Case No.

1491

Application, Transcript,
Small Exhibits, Etc.

CASE 1491: Application of Pan Amer. for permission to commingle oil production from two separate leases.

Carlsbad
Needs spec. "meter-check" ltr of transmittal

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

August 19, 1958

COPY

Mr. Guy Buell
Pan American Petroleum Corp.
P.O. Box 1410
Ft. Worth, Texas

Dear Mr. Buell:

We enclose two copies of Order R-1240 issued August 14, 1958, by the Oil Conservation Commission in Case 1491, which was heard on August 13th.

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 you 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

ALP/DSN:bp
Encls.

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. 1491
Order No. R-1240

APPLICATION OF PAN AMERICAN PETROLEUM
CORPORATION FOR PERMISSION TO COMMINGLE
THE PRODUCTION FROM TWO SEPARATE LEASES
IN THE EMPIRE-ABO POOL, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on August 13, 1958, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 14th day of August, 1958, the Commission, a quorum being present, having considered the application and the evidence adduced, 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, Pan American Petroleum Corporation, is the operator of two separate basic leases in the Empire-Abo Pool, one lease comprising the N/2 and SW/4 of Section 11, the other comprising the E/2 of Section 10, both in Township 18 South, Range 27 East, NMPM, Eddy County, New Mexico.

(3) That the applicant proposes to commingle the production from both of the above-described leases in a common tank battery located on the basic lease in said Section 11 after separately measuring the production from each of the above-described leases by means of positive volume meters.

(4) That the metering system proposed by the applicant will provide an accurate and reliable means for measuring the amount of oil produced from each of the above-described leases, provided said meters are periodically checked for accuracy.

(5) That approval of the subject application will not cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Pan American Petroleum Corporation, be and the same is hereby authorized to commingle the production from all wells completed in the Empire-Abo Pool on two separate basic leases in a common tank battery, one of said leases comprising the N/2 and SW/4 of Section 11, the other comprising the E/2 of Section 10, both in Township 18 South, Range 27 East, NMPM, Eddy County, New Mexico.

PROVIDED, HOWEVER, That nothing contained herein shall be construed as authorizing the production of more than 16 wells into a common tank battery.

(2) That the applicant shall continuously and separately measure the production from each of the above-described leases by means of positive volume meters.

(3) That each of said positive volume meters shall be checked for accuracy at intervals and in a manner satisfactory to the Commission.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

MURRAY E. MORGAN, Member

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

No. 22-58

DOCKET: REGULAR HEARING AUGUST 13, 1958

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

ALLOWABLE: (1) Consideration of the oil allowable for September, 1958

(2) Consideration of the allowable production of gas for September, 1958, from six prorated pools in Lea County, New Mexico; also consideration of the allowable production of gas from seven prorated pools in San Juan and Rio Arriba Counties, New Mexico, for September, 1958.

NEW CASES

CASE 1491: Application of Pan American Petroleum Corporation for permission to commingle oil production from two separate leases. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the oil production from two separate leases in the Empire-Abo Pool. One lease comprises the N/2 and SW/4 of Section 11, and the other lease comprises the E/2 of Section 10, all in Township 18 South, Range 27 East, Eddy County, New Mexico. Applicant proposes to separately meter the production from each individual well prior to being run into common storage.

CASE 1492: Application of Amerada Petroleum Corporation for permission to institute a pilot water flood project. Applicant, in the above-styled cause, seeks an order authorizing it to institute a pilot water flood project in the Saunders Pool in an area covering the NE/4 SW/4 and the N/2 of Section 10 and the S/2 S/2 of Section 3, Township 15 South, Range 33 East, Lea County, New Mexico. Applicant proposes to inject water into the Pennsylvanian formation of the Saunders Pool through its State "SG" Well No. 1, located in the NE/4 SW/4 of said Section 10.

CASE 1493: Application of Magnolia Petroleum Company for permission to institute a pilot water flood project and for administrative procedures for the subsequent expansion of said water flood project and for the assignment of a special allowable to said project. Applicant, in the above-styled cause, seeks an order authorizing it to institute a pilot water flood project on its State Bridges Lease in the Vacuum Pool, which comprises all or portions of Sections 3, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25, 26, and 27, Township 17 South, Range 34 East, Lea County, New Mexico. Applicant proposes to inject water into the Grayburg-San Andres formation of the Vacuum Pool through six wells located in said Section 14. Applicant further proposes that administrative procedure be established for (1) expanding said pilot water flood project within the limits of said State Bridges Lease without notice and hearing and (2) assigning a project or lease allowable to the extent necessary for the proper operation of said project.

CASE 1489: Southeastern New Mexico nomenclature case calling for an order for the extension of existing pools in Lea, Eddy and Chaves Counties, New Mexico.

(a) Extend the Anderson Ranch-Wolfcamp Pool to include:

TOWNSHIP 16 SOUTH, RANGE 32 EAST, NMPM
Section 2: Lots 1, 2, 7, 8, 9, 10, 15, & 16

(b) Extend the Artesia Pool to include:

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM
Section 34: NE/4

(c) Extend the Bagley-Upper Pennsylvanian Gas Pool to include:

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM
Section 4: NW/4

(d) Extend the Blinebry Oil Pool to include:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 36: SE/4

(e) Extend the Bronco-Wolfcamp Pool to include:

TOWNSHIP 12 SOUTH, RANGE 38 EAST, NMPM
Section 35: SW/4

(f) Extend the Caprock-Queen Pool to include:

TOWNSHIP 14 SOUTH, RANGE 31 EAST, NMPM
Section 8: SW/4 SW/4
Section 23: SW/4
Section 26: NW/4

(g) Extend the Cave Pool to include:

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM
Section 4: SE/4

(h) Extend the Empire Abo Pool to include:

TOWNSHIP 18 SOUTH, RANGE 27 EAST, NMPM
Section 10: NE/4
Section 11: NE/4

(i) Extend the Jalmat Pool to include:

TOWNSHIP 23 SOUTH, RANGE 36 EAST, NMPM
Section 20: S/2

(j) Extend the Roberts Pool to include:

TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM
Section 7: SW/4 & W/2 SE/4

(k) Extend the Shugart Pool to include:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
Section 36: W/2 NW/4

(l) Extend the Tatum-Wolfcamp Pool to include:

TOWNSHIP 13 SOUTH, RANGE 36 EAST, NMPM
Section 7: NE/4

(m) Extend the Tubb Gas Pool to include:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
Section 14: NE/4

(n) Extend the South Vacuum-Devonian Pool to include:

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM
Section 27: W/2
Section 34: N/2
Section 35: NW/4

CASE 1490: Northwestern New Mexico nomenclature case calling for an order for the creation of a new pool and the extension of existing pools in Rio Arriba and San Juan Counties, New Mexico.

