

CASE 3333: Application of WM. A.  
AND EDWARD R. HUDSON for a water-  
flood project, Eddy County, N.M.

CASE No.  
3333

Application,  
TRANSCRIPTS,  
SMALL Exhibits  
ETC.

dearnley-meier reporting service, inc.

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

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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
November 23, 1965

EXAMINER

HEARING

IN THE MATTER OF:

Application of William A. and Edward R.  
Hudson for a waterflood project, Eddy  
County, New Mexico. Applicant, in the  
above-styled cause, seeks authority to  
institute a waterflood project in the  
Queen formation through six wells in  
Sections 10, 11, and 15, Township 18  
South, Range 31 East, Shugart Yates-Seven  
Rivers-Queen-Grayburg Pool, Eddy County,  
New Mexico.

Case No. 3333

BEFORE: DANIEL S. NUTTER, Examiner

TRANSCRIPT OF HEARING

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

REGISTER

HEARING DATE NOVEMBER 23, 1965 TIME: 9 A.M.

NAME:	REPRESENTING:	LOCATION:
John J Russell	Felmont	Roswell, N.M.
St. Buell	Seth, Montgomery F & A	Santa Fe
Richard Sava	Shell Oil	Midland, Texas
H.P. York	TEXACO Inc.	Hobbs, N.M.
Ralph L. Gray	Hudson & Hudson	Artesia.
Jason Kellah	Kallah & Fox	Santa Fe
R.J. Trimbles	Atlantic	Roswell
H.M. Lindner	Sinclair	Midland
P.G. Anderson	MON SANTO	MIDLAND
R.G. Wapner	Monanto	Midland
J.E. Spiering	modrall, leyman Spiering et al	Albuquerque
R.W. White	mobile oil Co.	Hobbs, N.M.
J. Blumstein	Huntell, Bondurant + Christy	Roswell, NM
R.C. Sank	Suncor M.O.I.C.	Tulsa, Okla.
R.C. REYNOLDS	FELMONT OIL CORP	MIDLAND TEXAS
J.D. Miller	FELMONT OIL CORP	MIDLAND TEXAS
J.L. White	Mobil Oil Co	Midland Texas

## NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARINGSANTA FE, NEW MEXICOREGISTERHEARING DATE NOVEMBER 23, 1965 TIME: 9 A.M.

NAME:	REPRESENTING:	LOCATION:
L. C. White	W G K + K	S.F.
N. DuBaine	Pet Bysam & Co.	S.F.
John Hastings	Sunway DX	Roswell
GEORGE PEDRAZA	Sunway DY	Roswell

MR. DURRETT: This is an application by William A. and Edward R. Hudson for a waterflood project, Eddy County, New Mexico.

MR. KELLAHIN: Jason Kellahin of Kellahin and Fox of Santa Fe appearing for the applicant. I have one witness I would like to have sworn, please.

(Witness sworn.)

(Whereupon, Applicant's Exhibits 1 through 12 marked for identification.)

R A L P H L. G R A Y, a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Will you state your name, please?

A Ralph L. Gray.

Q What is your profession, Mr. Gray?

A Consulting engineer.

Q In that connection, have you any relationship with William A. and Edward R. Hudson in Case Number 3333?

A Yes, I do. I represent this operator.

Q Are you familiar with the application in Case 3333?

A Yes, sir.

Q Would you state briefly what is proposed in this case?

A The applicant proposes to commence a water injection program in the Shugart Pool. They propose to convert six of

the present producing wells to water injection wells.

Q Now, referring to what has been marked as Exhibit Number 1, will you identify that exhibit and discuss the information shown on it?

A Exhibit 1 has been prepared to show the ownership within a two-mile radius of this proposed plat area. Hudson leases are indicated on this map by the yellow coloring.

Q Now, referring to what has been marked Exhibit Number 2?

A Exhibit Number 2 is a more detailed map of this area. This map shows the proposed water injection wells on both the Hudson properties and also the Marathon properties. This area is to be flooded on a cooperative basis. We are in the process of making an agreement with Marathon for a lease-line operation and Marathon has tentatively agreed to the same spacing pattern.

This map also shows the three injection wells that are proposed on the Marathon property although these three are not actively a part of our application.

Q There is not -- there is no immediate plan to convert those Marathon wells to water injection?

A No, that will be done by Marathon.

Q I see. Now, you also show that Atlantic has an interest in this area. What is the situation as to Atlantic?

A We've also had discussions with Atlantic and it's my understanding that they also have agreed to the the proposed space plan.

Q Now, which of the Hudson wells will you convert to water injection?

A The water injection wells will be Shugart "A", Number 2, Number 3 and Number 5 wells. In Shugart "B", Number 1, 2 and 6 wells.

Q Now, what is the present situation as to those wells? Are they already drilled?

A Oh, yes. These wells have been drilled and have been produced and are essentially produced on to the economic limit.

