Case No.

22 File #1

Application, Transcript,
Small Exhibits, Etc.

ARKANSAS OIL AND GAS COMMISSION
EL DORADO, ARKANSAS
JANUARY 24, 1941

Reference No. 3-41

IN RE: CONSERVATION OF, AND PREVENTION OF WASTE OF OIL AND GAS

NOTICE OF PUBLIC HEARING

Notice is hereby given, pursuant to the provisions of Act 105 of the 52nd General Assembly of the State of Arkansas, to the public and all interested parties that the Arkansas Oil and Gas Commission will hold a public hearing beginning at

9 o'clock A. M.,
Tuesday, February 4, 1941,
Union County Court House
El Dorado, Arkansas,

to consider and act upon the application of Marine Oil Company et al, filed with Arkansas Oil and Gas Commission on January 23, 1941, which application is as follows:

"BEFORE THE ARKANSAS OIL AND GAS COMMISSION

IN THE MATTER OF:

"APPLICATION OF MARINE OIL COMPANY ET AL FOR AN ORDER APPROVING AN AGREEMENT FOR THE UNIT OPERATION OF A PORTION OF THE JONES SAND HORIZON OF THE SHULER FIELD IN UNION COUNTY, ARKANSAS, FOR THE PRODUCTION OF OIL AND GAS THEREFROM; FOR AN ORDER APPROVING AN AGREEMENT EXECUTED BY PERSONS OWNING ROYALTY PAYABLE ON OIL AND GAS PRODUCED FROM THE PROPOSED UNITIZED AREA WITH RESPECT TO OPERATING THE PROPOSED UNITIZED AREA AS A UNIT; FOR AN ORDER PERMITTING THE OPERATORS OF LEASES AND LANDS WHICH SHALL CONSTITUTE THE PROPOSED UNITIZED AREA TO CONSTRUCT AND OPERATE A REPRESSURING PLANT TO EFFECT PRESSURE MAINTENANCE IN, OR REPRESSURE OF, THE JONES SAND FORMATION UNDER THE PROPOSED UNITIZED AREA; FOR AN ORDER PERMITTING THE OPERATION OF THE PROPOSED UNITIZED AREA AS A UNIT FOR THE PRODUCTION OF OIL AND GAS THEREFROM; AND FOR AN ORDER ESTABLISHING A FORMULA WITH RESPECT TO THE ALLOWABLE PRODUCTION OF WELLS PRODUCING FROM THE JONES SAND AREA, EITHER WITHIN OR WITHOUT THE UNITIZED AREA.

"Come these applicants, Marine Oil Company, Lion Oil Refining Company, Phillips Petroleum Company, Texas Canadian Oil Corporation, The Atlantic Refining Company, Crescent Drilling Company, Inc., Delta Drilling Company, Sklar Oil Corporation, T. H. Barton, O. C. Bailey, J. D. Trimble, Edwin M. Jones, C. H. Murphy, Ruth Hurley, Ruth Hurley, Guardian for Joe B. Hurley, Jr., Ruth Hurley, Guardian for Lou Anne Hurley, J. K. Mahony, Emma Riley, Bertie W. Murphy, Emon A. Mahony, Patty Joe Montgomery, G. P. Gammill, Trustee, J. I. Roberts, and C. H. Murphy, Jr., and would show your Commission as follows:

"That the Jones sand pool of the Shuler field in Union County, Arkansas, was discovered after January 1, 1937, and is a common source of supply of crude oil; that said formation lies at a depth of approximately 7600 feet, is a homogeneous body of sand saturated with oil, in which the expulsion medium for the production of oil by natural flow through wells is free gas and gas in solution, there being no effective water drive to aid in the production of oil therefrom.

"That your applicants, considering their holdings in the aggregate, own each drilling unit now producing oil or gas from the Jones sand pool, either through ownership of that drilling unit in fee simple, or through ownership of an oil and gas lease affecting each drilling unit vesting in the Lessee a full seven-eighths working interest in oil and gas produced therefrom, with the exception of the drilling units into which the following described land is divided:

> The S½ of the NW¼ of the SE¼, the SW¼ of the SE¼ and the S½ of the SE¼ of the SE¼ of Section 7 and the NE¼ of the SE¼ of Sec. 18, all in Township 18 South, Range 17 West, Union County, Arkansas.

"That heretofore one hundred forty-six (146) wells have been completed in the Jones sand formation for the production of oil and gas, one well being drilled to each drilling unit, each such drilling unit, with exceptions of no consequence, covering twenty acres; that of said 146 wells, your applicants own and operate one hundred and forty.

"That as of January 15, 1941, your applicants entered into an agreement for the unit operation of that portion of the Jones sand pool lying under the drilling units with respect to said pool owned by them, which agreement provides for the erection and operation of a plant for injecting gas, air or other substance into the Jones sand formation, for the purpose of maintaining the reservoir pressure of that formation, a copy of which contract is filed herewith, marked Exhibit "A" and made a part hereof by reference for all purposes.