(a) Create a new oil pool for Gallup production, designated as the Gallegos-Gallup Oil Pool and described as:

TOWNSHIP 26 NORTH, RANGE 11 WEST, NMPM
Section 6: SW/4
Section 7: All
Section 8: S/2 & NW/4
Section 9: SW/4
Section 16: W/2
All of Sections 17 and 18
Section 19: N/2
Section 20: N/2
Section 21: N/2

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM
Section 1: S/2
Section 2: S/2
Section 3: S/2 & NW/4
All of Sections 4 and 5
Section 6: NE/4
Section 8: N/2 & SE/4
All of Sections 9, 10, 11, 12 & 13
Section 14: E/2
Section 24: N/2

TOWNSHIP 27 NORTH, RANGE 12 WEST, NMPM
Section 30: SW/4
Section 31: All
Section 32: S/2
Section 33: SW/4

TOWNSHIP 27 NORTH, RANGE 13 WEST, NMPM
Section 25: S/2
Section 35: NE/4
Section 36: N/2 & SE/4

(b) Extend the Aztec-Pictured Cliffs Pool to include:

TOWNSHIP 30 NORTH, RANGE 12 WEST, NMPM
Section 2: SE/4

(c) Extend the South Blanco-Pictured Cliffs Pool to include:

TOWNSHIP 24 NORTH, RANGE 3 WEST, NMPM
Section 17: SE/4

TOWNSHIP 26 NORTH, RANGE 5 WEST, NMPM
All of Sections 4, 5, & 6
Section 7: N/2 & SE/4
All of Sections 8 & 9
Section 23: SE/4
Section 24: SW/4

TOWNSHIP 26 NORTH, RANGE 6 WEST, NMPM
Section 1: All
Section 2: N/2
Section 12: N/2

TOWNSHIP 27 NORTH, RANGE 5 WEST, NMPM
All of Sections 31 & 32

TOWNSHIP 27 NORTH, RANGE 6 WEST, NMPM
Section 2: S/2
Section 11: E/2
Section 12: W/2
Section 13: NW/4
Section 16: All
Section 17: S/2
All of Sections 35 & 36

TOWNSHIP 27 NORTH, RANGE 7 WEST, NMPM
Section 4: All
Section 5: NE/4

(d) Extend the Tapacito-Pictured Cliffs Pool to include:

TOWNSHIP 25 NORTH, RANGE 3 WEST, NMPM
Section 9: SE/4
Section 16: NE/4

(e) Extend the Blanco Mesaverde Pool to include:

TOWNSHIP 26 NORTH, RANGE 5 WEST, NMPM
Section 8: W/2

TOWNSHIP 26 NORTH, RANGE 7 WEST, NMPM
Section 11: All

TOWNSHIP 27 NORTH, RANGE 8 WEST, NMPM
Section 32: S/2
Section 33: W/2

(f) Extend the Bisti-Lower Gallup Oil Pool to include:

TOWNSHIP 24 NORTH, RANGE 10 WEST, NMPM
Section 3: SW/4
Section 10: NW/4

TOWNSHIP 26 NORTH, RANGE 13 WEST, NMPM
Section 29: N/2 NW/4 & NW/4 NE/4

(g) Extend the Escrito-Gallup Oil Pool to include:

TOWNSHIP 24 NORTH, RANGE 7 WEST, NMPM
Section 15: SW/4 SW/4
Section 22: NW/4

(h) Extend the Horseshoe-Gallup Oil Pool to include:

TOWNSHIP 30 NORTH, RANGE 16 WEST, NMPM
Section 4: NE/4 SW/4

(i) Extend the South Blanco-Tocito Oil Pool to include:

TOWNSHIP 26 NORTH, RANGE 6 WEST, NMPM
Section 11: W/2 SW/4

ir/

Case 1491

FORM 470 2-57

Cooley
ov,
Dan

PAN AMERICAN PETROLEUM CORPORATION

MAIN OFFICE OCC Roswell, New Mexico
July 23, 1958

1958 JUL 25 AM 9:03 File: F-638-986.510.1

Subject: Request For Hearing
To Commingle Production
USA-Malco Refineries "A",
"B", "C" and "D" Leases,
Empire-Abo Field,
Eddy County, New Mexico.

New Mexico Oil Conservation Commission (3)
P. O. Box 871
Santa Fe, New Mexico

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

Gentlemen:

As discussed by Mr. W. J. Cooley and Mr. D. R. Currens in a telephone conversation today, we are sending the accompanying plats so that they may be attached to our application of July 21, 1958, File: F-636-986.510.1, for a hearing to commingle production from the subject leases.

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION

C. L. Kelley
District Superintendent

By J K Brown

Attachments

Case 1491

FORM 470 2-57

PAN AMERICAN PETROLEUM CORPORATION

MAIN OFFICE OCC
1958 JUL 23 AM 8:33

Roswell, New Mexico

July 21, 1958

File: F-636-986.510.1

Subject: Request For Hearing To Commingle Production USA-Malco Refineries "A", "B", "C" and "D" Leases, Empire-Abo Field, Eddy County, New Mexico.

