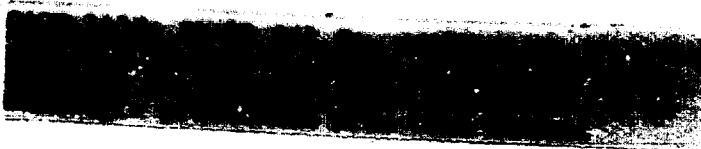


Case No.

1418

Application, Transcript,  
Small Exhibits, Etc.



Spec. Lt. J.  
transmitted

EXAMINER HEARING  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
April 9, 1958

IN THE MATTER OF: Case No. 1418

TRANSCRIPT OF PROCEEDINGS

DEARNLEY - MEIER & ASSOCIATES  
INCORPORATED  
GENERAL LAW REPORTERS  
ALBUQUERQUE, NEW MEXICO  
3-6691 5-9546

IN THE MATTER OF:

Application of Shell Oil Company for an exception to Rule 309 of the Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order authorizing the transportation, prior to measurement, of oil produced on its E. W. Mudge No. 4 Lease, comprising All of Sections 21, 28, 33, and 34, to its L. M. Phillips No. 2 Lease, comprising the S/2, NE/4, and Lots 1 and 2 of Section 4, N/2 Section 9, SW/4 and E/2 Section 10, All Section 15, N/2 and SE/4 Section 22, and W/2 Section 27, all in Township 25 North, Range 12 West, San Juan County, New Mexico. Applicant further seeks authority to commingle the Production from each of said leases after separately measuring said production by means of positive displacement meters.

Case 1418

BEFORE: Elvis A. Utz, Examiner

## TRANSCRIPT OF PROCEEDINGS

MR. UTZ: The next case on the docket will be Case 1418.

MR. PAYNE: Case 1418: Application of Shell Oil Company  
for an exception to Rule 309 of the Commission Rules and Regulations.

MR. SETH: We have two witnesses, please.

MR. KELLY: I would like to know what the procedure is going to be according to the docket from now on. What case will be heard next?

MR. UTZ: We had a request, due to previous engagements of the attorneys in Cases 1413 and 1418 and the Cities Service case

which I postponed this morning until after lunch, Case 1356; as soon as those cases are heard, we'll come back to 1412 and proceed from there. Are you in a hurry to get away?

MR. KELLY: No, I had some other things I could be doing.

MR. UTZ: You may proceed with swearing the witnesses, please.

(Witnesses sworn.)

DONALD JACOBSEN

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

By MR. SETH:

Q Will you state your name, please, and your position?

A My name is Donald Jacobsen, division mechanical engineer, Shell Oil Company, Farmington Division.

Q Have you testified before the Commission at a previous hearing?

A No, I have not.

Q Would you give us a little background on your educational qualifications, your experience?

A I received a Bachelor of Science in Mechanical Engineering from the University of California. I have been employed by Shell approximately ten years, during which time I have been engaged in drilling, production, and field facility operations. Currently I'm the division landman in Farmington, and have been for three years;

previously I was in California.

Q Are you familiar with the application in this Case 1418?

A Yes.

Q Are you familiar with the mechanical system in the Bisti Field of which this is a part?

A Yes, these facilities were constructed under my supervision.

MR. SETH: May he testify as an expert?

MR. UTZ: His qualifications are acceptable.

Q Have you prepared a plat or map showing the proposed facilities?

A Yes, I have.

Q Will you tell us what this plat shows?

A This is a plat showing the two contiguous leases, the E. W. Mudge No. 4 Lease, and the L. M. Phillips No. 2 Lease. The Mudge Lease consists of all of Sections 21, 28, 33, and 34, in Township 25 North, Range 12 West, San Juan County, New Mexico.

The L. M. Phillips No. 2 Lease consists of Lots 1 and 2, the South Half, the Northeast Quarter of Section 4, the North one-half of Section 9, the Southwest one-quarter and East one-half of Section 10, All of Section 15, the North one-half and the Southeast one-quarter of Section 22, and the West one-half of Section 27.

Q Now referring to the application, would you state briefly what the proposal is with reference to Exhibit No. 1?

A We propose to transport the oil from a lone single well

on the E. W. Mudge 4 Lease to an existing point of shipment to the Four Corners Pipe Line through the means of a 4,000 foot 2-inch surface laid line. At the existing station we will install separate metering facilities and gas separating facilities for this one well, which is Government 41-21, and we'll commingle that with the production from the L. M. Phillips Lease and ship it to the Four Corners Pipe Line through our existing ACT installation.

Q Are both these leases Federal leases?

A That's right.

Q Are the royalties the same?

A To my knowledge, I have been informed they are the same.

Q What are you doing with the oil from the Mudge Lease well at the present time?

