

CASE 5916: MARATHON OIL COMPANY FOR
DOWNHOLE COMMINGLING, LEA COUNTY,
NEW MEXICO

Case Number

5916

Application

Transcripts

Small Exhibits

ETC.

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

EXAMINER HEARING

IN THE MATTER OF:

Application of Marathon Oil Company for) CASE
downhole commingling, Lea County,) 5916
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: Lynn Teschendorf, Esq.
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Santa Fe, New Mexico

For the Applicant: Robert Hasty, Esq.
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1 MR. NUTTER: The hearing will come to order, please.
2 The next case will be Number 5916.

3 MS. TESCHENDORF: Case 5916, application of Marathon
4 Oil Company for downhole commingling, Lea County, New Mexico.

5 MR. HASTY: Mr. Examiner, my name is Robert Hasty
6 from Houston, Texas, representing Marathon Oil. Before I
7 proceed I would ask it noted for the record the appearance
8 entered of Mr. Charles Malone of the Atwood, Malone, Mann &
9 Cooter firm in Roswell.

10 MR. NUTTER: We have that appearance..

11 MR. HASTY: May I have permission to proceed?

12 MR. NUTTER: Yes, sir, please do.

13 MR. HASTY: I would call my first witness, Mr. Joe
14 Younger and ask that he be sworn.

15 (THEREUPON, the witness was duly sworn.)

16
17 JOE W. YOUNGER
18 called as a witness, having been first duly sworn, was examined
19 and testified as follows:

20
21 DIRECT EXAMINATION

22 BY MR. HASTY:

23 Q Mr. Younger, would you state your full name and
24 address, please?

25 A Joe W. Younger, Midland, Texas.

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1 Q By whom are you employed?

2 A Marathon Oil Company.

3 Q You are here to testify in support of Marathon's
4 application today, is that correct?

5 A This is true.

6 Q Have you appeared as a witness before this time before
7 the New Mexico Oil Conservation Commission?

8 A No, I haven't.

9 Q Would you please state for the record a summary of
10 your background and experience as it relates to the testimony
11 that you are going to give today?

12 A Yes, I received a B.S. degree in Petroleum engineering
13 from the University of Tulsa in 1957. Upon graduation I went to
14 work for Marathon Oil Company and have been working for this
15 company ever since. I worked nine years in Hobbs, New Mexico
16 as area engineer for the period 1962 through 1973 and at the
17 present time I'm District Operations Engineer in our Midland,
18 Texas District Office.

19 Q During the period of time of your employment with
20 Marathon have you been exposed to the engineering problems
21 associated with the production of work-over oil wells in the
22 West Texas and New Mexico area?

23 A Yes, sir.

24 Q And your current duties for Marathon include responsi-
25 bilities for engineering matters associated with production in

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1 the area of Lea County, New Mexico?

2 A Yes, this is true.

3 Q Are you a member of any professional societies in
4 the field of petroleum engineering?

5 A The Society of Petroleum Engineers, API.

6 MR. HASTY: Very well. Mr. Examiner I offer Mr.
7 Younger to testify as an expert.

8 MR. NUTTER: He is qualified.

9 MR. HASTY: Thank you.

10 Q (Mr. Hasty continuing.) Mr. Younger, what is it that
11 Marathon is seeking by this application today?

12 A Marathon is seeking approval to downhole commingle
13 production from the North Vacuum-Abo, Vacuum-Wolfcamp and Vacuum
14 Upper Penn zones in the McCallister State Well No. 7.

15 Q During your testimony you will be referring to a
16 number of exhibits which have been marked One through Seventeen
17 for identification, were each of these exhibits either prepared
18 by you or under your supervision?

19 A Yes, sir, they were.

20 Q Mr. Younger, where is the McCallister State Well
21 No. 7 located?

22 A The well is located six hundred and sixty feet
23 from the south line and seventeen hundred and eighty feet from
24 the west line of Section 25, Township 17 South, Range 34
25 East, Lea County, New Mexico.

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1 Q Referring to what has been marked as Exhibit Number
2 One, can you point to that McCallister No. 7 on the plat there?

3 A Yes, sir. Marathon's McCallister State lease is
4 shown outlined in yellow and the well is designated by the red
5 arrow.

6 Q Marathon is the operator of that well, is that
7 correct?

8 A That is true.

9 Q And the lease is from the State of New Mexico?

10 A It is a State lease.

11 Q Is the lease a part of any production unit?

12 A No, it isn't.

13 Q How is the working interest and ownership distributed?

14 A The working interest ownership is eighty-seven and
15 a half percent, twelve and a half percent is royalty to the
16 State of New Mexico.

17 Q And the State owns the entire royalty?

18 A This is true.

19 Q And Marathon owns the entire working interest?

20 A Yes, sir.

21 Q Is that true as to all zones, its' common --

22 A Yes.

23 Q When was the McCallister No. 7 drilled?

24 A This well was drilled in 1963.

25 Q How many completions are presently in the well?

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1 A There are three.

2 Q Was this triple completion authorized by an order
3 of the Oil Conservation Commission?

4 A Yes, by administrative order MC-1345-A.

5 Q In what pools or reservoirs are the three completions?

6 A The lower is in the lower reservoir in the Upper Penn,
7 the middle reservoir is the Wolfcamp and the upper reservoir
8 is the Abo.

9 Q Are each of those reservoirs classified as oil
10 reservoirs?

11 A That is true.

12 Q What is the depth of the lowest of those three?

13 A The lowest reservoir is the Upper Penn found at
14 approximately ten thousand one hundred feet.

15 Q Are these the three pools for which Marathon is
16 asking approval for downhole commingling today?

17 A Yes.

18 Q Now part two and three for identification are two
19 wellbore sketches. I would ask for you to identify those and
20 state what they represent.

21 A Exhibit Number Two is a wellbore sketch of the
22 downhole triple equipment in the McCallister Well No. 7 as
23 it exists. You will notice that the Wolfcamp zone is on gas
24 lift, the Abo was on gas lift and the Upper Penn zone was
25 flowing.

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1 Exhibit Number Three is a wellbore sketch of this
2 downhole completion in the McCallister State Well No. 7,
3 showing all of the zones downhole commingled and this is what
4 we are seeking in our application today.

5 Q How is the oil presently being produced in the
6 McCallister No. 7?

7 A It is being produced by rod pump.

8 Q Is the triple completion equipment presently in
9 the wellbore?

10 A No, the triple equipment has been removed from the
11 well.

12 Q When was it removed?

13 A It was removed in September of 1976.

14 Q Would you describe the operation that took place at
15 that time and what was done with the well in the months
16 immediately following?

17 A Yes, in September of '76 we moved on the well to
18 remove the downhole triple equipment and to fully evaluate
19 each of the zones to see if in fact we did want to downhole
20 commingle. In the course of this clean out operation we ran
21 into a difficult fishing job. We had to cut off each of the
22 tubing strings, mill over the triple, the dual and the single
23 packer and it took about twenty days in this operation in
24 fishing all of this equipment out of the well. In the course
25 of this operation we lost about three thousand barrels of

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1 water to the formation. To recover the load water that we
2 lost as rapidly as possible we installed a large beam-type
3 pumping unit and pumped all three zones together and the well
4 stabilized in February of 1977.

5 Q Marked Four, Five and Six for identification are
6 exhibits on the Commission's Form C-16, would you refer to
7 those and explain what they represent?

8 A Exhibit Number Four is a swab test that was conducted
9 during the early part of March of '77 on the Vacuum-Abo North
10 Pool.

11 Exhibit Five is a swab test that was conducted on
12 the Wolfcamp zone and Exhibit Number Six is a swab test on
13 the Upper Penn zone.

14 We swab tested each of these zones over a two-day
15 period.

16 Q In your opinion were the results of the swab tests
17 representative of the capabilities of production of each of
18 those zones in the McCallister No. 7?

19 A I feel like they are not representative, based on
20 the fact that when you compare it to the production history
21 of these zones prior to these tests, the total production
22 from these three swab tests adds up to eighty barrels a day
23 and I feel like we are getting poor production on these tests
24 and that they are not representative.

25 Q Marked Seven for identification is a subsequent test

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1 on the Form C-116. Would you refer to that and identify it,
2 please?

3 A This Exhibit Number Seven is a downhole commingled
4 stabilized test of the Vacuum-Abo, Wolfcamp and Upper Penn.

5 I might point out that this test, as you can see,
6 was conducted on April 21st and the well was pumping off and on
7 at the time and we had it on a time clock, pumping five hours
8 on and three hours off.

9 Q In your opinion is that test more representative of
10 the capacity of production from these three zones in the
11 McCallister No. 7?

12 A Definitely.

13 Q Do any of the three pools in the McCallister No. 7
14 produce more water than the total daily production of oil
15 from all three pools?

16 A No, they don't.

17 Q Marked Eight, Nine and Ten for identification are
18 Exhibits on Commission Form C-124, Reservoir Pressure Reports.
19 Would you refer to those and identify them for the record,
20 please?

21 A Exhibits Eight, Nine and Ten show the reservoir
22 pressures at datum for each of the three reservoirs. Exhibit
23 Eight is the pressure at datum for the Abo Pool, being a
24 thousand and ninety-eight pounds. Exhibit Number nine is the
25 datum pressure for the Vacuum-Wolfcamp Pool, being one thousand

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1 three hundred and ninety pounds and Exhibit Number Ten is the
2 pressure datum for the Upper Penn Pool, being a thousand and
3 twelve pounds. These tests were conducted in February of
4 1976.

5 There is one thing I may point out. I did, since
6 these pressures were all taken as different datum, I did
7 correct the pressures to a common datum, that being the datum
8 of the Upper Penn, and find out that the maximum differential
9 under shut-in conditions is five hundred and ninety-five psi
10 and that would be the Abo being higher than the Upper Penn zone
11 by five hundred and ninety-five pounds.

12 Q Marked Eleven, Twelve and Thirteen for identification
13 are graphs of the production history of each of the three
14 producing reservoirs in the McCallister No. 7. Would you
15 identify those and tell us what the production history curves
16 tell us about the production in each of those reservoirs?

17 A Exhibit Number Eleven is the production history curve
18 for the Vacuum-Abo North Pool. As you can see it shows the
19 monthly oil and water production. The history that is shown here
20 is from 1964 through 1968 on the first page of this exhibit. You
21 will notice that we shut the well in in December of 1968. As
22 mentioned earlier this well had been produced by gas lift and
23 we shut the well in due to uneconomic oil production. We were
24 making about five barrels of oil per day, a hundred and fifty
25 barrels per month is what that is showing there.

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1 And if you refer over to page two of the same
2 exhibit you will see that we have picked up production for the
3 Abo Pool in October of 1976 and this was after we started
4 downhole commingling the three zones together.

5 Exhibit Number Twelve is the production performance
6 curve for the Vacuum-Wolfcamp zone. Here again this well had
7 been produced by gas lift and we shut this well in in December
8 of 1972, here again due to uneconomic oil production.

9 If you will refer to page two of the same exhibit
10 you can see where we have picked up oil production after
11 downhole commingling the oil production of the well.

12 Exhibit Number Thirteen shows the production
13 performance curve for the Upper Penn Pool. This is by far the
14 strongest of the three zones. This well has flowed ever since
15 it was completed back in 1963. I might point out that in
16 the summer months of 1976 that well commenced loading up due to
17 the decreasing bottom-hole pressure and you will see the
18 production reported there for June, July and August was nose-
19 diving, it was down to ninety barrels per month for the month
20 of August. The September production of zero was the month
21 in which we encountered the difficulty in fishing all of the
22 triple equipment from the well.

23 Q Is it correct to say, Mr. Younger, that the present
24 production capability of the McCallister No. 7 is in all three
25 of the zones, the Abo, the Wolfcamp and the Upper Penn is

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1 marginal?

2 A. Yes, this is true.

3 Q. Has the production from those three pools historically
 4 been commingled at the surface?

5 A. Yes.

6 Q. Was this done pursuant to a permit from the New Mexico
 7 Oil Conservation Commission?

8 A. Yes, the surface commingling was pursuant to
 9 administrative order PC-136.

10 Q. Will further commingling, in your opinion, downhole
 11 in the wellbore, have any adverse effect on the value of the
 12 commingled stream?

13 A. No, since it is commingled at the surface it will
 14 have no effect.

15 Q. Then in your opinion those fluids that are produced
 16 are chemically compatible with one another?

17 A. Yes.

18 Q. Is there any reason to anticipate problems in the
 19 wellbore, such as damage to any of the reservoirs, if the
 20 production is commingled in the wellbore?

21 A. I do not anticipate any.

22 Q. To your knowledge are there other wells in the area
 23 of the McCallister State No. 7 where these same three reservoir
 24 are commingled in the wellbore?

25 A. Yes, there are.

1 Q Can you point to those by referring to the plat
2 on Exhibit Number One?

3 A Yes, there are four wells that are downhole
4 commingled in these same three zones. On Exhibit One I will
5 point these wells out, the first being Getty's BA Well No. 6
6 which is located just south of our No. 7 well. Getty's BA
7 Well No. 8 which is located southeast of our No. 7 Well.
8 Texaco's Q Well No. 4 located east of our No. 7 Well and then
9 the Texaco T No. 1 located northeast of our well. I might
10 point out that that is the Texaco T lease but the well is
11 called the Texaco Mobile State Com Well No. 1.

12 Q Have the operators offsetting the McCallister State
13 lease and particularly the operators operating these other
14 downhole commingled wells been given notice of Marathon's
15 application today?

16 A Yes, they have.

17 Q Have you received any response by way of waiver
18 letters from those operators?

19 A Yes, we have received waivers from all of the offset
20 operators.

21 Q Are those the exhibits that are marked Fourteen,
22 Fifteen, Sixteen and Seventeen in the record?

23 A Yes, sir, that's right.

24 Q In your opinion would the downhole commingling in
25 McCallister No. 7 have any adverse effect on the potential for

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1 secondary recovery operations in the area of this well?

2 A. No, sir.

3 Q. And do you have an opinion regarding the possibility
4 that downhole commingling in the wellbore of these three zones
5 would result in waste?

6 A. To the contrary, I think it would increase our
7 reserves by downhole commingling.

8 Q. What is the basis for that opinion?

9 A. Well, as I mentioned earlier, the Abo and the Wolfcamp
10 zones were shut in, they were at their economic limits and by
11 producing it downhole commingled we would be able to return
12 production to these two zones.

13 Q. Would the downhole commingling, in your opinion, have
14 any adverse effect on the opportunity of the offsetting producers
15 to produce from any of the three commingled zones?

16 A. Would it have any adverse effect? No.

17 Q. Under the Rules of the Commission there is an
18 allowable limit of eighty barrels per day when production from
19 a zone at the depth of the Upper Penn is downhole commingled
20 with another reservoir, what is Marathon proposing today as
21 a production allowable for the McCallister State Well No. 7 if
22 the Commission approves the application for downhole commingling?

23 A. Marathon is proposing that the maximum allowable be
24 set at eighty barrels per day.

25 Q. Do you have an opinion as to how the commingled

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1 production should be allocated among the three commingled
2 reservoirs at McCallister No. 7?

