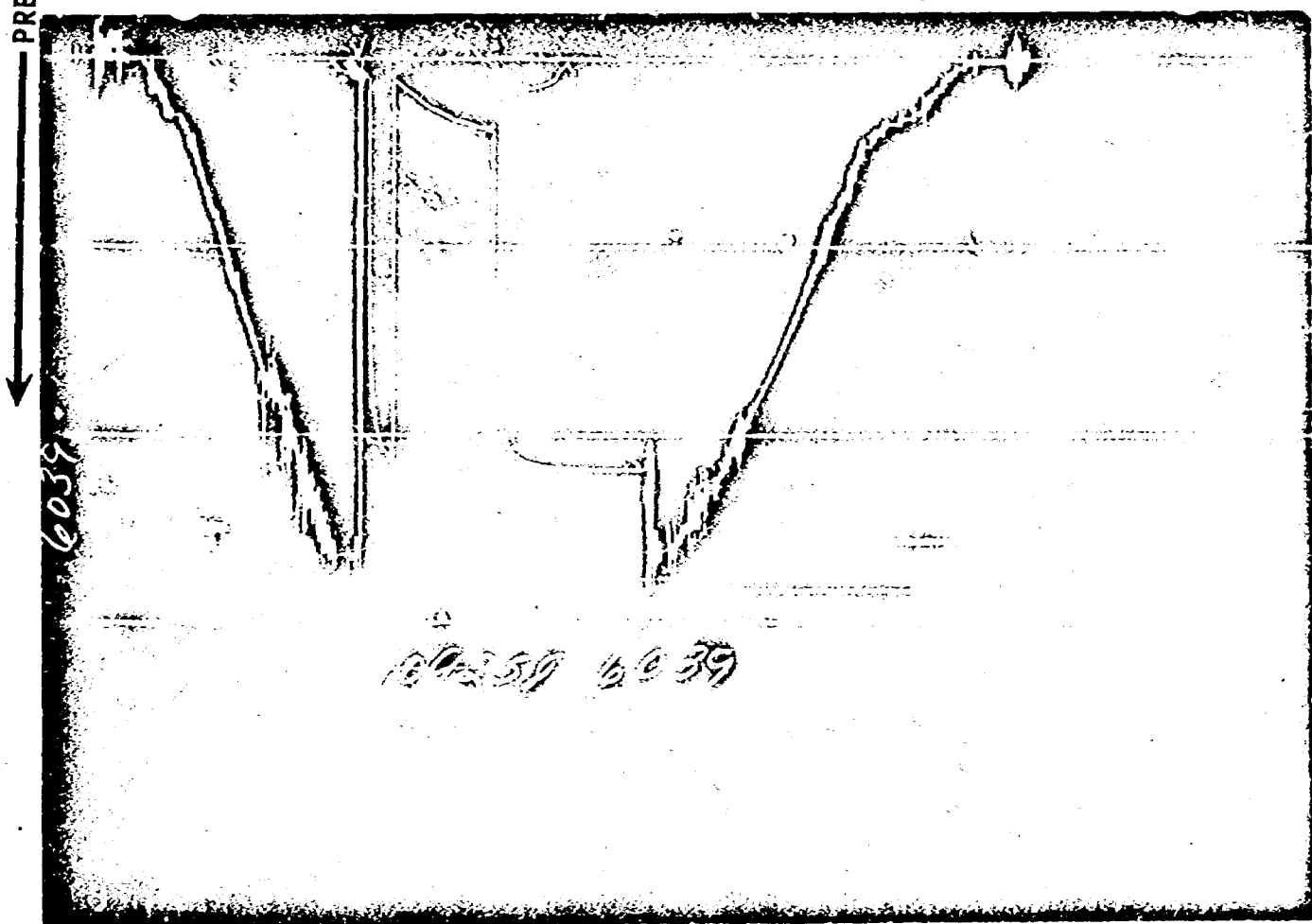