New Mexico Oil Conservation Commission (3)
P. O. Box 871
Santa Fe, New Mexico

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

Gentlemen:

Pan American Petroleum Corporation respectfully requests an Examiner Hearing for the purpose of obtaining an order to permit oil produced from the following leases all located in Eddy County, New Mexico, to be commingled into common tankage. The leases, designated as "A", "B" and "C", are actually the same basic lease which is comprised of the N/2 and SW/4 of Section 11. The lease designated as "D" is a separate basic lease and is comprised of the E/2 of Section 10.

USA-Malco Refineries "A" Lease - Section 11, T-18-S, R-27-E
USA-Malco Refineries "B" Lease - Section 11, T-18-S, R-27-E
USA-Malco Refineries "C" Lease - Section 11, T-18-S, R-27-E
USA-Malco Refineries "D" Lease - Section 10, T-18-S, R-27-E.

At present there are four wells completed in the Abo formation in Section 11 and one well drilling to the Abo in Section 10. These wells are located as follows:

Section 11, T-18-S, R-27-E

USA-Malco Refineries "A" No. 1 - 660' from N, 1980' from W
USA-Malco Refineries "B" No. 1 -1980' from N, 660' from W
USA-Malco Refineries "B" No. 2 - 660' from N and W
USA-Malco Refineries "C" No. 1 - 660' from N and 1980' from E

Section 10, T-18-S, R-27-E

USA-Malco Refineries "D" No. 1 - 660' from N, 560' from E

Production from each individual well will be separately metered by use of positive volume meters before it is run into common storage with production from other wells. The meters to be used in this arrangement will be periodically calibrated and tested to insure that accuracy is maintained. Production from all wells will be checked each day by actual storage measurements and these measurements will be compared with the individual meter readings as an additional confirmation of meter accuracy. Comparison of these measurements will insure that each interest owner is properly credited with his proportionate share of production.

The accompanying plat shows the acreage involved in this application.

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION

C. L. Kelley
District Superintendent

Attachments

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE NO. 1491

TRANSCRIPT OF HEARING

AUGUST 13, 1958

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

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
August 13, 1958

IN THE MATTER OF:

Application of Pan American Petroleum Corporation for permission to commingle oil production from two separate leases. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the oil production from two separate leases in the Empire-Abo Pool. One lease comprises the N/2 and SW/4 of Section 11, and the other lease comprises the E/2 of Section 10, all in Township 18 South, Range 27 East, Eddy County New Mexico. Applicant proposes to separately meter the production from each individual well prior to being run into common storage.

CASE NO. 1491

BEFORE:

Mr. Edwin L. Mechem
Mr. Murray Morgan
Mr. A. L. Porter

TRANSCRIPT OF HEARING

MR. PORTER: Take up next Case 1491.

MR. PAYNE: Application of Pan American Petroleum Corporation for permission to commingle oil production from two separate leases.

MR. BUELL: May it please the Commission, we will have one witness.

(Witness sworn.)

DAN CURRENS

called as a witness, having been first duly sworn, testified as

follows:

DIRECT EXAMINATION

BY: MR. BUELL:

Q Mr. Currens, state your full name, by whom you are employed, in what capacity, and in what location, please?

A Dan Currens, employed by Pan American Petroleum Corporation as reservoir engineer at Roswell, New Mexico.

Q Mr. Currens, you have testified at prior Commission hearings and your qualifications as a petroleum engineer are a matter of record, are they not?

A Yes, sir, they are.

MR. BUELL: Are his qualifications accepted?

MR. PORTER: Yes, sir.

Q What leases are involved in this application, Mr. Currens?

A The leases involved in this application are two leases in Eddy County, New Mexico, one being in Section 11, Township 18 South, Range 27 East, that lease being the N/2 and SW/4 of that section, and the other lease being the E/2 of Section 10, Township 18 South, Range 27 East.

Q Mr. Currens, I hand you now what has been marked as Pan American's Exhibit No. 1. What is that exhibit, please, sir?

A Exhibit No. 1 is a plat showing the two leases in question here today, that we are asking to commingle production from, and the adjacent area, surrounding area around these two leases. One lease, the one in Section 11 is outlined in red, and

the one in Section 10 is outlined in green.

Q All right, sir. Is there any more detail on that exhibit that you would like to bring out at this time? Are there any lease divisions shown on that?

A Yes, sir. I might go ahead and mention here that in Section 11, you'll see three 80-acre tracts designated as "A", "B" and "C", and in Section 10, you'll see an 80-acre tract that is designated as "D". I will be referring to these designations later. They are simply lease accounting designations within our company.

Q From what pool is production from these two leases obtained?

A From the Abo, Empire-Abo. I might add here that at present only the NW/4 of Section 11 is in the defined Empire-Abo Pool. However, in a nomenclature case on this docket today, which is 1489, as I recall, -- Yes, Case 1489, there is a proposed extension to the Empire-Abo Pool that will add the NE/4 of Section 10 and the NE/4 of Section 11.

Q And as a result of that case which will be heard today, production from these two leases will all be classified in that pool? A Yes, sir.

Q And both leases are producing from a common source of supply, the same reservoir? A Yes, sir.

Q Briefly, what is the request we are making here today, Mr. Currens?

A We are asking that we be allowed to commingle production from these Abo wells in Section 11 with wells in Section 10, and putting it into a tank battery after separate metering.

Q Where will this tank be located, on which lease?

A Section 11; on the NW/4 of that lease.

Q And is that battery installed and being used in Section 11?

A Yes, sir, that battery is now in there and taking production from the Section 11 wells.

Q Where is it located in Section 11?

A The NW/4.

Q I hand you now what has been marked as Pan American's Exhibit No. 2. What is that exhibit?

A Exhibit No. 2 is a sketch showing the present battery facilities at the battery site in Section 11. This is a simplified diagram of the equipment that we now have installed.

Q Would you describe such equipment just as briefly as you possible can?

A Well, you can see here the storage tanks, the lines from the wells into separators, separators for each of the different accounting designations, and test separator facilities, and lines from the separator tc meters, and lines for test and normal fill purposes from the meters to the tanks.

Q Would you just briefly run through the process or the procedure by which oil is handled at that battery at this time?