3 A I would recommend that seventy-five percent of the
4 production be allocated to the Upper Penn-zone, twelve and a
5 half percent to be allocated to the Wolfcamp zone and twelve and
6 a half percent allocated to the Abo zone.

7 Q What is the basis for that opinion?

8 A This is based on the performance histories of the
9 three different zones.

10 MR. HASTY: Mr. Examiner, I would offer the Exhibits
11 marked One through Seventeen into the record.

12 MR. NUTTER: Marathon's Exhibits One through Seventeen
13 will be admitted into evidence.

14 (THEREUPON, Marathon's Exhibits One
15 through Seventeen were admitted into
16 evidence.)

17 MR. HASTY: And on the basis of Mr. Younger's
18 testimony I would move that the Examiner approve our amended
19 application to request approval of downhole commingling
20 retroactive to October 1, 1976, when the operations actually
21 took place, which he has described.

22
23 CROSS EXAMINATION

24 BY MR. NUTTER:

25 Q Mr. Younger, in taking these tests, these swab tests

1 on the three zones on your Exhibits Four, Five and Six, were
2 the other two zones isolated while the one zone was being
3 swabbed in each case?

4 A Yes, sir, they were. We went in the hole with a
5 retrievable bridge plug and packer and isolated each zone
6 individually.

7 Q Now, how does the comparison of the swab results
8 stand up to this seventy-five, twelve and a half, twelve and
9 a half allocation formula you have proposed?

10 A Okay. I pointed out on the swab tests, if you take
11 the twenty-four hour rates for the swab test it adds up to
12 eighty barrels a day for the three zones. The actual
13 commingled production is only forty barrels a day. I don't
14 know whether I can come out and say, in other words, in using
15 the swab test, it would be more close to fifty percent for the
16 Upper Penn, fifty percent for the Abo and just a negligible
17 amount, you know, for the Wolfcamp.

18 Q That Abo swabbed pretty good, didn't it?

19 A It swabbed real good and I think that -- we were
20 real excited, we were hoping that it would hold but I feel
21 like it was just not a stabilized test.

22 Q How about this allocation formula of seventy-five,
23 twelve and a half, twelve and a half, with respect to gas?
24 You don't have the same gas production from the three zones
25 according to the swab tests?

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1 A. On the swab tests this is true. I would recommend,
2 sir, that we just go ahead and base it on the commingled,
3 on the gas-oil ratio on the commingled test --

4 Q Eighteen twenty-five.

5 A. Eighteen twenty-five and that the gas be broken down
6 evenly on that basis between the zones.

7 Q Well, the Wolfcamp doesn't make much gas apparently,
8 according to Exhibit Number Five. It is too small to measure
9 on that swab test?

10 A That's right.

11 Q Well now, what actually happened here when this
12 Upper Penn zone just nosedived in September of '76 and went to
13 nothing?

14 A Okay. In August of 1976, you can't see a point on
15 the graph, but it was ninety barrels for the month of August,
16 so there is a point.

17 Q And that was down from seven hundred the previous
18 month?

19 A That's right, seven hundred the previous month, down
20 to ninety. Now, what I was pointing out was that during June,
21 July and August we were having to swab the well frequently to
22 keep the well flowing, it was trying to die, so we were able to
23 keep the well going in June and July but in August we didn't
24 do a good job of keeping it alive and it only made ninety
25 barrels for the month. Okay now, in September we show no

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1 production. That is the month that we moved on the well to
2 work it over and we had this extensive fishing job, we just
3 had no production from the well.

4 Q But what caused it to fall so dramatically in August
5 and July, it suddenly lost its pressure? There was no water
6 apparently encroaching?

7 A Okay, I think I can explain it. Okay, by backing up
8 to the middle of 1975 you will notice that our production starts
9 to increase toward the end of '75 and the early part of '76.

10 Q Right.

11 A The well was trying to die at that time and we
12 reduced the back pressure on it. In other words, instead of
13 it going through a heater-treater which had about thirty pounds
14 back pressure, we set a stock tank at the well and then we
15 pumped from this stock tank over to the battery so we were
16 having trouble as far back as mid 1975 so it is not as abrupt
17 as what --

18 Q So actually in the middle of '75 you started flowing
19 it against no pressure at all then and maintained the production
20 for a few months?

21 A That's true.

22 Q And the other zones, one of them had been shut in
23 about eight years and the other had been shut in, what, about
24 four years?

25 A Four years, that's right. It was just a typical

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1 gas lift hookup there, that five barrels a day, with an
2 intermittent gas lift operation, we had a better use for
3 our gas lift gas for producing our Glorietta zone and it
4 was just not economic to produce those wells.

5 Q Now, will you continue to produce those three zones
6 with the beam pump then?

7 A Yes, we would.

8 MR. NUTTER: Are there any further questions of
9 Mr. Younger? He may be excused.

10 (THEREUPON, the witness was excused.)

11 MR. NUTTER: Do you have anything further, Mr. Hasty?

12 MR. HASTY: No, sir.

13 MR. NUTTER: Does anyone have anything they wish to
14 offer in Case 5916? We will take the case under advisement.

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REPORTER'S CERTIFICATE

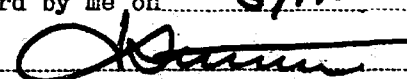
I, SIDNEY F. MORRISH, a Certified Shorthand Reporter,
do hereby certify that the foregoing and attached Transcript
of Hearing before the New Mexico Oil Conservation Commission
was reported by me, and the same is a true and correct record
of the said proceedings to the best of my knowledge, skill and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



Sidney F. Morrish, C.S.R.

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I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5916,
heard by me on 5/11, 1977.

 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. 5916
Order No. R-5453

APPLICATION OF MARATHON OIL COMPANY
FOR DOWNHOLE COMMINGLING, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 11, 1977,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 8th day of June, 1977, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

(2) That the applicant, Marathon Oil Company, is the owner
and operator of the McCallister State Well No. 7, located in Unit
N of Section 25, Township 17 South, Range 34 East, NMPM, Lea
County, New Mexico.

(3) That the applicant seeks authority to commingle North
Vacuum-Abo, Vacuum-Wolfcamp, and Vacuum-Upper Pennsylvanian
production within the wellbore of the above-described well.

(4) That from the North Vacuum-Abo zone, the subject well
is capable of low marginal production only.

(5) That from the Vacuum-Wolfcamp zone, the subject well is
capable of low marginal production only.

(6) That from the Vacuum-Upper Pennsylvanian zone, the
subject well is capable of low marginal production only.

(7) That the proposed commingling may result in the recovery
of additional hydrocarbons from each of the subject pools, there-
by preventing waste, and will not violate correlative rights.

-2-
Case No. 5916
Order No. R-5453

(8) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

(9) That to afford the Commission the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Hobbs district office of the Commission any time the subject well is shut-in for 7 consecutive days.

(10) That in order to allocate the commingled production to each of the commingled zones in the subject well, 12.5 percent of the commingled production should be allocated to the North Vacuum-Abo zone, 12.5 percent to the Vacuum-Wolfcamp zone, and 75.0 percent to the Vacuum-Upper Pennsylvanian zone.

IT IS THEREFORE ORDERED:

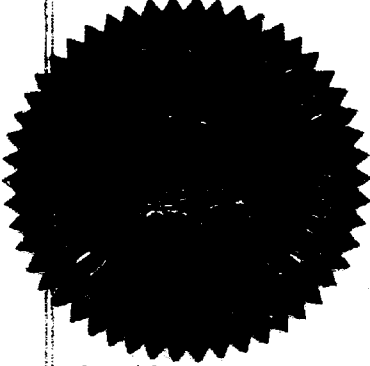
(1) That the applicant, Marathon Oil Company, is hereby authorized to commingle North Vacuum-Abo, Vacuum-Wolfcamp and Vacuum-Upper Pennsylvanian production within the wellbore of the McCallister State Well No. 7, located in Unit N of Section 25, Township 17 South, Range 34 East, NMPM, Lea County, New Mexico.

(2) That 12.5 percent of the commingled production shall be allocated to the North Vacuum-Abo zone, and 12.5 percent to the Vacuum-Wolfcamp zone, and 75.0 percent to the Vacuum-Upper Pennsylvanian zone.

(3) That the operator of the subject well shall immediately notify the Commission's Hobbs district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.

(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.



S E A L
jr/

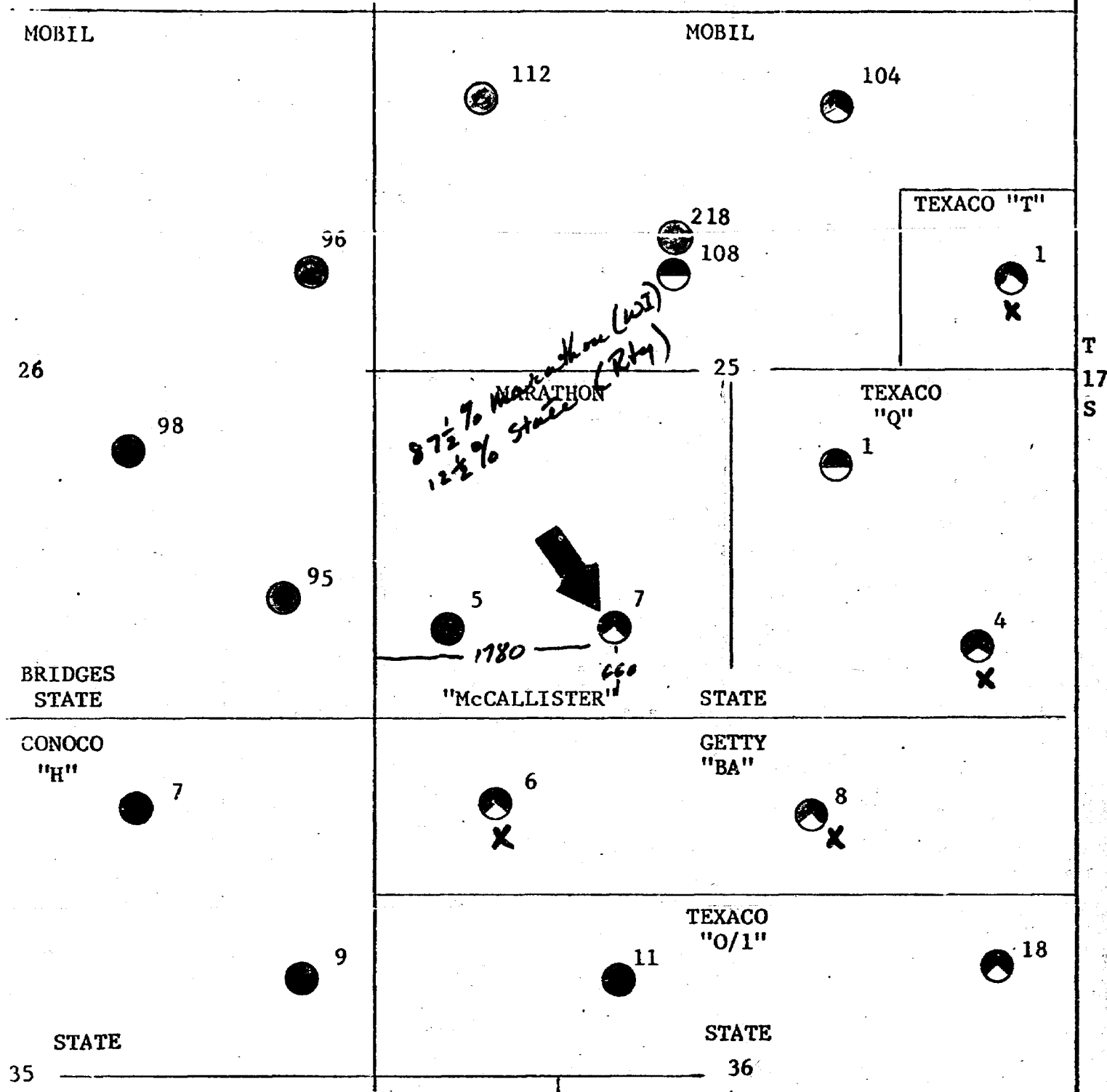
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Phil R. Lucero
PHIL R. LUCERO, Chairman

Emery C. Arnold
EMERY C. ARNOLD, Member

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

RANGE 34 EAST



Note:

Only Vacuum Abo, North; Vacuum Wolfcamp and Vacuum Upper Penn completions are shown on this plat

LEGEND

- Abo Completion
- Wolfcamp Completion
- Upper Penn Completion

5916

MARATHON OIL COMPANY
McCALLISTER STATE LEASE
Sec. 25, T-17-S, R-34-E

VACUUM FIELD
Lea County, New Mexico

Scale 1" = 1000'

x = wells w/ these same zones perforated in the well bore

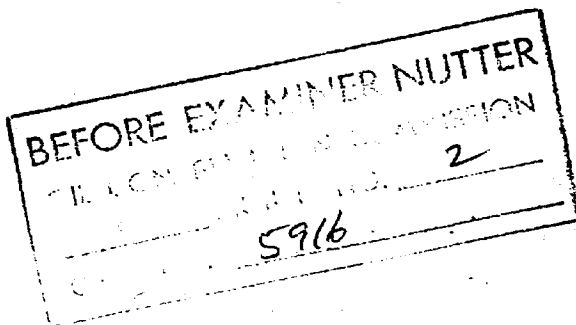
McCALLISTER STATE WELL NO. 7
 Diagrammatic Sketch of Downhole Triple Completion
 (Abo, Wolfcamp and Upper Penn Zones)

VACUUM FIELD
 Lea County, New Mexico

2 3/8" Tbg. (Gas Lift)
 Set @ 9755' (Wolfcamp)
 2 3/8" Tbg. (Flow)
 Set @ 10,061' (U. Penn)

(Gas Lift) - 2" Tbg. Set
 Abo @ 8937'

*PC 136
 surf commencing*



16" Csg. @ 371'

10 3/4" Csg. @ 5006'

*MC-1345-A
 authorized triple*

Abo Perfs.
 9064-9195'

BHP 1098

-----Triple Packer 8937'

*75% U.P.
 12 1/2 W.C.
 12 1/2 Abo*

Wolfcamp Perfs.
 9873-9987'

BHP 1370

-----Dual Packer 9755'

U. Penn Perfs.
 10,064-10,122'

BHP 1012

-----Otis "WA" Packer 10,014'

Strawn Perfs.
 10,287-10,313'

plugged off

-----Cement Plug 10,132'
 -----CIBP 10,160'

*may differ @ common
 datum (upper Pz datum)*

-----Cement Plug 11,870'
 -----CI Retainer 11,900'

Devonian OH Interval
 12,110' - 12,125'

