

CASE 3162: Appli. of CONTINENTAL  
for a waterflood expansion and an  
administrative procedure.

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CASE NO.

3762

Application,  
TRANSCRIPTS,  
SMALL Exhibits  
ETC.

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
November 24, 1968

EXAMINER    HEARING

IN THE MATTER OF:

APPLICATION OF CONTINENTAL OIL COMPANY FOR  
A WATERFLOOD EXPANSION AND AN ADMINISTRAT-  
IVE PROCEDURE, EDDY COUNTY, NEW MEXICO

Case No. 3162

BEFORE:

DANIEL NUTTER

TRANSCRIPT OF HEARING

MR. NUTTER: We will take Case Number 3156 under advisement, and call Case Number 3162.

MR. DURRETT: Application of Continental Oil Company for a waterflood expansion and an administrative procedure, Eddy County, New Mexico.

MR. KELLAHIN: Kellahin & Fox, representing the applicant. I have one witness I would like to have sworn.

Robert D. Riley thereupon was sworn and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Please state your name.

A Robert Daniel Riley.

Q By whom are you employed and in what position?

A I am employed by Continental Oil Company; I am a production engineer in the Hobbs District office, working in the reservoir engineering section, and have been working with the waterflood section of this department for the past year.

Q Have you ever testified before the Oil Conservation Commission?

A No, sir.

Q For the benefit of the Examiner would you briefly outline your education and your experience as an engineer.

A I received a BS degree in petroleum engineering in

May of 1959 from Texas A&M University. I have been employed by Continental Oil Company for the past five years following graduation. Four of these were on active employment as an engineer. The one year intervening I was taking graduate courses at Texas A&M University.

MR. KELLAHIN: Are the witness's qualifications acceptable?

MR. NUTTER: Yes, sir.

Q (MR. KELLAHIN) Mr. Riley, are you familiar with the application of Continental Oil Company in Case Number 3162?

A Yes, sir.

Q Would you state briefly what is proposed by Continental in this application.

A Case Number 3162 is the application of Continental Oil Company for amendment of R-2385 for authority to convert two additional wells for injection purposes in the Cave Pool Unit, and to provide administrative procedures for making future changes or additions of injection wells.

Q Referring to what has been marked Exhibit 1, would you describe what is shown on this exhibit.

A Exhibit 1 is a plat showing the Cave Pool Unit and the immediately surrounding area. The unit outline is shown by the dashed line. Producing wells within the unit are shown by the small dot and the injection wells are shown by dots and the

circumscribed triangle. The injection wells which are not colored are injection wells now in service. The two wells which have been colored red are the two wells which we are seeking approval to convert to injection. The two wells that we are considering are General American's Green B Number 4, located in Unit H of Section 7, and General American's Green B Number 7, located in Unit L, Section 5, both in Township 17S, Range 29 East, Eddy County, New Mexico.

Q Have there been any changes in the unit area since the effective date of Order Number R-2385?

A Yes, sir. The unit area has been enlarged effective November 1, 1964, to include the west half of the southwest quarter of Section 5, and the northeast quarter of Section 7, both of these being in Township 17 South, Range 29 East, Eddy County, New Mexico.

Q And that is shown on the present Exhibit 1?

A Yes, sir, the boundary on Exhibit 1 includes the enlarged unit area.

Q Referring to what has been marked Exhibit 2A, would you identify that and discuss what is shown on it; and also Exhibit 2B.

A Exhibit 2A is a schematic diagram of the proposed water injection well. This exhibit shows the total depth of the well, the size and depth of the casing strings, and the amount

of cement used. We have not shown the tops of the cement; we have shown the amount based on the records or our conversation with General American--they did not have a temperature survey on the production string, and based on the calculated fill-up we estimate 200 sacks, which would bring our cement back up to approximately 600 feet above the casing shoe. Exhibit 2B is likewise a schematic drawing of Green B Number 7. If I failed to mention it, Exhibit 2A was for Green B 4. Again, this exhibit gives the same basic casing and cementing program used on this well during its primary completion. This well was cemented 100 sacks on the production string, which would estimate the top of the cement 300 feet above the shoe.

Q Did Continental Oil Company drill the wells, or they were drilled by General American; is that correct?

A That's correct.

Q How do you propose to make this completion, and what tests will be made?

A We propose to make completion by injecting down the casing as shown by Exhibits 2A and B. We will install approximately 90 feet of tubing to inject into the casing. Prior to any injection, and as has been the practice under Order Number 2385, we will pressure-test each well to 2,000 pounds, prior to injection. If the wells fail to withstand the test we will either perform remedial work or will inject through tubing under a packer. If the well does successfully withstand the pressure

test we plan to inject water into the casing.

Q Is this the type of completion that has been performed for other injection wells in this waterflood project?

A Yes, sir, on the other injection wells shown on Exhibit 1 this is the type of completion, I believe, with the exception of one well which was a dry hole and the casing had been pulled, so we cemented a casing on that to TD. However, we are injecting a casing in that well.

Q Referring to what has been marked Exhibit 3 for identification, would you describe what is shown on there.

A Exhibit 3 is a tracing of a gamma-neutron log and a general data sheet for the Green B Number 4. The gamma-neutron log shows the top of the Premier Sand, which was the pay interval of the Cave Pool in the zone which we are flooding, and which was the casing set of the well. Other pertinent data is the completion dates, initial potentials, cumulative production and intervals open for completion.

Q Referring to what has been marked Exhibit 4 for identification, will you discuss that.

A Exhibit 4 is a general data sheet for General American Green B Number 7. There was no logs available on this well; however, the log would be comparable to that shown in Exhibit 3. This exhibit is submitted to furnish the completion data for the well.



Q Can you explain why these two wells were not included in the original application for the Cave Pool waterflood?

A At the time of formation of the Cave Pool unit it was General American's intent to cooperate in the waterflood project rather than to commit their acreage to the unit. However, their position has changed, and at their request we have expanded the unit to include their acreage. The portion of their lease now committed to the unit is designated as Tract 17 of the KP unit, and the wells located on this tract, two of which we have discussed in this case, will have--the names will be changed; the Green B Number 4 will become Cave Pool Unit Number 53; the Green B 5 will become Cave Pool Unit 52, and 7 will become Cave Pool Unit 51; and for clarification of the Green B 5 well, if you will notice on Exhibit 1, this will be a producing well within the waterflood pattern.

Q The application requests establishment of an administrative procedure for approval of additional injection wells. Does Continental Oil at this time contemplate adding or substituting injection wells in this project?

A No, sir, we don't. However, it's always a possibility that such changes may become necessary as the flood progresses; and this is the second hearing the Commission has had to hold as a result of our failure to request administrative procedures for securing permission to add injection wells at the original hearing

of the Cave Pool Unit Waterflood. In the interest of avoiding future hearings, it is recommended that the Commission incorporate such procedures into the amended order.

Q What sources of water will you use for injection purposes?

A Water which has been used to date, and which we will continue to use in the two new injection wells, is from the Poga Loga formation, and we are purchasing this water from the Caprock Water Company.

Q That is fresh water?

A Yes, sir.

Q Will you re-inject produced water?

A Yes, sir, it is our plan.

Q Are you doing so now?

A No, sir, to this time we have not. Our water production has not been great enough to set up facilities to accomplish this.

Q Were Exhibits 1 through 4 prepared by you or under your supervision?

A Yes, sir.

MR. KELLAHIN: At this time I'd like to offer Exhibits 1 through 4, inclusive.

MR. NUTTER: Continental Oil Company Exhibits 1 through 4 will be admitted.

MR. KELLAHIN: That's all I have on direct.

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

MR. IRBY: In what formation is the surface casing set?

A Sir, at the moment I cannot give you a specific answer on that. It is the standard depth which has been used for setting surface casing in this area--I believe it is the depth that has been used for all producing wells in this area on primary completion, and I assumed this depth as satisfactorily detected on surface waters as were seen at the time the wells were drilled.

Q What was the condition of the casing in each of the two wells at the time of completion?

A This information is not available to us at this time. We have just taken over operation of these wells, I believe effective today, and have not received full well files from General American. The data on these plats were obtained by telephone conversation, and at my disposal at this time I have no record of the type of casing that was set, other than the size of them.

