

Casa No.

1548

Application, Transcript,  
Small Exhibits, Etc.

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BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

IN THE MATTER OF:

Case No. 1548

TRANSCRIPT OF HEARING

MARCH 25, 1959

DEARNLEY - MEIER & ASSOCIATES  
GENERAL LAW REPORTERS  
ALBUQUERQUE NEW MEXICO  
Phone CHapel 3-6691

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

IN THE MATTER OF:

Case 1548 Application of Shell Oil Company for an amendment of Order R-1290. Applicant, in the above-styled cause, seeks an order amending Order R-1290 to eliminate the restriction requiring separate metering of production from each lease prior to commingling, since all interests are common except for small override on one lease and the holder of this interest has waived objections to commingling prior to metering.

Mabry Hall  
Santa Fe, New Mexico  
March 25, 1959

BEFORE:

Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: The next case will be Case 1548.

MR. PAYNE: Case 1548, "Application of Shell Oil Company for an amendment of Order R-1290."

MR. SETH: Oliver Seth for Shell Oil Company. We have one witness, Mr. Elkins.

(Witness sworn in.)

MR. UTZ: Are there other appearances to be made in this case?

If not, you may proceed, Mr. Seth.

MR. SETH: Mr. Examiner, I would like to make just a very brief statement concerning this case. This case relates

to Order Number R-1290, previously issued in this case. Order R-1290 permitted the commingling of production from four State leases owned by the applicant. This order had an additional requirement that such commingling would be permitted after the production from each lease had been separately metered.

These leases, as indicated, are in common ownership. They are all State leases, but there is a variation in that one of the leases, which is the State "H" Lease, northwest quarter, southwest quarter, Section 29, 27 South, 35 East, had overriding royalty interests outstanding in the third party. Since the previous hearing, there's been correspondence with this overriding royalty owner and he has submitted a waiver in which he agrees that the production may be allocated on the basis of monthly well tests.

R. L. ELKINS

a witness, being first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. SETH:

Q Mr. Elkins, do you have a plat showing the location of these leases?

A Yes, I do.

Q This plat shows the location of the State "H" Lease, does it not?

A Yes, sir.

MR. UTZ: I don't believe we swore the witness in, did we?

MR. SETH: Yes.

Q (By Mr. Seth) Will you state, please, for the Examiner, the name of the overriding royalty owner on the State "H" Lease?

A The name of the overriding royalty interest is Frederick H. Bergland.

Q And your company had correspondence with this --

A Yes, we have.

Q --interest owner?

A Yes.

Q Have you received a letter of transmittal from him?

A Yes, we received a letter of transmittal and a waived signed by Mr. Bergland.

Q Do you have that?

A Yes, I do.

(Thereupon, the document was marked as Shell's Exhibit No. 1 for identification.)

Q (By Mr. Seth) I hand you what has been marked Exhibit One of Shell's; is this the letter of transmittal?

A Yes, it is.

Q Does it have attached to it a waiver executed by Mr. Bergland?

A Yes, it does.

Q That is what you received through the mail?

A Yes, sir.

MR. SETH: We would like to offer that in evidence, please.

MR. UTZ: Without objection, it will be entered as an exhibit, Exhibit Number One.

Q (By Mr. Seth) Now, would you state to the Examiner, Mr. Elkins, the limit of the age of the wells, their production, the amount of water and the facts relative to well monthly testing as against metering?

A Well, the age of these wells is approximately twenty years and the production is from a completion-type reservoir and the water cuts are quite low, ranging between wells from five tenths of one per cent to two tenths of one per cent, and inasmuch as it is a completion-type reservoir, we do not expect these water cuts to increase appreciably in the future, and the wells have all produced top allowable except the State "H" 1 Well on the one lease that has the overriding royalty interest. The gravity in the field is about 36 degrees API, and due to the fact that the water cuts are extremely low and the small amount of water that is emulsified, we do not anticipate that water production to increase. It appears that we could allocate production on the basis of monthly well tests quite accurately for that reason, and this would be entirely from our standpoint

in an effort to reduce initial and maintenance and operating costs in this field. If we are required to install meters for each lease, it would substantially increase all of those costs.

Q This water cut, has it been fairly constant during the last several years?

A Yes, it has.

Q You haven't noticed any appreciable variation from month to month?

A No more than maybe one tenth of one per cent from month to month.

Q Are these pumping wells or --

A All of the wells are pumping except the State "A" 2 Well, and it is flowing.

Q In your opinion, will allocation of production among these leases on the basis of monthly well tests be an accurate, reasonable basis of allocation?

A Yes, in my opinion, it would be an accurate means of allocating production.

Q On what do you base that opinion?

A It is based on the fact that our water cuts are so low and--well, that's the primary reason, the low water cuts from all the wells.

Q And how about any variation in the amount of the water cuts from time to time, is that --

A Yes, and the fact that the water cuts do not vary

appreciably and the fact that we do not anticipate these water cuts to increase in the future.

Q What is your--you testified previously in this case, did you not?

A Yes, I did.

Q What is your position with the company?

A I am the Division Mechanical Engineer of the Roswell Division.

MR. SETH: I believe that's all the direct we have. Mr. Examiner, we would like to call attention to the Commission, in the waiver which has been admitted as Exhibit One, the interest owner is agreeable to the allocation on the basis of monthly well tests.

MR. UTZ: Is there a question of the witness?

MR. PAYNE: Mr. Elkins, as I understand it, the working interests, the royalty interests and the overriding royalty interests are common in all four of these leases with the sole exception of a small overriding interest in the State "H" lease which is not common, is that right?

A That's correct.

MR. PAYNE: And --

A This is all State land designated by the same beneficiary.

MR. PAYNE: To allocate all the production from the four leases on the basis of monthly well tests, will that reduce

operating costs and maintenance costs?

A Yes, it would appreciably, and also affect conservation, since we now have four tank batteries that are in a pretty bad state of depletion. In this field, one tank battery would be sufficient and would reduce operating costs.

MR. PAYNE: In your opinion, would the economic limit be lowered and therefore avoid premature abandonment if this application is granted?

A Yes, it should be.

MR. PAYNE: That's all.

MR. UTZ: Are there other questions?

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Elkins, what is the State "H" Number 1 making at the present time?

A It makes about thirty barrels per day, and during--let's see, I have some production data here. During December, for example, we produced 922 barrels of oil from that well, and during January, we produced 925 barrels of oil.

Q Do you have an estimate of what the cost of installing these four meters that were required in Order 1290, R-1290 would be?

A We estimate that the installed four meters would cost approximately four to five thousand dollars in this field on initial cost only.

Q About a thousand dollars a meter?

A That's right.

Q And how about the maintenance of these meters, do you have an estimate on the cost of maintenance?

A We don't have any accurate cost on the maintenance, I would hate to give it right now because we haven't used them too long. However, while I can't give you a figure, we do check these meters once a month and they do require continual maintenance, but an actual dollars and cents figure, I can't give it.

Q How long does it usually take to test these meters?

A It would take four days a month in this case.

Q Four days to test four of them?

A Yes, sir.

Q A day a meter?

A Yes.

Q What did you say your average water cut was?

A It varies between wells from two tenths of one per cent to five tenths of one per cent, according to our latest well test information.

MR. UTZ: Are there other questions of the witness?

If not, the witness may be excused.

(Witness excused.)

MR. UTZ: Are there other statements to be made in this case?

If not, the case will be taken under advisement.

MR. SETH: We would like to ask the Examiner to have the transcript of the first hearing in this case incorporated as part of this hearing, and its exhibits.

MR. UTZ: Off the record just a moment.

(Discussion off the record.)

MR. SETH: We would move that the letter of October 8, 1957 from the Commission of Public Lands to Shell Oil Company be admitted as Exhibit Number Two in this case.

(Thereupon, the document  
was marked as Exhibit  
Number 2 for  
identification.)

MR. UTZ: Is there objection to the incorporation of the testimony in Case 1290 and the entrance of Exhibit --

MR. SETH: Exhibit Two.

MR. UTZ: Exhibit Number Two, which is a letter from the State Land Office approving the comingling of these four leases? Without objection, it will be entered as a part of the record.

STATE OF NEW MEXICO )  
 : ss  
 COUNTY OF BERNALILLO )

I, JERRY MARTINEZ, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing were reported by me in Stenotype, and that the same was reduced to typewritten transcript by me and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 27th day of March, 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

*Jerry Martinez*  
 Notary Public

My Commission Expires:

January 24, 1962

I do hereby certify that the foregoing is a complete record of the proceedings in the Examining Hearing of Case No. 1547, heard by me on March 25, 1959.

*James M. [Signature]* Examiner  
 New Mexico Oil Conservation Commission

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

April 2, 1959

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

Dear Mr. Seth:

On behalf of your client, Shell Oil Company, we enclose two copies of Order R-1290-A issued April 2, 1959, by the Oil Conservation Commission in Case 1548, which was heard on March 25th at Santa Fe before an examiner.

Very truly yours,

A. L. Porter, Jr.  
Secretary - Director

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Encls.

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

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

**CASE NO. 1548  
Order No. R-1290-A**

**APPLICATION OF SHELL OIL COMPANY  
FOR AN AMENDMENT OF ORDER R-1290  
TO ELIMINATE THE REQUIREMENT THAT  
PRODUCTION FROM FOUR STATE LEASES  
IN THE VACUUM POOL, LEA COUNTY,  
NEW MEXICO, BE SEPARATELY METERED  
PRIOR TO COMINGLING.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on March 25, 1959, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 2<sup>nd</sup> day of April, 1959, the Commission, a quorum being present, having considered the application, the evidence adduced and the recommendations of the Examiner, Elvis A. Utz, 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 Order No. R-1290 authorized the applicant, Shell Oil Company, to comingle the production from the following-described state leases in the Vacuum (San Andres) Pool, Lea County, New Mexico, after separately metering the production from each lease:

State "B" Lease (B-1414) consisting of the E/2  
SE/4 of Section 30

State "F" Lease (B-2423) consisting of the S/2  
SW/4 of Section 29

State "A" Lease (B-2354) consisting of the NE/4  
of Section 31

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Case No. 1548  
Order No. B-1290-A

State "H" Lease (B-2284) consisting of the NW/4  
SW/4 of Section 29

all in Township 17 South, Range 35 East, NMPM, Lea County, New Mexico.