Q Now, referring to what has been marked Exhibit Number 3, would you identify that exhibit and discuss the information shown on it?

A Exhibit Number 3 is the diagramatic sketch of all six of the proposed injection wells. This diagram shows the location of the 8-5/8" salt string, top of anhydrate, and top of salt, base of salt, top of the red sand, the perforations in the red sand, the depth of the 5½ production string of casing, the amount of cement and the total depth for each proposed injection well.

Q Now, your diagramatic sketch would indicate that you are going to inject through tubing under a packer, is this



correct?

A That's correct.

Q What type of tubing would you use in this completion?

A Well, this would be 2-3/8", so it would be upset tubing.

Q Is that internally coated?

A We propose to have this tubing coated internally before injecting.

MR. NUTTER: That would be plastic coating?

THE WITNESS: Yes.

Q (By Mr. Kellahin) In connection with the cementing program on these wells, are you familiar with a letter written by the office of the State Engineer in connection with these -- this application?

A Yes, sir.

Q In which he stated: "We offer no objection to the granting of the application providing a packer will be placed to the top of the cement surrounding the 5-1/2 inch casing." Will that be the result in this case?

A Yes, it will inasmuch as the cement is circulated to the surface.

Q There would be no problems in cementing?

A No, sir.

Q Now, referring to what has been marked Exhibit 4

through 9, would you identify those exhibits and discuss the information shown on those?

A Exhibits 4 through 9 are portions of the gamma ray neutron logs on each of the proposed injection wells. These logs show the present perforations and the red sand formation, show the top of the red sand and other pertinent information. Each of these wells were originally drilled through the Grayburg Formation.

Two of the wells: Shurgart "A", Number 2, and "A", Number 5, were perforated in the Grayburg zone as well as the red sand.

It's only proposed to flood the red sand formation so we propose to exclude the Grayburg formation by setting a bridge plug just below the red sand perforation.

Q The only formation that you propose to flood is the Queen, is that right?

A That's right.

Q Now, referring to what has been marked as Exhibit Number 10, would you identify that exhibit?

A Exhibit Number 10 is a performance curve showing the monthly oil production on the Shurgart "A" Lease from the beginning until July -- through July of 1965.

Q Now, the line shows the total oil production for both the Grayburg and Queen formation, is that correct?

A Yes. All of these wells were initially completed in the red sand and two wells were opened up in the Grayburg at a later time. The increase in the oil production after the Grayburg was opened up was very small and we consider that there has been a very small amount of production which has actually come from the Grayburg zone.

Q Now, in connection with the Queen formation, and in your opinion, is that formation substantially depleted on this lease?

A Yes, it is.

Q And you have an advanced stripper stage of production?

A That's correct.

Q Now, referring to Exhibit Number 11, does that reflect the same information as to your "B" lease?

A This Exhibit 11 is also an oil production curve for the Shurgart "B" Lease.

Q None of the wells on that lease were opened in the Grayburg?

A That is correct.

Q And does this reflect that the "B" lease is substantially depleted in the Queen formation?

A Yes, sir.

Q And it is at an advanced stripper stage?

A Yes.

Q Now, referring to what has been marked Exhibit Number 12, would you identify that exhibit and discuss it?

A Exhibit Number 12 shows the status of the wells as of September, 1965. All of these wells are pumping except the four wells which have been temporarily abandoned. These four wells are the Shugart "A", Number 1; "A", Number 4; "B", Number 1; and "B", Number 4 wells.

This exhibit also shows the average daily oil production for September, 1965. It should be noted that these wells average between 2.0 and 4.8 barrels per day.

Q And would you consider that a stripper operation?

A Yes, sir.

Q Now, what source of water will you utilize for this water flooding?

A It's proposed to purchase water from Double Eagle Water Company.

Q Is that a fresh water supply?

A Yes.

Q Will you reinject introduced water?

A Well, we can't say at this time.

Q And what volume of water do you propose to inject in the formation?

A We estimate that after the initial settlement that these wells will probably take an average of about 200 barrels

per day per well.

Q Were Exhibits 1 through 12 prepared by you or under your supervision?

A Yes, sir.

MR. KELLAHIN: At this time I would like to offer in evidence Exhibits 1 through 12.

MR. NUTTER: Hudsons' Exhibits 1 through 12 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1 through 12 were offered and admitted into evidence.)

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

MR. NUTTER: Are there any other questions of Mr. Gray?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Gray, do you have any estimate of the secondary recovery that might be obtained from this well, this project?

A Often we use a rough estimate of 1 to 1. The primary oil recovery of Shugart "A" Lease as of October 1st, 1965, 86,663 barrels. On the Shugart "B" Lease, the recovery was 131,724 barrels. This is a rather poor prospect. We rate the prospect and I would say that we'll be lucky to get 1 to 1.