A Well, I think I could probably do that easiest by taking one of these and going through it. Let's take this "C" accounting designation that we have here, which is up at the top on the right. We have a flow line from the Malco "C" No. 1 coming into the "C" separator. The line from the separator to the meter is for either test or normal fill of the tanks into the storage facilities and into the tanks themselves. Also, you can see we have the test facilities there, and we can route the production through the test separator and test meter separately from the "C" meter.

Q All right, sir. Would the same flow pattern generally be the same for the other accounting designations?

A Yes, sir, it would. That's just one. The others are all similar.

Q Now, this installation is currently in use handling Section 11 production, is that not right?

A Yes, it is.

Q Are these meters at this time so located so that the only oil that reaches them is pipeline oil?

A Yes, sir, they are located in such a way that only pipeline oil will be metered. Any treating that might be necessary on any of the wells will be done prior to the time that it gets to that meter, so only pipeline oil will be going through that meter.

Q I hand you now what has been marked as Pan American's

Exhibit No. 3. What is that Exhibit?

A Exhibit 3 is essentially the same thing we saw on Exhibit 2. The blue lines are all the same. However, there are certain lines on here in red that represent the proposed facilities for what we are asking for here today. In other words, the separator, metering lines and installation for bringing production in from Section 10 wells.

Q Will you briefly discuss the additional facilities that are reflected there in red?

A Well, this is, of course, rather simplified. We have the flow line coming into the separator, which would bring the production from the Section 10 wells into the separator, from the separator into the meter where it will either be routed through the test or normal fill route to the battery itself. Incidently, I don't show it here, but we would have a similar hookup so that we could send production through separate test facilities, also separate test meters.

Q Let me ask you this, Mr. Currens, in the mechanical installation as proposed, would it be possible to run or flow oil production from Section 10 through a Section 11 meter?

A No, sir, it wouldn't be.

Q All right, sir. By the same token, would it be possible under the proposed mechanical installation to flow Section 11 oil through a Section 10 meter?

A No, sir. The only place oil can be -- that would be

from Section 10. It could only go through a Section 10 meter or test facility.

Q With respect to the meter location for the Section 10 production, will it also be so located that only pipeline oil will reach that meter and be metered?

A Yes, sir. Again, there we would locate that meter so that any necessary treating would be done ahead of that meter. Only pipeline oil would go through it.

Q What type of meters are we currently using to handle our Section 11 production?

A We are using National positive meters.

Q Will we use the same meter to handle the Section 10 oil?

A Yes, sir, National Tank Company meter.

Q Is that a proven piece of oil field equipment?

A Yes, sir. It has been in use -- we have been using it several months, and it's a good piece of equipment. We are satisfied with it. And, incidently, you may not be familiar with that particular meter. I have some National brochures here that might explain the operation to you, if you are not familiar.

Q Mr. Currens, what is your personal opinion of this equipment, this meter, with respect to accuracy and reliability?

A Well, sir, as I said before, we have been using it several months on this Section 11 production, and we found it to be very reliable.

Q Have we conducted tests of these meters that are currently

installed?

A Yes, sir, we made individual tests on these meters. We are operating the meters right now with an accuracy as good as our hand manual gauging accuracy of our tanks. We are well within that accuracy at this time.

Q In other words, our experience has certainly shown that they are reliable and accurate?

A Yes, sir.

Q Mr. Currens, if the Commission approves this application today, will continuous checks as to accuracy be made on the meters?

A Yes, sir. It will be done in two ways. I might point out here that in addition to metering the oil through the meters, we will continue to make daily manual gauging of the tanks to check that production actually into the tanks against the meter readings. This ought to afford us a very good check. In addition to that, we have -- we'll have a meter prover vessel there, which can be used for very accurate test of the meters themselves.

Q Now, do you think that this program that you just outlined will assure continued accuracy of the meters?

A Yes, sir. We will run those meters through the prover on a routine basis.

Q Let me ask you this. In your opinion, will approval of this request serve conservation?

A Yes, sir, I believe it will in that we should enjoy a longer life, greater ultimate recovery of oil from these leases,

due to a lower check limit due to the advantages of the checks and operations, where we have a consolidated battery of this type.

Q All right, sir. Now, with respect to the protection of correlative rights, do you feel that the installation as proposed will adequately protect the rights of all parties in interest?

A Yes, sir, I believe it certainly will. We are separately metering the production from each lease, and that should afford good protection of correlative rights.

MR. BUELL: That's all I have at this time.

MR. PORTER: Anyone else have a question of Mr. Currens? Mr. Morgan.

CROSS EXAMINATION

BY MR. MORGAN:

Q Are there actually divided royalty interests between Section 11 and Section 10?

A Yes, sir. Part of this is one hundred percent Pan American, part of it is fifty-fifty, Pan American Malco. This is all U. S. basic royalty. U.S.G.S. has okayed our arrangement here, the basic royalty. There are some overriders in here.

MR. BUELL: But only one royalty owner as such, U.S.G.S.

Q (By Mr. Morgan) There are separate overriding royalty interests?

A Yes, sir.

MR. BUELL: Yes, sir.

MR. PORTER: Anyone else have a question of Mr. Currens?

QUESTIONS BY MR. COOLEY:

Q Mr. Currens, has U.S.G.S. and all other persons or agencies owning an interest in these two leases been notified of this application?

A They have all been notified, of course, by the advertisement, and we have written each individual owner of any interest in either of these leases.

Q Have you received any reply or indication -- concurrence from U.S.G.S.?

A Yes, sir. We have a letter from U.S.G.S. saying what their requirements are for the separate meters for the two leases, which we are doing here.

MR. BUELL: If the Commission so desires, we will offer that as an exhibit, if you would like to have it in the record.

MR. PORTER: Do you have a copy of that letter?

MR. BUELL: Yes, sir.

Q (By Mr. Cooley) Mr. Currens, will payment to the various interest holders be made on the basis of the meter readings?

A Yes, sir.

Q Will that be a hundred percent of meter readings, or will there be a shrinkage factor applied or some type of factors applied to the meter readings?