(3) That all interests in the above-described leases are common with the exception of a diverse overriding royalty interest in said State "H" Lease (B-2284).

(4) That the holder of this overriding royalty interest has waived objection to the commingling of the Vacuum (San Andres) production from the above-described leases without separately metering the production from each lease.

(5) That accordingly the applicant seeks an amendment to Order No. B-1290 eliminating the requirement that the Vacuum (San Andres) production from the above-described leases be separately metered prior to commingling.

(6) That the application should be approved and Order No. B-1290 amended as requested.

IT IS THEREFORE ORDERED:

That paragraph 2 of Order No. B-1290 be and the same is hereby amended to allow the applicant, Shell Oil Company, to commingle the Vacuum (San Andres) production from the following-described state leases without separately metering the production from each of said leases:

State "B" Lease (B-1414) consisting of the E/2  
SE/4 of Section 30

State "F" Lease (B-2423) consisting of the S/2  
SW/4 of Section 29

State "A" Lease (B-2354) consisting of the NE/4  
of Section 31

State "H" Lease (B-2284) consisting of the NW/4  
SW/4 of Section 29

all in Township 17 South, Range 35 East, NMPM, Lea County, New Mexico.

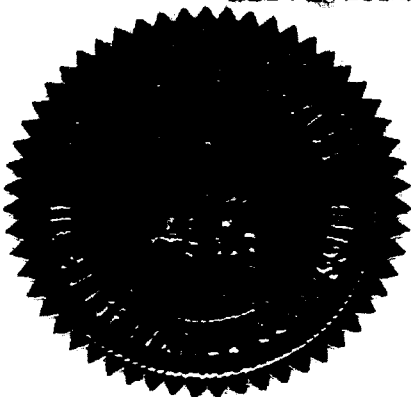
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*John Burroughs*  
John Burroughs, Chairman

*Murray E. Morgan*  
Murray E. Morgan, Member

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



**DOCKET: EXAMINER HEARING MARCH 25, 1959**

Oil Conservation Commission 9 a.m. Mabry Hall, State Capitol, Santa Fe

The following cases will be heard before ELVIS A. UTZ, Examiner:

- CASE 1548: Application of Shell Oil Company for an amendment of Order R-1290. Applicant, in the above-styled cause, seeks an order amending Order R-1290 to eliminate the restriction requiring separate metering of production from each lease prior to commingling, since all interests are common except for small override on one lease and the holder of this interest has waived objection to commingling prior to metering.
- CASE 1620: Application of Sunset International Petroleum Corporation for an oil-gas dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its SIPCO Kutz A Federal Well No. 1, located in the NE/4 SW/4 of Section 32, Township 28 North, Range 10 West, San Juan County, New Mexico, in such a manner as to permit the production of oil from an undesignated Gallup oil pool and the production of gas from the Angels Peak-Dakota Gas Pool through parallel strings of 2-1/16 inch Hydril tubing.
- CASE 1621: In the matter of the application of Humble Oil & Refining Company for an order reclassifying the Four Lakes-Devonian (Oil) Pool in Lea County, New Mexico, as a gas pool.
- CASE 1622: Application of Gulf Oil Corporation for two non-standard gas proration units. Applicant, in the above-styled cause, seeks an order establishing a 160-acre non-standard gas proration unit in both the Tubb Gas Pool and the Blinbry Gas Pool, each to comprise the SE/4 NW/4, NW/4 SE/4, and the N/2 SW/4 of Section 31, Township 22 South, Range 38 East, Lea County, New Mexico, and to be dedicated to applicant's Scarborough Estate Well No. 4 located 1980 feet from the North and West lines of said Section 31 which well is dually completed in the aforementioned pools.
- CASE 1623: Application of Wellshire Development Company for an unorthodox oil well location. Applicant, in the above-styled cause, seeks an order authorizing an unorthodox oil well location in the Bisti-Lower Gallup Oil Pool for its Wellshire No. 1 Federal Well located 530 feet from the South line and 2110 feet from the East line of Section 35, Township 25 North, Range 10 West, San Juan County, New Mexico.

**[CONTINUED CASES]**

- CASE 1573: Application of Southwestern, Inc. Oil Well Servicing for permission to make a "slim hole" completion. Applicant, in the above-styled cause, seeks an order authorizing it to utilize the "slim hole" method of completion for a well located in the SE/4 NW/4 Section 32, Township 16 South, Range 30 East, Square Lake Pool, Eddy County, New Mexico. Applicant proposes to utilize 2 1/2 inch tubing as a substitute for casing in the above-described well.

CASE 1590: Application of Rex Mocre for an order authorizing a gas injection project in San Juan County, New Mexico, and for the promulgation of special rules and regulations in connection therewith. Applicant, in the above-styled cause, seeks an order authorizing it to inject gas into the Gallup formation of the Bisti-Lower Gallup Oil Pool through its Scott No. 5 Well located 2115 feet from the South line and 2080 feet from the West line of Section 3, Township 24 North, Range 10 West, San Juan County, New Mexico. Applicant further proposes that special rules and regulations be promulgated to govern the above-described project, which rules would provide for the transfer of the allowable from the injection well to producing wells, transfer of allowables from wells which have been shut-in for observation or to increase the efficiency of the project, operation of the wells on a net gas-oil ratio basis giving allowance for gas injected, and such other rules and regulations as the Commission deems necessary.

**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. 1548  
Order No. R-1290**

**APPLICATION OF SHELL OIL COMPANY  
FOR PERMISSION TO INSTALL AN  
AUTOMATIC CUSTODY TRANSFER SYSTEM  
IN THE VACUUM POOL, LEA COUNTY,  
NEW MEXICO, AND FOR PERMISSION TO  
COMMINGLE THE PRODUCTION FROM FOUR  
SEPARATE LEASES.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on November 19, 1958, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 26<sup>th</sup> day of November, 1958, the Commission, a quorum being present, having considered the application, the evidence adduced and the recommendations of the Examiner, Elvis A. Utz, 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 following-described leases in the Vacuum Pool, Lea County, New Mexico:

State "B" Lease (B-1414) consisting of the E/2  
SE/4 of Section 30, Township 17 South, Range 35 East.

State "F" Lease (B-2423) consisting of the S/2  
SW/4 of Section 29, Township 17 South, Range 35 East.

State "A" Lease (B-2354) consisting of the NE/4  
of Section 31, Township 17 South, Range 35 East.

State "H" Lease (B-2284) consisting of the NW/4  
SW/4 of Section 29, Township 17 South, Range 35 East.

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Case No. 1548

Order No. B-1290

(3) That the applicant proposes to commingle the Vacuum (San Andres) Pool production from the above-described leases and to install automatic custody transfer equipment to handle the Vacuum (San Andres) production from said leases.

(4) That approval of the subject application will not cause waste nor impair correlative rights provided that the production from each of said leases is separately metered prior to commingling and provided further that adequate testing and measuring equipment is installed.

IT IS THEREFORE ORDERED:

(1) That the applicant, Shell Oil Company, be and the same is hereby authorized to install automatic custody transfer equipment to handle the Vacuum (San Andres) production from the following-described leases:

State "B" Lease (B-1414) consisting of the E/2 SE/4 of Section 30, Township 17 South, Range 35 East.

State "F" Lease (B-2423) consisting of the S/2 SW/4 of Section 29, Township 17 South, Range 35 East.

State "A" Lease (B-2354) consisting of the NE/4 of Section 31, Township 17 South, Range 35 East.

State "H" Lease (B-2284) consisting of the NW/4 SW/4 of Section 29, Township 17 South, Range 35 East,

all in Lea County, New Mexico.

(2) That the applicant be and the same is hereby authorized to commingle the production from the Vacuum (San Andres) Pool from the above-described leases after the production from each lease has been separately metered.

PROVIDED HOWEVER, That said meters be checked for accuracy at intervals and in a manner satisfactory to the Commission.

PROVIDED FURTHER, That the applicant shall install adequate testing facilities to permit the testing of all wells located on the above-described leases at least once each month

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Case No. 1548  
Order No. R-1290

to determine the individual production from each well.

DONE at Santa Fe, New Mexico, on the day and year herein-  
above designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*E L Mechem*

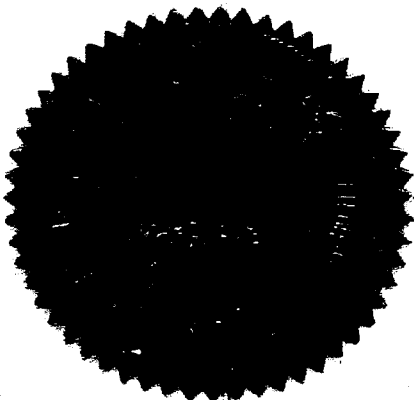
EDWIN L. MECHAM, Chairman

*Murray E. Moran*

MURRAY E. MORAN, Member

*A. L. Porter, Jr.*

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



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OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

1478

Date 11-20-55

CASE NO. 1548

HEARING DATE 11-19-55

My recommendations for an order in the above numbered case(s) are  
as follows:

1. Grant exception to Rule 309(a) and approve,  
LACT system.
2. Each lease (4) shall be metered separately  
before commencing.
3. Usual meter tests.