A We are presently trucking the oil to our Carson Unit Central Plant, and there we are shipping it to the Four Corners Pipe Line Company. We have a portable temporary 250-barrel tank located at the site of Government 41-21.

Q Has the Automatic Custody Transfer arrangement system been previously approved by the Commission?

A That is correct. It will be the same system approved by the Commission in the July hearing.

Q Is this an extension of the same manner of handling the oil, that is, by a closed system?

A That is correct. It will be very similar to the system we will employ for our non-participating wells going into the partici-

pating area in the Carson Unit.

Q How does it differ from that system?

A Well, the only difference is we are coming off two separate leases, rather than being from the participating to the non-

participating of this certain unit.

MR. COOLEY: Would you repeat the answer?

A In this case we have two separate leases, the E. W. Mudge 4, and the L. M. Phillips 2. This is different from the non-

participating and participating area of the Carson Unit.

Q Now in the proposed system --

A Do you want me to explain a little further?

MR. COOLEY: We can ask him on cross examination. I don't understand what he means by the latter statement.

Q This proposed system, the oil will be taken from Mudge lease and it will be metered off the lease, is that correct?

A That is right.

Q How does that compare with the proposal that was made in Case No. 1275 with reference to non-participating wells?

A Well, the 1275 Case, we took oil from outside the participating area and we took it into facilities which existed inside the participating area of the Carson Unit, whereas here we have two definite distinct leases involved. The other was somewhat hypothetical because it was formed by the area boundary line.

Q How many wells on the Mudge Lease?

A Just the 41-21, and we anticipate no drilling in the near



future.

Q Have you prepared a diagram showing the proposed location of the facilities?

A Yes.

Q Referring to what has been marked as Exhibit No. 2, would you state, please, what that shows?

A It shows the existing form of our central plant on our L. M. Phillips Lease with just the essential portions there. There are more facilities, but we left them out so it wouldn't be crowded on the drawing. In the dotted lines it shows the proposed system where we will bring the 2-inch flow line from the Mudge, and we will go through a testing station that will consist of a regulator, gas meter, separator, and sampler; and then this flow of oil will then go to the downstream side of the existing station at No. 15 L. M. Phillips. It will then go to the surge tanks, and if necessary to the heater treater, and then to the Automatic Custody Transfer installation to the Four Corners Pipe Line.

Q Under this proposal as shown on Exhibit 2, are there separate testing and metering facilities for the Mudge well?

A Yes, we will put in a distinctly independent separate metering station which Mr. Kempton will describe in further detail.

Q The difference being, and the exception is asked for the reason that these facilities, although separate, will be located on the Phillips Lease?

A Yes.

Q Adjacent to the existing facilities?

A Yes, that is correct, the reason being we will have an existing plant and we will therefore have a common place where the man can observe it. We have an existing connection to the Four Corners Pipe Line Company, and when we do make arrangements to sell the gas, we will have an existing point to sell the gas, rather than have both these companies extend their systems down to this one well.

Q Is there anything further you would like to mention?

A No, I think we should mention the United States Geological Survey.

Q I mean as to the mechanical system, is there anything further on that that you would like to state?

A No.

Q You mentioned, I believe, both these were Federal leases. Have you made application, or requested the United States Geological Survey to consider this proposal?

A Yes, we have made application and received their approval for the system.

Q Referring to what have been marked as Exhibits 3 and 4, state what those are.

A No. 3 is the letter to the United States Geological Survey in Roswell, in which we briefly describe the system I described here, asking their permission; and their return letter of March 3rd in which they grant this permission to meter and ship as indicated.

Q In your opinion will the use of this closed system as distinct from lease tanks and the trucking transfers, will it result in a conservation of oil and gas?

A Yes, sir.

MR. SETH: I believe that's all the direct we have.

MR. UTZ: Any questions of the witness? Mr. Nutter.

CROSS EXAMINATION

By MR. NUTTER:

Q Mr. Jacobsen, has the system which was authorized by the Commission last July for the Phillips No. 2 Lease been installed?

A The test station and the Automatic Custody Transfer have been. The test stations have been in operation, due to the use of them in line fill. The ACT have not because we have not shipped on a continuous basis.

Q You are using the test station but transferring the custody of the oil by means of tank, to date?

A That's right. We anticipate in the very near future to start full-scale operations to the Four Corners line, at which time we will use the ACT units.

Q You say the royalty ownership under the Mudge is the same as under the Phillips?

A That is correct.

Q For all practical purposes, could these be considered one lease, if Shell had so desired?

A That's right.

MR. NUTTER: I believe that's all.

By MR. UTZ:

Q Did that last statement include overriding royalties, too?

A The way I understand it is Federal leases with the cross filing of the overriding royalties.

Q So the overriding royalties are the same?

A Yes.