A I don't believe we will have much of a shrinkage here, sir. We, as I say, have checked these into tank production and have checked those within the accuracy of gauging our tanks. I

believe it will be on the meter reading, sir. Of course, we are running a continual cross check by our gauges of total production.

Q Wouldn't it be normal for the runs from the tanks, runs to pipelines on the basis --

A I am talking about, of course, allocated back by the meter readings to the actual runs too. Pipeline, yes, sir.

Q It would be percentage, each meter would bear a percentage to the total runs, is that right?

A Yes, sir. That would be the easiest way to work it. They should, of course, always check, go down the line.

Q But basically the participation will be found upon the meter reading?

A Yes, sir.

Q Have you received any objection to this proposed application from any interest holder?

A No, sir, we have not.

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

QUESTIONS BY MR. UTZ:

Q Mr. Currens, can you give me the exact location of the tank battery in Section 11?

A Yes, sir. That's located in the NE/4 of the NW/4 of Section 11. It is south of that Well "A" No. 1. I might point out here, of course, we are not, I hope we are not fully developed in this area at this time, and we may want to add some to this battery as it now stands; additional tanks, depending on which

way our trend might run here. We might be looking down the road a little bit to shifting the location of that battery at some later date.

Q Will Section 11 oil have separate test separator?

A Yes, sir. I believe that is the proposal that we have here, a separate test facility for each one. We intend to keep these always completely separate and distinct so that there is no way of getting 10 into 11 or vice versa.

Q That is what you intended to show on your Exhibit 3 --

A Yes, sir.

Q -- where you have the word "test?"

A Well, you'll note here that all of these lines have their own test facilities, and normal test facilities from each of the meters in addition to the completely separate test facilities for the lease as a whole. We've got a great deal of flexibility for testing here.

Q The oil from Section 10 and Section 11 cannot in any way commingle with any other oil?

A I don't know how it could, sir.

MR. PORTER: What type of depth, approximately six thousand feet?

A Six thousand. About six thousand, fifty-nine hundred, so on.

MR. PORTER: Does anyone have a question?

A I might mention the discovery well was six thousand and

fourteen.

QUESTIONS BY MR. FISCHER:

Q Mr. Currens, I want to find out what the size of the present tanks are.

A They are thousand barrel tanks.

Q And there are only two?

A There are two, yes, sir.

Q Do you contemplate that they will have to be extended when this "D" 1 and proposed "D" 2 come in there?

A I don't believe they will for the "D." I certainly hope we have to set another tank down there, though.

Q How much oil is flowing into that tank battery at the present time?

A Well, the depth factor is 1.77. They are all top allowable wells.

Q That is about sixty-six barrels a day, per well, isn't it?

A Sixty-two barrels.

Q Sixty-two for four wells?

A Sixty-two for four wells, yes, sir. That would be one hundred and -- two hundred and forty-eight; I am about a hundred short there.

Q If you put those -- A Yes, sir.

Q How many days storage do you have with each tank -- in each tank, how many days do you think it will take?

A Sixty-two times six. And you say how many barrels?

Q Three seventy-two, have about three days.

A Have about three days, roughly.

MR. FISCHER: That is all.

MR. PORTER: Anyone else have a question of Mr. Currens? You may be excused.

(Witness excused.)

MR. BUELL: May I offer at this time our Exhibits 1 through 4 inclusive?

MR. PORTER: Without objection, Exhibits 1 through 4 will be entered into the record.

Anyone have any statement to make, any comments in the case? We will take the case under advisement and take a ten minute recess.

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, J. A. Trujillo, 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 by me and/or 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 25th day of August 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

J. A. Trujillo
Notary Public

My Commission Expires:

October 5, 1960

Page________

NEW MEXICO OIL CONSERVATION COMMISSION

Mabry Hall

Santa Fe, NEW MEXICO

REGISTER

HEARING DATE Cabaniss August 13, 1958 TIME: 9:00 a.m.

NAME:	REPRESENTING:	LOCATION:
Roy C. Adams	Shell	Roswell
D. R. Currens	Pan Am	Roswell
Glenn King	" "	"
Guy Buell	" "	"
R. H. Chetwood	Cities Service Oil Co	Bartlesville, Okla
Wm. E. Bates	The Texas Co	Midland, Tex
R. F. Montgomery	OCC	Hobbs N.M.
William R Loar	Sunray Mid-Cont	Tulsa, Okla.
R. L. Adams	Continental Oil	Roswell, NM.
R. E. Brosehatt	Amerada Pet. Corp.	Hobbs, N.M.
James E. Sperling	Magnolia	Albuquerque, N.M.
C. J. Evans	Magnolia	Hobbs, N.M.
Booth Kellough	Gulf	Denver
H. L. Bayer	"	Fort Worth
W. V. Kastler	"	Roswell
[illegible] Kemper	"	Fort Worth
R L Denton	Magnolia	Midland
J. E. McHale	Magnolia Pet Co	Dallas
D. R. Wall, Jr.	Magnolia Pet Co	Dallas

NEW MEXICO OIL CONSERVATION COMMISSION

Mabry Hall

Santa Fe, NEW MEXICO

REGISTER

HEARING DATE August 13, 1958 TIME: 9:00 a.m.