*Ernest H. Dyer*

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

BEFORE THE  
OIL CONSERVATION COMMISSION  
NOVEMBER 19, 1958

IN THE MATTER OF:

APPLICATION OF THE SHELL OIL COMPANY, CASE 1548

TRANSCRIPT OF HEARING

DEARNLEY, MEIER & ASSOCIATES  
GENERAL LAW REPORTERS  
ALBUQUERQUE NEW MEXICO  
Phone CHapel 3-6891

BEFORE THE  
OIL CONSERVATION COMMISSION  
NOVEMBER 19, 1958

IN THE MATTER OF:

Application of Shell Oil Company for an automatic custody transfer system and for permission to commingle the production from four separate leases. Applicant, in the above-styled cause, seeks an order authorizing it to install an automatic custody transfer system and to commingle the production from the Vacuum Pool on four State Leases located in Sections 29, 30 and 31, Township 17 South, Range 35 East, Lea County, New Mexico. ) Case 1548

BEFORE:

ELVIS A. UTZ, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: The next case is 1548.

MR. PAYNE: Application of Shell Oil Company for an automatic custody transfer system and for permission to commingle the production from four separate leases.

MR. SETH: Oliver Seth of Santa Fe appearing for the applicant. This is an application to install central treating facilities, automatic transfer facilities, and to commingle production from four separate leases in the Vacuum Pool. These are contiguous state leases. There are 9 wells on the leases, and 8 pumping wells and one flowing well. Mr. Elkins is the witness in this case.

(Witness sworn.)

R. L. ELKINS

the witness, having first been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. SETH:

Q Would you state your name?

A R. L. Elkins.

Q What is your position with the company?

A Division Mechanical Engineer for the Shell Oil Company  
in Roswell.

Q Are you familiar with the application of Shell in this  
case?

A I am.

Q Have you previously testified before the Commission?

A Yes.

Q As a mechanical engineer?

A Yes, sir.

Q Have you prepared a plat showing the well location?

A Yes.

MR. SETH: Would you mark that Exhibit One, please.

(Shell Exhibit 1 marked for  
identification.)

Q (By Mr. Seth) Would you please state to the Commission  
what this shows?

A This plat shows the four State leases which are contiguous  
which Shell proposes to commingle production from into one

4

common tank battery.

Q Is the location of the proposed battery located there?

A Yes, sir, it is indicated by a rectangle in the northeast corner of Section 31.

Q Now, this development is relatively old. What is the reason for the submission of the application at this time?

A We are proposing to centralize tank batteries at this time because the four tank batteries we have on these separate leases are corroded and beyond repair.

Q Approximately how old is the development here?

A It is approximately 20 years old.

Q Have you prepared a sketch or diagram of the proposed installation?

A I have prepared a diagram of the proposed Lact Unit, and we have no diagram for the battery itself, inasmuch as it will be a standard battery ahead of the Lact Unit. What I mean by the standard battery, we will have production of daily oil from 9 wells and we will have a production separator and a metering test separator to test the wells once a month. From the separator, the production will go to a water tank and from there into a surge tank in much the same manner as in a conventional battery.

Shell is proposing to allocate production to the various leases on the basis of monthly well tests which will be taken by the metering test separator.

Q Now, would you cover, if you would, please, the automatic

equipment?

A All right. Looking at the diagrammatic --

Q Excuse me. This is a diagram attached to our Exhibit 2, is that correct?

A That's right. Looking at that diagram, you come in from the run tank on the line in the upper right hand corner, and the first piece of equipment is a charging pump, which will increase the pressure on the crude oil and tend to prevent gas from leaking over the P. D. Meter. The next is a strainer.

Q You are going from right to left?

A I'm going according to the way the stream flows, from right to left. And the next thing, we have a continuous bypass stream of fluid around the charging pump, and from that bypass stream we will take a sample from the continuous stream of crude oil to the pipe line, and this sample of crude oil will be analyzed, first put in a sample container and analyzed for average B. S. & W. content and shipped to the pipe line.

The next is a deaerator to remove any gas that might cause an error in our meter.

The next is an S-12, A. O. Smith P. D. Meter that is temperature compensated. The next item is a back pressure regulator to maintain pressure on the system through the P. D. Meter. It also acts as a stop valve. From there we go into the pipe line.

On the skid here, we propose to have meter prover connections with the idea we will prove this P. D. Meter with a master meter once a

month, or how often the Commission might require.

Q Are the various items of equipment you've enumerated shown on the first sheet of Exhibit Two?

A Yes, sir.

Q And these numbers correspond to the numbers there?

A Yes, sir, the numbers correspond to the numbers.

Q Would you say this installation is similar to the installation by Shell in the Pearl Queen Application that has been considered by the Commission?

A It is very similar with exceptions. In this installation here, we have not quite the B. S. & W. monitor which we have on our Pearl facility. The reason we haven't here, in eight of our wells the water cut does not exceed three tenths of one per cent. In the ninth well, the water cut is only three per cent. Essentially, we are producing pipe line oil from a well to begin with; it is unlikely we would have bad oil going to a pipe line.

Q These are old wells?

A It is an old well, a depletion type reservoir. We wouldn't expect water cuts. The next difference is the A. O. Smith P. D. Meter. In our meter we have a ticket printer inserted into the meter, and we do not include a ticket printer facility on this meter in order to prevent jamming of this meter by dust and sand we have encountered in this area. It will be a non-resetable counter meter so that the meter reading cannot be changed at any time.

Q Is the same conservation purpose effected as in the Queen system?

A Yes, it will. We have stated if the Pearl were going to this type of system we could keep a better closed system on the crude oil and by that means conserve volume and obtain a higher price for our crudes. In addition to that, it will reduce our operating costs and allow us to carry the field to a lower point of completion. We will be able to produce more oil from the field.

Q Does the system have an emergency high level shut in valve?

A Yes, it does. In our surge tank we have an emergency high level control that once the level builds up to this emergency level it will shut in our pumping wells; it will not shut in our flowing well; however, above the emergency shut in, we have 210 barrels of storage capacity in our surge tank which will be the capacity to handle the flowing well for about five days.

Q Did you receive any objections from any adjoining offset operators?

A We notified all offset operators by registered mail. We haven't received any objections.

Q Is the ownership of the land common in these four leases?

A Yes, it is. It is all State land.

Q Is there an overriding royalty interest?

A We have one on the State "H" Lease.

Q Did he indicate any objection?

DEARNLEY - MEIER & ASSOCIATES  
GENERAL LAW REPORTERS  
ALBUQUERQUE, NEW MEXICO  
Phone CHapel 3-6691

A No, we have a waiver from this man.

MR. SETH: Would you mark that as Exhibit 3, please?

(Marked Shell Exhibit 3 for  
identification.)

Q (By Mr. Seth) Was the Commissioner of Public Lands  
advised of the proposed application and did he indicate any  
objection or approval here?

A Yes, he was advised, and no he didn't offer any objection  
to it. It was all dedicated to common pools, and we have a waiver  
on that.

Q Do you have a letter from him?

A Yes, sir.

MR. SETH: Would you mark that, please?

(Marked Shell Exhibit 4 for  
identification.)

Q (By Mr. Seth) You are prepared to, I believe you  
indicated, conduct whatever testing that the Commission may  
from time to time require, and in view of that you have installed  
connections for metering and things like that?

A Yes, we have.

Q Is there anything further you would like to discuss?

A Only one other thing. We have a wire from The Texas-  
New Mexico Pipeline who will be taking this oil. They are in  
agreement and concur in our proposal here.

MR. SETH: We would like to offer Exhibits One through  
Four at this time.

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

MR. SETH: That's all the direct testimony.

MR. UTZ: Are there questions of the witness?

EXAMINATION BY MR. UTZ:

Q Mr. Elkins, in regard to the H Lease, is that a top allowable well?

A The H Lease is not top allowable. It is the only well in the unit that isn't.

Q How do you determine the amount of royalty to pay the royalty owner in this lease?

A By monthly well tests from our automatic test separator.

Q That is the only lease that it would make any difference on, is that correct?

A That is correct.

MR. UTZ: Any other questions of the witness? If not, the witness will be excused.

(Witness excused.)

MR. UTZ: Any other statement to be made in this case, any further testimony? If not, the case will be taken under advisement.

---

STATE OF NEW MEXICO )  
 ) ss  
COUNTY OF BERNALILLO)

I, John Calvin Bevell, 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 in Stenotype and reduced to typewritten transcript by me; that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this 26th day of November, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

  
NOTARY PUBLIC

My Commission Expires:

January 24, 1962

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1548, heard by me on Nov. 19, 1958.

  
Examiner  
New Mexico Oil Conservation Commission

**OIL CONSERVATION COMMISSION**

P. O. BOX 871

**SANTA FE, NEW MEXICO**

November 28, 1958

C  
O  
P  
Y

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

Dear Mr. Seth:

On behalf of your client, Shell Oil Company, we enclose two copies of Order R-1290 issued November 26, 1958, by the Oil Conservation Commission in Case 1548, which was heard before an examiner on November 19th.

Please note that this order requires that each meter installed in the subject system shall be tested for accuracy at intervals and in a manner satisfactory to the Commission. It will be necessary for Shell Oil Company to run a series of tests of sufficient duration to determine that the meters are functioning properly immediately following installation. Thereafter, tests should be made at intervals not to exceed one month and a report of said calibration filed 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

bp  
Encls.

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF  
SHELL OIL COMPANY TO AMEND ORDER NO.  
R-1290 ENTERED IN CASE NO. 1548 TO  
REMOVE THE REQUIREMENT IN THE ORDER  
THAT PRODUCTION FROM THE FOUR LEASES  
BE METERED SEPARATELY BEFORE THE  
PRODUCTION THEREFROM IS COMMINGLED.

P E T I T I O N

Shell Oil Company hereby makes application to the Commission that it amend its Order No. R-1290 entered in Case No. 1548, and the Petitioner shows:

1. Shell Oil Company is the owner and operator of the following described leases in the Vacuum Pool in Lea County, New Mexico:

State "B" Lease (B-1414) consisting of the E/2  
SE/4 of Section 30, Township 17 South, Range 35  
East.

State "F" Lease (B-2423) consisting of the S/2  
SW/4 of Section 29, Township 17 South, Range 35  
East.

State "A" Lease (B-2354) consisting of the NE/4  
of Section 31, Township 17 South, Range 35 East.

State "H" Lease (B-2284) consisting of the NW/4  
SW/4 of Section 29, Township 17 South, Range 35  
East.