Q Now, you have been negotiating with Marathon. Is it

Marathon's intention as far as you know to ask for a flooding program to put these three wells on injection at some later date?

A Yes, that's our understanding. In discussing this program with Marathon, they advised us that this project will not be set up on their budget until 1966, so they were unable at this time to participate in this particular hearing with us.

Q And as far as this one well of Atlantic's in Section 14 is concerned, you anticipate they will be asking for authority to convert it to injection, also, later?

A Yes, sir, if they have not already also done so. I am not certain about that.

A VOICE: That has already been done.

MR. NUTTER: Where was the voice from?

A VOICE: Right here.

MR. PORTER: Would you --

A VOICE: Richard L. Trimble with Atlantic Refining Company.

MR. NUTTER: Was this the one that was recently authorized by Atlantic?

MR. TRIMBLE: Yes, sir.

MR. NUTTER: You also have an agreement with Maxwell over here further to your east?

MR. TRIMBLE: Yes, and we are injecting water right now.

MR. NUTTER: Has this Number 3 been converted to water injection?

MR. TRIMBLE: Yes, sir.

MR. NUTTER: Thank you.

MR. TRIMBLE: Yes, sir.

Q (By Mr. Nutter) Mr. Gray, do you anticipate putting your six wells on water injection prior to the time that Marathon would put theirs on?

A No. The tentative plans that have been agreed upon with both Hudson and Marathon provide that Hudson will actually build a water flood plant which will service both properties and Hudson will operate the property. So, we anticipate that by the time the plant is actually built and we are ready to inject that by that time Marathon will have had their hearing and they will be ready at the same time.

Q I see. So, in accordance with the line agreement that you are negotiating it will all go on at the same time?

A Yes.

Q Now, is there a difference in ownership between Hudson's Shugart "A" and Shugart "B" Leases?

A No, there's no difference in ownership. There is a little difference on royalties.

Q I see. So, presumably each will be required to stand on its own as far as allowable is concerned? You have a

project allowable for the Shugart "A" Lease and a project allowable for the Shugart "B" Lease --

A Yes.

Q -- because of the variation in nomenclature?

A Yes.

MR. NUTTER: Are there any other questions of Mr. Gray? You may be excused.

Do you have anything further, Mr. Kellahin?

(Counsel nods head.)

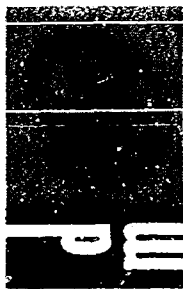
MR. NUTTER: Does anyone else have anything they wish to offer in Case 3333?

MR. DURRETT: I would like to state for the record that the Commission has received the letter of November 19, 1965 from the State Engineer.

MR. NUTTER: Thank you, Mr. Durrett. Is there anything further in this case?

We will take the case under advisement and call Case 3334.

(Whereupon, Case Number 3333 was concluded.)





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I N D E X

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E X H I B I T S

<u>EXHIBIT</u>	<u>MARKED FOR IDENTIFICATION</u>	<u>OFFERED</u>	<u>ADMITTED</u>
App's. 1	2	9	9
App's. 2	2	9	9
App's. 3	2	9	9
App's. 4	2	9	9
App's. 5	2	9	9
App's. 6	2	9	9
App's. 7	2	9	9
App's. 8	2	9	9
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App's. 10	2	9	9
App's. 11	2	9	9
App's. 12	2	9	9

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STATE OF NEW MEXICO )  
 ) ss  
COUNTY OF BERNALILLO )

I, DEAN A. ROBINSON, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission 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 30th day of November, 1965.

Dean A. Robinson  
NOTARY PUBLIC

My Commission Expires:

October 16, 1969.

I do hereby certify that the foregoing is a complete record of the proceedings in the hearing of Case No. 3333, held by me on 11/23, 1965.

James Examiner  
New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO

December 10, 1965

C  
O  
P  
Y

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

Dear Mr. Kellahin:

Reference is made to Commission Order No. R-3002, recently entered in Case No. 3333, approving the Hudson and Hudson Shugart "A" and Shugart "B" Waterflood Projects.

Injection in each of the projects is to be through the three authorized injection wells which shall be equipped with packers and internally plastic-coated tubing.

As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which the Shugart "A" project will be eligible to receive under the provisions of Rule 701-E-3 is 210 barrels per day; the maximum allowable for the Shugart "B" project will be 252 barrels per day.

Please report any error in these calculated maximum allowables immediately, both to the Santa Fe office of the commission and the appropriate district proration office.