NAME:	REPRESENTING:	LOCATION:
M. T. Smith	Shell Oil Co	Midland
Tom Steele	The Ohio Oil Co.	Midland, Texas
R. L. Shoemaker	Indiana Oil Pur. Co.	Midland
E. Flowers Jr.	Atlantic	Dallas
Jack Vickrey	Magnolia Pet. Co.	Dallas
Wm. Bell	Gulf Oil	Denver
Bill McComb	Malco.	Roswell
Robert A. Brennan	"	"
R. L. McPherson	McWood Corp	Midland
Ben H. Parker	Frontier Ref Co	Denver
Toley McElvain	Sinclair [illegible] oil	Roswell
Marvin R. Griffin	Permian Oil Co	Midland
W. H. Jetton	Atlantic	
O. H. Cloud	Gulf	Houston
R. M. Wiese	Gulf	Denver
Horace N. Burton	Sinclair Oil & Gas Co.	Midland
H. B. Bushnell	Amerada	Tulsa

NEW MEXICO OIL CONSERVATION COMMISSION

Mabry Hall

Santa Fe, NEW MEXICO

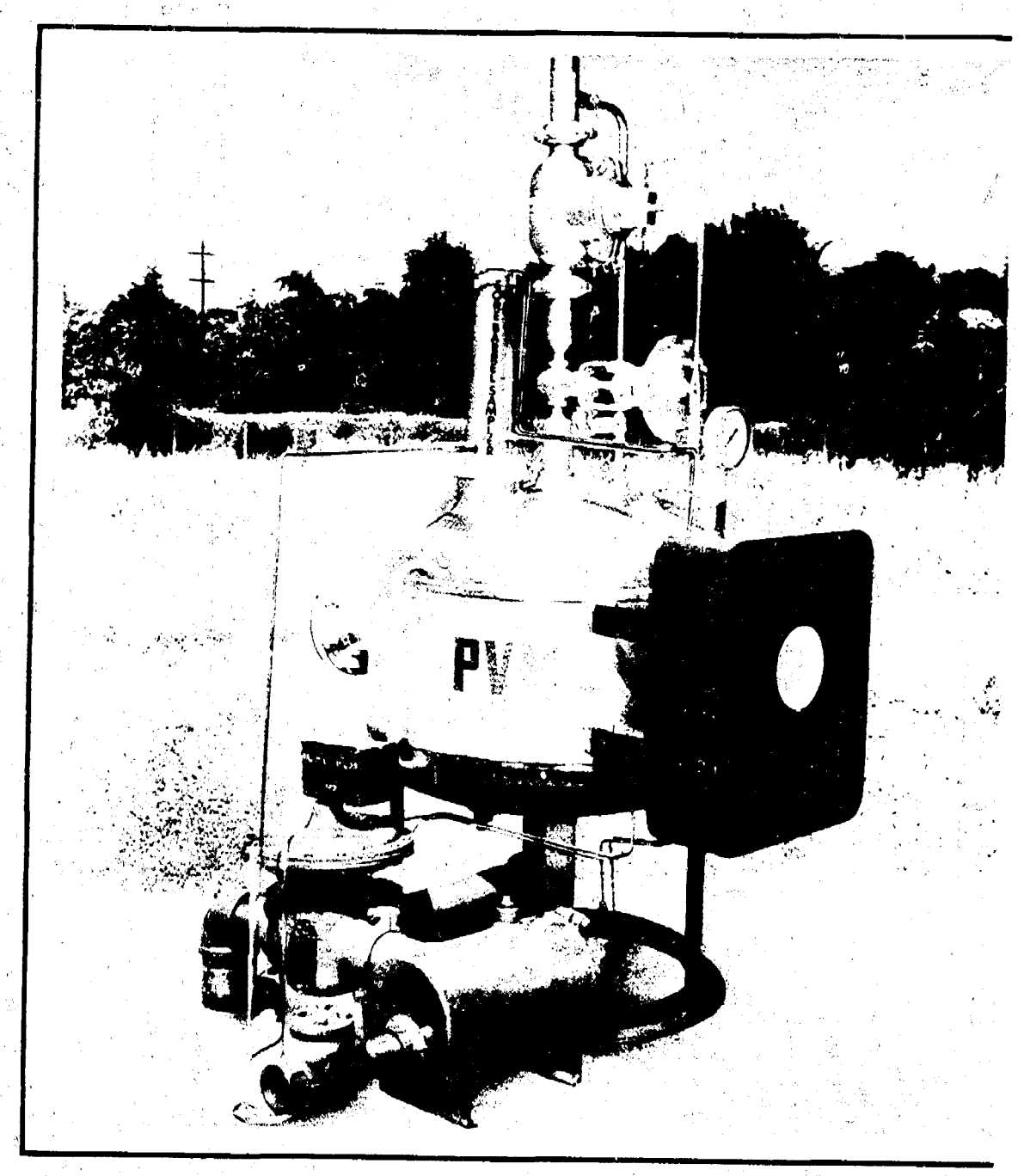
REGISTER

HEARING DATE August 13, 1958 TIME: 9:00 a.m.

NAME:	REPRESENTING:	LOCATION:
Eric Engbrecht	O.C.C.	Hobbs
W. D. Mitchell	Gulf	Durango
R. T. Wright	El Paso Natural	Jal
Sam F. Weir	Cactus Pet. Inc.	Midland
L. A. Fearn	Humble Pipe	✓
Bill Sullivan	El Paso Nat. Gas Products Co	Farmington, N. Mexico
A. R. [illegible]	NMOCC	Aztec
Ewell N. Walsh	El Paso Nat. Gas Products Co	Farmington
E. C. Arnold	NMOCC	Aztec
[illegible]	Southern Union Gas	Dallas
[illegible]	El Paso Natural Gas	El Paso
M. L. Armstrong	OCC	Artesia
H. C. [illegible]	[illegible]	[illegible]
J. E. [illegible]	TP Coal & Oil	Midland
Frank E. [illegible]	State Engr. Office	Santa Fe
Paul S. Johnston	Buckle Oil Co.	Hobbs