Q Do you propose any tests on these wells subsequent to the 2,000 PSI test at the time of conversion to water injection?

A You mean tests following completion of this well?

Q Yes.

A No, sir, we have not set up a program for testing the wells. We have found that some of these wells initially took the

approximate injection volume of around 150 to 210 barrels per day. Initially on a few wells this was accomplished with zero surface pressure. However, as you begin to attain fill-up this pressure has climbed, and in most portions of our waterflood it is up to five and 600 pounds, and we do check the pressures once each month, and record them, and if we develop a leak in the casing it would show up by reduced surface projections, and likewise the projection rate would climb exceptionally high; and I feel that any such thing would be realized within a short period of time...the maximum of one month, and we have not run into a problem of corrosion at this time and are not expecting it; and we feel we should not have a problem of corrosion that would cause a casing leak.

Q What tests have been made with respect to corrosion in the other injection wells in this project?

A There have been tests made. I cannot give you specific details; I have talked with engineers who have obtained these tests and the information I received from them is that we have--is that corrosion is not taking place there, or we haven't found it at an alarming rate. I don't think I can say specifically there is no corrosion, but we have been injecting for a little over a year now, and have had no indication of corrosion with any of our surface equipment, or in any other wells to this date, and that has been a year of injection.

Q Have any coupons or anything of that nature been used for these tests?

A I really don't know, sir.

Q All you know is that they have taken observations on the surface equipment?

A I believe they have checked for corrosion as well as for--we checked for corrosion and bacteria for plugging of the wells, and the details I can't say, but I believe they have made checks other than just visual inspections of our surface equipment.

Q I believe you said the maximum injection pressures to date are on the order of 500 PSI?

A No, sir, 500 PSI has been indicated as for the better producers. I made the statement that we do expect pressure on all wells so that we could distinguish a leak. However, on some wells which are located along the parameter of the flood, which would be edged wells of reduced pay thickness and quality, we have observed pressures of approximately 1450 PSI. Our maximum plant pressure is 1500 pounds, and we have observed--well, perhaps 1450, in a few isolated wells.

Q You are taking tests monthly to determine injection pressures and volume of water injected?

A Yes, sir.

Q And by this means you expect to determine if a leak

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occurs in the casing?

A I think that this would definitely show a leak in the casing, by your pressure and rate behavior. I believe these are recorded on one of the Commission forms which are submitted each month; and we also have company records on which these are recorded.

Q Will you be willing to furnish me information immediately if your injection pressures drop or your volumes increase?

A Yes, sir, I feel that Continental would certainly be willing to furnish the information required on that. It's difficult to--what I want to say, is there any distinction you might have on our rates? Of course, pressure varies to some extent.

Q I realize there would be a significant increase in the volume of water accepted by the well, or a significant decrease in the injection pressure.

A Yes, sir. I think Continental would certainly be willing to do that. I might point out that we are interested in water-floating our pay section, and we are losing money by losing water, and we are just as interested as you are that we don't lose our water by some type of casing leak, and we would submit any records you require.

Q Not to be argumentative with you, but I will not agree that you are as interested in this water as I am. I think some of the leaky wells in Lea County prove this--with certain other

oil companies; not necessarily Continental. That's all I have.

MR. NUTTER: You have computed here that top cement above the shoe would be 600 feet on one well and 300 on the other. Were you taking this volume of cement and going to the tables and using size of hole and size of casing?

A Yes, sir, using what would be the casing and bore hole annulus, and assuming that it was a neat cement which had a volume of 1.1 cubic feet per sack, and estimating the approximate height.

Q And this is on actual fill-up and no consideration given to wash-outs or large holes?

A That is correct.

Q Is there any way--I realize when you test the casing you probably go down with a packer and pressure up the casing, and put the packer just above the shoe?

A Yes, sir

Q Is there any way of testing to find out, when you pull that packer and start going in with pressure, that you don't have a break-through of water up around the cement?

A Sir, we will test the wells to 2,000 pounds or maximum plant pressure. We can inject 1500 pounds, and we feel that if we did not break the cement around the shoe on test, prior to putting the well on injection, the 500 lesser pounds should not--

Q You're not going to be testing that shoe on the pressure test, and the cement around the shoe.

A I'm sorry, sir--I was slightly confused there. This is--let me back up and say yes, sir, you are correct. We have run surveys on, I believe it was four wells, in the portions of the pool which are now developed to waterflood, to check this, and in no instance did we find we were losing water behind the casing, and this is open hole wells. However, the alternate to injecting down the casing, accomplished by running a tube and packer, would not answer the question you have asked; because here again you would be injecting water into an open hole, subjecting the cement around the casing shoe to the same pressure, and a tube and packer would not eliminate this possibility.

Q I realize this; but is the amount of cement used on these wells comparable with the amount of cement used by other companies in developing this Cave Pool? These people used 100 sacks on one and 200 on another well. Is that a comparable amount to the other wells?

A This is a comparison I cannot give you a definite answer on, but in my opinion I think we would find that it is a comparable amount.

Q This bradenhead--is that open, or what is the status between the 8-7/8 inch casing?

A It would be my opinion that it is open from the top of the cement to the surface. Is that your question?

Q I meant if it was open at the top, or if it is sealed



off. If a man would have either a break-through of water around the shoe, or if he had a leak and there was no porosity, water would build up in that casing?

A Yes, sir, and there would show an indication by pressure on the surface.

Q Yes, either on a gauge, or if it was open, by a flow of water?

A The condition of these wells are not known to me today. These were not Continental wells, and since we have just assumed operation of them we have not examined them, and I really could not answer the question whether they are open. Most of them, I think you will find, the bradenhead is acceptable, but on these I could not say.

MR. NUTTER: Do you know, Vic?

MR. LYON: No, I don't. We can investigate and let you know, if you would like, but I don't know what the condition of the bradenhead is.

MR. NUTTER: If the bradenhead were open and you had a flow of water or break-through, you would sometimes get an indication?

A (WITNESS) Yes.

Q If you had a very permeable, porous zone down in the hole that would take the water faster than the hydrostatic head could build up in the well, you might never have an indication at the

surface. Vic, if you would check on the bradenheads, I would be interested in knowing--maybe just a quarter-inch tap left open would let a flow of water out of the bradenhead.

MR. LYON: Continental as a standard practice does have fittings available. I'll check the installed pressure guages or valves where we can check where there's pressure, but as far as the General American's practice, I can't say.

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

MR. IRBY: I have a statement I'd like to make. No further questions of this witness.

MR. NUTTER: If there are no further questions the witness may be excused. Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: No.

MR. NUTTER: Does anyone have anything further?

MR. IRBY: I would recommend, Mr. Examiner, that Continental be required to furnish the information which is mentioned in your statement to Mr. Lyon, and that a copy of this information be furnished me; and that if the Examiner feels it is significant, that his recommended procedure with regard to the bradenhead be made a part of the order.

MR. DURRETT: If the Examiner please, I'd like to state for the record that I received a letter from Mr. Irby of the State Engineer's Office stating that he objected to

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this application as he did not have a copy. Now that he has heard the case here today, I thought he might want to modify this objection.

MR. IRBY: I withdraw the effect of my letter dated November 24, 1964, with regard to the Oil Commission Case Number 3162.

MR. NUTTER: If there is nothing further in Case Number 3162, we will take the case under advisement. The hearing is adjourned.

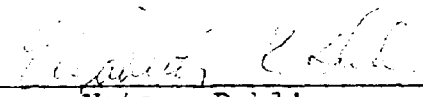
(The hearing thereupon adjourned, at 5:50 o'clock P.M., November 24, 1964.)

\* \* \*

STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss

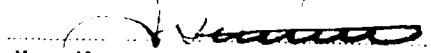
I, ELIZABETH K. HALE, Notary Public and Court Reporter, do hereby certify that the foregoing and attached transcript of hearing in Case Number 3162 was reported by me and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Witness my hand and seal this 6th day of December, 1964.

  
Notary Public

My commission expires  
May 23, 1968.

I hereby certify that the foregoing is  
a complete record of the proceedings in  
the Executive Hearing of Case No. 3162,  
heard by me on 11/24, 1964.