Q Do you anticipate drilling more wells on the Mudge 4 Lease?

A We at this present time do not; however, if we were to drill more wells, then it would enter into an economic problem as to how many wells we would need to have the Four Corners line extended down to the Mudge property.

Q All you are asking for is authorization to transport oil from one well to the Phillips Lease?

A That's right.

Q Is this Mudge 4 Well a flowing well?

A No, it is not. It has a pumping unit driven by a gas engine on it.

MR. UTZ: Any other questions?

By MR. NUTTER:

Q Is the Mudge Lease essentially completed as far as development is concerned?

A At this time I am not in a position to say it is. I don't think it is. I hope we have more production, but the well is a very small producer. It will be some time before we extend our

development on that property.

MR. UTZ: Any other questions?

By MR. COOLEY:

Q Mr. Jacobsen, will another witness testify as to the mechanics of the proposed installation?

A The details of the test station, yes, sir.

MR. COOLEY: I have no questions.

MR. UTZ: Does anyone else have a question of the witness? If not, the witness may be excused.

(Witness excused.)

MR. SETH: We would like to offer Exhibits 1 through 4, if the Commission please.

MR. UTZ: Is there objection to the entrance of Exhibits 1 through 4 in this case? If not, they will be accepted.

MR. SETH: I call Mr. Kempton.

LARRY C. KEMPTON

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

By MR. SETH:

Q Will you state your name and position, please?

A Larry C. Kempton, mechanical engineer with Shell Oil Company.

Q Have you testified before the Commission --

A No, I have not.

Q -- in previous hearings? Tell us your formal education

and your experience, please.

Q I received a Bachelor of Science degree from the University of Arizona in June of 1953, and since that time have been mechanical engineer with Shell Oil Company; and the last five years that I have been with Shell, most of the time has been with field facility equipment similar to this case.

Q Have you had practical experience with similar facilities in California and elsewhere?

A Yes, I have.

Q What are your duties at the present time?

A Field facilities engineer for the Farmington Division, designing the facilities and equipment similar to this proposed here.

Q Have you participated in the design of this equipment?

A Yes, I did.

Q And the preparation of diagrams?

A Yes.

Q Are you generally familiar with the application in this case?

A Yes, I am.

MR. SETH: May he testify as an expert?

MR. UTZ: His qualifications are acceptable.

Q Have you prepared a drawing showing the facilities proposed to be installed?

A Yes, sir, I have.

Q I hand you what has been marked for identification as

Exhibit 5, and would you please state what that shows?

A This drawing shows the test facilities which will serve the Mudge 4 Well and which will be physically located at the L. M. Phillips ~~Central~~ plant.

Q Exhibit 5, the facilities thereon relate only to the Mudge wells?

A This is separate facilities to serve only the Mudge 4 Well.

Q Would you describe briefly the flow?

A Well, on the flow diagram, the oil comes in the 2-inch flow line from the well directly into the spherical separator.

Q You are referring to the drawing in the upper left-hand corner?

A The upper left-hand corner. The oil comes into the spherical separator, the oil comes out of the separator into the automatic sampler; the automatic sampler that will be used, it is intended that this sampler will be an electrically operated MacFarland sampler piston and sample container. Then the oil comes into an A.O. Smith Model APM tube piston-type oil meter and on down the 2-inch line, and then is commingled with the oil from the test stations on the L. M. Phillips Lease.

Q Is this type of meter, is that one customarily used in an installation of this character?

A Yes. This is the meter that Smith makes for oil rates up to approximately 750 barrels per day, which will be well within the range of this well.

Q Is that the same manufacturer of meters that you were using and propose to use on the rest of the system?

A Yes, the custody transfer meters are larger size Smith meters.

Q Now, the sampling device and method, is that one that is customarily used in this type of facility?

A We propose to use the same sampling device that we will use on our automatic custody transfer installations.

Q Will you run through the gas flow, briefly?

A The gas comes from the top of the separator through a positive displacement gas meter and then the pressure is held on the separator by a back pressure regulator, and the gas flows into a common line with the gas from the L. M. Phillips 2 Lease.

Q Is this the type of separator that's in regular use at the present time?

A Yes, this is the common separator that we are using on all of our test station facilities. The gas meter is the positive displacement type. There are four compartments and two diaphragms in the meter, so that the four chambers are alternately filled and exhausted, giving a positive displacement and positive metering. It also has a pressure compensating device so that it reads directly in standard cubic feet.

Q Are these facilities over-all, then they are similar to those installed in the Bisti under Case 1275, is that right?

A The major components are the same as we will have for our



test facilities on our test stations, so that in addition to being useful here, if we do drill more wells on the Mudge 4 Lease at a later date and decide to expand the facilities for that lease, this equipment will be salvageable for use on that test station.