2. The applicant was given permission in Order No. R-1290 to commingle the Vacuum (San Andres) Pool production from the above described leases and to install automatic custody transfer equipment to handle such production.

3. The Order, however, provided that the production from each of the leases be separately metered prior to commingling.

*Docket Mailed*  
*3-11-59*  
*BP*

4. There is an overriding royalty on the State "H" Lease described above which is owned by Mr. Frederick H. Burgland. This owner of the overriding royalty has executed a written waiver which states that he has no objection to the commingling; that he desires the State "H" Lease to be included in the consolidation and that the allocation of production to the four leases be on the basis of monthly well test. A copy of this Waiver is attached to this Petition.

Petitioner therefore asks that the said Order No. R-1290 be amended to delete the reference to separate metering in Paragraph 4 of the Findings and to eliminate the requirement of separate metering as contained in Paragraph 2 of the Order portion thereof.

Respectfully submitted,

SHELL OIL COMPANY

BY:

SETH, MONTGOMERY, FEDERICI & ANDREWS

BY: *Chenault*

W A I V E R

Date Jan 14, 1959

New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

Gentlemen:

I have been informed by Shell Oil Company that they propose to use consolidated tankage in the Vacuum Field, which would handle production from the State "H" Lease (on which I have a 1/16 overriding royalty interest) together with the production from the State "A", State "B", and State "F" Leases.

I understand that the tankage and oil treating system on the State "H" Lease, as well as the tankage on the other three subject leases, have corroded to the extent that they will require immediate replacement. By consolidating this tankage and allocating production to the four leases on the basis of monthly well tests, Shell expects to be able to reduce operating and maintenance costs for the State "H" and other subject leases. This would enable continued production to a lower economic limit and avoid premature abandonment of the lease. In addition, this consolidation would reduce vapor losses and effect conservation.

In view of this I have no objection to their proposal, and, in fact, desire that the State "H" Lease with its one well be included in this consolidation.

Yours very truly,

*Frederick H. Burgland*  
Frederick H. Burgland

Case 1548

Examining



MAIN OFFICE GCC

SHELL OIL COMPANY

1958 OCT 16 AM 3:27

P. O. Box 845  
Roswell, New Mexico

October 16, 1958

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

New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.

Gentlemen:

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

Shell proposes to install one consolidated treating and automatic custody transfer facility (utilizing a temperature compensated positive displacement meter) to serve nine wells on four contiguous State leases. We are confronted with immediate replacement of corroded tankage on several of these leases and the remainder of the tankage is old and will require replacement in the near future. Considerable savings will be realized by consolidating production handling facilities. All wells on the subject leases produce from the San Andres Formation in the Vacuum Field.

The automatic custody transfer facility will be located on the State "A" Lease. The four leases to be served by this installation are described as follows:

1. State "B" Lease (N.M. State B-1414) consisting of 80 acres in the E/2 of the SE/4 of Section 30, T-17-S, R-35-E
2. State "F" Lease (N.M. State B-2423) consisting of 80 acres in the S/2 of the SW/4 of Section 29, T-17-S, R-35-E
3. State "A" Lease (N.M. State B-2354) consisting of 160 acres in the NE/4 of Section 31, T-17-S, R-35-E
4. State "H" Lease (N.M. State B-2284) consisting of 40 acres in the NW/4 of the SW/4 of Section 29, T-17-S, R-35-E

Docket Mailed  
11-5-58

MAIN OFFICE OCC  
OCT 23 AM 8:27  
New Mexico Oil Conservation Commission

2

The State Land Commissioner has consented in writing to our proposal and we have requested approval from the only overriding royalty interest concerned on the State "B" Lease. By copy of this letter, all operators owning offsetting interests in the Vacuum Area, have been notified by certified mail of this application.

Wherefore, Shell Oil Company requests that the foregoing application for an exception to Rule 309 be heard at the regularly scheduled November Examiner's Hearing of the New Mexico Oil Conservation Commission in Santa Fe, New Mexico.

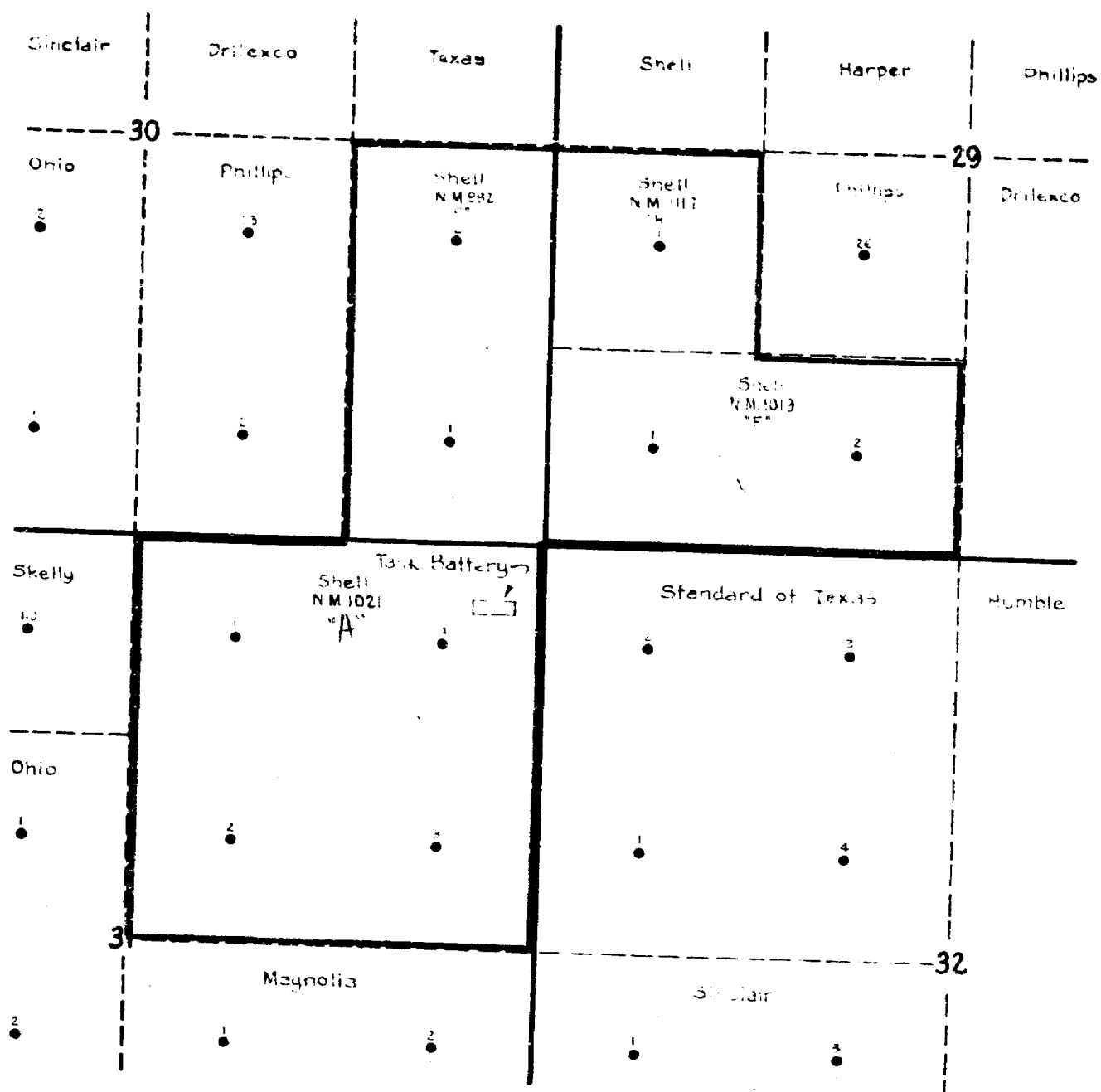
Very truly yours,



P. A. Dennie  
Division Production Manager

Attachments

cc: All offset operators



1958 OCT 23 AM 8:27  
MAIN OFFICE 000

Shell Oil Company  
Roswell Production Division  
**PROPOSED TANKAGE CONSOLIDATION**  
Verdun Field, T-17-S, R-35-E, Lea Co., N.M.  
Date: 10-10-58

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date 3-25-59

CASE NO. 1598

HEARING DATE 3-25-59

My recommendations for an order in the above numbered case(s) are as follows:

1. Grant Shell's application to remove the metering requirements of R-1280.
2. I suggest we supersede R-1280 so well will have only one order on this matter.
3. This recommendation is made because of the Royalty owners waiver as well as that same of the State Land Office.

*Christie D. G.*

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

# STATE LAND OFFICE

*Santa Fe, New Mexico*



MURRAY E. MORGAN  
COMMISSIONER OF PUBLIC LANDS

October 8, 1957

Shell Oil Company  
P. O. Box 1957  
Hobbs, New Mexico

Gentlemen:

Permission is hereby granted to commingle production from eleven wells on six Shell State Leases located in Sections 29, 30 and 31, T-17-S, R-15-E, Vacuum Field, Lea County, New Mexico on the following described acreage:

Four of the wells are in Section 31 (New Mexico State Lease B-2354), two are in Section 30 (New Mexico State Lease B-1414), two are in Section 29 (New Mexico State Lease B-2423), one is in Section 29 (New Mexico State Lease B-2284), one is in Section 31 (New Mexico State Lease B-1415), and one is in Section 31 (New Mexico State Lease B-1404).

All this acreage is committed to one beneficiary institution, that being Common Schools.