  
Examiner  
New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO

January 4, 1965

C  
O  
P  
Y

Continental Oil Company  
P. O. Box 440  
Hobbs, New Mexico

Attention: Mr. Jack Marshall

Gentlemen:

Reference is made to your letter dated December 23, 1964, regarding our letter of December 15, 1964, concerning the maximum allowable which your Cave Fuel Unit Waterflood Project will be eligible to receive.

In computing the maximum allowable of 2,184 barrels per day, we neglected to include the second well completed in Unit K of Section 5, Township 17 South, Range 29 East. The correct maximum allowable should be 2,198 barrels per day, and our letter of December 15, 1964, is hereby amended to so read.

Thank you for calling our attention to this matter.

Very truly yours,

A. L. Porter, Jr.  
Secretary-Director

ALP:DSN:sg

cc: Oil Conservation Commission - Hobbs  
Case File 3162

3162

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DEC 24 1964

## CONTINENTAL OIL COMPANY

P. O. BOX 460

HOBBS, NEW MEXICO

December 23, 1964

PRODUCTION DEPARTMENT  
HOBBS DISTRICT  
JACK MARSHALL  
DISTRICT MANAGER  
G. C. JAMIESON  
ASSISTANT DISTRICT MANAGER

1001 NORTH TURNER  
TELEPHONE: EX 3-4141

New Mexico Oil Conservation Commission  
Post Office Box 2088  
Santa Fe, New Mexico

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

Gentlemen:

Re: Cave Pool Unit

Your letter dated December 15, 1964, addressed to Mr. Jason Kellahin, referred to Order No. R-2831 recently entered in Case No. 3162. Your letter indicates that the maximum allowable for which this project will be eligible will be 2,184 barrels per day. Our figures indicate that this maximum allowable should be 2,198 barrels, considering the second well completed in Unit K, Section 5, T-17S, R-29E. We should appreciate your rechecking this figure and advising which figure is correct.

We appreciate your cooperation in this matter.

Yours very truly,

*Jack Marshall*

JM-DFW

cc: NMOCC-Hobbs  
RGP GW JWK

OIL CONSERVATION COMMISSION  
P. O. BOX 871  
SANTA FE, NEW MEXICO

December 15, 1964

C  
O  
P  
Y  
  
Mr. Jason Kallahin  
Kallahin & Fox  
Attorneys at Law  
Post Office Box 1769  
Santa Fe, New Mexico

Dear Sir:

Reference is made to Commission Order No. R-2831, recently entered in Case No. 3162, approving the expansion of Continental Oil Company's Cave Pool Waterflood Project.

As discussed at the hearing, injection is to be through casing after the casing in both of the injection wells has been pressure tested to the maximum expected injection pressure of 2000 psi and the results of such tests furnished to the Commission and to the State Engineer Office at Santa Fe. In the event casing failure is detected in either well, injection shall be permitted in said well only through tubing and packer. As further agreed to at the hearing, connections are to be installed on the Brownheads to permit the installation of a valve or pressure gauge. (Letter from Jack Marshall dated December 1, 1964, advises that this has been done.)

As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 2184 barrels per day.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe Office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify

**OIL CONSERVATION COMMISSION**

P. O. BOX 871

SANTA FE, NEW MEXICO

-2-

**Mr. Jason Hallahin  
Hallahin & Fox  
Attorneys at Law  
Post Office Box 1769  
Santa Fe, New Mexico**

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both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

O

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

P

Very truly yours,

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

Y

**ALP/DSH/lr**

**cc: Mr. Frank Irby  
State Engineer Office  
Santa Fe, New Mexico**

**Oil Conservation Commission:  
Hobbs, New Mexico  
Artesia, New Mexico**

Docket No. 32-64

DOCKET: EXAMINER HEARING - TUESDAY - NOVEMBER 24, 1964

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

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

*Jack Russell  
Charlie Seely*  
CASE 3147: Application of Newmont Oil Company for a waterflood expansion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its West Square Lake Waterflood Project by the injection of water into the Grayburg and San Andres formation through 10 wells in Sections 32, 33, and 35, Township 16 South, Range 30 East, and Section 4, Township 17 South, Range 30 East, Eddy County, New Mexico.

*Jack Russell  
Charlie Seely*  
CASE 3148: Application of Newmont Oil Company for a waterflood buffer zone, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks establishment of the NW/4 SE/4 of Section 28, the W/2 SW/4 of Section 33, and the SE/4 NW/4 and SE/4 NE/4 of Section 34, all in Township 16 South, Range 31 East, as a buffer zone adjacent to its Square Lake Waterflood Project, Eddy County, New Mexico.

*Jack Russell  
Charlie Seely*  
CASE 3149: Application of Newmont Oil Company for amendment of Order No. R-2178-B, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Order No. R-2178-B to include the S/2 SE/4 of Section 11, Township 18 South, Range 29 East, in Stage I of the Loco Hills Sand Unit Waterflood Project, to approve two Stage I water injection wells in said Section 11, and to include the NE/4 NE/4 of Section 15, Township 18 South, Range 29 East, in Stage III of the waterflood project.

*Kirk Hamon  
Geologist*  
CASE 3150: Application of California Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Bogle Flats Unit Area comprising 11,091 acres, more or less, of State and Federal lands in Township 22 South, Range 23 East, Eddy County, New Mexico.

*Charles Hamon  
Hamon Shew  
Hamon*  
CASE 3151: Application of Jake L. Hamon for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (conventional) of its State E-8321 Well No. 1 located in Unit L of Section 4, Township 21 South, Range 35 East, Lea County, New Mexico, to produce oil from the Wolfcamp and Strawn formations through parallel strings of tubing.

*Hamon  
O'Brien  
Geologist*  
CASE 3152: Application of Jake L. Hamon for the creation of a new oil pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Wolfcamp production for its State E-8321 Well No. 1 located in Unit L of Section 4, Township 21 South, Range 35 East, Lea County, New Mexico, and for the promulgation of special rules for said pool, including a provision for 80-acre spacing and fixed well locations.



November 24th Examiner Hearing

*Case 3153*  
*315*  
**CASE 3153:** Application of Jake L. Hamon for the creation of a new oil pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Strawn production for its State E-8321 Well No. 1 located in Unit L. of Section 4, Township 21 South, Range 35 East, Lea County, New Mexico, and for the promulgation of special rules for said pool, including a provision for 80-acre spacing and fixed well locations.

*Cont 15*  
*Dec 15*  
**CASE 3154:** Application of Atlantic Refining Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Culwin Queen Unit Area comprising 820 acres, more or less, of State and Federal lands in Townships 18 and 19 South, Ranges 30 and 31 East, Eddy County, New Mexico.

*Cont 15*  
*Dec 15*  
**CASE 3155:** Application of Atlantic Refining Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Shugart Pool in its Culwin Queen Unit Area by the injection of water into the Queen formation through six injection wells in Section 36, Township 18 South, Range 30 East, Section 31, Township 18 South, Range 31 East, Section 1, Township 19 South, Range 30 East, and Section 6, Township 19 South, Range 31 East, Eddy County, New Mexico.

*Jason R. Ut. Lyon*  
**CASE 3156:** Application of Continental Oil Company for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Cass Pool, Lea County, New Mexico, including a provision for 80-acre spacing and the transfer of allowables.

*Dick Morris*  
*Dec 15*  
*Jack Russell*  
**CASE 3157:** Application of The Pure Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its Red Hills Unit Well No. 1 located 330 feet from the South line and 2310 feet from the East line of Section 32, Township 25 South, Range 33 East, Lea County, New Mexico, as a dual completion (conventional) to produce gas from the Wolfcamp and Pennsylvanian formations through parallel strings of tubing.

*Dick Morris*  
*Dec 15*  
*Jack Russell*  
**CASE 3158:** Application of The Pure Oil Company for the creation of a new gas pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Wolfcamp gas pool for its Red Hills Unit Well No. 1 located 330 feet from the South line and 2310 feet from the East line of Section 32, Township 25 South, Range 33 East, Lea County, New Mexico, and the promulgation of special pool rules including a provision for 640 acre spacing.

*Dick Morris*  
*Dec 15*  
*Jack Russell*  
**CASE 3159:** Application of The Pure Oil Company for the creation of a new gas pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Pennsylvanian gas pool for its Red Hills Unit Well No. 1, located 330 feet from the South line and 2310 feet from the East line of Section 32, Township 25 South, Range 33 East, Lea County, New Mexico, and the promulgation of special pool rules including a provision for 640-acre spacing.