Q Is there anything further on that Exhibit 5 that you would like to mention?

A Well, we have meter prover connections so we can use a volumetric type prover tank similar to the one that is to be used on the custody transfer meters.

Q What about calibration of the meters, how frequently do you recommend that be done?

A Initially we plan to calibrate the meters once per month and then I think our experience can determine whether that is frequent enough or too frequent, after we got a few months experience.

Q Is there anything further on that exhibit you want to discuss?

A Let's see, about the only other thing, both the oil and gas meter have a direct reading counter installed on the meters themselves so that the pumper can read the production whenever he is there.

Q Are you familiar with the topography in this general area?

A Yes.

Q Describe it briefly, what it is, between this facility and Mudge No. 4.

A The topography between L. M. Phillips and the Government

41-21 Well on the Mudge 4 Lease is flat right through that particular area.

Q The proposed flow line is some 4,000 feet in length?

A Approximately 4,000.

Q Is that, would you say, an excessive length or average length?

A Longer than the average that we have in the Bisti Field, but we have several that would be longer. I don't think it is excessive.

Q Do you anticipate any mechanical problems in connection with the flow line or the metering facilities?

A No, I do not.

Q You have an additional diagram?

A Yes, I have one more diagram, which shows a detail of the gas meter.

Q Now, referring to what has been marked as Exhibit 6, would you describe what that shows, please?

A Well, referring to the drawing, in the lower left-hand corner it shows the gas flow coming from the top of the separator for the Mudge 4 Well through the positive displacement gas meter and on out the other side; on top is shown the Hemm corrector, which gives pressure compensated reading and also shows the counter, showing mcf per day, or just mcf going through the meter. The detail in the lower right-hand corner shows the automatic condensate traps which will automatically bleed any condensate from the meter.

so that we don't get inaccuracy due to condensate building up in the gas meter.

Q Does this show the direct reading feature of the meter on this diagram?

A Yes, it does.

Q Is there anything further on Exhibit 6 that you want to mention?

A I don't believe so.

Q Is there anything further in connection with the system as a whole you would like to explain?

A No, I don't believe there is anything else.

MR. UTZ: Any questions of the witness? Mr. Nutter.

CROSS EXAMINATION

By MR. NUTTER:

Q I note that this meter is called an A. O. Smith oil meter and sampler. How does this device sample the oil?

A The sampler that we intend to use is not mechanically connected to the meter. We will use a three-way cellunoid valve, which will be weighted by an impulse transmitter on the meter itself so that every barrel, approximately every barrel we will get an impulse to the three-way cellunoid, which will let a sample of oil be drawn from the line into the MacFarland piston, and then when the cellunoid is de-energized, the oil will be vented from the sampler piston into the sampler container by use of the three-way cellunoid valve.

Q You say a sample is taken for each barrel?

A On the custody transfer meters, that is the case. These will probably be the same.

Q In other words, this is an automatic size batch sampler, and the size of the batch is relatively small?

A It is adjustable, it is small.

Q What disposition is made of the condensate which accumulates in the gas meter?

A It's tied into our drain line from the test station, and at the present time is run to the counter.

MR. NUTTER: That's all.

MR. UTZ: Any other questions? Mr. Cooley.

By MR. COOLEY:

Q Mr. Kempton, this metering from the Mudge Lease will be after it is separated and after all foreign matters are extracted. Will the meter reading be 100 percent oil?

A No, it will not. The meter reading will be, the oil meter will read all total liquid produced from the well. The gas meter will read the total gas produced from the oil. The amount of clean oil will be determined by the sampler.

Q Are you aware whether any water is produced from the Bisti wells?

A The average cut on the Mudge 4 Well, this Government 41-21 Well, is approximately one to two-tenths of one percent at the present time. It has been produced only a short time.

Q Does Shell have any reason to anticipate that that cut will substantially increase?

A I don't think we could say at the present time. Some of the other wells are higher than that, although they are all quite low at the present time.

Q Would the meter measure water if it were produced?

A Yes, it would.

Q This wouldn't be a very effective set-up in the event the water cut was very large, would it?

A Yes, I think it would, because the sampler will tell you what percentage of the total liquid measured by the meter was clean oil and you can take your factor to determine how much clean oil was produced from the well.

Q They would have, the amount of oil would have to be calculated rather than actually measured as pure oil, would it not?

A It would be calculated.

Q Are any facilities set up in the automatic equipment to shut the well off when it makes its allowable? What provisions can be made to keep the well from overproducing?

A You mean automatic provisions?

Q Are there any automatic provisions at all to shut the well off when it makes its allowable?

A We don't have any facilities installed now that would do that. The pumper could watch the meter and shut the well down, since it is a low producer, or if we wanted to make it automatic,

decided that it should be automatic, that could be done by tying it in with the counter on the meter itself.