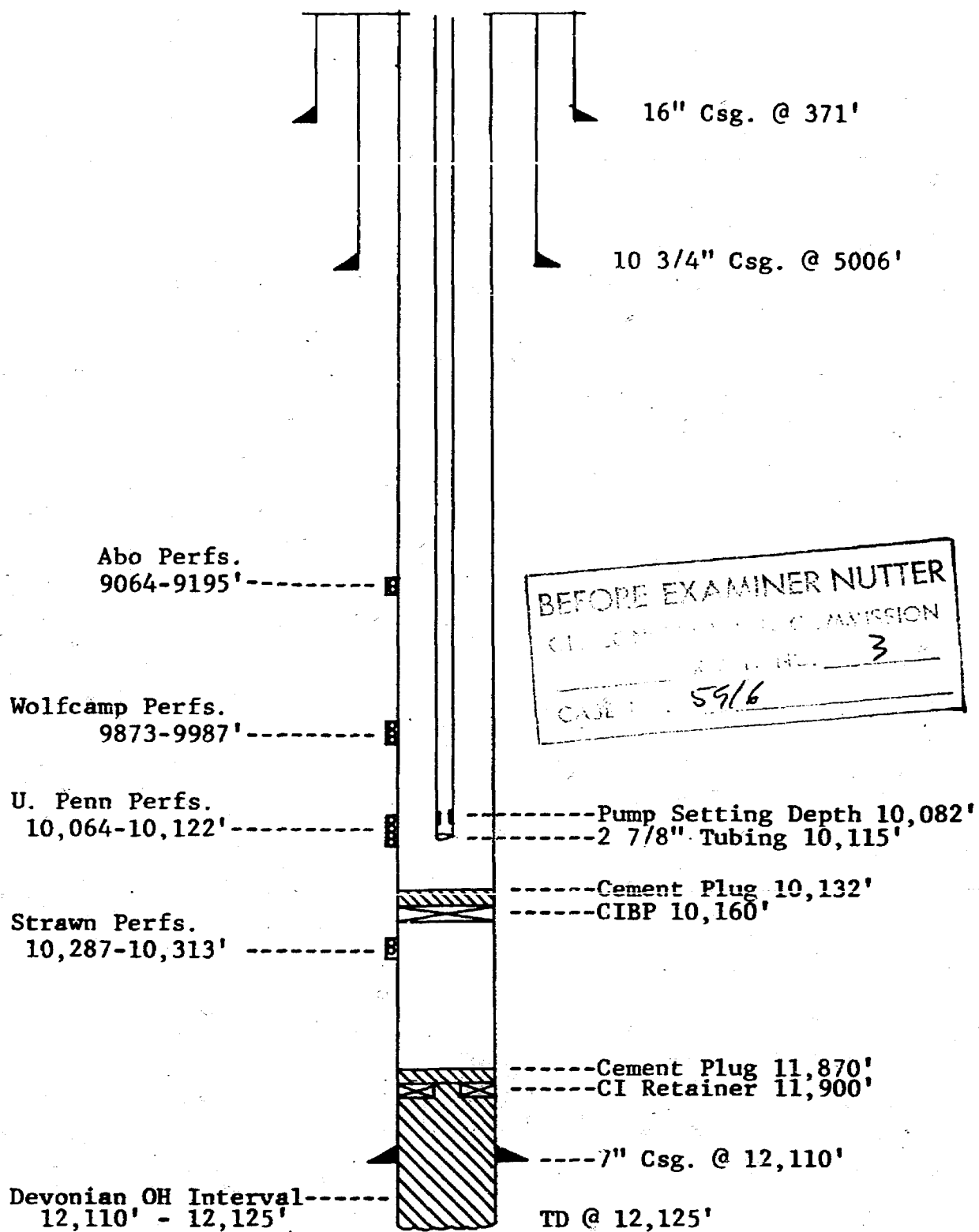
-----7" Csg. @ 12,110'

TD @ 12,125'

propose map allow of 80

McCALLISTER STATE WELL NO. 7
Diagrammatic Sketch of Downhole Completion
(Abo, Wolfcamp and Upper Penn Zones)

VACUUM FIELD
Lea County, New Mexico



NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator Marathon Oil Company		Pool Vacuum Abo, North				County Lea									
Address P. O. Box 2409 - Hobbs, New Mexico						TYPE OF TEST - (X)		Scheduled <input type="checkbox"/>		Completion <input type="checkbox"/>		Special <input checked="" type="checkbox"/>			
LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST				GAS - OIL RATIO CU.FT/BBL
		U	S	T	R						WATER BBLs.	GRAV. OIL	OIL BBLs.	GAS M.C.F.	
McCallister State	7	N	25	17S	34E	3-12&13-77S*	--	--		18.	3	39	26	25	962
						*Swab tested over two day period.									
						APPLICATION FOR DOWNHOLE COMMINGLING									

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Anthony Lovas
(Signature)
Petroleum Engineer
(Title)
April 5, 1977
(Date)

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116.
Revised 1-1-65

Operator Marathon Oil Company		Pool Vacuum Wolfcamp				County Lea										
Address P. O. Box 2409 - Hobbs, New Mexico						TYPE OF TEST - (X)		Scheduled <input type="checkbox"/>		Completion <input type="checkbox"/>		Special <input checked="" type="checkbox"/>				
LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	STATUS	CHOKE SIZE	T.B.G. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST				GAS - OIL RATIO CU.FT./BBL
		U	S	T	R							WATER BBLs.	GRAV. OIL	OIL BBLs.	GAS M.C.F.	
McCallister State	7	N	25	17S	34E	3-9&10-77	S*	--	--		18	4	40	5	TSTM	--
<p>*Swab tested over two day period.</p> <p>APPLICATION FOR DOWNHOLE COMMINGLING.</p>																

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 291 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Anthony Kovacs
(Signature)

Petroleum Engineer

(Title)

April 5, 1977

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator Marathon Oil Company		Pool Vacuum Upper Penn				County Lea			
Address P. O. Box 2409 - Hobbs, New Mexico						TYPE OF TEST - (X) <input checked="" type="checkbox"/> Scheduled <input type="checkbox"/> Completion <input type="checkbox"/> Special <input checked="" type="checkbox"/>			

LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	STATUS	CHOKE SIZE	TSG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST				GAS - OIL RATIO CU.FT/BBL
		U	S	T	R							WATER BBL.	GRAV. OIL	OIL BBL.	GAS M.C.F.	
McCallister State	7	N	25	17S	34E	3-7&8-77	S*	--	--		20	3	41	32	55	1,719
<p>*Swab tested over two day period.</p> <p><u>APPLICATION FOR DOWNHOLE COMMINGLING</u></p>																

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 30) and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Anthony Kovacic
(Signature)

Petroleum Engineer
(Title)

April 5, 1977

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator Marathon Oil Company		Pool *		County Lea												
Address P. O. Box 2409 - Hobbs, New Mexico				TYPE OF TEST - (X)												
				Scheduled <input type="checkbox"/>												
				Completion <input type="checkbox"/>												
				Special <input checked="" type="checkbox"/>												
LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST				GAS - OIL RATIO CU.FT/B3L
		U	S	T	R							WATER SBLs.	GRAV. OIL	OIL BBLs.	GAS M.C.F.	
McCallister State	7	N	25	17S	34E	4-21-77	P	---	50		24	5		40	73	1,825
<p>* Downhole commingled test of Vacuum Abo. North; Vacuum Wolfcamp; Vacuum Upper Penn.</p> <p>APPLICATION FOR DOWNHOLE COMMINGLING</p>																

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

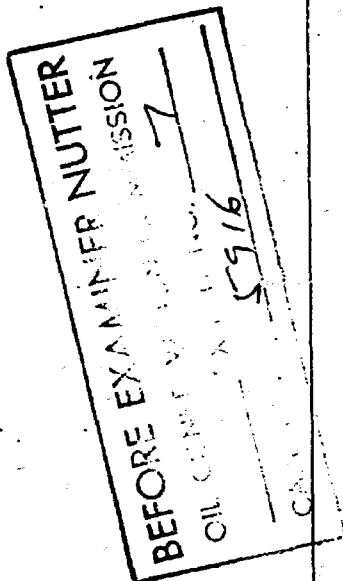
I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Joe W. Younger
(Signature)

District Engineer
(Title)

5-4-77

(Date)



TYPE OF REPORT - (X)	
Initial Completion	
Special	
General Survey	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-124
Revised 1-1-65

RESERVOIR PRESSURE REPORT

Operator Marathon Oil Company		Pool Vacuum Abo, North		County Lea		Date 2-17-76	
Address Hobbs, New Mexico		Producing Formation Abo		Oil Gradient .351 psi/ft.		Water Gradient -- psi/ft.	
				Gas Gravity --		Datum Plane -4650	

LEASE	WELL NO.	LOCATION				ELEV.	OIL (O) OR GAS (G)	DATE TESTED	SHUT - IN HOURS	SHUT- IN TAG. PRESS.	BOMB TEST DATA			SONIC INSTRUMENT TEST DATA*							PRESS. AT DATUM			
		U	S	T	R						TEST DEPTH	S.H. TEMP. °F	OS- SERVED PRESS.	PROD. TEST (BBLs./DAY)		LIQUID LEVEL	LIQUID GRAD- IENT PSI/FT.	WT. OF LIQUID COL. PSI	WT. OF GAS COL. PSI	CSG. PRESS.				
														GIL	WATER									
McCallister State	7	N	25	17S	34E	4005	0	2-17-76	*	25	8912	156	1188											1,0

BEFORE EXAMINED NUTTER

CIL CCN 5916

MISSISSIPPI

* Shut in since December 1968

BEFORE EXAMINED NUTTER
OIL CONSERVATION COMMISSION
5916

* Shut in since December 1968

All depths plus or minus sea level; all pressures psi; Bomb shall be calibrated frequently enough against a dead weight tester to ensure an accuracy of one per cent; gas gravity shall be determined by analysis; liquid level shall be feet above datum plane. SEE RULE 302.

* Well shall be produced at least 24 hours prior to shutting in for sonic test.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Joe W. Younger
(Signature)

Dist. Ops. Engr.
(Title)

5-4-77
(Date)

TYPE OF REPORT - (X)	
Initial Completion	
Special	
General Survey	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-124
Revised 1-1-65

RESERVOIR PRESSURE REPORT

Operator Marathon Oil Company	Pool Vacuum Wolfcamp	County Lea	Date 2-17-76
Address Hobbs, New Mexico	Producing Formation Wolfcamp	Oil Gradient .334 psi/ft.	Water Gradient --- psi/ft.
		Gas Gravity	Datum Plane -5900

LEASE	WELL NO.	LOCATION				ELEV.	OIL (O) OR GAS (G)	DATE TESTED	Z IN SHUT IN HOURS	SHUT-IN TSG. PRESS.	BOMB TEST DATA			SONIC INSTRUMENT TEST DATA*							PRESS. AT DATUM
		U	S	T	R						TEST DEPTH	B.H. TEMP. °F	OB-SERVED PRESS.	PROD. TEST (BBLs./DAY)		LIQUID LEVEL	LIQUID GRAD-IENT PSI/FT.	WT. OF LIQUID COL. PSI	WT. OF GAS COL. PSI	CSG. PRESS.	
McCallister State	7	N	25	17S	34E	4005	0	2-17-76	*	25	8912	159	1058								1,390
* Shut in since December 1972																					

BEFORE EXAMINED NUTTER
OIL CONSERVATION COMMISSION
9
5516
CA

All depths plus or minus sea level; all pressures psi; Bomb shall be calibrated frequently enough against a dead weight tester to ensure an accuracy of one per cent; gas gravity shall be determined by analysis; liquid level shall be feet above datum plane. SEE RULE 302.

* Well shall be produced at least 24 hours prior to shutting in for sonic test.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Joe W. Hargis
(Signature)

Dist. Gas Eng.
(Title)

5-4-77
(Date)

TYPE OF REPORT - (X)	
Initial Completion	
Special	
General Survey	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-124
Revised 1-1-65

RESERVOIR PRESSURE REPORT

Operator Marathon Oil Company	Pool Vacuum Upper Penn	County Lea	Date 2-17-76
Address Hobbs, New Mexico	Producing Formation Upper Penn	Oil Gradient .310 psl./ft.	Water Gradient -- psl./ft.
		Gas Gravity --	Datum Plane -6100

LEASE	WELL NO.	LOCATION				ELEV.	OIL (O) OR GAS (G)	DATE TESTED	SHUT-IN HOURS	SHUT-IN TBG. PRESS.	BOMB TEST DATA			SONIC INSTRUMENT TEST DATA*							PRESS. AT DATUM		
											TEST DEPTH	B.H. TEMP. °F	OB-SERVED PRESS.	PROD. TEST (BLS./DAY)		LIQUID LEVEL	LIQUID GRADIENT PSI/FT.	WT. OF LIQUID COL. PSI	WT. OF GAS COL. PSI	CSG. PRESS.			
		OIL	WATER																				
McCallister State	7	N	25	17S	34E	4005	0	2-17-76	48	263	10,029	170	988										1,012

BEFORE EXAMINED NUTTER

OIL OCCURRED IN PRODUCTION 10

59/6

CA

BEFORE EXAMINED NUTTER
OIL CONSERVATION COMMISSION
10
59/6

All depths plus or minus sea level; all pressures psi; Bomb shall be calibrated frequently enough against a dead weight tester to ensure an accuracy of one per cent; gas gravity shall be determined by analysis; liquid level shall be feet above datum plane. SEE RULE 302.

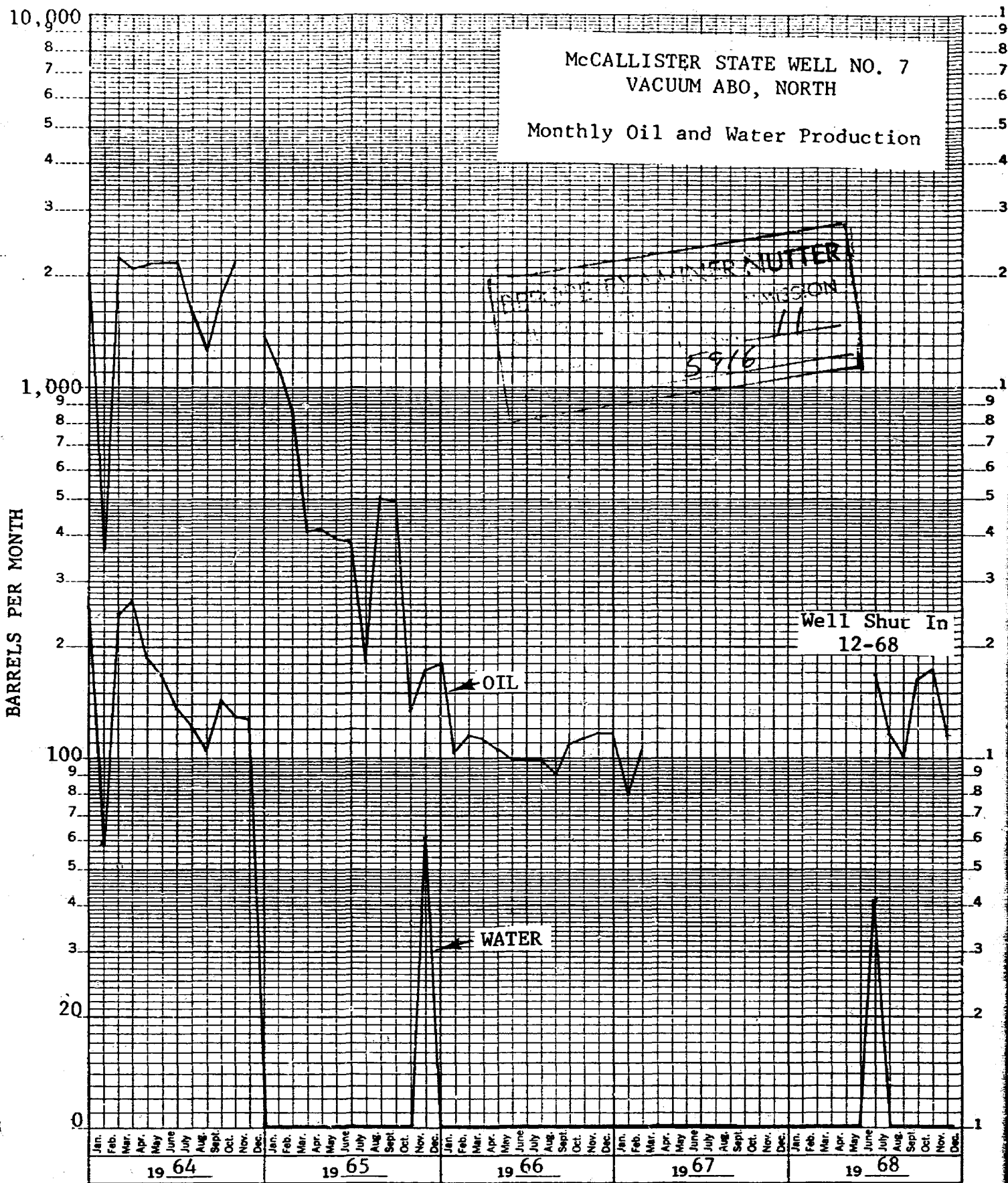
* Well shall be produced at least 24 hours prior to shutting in for sonic test.