*Leo Fish*

November 24th Examiner Hearing

*Charlie White*  
*Carl H. Hightower*  
CASE 3160: Application of Texaco Inc. for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (tubingless) of its State of New Mexico "R" (NCT-4) Well No. 1 located in Unit C of Section 7, Township 18 South, Range 35 East, Lea County, New Mexico, to produce oil from the Vacuum-San Andres and Vacuum-Abo Reef Pools through parallel strings of 2-7/8 inch casing cemented in a common well bore.

*J. W. Durratt*  
*Emory Arnold*  
*Dick Morris*  
*So. Union Prod.*  
*James - Brock*  
*Lester*  
CASE 3161: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to permit Southern Union Production Company and all other interested parties to show cause why the Robert Mims-State Well No. 1 located in Unit M of Section 16, Township 29 North, Range 9 West, San Juan County, New Mexico, should not be properly repaired or plugged in accordance with a Commission approved plugging program.

*James H. Hinch*  
*R. B. Riley*  
*Producers*  
*Engle*  
*James*  
CASE 3162: Application of Continental Oil Company for a waterflood expansion and an administrative procedure, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to convert to water injection its General American Green "B" Wells Nos. 4 and 7, located in Unit H of Section 7 and Unit L of Section 5, respectively, Cave Pool Waterflood Project, Township 17 South, Range 29 East, Eddy County, New Mexico. Applicant further seeks an administrative procedure in exception to Rule 701 whereby additional wells in said project could be converted to water injection prior to receiving response from flooding operations.

GOVERNOR  
JACK M. CAMPBELL  
CHAIRMAN

*State of New Mexico*  
**Oil Conservation Commission**



LAND COMMISSIONER  
L. B. JOHNNY WALKER  
MEMBER

P. O. BOX 271  
SANTA FE

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

ORDER HANDED TO JASON KELLAHIN  
ON DECEMBER 7, 1964 - ir/

Re: Case No. 3162  
Order No. R-2831  
Applicant: \_\_\_\_\_

Dear Sir:

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

Very truly yours,

*A. L. Porter, Jr.*

A. L. PORTER, Jr.  
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC   x  

Artesia OCC   x  

Astec OCC           

OTHER            Mr. Frank Irby



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

December 7, 1964

S. E. REYNOLDS  
STATE ENGINEER

ADDRESS CORRESPONDENCE TO:  
STATE CAPITOL  
SANTA FE, N. M.  
87501

Mr. A. L. Porter, Jr.  
Secretary-Director  
Oil Conservation Commission  
Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to Continental Oil Company's letter of December 1, 1964 pertaining to Case 3162.

In view of the fact that the casing in both wells involved in this application is set in the Rustler formation, this office offers no objection to the granting of the application, provided the well casing is successfully tested to 2000 psi prior to commencement of injection and provided frequent periodic checks are taken to determine whether a casing leak has occurred.

I am curious as to why Mr. Marshall expounded on standard practices in use in the field and the comparison of cement used in the subject wells to that used by other operators in the area. However, this is of no consequence since it has no bearing on the ability of the well to conduct the fluid without loss.

Yours truly,

S. E. Reynolds  
State Engineer

FEI/ma  
cc-Continental Oil Co.  
F. H. Hennighausen

By: *Frank E. Irby*  
Frank E. Irby  
Chief  
Water Rights Div.



# CONTINENTAL OIL COMPANY

P. O. BOX 480  
HOBBS, NEW MEXICO

PRODUCTION DEPARTMENT  
HOBBS DISTRICT  
JACK MARSHALL  
DISTRICT MANAGER  
G. C. JAMIESON  
ASSISTANT DISTRICT MANAGER

December 1, 1964

1001 NORTH TURNER  
TELEPHONE: EX 3-4141

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

Attention of Mr. D. S. Nutter

Gentlemen:

Re: Case No. 3162

At the hearing November 24, 1964, on the captioned case, the Examiner and representative of the State Engineer's Office requested that we furnish certain information which was not available at the hearing. We find that the casing set in the two new injection wells conforms with one of the two standard practices in use in this field. Operators apparently have set casing either just above the salt or just below the salt. General American set their casing in the Rustler formation immediately above the salt beds. The amount of cement used compares favorably with the practice of other operators who set casing at this depth.

In order to determine the status of the bradenheads on the injection wells, it has been necessary to excavate around each well. This has been done and connections have been installed in the bradenhead whereby a 2" riser will be available above the surface and a valve or pressure gauge, or both, can be installed.

If you have further questions in connection with this case, please contact this office.

Yours very truly,

JM-DFW

cc: Mr. Frank Irby  
State Engineer's Office  
Santa Fe, New Mexico

**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. 3162  
Order No. R-2831**

**APPLICATION OF CONTINENTAL OIL  
COMPANY FOR A WATERFLOOD EXPANSION  
AND AN ADMINISTRATIVE PROCEDURE,  
EDDY COUNTY, NEW MEXICO.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on November 24, 1964, at Santa Fe, New Mexico, before Examiner Daniel S. Matter.

NOW, on this 7th day of December, 1964, 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, Continental Oil Company, seeks permission to expand its Cave Pool Unit Waterflood Project, authorized by Order No. R-2385, by the injection of water into the Premier Sand of the Grayburg formation through two injection wells in Sections 5 and 7, Township 17 South, Range 29 East, NMPM, Eddy County, New Mexico.

(3) That the applicant also seeks the establishment of an administrative procedure in exception to Rule 701 of the Commission Rules and Regulations whereby additional wells in the Cave Pool Unit Waterflood Project may be converted to water injection prior to receiving response from waterflood operations.

-2-

CASE No. 3162

Order No. R-2831

(4) That the wells in the expanded project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(5) That the proposed expansion of the Cave Pool Unit Waterflood Project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(6) That the proposed expansion of the Cave Pool Unit Waterflood Project should be authorized and the expanded project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(7) That all wells in the Cave Pool Unit Waterflood Project are located within the boundaries of the Cave Pool Unit Area and are operated by one operator; that an administrative procedure should therefore be established whereby additional wells in said waterflood project may be converted to water injection prior to receiving response from waterflooding operations.

**IT IS THEREFORE ORDERED:**

(1) That the applicant, Continental Oil Company, is hereby authorized to expand its Cave Pool Unit Waterflood Project in the Cave Pool Unit Area by the injection of water into the Premier Sand of the Grayburg formation through the following-described wells in Township 17 South, Range 29 East, NMPN, Eddy County, New Mexico:

The General American Oil Company of Texas Green "B" Well No. 7, located in Unit L of Section 5,

The General American Oil Company of Texas Green "B" Well No. 4, located in Unit H of Section 7.

(2) That the expanded waterflood project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the expanded waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1119 of the Commission Rules and Regulations.

-3-

CASE No. 3162

Order No. R-2831

(4) That as an exception to Rule 701 of the Commission Rules and Regulations, the Secretary-Director is hereby authorized to approve the conversion of additional wells to water injection in the Cave Pool Unit Waterflood Project when an application for such authority has been filed in accordance with the requirements of Rule 701-B of the Commission Rules and Regulations and the Secretary-Director determines that approval of the application will increase the efficiency of the waterflood project and prevent waste.

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

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*Jack M. Campbell*  
JACK M. CAMPBELL, Chairman

*E. S. Walker*  
E. S. WALKER, Member

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

esr/



OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date 11/25/64

CASE 3162 Hearing Date 9am 11/24

My recommendations for an order in the above numbered cases are as follows:

*Amend Order No R-2385 to*

*Authorize Continental Oil Co to*  
*expand its Cove Pool, <sup>unit</sup> WF*  
*Pray by the addition of two*  
*more water injection wells:*  
*Permian American Oil Company of Texas*

*Green "B" No 7 L-5-17-29*  
*" " " 4 H-7-17-29*

*Also write in a provision*  
*whereby substitutions for <sup>authorized</sup> injection*  
*wells can be approved*  
*administratively*

*[Signature]*

SPECIAL RULES AND REGULATIONS  
FOR THE CASS POOL

RULE 1. Each well completed or recompleted in the Cass Pool or in the Pennsylvanian formation within one mile of the Cass Pool, and not nearer to or within the limits of another designated Pennsylvanian Pool, shall be spaced, drilled, operated, and produced in accordance with the special Rules and Regulations hereinafter set forth.

