Case No.

1415

Application, Transcript,
Small Exhibits, Etc.

[redacted]

Sundays —
will need special
letter of [redacted]

[redacted]

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

IN THE MATTER OF: Case No. 1415

TRANSCRIPT OF PROCEEDINGS

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

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

IN THE MATTER OF:

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

Case 1415

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF PROCEEDINGS

MR. UTZ: We will take up next Case 1415.

MR. PAYNE: Case 1415: Application of Phillips Petroleum Company for authority to effect an oil-oil dual completion and to commingle the production from two separate pools.

MR. MORGAN: I am Forrest Morgan, representing Phillips Petroleum Company. I am the only witness and would like to be sworn.

(Witness sworn.)

MR. MORGAN: I have not previously qualified before the Commission.

FORREST C. MORGAN

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

DIRECT EXAMINATION

By MR. PAYNE:

Q Would you state your name and position, please?

A My name is Forrest C. Morgan, assistant district superintendent at the Hobbs, New Mexico, district.

Q What is your educational background?

A Bachelor of Science degree in General Engineering from the University of Oklahoma.

Q What year was that?

A 1948.

Q What have you done since that time?

A I have been with Phillips in engineering work since graduation.

MR. PAYNE: Are his qualifications acceptable?

MR. UTZ: They are.

Q Would you proceed, please?

A Yes, sir. This application is to allow dual completion of our Santa Fe Well No. 18 located 660 feet from the North line and 1980 feet from the East line, Section 34, Township 17 South, Range 35 East, Lea County, New Mexico. The well is currently a

top allowable oil producer from the San Andres formation, and we wish to dual the well so as to produce from both the San Andres and Yates formations. I will now pass out Exhibit "A", and in the interest of time, I would like to pass out Exhibits "A" and "B" at the same time.

MR. UTZ: I wish you would, please.

A Exhibit "A" is a plat showing the offset operators and producing wells in the area around the subject well. The Phillips Petroleum Company acreage is shown in blue and the subject well is colored in red. This well has been selected for dual completion based on offset Yates producers to the north and west with low gas-oil ratios. Based on drilling time, sub-sea correlation, and sample logs, we anticipate the Yates to be productive in this well between 3050 feet and 3150 feet. A gamma ray-neutron log will be run prior to the actual dual completion operations.

The well has 9-5/8 inch casing set at 1633 feet with cement circulated to the surface. This will afford adequate protection to any fresh water zone.

7-inch casing is set at 4185 feet with 400 sacks of cement. The theoretical cement top is at 1260 feet which will assure separation between the two zones involved in the dual completion.

Exhibit "B", which I have already passed out, with the colors there, I'll explain here. Our plan for dual completion is to pull rods and tubing, perforate the Yates formation between 3050 and 3150 feet and set a permanent production packer at

approximately 4175 feet. The tubing and rods will then be run in the manner shown on Exhibit "B". Any required treatment of the Yates will be done after all tubing strings are run and landed. It may be noted that our proposed hookup will afford positive separation between the two zones during all future anticipated well servicing and workover requirements. It will also afford the desirable features of single completed wells such as pump submergence and provisions for venting free gas.

The brown color on Exhibit "B" shows the San Andres oil entering the pump and being discharged into hollow polished rods through a blind cage on top of the pump. The oil progresses upward to a point above a metal pack-off assembly. From there, it enters the sucker rod - tubing annulus and flows to the surface in the conventional manner. The pump will be set near total depth and adequate space will be provided to permit maintaining a pumping fluid level below the packer. San Andres free gas, shown in yellow, will be vented to the surface through a 3/4 inch or larger tubing string. I would like to emphasize that the metal pack-off assembly shown on the schematic pertains to San Andres production only and is not related to zone separation. It will be noted that San Andres pump jobs and rod jobs can be performed without any possibility of zone communication. If a tubing leak should occur in the plastic coated 2 inch CS Hydril string above the packer, it can be replaced without possibility of communication by closing the Garret sleeve below the packer, running a blanking choke in the seating nipple,

and releasing the tubing from the C-2 latching receptacle. Repair on the 3/4 inch or larger tubing could also be performed without commingling by this same procedure. Repair of the 2 inch EU tubing serving the Yates can also be performed without possibility of commingling. It may be noted that the Yates can be artificially lifted at any future date simply by running a rod string and pump. The hookup will afford pump submergence and provisions for venting Yates free gas as in any singly completed well.

The hookup will also permit corrosion inhibition of both zones if later required. This equipment has been used in other similar installations by Phillips Petroleum Company in Okalhoma and Texas, and is considered an accepted method of producing dually completed wells.

We plan to conduct a packer leakage test after dual completion of the well and at other intervals as specified by the Commission.

Based on other operators information, we anticipate a bottom-hole pressure in the Yates of approximately 1700 psi. The San Andres bottom-hole pressure now approximates 775 pounds per square inch. The packer will easily handle this small pressure differential.

The Yates oil gravity is 36 degrees API and the San Andres gravity is 37.6 degrees, which will permit detection of any subsurface communication.

We propose dual completion of this well rather than a new Yates single completion because we consider our proposed arrangement

sound and because a savings of $10,157 will result by dual completion rather than drilling a separate Yates well.

As a further part of this application, we propose to produce Yates and San Andres crudes into common storage. The Yates oil will be produced and measured through a metering separator incorporating a cyclic type dump meter. San Andres production will be determined by deducting Yates oil from the total gauged production.

Royalty interests are identical on the Yates and San Andres zones. The only basis for separately measuring the two crudes is for accounting purposes with the Commission and reservoir purposes in our own company.

Metering separators have been used by our company in New Mexico, West Texas, Oklahoma, and Kansas. This experience has conclusively proven their reliability and accuracy. Producing the Yates and San Andres zones into common storage will effect a savings of $3,684 to Phillips Petroleum Company. This will also permit production to a lower economic limit on both zones and thus effect conservation.

This concludes my testimony unless there are other questions, and I would like to move that Exhibits "A" and "B" be placed in evidence.

MR. UTZ: Is there objection to Exhibits "A" and "B"?

MR. PAYNE: Were these exhibits prepared by you or under your direction?

A Under my direction.

MR. UTZ: If there is no objection, they will be received. Any questions of the witness? Mr. Nutter.

CROSS EXAMINATION

By MR. NUTTER:

Q Mr. Morgan, I didn't catch it when you gave the bottom-hole pressure for the Yates formation.

A 1700.

Q And 775 for the San Andres?

A Yes, sir.

Q What are the two GOR's for those two zones?

A Our present gas-oil ratio on our Santa Fe Well is 529.

