

Case No.

569

Application, Transcript,
Small Exhibits, Etc.

Ex C. Case no 569

OIL PRODUCTION

BUFFALO OIL COMPANY - BAISH A - YATES LEASE

	Well #17-Y	18-Y	19-Y	22-Y	23-Y	24-Y
1948						
April	456					
May	336					
June	355					
July	372	309				
Aug	372	310	194			
Sept.	541	300	0			
Oct.	434	340	217			
Nov.	450	368	300			
Dec.	464	402	274			
1949						
Jan.	434	452	248			
Feb.	392	336	252			
Mar.	224	403	279			
April	360	360	124			
May	279	279	91			
June	260	260	92			
July	279	298	93			
Aug	217	341	65			
Sept	210	324	60			
Oct.	217	329	62			
Nov.	210	329	60			
Dec.	215	341	62			
1950						
Jan.	217	347	62			
Feb.	215	308	56			
Mar	217	388	62			
Apr	230	356	80			
May	227	341	62			
June	190	305	40			
July	217	344	62			
Aug	204	315	62			
Sep	240	388	60			
Oct	217	356	62			
Nov.	210	330	423			
Dec.	217	341	374			
1951						
Jan	284	508	349			
Feb	243	607	364			
Mar	260	649	389			
Apr	248	619	371			
May	235	587	352			
June	212	529	318			
July	203	509	305			
Aug	230	516	346			
Sep	244	611	366			
Oct	238	594	320			
Nov	214	535	321			
Dec	278	696	417			
1952						
Jan	244	620	372			
Feb.	236	614	368			
Mar	222	620	372			
Apr	218	544	327			
May	169	420	252			
June	240	600	214	240	150	
July	248	535	372	262	899	250
Aug	220	487	330	170	797	564
Sep	201	452	302	191	609	628
Oct	238	442	357	298	558	744
Nov	149	399	319	266	506	640
Dec	48	452	362	301	572	625

Oil Production - Balish A Yates Lease

7-29-53

Page #2

1953

Jan

Feb



May

June

TOTALS

POOL TOTAL - 69,837

NEIL B. WATSON

ATTORNEY AT LAW
ARTESIA, NEW MEXICO

July 13, 1953

Case 569

OIL CONSERVATION COMMISSION
SANTA FE, N.M.

JUL 15 1953

Mr. W. B. Macey, Chief Engineer,
Oil Conservation Commission,
Box 871,
Santa Fe, New Mexico.

Dear Mr. Macey:

As attorney for Buffalo Oil Company, I herewith enclose, in triplicate, Application of Buffalo Oil Company for permission to inject water into the Baish Pool in Sections 21 and 22, Township 17 South, Range 32 East, N.M.P.M., for secondary recovery.

It is our understanding that the Commission will have a hearing on August 18th, and we would like to have this matter set down for that hearing and, if that date is not correct, we would like to have it set down for the earliest hearing possible, in order to allow time for proper notice.

It would be appreciated if you would acknowledge receipt and, also, in the event there is any additional information that should be in the Application, I would appreciate it if you would call me collect at phone 175, Artesia, as we would like to have the Application on file so that we can have the hearing at the August meeting.

Yours very truly,

Neil B. Watson
Neil B. Watson.

NBW:lve
enc.

New Mexico
OIL CONSERVATION COMMISSION

GOVERNOR EDWIN L. MECHEM
CHAIRMAN
LAND COMMISSIONER E. S. WALKER
MEMBER
STATE GEOLOGIST R. R. SPURDIE
SECRETARY AND DIRECTOR



P. O. BOX 871
SANTA FE, NEW MEXICO

September 7, 1953

Memo to Commission

**Case No. 569 - The application of Buffalo
Oil Company for Permission to institute water
flooding on their Baish lease in the Baish Pool.**

Recommendation:

**It is recommended that the application be approved and that
the Order as submitted by Buffalo Oil Company Attorney Neil A.
Watson be checked for accuracy and if found to be in order, it be
used for signature.**

W. B. Macey

OIL CONSERVATION COMMISSION
P. O. BOX 671
SANTA FE, NEW MEXICO

September 25, 1953

Mr. Neil B. Watson, Attorney
Artesia, New Mexico

Dear Sir:

For your records and for transmittal to your client,
Buffalo Oil Company, we enclose two signed copies of
Order R-363 issued by the Commission in Case 269.