Very truly yours,

MURRAY E. MORGAN  
Commissioner of Public Lands  
By:

*Mrs. Linnie Cook*

Mrs. Linnie Cook, Supervisor  
Royalty Division

Wmb

Oil Conservation Commission

BEFORE EXAMINER UTZ	
OIL CONSERVATION - Admission	
Shell	EXHIBIT NO. <u>7</u>
CASE NO.	<u>1548</u>

DOCKET: EXAMINER HEARING NOVEMBER 19, 1958

Oil Conservation Commission 9 a.m., Mabry Hall, State Capitol, Santa Fe, New Mexico

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

CASE 1337:

Application of Gulf Oil Corporation for permission to commingle the production from two separate oil pools. Applicant, in the above-styled cause, seeks an order amending Order R-1093 and Order R-1093-A to authorize it to commingle the production from the Montoya formation with the production from the Ellenburger, Fusselman, and McKee formations on its Learcy Mc-Buffington Lease consisting of the S/2 of Section 13, Township 25 South, Range 37 East, Lea County, New Mexico.

CASE 1548:

Application of Shell Oil Company for an automatic custody transfer system and for permission to commingle the production from four separate leases. Applicant, in the above-styled cause, seeks an order authorizing it to install an automatic custody transfer system and to commingle the production from the Vacuum Pool on four State Leases located in Sections 29, 30, and 31, Township 17 South, Range 35 East, Lea County, New Mexico.

CASE 1549:

Application of Tidewater Oil Company for two non-standard gas proration units. Applicant, in the above-styled cause, seeks an order establishing a 120-acre non-standard gas proration unit, in both the Tubb Gas Pool and the Blinbry Gas Pool, each to comprise the S/2 SE/4 and SE/4 SW/4 of Section 36, Township 21 South, Range 37 East, Lea County, New Mexico, and to be dedicated to applicant's State "Q" Well No. 1, located in the SE/4 SW/4 of said Section 36, which well is dually completed in the aforesaid pools.

CASE 1550:

Application of Tidewater Oil Company to commingle the production from several separate oil pools. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from the Ellenburger, McKee, Fusselman, Montoya and any other pool or pools encountered which produces oil of similar qualities on its Coates "C" Lease comprising the E/2 and SE/4 NW/4 and NE/4 SW/4 of Section 24, Township 25 South, Range 37 East, Lea County, New Mexico. Applicant further requests permission to commingle production from the Drinkard formation on said lease with any other pool or pools encountered which produce sour crudes. Applicant proposes to separately meter production from each pool prior to being commingled. Applicant further seeks permission to produce more than sixteen wells into said common facilities.

CASE 1551:

Application of Pan American Petroleum Corporation for permission to commingle the production from three separate leases and for permission to produce more than sixteen wells into a common tank battery. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from the Empire-Abo Pool from the three separate Federal leases hereinafter described:

LC-065478-B N/2 NW/4, NE/4, N/2 SE/4, and E/2 SW/4  
Section 3; E/2 Section 10

NM-025604 S/2 SE/4 Section 3; W/2 Section 10

LC-067858 N/2 and SW/4 Section 11

all in Township 18 South, Range 27 East, Eddy County, New Mexico. Applicant further requests authority to produce more than sixteen wells into the common tank battery for said leases. Applicant proposes to separately meter production from each of the above-described leases prior to being commingled.

**CASE 1552:**

Application of Pan American Petroleum Corporation for permission to commingle the production from four separate leases. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from the Abo formation adjacent to the Empire-Abo Pool from the four separate State leases hereinafter described:

E-5461 NW/4 NW/4 Section 2

B-7244-30 S/2 NW/4, NW/4 SW/4, and SE/4 SW/4 Section 2

B-8814-12 NE/4 SW/4 Section 2

E-7833 SW/4 SE/4 Section 2

all in Township 18 South, Range 27 East, Eddy County, New Mexico. Applicant proposes to separately meter the production from each of said leases prior to being commingled.

**CASE 1553:**

Application of The Texas Company for a dual completion and for permission to commingle the liquids produced from two separate pools. Applicant, in the above-styled cause, seeks an order authorizing it to dually complete its Peery-Federal (NCT-1) Well No. 1 located 1980 feet from the North and East lines of Section 29, Township 15 South, Range 30 East, Chaves County, New Mexico, in such a manner as to permit the production of oil from an undesignated Devonian oil pool and gas from an undesignated Ellenburger Gas Pool through parallel strings of tubing. Applicant further requests permission to commingle the liquids and low pressure gas produced from the Devonian and Ellenburger formations from all existing and future wells on its Peery-Federal Lease which comprises all of said Section 29.

**CASE 1554:**

Application of The Texas Company for an automatic custody transfer system and for permission to commingle the production from five separate leases. Applicant, in the above-styled cause, seeks an order authorizing it to install an automatic custody transfer system and to commingle the production from the Bisti-Lower Gallup Oil Pool on five Navajo Allottee Leases located in Sections 14, 15, and 23, Township 25 North, Range 11 West, San Juan County, New Mexico. Applicant proposes to separately meter the production from each lease prior to being commingled.

**CASE 1555:**

Application of H. K. Riddle for two non-standard oil proration units and two unorthodox oil well locations. Applicant, in the above-styled cause, seeks an order establishing a 61-acre non-standard oil proration unit consisting of Lots 1, 2, 3, and 4 of Section 18, said unit to be dedicated to a well to be drilled on an unorthodox location 1980 feet from the South line and 252 feet from the West line of said Section 18; applicant further seeks

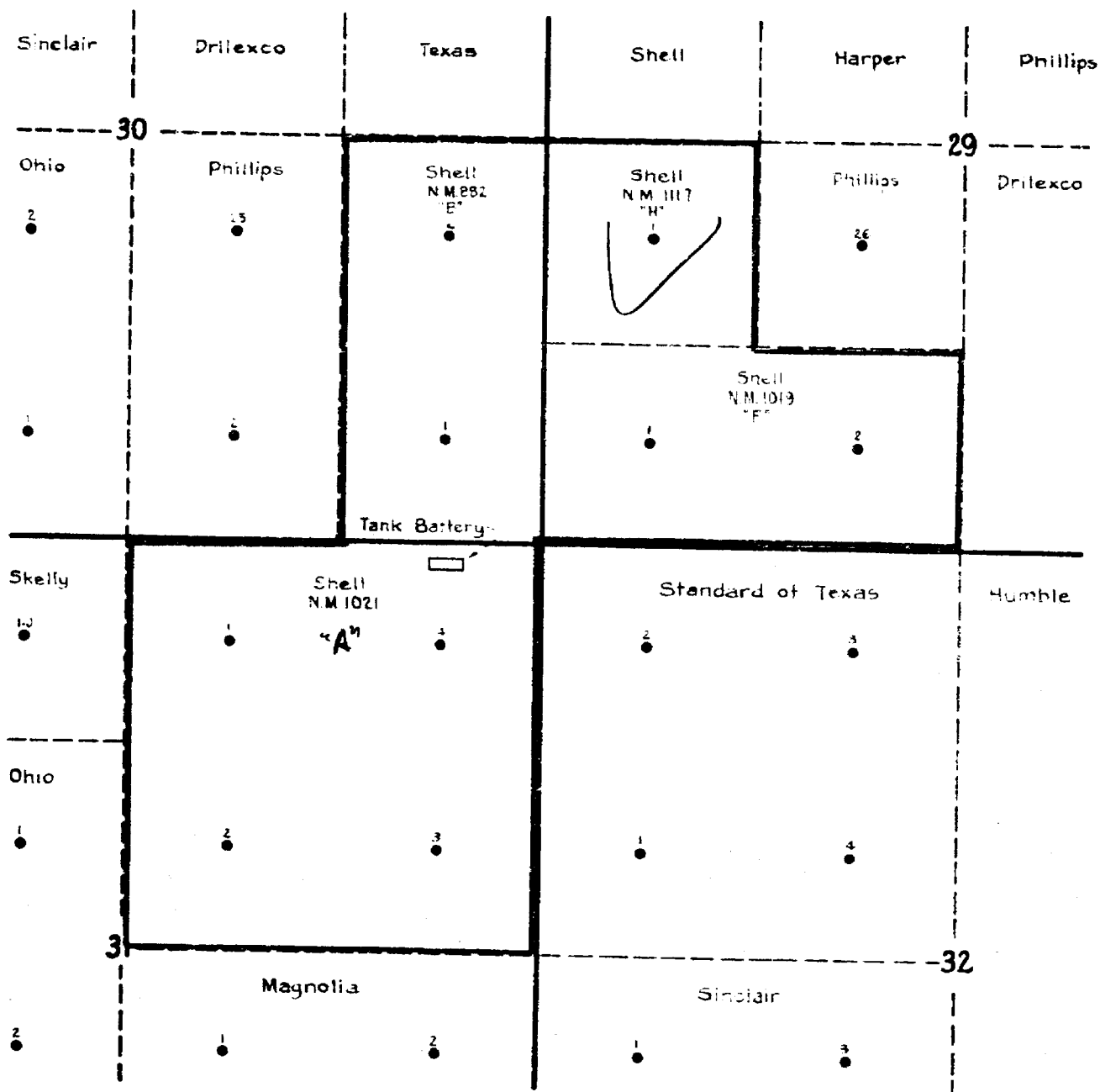
the establishment of a 63-acre non-standard oil proration unit consisting of Lots 1, 2, 3, and 4 of Section 19, said unit to be dedicated to a well to be drilled on an unorthodox location 660 feet from the North line and 256 feet from the West line of said Section 19, all in the Bisti-Lower Gallup Oil Pool, Township 26 North, Range 13 West, San Juan County, New Mexico.

CASE 1556:

Application of Chaco Oil Company for an exception to Rule 104 of the Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order authorizing it to drill four additional oil wells in the Red Mountain-Mesaverde Oil Pool in the SW/4 SE/4 of Section 20 and the NW/4 NE/4 of Section 29, Township 20 North, Range 9 West, McKinley County, New Mexico.

CASE 1557:

Application of Cities Service Oil Company for a dual completion. Applicant, in the above-styled cause, seeks an order authorizing it to dually complete its State "P" No. 3 Well located 990 feet from the South and West lines of Section 32, Township 22 South, Range 38 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Blinbry Oil Pool and from an undesignated Glorieta oil pool through parallel strings of tubing.