Q That is in the San Andres?

A That is the San Andres gas-oil ratio. The gas-oil ratio -- we have two Yates wells that are direct offsets to us; the one to the north has a gas-oil ratio of 1980 and the one to the west has a gas-oil ratio of 1318.

Q Which is the newer well?

A I believe that the Standard of Texas Well is the newer well, that would be the north well.

Q That is the one with the GOR of --

A (Interrupting) 1980.

Q Mr. Morgan, in effect, what the installing of this 3/4 inch macaroni tubing string does for this dual completion is add a casing annulus?

A Yes, that is exactly it. We have prepared theoretical curves

which we have confirmed by field analysis, showing the effect of pump gas on volumetric efficiency. We have concluded that anything normally above 600 gas-oil ratio cannot be pumped with any reasonable efficiency. Where we have a gas-oil ratio above that, that would adversely affect efficiency, we provide facilities for venting the gas. In other words, we anticipate that this will be equivalent to a singly completed well, as near as we can make it.

Q You have created an artificial casing annulus?

A Yes, we have two casing annulus' in this well.

Q Is the gas vented in this field?

A No, it is in the Vacuum Field and Phillips Petroleum gathers gas.

Q What are the mechanics of the seal which is obtained in this DS 2092 take-off collar with the landing receptacle, and all this business here? Are these components actually integral parts of the tubing string, screwed into the tubing string, or dependent on rubber seals, or what?

A No, sir. The DS 2092 is actually screwed in as an integral part of the tubing string. It has an ID such that you can actually use it as, in essence, a pump hold-down. The ID on the one that we are planning to use, I believe, is 1.830 and then you also have an assembly that you run on your rod string and you do two things with that: first, you lock it in place, it has a mechanical lock on the bottom; and it also has a metal-to-metal seal at the top.

Q How about this Baker C-2 latching receptacle? What does that depend on to assure no communication?

A That is exactly the same seal as you have in any Baker 415-D packer. You have a machine surface and your seal assembly fitting into it. That was put in there simply to give us added assurance that we could do any future work that comes up without any possibility of commingling. In other words, we can replace tubing.

Q Do you happen to have any brochures put out by the manufacturer of this landing receptacle and so forth?

A I have a manufacturer's representative with me. He is well equipped, he would be more than happy to testify or pass the bulletins out.

Q I think it would be well, inasmuch as this type of installation has not been proved heretofore, to at least have the brochure with the pictures of the machine entered as an exhibit in this case.

A We have abundant copies and we would be glad to do that. I would like to point out that the DS 2092 is not a new tool. We simply borrowed a tube to do what we wanted to from two tubing arrangements that we have used for five years.

Could you give me the pictures of your tools on that, and we will enter those?

MR. UTZ: Do you have them with you now?

MR. NUTTER: If those can be mailed in, that will be

satisfactory.

A We will bring them here as soon as I'm released, to you.

Q Did I understand you to say that you would receive the oil from both zones in common storage after metering the Yates oil through dump type meters?

A That is correct. A metering separator that incorporates a cyclic-type dump meter.

Q That would have a separator attached as part of it?

A It is a separator with just a built-in metering device in it.

Q How would you determine the volume of oil produced from the San Andres?

A In other words, we will have a manual gauge each day; all you would do is deduct the meter reading from the Yates oil from the total gauged production.

Q Is there not a possibility that the volume of the oil will change after it has been run into the tank, that the measured difference might not truly reflect the amount of oil that was produced from the San Andres?

A Mr. Nutter, that is a good question, and we run extensive tests here two years ago in our Ardmore District to confirm just exactly that. Our findings were that if we calibrated the metering vessel at the time we installed it, over a year's time we had minor variations, essentially there was none.

Q Are you acquainted with Commission Order No. R-1093 which

the Commission entered in Case No. 1337 on November 27, 1957, authorizing the Gulf Oil Corporation to commingle production from two separate pools?

A No, sir, I am not familiar with that order.

Q I think if you will read that order, you will find that the Commission authorized the commingling but only after the production from the two zones had been metered separately.

A They used independent meters rather than the deduction?

Q Yes, sir.

A I see. No, sir, I was not aware; this was our recommended approach and we had no background on it.

Q Would Phillips Petroleum Company be willing to install separate meters for the two zones?

A We would, if the Commission desired. We would be more than glad to install a separate metering vessel for the San Andres crude.

MR. NUTTER: I believe that is all.

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

(Witness excused.)

MR. UTZ: Do you wish to introduce this brochure as Exhibit No. 3?

MR. MORGAN: As "C", I used "A","B", and "C".

MR. UTZ: Is there objection to the brochure as Exhibit No. "C"? If not, it will be accepted. Any other statements in this case? If not, the case will be taken under advisement.

We have three other cases, and I think it will take better than an hour to complete them. We will not be able to have this Hall tomorrow. If the interested parties will report in the Commission office in the morning, we will have a place to complete the hearings.

The hearing will be adjourned until 9:00 o'clock in the morning.

(Recess.)

C E R T I F I C A T E

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

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

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

Ada Dearnley
NOTARY PUBLIC

My commission expires:

June 19, 1959.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1415, heard by me on May 2, 1958.

Examiner
New Mexico Oil Conservation Commission

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

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

Case File 1415

November 2, 1961

Phillips Petroleum Company
Box 2105
Hobbs, New Mexico

Attention: Mr. W. C. Rodgers

Re: Santa Fe Lease, Vacuum Field, San Andres - Yates Commingling

COPY

Gentlemen:

Reference is made to your letters of October 5 and October 26, 1961, requesting amendment of Order No. R-1158 to permit the commingling of Vacuum-San Andres oil from 8 wells on your Santa Fe Lease with Vacuum-Yates oil from one well on said lease, metering the Yates production only. Order No. R-1158 had previously authorized the commingling but only after separate measurement. The Commission's recent commingling manual and Order No. R-2061 permits the Secretary-Director to authorize the use of the subtraction method.

Phillips Petroleum Company is hereby authorized to remove the meter from the San Andres leg of the subject commingling installation. Further, in accordance with your request to place the remaining Yates meter on a six-months proving basis rather than monthly as now required, Phillips is authorized to extend the test schedule, but only to a

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

three-month interval. The fluctuations in meter factors as depicted by the tabulations and graphs submitted indicate that this meter leaves something to be desired in uniform performance. Due to the marginal nature (8 BOPD) of the Tubes production, however, it is felt that sufficiently reliable factors can be maintained with three-month proving.