Very truly yours,

W. B. Macy, Chief Engineer

WBM:ar

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Y

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

August 3, 1953

**Mr. Neil B. Watson, Attorney
ARTESIA, NEW MEXICO**

Dear Sir:

The application you submitted in behalf of Buffalo Oil Company for approval of a secondary-recover project in the Balish Pool has been set up as Case 569 and advertised for the regular August 20, 1953, hearing of the Commission.

Very truly yours,

**W. B. Macey
Chief Engineer**

WBM:mr

C
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BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF THE STATE OF NEW
MEXICO FOR THE PURPOSE OF CON-
SIDERING:

CASE NO. 569
Order No. R-363

THE APPLICATION OF BUFFALO OIL
COMPANY FOR PERMISSION TO INJECT
WATER INTO THE BAISH POOL IN
SECTIONS 21 AND 22, TOWNSHIP 17
SOUTH, RANGE 32 EAST, NMPM, LEA
COUNTY, NEW MEXICO FOR SECONDARY
RECOVERY.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on August 20, 1953,
before the Oil Conservation Commission of the State of New Mexico, here-
after referred to as the "Commission".

NOW, on this ¹⁷ day of September, 1953, the Commission, a quorum
being present, having considered the application and exhibits attached thereto,
and the testimony introduced at said hearing and being fully advised in the
premises,

FINDS:

1. That due notice having been given as required by law, the Com-
mission has jurisdiction of this cause and the persons and subject matter there-
of.
2. That the application filed herein complies in all respects with the
provisions of Rule 701 of the Rules and Regulations of the Oil Conservation
Commission of the State of New Mexico.
3. That Buffalo Oil Company is the owner of the oil and gas lease
upon which its Baish A 17 Y Well is located, 2310 feet from the north and
2310 feet from the east line of Section 21, Township 17 South, Range 32 East,
NMPM, in Lea County, New Mexico; and Buffalo Oil Company made application
to use said well as a proposed intake well for a secondary recovery program,
by water flooding.
4. That the formation from which the wells are producing is the
Yates sand in the Baish Pool, which produces from approximately 2350 feet;
and all of the wells producing from the entire Baish Pool are located on
acreage belonging to Buffalo Oil Company, and injection of water will not affect
any other operator in that all of the other wells in the area are producing from
other formations.
5. That said Buffalo Oil Company Baish A 17 Y Well pumps about 4
barrels of oil per day at this time and, by converting this well into a water-
injection well, it is anticipated to benefit the recovery of oil in other wells
producing from the Yates pay in the Baish Pool, and to test and determine the
water flood possibilities.

IT IS THEREFORE ORDERED:

1. That the application of Buffalo Oil Company for permission to institute a secondary recovery program by injection water into the Yates sand formation in the Baish Pool in Lea County, New Mexico, be, and the same hereby is, approved, subject to like approval being had and obtained, from the United States Geological Survey.

2. That permission is hereby granted to Buffalo Oil Company to inject water into its Baish A 17 Y Well located 2310 feet from the north and 2310 feet from the east line of Section 21, Township 17 South, Range 32 East, NMPM, in Lea County, New Mexico, said water to enter into the Yates sand formation below the casing point in said well at 2302 feet, to a depth of approximately 2390 feet, all in accordance with the application of Buffalo Oil Company in this cause.