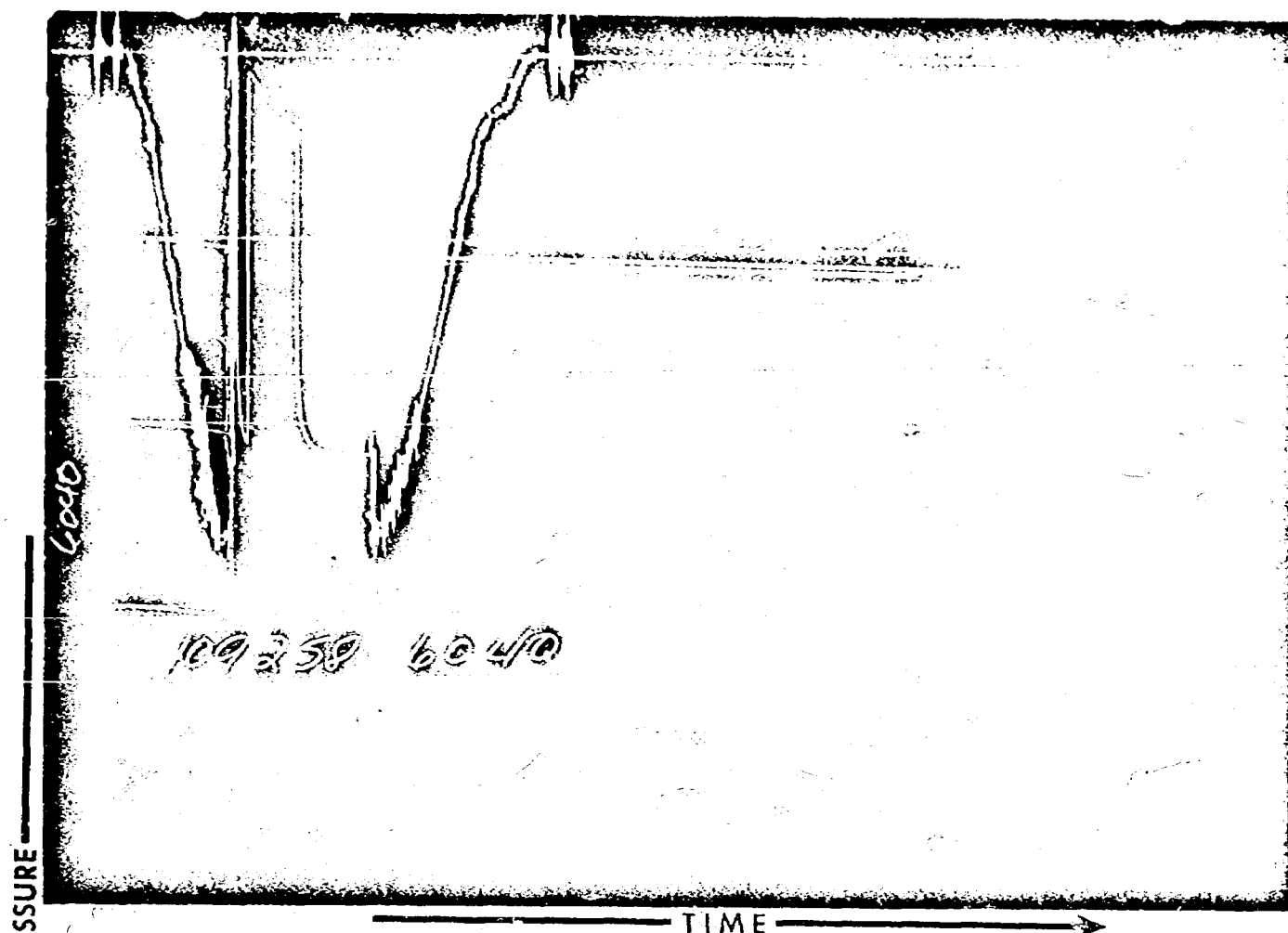
SANDOVAL