Very truly yours,

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

ALP/DSN/og

cc: Joe D. Ramey
Oil Conservation Commission
Hobbs, New Mexico

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

May 2, 1958

COPY

Mr. Forest C. Morgan
Phillips Petroleum Co.
P.O. Box 2105
Hobbs, New Mexico

Dear Mr. Morgan:

Enclosed herewith is Commission Order R-1158 issued April 22, 1958, by the Oil Conservation Commission in Case 1415 which was heard April 9th in Santa Fe.

You will note that the last paragraph of this order requires that the Commission be notified whether positive displacement meters or dump type meters are installed in the subject installation and that each of said meters shall be checked for accuracy at intervals and in a manner satisfactory to the Commission. Phillips Petroleum Company is hereby directed to calibrate each of said meters at intervals not to exceed one month and to file a report of said calibrations with the Commission. The meters shall be calibrated against a master meter or against a test tank of measured volume.

Very truly yours,

A. L. Porter Jr.
Secretary - Director

ALP/DSN:bp

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 1415
Order No. R-1158

APPLICATION OF PHILLIPS PETROLEUM
COMPANY FOR AN OIL-OIL DUAL COMPLETION
AND FOR PERMISSION TO COMMINGLE THE
PRODUCTION FROM TWO SEPARATE POOLS.

ORDER OF THE COMMISSION

BY THE COMMISSION:

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

NOW, on this 22nd day of April, 1958, the Commission, a quorum being present, having considered the application, the evidence adduced and the recommendations of the Examiner, Elvis A. 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, Phillips Petroleum Company, is the owner and operator of the Santa Fe Well No. 18, located in the NW/4 NE/4 of Section 24, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico.

(3) That the applicant proposes to dually complete the said Santa Fe Well No. 18 in such a manner as to permit the production of oil from the Vacuum-Yates Pool and Vacuum (San Andres) Pool through parallel strings of 2 3/8-inch tubing.

(4) That the applicant further proposes to commingle the oil and gas produced from the said Santa Fe Well No. 18 from the Vacuum-Yates Pool and Vacuum (San Andres) Pool after the production from each of said pools has been separately measured.

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

(6) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(7) That the subject application should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicant, Phillips Petroleum Company, be and the same is hereby authorized to dually complete its Santa Fe Well No. 18, located in the NW/4 NE/4 of Section 34, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, in such a manner as to permit the production of oil from the Yates formation adjacent to the Vacuum-Yates Pool and oil from the Vacuum (San Andres) Pool through parallel strings of 2 3/8-inch tubing.

PROVIDED HOWEVER, That subject well shall be completed and thereafter produced in such a manner that there will be no commingling within the well-bore, either within or outside the casing, of gas, oil and gas, or oil produced from either or both of the separate strata,

PROVIDED HOWEVER, That prior to the actual dual completion the operator shall make pressure tests of the casing to prove that no casing leaks exist. In the event a casing leak is apparent the operator shall take appropriate steps to adequately repair the leak. The results of these tests shall be reported to the Commission on Form C-103.

PROVIDED FURTHER, That upon the actual dual completion of such subject well applicant shall submit to the appropriate District Office of the Commission copies of Oil Conservation Commission Form C-103, Form C-104, Form C-110, and Form C-122, outlining the information required on those forms by existing Rules and Regulations, and two copies of the electric log of the well.

PROVIDED FURTHER, That said subject well for dual completion and production shall be equipped in such a way that reservoir pressures may be determined separately for each of the two specified strata, and further, be equipped with all necessary connections required to permit recording meters to be installed and used at any time as may be required by the Commission or its representatives, in order that natural gas, oil, or oil and gas from each separate stratum may be accurately measured and the gas-oil or gas-liquid ratio thereof determined, and

PROVIDED FURTHER, That the operator shall make any and all tests, including segregation and packer-leakage tests upon completion and annually thereafter during the Annual Gas-Oil Ratio Test Period for the Vacuum (San Andres) Pool, commencing in the year 1959, and whenever the packer is disturbed, but not excluding any other tests and/or determinations as deemed necessary by the Commission; the original and all subsequent tests shall be witnessed by representatives of offset operators if any there be at their election, and the results of each test, properly attested to by the applicant herein and all witnesses, shall be filed with the Commission within fifteen (15) days after the completion of such tests, and further, that applicant shall file with the Commission in duplicate a packer-setting affidavit, which affidavit shall be due within fifteen (15) days of the dual completion or whenever the packer is disturbed, and

PROVIDED FURTHER, That upon the actual dual completion of such subject well, applicant shall submit to the Commission a diagrammatic sketch of the mechanical installation which was actually used to complete and produce the seal between the strata, and a special report of production, gas-oil ratio or gas-liquid ratio, and reservoir pressure determination for each producing zone or stratum immediately following completion.

IT IS FURTHER ORDERED, That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order after proper notice and hearing the Commission may terminate the authority hereby granted and require applicant or its successors and assigns to limit its activities to regular single-zone production in the interests of conservation.

(2) That the applicant, Phillips Petroleum Company, be and the same is hereby authorized to commingle the production from the said Santa Fe Well No. 18 from the Vacuum-Yates Pool and Vacuum (San Andres) Pool, provided the production from each of said pools is separately measured by means of either positive displacement meters or dump-type meters prior to being commingled.

PROVIDED FURTHER, That the applicant shall notify the Commission as to type of meters installed on the above-described well and that said 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

ir/

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 4-11-58

CASE 1415 Hearing Date 4-9-58

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

1. Approve Dual Completion as requested using Std. Twin String oil-oil Dual order.
2. Approve commingling Vacuum-Yates oil and Vacuum San Andres oil in a common tank battery only after each zone has been measured by means of either a Meyers type or Positive displacement meter.
3. Upper completion in Vacuum-Yates all Pool
4. Lower " " " San Andres Oil Pool

Emery C. Arnold
Examiner

Staff Member

CASE 1408: Application of Delhi-Taylor Oil Corporation for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 170.58-acre non-standard gas proration unit in the Aztec-Pictured Cliffs Gas Pool consisting of the SW/4 of Section 30 and the N/2 NW/4 of Section 31, all in Township 29 North, Range 8 West, San Juan County, New Mexico, said unit to be dedicated to the applicant's Jones Well No. 3, located 1750 feet from the South line and 1090 feet from the West line of said Section 30.

CASE 1409: Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Lea State "CL" Well No. 1, located 2651 feet from the North line and 1650 feet from the East line of Section 2, Township 16 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Wolfcamp formation adjacent to the Anderson Ranch-Wolfcamp Pool and oil from the Anderson Ranch-Devonian Pool through parallel strings of tubing.