3. That monthly progress reports of the project shall be made to the Commission upon forms hereby authorized to be prescribed by the Commission, which form shall show rates of and amounts of water injected, actual production of oil and water and other pertinent information relating to the success or failure of the project.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



EDWIN L. MECHEM, Chairman


E. S. WALKER, Member
R. R. SPURRIER, Member and Secretary

SEAL

BEFORE THE
OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

CASE 562: In the matter of the application of Buffalo Oil Company for approval of a secondary-recovery project (by water injection) in the Balish Pool, Sections 21 and 22, Township 17 South, Range 32 East, NMPL, Lea County, New Mexico, for the proposed intake well being its Balish 'A' 17-Y Well, 2310 feet from the north and east lines of Section 21, Township 17 South, Range 32 East.

TRANSCRIPT OF HEARING

August 30, 1953

BEFORE: Honorable Ed. L. Mechem, Governor
Honorable B. S. Walker, Land Commissioner
Honorable R. R. Spurrier, Director, OCC

STATE OF NEW MEXICO)
COUNTY OF LOS ALAMOS) ss.

I hereby certify that the within transcript of proceedings before the Oil Conservation Commission is a true record of the same to the best of my knowledge, skill and ability.

TRANSCRIBED at Los Alamos, New Mexico this 2nd day of September, 1953.


Audrey M. Henriksen
Notary Public

My commission expires September 22, 1953.

NEW MEXICO OIL CONSERVATION COMMISSION

Regular Hearing

9:00 a.m., August 20, 1953

MR. WATSON: My name is Neil A. Watson, Artesia, New Mexico appearing for Buffalo Oil Company. I have as a witness Mr. Ralph L. Gray.

RALPH L. GRAY,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. WATSON:

Q. State your name, please?

A. Ralph L. Gray.

Q. Are you employed by Buffalo Oil Company, Mr. Gray?

A. I am.

Q. In what capacity?

A. Assistant superintendent.

Q. How long have you been so employed?

A. About five years.

Q. Do you hold a degree in engineering, Mr. Gray?

A. Yes.

MR. SPURRIER: I believe Mr. Gray has qualified before the Commission before. You can just go ahead if you want to.

Q. Mr. Gray, I hand you Exhibit A in Case 569 and ask you to state what that is, please?

A. Exhibit A is a map showing the Baish Pool, showing the estimated pool limits and showing also the proposed water injection project.

Q. The acreage included in the Baish pool, is that federal, state or fee acreage?

A. That's federal acreage.

Q. And who is the lessee?

A. Buffalo Oil Company.

Q. How many wells are there producing from the Baish pool?

A. Six wells.

Q. And who is the owner of these wells?

A. Buffalo Oil Company.

Q. Are there any other owners of wells in that area that produce from the Baish pool?

A. No.

Q. Did you prepare Exhibit A?

A. Yes, I did.

MR. WATSON: We would like to submit it now.

MR. SPURRINE: Without objection, it will be admitted.

Q. I hand you what has been marked Exhibit B in Case No. 369 and ask you to state what that represents.

A. Exhibit B is a cross-section of the Baish Pool well showing the location of the producing oil sand and the location of the fields.

Q. From what depth approximately, does a well produce from the Yates sand in the Baish pool?

A. From approximately 2,350 feet.

Q. I hand you what has been marked Exhibit G and ask you to state what that represents.

A. Exhibit G is a declaration of the oil production by months for each of the six wells up to June, 1953.

Q. What does Exhibit G show with reference to production over the past six months?

A. This shows that during the past six months this well has produced an average of about 30 to 80 barrels ^{of oil} per month.

Q. What are the characteristics of the formation in the Yates sand in the Baish pool?

A. Two of the wells were cored with diamond bit and core analysis was obtained and this analysis showed that the average porosity is 22, the permeability is about 60 millidarcies and the water tabulation was about 30 per cent.

Q. What is the productive area in the pool?

A. Not more than 320 acres. 390 acres, that is.

Q. And what is the gravity of the oil?

A. It's 29 degrees.

Q. In this proposed program to inject water into the Yates sand in the Baish pool, how do you propose to carry on the injection program?

A. We propose to take from 40 to 100 barrels of water per day from our Baish C No. 12 well, which is has been making, and this water will be moved to Baish A 17-Y into a storage tank at that location and then injected into the Baish A 17-Y either by gravity or

if necessary, by means of a pump.