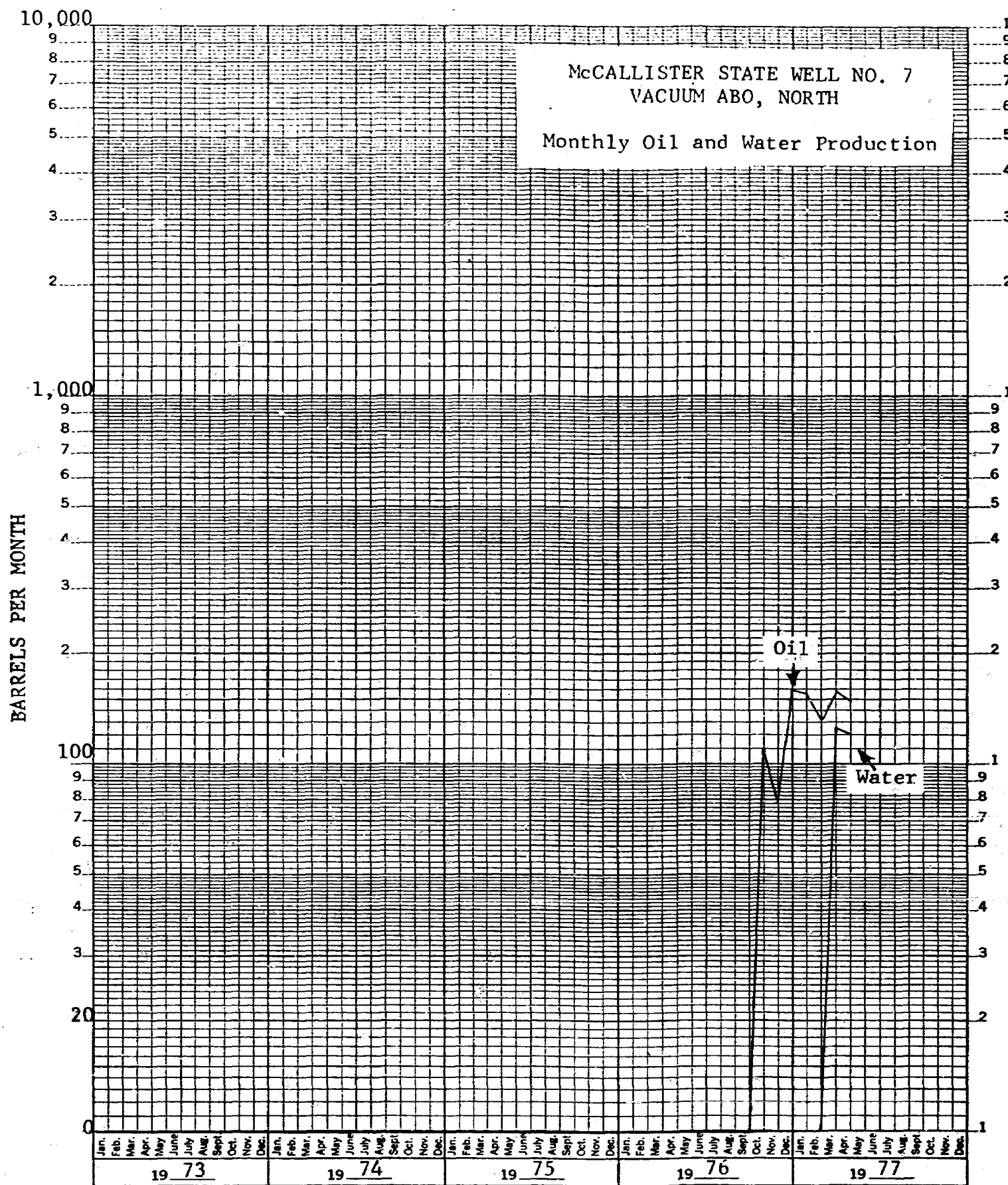
I hereby certify that the above information is true and complete to the best of my knowledge and belief.

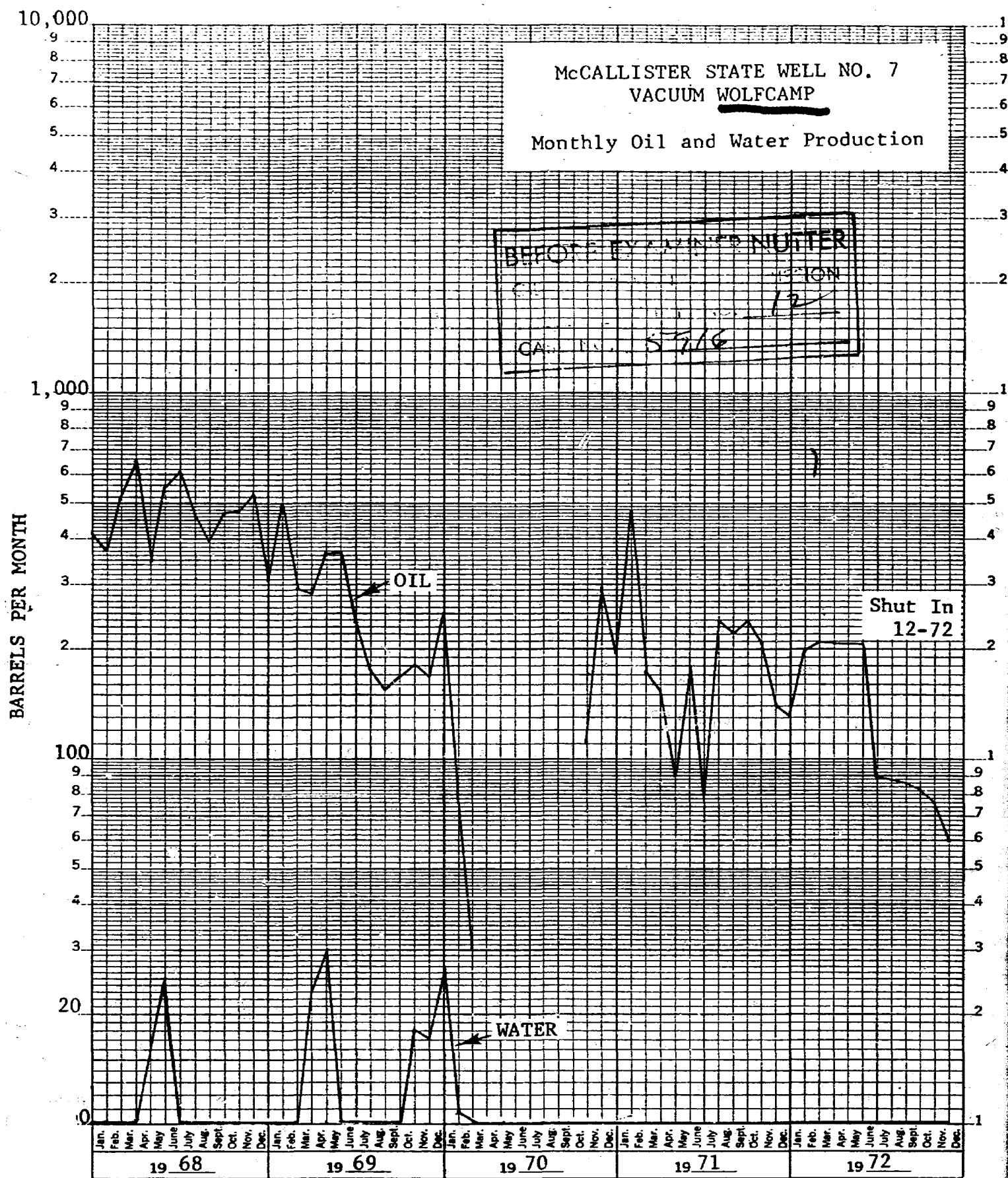
Joe W. Younger
(Signature)

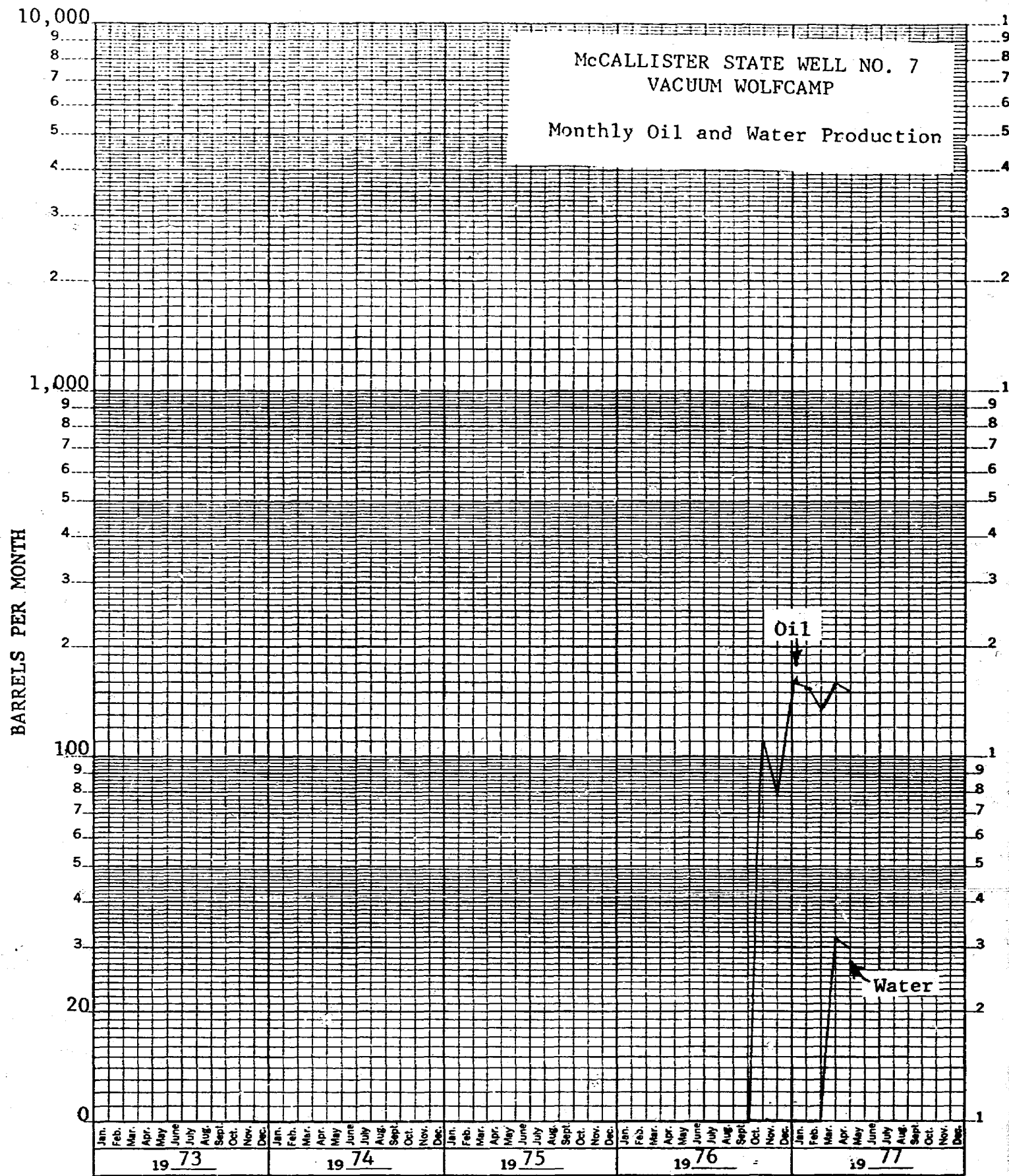
Dist. Open Eng.
(Title)

5-4-77
(Date)



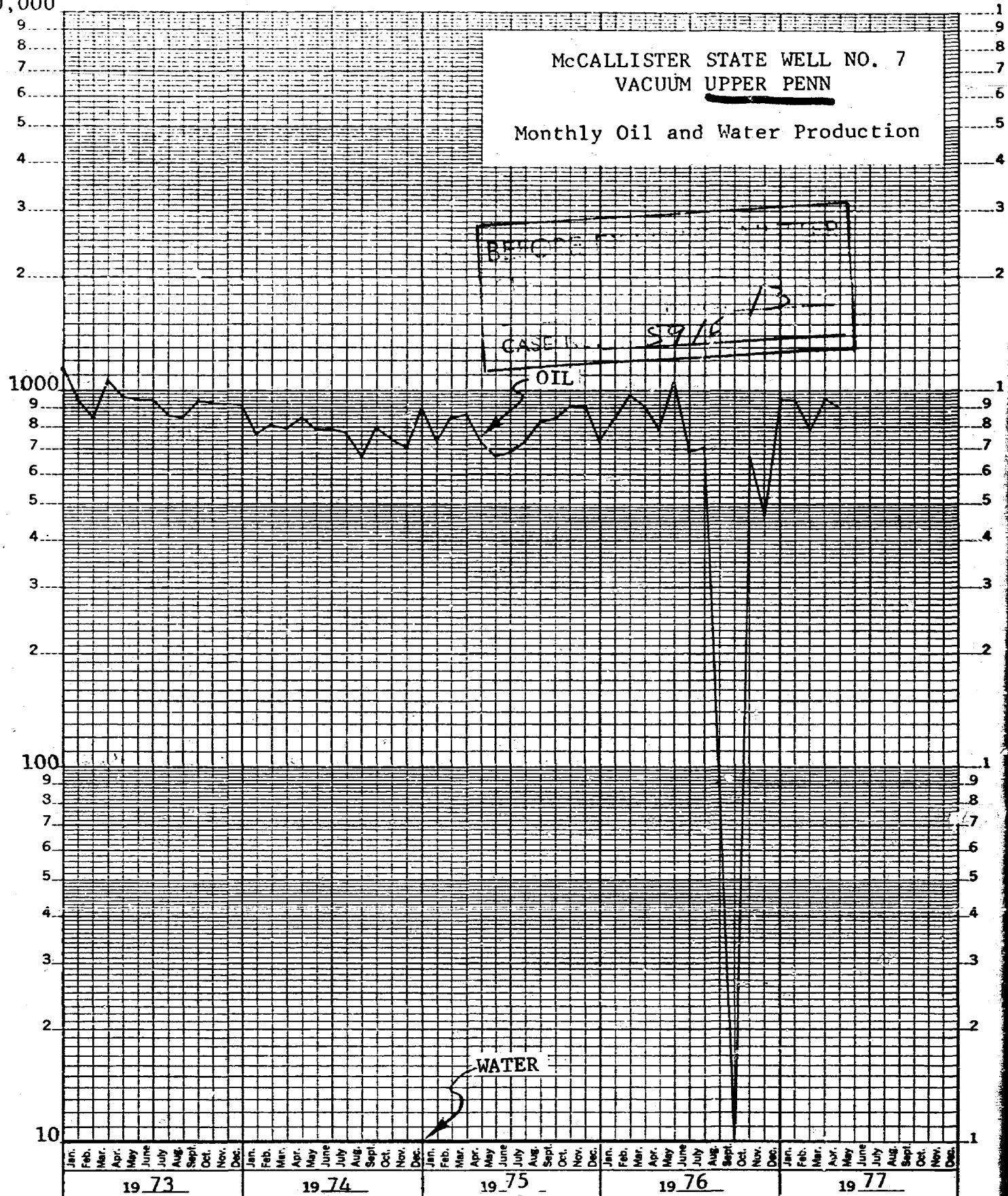






McCALLISTER STATE WELL NO. 7
VACUUM UPPER PENN
Monthly Oil and Water Production

BARRELS PER MONTH



April 27, 1977

TO WHOM IT MAY CONCERN:

Re: Wellbore Commingling, McCallister State Well No. 7, Vacuum
Abo North, Vacuum Wolfcamp and Vacuum Upper Penn Pools, Lea
County, New Mexico

This is to acknowledge that the undersigned waives objection to
the downhole commingling proposed by Marathon Oil Company of the
above referenced well.