CASE 1410: Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Lea State "R" Well No. 1, located 990 feet from the North line and 660 feet from the East line of Section 2, Township 16 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Wolfcamp formation adjacent to the Anderson Ranch-Wolfcamp Pool and oil from the Anderson Ranch-Devonian Pool through parallel strings of tubing.

CASE 1411: Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its J. F. Janda "F" Well No. 3, located 1980 feet from the North and West lines of Section 4, Township 22 South, Range 36 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Jalmat Gas Pool and oil from the South Eunice (Oil) Pool through parallel strings of tubing.

CASE 1412: Application of John M. Kelly for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 240-acre non-standard gas proration unit in the Eumont Gas Pool consisting of the E/2 SW/4, W/2 SE/4, and W/2 NE/4 of Section 16, Township 19 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the applicant's Humble State No. 1 well located 1980 feet from the South and West lines of said Section 16.

CASE 1413: Application of Austral Oil Exploration Company for an exception to Rule 309 of the Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from all wells completed in the Townsend-Wolfcamp Pool, Lea County, New Mexico, on the following described leases:

No. 10-58

DOCKET: EXAMINER HEARING APRIL 9, 1958

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

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

- - -

CASE 1356: Application of Cities Service Oil Company for an order amending Order No. R-1128. Applicant, in the above-styled cause, seeks an order amending Order No. R-1128 to authorize the transfer of allowable from water injection wells to other wells on the same basic lease, to establish a lease allowable for the applicant's Government "B" Lease, and to authorize administrative approval for additions to, or deletions from the pilot area and/or injection wells.

CASE 1404: Application of Continental Oil Company for permission to produce more than eight oil wells into a common tank battery. Applicant, in the above-styled cause, seeks an order authorizing the production of a maximum of eleven oil wells in the Jalmat Gas Pool into a common tank battery. Said wells are located on the applicant's Eaves A-19 lease comprising the S/2, S/2 NW/4, and NW/4 NW/4 of Section 19, Township 26 South, Range 37 East, Lea County, New Mexico.

CASE 1405: Application of Continental Oil Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its A. M. Lockhart B-14 "A" No. 1-D Well, located 1980 feet from the North line and 660 feet from the East line of Section 14, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce oil from the Terry Blinebry Oil Pool and oil from the Drinkard Oil Pool through parallel strings of tubing.

CASE 1406: Application of Continental Oil Company for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 200-acre non-standard gas proration unit in the Eumont Gas Pool consisting of the S/2 S/2 and the NW/4 SW/4 of Section 13, Township 20 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the applicant's SEMU Permian Well No. 41 located 660 feet from the South and East lines of said Section 13.

CASE 1407: Application of Delhi-Taylor Oil Corporation for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 169.42-acre non-standard gas proration unit in the Aztec-Pictured Cliffs Gas Pool consisting of the SW/4 and S/2 NW/4 of Section 31, Township 29 North, Range 8 West, San Juan County, New Mexico, said unit to be dedicated to the applicant's Prichard Well No. 4-C located 1450 feet from the South line and 790 feet from the West line of said Section 31.

CASE 1418
Continued: all in Township 25 North, Range 12 West, San Juan County, New Mexico. Applicant further seeks authority to commingle the production from each of said leases after separately measuring said production by means of positive displacement meters.

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CASE 1413
Continued: W. M. Snyder "B" Lease - Township 16 South, Range 36 East
Section 6: Lots 9, 10, 15, & 16 and SE/4

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

CASE 1414: Application of The Texas Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its C. H. Weir "B" Well No. 1, located in the SE/4 NE/4 of Section 11, Township 20 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Skaggs-Drinkard Pool and oil from an undesignated Glorieta oil pool through parallel strings of tubing.

CASE 1415: Application of Phillips Petroleum Company for authority to effect an oil-oil dual completion and to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Santa Fe Well No. 18, located in the NW/4 NE/4 of Section 34, Township 17 South, Range 35 East, Lea County New Mexico, in such a manner as to produce oil from the Yates formation adjacent to the Vacuum-Yates Pool and from the Vacuum (San Andres) Pool through parallel strings of tubing. Applicant further seeks authority to commingle the oil produced from the separate reservoirs in common storage after measuring the Yates oil through dump-type meters.

CASE 1416: Application of Aztec Oil and Gas Company for a non-standard location. Applicant, in the above-styled cause, seeks an order authorizing a non-standard gas well location for its Culpepper-Martin Well No. 9, to be located 1850 feet from the North line and 1950 feet from the West line of Section 30, Township 32 North, Range 12 West, Blanco Mesaverde Pool, San Juan County, New Mexico.

CASE 1417: Application of Sinclair Oil and Gas Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its A. M. York "B" Well No. 2, located in the NE/4 NE/4 Section 20, Township 21 South, Range 37 East, Lea County, New Mexico, to produce oil from the Tubb Gas Pool and from the Drinkard Oil Pool through parallel strings of tubing.

CASE 1418: Application of Shell Oil Company for an exception to Rule 309 of the Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order authorizing the transportation, prior to measurement, of oil produced on its E. W. Mudge No. 4 Lease, comprising All of Sections 21, 28, 33, and 34, to its L. M. Phillips No. 2 Lease, comprising the S/2, NE/4, and Lots 1 and 2 of Section 4, N/2 Section 9, SW/4 and E/2 Section 10, All Section 15, N/2 and SE/4 Section 22, and W/2 Section 27,

Case 1415

Oil & Gas Dual

Eng. Exam Hearing

Vacuum Dual + Vacuum-Yates Dual

PHILLIPS PETROLEUM COMPANY

Hobbs, New Mexico
March 3, 1958

In re: Application to Dually Complete and Commingle Crudes in Common Storage, Phillips Petroleum Company Santa Fe Lease Well No. 18, Yates Oil and San Andres Oil Pools, Lea County, New Mexico

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

Gentlemen:

By this letter of application Phillips Petroleum Company wishes to state the following:

(a) That Phillips Petroleum Company's Santa Fe Well No. 18, located in the NW/4 NE/4 of Section 34-17S-35E, was completed on January 27, 1939, at a total depth of 4550'. The attached Exhibit "A" shows the location of this well on the Phillips Petroleum Company Santa Fe lease together with the location of all offset wells. The attached Exhibit "B" shows a diagrammatic sketch of the proposed dual completion.

(b) That subject well has 7" casing set at 4185' and cemented with 400 sacks of cement. The well is currently producing oil from the open hole section 4185' to 4550' from the San Andres formation in the Vacuum Pool.