State

NEW MEXICO

Lease Owner/Company Name

FILON EXPLORATION CORPORATION



Gauge No. 6040			Depth 5470'			Clock No. 13840			24 hour		Ticket No. 109258				
First Flow Period			First Closed In Pressure			Second Flow Period			Second Closed In Pressure			Third Flow Period		Third Closed In Pressure	
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.
0	.0000	81	.0000		95	.0000	115	.0000		370					
1	.0034	78	.0033		1637	.0332	167	.0232*		690					
2	.0068	79	.0065		1797	.0663	231	.0430		2084					
3	.0102	83	.0099		1858	.0995	282	.0629		2121					
4	.0316	90	.0132		1941	.1327	321	.0827		2141					
5	.0170	95	.0165		1978	.1659	345	.1026		2153					
6			.0197		2004	.1990	370	.1224		2161					
7			.0230		2029			.1423		2164					
8			.0263		2050			.1621		2167					
9			.0296		2064			.1820		2170					
10			.0329		2078			.2018		2171					
11			.0362		2088			.2216		2172					
12			.0395		2099			.2415		2174					
13			.0428		2105			.2614		2174					
14			.0460		2112			.2812		2175					
15								.3010		2175					

Gauge No. 6039			Depth 5484'			Clock No. 14122			12 hour	
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	
0	.0000	99	.0000		114	.0000	136	.0000	391	
1	.0068	95	.0067		1683	.0675	186	.0469*	2026	
2	.0136	97	.0134		1825	.1350	250	.0870	2107	
3	.0204	103	.0201		1903	.2025	300	.1272	2142	
4	.0272	111	.0263		1957	.2700	339	.1673	2161	
5	.0340	114	.0336		1996	.3375	366	.2075	2170	
6			.0403		2020	.4050	391	.2475	2177	
7			.0470		2054			.2878	2181	
8			.0537		2073			.3279	2185	
9			.0604		2090			.3681	2186	
10			.0671		2100			.4082	2187	
11			.0738		2111			.4484	2189	
12			.0805		2120			.4885	2189	
13			.0872		2127			.5287	2190	
14			.0940		2133			.5688	2190	
15								.6090	2190	

Reading Interval 1 1 10 6 Minutes

REMARKS: *First interval is equal to 7 minutes.

TICKET NO. 109258

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub	6"	2.5"	1.1'	
Water Cushion Valve				
Drill Pipe	4½"	3.826"	4815'	
Drill Collars	6 1/4"	2 1/4"	620'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler	5"	2.75"		
Hydro-Spring Tester	5"	.75"	6'	5466'
Multiple CIP Sampler	5"	2.38"	5.4'	
Extension Joint				
AP Running Case	5"	3½"	4'	5470'
Hydraulic Jar	5"	1.75"	6'	
VR Safety Joint	5"	1"	2.8'	
Pressure Equalizing Crossover				
Packer Assembly				
Distributor				
Packer Assembly				
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.S. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly	7 3/4"	1.53"	5'	5473'
Distributor				
Packer Assembly	7 3/4"	1.53"	5'	5478'
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor	5 3/4"	3½"	5'	
Blanked-Off B.T. Running Case	5 3/4"	3½"	5'	5484'
Total Depth				5488'

CL1-12A (REV. 1964)