Q. At what point do you propose to inject the water into the well?

A. This will be at the approximate location of 2,302 feet and will be injected above 2,290 feet. The lower zone might take some water.

Q. What results do you anticipate in this program?

A. It is hoped that by injecting water into this well, we will be able to increase the amount of oil we are able to recover from this well.

Q. Do you have any other statement in connection with this application that you would like to make at this time?

A. This being on federal acreage, of course, it will take USGS approval also and we have contacted USGS and they have offered no objection to this program although it will be necessary for us to file the notice of approval in order to carry on.

MR. SPURRIER: Are there any questions of the witness?

MR. WATSON: I would like to submit B and C, at this time.

MR. SPURRIER: Without objection, they will be received.

MR. MACHY: Is your well making any water at present?

MR. GRAY: Only a very small percentage - about 2 or 3 per cent water.

MR. MACHY: You would be able to determine that way the effect of this other method?

MR. GRAY: That's right. The well produces about 20 barrels of oil per day and if we get any benefit, it will be readily recognizable.

MR. MACHY: Would you say there was a possibility that you might have an allowable problem?

MR. GRAY: I hope so.

(Laughter)

MR. MACHY: I was thinking perhaps you might have to slow it down and thereby hurt the efficiency of your flood.

MR. GRAY: Well, we recognize that as being possible but due to the very small amount of water that is being injected, we didn't anticipate any trouble for quite a while and should that occasion arise, it may be necessary for us to come back to the Commission and get some rule on allowable.

MR. MACHY: You own all the producing property in the pool?

MR. GRAY: That's right.

MR. GRAHAM: What about the allowable that this in-put well now has? What disposition would you make of that?

MR. GRAY: The allowable on the Baish A 17-Y will be discontinued and at the present time, the other wells are producing to capacity so we are not asking for any additional allowable.

MR. SPURRIER: Any further questions? If not, the witness may be excused.

We will take the case under advisement and move on to Case 570.

PHONES:
OFFICE: 4300
HOME: 4383
4758

OFFICE 000

P. O. BOX 5613

RECEIVED FEB 1 1955

Eugene E. Nearburg
Charles C. Loveless, Jr.
ROSWELL, NEW MEXICO

February 1, 1955

New Mexico Oil Conservation
Commission
Santa Fe
New Mexico

Att: Nancy Royal

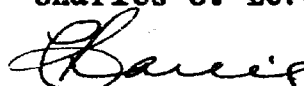
Dear Miss Royal:

Thanks for loaning this instrument
out of Subject Case File 569.

My warmest personal regards.

Charles C. Loveless, Jr.

CCL/amp
encl.



OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

January 13, 1961

Continental Oil Company
825 Petroleum Building
Roswell, New Mexico

Attention: Mr. William A. Mead

Gentlemen:

Reference is made to your letter of December 29, 1959, regarding the Raish Pool waterflood authorization which Buffalo Oil Company received under Order No. E-363, Case 586, on September 17, 1958.

Actually Order No. E-363 has never been cancelled. However the waterflood authorized therein was never commenced, as far as we are able to tell.

Inasmuch as the techniques of flooding as well as the administration of floods has changed considerably over the years since this flood was approved, we believe that it would be desirable to start all over again if Continental should plan a flood in this area.

It will, therefore, be necessary for Continental Oil Company to file an application for hearing and obtain new authority for a flood in the Raish Pool prior to instituting any such operations in this area.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/BNH/15

cc: Mr. Joe Ramey - Oil Conservation Commission, Hobbs, N.M.

WM. A. MEAD
DIVISION SUPERINTENDENT
OF PRODUCTION
NEW MEXICO DIVISION

1960
CONTINENTAL OIL COMPANY

825 PETROLEUM BUILDING
ROSWELL, NEW MEXICO
December 29, 1960

New Mexico Oil Conservation Commission
Box 871
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr., Secretary-Director

Gentlemen:

The following is a request for information concerning Buffalo Oil Company's application for permission to inject water into the Yates formation, Baish Pool in Sections 21 and 22, T-17S, R-32E, Lea County, New Mexico for secondary recovery purposes. Our records show that approval for the application was issued on September 17, 1953 by Order No. R-363.