(c) That the applicant proposes to dually complete the well in the following manner:

(1) Perforate the 7" casing within the approximate interval of 3050' - 3150' in the Yates formation in the Vacuum-Y... Pool.

(2) Set production type packer below these perforations at approximately 4175' to separate the two pay zones.

(3) Produce oil from the San Andres formation through tubing extending through the production packer and oil from the Yates formation through a second tubing string suspended in the annulus between the lower tubing string and casing.

(d) That the dual completion of the well in the above described manner is mechanically feasible and practical and is in the interest of conservation and the protection of correlative rights.

(e) That the applicant will comply with all rules and regulations of the New Mexico Conservation Commission to maintain separation of production from the two pay zones.

(f) That applicant has mailed a copy of this application to the following offset operators:

Cities Service Oil Company
Box 97
Hobbs, New Mexico

Shell Oil Company
Box 1957
Hobbs, New Mexico

Magnolia Petroleum Company
Box 2406
Hobbs, New Mexico

Standard Oil Company of Texas
Bin "B"
Royalty, Texas

Application is also made to commingle Yates and San Andres crudes in common storage. Yates oil will be produced and ~~measured through a metering separator that incorporates~~ a cyclic type dump meter. San Andres oil production will be determined by deducting the metered Yates oil from the total gauged production.

Therefore, Phillips Petroleum Company requests that the Oil Conservation Commission grant a hearing on this application to dually complete the subject well and commingle Yates and San Andres crudes in common storage.

I hereby certify that the information given above is true and complete to the best of my knowledge.

Respectfully submitted,

PHILLIPS PETROLEUM COMPANY

W. C. Rodgers
District Superintendent
Production Department

WWP:js
Attach (2)

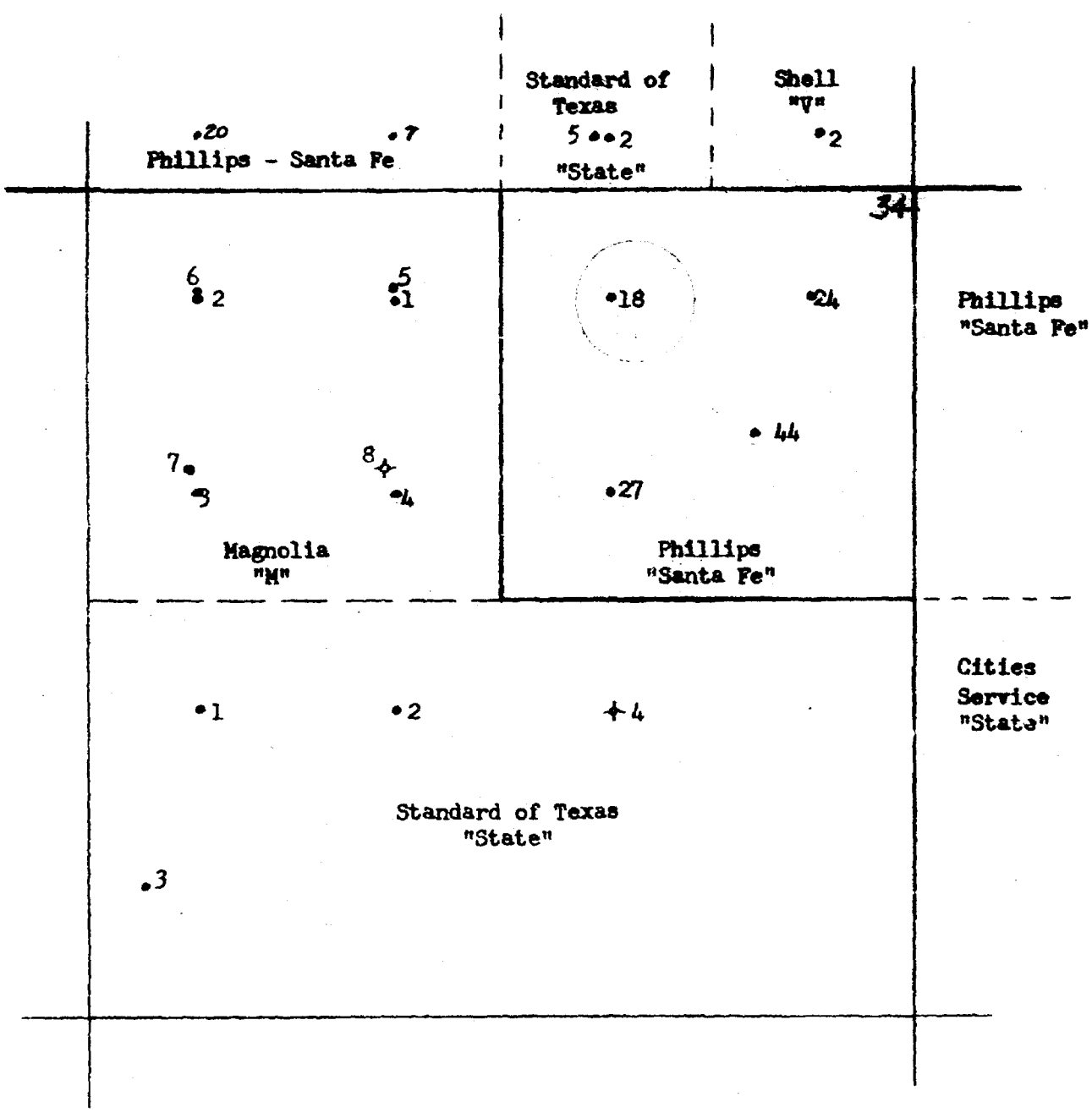
Sworn to and subscribed before me this the 4th day of March, 1958.

MY COMMISSION EXPIRES AUGUST 23, 1961

My Commission Expires _____

Notary Public

EXHIBIT "A"