CHEMICAL & GEOLOGICAL LABORATORIES

P. O. Box 2794
Casper, Wyoming

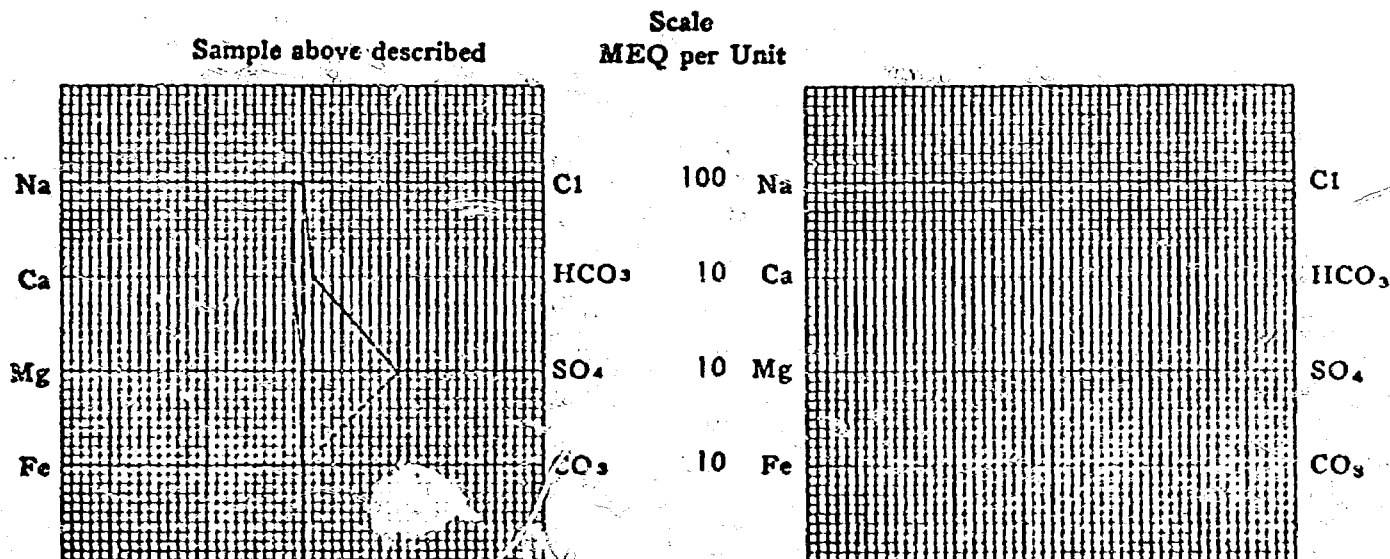
WATER ANALYSIS REPORT

OPERATOR Filon Exploration Co. DATE October 2, 1975 LAB NO. 17643
 WELL NO. Federal 12-1 LOCATION _____
 FIELD _____ FORMATION Entrada
 COUNTY _____ INTERVAL _____
 STATE _____ SAMPLE FROM Treater (9-20-75)

REMARKS & CONCLUSIONS: No other information given.

Cations			Anions		
	mg/l	meq/l		mg/l	meq/l
Sodium	2784	121.11	Sulfate	4875	101.40
Potassium	21	0.54	Chloride	730	20.59
Lithium			Carbonate		
Calcium	108	5.39	Bicarbonate	378	6.20
Magnesium	14	1.15	Hydroxide		
Iron			Hydrogen sulfide		
Total Cations		128.19	Total Anions		128.19
Total dissolved solids, mg/l			Specific resistance @ 68°F.:		
			Observed	0.97	ohm-meters
NaCl equivalent, mg/l			Calculated	1.05	ohm-meters
Observed pH					

WATER ANALYSIS PATTERN



(Na value in above graphs includes Na, K, and Li)
 NOTE: Mg/l = Milligrams per liter Meq/l = Milligram equivalents per liter
 Sodium chloride equivalent = by Dunlap & Hawthorne calculation from components

Memo

From
D. S. NUTTER
CHIEF ENGINEER

To Diane -

Before finalizing
order, let's check
with Al Kendrick
to see if the well
which was drilled in
Sec 14 was successful
and whether the
horizontal limits should
include a portion of
Section 14.

DRAFT

DSN/dr

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 5574

APPLICATION OF FILON EXPLORA-
TION CORPORATION FOR POOL CREATION,
ASSIGNMENT OF A DISCOVERY ALLOWABLE,
AND SPECIAL POOL RULES, SANDOVAL
COUNTY, NEW MEXICO.