"That, heretofore, more than 130 persons owning more than sixty percent of all royalties payable with respect to oil and gas now being produced from the Jones sand pool, and who shall own more than sixty percent of the royalty payable with respect to oil and gas produced from the unitized area of the Jones sand, in accordance with the terms of said agreement, have entered into a written agreement designated 'Royalty Pooling Agreement', by which said persons consent that all of the drilling units with respect to the Jones sand pool, owned and operated by your applicants, may henceforth, subject to the approval of your Commission, be operated as a unit for the production of oil and gas therefrom, in accordance with the terms of the Unit Operation Agreement executed by your applicants as aforesaid, and in accordance with the terms of the Royalty Pooling Agreement executed by said persons. A copy of said Royalty Pooling Agreement is filed herewith, marked Exhibit "B" and made a part of this application for all purposes.

"Your applicants would further show that since the discovery of the Jones sand pool, wells completed in that formation have produced oil and gas by natural flow, that the only effective natural medium for expelling oil from the wells completed in that pool is the free gas in the Jones sand formation and the gas in solution in the oil contained in that formation. That when the first wells were completed as producers in this pool, the wells produced oil with an efficient gas-oil ratio, but that as additional wells were completed and larger quantities of oil were withdrawn from the reservoir, the quantity of gas produced along with oil in flowing the various wells producing from the pool increased in ratio to the quantity of oil produced, which increase has continued during the past several months, to the end that approximately thirty-two million cubic feet of gas are at this time being taken from the reservoir each day in the production of 13,500 barrels of oil each day.

"That because of the withdrawal of enormous quantities of gas from the formation in flowing the wells producing oil from it, it has been necessary to install pumping equipment on some of the wells producing from the formation to produce oil from them, and it has been discovered that the best type of pumping equipment will not effectively pump oil from a well in the Jones sand formation when that well has ceased to flow by natural reservoir pressure.

"That if the method of operating the wells producing from the Jones sand horizon, presently employed, is continued, the fact that enormous quantities of gas are released from the reservoir in producing the daily allowable quantity of oil will, within a few months, result in all wells in the Jones sand pool ceasing to flow oil, and when that stage is reached, the ineffectiveness of producing oil from wells completed in that formation by pumping equipment will result in millions of barrels of oil remaining in that formation under such a condition that they shall never be produced, all of which shall result in great underground waste of oil.

"However, if your applicants are permitted to operate the drilling units with respect to the Jones sand pool owned by them as a unit, under the terms of the Unit Operation Agreement heretofore executed by them as aforesaid, and under the terms of the Royalty Pooling Agreement heretofore mentioned, and are permitted to construct and operate a repressuring plant to reinject into the Jones sand horizon gas which is produced from the unitized area along with the oil produced from it, and to inject into said formation additional gas, or other appropriate substance, obtained from other sources, and are permitted to take the quantity of oil permitted to be produced daily from the unitized area as a whole, through wells capable of producing that oil at the most favorable gas-oil ratio, the flowing life of the Jones sand pool shall be greatly extended and several millions of barrels of oil shall be recovered from the Jones sand pool, which would never be produced under any other known method of operating the pool, which would be in the interest of conservation of oil and gas and the prevention of waste, as waste is defined in Act 105 of the Acts of the General Assembly for the State of Arkansas for 1939.

"WHEREFORE, your applicants pray that your Commission, after notice and hearing as required by law, enter an order, or orders, to the following effect:

"(a) Approving the Unit Operation Agreement executed by your applicants under date of January 15, 1941, which agreement is filed herewith as Exhibit "A", approving the Royalty Pooling Agreement which is filed herewith as Exhibit "B", and ordering that your applicants begin immediately the operation of the unitized area described in the Unit Operation Agreement which is filed herewith as Exhibit "A", in accordance with the terms of said agreement and in accordance with the terms of the Royalty Pooling Agreement which is filed herewith as Exhibit "B", and permitting the Operator operating the unitized area under the terms of said agreements to produce the quantity of oil from the Jones sand formation which your commission permits, from time to time, to be produced daily from the unitized area as a whole from the group of wells which, from time to time, produce oil from the Jones sand under the unitized area at the most efficient gas-oil ratio.

"(b) Providing that each person, firm or corporation owning royalty payable with respect to oil or gas produced from the Jones sand pool lying under any drilling unit which is a part of the unitized area, as described in the Unit Operation Agreement, irrespective of whether that person, firm or corporation has signed the Royalty Pooling Agreement which is Exhibit "B" hereto, shall, during the period that the unitized area, as described in said Unit Operation Agreement, is operated as a unit under the order of your Commission, be entitled, in lieu of and in substitution for the royalty heretofore payable to each such person, firm or corporation with respect to said production of oil or gas, a portion of the gross production of oil and gas produced from the Jones sand horizon under the unitized area, calculated in accordance with the provisions of Article V of the Royalty Pooling Agreement which is Exhibit "B" hereto, and providing further that so long as the unitized area is operated as a unit, production of oil from the unitized area, through any well, or wells, shall be considered for all purposes as production of oil from each of the oil and gas leases, or portion of oil and gas leases affected by the Unit Operation Agreement heretofore mentioned, insofar as such lease, or portion of lease, covers or affects any of the land included within the unitized area, and that no such person, firm or corporation shall have any right to cancel any such lease, or portion of a lease, through failure of the owner, or owners, thereof to produce oil therefrom so long as oil or gas is being produced in commercial quantities from any well producing from the Jones sand horizon under the unitized area, nor shall the term of any such lease, or portion of a lease, expire so long as a well is producing oil or gas in commercial quantities from the Jones sand pool under the unitized area.