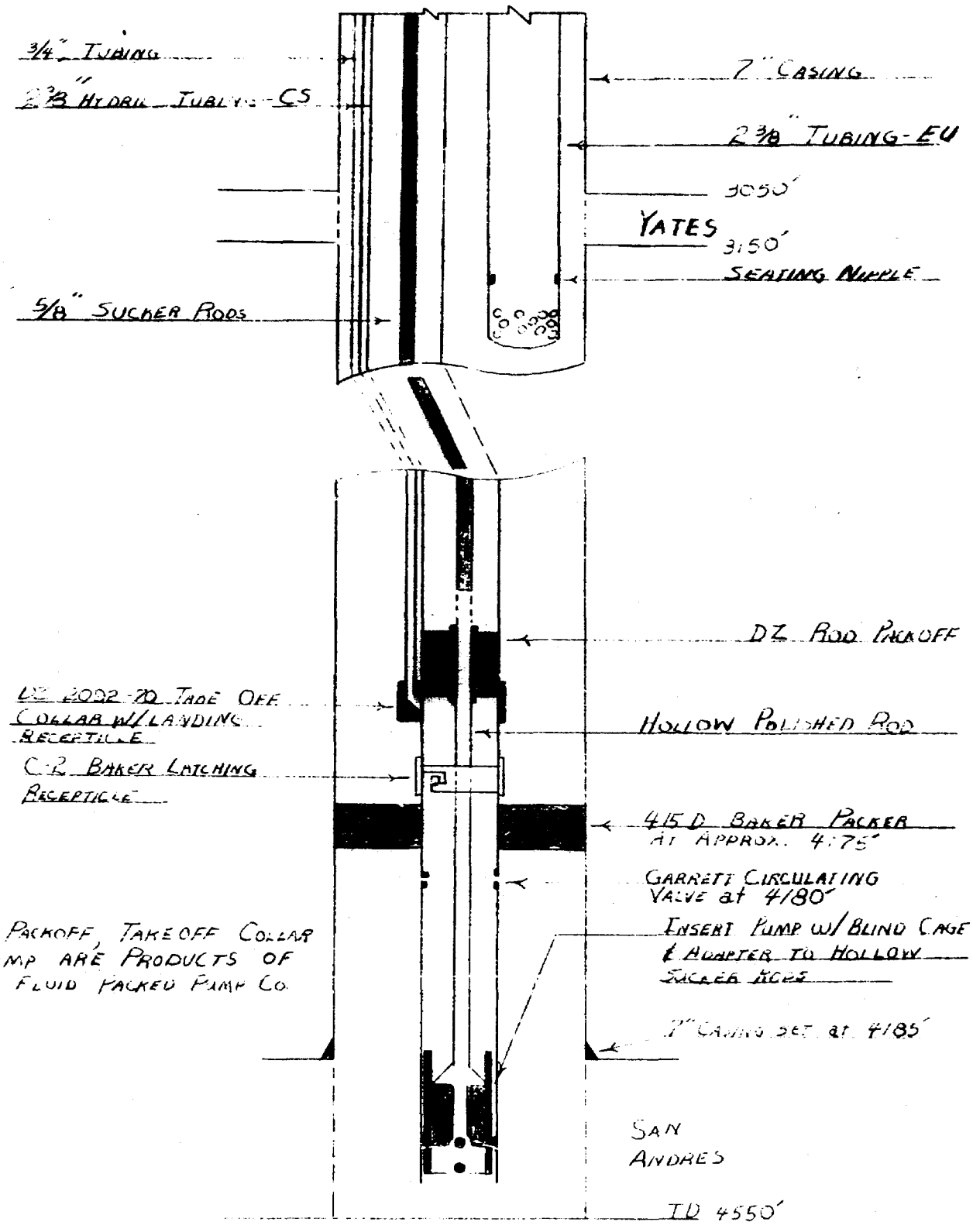


BARTLESVILLE, OKLAHOMA

Phillips Petroleum Company - Santa Fe Lease
NE/4, Sec. 34, R-35-E, T-17-S, Lea County, New Mexico

DRAWN 2-26-58	HB	REVISION	BY	DATE	AFE. NO.	DWG. NO.
CHECKED						
APPROVED					SCALE 1" = 1000'	SHEET NO.

EXHIBIT "B"



BARTLESVILLE, OKLAHOMA

PROPOSED DUAL COMPLETION
SANTA FE WELL NO. 6
LEA COUNTY, NEW MEXICO

DRAWN 12-13-57	W'W'P	REVISION	BY	DATE	AFE. NO.	DWG. NO.
CHECKED 3-3-57	[illegible]					
APPROVED					SCALE	SHEET NO.

it has been metered by means of dump-type oil meters, and to transfer the custody of all such oil to the purchaser by means of a positive displacement meter.

(5) That the applicant amended its application at the hearing to delete that portion wherein permission was requested to produce the wells on the above-described lease in excess of the monthly allowable tolerance.

(6) That if the said Learcy McBuffington Lease is fully developed there will be more than eight wells producing into the system.

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

(8) That the previous use of automatic equipment, similar to that proposed by the applicant has shown that such equipment is a reliable and economic means of measuring and transferring the custody of oil and that the use of such equipment should be permitted.

(9) That the applicant should be permitted to install and operate the automatic equipment in the manner proposed and to commingle the production from the McKee formation and the Ellenburger formation after said production has been measured, provided that each of the meters in the system is periodically checked for accuracy.

(10) That the system should be so equipped as to prevent the undue waste of oil or gas in the event of malfunction or line break.

(11) That the system should be so equipped as to permit the testing of each well in the system at least once a month.

IT IS THEREFORE ORDERED:

(1) That the applicant, Gulf Oil Corporation, be and the same is hereby authorized to install central production and test facilities utilizing dump-type oil meters, and automatic custody transfer equipment utilizing a positive displacement meter, to receive the production from all wells completed in the McKee formation and the Ellenburger formation on the following described lease:

LEARCY McBUFFINGTON LEASE

TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM
Section 13: S/2

all in Lea County, New Mexico.

FURTHER, That the applicant be and the same is hereby authorized to commingle the production from the McKee formation and the Ellenburger formation underlying the above-described lease after such production has been separately metered through the central production and test facilities.

PROVIDED HOWEVER, That each well connected to the above-described system shall be individually tested at least once a month.

PROVIDED FURTHER, That each dump-type meter and positive displacement meter in the above-described system shall be checked for accuracy at intervals and in a manner satisfactory to the Commission.