Q Since this is a pumping well, it will necessitate a pumper visiting the well about once a day, won't it?

A I don't know that it will need to be that often or not. It will have to be determined by practice. We don't have much experience in this field yet.

Q In answer to Mr. Seth's question a while ago, considering the relative lengths of the flow lines, you would say this was considerably longer than average, wouldn't you?

A I think the average in this field is somewhere around 2,000 feet.

Q How long is this one?

A Four.

Q Are there any provisions made in this automatic equipment which would indicate a break or malfunction or leak or something of that order in the flow line?

A A pressure switch could very easily be installed in the flow line which would shut down the pumping unit in the event of line break.

Q Would that be feasible in this case?

A Yes, it would. It probably would be a worthwhile thing to install.

Q Are you at liberty to commit Shell as to whether they would be willing to do so or not?

A We would be.

MR. COOLEY: That's all the questions I have. Thank you.

MR. UTZ: Mr. Kempton, can you adjust the pump on the Mudge No. 4 so that it will not produce 125 percent more than its daily allowable?

A Yes, I think we could.

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

(Witness excused.)

MR. SETH: I would like to offer Exhibits 5 and 6.

MR. UTZ: Is there objection to the entrance of Exhibits 5 and 6? If not, they will be accepted.

MR. SETH: We have nothing further.

MR. UTZ: Any further statements? If not, the case will be taken under advisement.

\* \* \* \* \*

## C E R T I F I C A T E

STATE OF NEW MEXICO     )  
                                   ) ss  
 COUNTY OF BERNALILLO    )

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript under my personal supervision, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this *3<sup>rd</sup>* day of May, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

*Ada Dearnley*  
 NOTARY PUBLIC

My commission expires:

June 19, 1959.

I do hereby certify that the foregoing is a true and correct copy of the proceedings in the case of *1418*, heard on *April 8*, 1958.  
*Thos. C. Dearnley*, Examiner  
 New Mexico Oil Conservation Commission



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

May 2, 1958

C  
O  
P  
Y

Mr. Oliver Seth  
Seth & Montgomery  
P.O. Box 828  
Santa Fe, New Mexico

Dear Mr. Seth:

Enclosed herewith is Order No. R-1162 issued April 22, 1958, by the Oil Conservation Commission in Case 1418, which was heard April 9th at Santa Fe.

You will note that the fourth paragraph in the Order Portion of this order requires that each of the positive displacement flow meters shall be checked for accuracy in a manner and at intervals satisfactory to the Commission. Shell Oil Company is hereby directed to calibrate each of the positive displacement flow meters at intervals not to exceed one month and to file a report of said calibrations with the Commission. The meters shall be calibrated against a master meter or against a test tank of measured volume.

Very truly yours,

A. L. Porter, Jr.  
Secretary - Director

ALP/DSN:bp  
Encl.

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

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

**CASE NO. 1418  
Order No. R-1182**

**APPLICATION OF SHELL OIL COMPANY FOR AN  
ORDER AUTHORIZING OFF-LEASE MEASUREMENT  
OF PRODUCTION FROM ITS MUDGE NO. 4 LEASE  
IN SAN JUAN COUNTY, NEW MEXICO.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on April 9, 1958, at Santa Fe, New Mexico, before Elvis A. Uta, Examiner duly appointed by the New Mexico Oil Conservation Commission, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 22<sup>nd</sup> day of April, 1958, the Commission, a quorum being present, having considered the application, the evidence adduced and the recommendations of the Examiner, Elvis A. Uta, 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, Shell Oil Company, is the owner and operator of the E. W. Mudge No. 4 Lease comprising all of Sections 21, 28, 33, and 34, all in Township 25 North, Range 12 West, NMPM, San Juan County, New Mexico.

(3) That the applicant was authorized by Order No. R-1029 dated August 7, 1957, to install central production test facilities and automatic custody transfer equipment to receive the production from the Bisti-Lower Gallup Oil Pool on the above-described lease.

(4) That at present, there is only one well completed in the Bisti-Lower Gallup Oil Pool on the above-described lease, being the Mudge Well No. 41-21 located in the NE/4 NE/4 of said Section 21, and that it is not feasible to install the above-described equipment on the said Mudge No. 4 Lease to receive the production from only one well.

(5) That the applicant was also authorized by Order No. R-1029 to install central production test facilities and automatic custody transfer equipment on its Phillips No. 2 Lease, a portion of which consists of Section 15, Township 25 North, Range 12 West, NMPM, San Juan County, New Mexico, and that such equipment has been installed in the SW/4 of said Section 15.