In order that the allowable assigned to the projects 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 2088  
SANTA FE, NEW MEXICO

-2-

Mr. Jason Kellahin  
December 10, 1965

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

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

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

P ALP/DSN/ir

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

Y Oil Conservation Commission  
Artesia, 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. 3333  
Order No. R-3002

APPLICATION OF WILLIAM A. AND EDWARD  
R. HUDSON FOR TWO WATERFLOOD PROJECTS,  
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 23, 1965, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 3rd day of December, 1965, 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 applicants, William A. and Edward R. Hudson, seek permission to institute two waterflood projects in the Shugart Pool by the injection of water into the Red Sand of the Queen formation through six injection wells in Sections 10, 11, and 15, Township 18 South, Range 31 East, NMPM, Eddy County, New Mexico.

(3) That the wells in both project areas are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) That the proposed waterflood projects should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That the subject application should be approved and the projects should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

-2-

CASE No. 3333  
Order No. R-3002

IT IS THEREFORE ORDERED:

(1) That the applicants, William A. and Edward R. Hudson, are hereby authorized to institute two waterflood projects in the Shugart Pool by the injection of water into the Red Sand of the Queen formation through the following-described wells in Township 18 South, Range 31 East, NMPM, Eddy County, New Mexico:

Shugart "A" Waterflood Project

Injection wells:

H & H Shugart "A" Well No. 2, Unit K, Section 10  
H & H Shugart "A" Well No. 3, unit G, Section 10  
H & H Shugart "A" Well No. 5, Unit M, Section 10

Shugart "B" Waterflood Project

Injection wells:

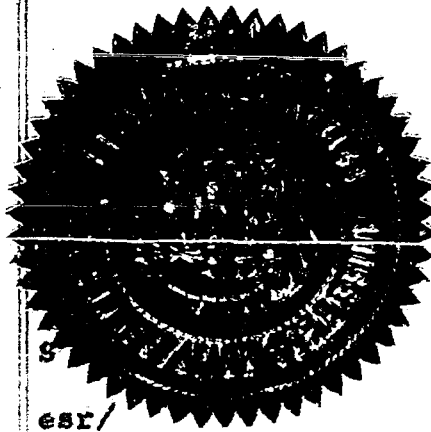
H & H Shugart "B" Well No. 1, Unit M, Section 11  
H & H Shugart "B" Well No. 2, Unit A, Section 15  
H & H Shugart "B" Well No. 6, Unit G, Section 15

(2) That the subject waterflood projects 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 waterflood projects herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(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 herein-above designated.



STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

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

*Guyton B. Hays*  
GUYTON B. HAYS, Member

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

esr/

GOVERNOR  
JACK M. CAMPBELL  
CHAIRMAN

State of New Mexico  
Oil Conservation Commission



LAND COMMISSIONER  
GUYTON B. HAYS  
MEMBER

P. O. BOX 2088  
SANTA FE

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

December 3, 1965

Re: Case No. 3333

Order No. R-3002

Applicant:

William A & Edward R. Hudson

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

Dear Sir:

Enclosed herewith is a copy of the above-referenced Commission order recently entered in the subject case. Letter pertaining to conditions of approval and maximum allowable to follow.

Very truly yours,

A handwritten signature in cursive script, reading "A. L. Porter, Jr.", written in dark ink.

A. L. PORTER, Jr.  
Secretary-Director

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC X

Artesia OCC       

Aztec OCC       

Other Mr. Frank Irby



STATE OF NEW MEXICO  
STATE ENGINEER OFFICE  
SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

November 15, 1965

ADDRESS CORRESPONDENCE TO:  
STATE CAPITOL  
SANTA FE, NEW MEXICO 87501

*Case 3333*

Mr. A. L. Porter, Jr.  
Secretary-Director  
Oil Conservation Comm.  
Santa Fe, N. M.

Dear Mr. Porter:

Reference is made to the application of Wm. A. and  
Edward R. Hudson for approval of a waterflood project  
and converting the following wells to injection service:

Shugart "A" No. 2  
Shugart "A" No. 3  
Shugart "A" No. 5  
Shugart "B" No. 1  
Shugart "B" No. 2  
Shugart "B" No. 6

This office offers no objection to the granting of the  
application provided the packer is set well below the  
top of the cement surrounding the 5½" casing.

FEI/ma

cc-Jason W. Kellahin  
F. H. Hennighausen

Yours truly,

S. E. Reynolds  
State Engineer

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



OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date 11/24/65

CASE 3333

Hearing Date 9am 11/28/65

DSN@ SF

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

Enter an order authorizing Wm. A. Hudson  
& Edw. R. Hudson to institute to institute  
two separate waterflood projects in  
the Shugart Pool as follows

Shugart "A" Waterflood Project

Injection wells:

N&H Shugart "A" Well No 2 Unit K S 10, T 18, R 31E  
" " " " 3 " G " " "  
" " " " 5 " M " " "

Shugart "B" Waterflood Project

Injection wells:

N&H Shugart "B" Well No 1 Unit M, S 11, T 18, R 31E  
" " " " 2 " A, S 15, " "  
" " " " 6 " G " " "