PROVIDED FURTHER, That the above-described system shall be so equipped as to prevent the undue waste of oil or gas in the event of malfunction or line break.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

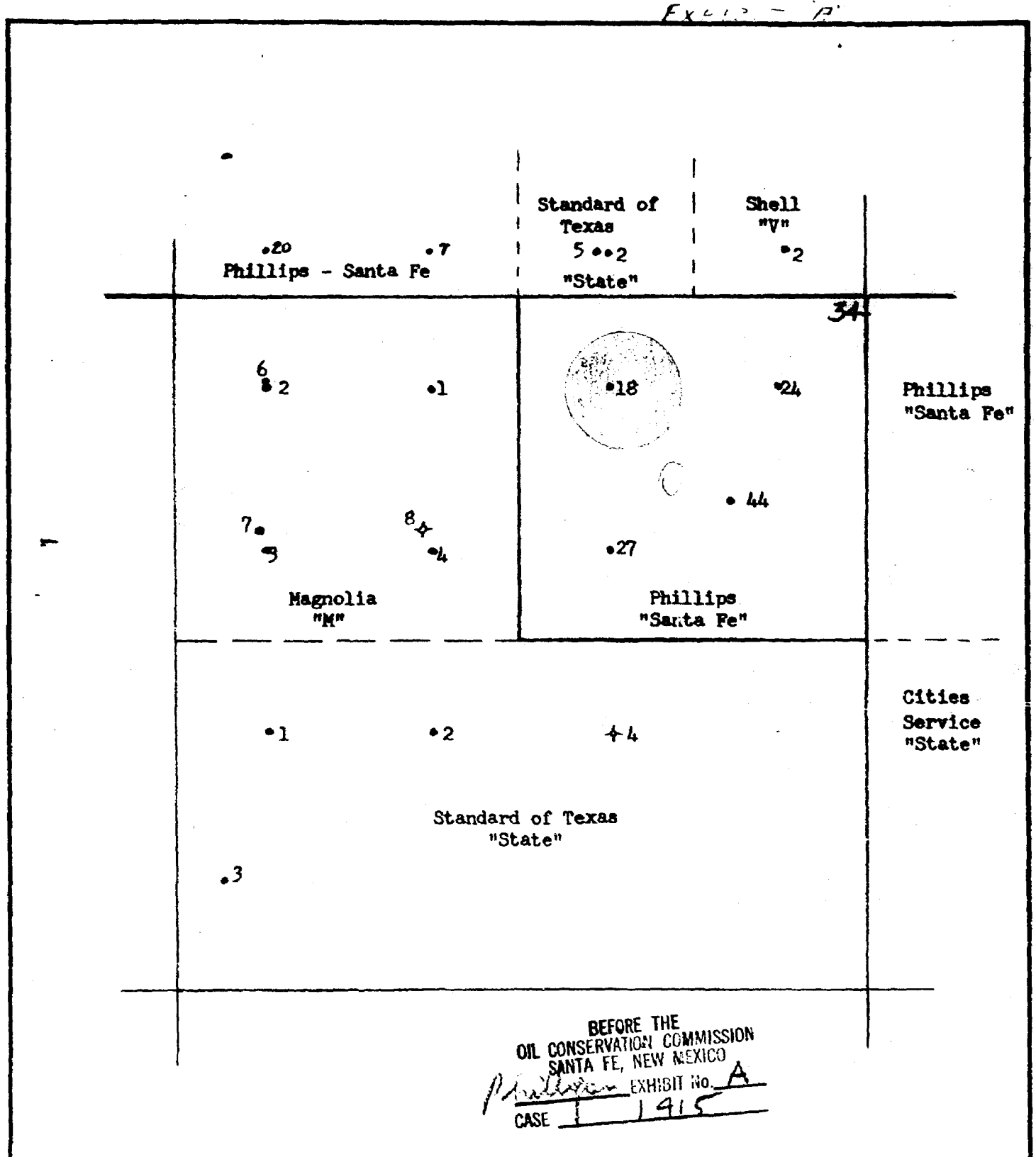
MURRAY E. MORGAN, Member

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

S E A L

ir/

Exhibit - A



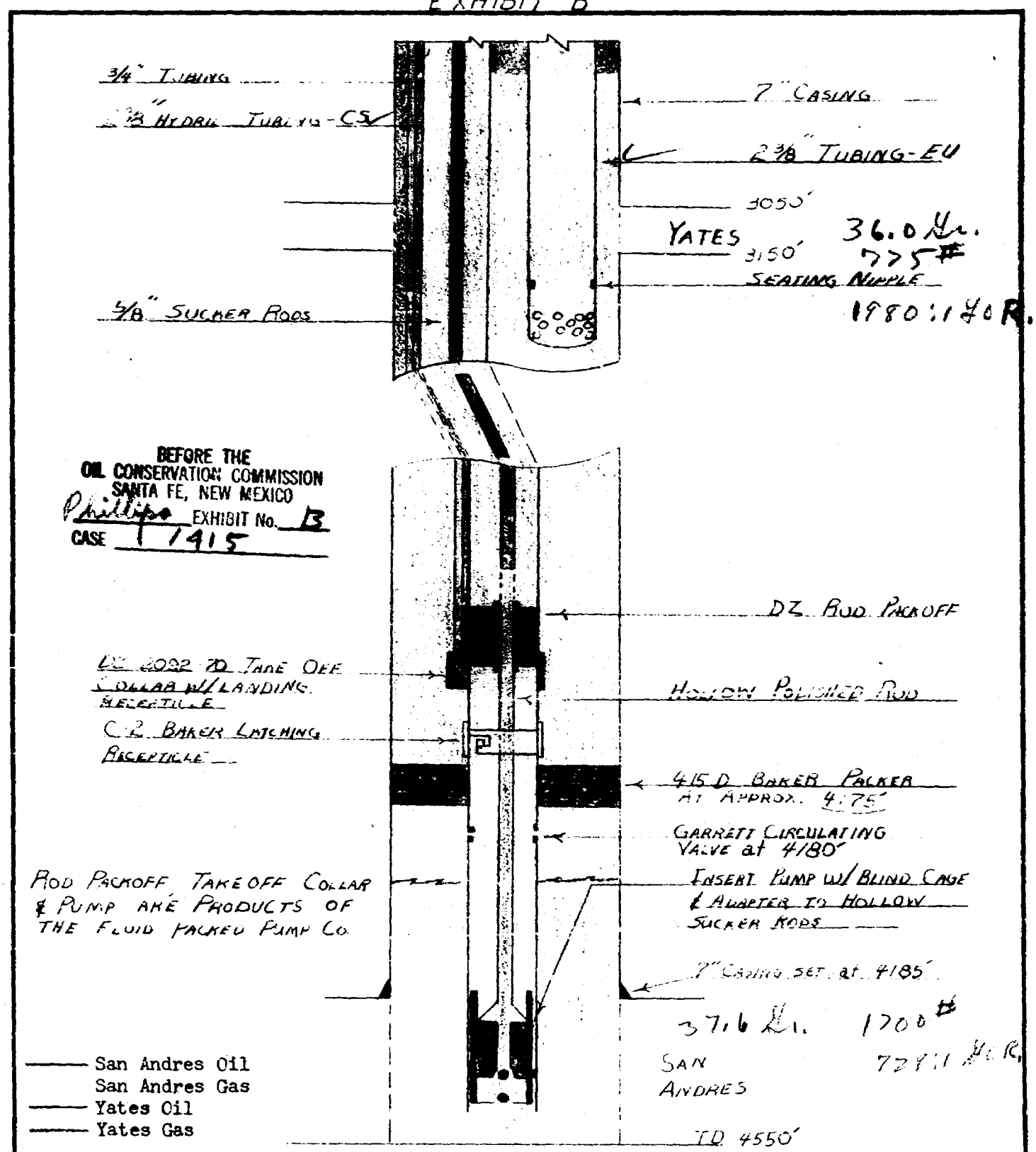
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Phillips EXHIBIT No. A
CASE 1915

BARTLESVILLE, OKLAHOMA

Phillips Petroleum Company - Santa Fe Lease
NE/4, Sec. 34, R-35-E, T-17-S, Lea County, New Mexico

DRAWN 2-26-58		REVISION	BY	DATE	AFE. NO.	DWG. NO.
CHECKED						
APPROVED					SCALE 1" = 1000'	SHEET NO.