BEFORE EXAMINER UTZ  
 OIL CONSERVATION COMMISSION  
*Shell* EXHIBIT NO. 1  
 CASE NO. 1548

Shell Oil Company  
 Roswell Production Division  
**PROPOSED TANKAGE CONSOLIDATION**  
 Vacuum Field, T-17-S, R-35-E, Lea Co., N.M.  
 Date: 7-2-58 Date: 10-16-58



WAIVER

Date Oct 13, 1958

New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

Gentlemen:

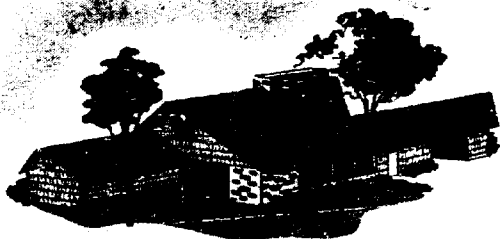
I have been informed by Shell Oil Company that they are making application for the use of consolidated tankage in the Vacuum Field.

You are respectfully advised that I have no objection to their proposal.

Yours very truly,

BEFORE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	
<i>Shell</i>	EXHIBIT NO. <u>3</u>
CASE NO.	<u>1548</u>

*Frederick H. Bergland*  
Frederick H. Bergland



# FRED BURGLAND REALTOR

TELEPHONE ~~8-1331~~  
DI 3-9251

216 HILL ARCADE

GALESBURG, ILLINOIS  
January 14, 1959

Mr. P.A. Dennie, Division Production Manager  
Shell Oil Company  
P.O. Box 845  
Roswell, New Mexico

Dear Mr. Dennie;

Enclosed you will find three signed  
copies of the waiver as you requested.

Very Truly Yours,

*Frederick H. Burgland*  
Fredrick H. Burgland

Enclosures 3

FHB:lb

BEFORE EXAMINER UTZ	
OIL CONVEYANCE COMMISSION	
<i>Shue</i>	EXHIBIT NO. <u>1</u>
CASE NO.	<u>1548</u>



W A I V E R

Jan 14, 1959

New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

Gentlemen:

I have been informed by Shell Oil Company that they propose to use consolidated tankage in the Vacuum Field, which would handle production from the State "H" Lease (on which I have a 1/16 overriding royalty interest) together with the production from the State "A", State "B", and State "F" Leases.

I understand that the tankage and oil treating system on the State "H" Lease, as well as the tankage on the other three subject leases, have corroded to the extent that they will require immediate replacement. By consolidating this tankage and allocating production to the four leases on the basis of monthly well tests, Shell expects to be able to reduce operating and maintenance costs for the State "H" and other subject leases. This would enable continued production to a lower economic limit and avoid premature abandonment of the lease. In addition, this consolidation would reduce vapor losses and effect conservation.

In view of this I have no objection to their proposal, and, in fact, desire that the State "H" Lease with its one well be included in this consolidation.

Yours very truly,

*Frederick H. Burgland*  
Frederick H. Burgland

AUTOMATIC CUSTODY TRANSFER SKID

SHELL OIL COMPANY

Equipment

BEFORE EXAMINER UTZ

OIL COMMISSION

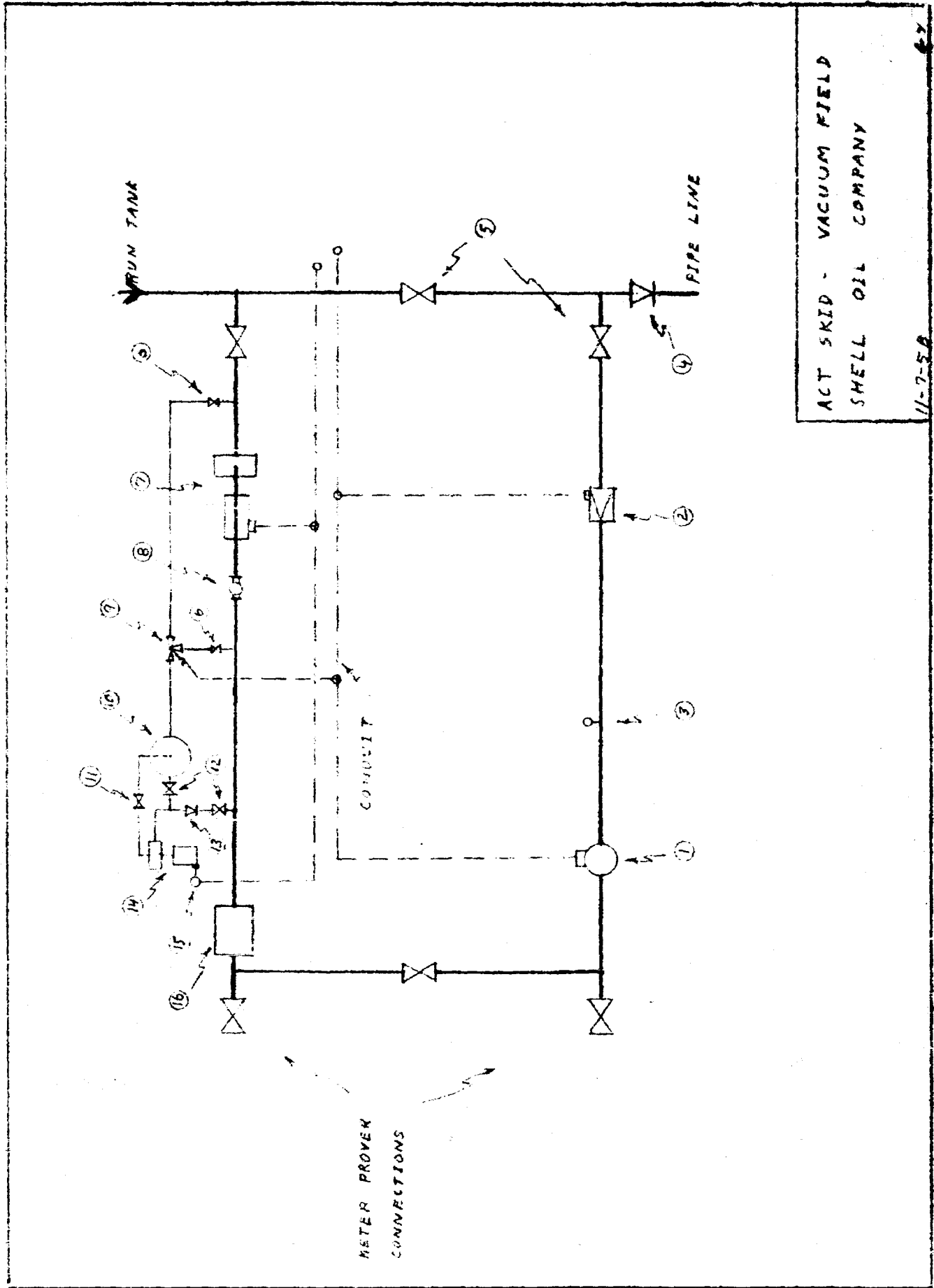
EXHIBIT NO. 2

CASE NO. 1548

Item No.	Quantity	Description
1	1	A. O. Smith Model S-12 temperature compensated P. D. Meter with Model 107 non-reset counter registering in barrels and "ET" electrical impulse transmitter to give one pulse per barrel - 2" flanged connections
2	1	Clayton Model 53 E Globe type No. 100 combination pressure and stop-valve - 125 ASA pressure rating - 2" flanged connections - 5 to 25 psi adjustable back pressure - explosion proof 110-volt solenoid - corrosion resistant materials for use with crude oil 40-110 F°
3	1	0-50 psi pressure gauge with pulsation dampener
4	1	2" Frank Wheatly 150 psi W. P. Semi-steel swing check valves - screwed connections
5	6	2" plug valves - wrench operated
6	2	1/4" gate valves
7	1	Marlow Model 14 HEL-9 self priming centrifugal pump w/2" screwed connections - 3 H.P. 220-volt 3-phase explosion proof electric motor c/w base and flexible coupling
8	1	A. O. Smith 2" flanged type E strainer w/ 1/4" mesh wire screen
9	1	Skinner 3-way solenoid valve
10	1	15-gallon sample container - shop made
11	1	1" gate valve - mixer pump suction line
12	2	1/2" gate valves - mixer pump discharge lines
13	1	1/2" check valve
14	1	Marlow Model 1HLEC centrifugal pump w/ 1/3 H.P. 118-volt single phase explosion proof electric motor
15	1	Explosion proof switch for 110-volt motor
16	1	3" Model 1030 A. O. Smith Deaerator, flanged connections