Case No. 1418  
Order No. R-1162

(6) That the applicant proposes to install separate central production test facilities adjacent to the central plant on the Phillips No. 2 Lease in the SE/4 of said Section 15 to receive the production from the said Mudge No. 4 Lease, and that the applicant further proposes to commingle the production from its Mudge No. 4 Lease with that from its Phillips No. 2 Lease and to transfer the custody of the same by means of automatic equipment after the production from each of said leases has been separately tested and measured by means of positive displacement meters.

(7) That the system should so be equipped that the aforementioned Mudge Well No. 41-21 can be automatically shut down in the event of a line break.

(8) That the subject application should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicant, Shell Oil Company, be and the same is hereby authorized to install separate central production test facilities adjacent to the central plant on the Phillips No. 2 Lease in the SE/4 of Section 15, Township 25 North, Range 12 West, NMPM, San Juan County, New Mexico to receive the Risti-Lower Gallup oil production from the applicant's Mudge No. 4 Lease comprising all of Sections 21, 28, 33, and 34, all in Township 25 North, Range 12 West, NMPM, San Juan County, New Mexico.

(2) That the applicant be and the same is hereby further authorized to commingle the Risti-Lower Gallup oil production from its Mudge No. 4 Lease with that from its Phillips No. 2 Lease and to transfer the custody of the same by means of automatic equipment after the production from each of said leases has been separately tested and measured by means of positive displacement meters.

(3) That the system authorized above shall be so equipped that the production from the Mudge Well No. 41-21 can be automatically shut down in the event of a line break.

(4) That the positive displacement meters referred to above shall be checked for accuracy in a manner and at intervals satisfactory to the Commission.

PROVIDED HOWEVER, That in the event more than one well is drilled on the aforesaid Mudge No. 4 Lease, such facilities shall be installed as necessary to provide for the periodic testing of the individual wells on said lease.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*E. L. Mechem*  
EDWIN L. MECHEM, Chairman

*Murray E. Morgan*  
MURRAY E. MORGAN, Member

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



OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date 4-11-58

CASE 1415

Hearing Date 4-8-58

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

1. approve as requested with the following additions.
2. Provision to shut down the <sup>Shell-</sup> Mudge #41-24 in event of line break.
3. Production from each lease to be measured separately with positive displacement meters before custody transfer.
4. Use order R-1029 for a guide in writing this order.

*Ernest W. [Signature]*  
Examiner

\_\_\_\_\_  
Staff Member

DOCKET: EXAMINER HEARING APRIL 9, 1958

OIL CONSERVATION COMMISSION 9 a.m., MABRY HALL, STATE CAPITOL, SANTA FE, NM

The following cases will be heard before Elvis A. Utz, Examiner:

- - -

- CASE 1356: Application of Cities Service Oil Company for an order amending Order No. R-1128. Applicant, in the above-styled cause, seeks an order amending Order No. R-1128 to authorize the transfer of allowable from water injection wells to other wells on the same basic lease, to establish a lease allowable for the applicant's Government "B" Lease, and to authorize administrative approval for additions to, or deletions from the pilot area and/or injection wells.
- CASE 1404: Application of Continental Oil Company for permission to produce more than eight oil wells into a common tank battery. Applicant, in the above-styled cause, seeks an order authorizing the production of a maximum of eleven oil wells in the Jalmat Gas Pool into a common tank battery. Said wells are located on the applicant's Eaves A-19 lease comprising the S/2, S/2 NW/4, and NW/4 NW/4 of Section 19, Township 26 South, Range 37 East, Lea County, New Mexico.
- CASE 1405: Application of Continental Oil Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its A. M. Lockhart B-14 "A" No. 1-D Well, located 1980 feet from the North line and 660 feet from the East line of Section 14, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce oil from the Terry Blinebry Oil Pool and oil from the Drinkard Oil Pool through parallel strings of tubing.
- CASE 1406: Application of Continental Oil Company for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 200-acre non-standard gas proration unit in the Eumont Gas Pool consisting of the S/2 S/2 and the NW/4 SW/4 of Section 13, Township 20 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the applicant's SEMU Permian Well No. 41 located 660 feet from the South and East lines of said Section 13.
- CASE 1407: Application of Delhi-Taylor Oil Corporation for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 169.42-acre non-standard gas proration unit in the Aztec-Pictured Cliffs Gas Pool consisting of the SW/4 and S/2 NW/4 of Section 31, Township 29 North, Range 8 West, San Juan County, New Mexico, said unit to be dedicated to the applicant's Prichard Well No. 4-C, located 1450 feet from the South line and 790 feet from the West line of said Section 31.