EXHIBIT "B"

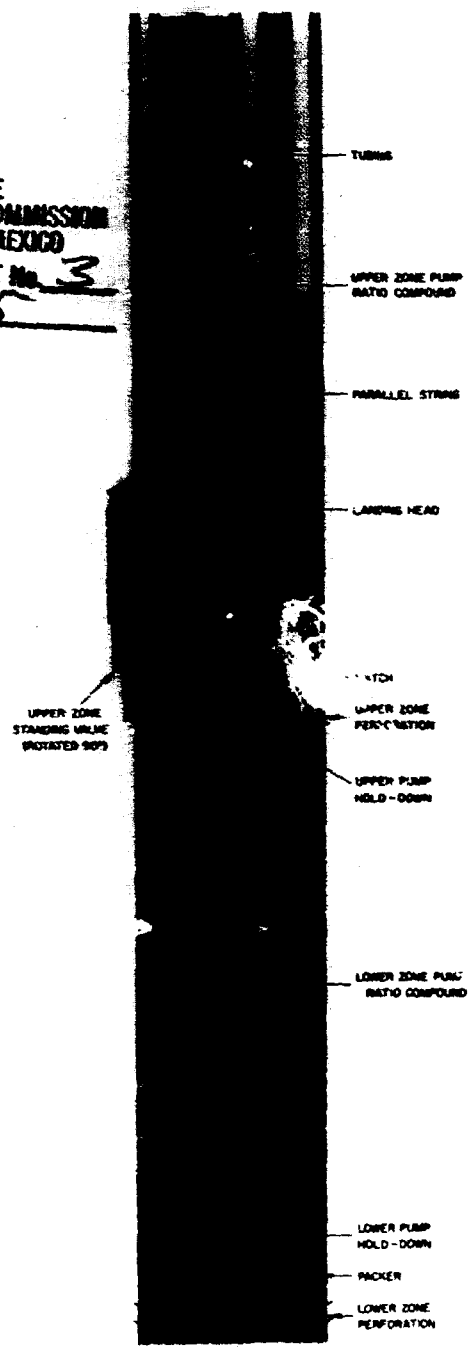


BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Phillips EXHIBIT No. B
CASE 1915

BARTLESVILLE, OKLAHOMA

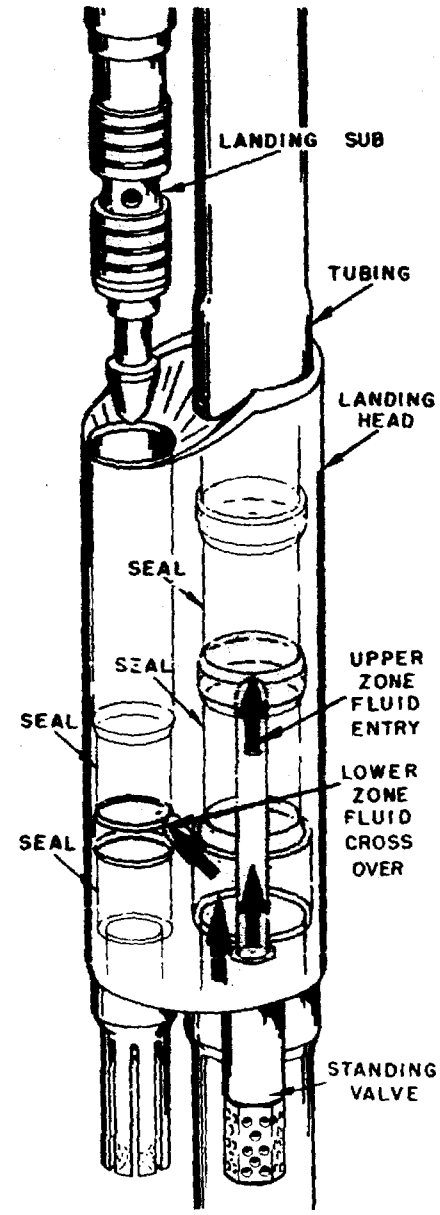
PROPOSED DUAL COMPLETION
SANTA FE WELL NO. 18
LEA COUNTY, NEW MEXICO

DRAWN 12-13-57	W.W.P.	REVISION	BY	DATE	AFE. NO.	DWG. NO.
CHECKED 3-3-57	J.C.H.					
APPROVED					SCALE	SHEET NO.



Typical Dual Zone Installation

WITH RATIO-COMPOUND PUMPS



In the installation illustrated, a packer separates the perforated intervals of the upper and lower zone. Both upper and lower zone pumps are positioned in the long string of tubing, and are run in, operated, and pulled with a single string of rods. The long string conducts the upper zone production while a second string of tubing conducts the lower zone production to the surface. No gas is vented from the lower zone, but gas from the upper zone is vented up the casing. The two tubing strings are run independently. The crossover shoe with integral landing head is run in on the long string. A landing spear is run on the bottom of the short string. This spear is automatically guided into place by the landing head and the seal elements are properly positioned by a no-go ring and latch.

In the illustration, a Ratio-Compound Pump is shown in both the upper and lower zone. A Ratio-Compound has the following advantages over a conventional pump in Dual Zone installations. In the lower zone where gas is not vented, it will reduce gas lock and improve pump efficiency. In the upper zone it will improve pump efficiency and will permit the upper pump to continue to produce even if a standing valve should fail. In both zones it will eliminate fluid pound and in gassy wells will maintain a tension in the rod string on the down stroke. Ratio-Compound pumps are available for all types of Dual Zone installations and may be run as an option without modification of the tubing assembly.

SINGLE PACKER DOUBLE STRING
Installation Typical of
DZT2092-55 DZT2092-70
DZT2592-70

with
Ratio-Compound Pumps