Injection in both projects will  
be into the Red Sand of the  
Queen Formation

  
Staff Engineer

Docket No. 33-65

DOCKET: EXAMINER HEARING - TUESDAY - NOVEMBER 23, 1965

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  
Elvis A. Utz, Alternate Examiner:

CASE 3294 (Continued from the September 22, 1965, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Harold J. Sechler, dba S. & S. Oil Producers, and all other interested parties to show cause why the Bond Well No. 1 located in the SW/4 NE/4 of Section 17, Township 9 North, Range 14 West, Valencia County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 3333: Application of William A. and Edward R. Hudson for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Queen formation through six wells in Sections 10, 11, and 15, Township 18 South, Range 31 East, Shugart Yates-Seven Rivers-Queen-Grayburg Pool, Eddy County, New Mexico.

CASE 3334: Application of Felmont Oil Corporation for an unorthodox location, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Federal 9 Well No. 1 at an unorthodox location 660 feet from the North and East lines of Section 9, Township 8 South, Range 37 East, Bluff-San Andres Gas Pool, Roosevelt County, New Mexico.

CASE 3335: Application of Monsanto Company for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox oil well location 1200 feet from the South line and 660 feet from the West line of Section 32, Township 16 South, Range 33 East, West Kemnitz-Lower Wolfcamp Pool, Lea County, New Mexico.

CASE 3336: Application of Shell Oil Company for special rules for the East Hightower-Upper Pennsylvanian Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the East Hightower-Upper Pennsylvanian Pool in Section 25, Township 12 South, Range 33 East, Lea County, New Mexico, including a provision for 80-acre proration units.

CASE 3337: Application of Shell 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 gas pool for Morrow production in Sections 3 and 4, Township 22 South, Range 34 East, and Section 34, Township 21 South, Range 34 East, Lea County, New Mexico, and the establishment of special pool rules, including a provision for 640-acre spacing units.

November 23, 1965, Examiner Hearing

- CASE 3338: Application of Socony-Mobil Oil Company, Inc. for pool-lease commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Glorieta, Blinberry, Upper-Pennsylvanian, Lower-Pennsylvanian, Devonian, Abo and Wolfcamp production from its State Bridges (Military Institute) Lease in Section 25, Township 17 South, Range 34 East, and from its State Bridges (Common School) Lease in Sections 3, 10 through 15, 22, 23, 24, and 26 and 27, Township 17 South, Range 34 East, Lea County, New Mexico, after separately metering the Military Institute production, allocating production to each lease by means of the subtraction method.
- CASE 3339: Application of Socony-Mobil Oil Company, Inc. for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Denton North Wolfcamp Unit Area comprising 2,640 acres, more or less, of Federal and fee lands in Township 14 South, Range 37 East, Lea County, New Mexico.
- CASE 3340: Application of Socony-Mobil Oil Company, Inc. for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Denton North Wolfcamp Unit by the injection of water into the Wolfcamp formation through twelve wells located in Sections 25, 26, 27, 34, 35, and 36, Township 14 South, Range 37 East, Lea County, New Mexico.
- CASE 3341: Application of Tenneco Oil Company for an administrative procedure, San Juan and Rio Arriba Counties, New Mexico. Applicant, in the above-styled cause, seeks the establishment of an administrative procedure whereby wells presently completed in the Blanco-Mesaverde Pool could, without notice and hearing, be recompleted in the Blanco-Mesaverde and/or Basin-Dakota Gas Pools by means of setting a whipstock above the Mesaverde producing interval and directionally drilling around the old interval of completion which was originally shot. Operators utilizing such administrative procedure would be required to conduct appropriate deviation tests to ensure that no well would be completed nearer than 200 feet to the outer boundary of its proration unit.
- CASE 3342: Application of Sunray DX Oil Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Grayburg-Jackson Pool, Eddy County, New Mexico, by the injection of water into the Keeley zone of the San Andres formation through four wells in Sections 22 and 23, Township 17 South, Range 29 East.
- CASE 3343: Application of Sunray DX Oil Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Grayburg-Jackson Pool, Eddy County, New Mexico, by the injection of water into the Metex zone of the Grayburg formation through four injection wells in Sections 14 and 15, Township 17 South, Range 29 East.

November 23, 1965, Examiner Hearing

CASE 3344: Application of Texaco Inc. for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the West Vacuum Unit Area comprising 2000 acres, more or less, of State land in Township 17 South, Range 37 East, Lea County, New Mexico.

CASE 3345: Application of Texaco Inc. for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its West Vacuum Unit by the injection of water into the Grayburg-San Andres formations through six injection wells located in Sections 3 and 4, Township 18 South, Range 34 East, and Sections 33 and 34, Township 17 South, Range 34 East, Vacuum Pool, Lea County, New Mexico.