- CASE 1408: Application of Delhi-Taylor Oil Corporation for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 170.58-acre non-standard gas proration unit in the Aztec-Pictured Cliffs Gas Pool consisting of the SW/4 of Section 30 and the N/2 NW/4 of Section 31, all in Township 29 North, Range 8 West, San Juan County, New Mexico, said unit to be dedicated to the applicant's Jones Well No. 3, located 1750 feet from the South line and 1090 feet from the West line of said Section 30.
- CASE 1409: Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Lea State "CL" Well No. 1, located 2651 feet from the North line and 1650 feet from the East line of Section 2, Township 16 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Wolfcamp formation adjacent to the Anderson Ranch-Wolfcamp Pool and oil from the Anderson Ranch-Devonian Pool through parallel strings of tubing.
- CASE 1410: Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Lea State "R" Well No. 1, located 990 feet from the North line and 660 feet from the East line of Section 2, Township 16 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Wolfcamp formation adjacent to the Anderson Ranch-Wolfcamp Pool and oil from the Anderson Ranch-Devonian Pool through parallel strings of tubing.
- CASE 1411: Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its J. F. Janda "F" Well No. 3, located 1980 feet from the North and West lines of Section 4, Township 22 South, Range 36 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Jalmat Gas Pool and oil from the South Eunice (Oil) Pool through parallel strings of tubing.
- CASE 1412: Application of John M. Kelly for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 240-acre non-standard gas proration unit in the Eumont Gas Pool consisting of the E/2 SW/4, W/2 SE/4, and W/2 NE/4 of Section 16, Township 19 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the applicant's Humble State No. 1 Well located 1980 feet from the South and West lines of said Section 16.
- CASE 1413: Application of Austral Oil Exploration Company for an exception to Rule 309 of the Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from all wells completed in the Townsend-Wolfcamp Pool, Lea County, New Mexico, on the following described leases:

CASE 1413

Continued:

W. M. Snyder "B" Lease - Township 16 South, Range 36 East  
Section 6: Lots 9, 10, 15, & 16  
and SE/4

W. M. Snyder "C" Lease - Township 16 South, Range 36 East  
Section 5: Lot 5  
Section 6: Lots 1, 7, & 8

CASE 1414:

Application of The Texas Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its C. H. Weir "B" Well No. 1, located in the SE/4 NE/4 of Section 11, Township 20 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Skaggs-Drinkard Pool and oil from an undesignated Glorieta oil pool through parallel strings of tubing.

CASE 1415:

Application of Phillips Petroleum Company for authority to effect an oil-oil dual completion and to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Santa Fe Well No. 18, located in the NW/4 NE/4 of Section 34, Township 17 South, Range 35 East, Lea County, New Mexico, in such a manner as to produce oil from the Yates formation adjacent to the Vacuum-Yates Pool and from the Vacuum (San Andres) Pool through parallel strings of tubing. Applicant further seeks authority to commingle the oil produced from the separate reservoirs in common storage after measuring the Yates oil through dump-type meters.

CASE 1416:

Application of Aztec Oil and Gas Company for a non-standard location. Applicant, in the above-styled cause, seeks an order authorizing a non-standard gas well location for its Culpepper-Martin Well No. 9, to be located 1850 feet from the North line and 1950 feet from the West line of Section 30, Township 32 North, Range 12 West, Blanco Mesaverde Pool, San Juan County, New Mexico.

CASE 1417:

Application of Sinclair Oil and Gas Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its A. M. York "B" Well No. 2, located in the NE/4 NE/4 Section 20, Township 21 South, Range 37 East, Lea County, New Mexico, to produce oil from the Tubb Gas Pool and from the Drinkard Oil Pool through parallel strings of tubing.

CASE 1418:

Application of Shell Oil Company for an exception to Rule 309 of the Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order authorizing the transportation, prior to measurement, of oil produced on its E. W. Mudge No. 4 Lease, comprising All of Sections 21, 28, 33, and 34, to its L. M. Phillips No. 2 Lease, comprising the S/2, NE/4, and Lots 1 and 2 of Section 4, N/2 Section 9, SW/4 and E/2 Section 10, All Section 15, N/2 and SE/4 Section 22, and W/2 Section 27,

-4-

Docket No. 10-58

Examiner Hearing April 9, 1958

CASE 1418

Continued:

all in Township 25 North, Range 12 West, San Juan County,  
New Mexico. Applicant further seeks authority to commingle  
the production from each of said leases after separately  
measuring said production by means of positive displacement  
meters.

ir/





**SHELL OIL COMPANY**

101 South Behrend Avenue  
Farmington, New Mexico

FEB 27 1958

Subject: Application of Shell Oil Company  
for Exception to Rule 309 of the  
Rules and Regulations of the New  
Mexico Oil Conservation Commission

New Mexico Oil Conservation Commission  
Post Office Box 872  
Santa Fe, New Mexico

Attention Mr. A. L. Porter, Jr.