Order No. R- 5118

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 22
19 75, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of November, 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, Filon Exploration Corporation, has
discovered a new common source of supply for the production of
oil from the Entrada formation ~~in~~ its Federal 12 Well No. 1, located
in Unit M of Section 12, Township 19 North, Range 4 West, NMPM,
Sandoval County, New Mexico, said well being completed to produce
from the Entrada formation August 25, 1975, through casing
perforations from 5,483 feet to 5,493 feet.

(3) That the applicant seeks the creation and designation
of a new oil pool for said Federal 12 Well No. 1, the promulgation
of special rules for said pool including the assignment of a
special depth bracket allowable, and the assignment of an oil
discovery allowance to the discovery well.

(4) That having made a bona fide discovery of a new common source of supply, the discovery well, applicant's Federal 12 Well No. 1 is eligible for and should be assigned an oil discovery allowable of five barrels for each foot of depth from the surface of the ground to the top of the perforations at 5,483 feet, or 27,415 barrels.

(5) That a new pool for said discovery well should be created and designated the Eagle Mesa-Entrada Oil Pool, and the vertical limits of said pool should be the Entrada formation and the horizontal limits should comprise:

TOWNSHIP 19 NORTH, RANGE 4 WEST, NMPM

Section 11: SE/4 SE/4

Section 12: SW/4 SW/4

Section 13: NW/4 NW/4

(6) That the aforesaid oil pool produces from the Entrada formation with a high water-oil cut, apparently as the result of a high connate water saturation and an active water-drive mechanism.

(7) That tests have shown that high-volume pumping of wells in the subject pool appears to reduce the water-oil cut and should result in the recovery of additional quantities of oil, thereby preventing waste.

(8) That the applicant proposes a special depth bracket allowable of 2,000 barrels of oil per day for the subject pool.

(9) That the water-oil cuts encountered in the wells completed in said pool to date, even when reduced by high-volume pumping, would result in the production of excessive volumes of fluid beyond the physical capacity of the available producing equipment or disposal facilities, if production were such as to justify a 2000 barrel-per-day oil allowable.

(10) That production of such excessive quantities of fluid as would be necessary to even approach 2,000 barrels of oil per day would greatly increase the hazard of water coming and subsequent loss of oil production, thereby causing waste.

(11) That the Entrada formation in the subject pool bears close resemblance to the Entrada formation in the Media-Entrada Oil Pool, which is located some five miles to the east-southeast.

(12) That the reservoir characteristics and the well-producing characteristics in the subject pool and said Media-Entrada Oil Pool appear to be almost identical.

(13) That a special depth bracket allowable of 750 barrels of oil per day has been in effect in said Media-Entrada Oil Pool for quite some time and has proven to be efficient and in the interest of conservation.

(14) That until more is known of the actual characteristics of the reservoir and the fluid mechanics in the subject pool, it appears to the Commission to be unwise to establish a depth bracket allowable for the subject pool which exceeds the depth bracket allowable previously established for a very similar oil pool.

(15) That the applicant's proposed 2,000 barrel-per-day depth bracket allowable should be denied.

(16) That temporary special pool rules should be adopted for the subject pool which provide for a depth bracket allowable of 750 barrels of oil per day per well.

(17) That creation of a new pool, assignment of a discovery allowable, and the promulgation of temporary special pool rules, all as described in Findings Nos. (5), (4), and (16) above are in the interest of conservation, will prevent waste, and will not impair correlative rights, *and should be approved.*

(18) That this case should be reopened at an examiner hearing in October, 1976, at which time the operators in the subject pool should appear and show cause why the temporary special depth bracket allowable should be made permanent.