CASE 3346: Application of Sinclair Oil & Gas Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Maljamar Pool by the injection of water into the Grayburg-San Andres formations through eight wells in Section 24, Township 17 South, Range 32 East, Lea County, New Mexico.

JASON W. KELLAHIN  
ROBERT E. FOX

KELLAHIN AND FOX  
ATTORNEYS AT LAW  
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SANTA FE, NEW MEXICO 87501

TELEPHONE 982-4315  
AREA CODE 505

October 28, 1965

*Case 3333*

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

Gentlemen:

Enclosed is an application seeking approval of the William  
A. and Edward R. Hudson water flood project on their Shugart  
"A" and "B" leases, Eddy County, New Mexico.

Please set this matter for hearing at the nearest available  
date.

Yours very truly,

KELLAHIN & FOX

*Jason W. Kellahin*

Jason W. Kellahin

JWK:crg

Enclosure

DOCKET MAILED

Date 11-10-65

BEFORE THE  
OIL CONSERVATION COMMISSION  
OF NEW MEXICO

IN THE MATTER OF THE APPLICATION  
OF WILLIAM A. AND EDWARD R. HUDSON  
FOR APPROVAL OF A WATER FLOOD PROJECT,  
EDDY COUNTY, NEW MEXICO

A P P L I C A T I O N

Come now William A. and Edward R. Hudson and apply to the  
Oil Conservation Commission of New Mexico for approval of a water  
flood project on their Shugart "A" and "B" leases in the Shugart  
Yates-Seven Rivers-Queen-Grayburg Pool, Eddy County, New Mexico,  
and in support thereof would show:

1. Applicant proposes to convert the following producing  
wells to water injection wells:

WELL	LOCATION
Shugart "A" #2	NE/SW Sec. 10-18S-31E
Shugart "A" #3	SW/NE Sec. 10-18S-31E
Shugart "A" #5	SW/SW Sec. 10-18S-31E
Shugart "B" #1	SW/SW Sec. 11-18S-31E
Shugart "B" #2	NE/NE Sec. 15-18S-31E
Shugart "B" #6	SW/NE Sec. 15-18S-31E

2. Applicant proposes initially to inject water into the  
Red Sand (Queen) formation by injection down 2 3/8" internally  
coated tubing, below a packer. Packer will be set just above  
the Red Sand, found at a depth of approximately 3300'.

3. Water source will be by purchase from Double Eagle Water  
Company from their system, which is predominately Ogallala water.

4. Applicant proposes to inject, after fill up, approximately  
200 barrels of water per well per day.

5. There is attached hereto and made a part hereof, a plat  
showing applicant's Shugart "A" and "B" leases, offsetting leases  
and offsetting wells, and proposed injection wells, circled in red.

6. There is attached hereto and made a part hereof a diagrammatic sketch showing the proposed injection well completion, together with information on the proposed injection wells, showing casing and cementing program, formation tops, and location of perforations.

7. The proposed water flood project is in the interests of conservation, will result in the recovery of oil that would not otherwise be recovered, and will result in the prevention of waste. The correlative rights of applicant and offset owners will be protected.

8. In accordance with the rules of the Commission, a copy of this application has been filed with the office of the State Engineer.

WHEREFORE applicant prays that this application be set for hearing before the Commission's duly appointed examiner, and that after notice and hearing the Commission enter its order approving the application.