Continental Oil Co.

Company

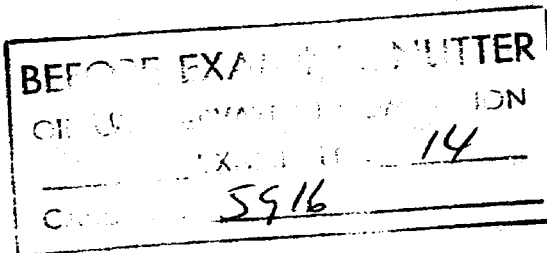
L. P. Thompson

Company Representative

L. P. Thompson

DIVISION MANAGER

Title



April 27, 1977

TO WHOM IT MAY CONCERN:

Re: Wellbore Commingling, McCallister State Well No. 7, Vacuum
Abo North, Vacuum Wolfcamp and Vacuum Upper Penn Pools, Lea
County, New Mexico

This is to acknowledge that the undersigned waives objection to
the downhole commingling proposed by Marathon Oil Company of the
above referenced well.

Getty Oil Company
Company

C. L. Wade
Company Representative

Area Supt.
Title

BEFORE EXAMINER
DATE OF EXAMINATION
_____ 15 _____
CASE NO. _____ 5916 _____

April 27, 1977

TO WHOM IT MAY CONCERN:

Re: Wellbore Commingling, McCallister State Well No. 7, Vacuum
Abo North, Vacuum Wolfcamp and Vacuum Upper Penn Pools, Lea
County, New Mexico

This is to acknowledge that the undersigned waives objection to
the downhole commingling proposed by Marathon Oil Company of the
above referenced well.

Tefaco Inc
Company

J. W. Gannon
Company Representative

Asst Supt.
Title

BEFORE EXAMINER	
FILED IN	
CASE	5916

April 27, 1977

TO WHOM IT MAY CONCERN:

Re: Wellbore Commingling, McCallister State Well No. 7, Vacuum
Abo North, Vacuum Wolfcamp and Vacuum Upper Penn Pools, Lea
County, New Mexico

This is to acknowledge that the undersigned waives objection to
the downhole commingling proposed by Marathon Oil Company of the
above referenced well.

MOBIL OIL CORPORATION

Company

J. A. Martin 4/6/77

Company Representative

REGULATORY ENGINEERING SUPERVISOR

Title

BEFORE E. J. NUTTER	
CE	BTN
EX	17
5916	

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

DOCKET: COMMISSION HEARING - THURSDAY - MAY 5, 1977

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

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

Docket No. 16-77

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 11, 1977

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

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

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

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

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

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

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

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

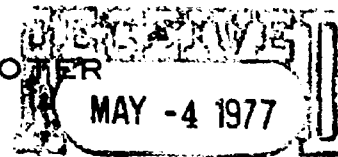
CASE 5917: Application of Hanagan Pet. Corp. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Round Mountain Well No. 1, to be located 2310 feet from the North line and 660 feet from the East line of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

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

ATWOOD, MALONE, MANN & COOTER

A PROFESSIONAL ASSOCIATION
LAWYERS

JEFF D. ATWOOD [1983-1986]
ROSS L. MALONE [1910-1974]



OIL CONSERVATION COMM
Santa Fe

P. O. DRAWER 700
SECURITY NATIONAL BANK BUILDING
ROSWELL, NEW MEXICO 88201
[505] 622-6221

CHARLES F. MALONE
RUSSELL D. MANN
PAUL A. COOTER
BOB F. TURNER
ROBERT A. JOHNSON
JOHN W. BASSETT
ROBERT E. SABIN
R. E. THOMPSON

RANDAL W. ROBERTS

May 2, 1977

Mr. Joe D. Ramey, Director
Oil Conservation Commission
Post Office Box 2088
Santa Fe, New Mexico 87501

RE: Case No. 5916 Examiner Hearing
May 11, 1977

Dear Mr. Ramey:

Please file our enclosed Entry of Appearance for
Marathon Oil Company in Case No. 5916.

With best regards, I am,

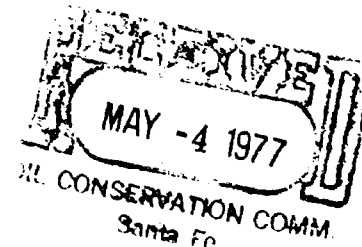
Very truly yours,

Charles F. Malone

CFM:sgs
Enc.

cc: Robert A. Hasty, Jr., Esquire
Marathon Oil Company
Post Office Box 3128
Houston, Texas 77001

w/enc.



BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION)
OF MARATHON OIL COMPANY FOR)
DOWNHOLE COMMINGLING, NORTH VACUUM)
ABO, VACUUM-WOLFCAMP AND VACUUM)
UPPER PENNSYLVANIAN PRODUCTION,)
LEA COUNTY, NEW MEXICO.) Case No. 5916

ENTRY OF APPEARANCE

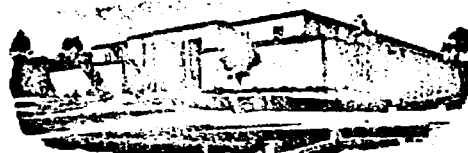
The undersigned Atwood, Malone, Mann & Cooter, P.A.,
Roswell, New Mexico, hereby enter their appearance for the
Applicant, Marathon Oil Company, with Robert A. Hasty, Jr. of
the Houston, Texas Bar.

ATWOOD, MALONE, MANN & COOTER, P.A.

By 
Attorneys for Marathon Oil Company
Post Office Drawer 700
Roswell, New Mexico 88201



State of New Mexico



Commissioner of Public Lands

April 22, 1977

PHIL R. LUCERO
COMMISSIONER

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

Marathon Oil Company
P. O. Box 2409
Hobbs, New Mexico 88240

Re: Wellbore Commingling, McCallister State
Well No. 7, Vacuum Abo North, Vacuum
Wolfcamp and Vacuum Upper Penn Pools,
Lea County, New Mexico

ATTENTION: Mr. C. S. Hilton, Jr.

Gentlemen:

Reference is made to your request dated April 5, 1977, requesting approval to permit downhole commingling of production from the Vacuum Abo North, Vacuum Wolfcamp, and Vacuum Upper Pennsylvanian Oil Pools in the McCallister State Well No. 7 located in Section 25, Township 17-South, Range 34-East, Lea County, New Mexico.

You are hereby given approval to the above request. This approval is subject to like approval by the New Mexico Oil Conservation Commission.

Your Ten (\$10.00) Dollar filing fee has been received.

Very truly yours,

PHIL R. LUCERO
COMMISSIONER OF PUBLIC LANDS

BY:
RAY D. GRAHAM, Director
Oil and Gas Division

PRL/RDG/s
encls.
cc:

New Mexico Oil Conservation Commission
New Mexico Oil and Gas Accounting Commission
New Mexico State Lease No. B-2706



Marathon
Oil Company

RECEIVED

APR 6 6 54 AM '77

P.O. Box 2409
Hobbs, New Mexico 88240
Telephone 505/393-7106

STAMPED
DATE

April 5, 1977

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

ATTENTION: Mr. Joe D. Ramey, Secretary-Director

Re: Wellbore Commingling, McCallister State Well No. 7, Vacuum Abo North, Vacuum Wolfcamp and Vacuum Upper Penn Pools, Lea County, New Mexico

Gentlemen:

Marathon Oil Company respectfully requests administrative approval to permit downhole commingling of production from the Vacuum Abo North, Vacuum Wolfcamp, and Vacuum Upper Pennsylvanian oil pools in the McCallister State Well No. 7 located in Section 25, Township 17-South, Range 34-East, Lea County, New Mexico. Texaco, Inc. has received permission to downhole commingle these same three zones (Order No. R-4859) in their New Mexico "Q" State Well No. 4, Unit P, Section 25, Township 17-South, Range 34-East. Getty has also received permission to downhole commingle these same three zones (Order No. R-4468) in their State "BA" Well No. 6, Unit D, Section 36, Township 17-South, Range 34-East.

The Upper Pennsylvanian zone is unable to continually flow without swabbing. The Abo zone has been shut in since December 1968 and the Wolfcamp zone since December 1972. In both cases the zones were temporarily abandoned due to mechanical failure of the gas-lift valves.

In support of this request and in accordance with Rule 303, Paragraph C, the following facts are submitted:

1. The attached plat shows the McCallister State Lease and the location of Well No. 7.
2. This well was triply completed in the Vacuum Abo North, Vacuum Wolfcamp and Vacuum Upper Pennsylvanian Pool as approved by NMOC Order No. NC-1345-A dated August 11, 1964.
3. The C-116 Forms for these three zones are attached. No zone produces more water than the combined oil production total. The combined production does not exceed the total top allowable of 80 BOPD for this depth as defined in Rule 303(C), Paragraph E.

4. Marathon Oil Company has commingled production from these zones at the surface (Order No. PC-136) and they are known to produce compatible fluids. Since the oil is commingled at the surface, downhole commingling would not result in a reduction of oil value.
5. The ownership of the zones to be commingled is common.
6. Attached are production decline curves of production from these three zones.
7. The measured static bottom-hole pressure for the three zones at -5900' Datum are as follows: Abo 1536 psi, Wolfcamp 1390 psi, Upper Penn 950 psi.
8. Downhole commingling will not jeopardize the efficiency of future secondary operations.
9. Attached is a schematic diagram of the proposed completion.
10. Copies of this application have been furnished to the offset operators.

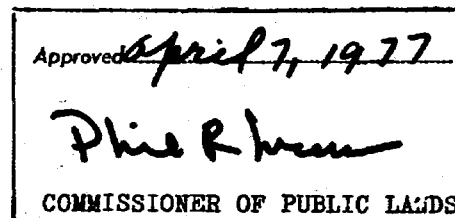
Yours truly,

MARATHON OIL COMPANY

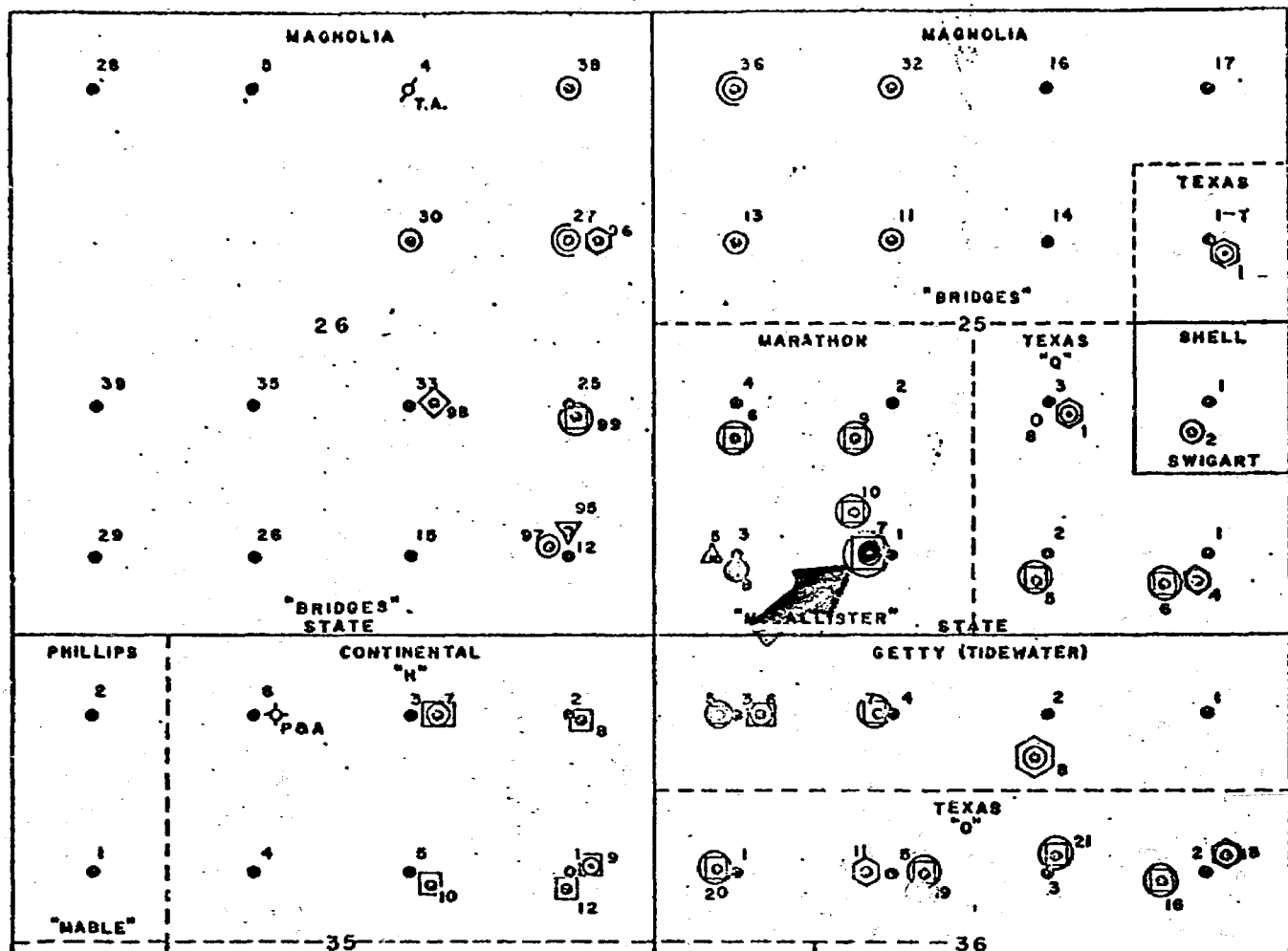
C. S. Hilton, Jr.