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

RULE 3. The Secretary-Director may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit comprising a single quarter-quarter section or lot. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application immediately upon receipt of written waivers from all offset operators; or, in the absence of such waivers, after 30 days from receipt of the application if no offset operator has entered an objection to the formation of the non-standard unit.

RULE 4. Each well projected to or completed hereafter in the Cass Pool shall be located not less than 330 feet from any boundary of a single governmental quarter-quarter section or lot.

RULE 5. A standard proration unit (79 through 81 acres) in the Cass Pool shall be assigned an 80-acre proportional factor of 3.33 for allowable purposes, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the

Special Rules and Regulations  
for the Cass Pool  
Page 2

allowable assigned to the unit from the wells on the unit in any proportion. The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable in the Cass Pool as the acreage in such non-standard unit bears to 80 acres.

RULE 6. The allowable, or any portion thereof, of any well capable of producing from the Cass Pool may be transferred to another well on the same lease capable of producing said allowable in addition to its own assigned allowable from the Cass Pool; provided, however, that no such allowable shall be transferred to a well nearer than 2000 feet from another well producing from the Cass Pool which is operated by another operator, unless written consent of said offset operator is first obtained, or after notice and hearing.

Docket No. 32-64

DOCKET: EXAMINER HEARING - TUESDAY - NOVEMBER 24, 1964

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

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

CASE 3147: Application of Newmont Oil Company for a waterflood expansion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its West Square Lake Waterflood Project by the injection of water into the Grayburg and San Andres formation through 10 wells in Sections 32, 33, and 35, Township 16 South, Range 30 East, and Section 4, Township 17 South, Range 30 East, Eddy County, New Mexico.

CASE 3148: Application of Newmont Oil Company for a waterflood buffer zone, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks establishment of the NW/4 SE/4 of Section 28, the W/2 SW/4 of Section 33, and the SE/4 NW/4 and SE/4 NE/4 of Section 34, all in Township 16 South, Range 31 East, as a buffer zone adjacent to its Square Lake Waterflood Project, Eddy County, New Mexico.

CASE 3149: Application of Newmont Oil Company for amendment of Order No. R-2178-B, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Order No. R-2178-B to include the S/2 SE/4 of Section 11, Township 18 South, Range 29 East, in Stage I of the Loco Hills Sand Unit Waterflood Project, to approve two Stage I water injection wells in said Section 11, and to include the NE/4 NE/4 of Section 15, Township 18 South, Range 29 East, in Stage III of the waterflood project.

CASE 3150: Application of California Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Bogle Flats Unit Area comprising 11,091 acres, more or less, of State and Federal lands in Township 22 South, Range 23 East, Eddy County, New Mexico.

CASE 3151: Application of Jake L. Hamon for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (conventional) of its State E-8321 Well No. 1 located in Unit L of Section 4, Township 21 South, Range 35 East, Lea County, New Mexico, to produce oil from the Wolfcamp and Strawn formations through parallel strings of tubing.

CASE 3152: Application of Jake L. Hamon for the creation of a new oil pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Wolfcamp production for its State E-8321 Well No. 1 located in Unit L of Section 4, Township 21 South, Range 35 East, Lea County, New Mexico, and for the promulgation of special rules for said pool, including a provision for 80-acre spacing and fixed well locations.

- CASE 3153: Application of Jake L. Hamon for the creation of a new oil pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Strawn production for its State E-8321 Well No. 1 located in Unit L. of Section 4, Township 21 South, Range 35 East, Lea County, New Mexico, and for the promulgation of special rules for said pool, including a provision for 80-acre spacing and fixed well locations.
- CASE 3154: Application of Atlantic Refining Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Culwin Queen Unit Area comprising 820 acres, more or less, of State and Federal lands in Townships 18 and 19 South, Ranges 30 and 31 East, Eddy County, New Mexico.
- CASE 3155: Application of Atlantic Refining Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Shugart Pool in its Culwin Queen Unit Area by the injection of water into the Queen formation through six injection wells in Section 36, Township 18 South, Range 30 East, Section 31, Township 18 South, Range 31 East, Section 1, Township 19 South, Range 30 East, and Section 6, Township 19 South, Range 31 East, Eddy County, New Mexico.
- CASE 3156: Application of Continental Oil Company for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Cass Pool, Lea County, New Mexico, including a provision for 80-acre spacing and the transfer of allowables.
- CASE 3157: Application of The Pure Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its Red Hills Unit Well No. 1 located 330 feet from the South line and 2310 feet from the East line of Section 32, Township 25 South, Range 33 East, Lea County, New Mexico, as a dual completion (conventional) to produce gas from the Wolfcamp and Pennsylvanian formations through parallel strings of tubing.
- CASE 3158: Application of The Pure Oil Company for the creation of a new gas pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Wolfcamp gas pool for its Red Hills Unit Well No. 1 located 330 feet from the South line and 2310 feet from the East line of Section 32, Township 25 South, Range 33 East, Lea County, New Mexico, and the promulgation of special pool rules including a provision for 640 acre spacing.
- CASE 3159: Application of The Pure Oil Company for the creation of a new gas pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Pennsylvanian gas pool for its Red Hills Unit Well No. 1, located 330 feet from the South line and 2310 feet from the East line of Section 32, Township 25 South, Range 33 East, Lea County, New Mexico, and the promulgation of special pool rules including a provision for 640-acre spacing.

- 3 -

November 24th Examiner Hearing

CASE 3160: Application of Texaco Inc. for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (tubingless) of its State of New Mexico "R" (NCT-4) Well No. 1 located in Unit C of Section 7, Township 18 South, Range 35 East, Lea County, New Mexico, to produce oil from the Vacuum-San Andres and Vacuum-Abo Reef Pools through parallel strings of 2-7/8 inch casing cemented in a common well bore.

CASE 3161: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to permit Southern Union Production Company and all other interested parties to show cause why the Robert Mims-State Well No. 1 located in Unit M of Section 16, Township 29 North, Range 9 West, San Juan County, New Mexico, should not be properly repaired or plugged in accordance with a Commission approved plugging program.

CASE 3162: Application of Continental Oil Company for a waterflood expansion and an administrative procedure, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to convert to water injection its General American Green "B" Wells Nos. 4 and 7, located in Unit H of Section 7 and Unit L of Section 5, respectively, Cave Pool Waterflood Project, Township 17 South, Range 29 East, Eddy County, New Mexico. Applicant further seeks an administrative procedure in exception to Rule 701 whereby additional wells in said project could be converted to water injection prior to receiving response from flooding operations.



# CONTINENTAL OIL COMPANY

P. O. BOX 460

HOBBS, NEW MEXICO

November 6, 1964

PRODUCTION DEPARTMENT  
HOBBS DISTRICT  
JACK MARSHALL  
DISTRICT MANAGER  
G. C. JAMIESON  
ASSISTANT DISTRICT MANAGER

1001 NORTH TURNER  
TELEPHONE: EX 3-4141

NOV 9 AM 9 24

*Case 3162*

New Mexico Oil Conservation Commission  
Post Office Box 2088  
Santa Fe, New Mexico

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

Gentlemen:

Re: Application for Amendment  
of Order No. R-2385 -  
Cave Pool Unit

We forward herewith application in triplicate for amendment of Order No. R-2385 for authority to convert two additional injection wells for the expanded Cave Pool Unit. We should appreciate your placing this matter for hearing on the Docket of November 24, 1964.