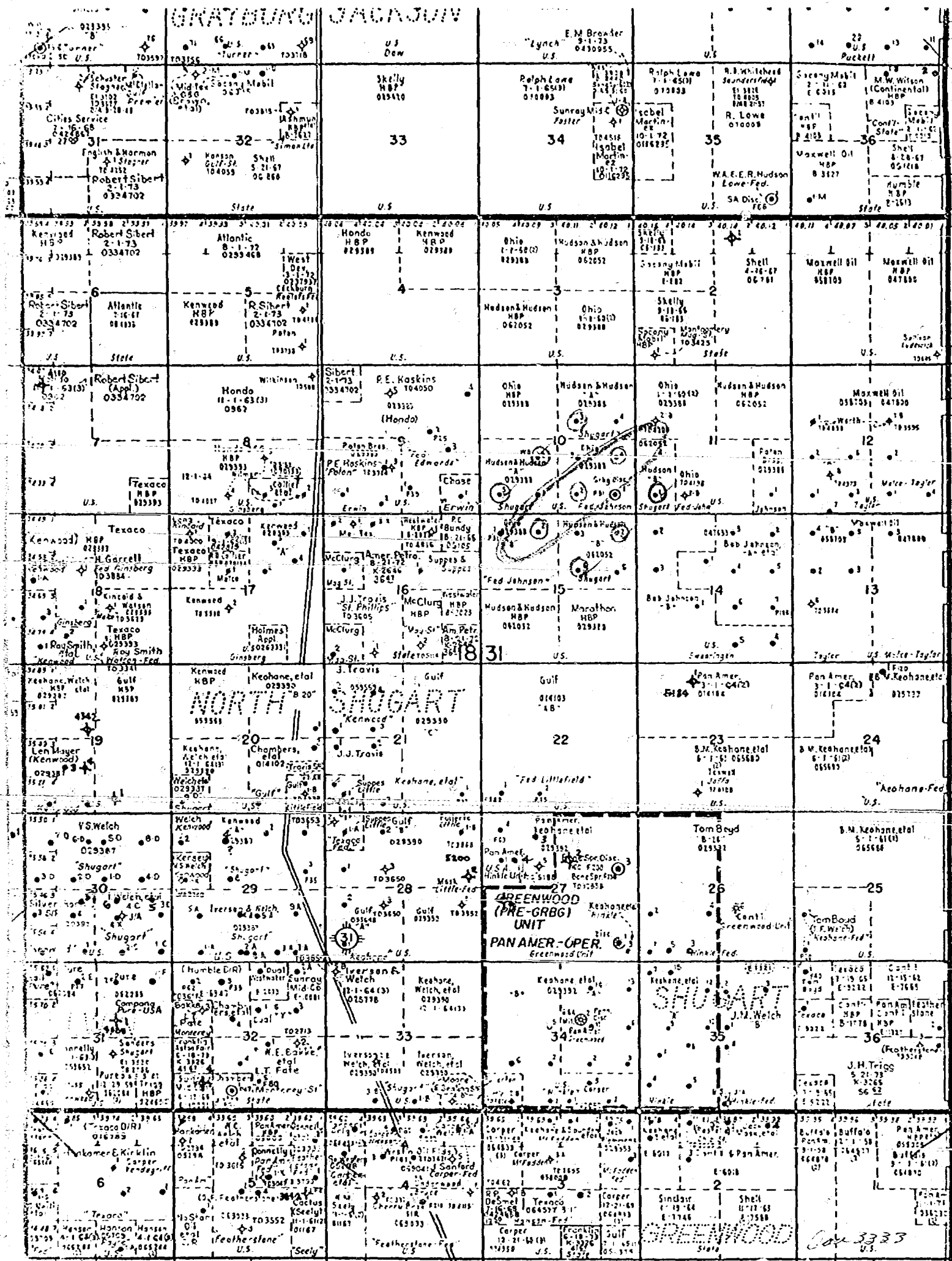
Respectfully submitted,

WILLIAM A. and EDWARD R. HUDSON

By Jason W. Kellahin

KELLAHIN & FOX  
P. O. Box 1769  
Santa Fe, New Mexico

Attorneys for Applicant



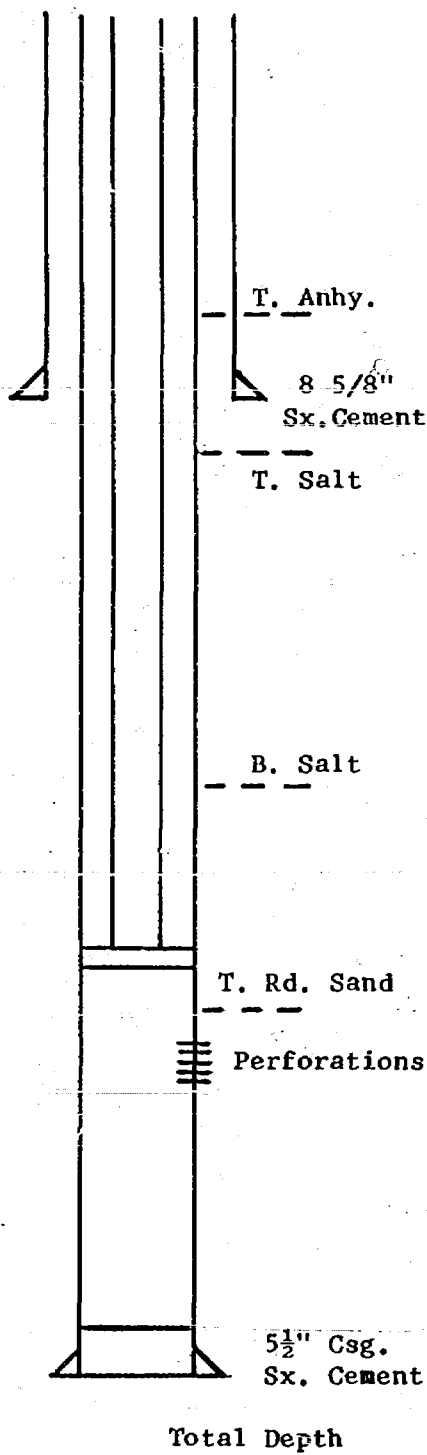
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WILLIAM A. & EDWARD R. HUDSON