C. S. Hilton, Jr.
Operations Superintendent

ARK:mfm
Enclosures



R 34 E



T
17
S

MARATHON OIL COMPANY
"Plot of St. McCallister Lease"
 Lea County, New Mexico
 Scale: 1"=1500' 6-11-64

**NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS**

C-116
Revised 1-1-65

Operator Marathon Oil Company				Tract Vacuum Abo, North				County Lea							
Address P. O. Box 2409, Hobbs, New Mexico 88240								TYPE OF TEST - (X) <input checked="" type="checkbox"/>		Scheduled <input type="checkbox"/>		Completion <input type="checkbox"/>		Special <input checked="" type="checkbox"/>	

LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	STATUS	CHOKE SIZE	T.B.G. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST				GAS - OIL RATIO CU.FT./BBL.
		U	S	T	R							WATER BBL.S.	GRAV. OIL	OIL BBL.S.	GAS M.C.F.	
McCallister State	7	N	25	17S	34E	3-12,13-77	S*	-	-	1500 bbl test allowable	18	3	39	26	25	962
<p>*Well was swab tested over a two-day period.</p> <p>APPLICATION FOR DOWNHOLE COMMINGLING</p>																

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Tony Kovacovich
(Signature)

Petroleum Engineer
(Title)

April 5, 1977
(Date)

**NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS**

C-116
Revised 1-1-65

Operator Marathon Oil Company				Field Vacuum Wolfcamp				County Lea						
Address P. O. Box 2409, Hobbs, New Mexico 88240							TYPE OF TEST - (X) <input checked="" type="checkbox"/>		Scheduled <input type="checkbox"/>		Completion <input type="checkbox"/>		Special <input checked="" type="checkbox"/>	

LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST				GAS - OIL RATIO CU. FT./BBL.
		U	S	T	R							WATER BBLs.	GRAV. OIL	OIL BBLs.	GAS M.C.F.	
McCallister State	7	N	25	17S	34E	3-9,10-77	S*	-	-	1500 bbl test allowable	18	4	40	5	TSTM	-
<p>*Well was swab tested over a two-day period.</p> <p><u>APPLICATION FOR DOWNHOLE COMMINGLING</u></p>																

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(Signature)

Petroleum Engineer

(Title)

April 5, 1977

(Date)

**NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS**

C-116
Revised 1-1-65

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		U	S	T	R							WATER BBLs.	GRAV. OIL	OIL 9BLS.	GAS M.C.F.	
McCallister State	7	N	25	17S	34E	3-7,8-77	S*	-	-	1500 bbl test allowable	20	3	41	32	55	1,719
*Well was swab tested over a two-day period. <u>APPLICATION FOR DOWNHOLE COMMINGLING</u>																

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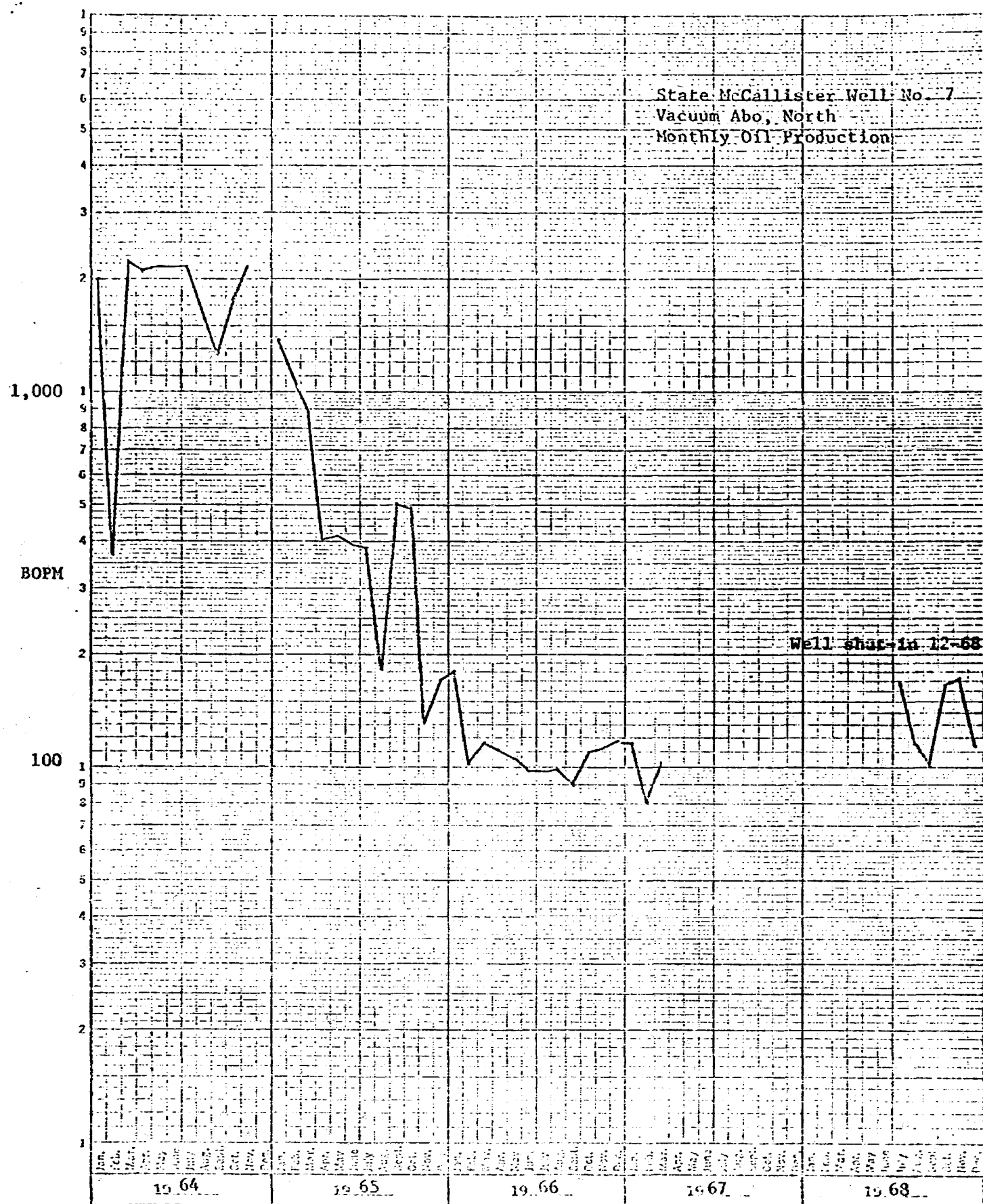
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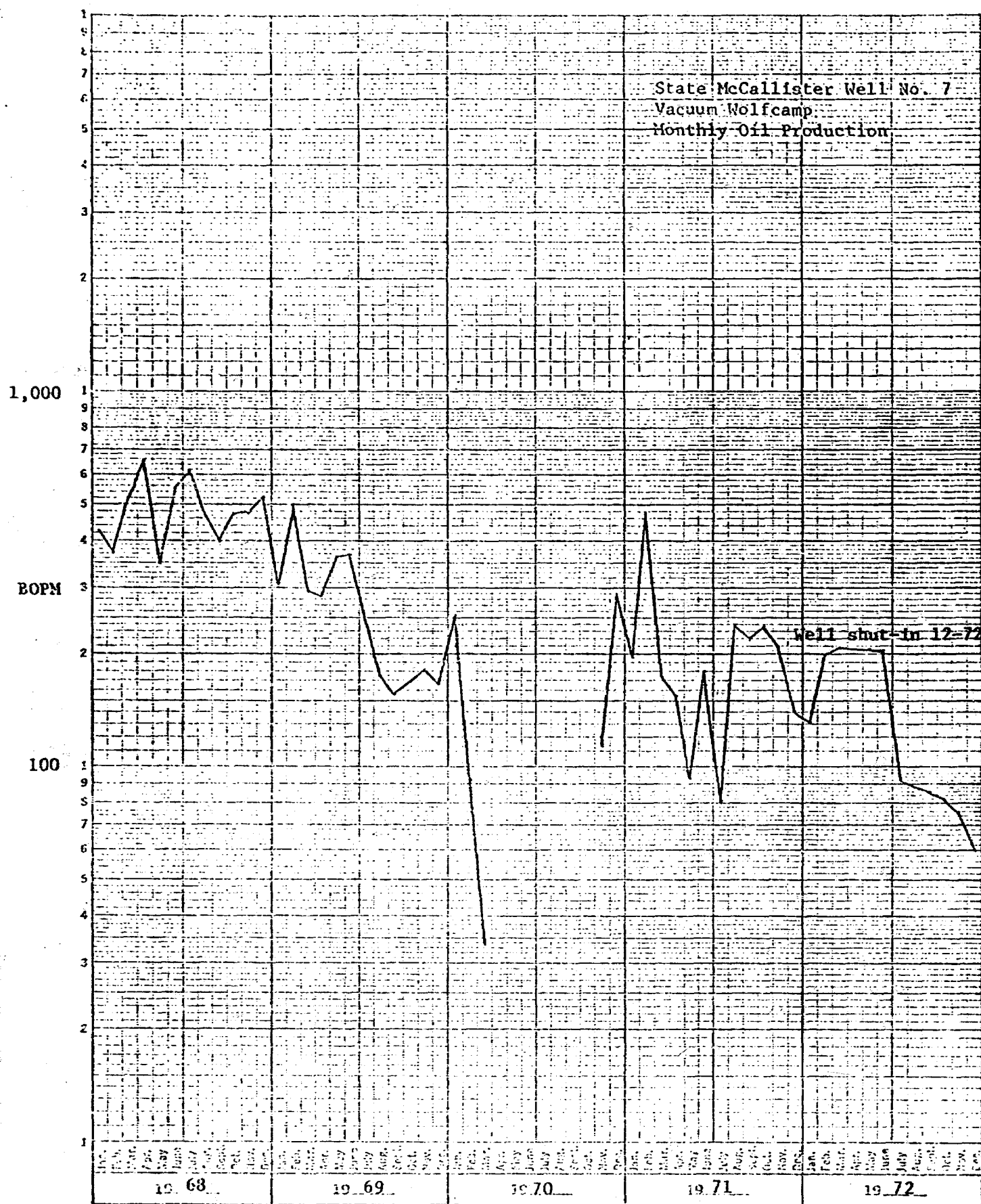
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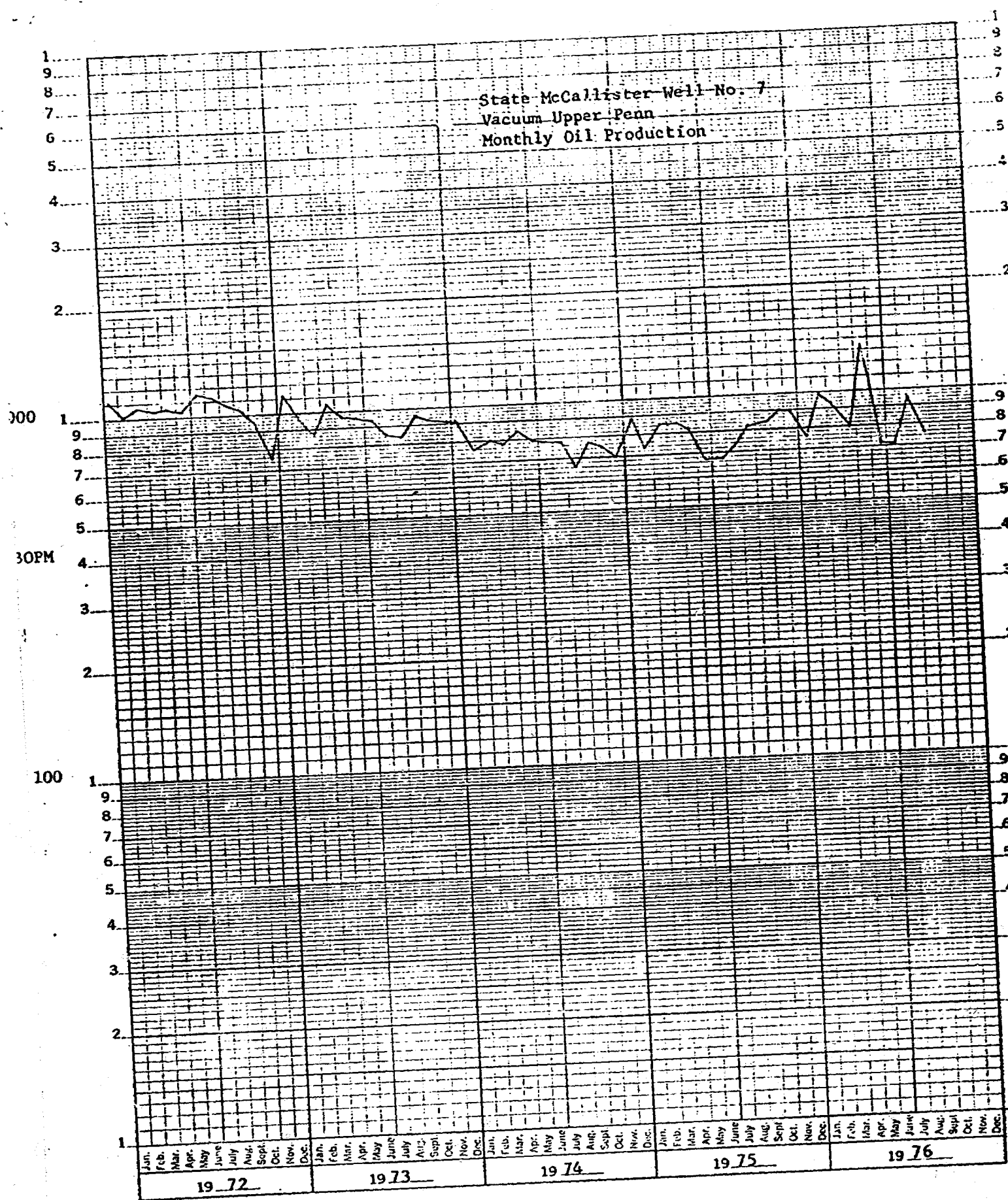
Tony Kovacevich
(Signature)

Petroleum Engineer
(Title)

April 5, 1977
(Date)