Yours very truly,

*Jack Marshall*

JM-DFW  
Enc.

cc: RGP GW JWK

DECLINED MAILED  
Date 11-13-64  
*AK*

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE  
STATE OF NEW MEXICO

Nov 9 AM 10

IN THE MATTER OF THE APPLICATION OF  
CONTINENTAL OIL COMPANY FOR AMENDMENT  
OF ORDER NO. R-2385 APPROVING TWO  
ADDITIONAL INJECTION WELLS AND PROVID-  
ING ADMINISTRATIVE PROCEDURES FOR  
APPROVAL OF FUTURE INJECTION WELLS IN  
THE CAVE POOL UNIT, EDDY COUNTY, NEW  
MEXICO

*Case 3/62*

A P P L I C A T I O N

Comes now applicant, Continental Oil Company and respect-  
fully requests the Commission to amend Order No. R-2385, approving  
the addition of two injection wells and providing Administrative  
procedures for the approval of future injection wells in the Cave  
Pool Unit, Eddy County, New Mexico, and in support thereof would  
show:

1. That the Cave Pool Unit was approved by Order No.  
R-2384.
2. That the Commission, by Order No. R-2385, authorized  
the institution of a waterflood project within the boundaries of  
the said Unit.
3. That the Cave Pool Unit has been enlarged in accord-  
ance with the Unit Agreement to include W/2 SW/4 Section 5, and  
SE/4 NE/4 Section 7, T-17S, R-29E, Eddy County, New Mexico.
4. That in order to extend the waterflood project in  
conformance with the original plan of operation, it is necessary  
to convert for injection the following wells:  
  
TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM, EDDY  
COUNTY, NEW MEXICO  
GENERAL AMERICAN OIL COMPANY OF TEXAS  
Green "B" Well No. 7, Unit L, Section 5  
Green "B" Well No. 4, Unit H, Section 7
5. That, in the interest of preventing unnecessary hear-  
ings on future substitutions or additions of injection wells, Admin-  
istrative procedures for approval of such injection wells should be  
established.

DOCKET MAILED

11-13-64  
Date \_\_\_\_\_

*[Signature]*




Application  
Page 2

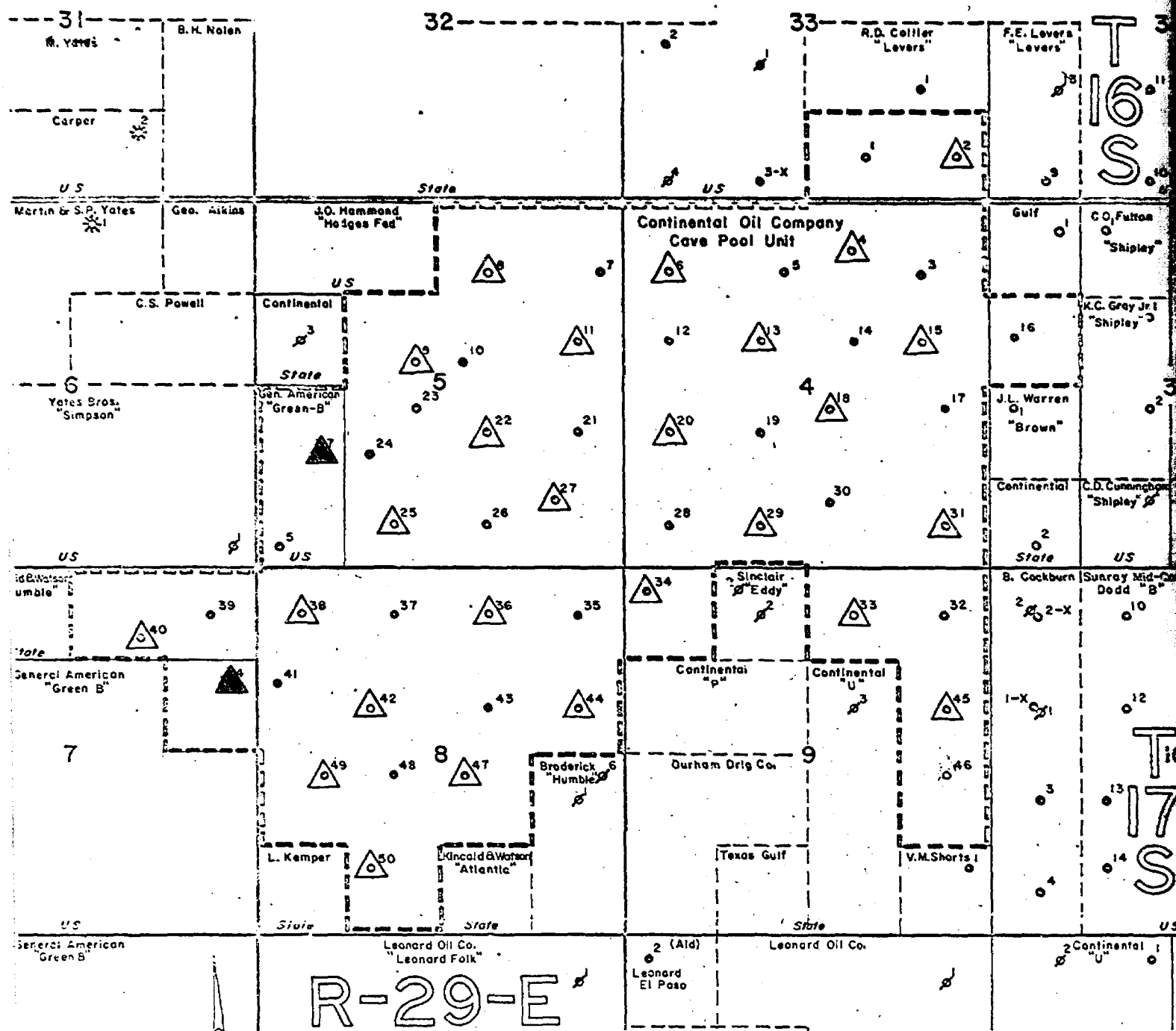
WHEREFORE, applicant respectfully prays that this application be set for hearing before the Commission's duly appointed Examiner and that upon hearing, an order be entered approving the addition of the two injection wells described above and the establishment of Administrative procedures for future changes in injection wells.

Respectfully submitted,

CONTINENTAL OIL COMPANY

  
By: JACK MARSHALL  
District Manager  
of Production  
Hobbs District

JM-DFW



# CONTINENTAL OIL COMPANY

PRODUCTION DEPARTMENT

HOBBS DISTRICT

CAVE POOL UNIT WATERFLOOD

Eddy County, New Mexico



Proposed Water Injection Well



Water Injection Well

--- Cave Pool Unit Boundary

SCALE IN FEET

0 1000 2000

22-3162



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

November 24, 1964

ADDRESS CORRESPONDENCE TO:  
STATE CAPITOL  
SANTA FE, N. M.

*Case 3162*

Mr. A. L. Porter, Jr.  
Secretary-Director  
Oil Conservation Commission  
Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to the application of Continental Oil Company for a waterflood expansion and an administrative procedure in Eddy County, New Mexico, docketed as Case 3162 for hearings before Oil Conservation Commission examiner this date.

This office objects to hearing on this matter for the reason that no copy of the application has been filed with this office as provided by Oil Conservation Commission Rule 701-B-5.