PROPOSED INJECTION WELLS

SKETCH



SHUGART "A"			SHUGART "B"		
2	3	5	1	2	6
T. Anhy. 690	718	655	780	725	694
8 5/8" Sx. Cement 732	744	756	796	760	755
200	200	200	200	200	200
T. Salt 820	764	860	870	830	758
B. Salt 1945	1947	1916	2030	1985	2065
T. Rd. Sand 3288	3286	3262	3342	3335	3332
Perforations 3307-27	3316-31	3288-3301	3364-78	3362-76	3365-79
5 1/2" Csg. 4043	4029	4039	4130	4120	4160
Sx. Cement 1200	1200	1200	1200	1200	1200
Total Depth 4056	4040	4048	4131	4120	4161

RALPH L. GRAY  
PETROLEUM ENGINEERING

*Case 3333*

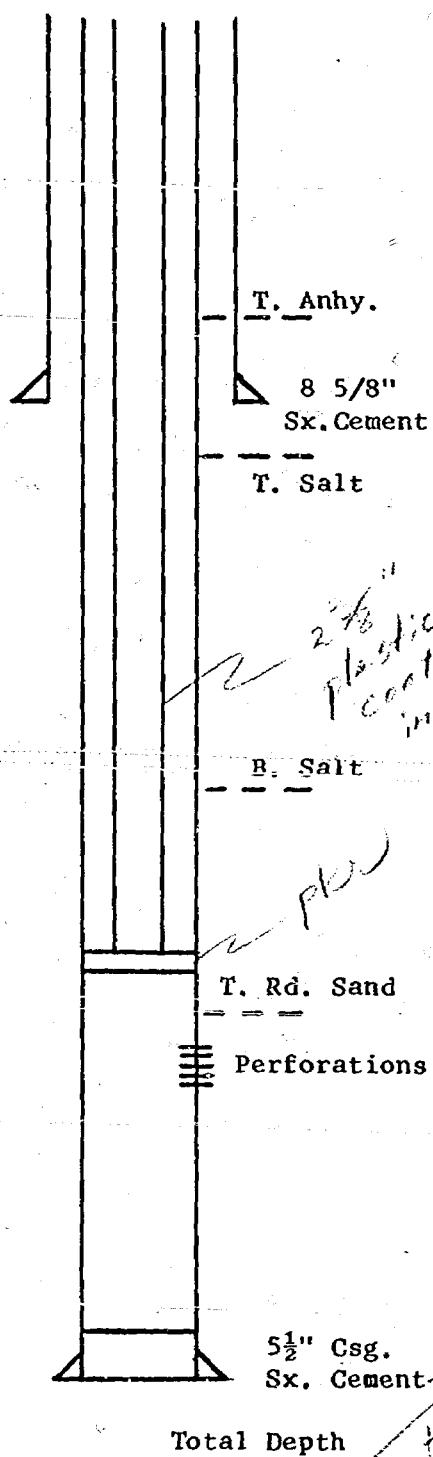




WILLIAM A. & EDWARD R. HUDSON

PROPOSED INJECTION WELLS

SKETCH



SHUGART "A"			SHUGART "B"		
2	3	5	1	2	6
T. Anhy. 680	718	655	780	725	694
8 5/8" Sx. Cement 732 200	744 200	756 200	796 200	760 200	755 200
T. Salt 820	764	860	870	830	758
B. Salt 1945	1947	1916	2030	1985	2065
T. Rd. Sand 3288	3286	3262	3342	3335	3332
Perforations 3307-27	3316-31	3288-3301	3364-78	3362-76	3365-79
5 1/2" Csg. Sx. Cement 4043 1200	4029 1200	4039 1200	4130 1200	4120 1200	4160 1200
Total Depth 4056	4040	4048	4131	4120	4161

*2 1/2" plastic coated internally*

*PKW*

*H & H Ex 2*

WILLIAM A. & EDWARD R. HUDSON  
STATUS OF WELLS - SEPTEMBER 1965

<u>WELL</u>	<u>PRODUCING STATUS</u>	<u>DAILY OIL PROD. SEPT. 1965</u>
Shugart "A" #1	T. A.	- -
Shugart "A" #2	Pumping	4.8 bbls.
Shugart "A" #3	Pumping	2.0 bbls.
Shugart "A" #4	T. A.	- -
Shugart "A" #5	Pumping	4.0 bbls.
Shugart "B" #1	T. A.	- -
Shugart "B" #2	Pumping	3.0 bbls.
Shugart "B" #3	Pumping	3.0 bbls.
Shugart "B" #4	T. A.	- -
Shugart "B" #5	Pumping	3.0 bbls.
Shugart "B" #6	Pumping	3.0 bbls.

CUMULATIVE OIL RECOVERY  
AS OF OCT. 1, 1965

Shugart "A" Lease - - - - -	86,663 bbls.
Shugart "B" Lease - - - - -	131,724 bbls.

*Handwritten:*  
 H 14 5 12  
 87200