PVM*

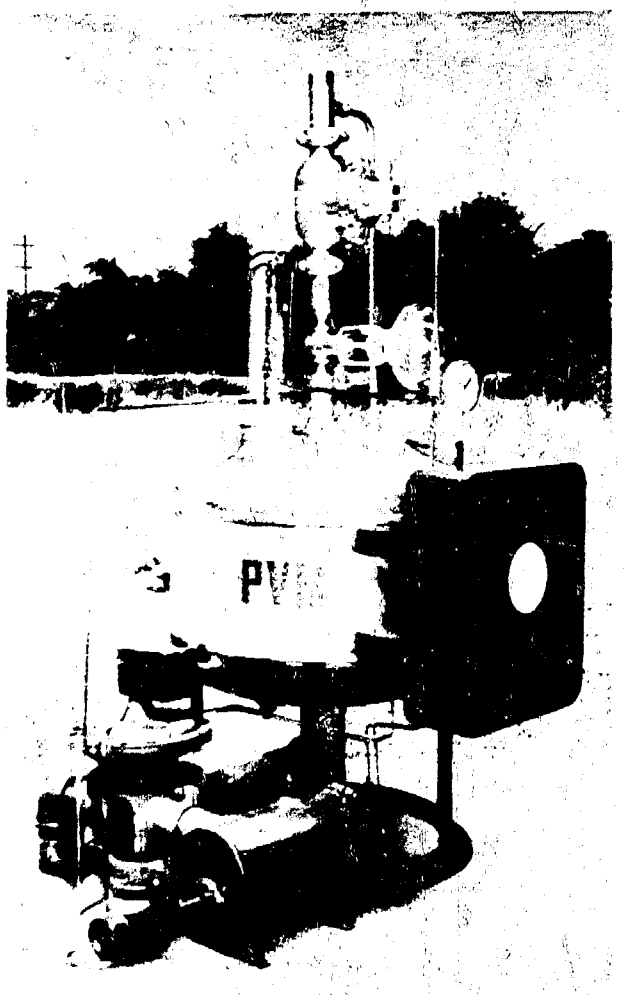
*POSITIVE VOLUME METERING



POSITIVE VOLUME METER

A necessity of oilfield liquid metering brings to mind immediately this thought: "I wish I had a liquid meter that is positive . . . like filling individual oil drums brim full and some way to count them as they are carried away!"

Never before has it been possible to answer that natural wish. But now National Tank Company offers such a positive meter and appropriately calls it the POSITIVE VOLUME METER (PVM*).



The PVM incorporated in a National Separator provides the producer with one vessel which assures the ultimate in separation efficiency and exact measurement of liquid handled for the given set of conditions.

The PVM meter is liquid packed, sampled, and then counted as the liquid is discharged. Its accuracy is indisputable as to volume of liquid measured at the pressure-temperature condition of operation.

A very unique feature is the automatic sampling of each cycle which takes out a pencil-thin core and saves it in a separate container attached so that exact content of BS&W can be determined later.

The PVM may be calibrated for an exact volume with compensation made for a given oil composition, temperature, and pressure.

The PVM Meter with Sampler is the most important development in oilfield liquid metering yet offered.

While the Approximator Class of cyclic volume metering is not new to the oil industry (National and others put this type meter in service as early as 1936) the accuracy of this unit has always been questioned. The questionable accuracy arises from the fact that the Approximator Class Meters are dependent upon:

1. The response of the float which is a function of the rate of metering (entry and exit of fluid) and fluid specific gravity.

2. Actuation of a liquid level controller at exactly the same level each time which is dependent on float action and sensitivity or refinement of the instrument.

3. The fast and uniform action of booster controls, if any, and of the valve or valves.

4. Constant friction throughout the float assembly. The PVM eliminates these inherent inaccuracies.

CORE BARREL SAMPLER*

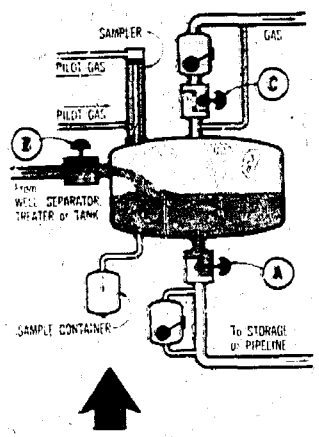
The Core Barrel Sampler used in conjunction with the PVM completes the requirements for metering oil field liquids. The Sampler cuts a core vertically through the liquid and leposits same in a container. Thus an exact and representative core is taken from a fixed volume. The composite sample when analyzed will give the true percentage of oil, water and/or emulsion that has been metered.

*PVM is the trademark of National Tank Company

*Core Barrel Sampler is the trademark of National Tank Company

THE NEW NATIONAL "POSITIVE VOLUME METER" WITH CORE BARREL SAMPLER

(Patent Applied For)



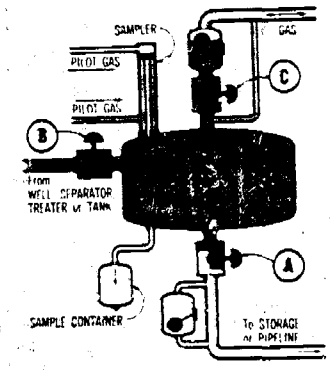
PVM FOR POSITIVE MEASUREMENT OF LIQUID FROM WELL, SEPARATOR, TREATER OR TANK

PVM FOR POSITIVE DETERMINATION OF WELL PRODUCTION FOR PRORATION OR CO-MINGLING

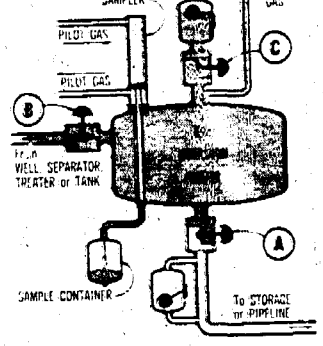
PVM AND CORE BARREL SAMPLER FOR POSITIVE DETERMINATION OF B S & W CONTENT

The metering chamber is filled with liquid with solution dissolved gas at the temperature and pressure under which it is operated. No free gas can void space for liquid within the vessel. The positive proportion of oil, emulsion and water water will be sampled as they exist, only after the vessel is filled and just prior to release of the liquid from the chamber.

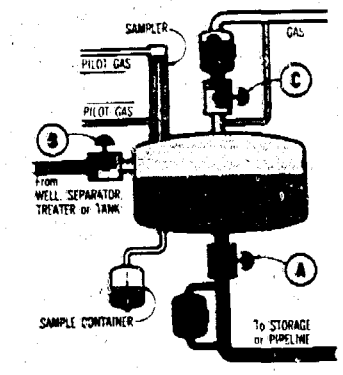
1. FILLING. Valve A is closed to retain liquid in metering chamber. Valve B is open to admit liquid and Valve C is open. The Sample Tube is up out of the stream.