*objection withdrawn at hearing*  
FEI/ma

Very truly yours,

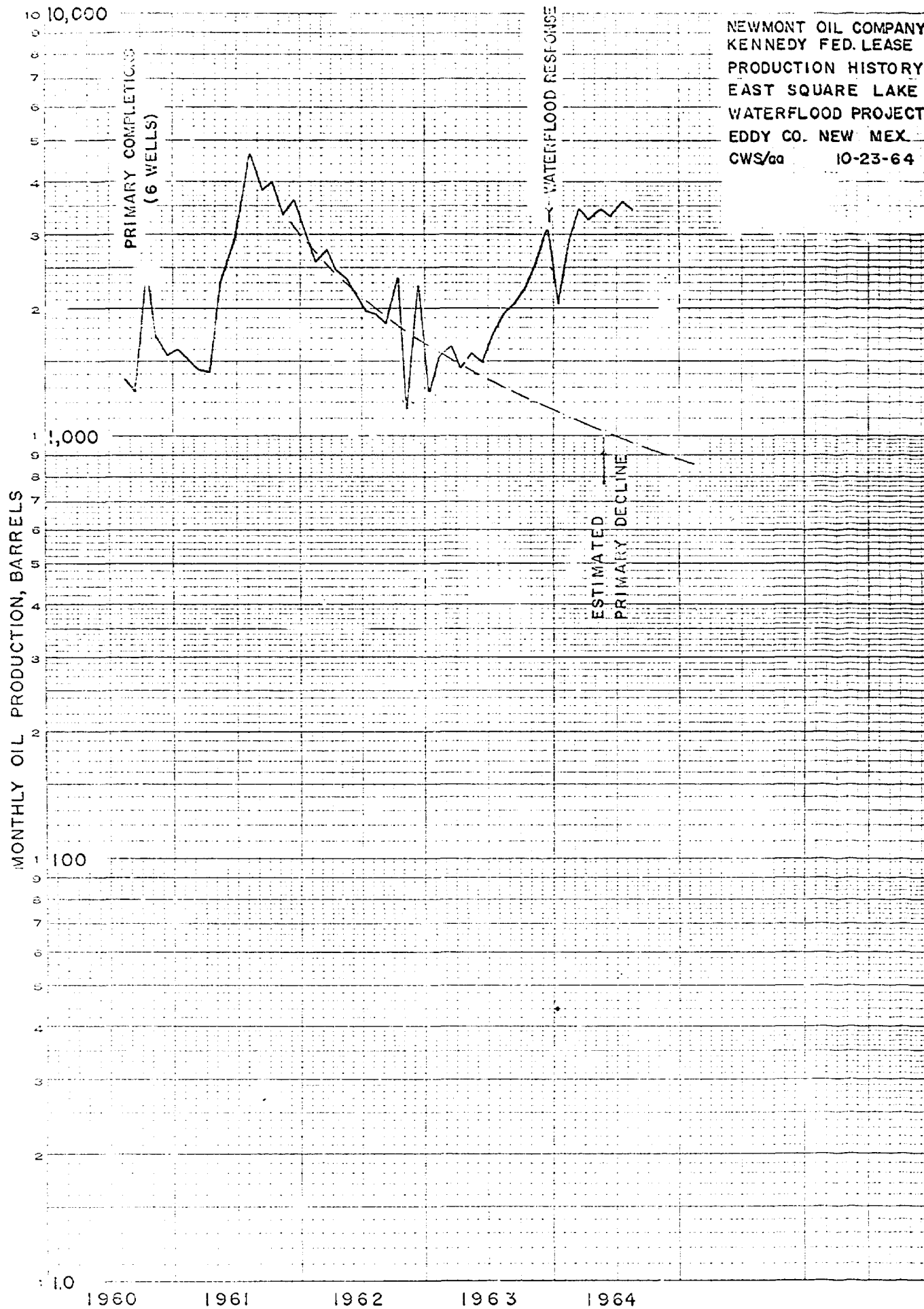
S. E. Reynolds  
State Engineer

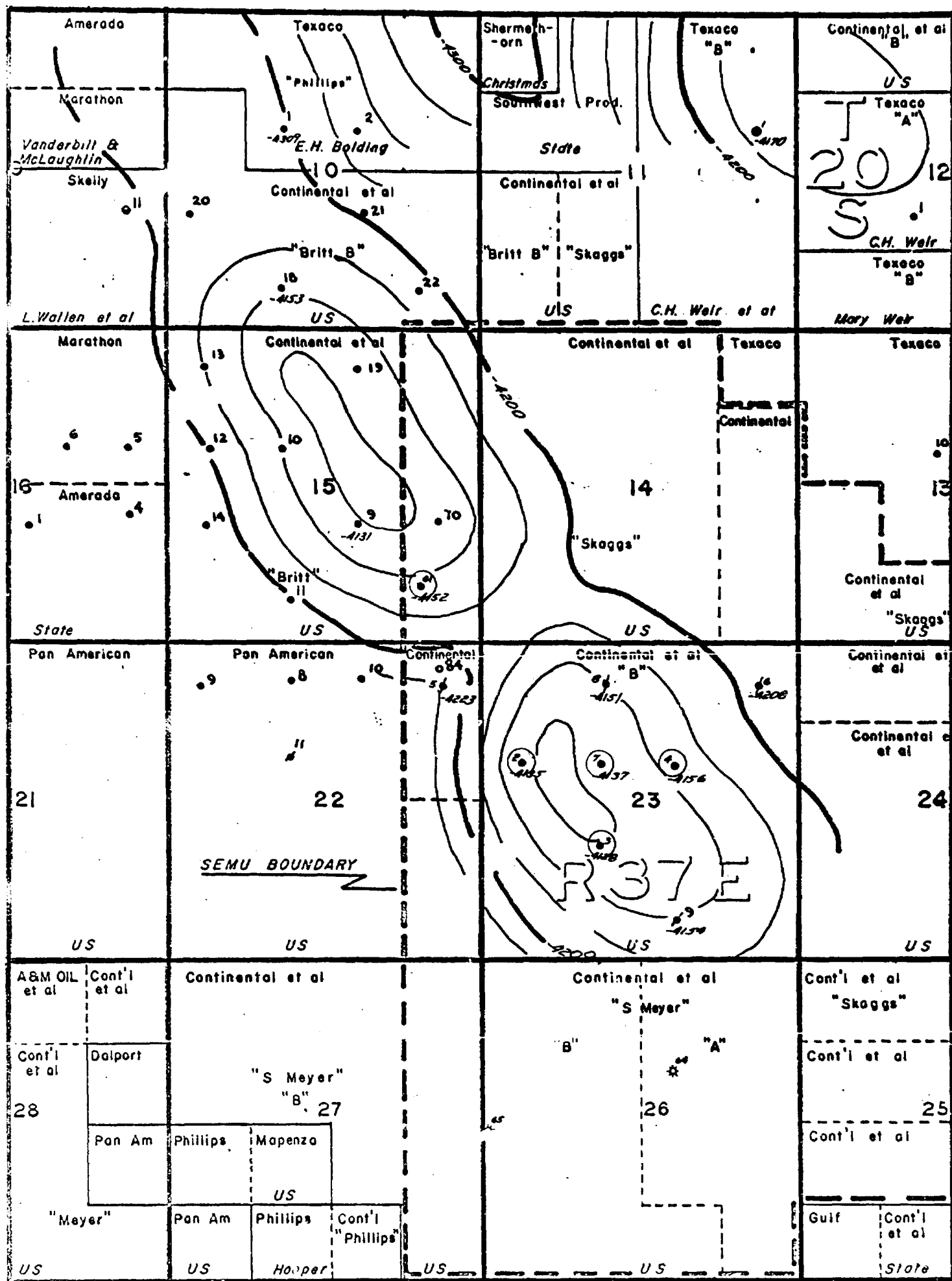
By: *Frank E. Irby*  
Frank E. Irby  
Chief  
Water Rights Div.



EUGENE DUTY/ELN CO.  
PAUL H. S. A.