IT IS THEREFORE ORDERED:

effective November 7, 1975,

(1) That ~~a~~^{the} new pool for the production of oil from the Entrada formation in Sandoval County, New Mexico, is hereby created and designated as the Eagle Mesa-Entrada Oil Pool with vertical limits comprising the Entrada formation and horizontal limits as follows:

TOWNSHIP 19 NORTH, RANGE 4 WEST, NMPM
Section 11: SE/4 SE/4
Section 12: SW/4 SW/4
Section 13: NW/4 NW/4

(2) That the discovery well for said pool, the Filon Exploration Corporation Federal 12 Well No. 1 located in Unit M of Section 12, Township 19 North, Range 4 West, NMPM, Sandoval County, New Mexico, is hereby assigned an oil discovery allowable of 27,415 barrels of oil, to be produced within 730 days after the effective date of this order.

(4) That a temporary special depth bracket allowable of 750 barrels of oil per day is hereby established for the Eagle Mesa-Entrada Oil Pool, Sandoval County, New Mexico.

(5) That this case shall be reopened at an examiner hearing in October, 1976, at which time the operators in the subject pool may appear and show cause why the temporary special depth bracket allowable should not be rescinded.

(6) That the Secretary-Director of the Commission may, at any time it appears that premature water encroachment or water coning is occurring, or other evidence of reservoir damage is apparent, rescind the provisions of this order and cause the top unit allowable for the Eagle Mesa-Entrada Oil Pool to revert to 107 barrels of oil per day.

(3) That applicant's request for a 2000 barrel-per-day ^{special} depth bracket allowance is hereby denied.

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(7) That each month the applicant shall take production fluid level tests on each producing well in the pool and shall report the results of these tests along with other pertinent monthly well production data to the Aztec district office of the Commission.

(8) 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. 5574

Order No. R-5118-A

IN THE MATTER OF CASE 5574 BEING REOPENED PURSUANT TO THE
PROVISIONS OF ORDER NO. R-5118 WHICH ORDER ESTABLISHED A
TEMPORARY SPECIAL DEPTH BRACKET ALLOWABLE OF 750 BARRELS
OF OIL PER DAY FOR THE EAGLE MESA-ENTRADA OIL POOL, SANDOVAL
COUNTY, NEW MEXICO

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 27
19 76, at Santa Fe, New Mexico, before Examiner Richard L. Stamets

NOW, on this November day of October, 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-5118, dated November 17, 1975, a temporary
special depth bracket allowable of 750 barrels of oil per day was established
for the Eagle Mesa-Entrada Oil Pool, Sandoval County, New Mexico.

(3) That pursuant to the provisions of Order No. R-5118, this case was reopened to permit all interested parties to appear and show cause why said special depth bracket allowable should remain in effect.

(4) That the evidence presented at the hearing indicates that high volume pumping of oil wells in the Eagle Mesa-Entrada Oil Pool generally results in a lower water-oil cut, thereby improving the producing efficiency of the reservoir.

(5) That retention of the special depth bracket allowable for wells in the subject pool should improve reservoir producing efficiency and result in the ultimate recovery of additional oil, thereby preventing waste.

(6) That retention of the special depth bracket allowable for wells in the subject pool will not cause waste nor impair correlative rights, and should be approved.

IT IS THEREFORE ORDERED:

(1) That the special depth bracket allowable of 750 barrels of oil per day for the Eagle Mesa-Entrada Oil Pool, Sandoval County, New Mexico, shall remain in full force and effect until further order of the Commission.

(2) That the operator of the Eagle Mesa-Entrada Unit Area shall report monthly to the Aztec District Office of the Commission the previous month's water-oil cut for each producing well in the Eagle Mesa-Entrada Oil Pool.

(3) That the Secretary-Director of the Commission may, at any time that it appears that premature water encroachment or water coning is occurring, or other evidence of reservoir damage is apparent, rescind the provisions of this order and cause the top unit allowable for the Eagle Mesa-Entrada Oil Pool to revert to 107 barrels of oil per day.

(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.