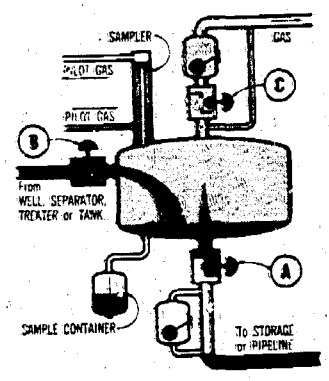
2. POSITIVE VOLUME ISOLATION: Valve A is still closed; meter fills past Valve C which closes. Valve B closes, assuring meter to be full of liquid. Note the volume trapped by Valves A, B and C is positive and not affected by float control levels.



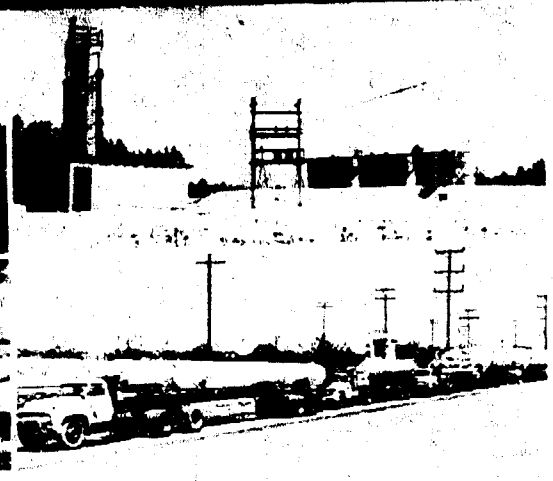
3. "CORE BARREL SAMPLING" OF LIQUID: Valves A, B and C are closed. Sample tube is driven vertically through the liquid, assuring a representative, proportional sample of the entire content as it exists in the vessel. Sample is discharged to a container for future analysis. Sampler is retracted.



4. DISCHARGING AND RECORDING: Valve A now opens permitting vessel to empty the positive volume. The cycle counter is actuated. Valves B and C are still closed.



5. VALVES REPOSITION: Valve A closes; valve C is opened, dropping fluid into meter for measurement with next volume and Valve B opens for new cycle.



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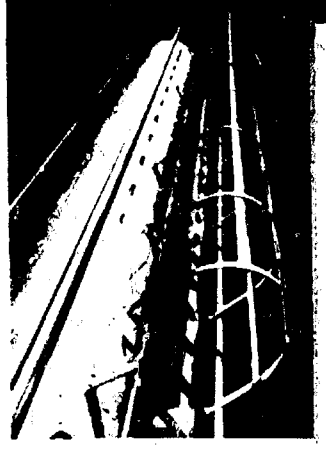

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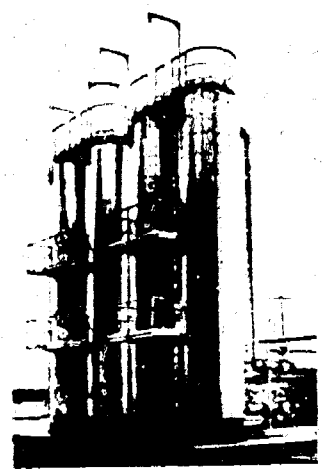

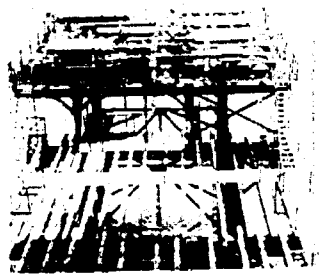

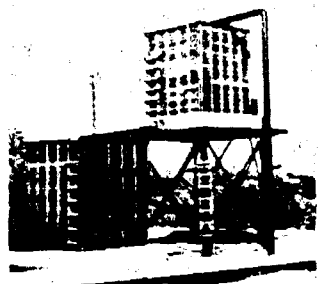

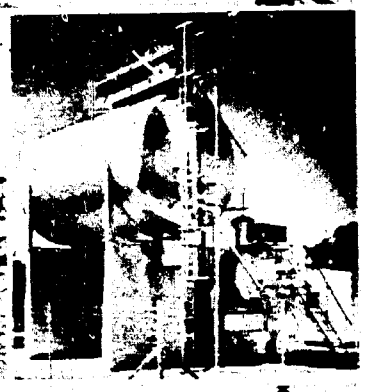

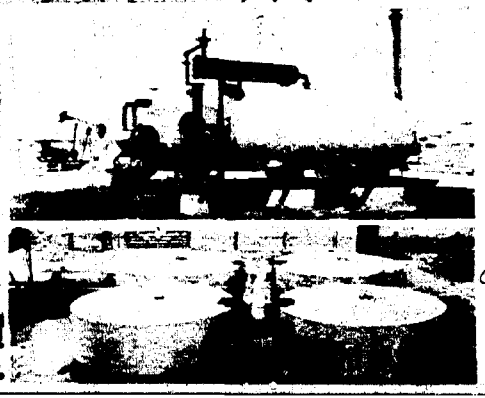

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 6721
Roswell, New Mexico

August 8, 1958

Pan American Petroleum Corporation
Box 899
Roswell, New Mexico

Attention: Mr. C. L. Kelley

Gentlemen:

Your letter of July 17, 1958, requests approval to commingle oil produced from your Abo formation wells on leases Las Cruces 065478(b) and 067858 in sections 10 and 11, T. 18 S., R. 27 E., N.M.P.M., Eddy County, New Mexico.

You advise that the individual wells will be metered separately before being run into common storage and also that approval will be necessary from the New Mexico Oil Conservation Commission.

We have no objection to the method you have proposed. Our requirements are that the production from each lease be continuously metered separately and that the necessary approval be obtained from the New Mexico Oil Conservation Commission.

Very truly yours,

Edwin M. Thomasson

EDWIN M. THOMASSON
Acting Oil and Gas Supervisor