Continental Oil Company purchased the Baish Pool properties from Buffalo Oil Company since issuance of this Order and our files contain no record of cancellation of this authorization.

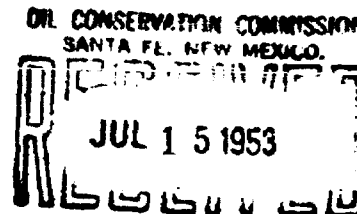
We are planning a waterflood operation in the Baish Pool but our plans for water injection differ from those approved in this Order. We request information as to whether Order No. R-363 has been cancelled, and if not, if the change in the plan for water injection may be approved administratively.

New Mexico Oil Conservation Commission
Page 2

Yours very truly,

W. G. Mead

WAM-sk



BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

RE: APPLICATION OF BUFFALO OIL COMPANY
FOR PERMISSION TO INJECT WATER INTO THE
BAISH POOL IN SECTIONS 21 and 22, TOWN-
SHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO, FOR SECONDARY
RECOVERY.

Case No. _____

A P P L I C A T I O N

COMES NOW Buffalo Oil Company, and hereby makes application to the New Mexico Oil Conservation Commission for a permit to inject water into the Baish Pool in Lea County, New Mexico for secondary recovery purposes and, in support of such Application, states:

1. That there is attached hereto, marked Exhibit "A" and made a part hereof, a plat showing the location of the proposed intake well, which well is the Buffalo Oil Company Baish A 17Y Well located 2310 feet from the north and 2310 feet from the east line of Section 21, Township 17 South, Range 32 East, N.M.P.M., in Lea County, New Mexico. That said Exhibit "A" shows also the location of the oil and gas wells in the Baish Pool and the names of the lessees within one-half (1/2) mile of the intake well and each offset operator. That Kewanee Oil Company is the only lessee within one-half mile of the intake well.

2. That the formation from which the wells are producing is the Yates Sand in the Baish Pool, which produces from about 2350 feet. That all of the wells producing from the Baish Pool and the entire Baish Pool is located on acreage belonging to Buffalo Oil Company; and Buffalo Oil Company states that

injection of water will not affect any other operator. That all of the other wells in this area are producing from other formations.

3. That the name of the formation is the Yates Sand in the Baish Pool; and this formation produces from a depth of approximately 2350 feet.

4. That there is attached hereto, made a part hereof and marked Exhibit "B", a graph showing a cross section of the Baish Pool and depth of the wells.

5. That the proposed intake well has 7 inch O.D. casing set at 2302 feet, and it is proposed to inject water below this point to a depth of approximately 2390 feet. That the casing in said well and the casing in the other wells in the Baish Pool was tested at the time said wells were drilled and completed.

6. That water is to be used for injection purposes, which water will be secured from Buffalo Oil Company Baish B No. 12 Well, which produces about 250 barrels of water per day from the Devonian Formation. It is anticipated that no treatment of water will be necessary, except that all air will be excluded from the system; and it is contemplated that 40 to 100 barrels of water will be injected daily.

7. At the present time, the Buffalo Oil Company A 17Y Well pumps about 4 barrels of oil per day and, by converting this well to a water injection well, it is hoped to benefit the recovery of oil in the other wells in the Yates Sand in the Baish Pool, and to test and determine the water flood possibilities for the Yates Sand.

8. That the name and address of the operator of the project is:


Buffalo Oil Company,
Carper Building,
Artesia, New Mexico.

Page No. 3

WHEREFORE, applicant requests permission from the New Mexico Oil Conservation Commission to proceed with said secondary recovery program, as set forth in the above Application.

BUFFALO OIL COMPANY

by



Neil B. Watson,
Attorney for Applicant,
Artesia, New Mexico.