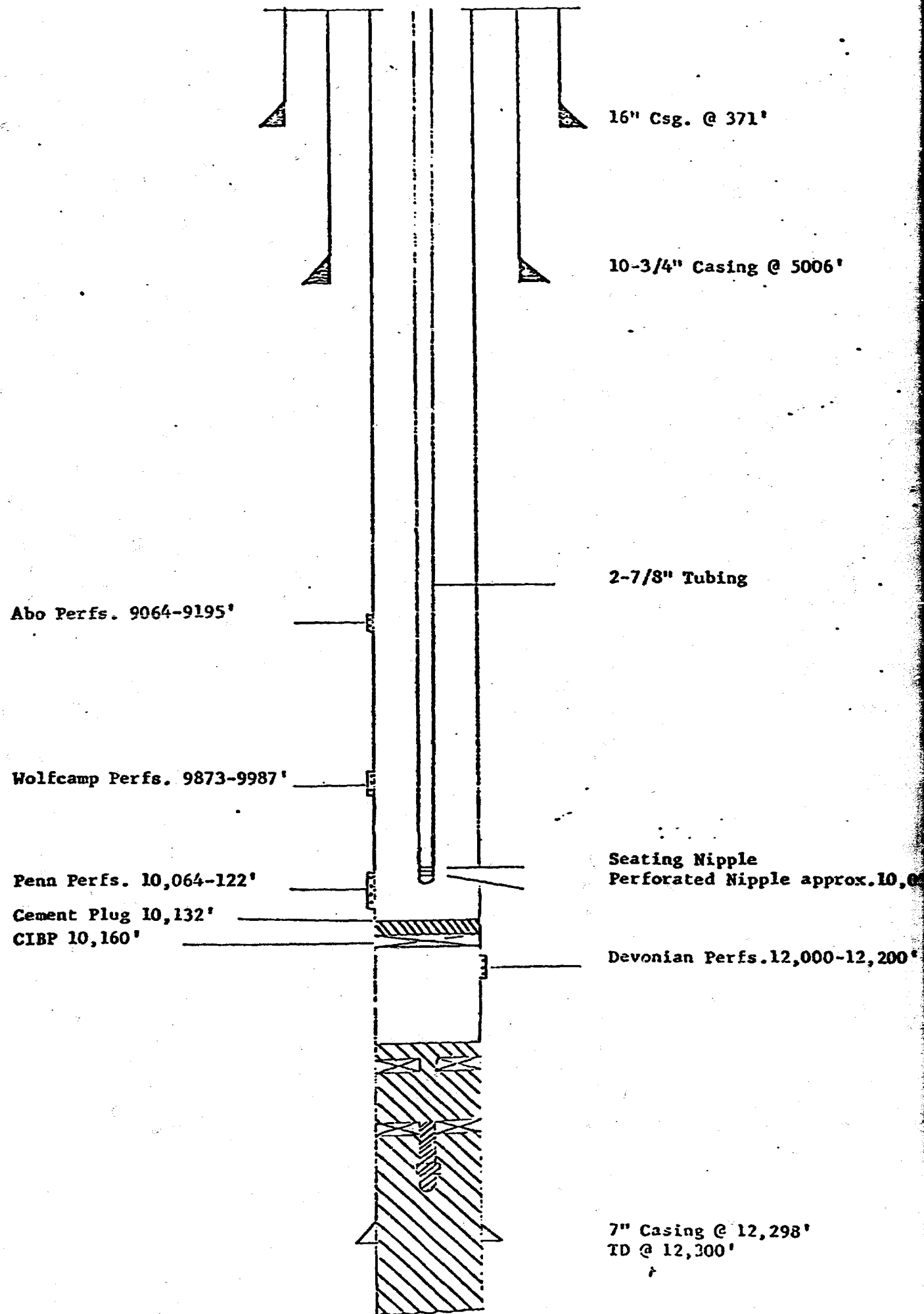






McCallister State No. 7

DIAGRAMMATIC SKETCH OF PROPOSED COMPLETION





**Marathon
Oil Company**

Houston Division
Production Operations, U.S. & Canada

APR 29 1977

P.O. Box 552
Midland, Texas 79701
Telephone 915/682-1626

April 27, 1977

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

Attention: Mr. Ulvoc

Re: Well bore commingling, McCallister State Well No. 7, Vacuum Abo,
North, Vacuum Wolfcamp, and Vacuum Upper Penn Pools, Section 25,
Township 17-South, Range 34-East, Lea County New Mexico.

Gentlemen:

Confirming our telephone conversation 4-20-77, please set for hearing
on May 11, 1977 Marathon Oil Company's application for downhole comm-
ingling production from the above referenced triple oil completion. In
support of this request please refer to our application dated 4-5-77
wherein we requested administrative approval.

Yours very truly,

MARATHON OIL COMPANY

Joe W. Younger

Joe W. Younger
District Operations Engineer

JWY/ml

xc: NMOCC - 3 copies
R. A. Hastly, Jr. - 1 copy

Case 5716



**Marathon
Oil Company**

P.O. Box 552
Midland, Texas 79701
Telephone 915/682-1626

April 27, 1977

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P. O. Box 2088
Santa Fe, New Mexico 87501

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wherein we requested administrative approval.

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MARATHON OIL COMPANY

Joe W. Younger
District Operations Engineer

JWY/ml

xc: NMOCC - 3 copies
R. A. Hasty, Jr. - 1 copy



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Midland, Texas 79701
Telephone 915/682-1626

April 27, 1977

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

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wherein we requested administrative approval.

Yours very truly,

MARATHON OIL COMPANY

A handwritten signature in cursive script that reads 'Joe W. Younger'.

Joe W. Younger
District Operations Engineer

JWY/ml

xc: NMOCC - 3 copies
R. A. Hasty, Jr. - 1 copy

Marathon DHC

4/11 - I told them this
will have to go for hearing,
unless they want to cut out
one pay. They will look it over
and let us know. May 11th
earliest hearing date.
CU

4/18 - Hilton called. Set for hearing
on May 25th

OIL CONSERVATION COMMISSION
Hobbs DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE April 27, 1977

RE: Proposed MC _____
Proposed DHC X _____
Proposed NSL _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated _____
for the Marathon Oil Co. McCallister State #7-N 25-17-34
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

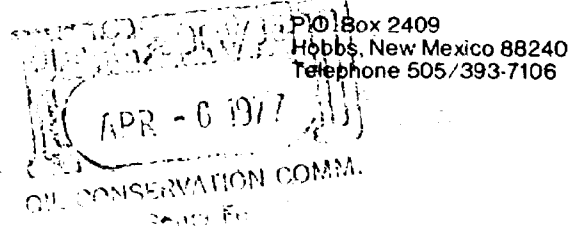
O.K.----J.S.

Yours very truly,

Jerry S. [Signature]

Case 5916

Houston Division
Production Operations, U.S. & Canada



April 5, 1977

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

ATTENTION: Mr. Joe D. Ramey, Secretary-Director

Re: Wellbore Commingling, McCallister State Well No. 7, Vacuum Abo North, Vacuum Wolfcamp and Vacuum Upper Penn Pools, Lea County, New Mexico

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The Upper Pennsylvanian zone is unable to continually flow without swabbing. The Abo zone has been shut in since December 1968 and the Wolfcamp zone since December 1972. In both cases the zones were temporarily abandoned due to mechanical failure of the gas-lift valves.

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NMOCC - Page 2
April 5, 1977

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10. Copies of this application have been furnished to the offset operators.

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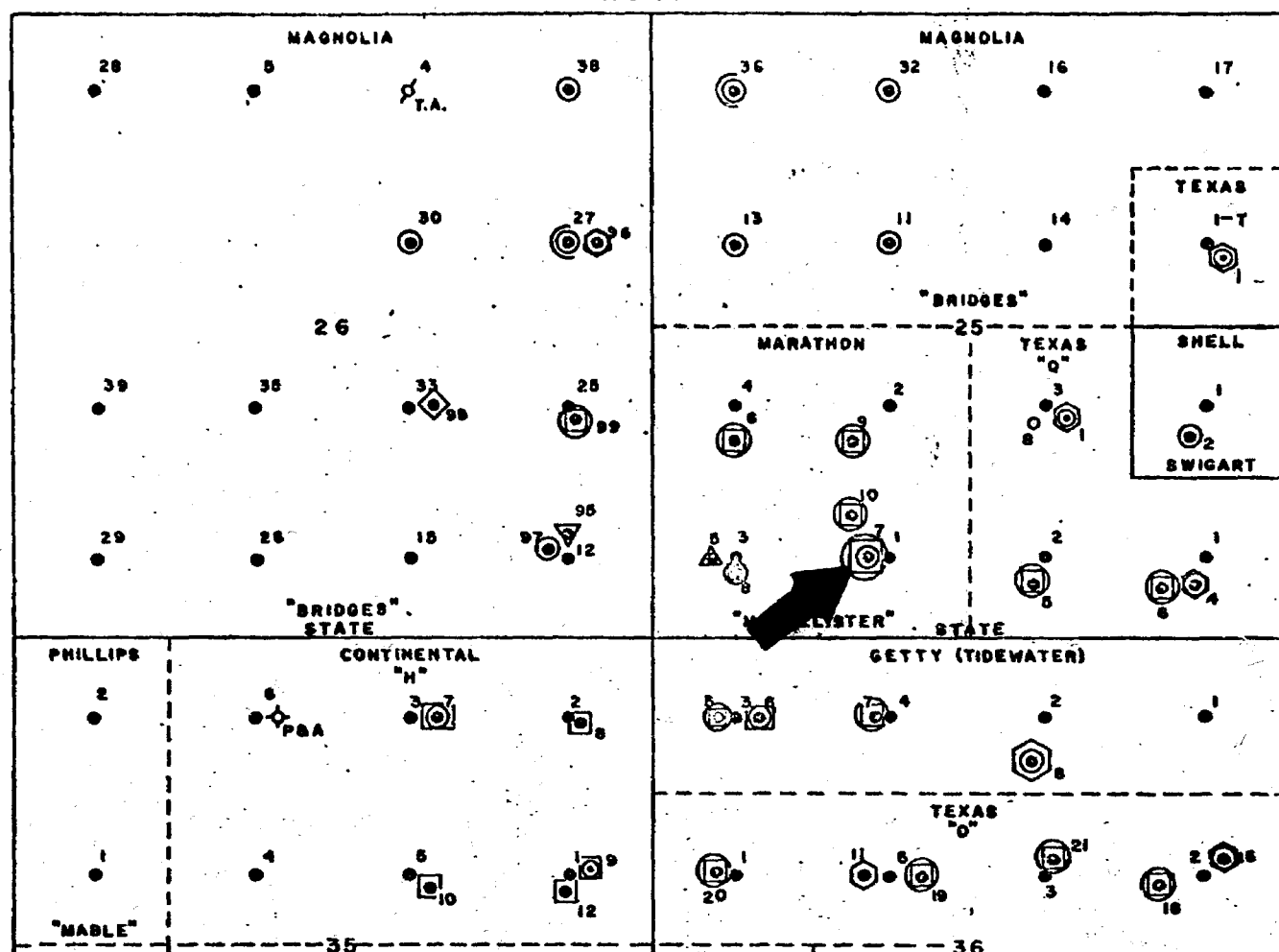
MARATHON OIL COMPANY

C. S. Hilton, Jr.

C. S. Hilton, Jr.
Operations Superintendent

ARK:mfm
Enclosures

R 3 4 E



MARATHON OIL COMPANY

"Plot of St. McCallister Lease"

Lea County, New Mexico

Scale: 1"=1500'

6-11-64

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator Marathon Oil Company		Pool Vacuum Abo, North				County Lea										
Address P. O. Box 2409, Hobbs, New Mexico 88240						TYPE OF TEST - (X)		Scheduled <input type="checkbox"/>		Completion <input type="checkbox"/>		Special <input checked="" type="checkbox"/>				
LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST				GAS - OIL RATIO CU.FT/BBL	
		U	S	T	R						WATER BBLs.	GRAV. OIL	OIL BBLs.	GAS M.C.F.		
McCallister State	7	N	25	17S	34E	3-12,13-77	S*	-	-	1500	18	3	39	26	25	962
<p>*Well was swab tested over a two-day period.</p> <p>APPLICATION FOR DOWNHOLE COMMINGLING</p>																

No well will be assigned an allowable greater than the amount of oil produced on the official test.

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I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Tony Kovacich
(Signature)

Petroleum Engineer
(Title)

April 5, 1977
(Date)

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator Marathon Oil Company				Pool Vacuum Wolfcamp				County Lea								
Address P. O. Box 2409, Hobbs, New Mexico 88240							TYPE OF TEST - (X)		Scheduled <input type="checkbox"/>		Completion <input type="checkbox"/>		Special <input checked="" type="checkbox"/>			
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		U	S	T	R							WATER BBLs.	GRAV. OIL	OIL BBLs.	GAS M.C.F.	
McCallister State	7	N	25	17S	34F	3-9,10-77	S*	-	-	1500	18	4	40	5	ISTM	-
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<u>APPLICATION FOR DOWNHOLE COMMINGLING</u>																

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I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Tony Kovacovich
(Signature)

Petroleum Engineer

(Title)

April 5, 1977

(Date)

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

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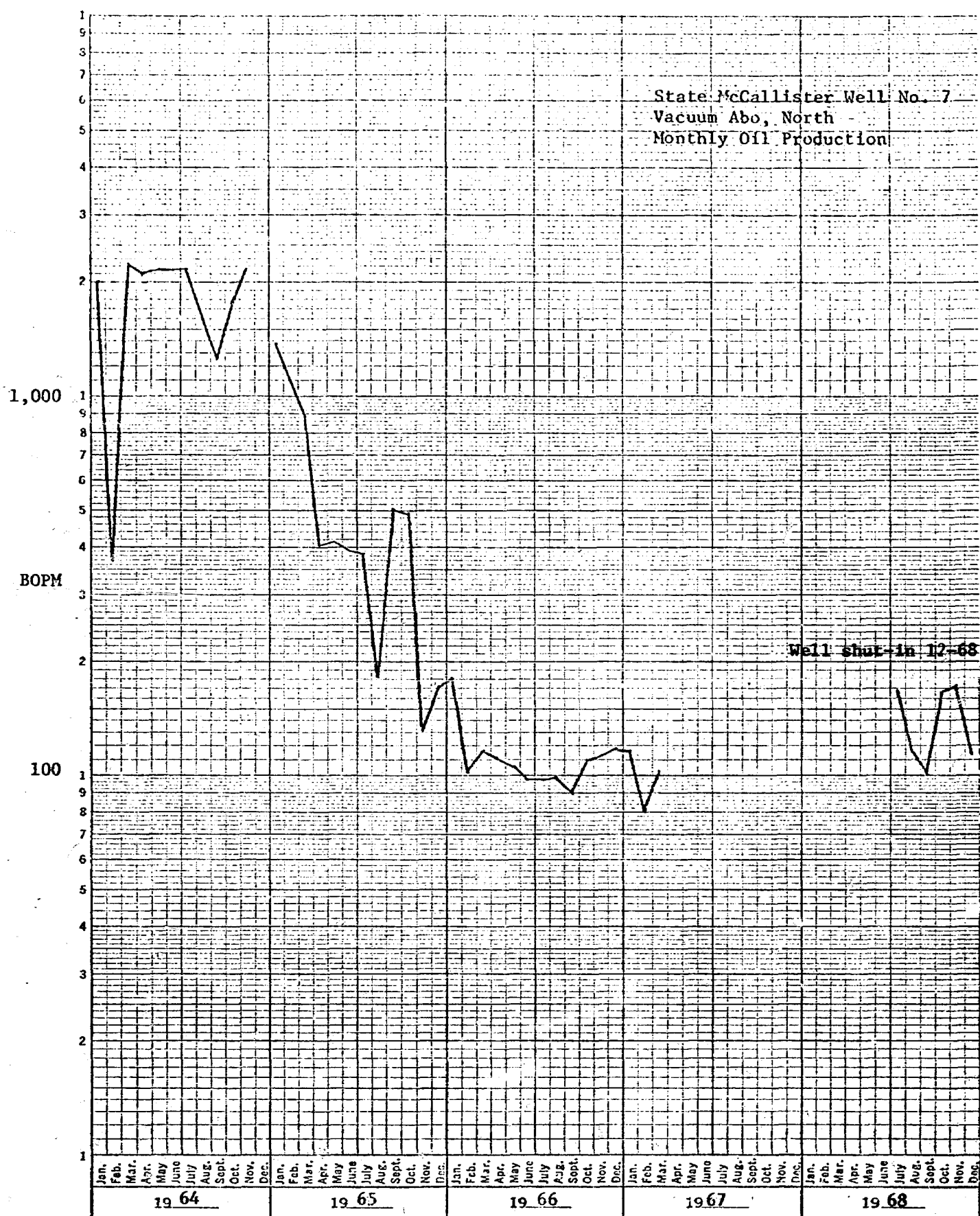
Petroleum Engineer