## Remarks:

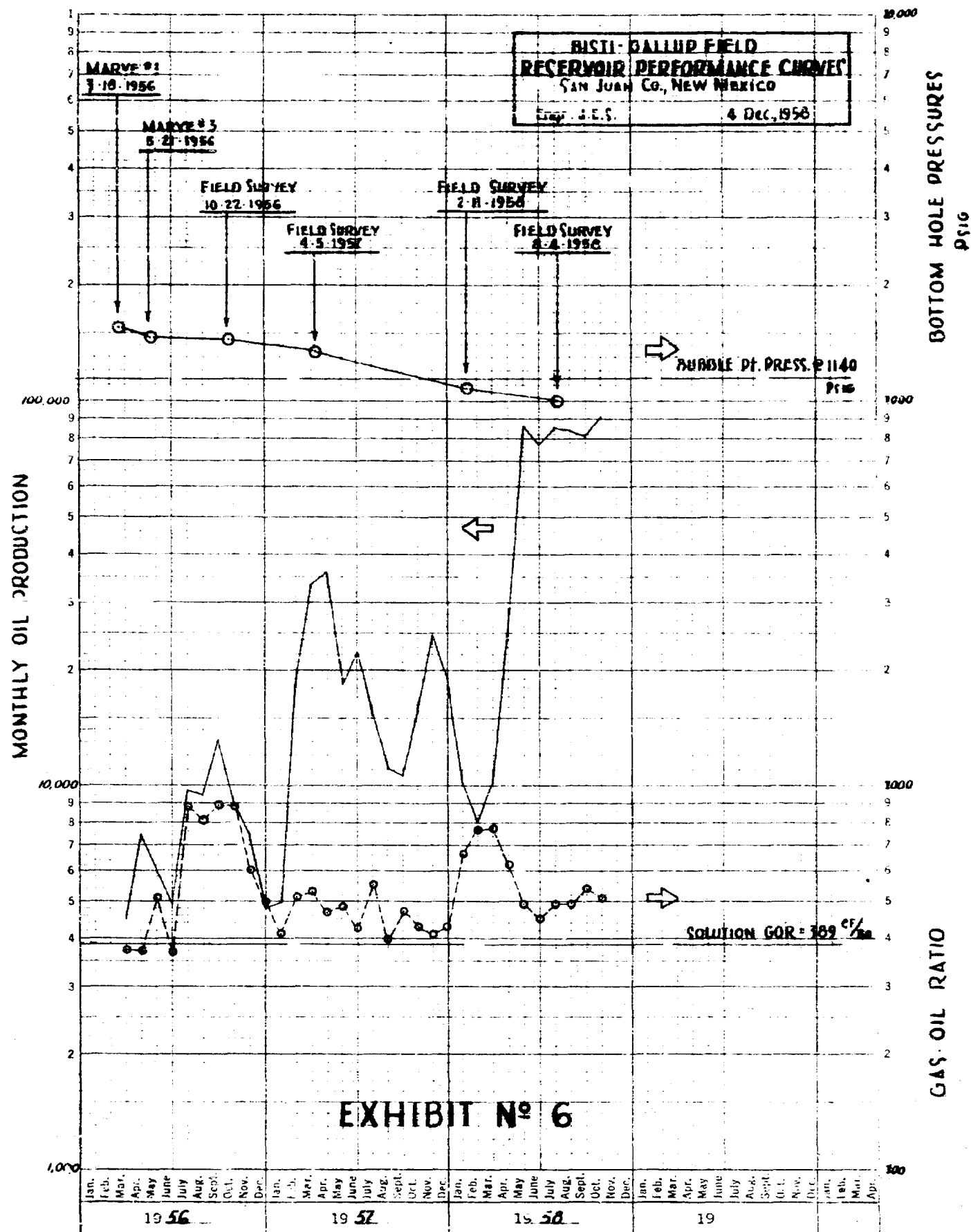
The equipment will be mounted on a skid about 4 1/2' x 10' long. All piping and valves will be 2-inch except conduit (1/2-inch) and sampling lines. Valves and piping connected to the 3-way solenoid valve (Item 9) will be 1/4-inch. The suction line from the mixer pump (Item 14) will be 1-inch and the discharge will be 1/2-inch. Welded connections should be used where possible.



ACT SKID - VACUUM FIELD  
SHELL OIL COMPANY

11-7-58

67



**PROOF OF ELLENBURGER DUMP METER ON LEAD/ MC NEVINUTON LEAD**  
**AGAINST ACT METER AND 1000-BARREL TANK**

**REMARKS:** In the following two tests the accuracy of the Ellenburger Dump Meter is checked against the volume run through the ACT P. D. Meter and the differential volume, from start to end of test, determined by manual gauging in the 1000-barrel surge tank. The volumes reported herein are corrected for temperature and flash.

**PURPOSE OF TEST:** To determine the accuracy of the Dump type Meter as compared with the ACT P. D. Meter, the prover meter.

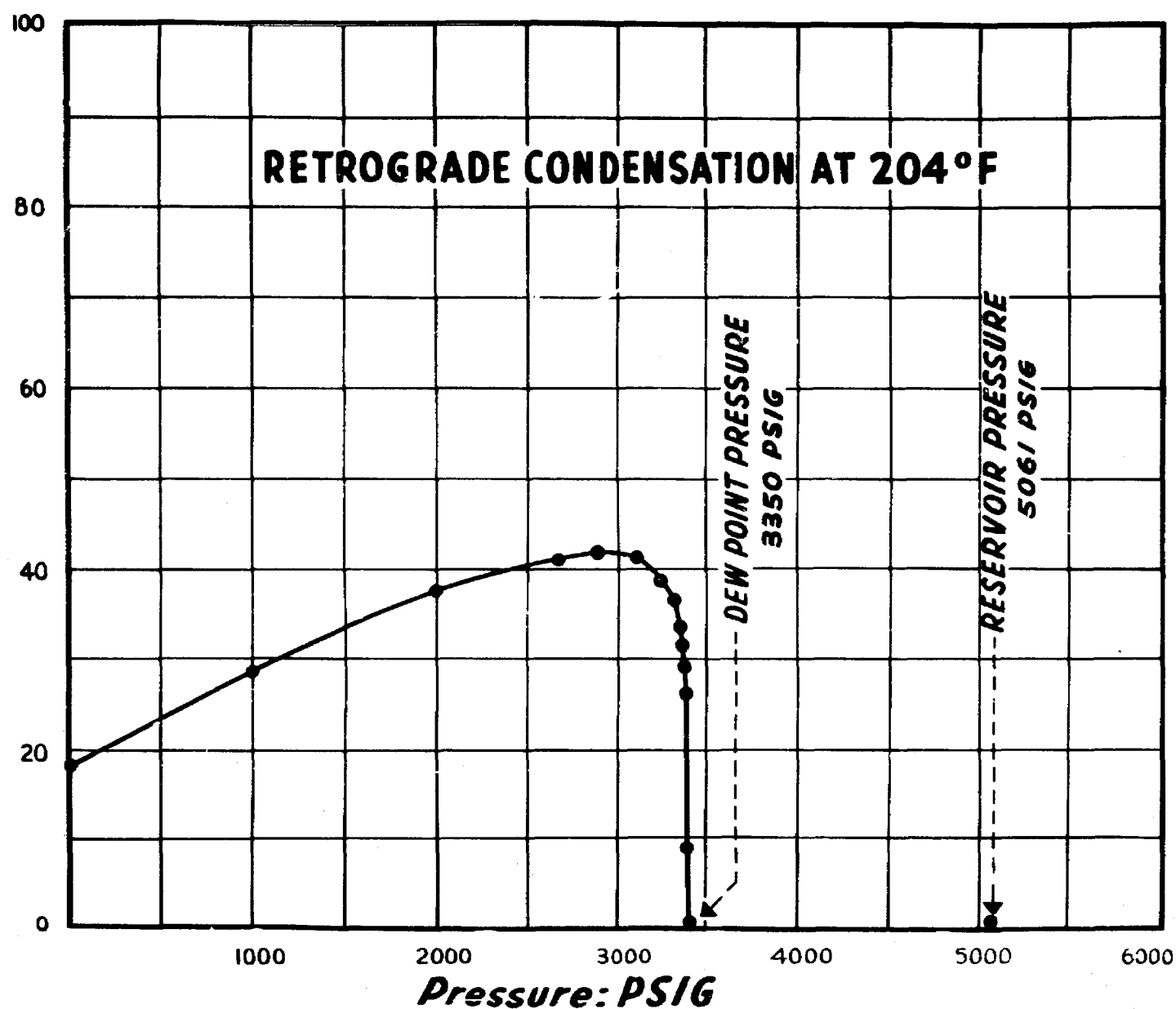
**TEST NO. 1 STARTED ON 9-29-28:**

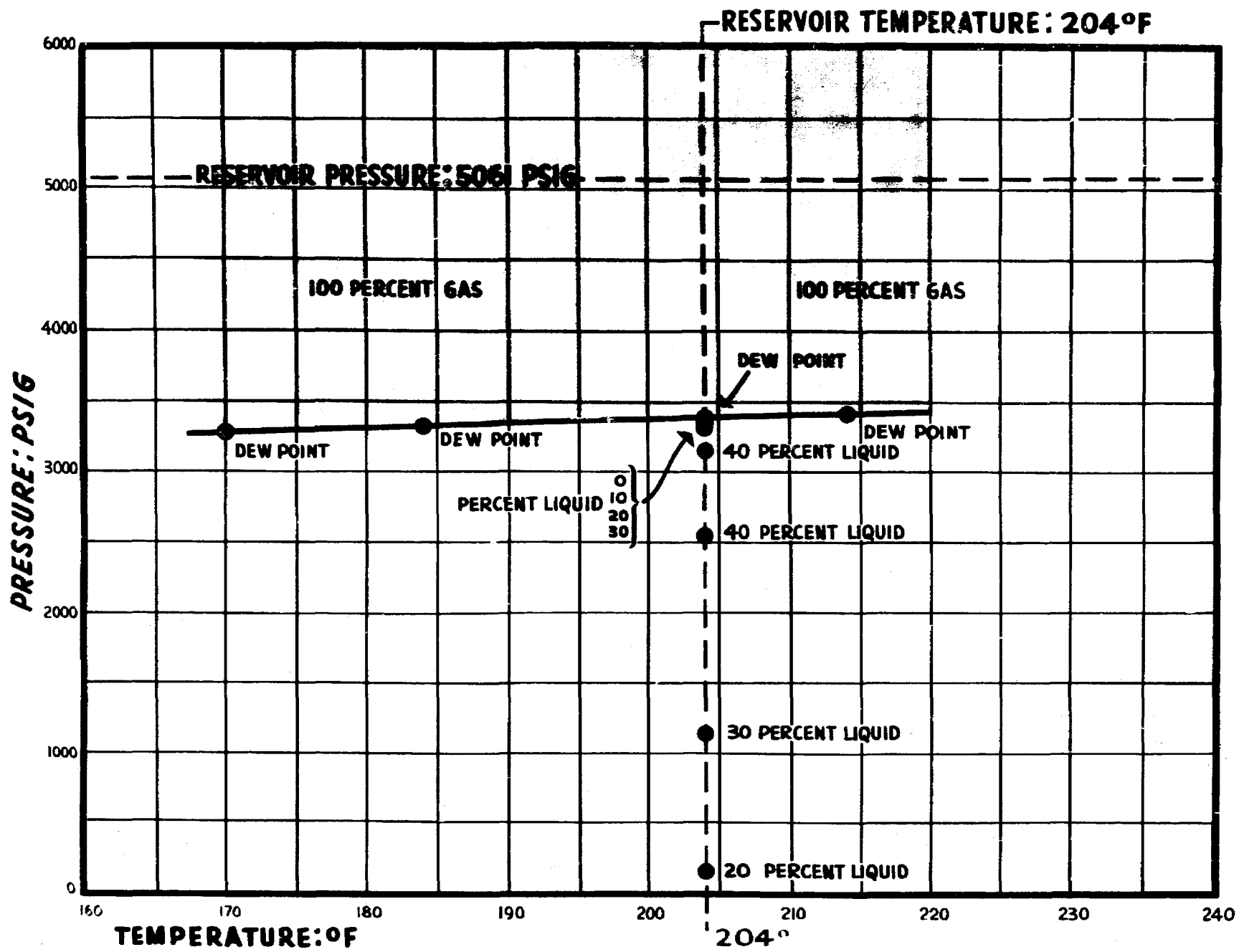
1. Corrected volume metered through ACT P. D. Meter, Bbls.	410.96
2. Corrected volume increase in 1000-Bbl surge tank	<u>199.82</u>
3. Total corrected volume through prover	601.87
4. Ending Dump Meter reading	3041.85
5. Starting Dump Meter reading	<u>2440.65</u>
6. Volume metered during test	601.20
7. Dump Meter Error, 601.20 - 601.87	- 0.67 Bbls.
8. Dump Meter Percent Error	- 0.11 %