EXHIBIT "A"

R-32-E.

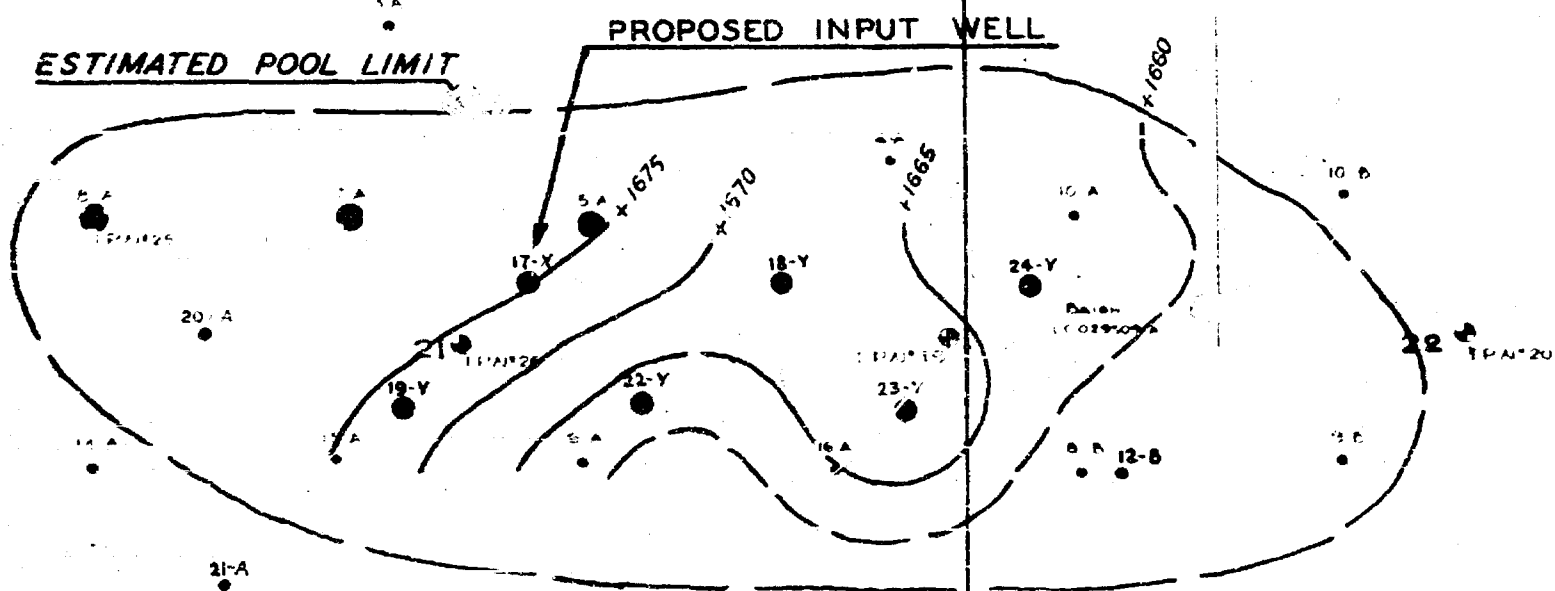
ESTIMATED POOL LIMIT

PROPOSED INPUT WELL

- MALJAMAR POOL WELL
- BAISH POOL WELL
- PREVIOUS BAISH POOL WELL

MAP OF BAISH POOL
Lea County, N. M.
Contours on Top of Dolomite
Scale 1"= 1000' July 1953

R-32-E.



MAP OF BAISH POOL
 Lea County, N. M.
 Contours on Top of Dolomite
 Scale: 1"= 1000' July 1953

EXHIBIT "B"

PROPOSED WATER INPUT WELL



BAISH A 19 Y

BAISH A 17 Y

BAISH A 22 Y

BAI

11800

11700

11600

7"

7"

7"

shot

YATES

OIL

SAND

TOP OF DOLOMITE

GAS SAND

Plug back

CROSS SECTION - BAISH PC