Gentlemen:

Shell Oil Company hereby requests approval of an Exception to Section (a) of Rule 309 of the Rules and Regulations of the New Mexico Oil Conservation Commission. This Exception would permit oil to be transported from a lease for measurement and storage.

Shell proposes to produce two contiguous leases in the Bisti Field into common tankage located on one of the leases. Both leases have the same royalty interests. The location of these leases is as follows:

1. E. W. Hudge #4 Lease - T25N, R12W, N.M.P.M.  
Section 21: All  
Section 28: All  
Section 33: All  
Section 34: All
2. L. M. Phillips #2 Lease - T25N, R12W, N.M.P.M.  
Section 4: Lots 1, 2, S $\frac{1}{2}$ , NE $\frac{1}{4}$   
Section 9: N $\frac{1}{2}$   
Section 10: SW $\frac{1}{4}$ , E $\frac{1}{2}$   
Section 15: All  
Section 22: N $\frac{1}{2}$ , SE $\frac{1}{4}$   
Section 27: W $\frac{1}{2}$

*San Juan County, New Mexico*

At present there is only one well on the E. W. Hudge #4 lease. This well is a small producer and no more drilling is currently anticipated. Consequently, the estimated reserves do not justify an extension of the Four Corners

pipeline to this lease. The field facilities on the L. M. Phillips #2 lease consist of (1) three individual test stations, and (2) central surge tankage and automatic custody transfer meters. (These facilities were described in the supporting information of Shell's "Application for Permission to use Centralized Production Test Facilities and Automatic Custody Transfer Equipment" presented before the NMOCC on July 17, 1957.) Four Corners Pipe Line Company is currently taking oil from this lease via pipeline connection.

It is proposed that a flow line be laid from the existing E. W. Mudge #4 well to the central plant on the L. M. Phillips #2 lease (approximately 4000'). An oil and gas separator, positive displacement oil meter and automatic sampler would be installed to serve the E. W. Mudge #4 well at this location. The metered oil from the E. W. Mudge #4 lease would then flow to common surge tankage with the L. M. Phillips #2 oil and through common automatic custody transfer meters to the pipeline. The total production is metered from each test station on the L. M. Phillips #2 lease; thus, the production from the lease can be obtained by adding the production from each test station. This will provide an accurate method of allocating the produced oil to each of the two leases involved.

By comingling the oil from these two leases as outlined above, a trucking charge of approximately 30¢/bbl. for the E. W. Mudge #4 oil will be saved. This will result in increased revenue to the royalty owners as well as the lease operator.

Wherefore, Shell Oil Company requests that the foregoing application for an exception to Rule 309 be heard at the Examiners Hearing of the New Mexico Oil Conservation Commission to be held in Santa Fe on or about March 19, 1958.

Very truly yours,



R. R. Robison  
Division Production Manager

cc - United States Geological Survey (2)  
Post Office Box 6721  
Roswell, New Mexico

NEW MEXICO  
OIL CONSERVATION COMMISSION  
P. O. Box 871  
Santa Fe, New Mexico

Date March 6, 1958

Shell Oil Company  
101 South Behrend Avenue  
Farmington, New Mexico

ATTENTION: R. R. Robison

Gentlemen:

Your application for an exception to Rule 309 of the Commission Rules and Regulations for your E. W. Hudge No. 4 Lease

dated February 27, 1958 has been received, and has been tentatively scheduled for hearing before an examiner on April 9, 1958.

A copy of the docket will be forwarded to you as soon as the matter is advertised.

Very truly yours,

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

ga

IN REPLY REFER TO.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

P. O. Box 6221  
Nowell, New Mexico

March 3, 1958

Shell Oil Company  
101 South Behrend Ave.  
Farmington, New Mexico

Attention: Mr. R. R. Robison

Gentlemen:

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
*Shell* EXHIBIT No. *4*  
CASE *17-18*

Your letter of February 27 advises that there is one producible oil well on lease Santa Fe 078065 and that in order to save the expense of providing oil measurement and shipping facilities on the leased land, you plan to lay a flow line from the well to the central plant on lease Santa Fe 078066 where a gas separator, a positive displacement meter, and automatic sampler will be installed to measure the production from Santa Fe 078065. The metered oil from such lease would then be commingled with the oil from Santa Fe 078066 for pipe line shipment through an automatic custody transfer station. You request our approval of the proposed measurement and shipping facilities.

The method you propose for measuring and shipping production from lease Santa Fe 078065 is hereby approved. 4

FARMINGTON  
DIVISION

MAR 5 1958

Manager	
Production	
Drilling	
Exploration Engr.	
Mechanical Engr.	
Survey & Draft.	
Treasury	
Purch. & Stores	
Automotive	
<i>Robison</i>	
File	

Very truly yours,

*John A. Anderson*  
JOHN A. ANDERSON  
Regional Oil and Gas Supervisor