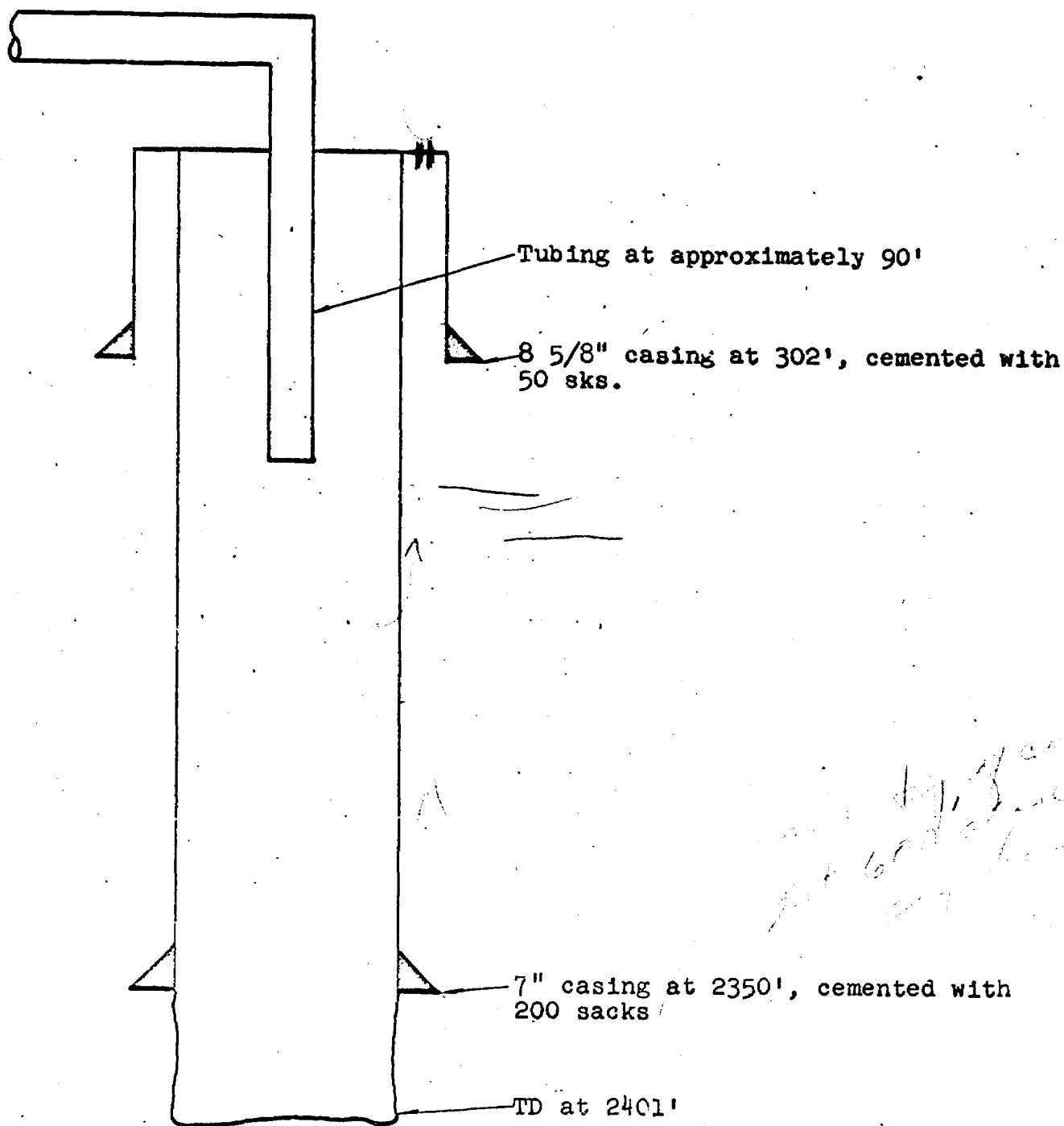
NO. 560-1512 DUTY/ELN GRAPH PAPER  
EUGENE DUTY/ELN CO.  
34 EYELETS X 12 DIVISIONS PER INCH





N  
 CONTINENTAL OIL COMPANY  
 PRODUCTION DEPARTMENT  
 HOBBS DISTRICT  
 CASS PENN. POOL  
 Lea County, New Mexico  
 STRUCTURE MAP CONTOURED ON  
 TOP STRAWN  
 EXHIBIT NO. 2  
 Contour Interval 25'  
 SCALE  
 NCREAGER 10-2-64 0' 1000' 2000'  
 REM

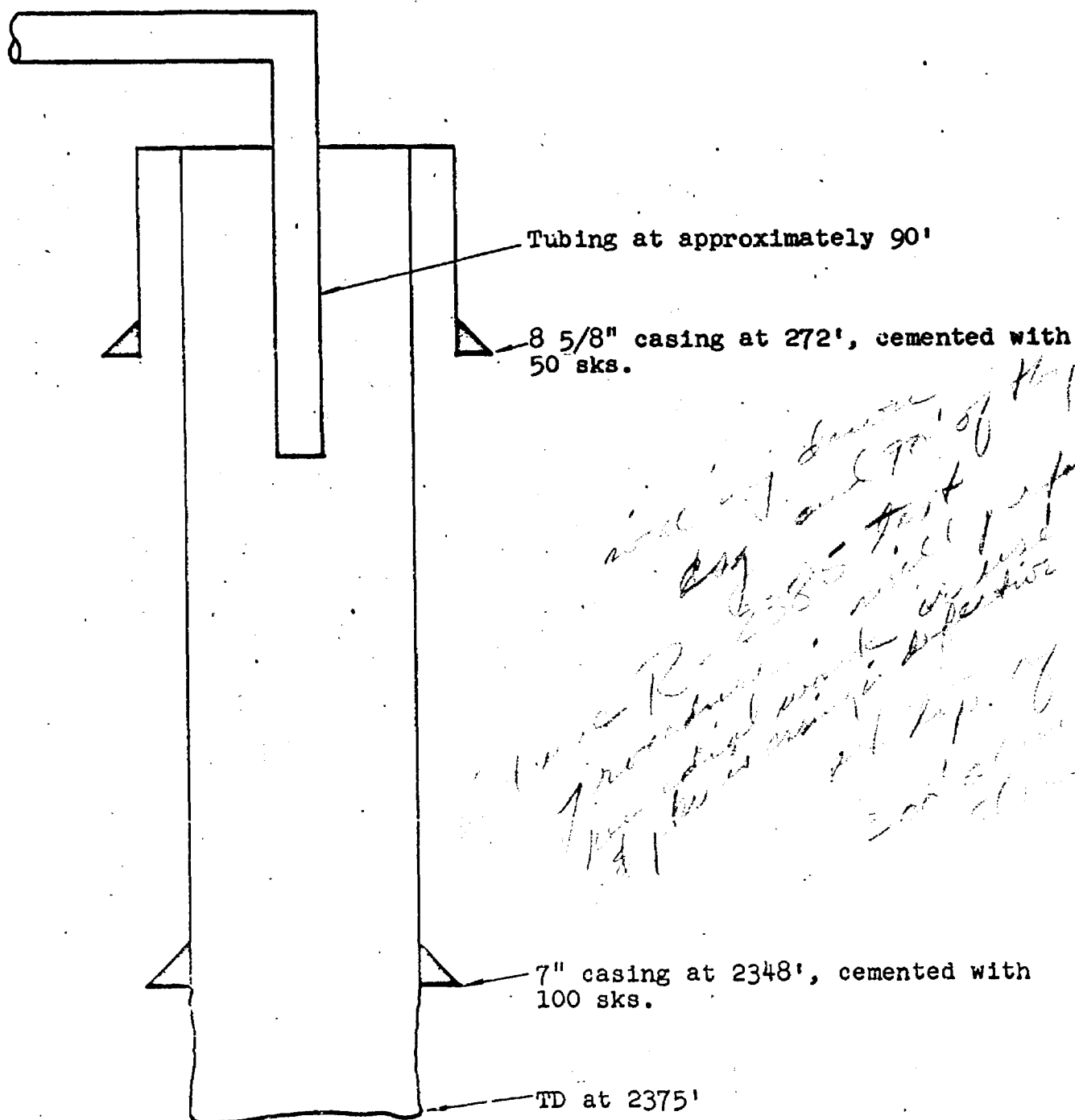
CONTINENTAL OIL COMPANY  
CAVE POOL UNIT WATERFLOOD  
GENERAL AMERICAN OIL CO. OF TEXAS - GREEN "B" NO. 4  
SCHEMATIC DRAWING  
PROPOSED WATER INJECTION WELL



BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 2A  
CASE NO. 3162

Exhibit No. \_\_\_\_\_

CONTINENTAL OIL COMPANY  
CAVE POOL UNIT WATERFLOOD  
GENERAL AMERICAN OIL CO. OF TEXAS - GREEN "B" NO. 7  
SCHEMATIC DRAWING  
PROPOSED WATER INJECTION WELL



BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 213  
CASE NO. 3162

Exhibit No. 1



## WELL DATA PLAT

### WELL NAME & LOCATION

General American Oil Company of Texas  
Green "B" No. 4

1050' FNL, 330' FEL, Sec 7-17-29

TD - 2401' ELEV. 3658' Grd.

### IP DATE 10-18-56 LATEST TEST

|       |      |           |         |
|-------|------|-----------|---------|
| Oil   | P 16 | Date      |         |
| Water | 136  | Oil       | Shut in |
| Gas   | 76   | Water     |         |
| CHK.  |      | Gas       |         |
| TP    |      | Allowable |         |
| CP    |      |           |         |

### CASING RECORD

Size/Depth/No. Sx./C'mt. Top

8 5/8"/302'/ 50/  
7" /2350'/200/

### CUMULATIVE PRODUCTION 9-1-64

8479

### COMPLETION INTERVAL

OH 2350'-2400'

### INITIAL TREATMENT

Natural

### PAST REMEDIAL WORK

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

EXHIBIT NO. 3

CASE NO. 3162

Exhibit No. 3