**TEST NO. 2 STARTED ON 11-11-28:**

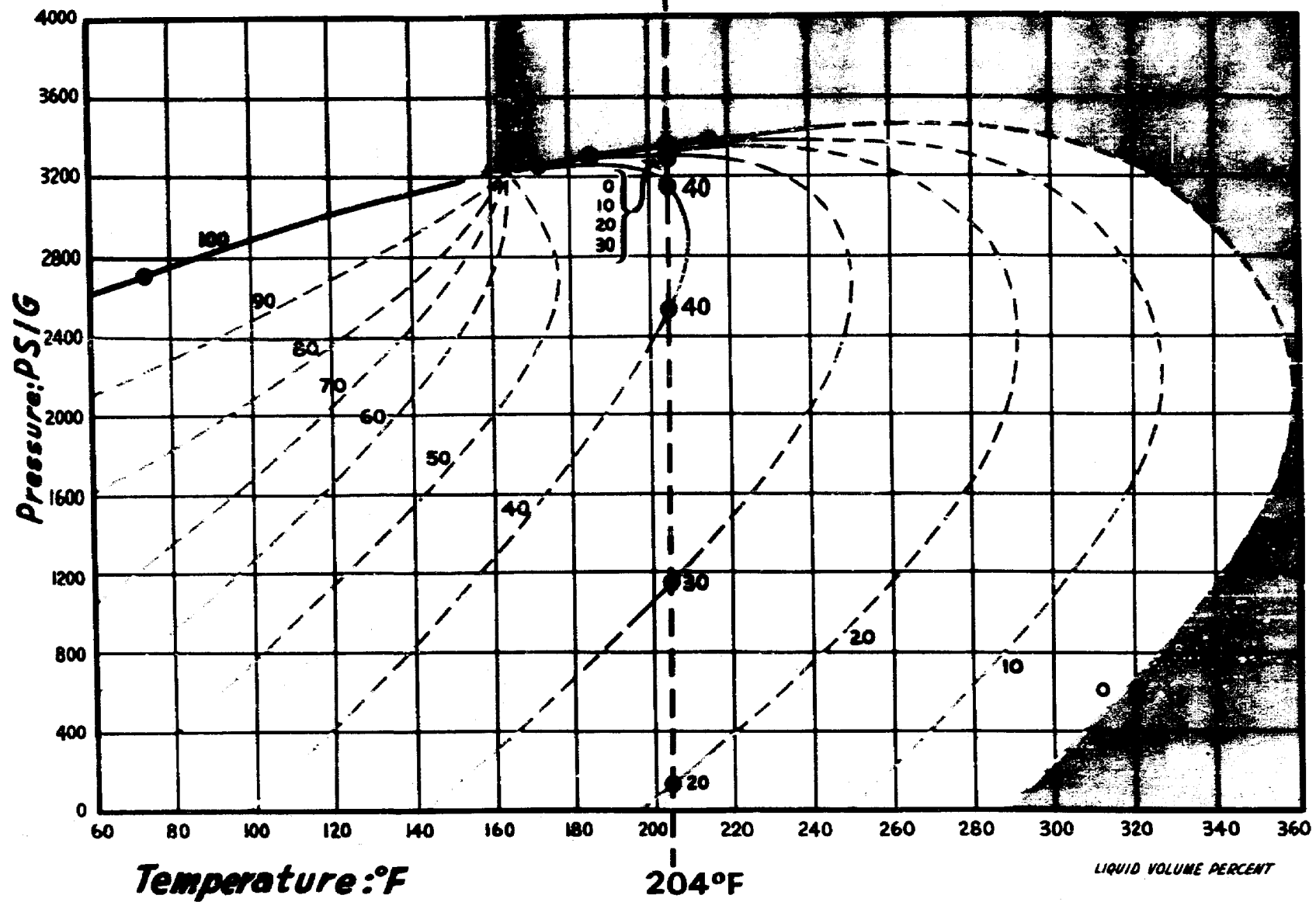
1. Corrected volume metered through ACT P.D. Meter, Bbls.	898.87
2. Corrected volume increase in 1000-Bbl surge tank	<u>28.80</u>
3. Total corrected volume through prover	927.67
4. Ending Dump Meter reading	3061.93
5. Starting Dump Meter Reading	<u>31374.10</u>
6. Volume metered during test	827.83
7. Dump Meter Error, 827.83 - 927.67	+ 0.36
8. Dump Meter Percent Error	+ 0.04

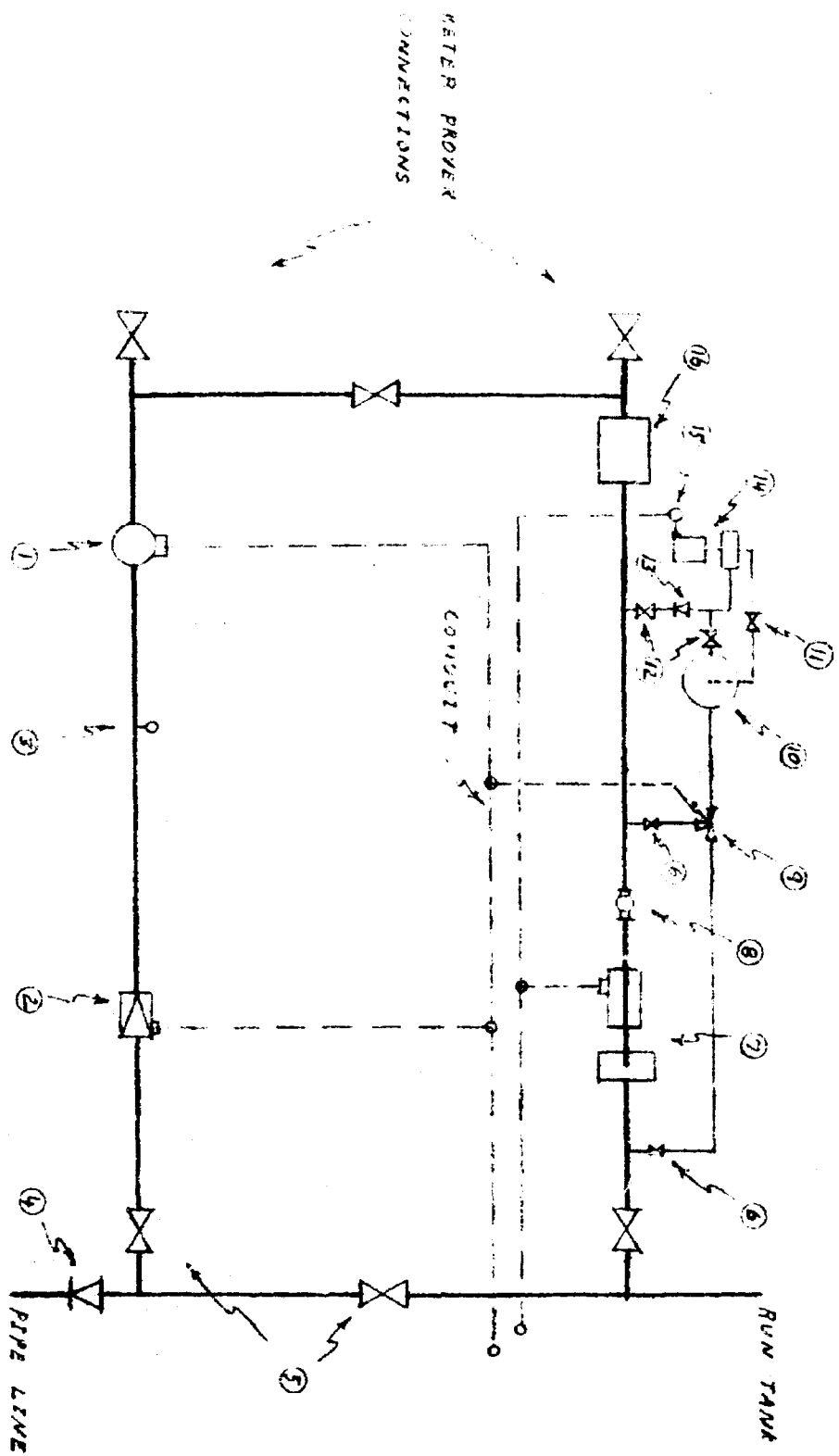
**RETROGRADE LIQUID VOLUME**  
**% of Hydrocarbon Pore Space**





RESERVOIR TEMPERATURE 204°F





METER PROVER  
CONNECTIONS

ACT SKID - VACUUM FIELD  
SHELL OIL COMPANY

11-7-58

EX