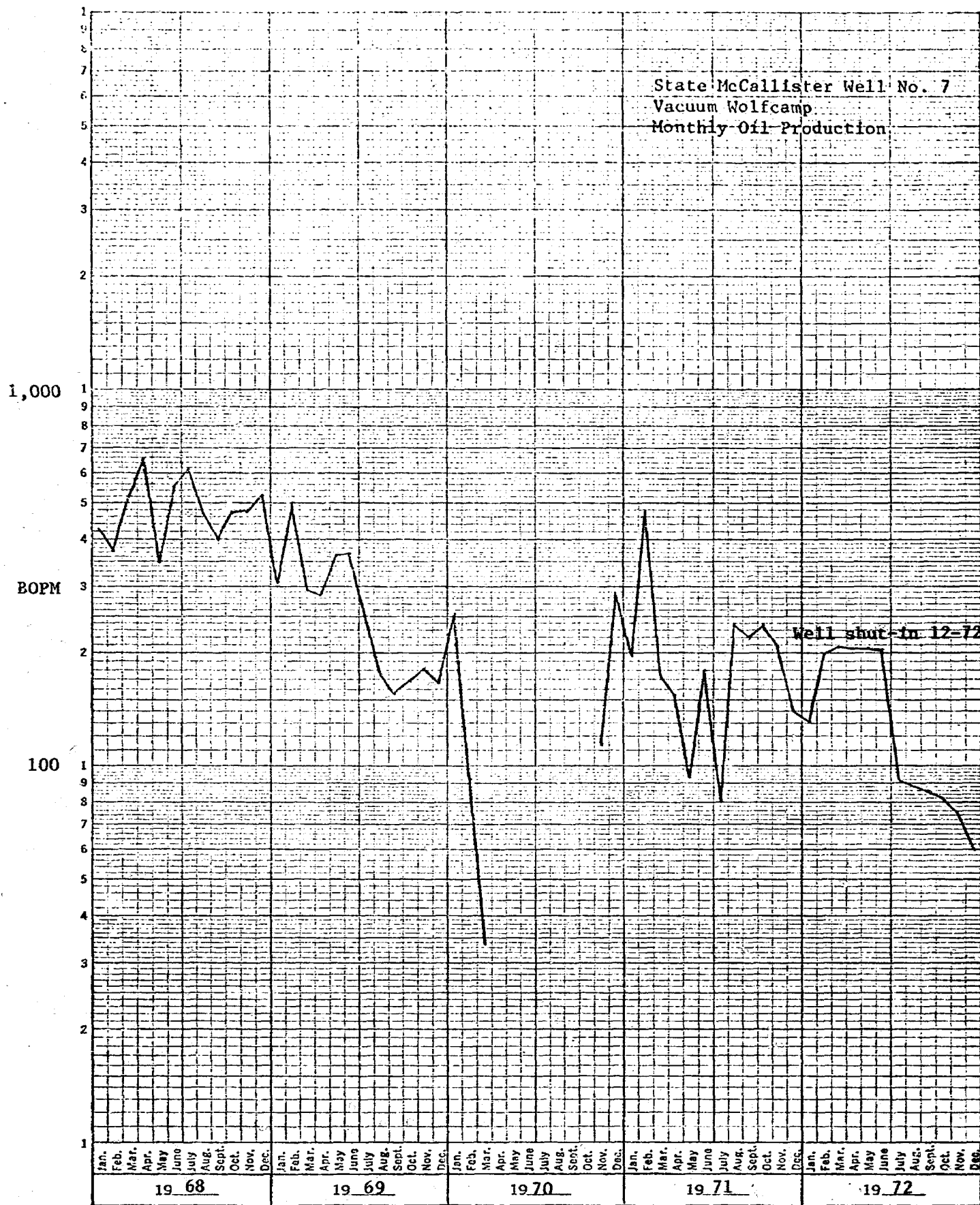
(Title)

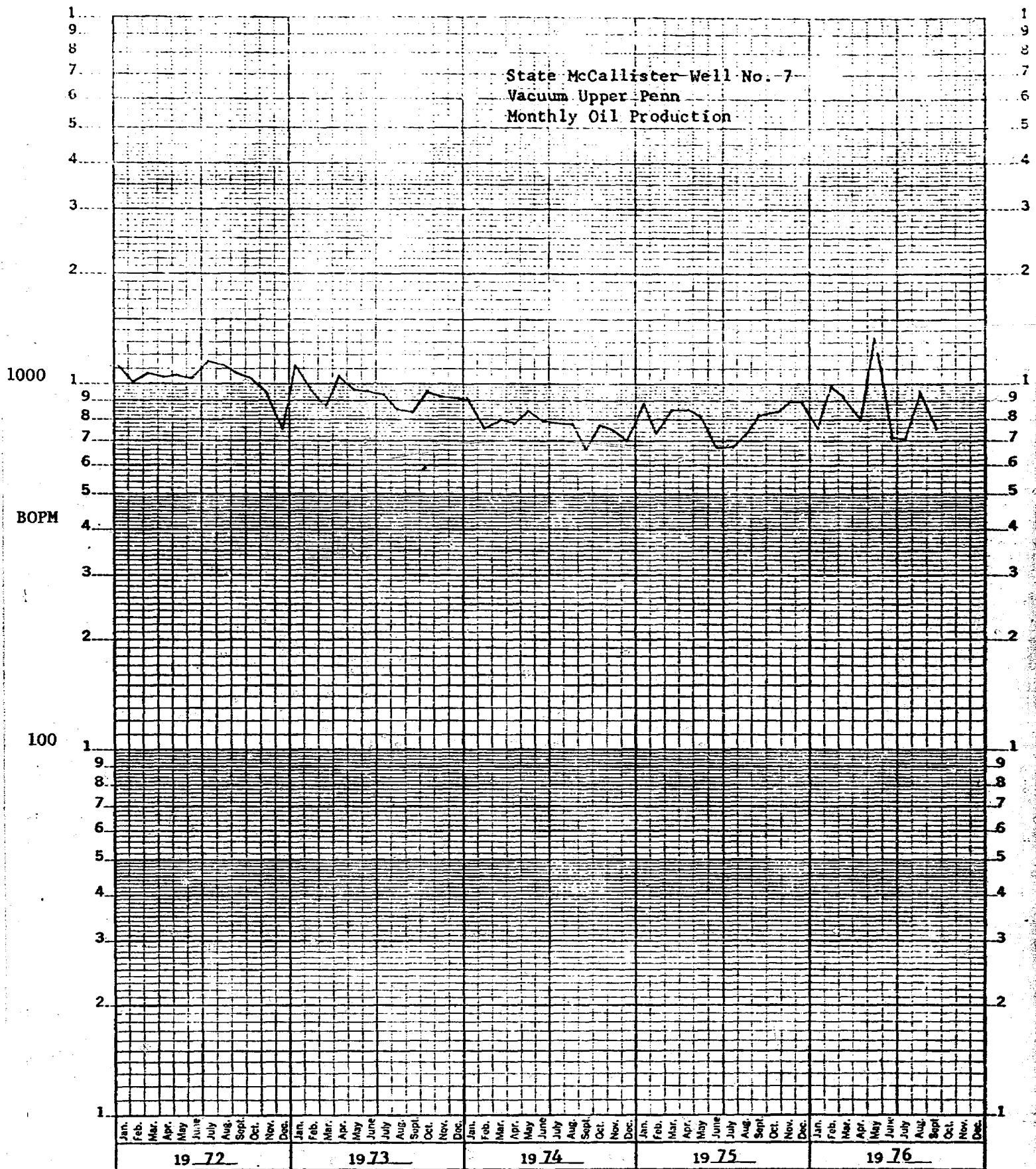
April 5, 1977

(Date)

State McCallister Well No. 7
Vacuum Abo, North
Monthly Oil Production

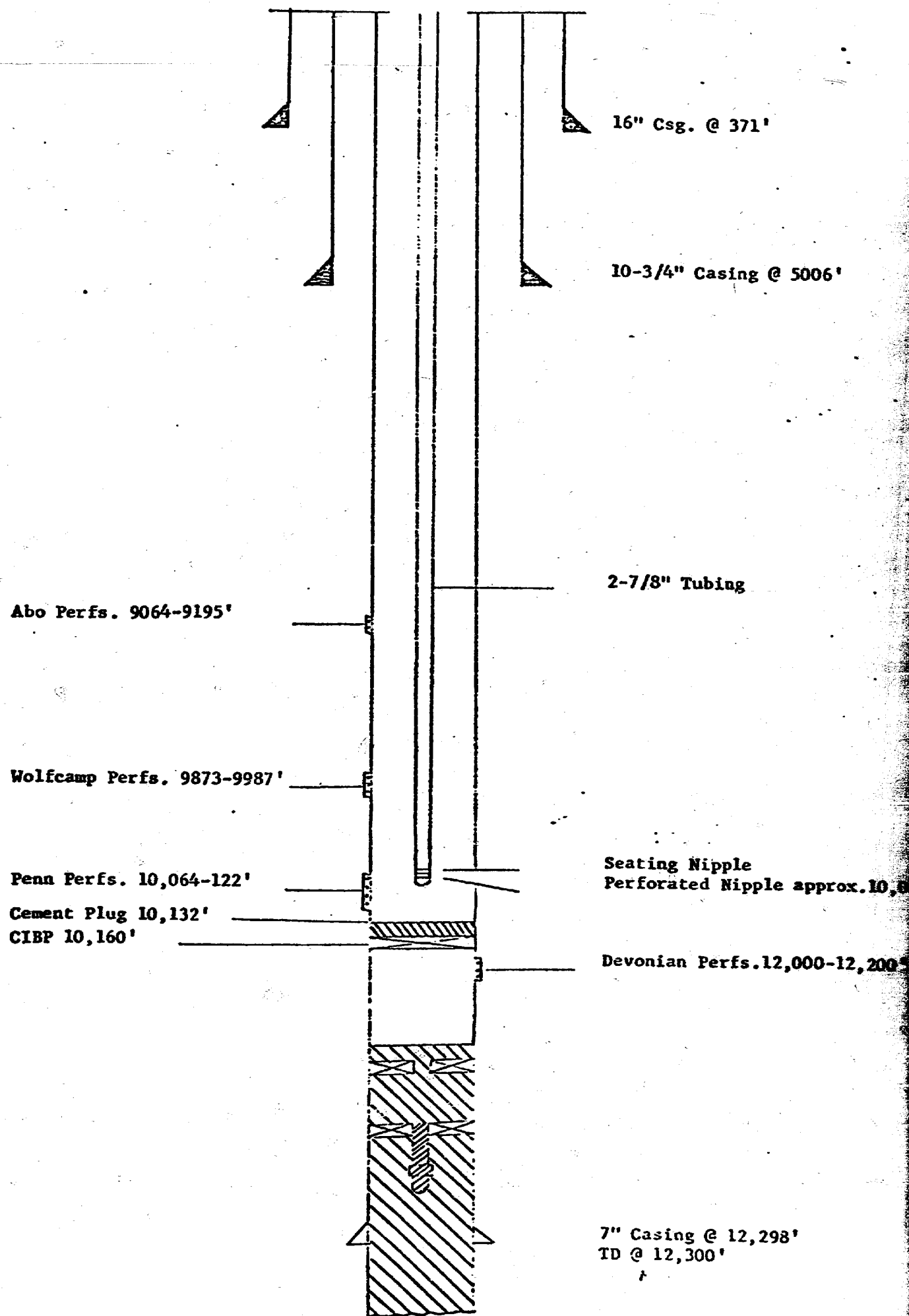






McCallister State No. 7

DIAGRAMMATIC SKETCH OF PROPOSED COMPLETION



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. 5916

Order No. R-5453

APPLICATION OF MARATHON OIL COMPANY
FOR DOWNHOLE COMMINGLING, LEA
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 11,
19 77, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of May, 1977, the Commission,
a quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

(2) That the applicant, Marathon Oil Company, is the
owner and operator of the McCallister State Well No. 7, located
in Unit N of Section 25, Township 17 South, Range
34 East, NMPM, Lea County, New Mexico.

(3) That the applicant seeks authority to commingle North
Vacuum-Abo, Vacuum-Wolfcamp, and Vacuum-Upper Pennsylvanian production
within the wellbore of the above-described well.

(4) That from the North Vacuum-Abo zone, the
subject well is capable of low marginal production only.

(5) That from the Vacuum-Wolfcamp zone, the
subject well is capable of low marginal production only.

(6) That the proposed commingling may result in the recovery
of additional hydrocarbons from each of the subject pools, thereby
preventing waste, and will not violate correlative rights.

(6) That from the Vacuum-Upper Pennsylvanian zone, the subject well is
capable of low marginal production only.

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(8) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

(9) That to afford the Commission the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Hobbs district office of the Commission any time the subject well is shut-in for 7 consecutive days.

(10) That in order to allocate the commingled production to each of the commingled zones in the subject well, 12.5 percent of the commingled production should be allocated to the North Vacuum-Abo zone, ~~and~~ 12.5 percent ~~of the commingled~~ production to the Vacuum-Wolfcamp zone, and 75.0 percent ~~of the commingled~~ production to the Vacuum-Upper Pennsylvanian zone.

IT IS THEREFORE ORDERED:

(1) That the applicant, Marathon Oil Company, is hereby authorized to commingle North Vacuum-Abo, Vacuum-Wolfcamp and Vacuum-Upper Pennsylvanian production within the wellbore of the McCallister State Well No. 7, located in Unit N of Section 25, Township 17 South, Range 34 East, NMPM, Lea County, New Mexico.

(2) That 12.5 percent of the commingled production shall be allocated to the North Vacuum-Abo zone, and 12.5 percent ~~of the commingled~~ production shall be allocated to the Vacuum-Wolfcamp zone, and 75.0 percent ~~of the commingled~~ production shall be allocated to the Vacuum-Upper Pennsylvanian zone.

(3) That the operator of the subject well shall immediately notify the Commission's Hobbs district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.

(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.