"(c) Permitting your applicants to construct and operate a repressuring plant for the purpose of injecting into the Jones sand formation gas produced from that formation, gas from any other source, or air or other appropriate substance, to maintain the reservoir pressure in the Jones sand pool, and to reinject such gas, air or other substance into said formation under the direction and supervision of your commission.

"(d) Fixing a daily pool allowable for the Jones sand pool and allocating that daily allowable between the owners of the unitized area described in Exhibit "B" hereto, and the owner, or owners, of all drilling units producing from the Jones sand pool and not included in the unitized area, in accordance with some formula to be fixed by your Commission, which will allocate such daily allowable for the Jones sand pool between the wells producing from the unitized area and wells producing on units not within the unitized area on the basis of volumetric withdrawal, to the end that the owner, or owners, of any drilling unit not included in the unitized area shall not be permitted to void more space in the Jones sand pool in producing a barrel of oil from that particular drilling unit than is being voided in producing a barrel of oil from the unitized area, taking into consideration the quantity of gas, air, or other substance that is being injected into the Jones sand formation from time to time by the owners and operators of the unitized area.

Respectfully submitted,

MAHONY & YOCUM

ROBERT C. KNOX

JEFF DAVIS

R. K. BATTEN

Attorneys for the Applicants."

At the conclusion of said hearing, the Arkansas Oil and Gas Commission shall, in accordance with the provision of Act 105 of the Acts of the 52nd General Assembly of the State of Arkansas, either deny said application or approve it in whole or in part and enter such orders, rules or regulations as may be justified by the testimony adduced at said hearing.

All interested parties are informed that the Unit Operation Agreement referred to in the foregoing application as Exhibit "A" hereto, and the Royalty Pooling Agreement referred to in the foregoing application as Exhibit "B" hereto, are on file in the office of the Arkansas Oil and Gas Commission, El Dorado, Arkansas, subject to the inspection of any such party.

The Secretary of the Commission is hereby instructed to cause this notice to be published in the issue of the El Dorado Daily News, of El Dorado, Arkansas, the county seat of Union County, Arkansas, in the issue thereof published on January 24, 1941, and in the issue thereof published on January 26, 1941.

ARKANSAS OIL AND GAS COMMISSION

A. M. CROWELL
Director of Conservation & Production

It is so ordered by the Commission:
O. C. Bailey, Chairman
J. D. Reynolds
Ed Hollyfield
Robert J. Short
R. S. Warnock, Jr.
Basil Hoag
Edwin B. Keith

ARKANSAS OIL AND GAS COMMISSION
EL DORADO, ARKANSAS
FEBRUARY 4, 1941

Reference No, 5-41

IN RE: FIELD RULES FOR THE McKAMIE GAS FIELD

McKAMIE GAS FIELD

WHEREAS, pursuant to the provisions of Act 105 of the 52nd General Assembly of the State of Arkansas and after due and proper notice to all interested parties, the Commission did hold a public hearing on Tuesday, February 4, 1941, in the County Court House in the City of El Dorado, Arkansas, and further has held other hearings including those of June 20, August 16, September 20 and December 16, 1940, for the purpose of hearing evidence in order to determine whether or not waste of oil or gas was taking place or was reasonably imminent in the McKamie Field of Lafayette County, Arkansas.

From the evidence adduced at said hearings and particularly the hearing held on Tuesday, February 4, 1941, the Commission finds the following facts and issued and promulgates the following rules and regulations, to-wit:

FINDINGS OF FACT

First: The Gas Pool of the McKamie Field of Lafayette County, Arkansas, consists of an area approximately forty-two hundred (4200) acres, located in the vicinity of the wells in Township 17 South, Ranges 23 and 24 West, and running to the west thereof, the exact limits thereof being indeterminate at this time.

Second: That the lime formation is productive of hydrocarbons from a producing zone between one hundred feet and two hundred feet in thickness at a depth approximately 9200 feet below the surface of the earth; that this production is gas in the reservoir; that the liquid produced at the wells under ordinary producing methods is the result of retrograde condensation; and is a condensate brought into existence by reduction in pressure and temperature from those of the reservoir.

Third: That while the hydrocarbons exist in a gaseous state under present reservoir conditions, vapor phase analyses of the reservoir content indicate that the dew point or retrograde condensation point may be near the original bottom hole pressure of the pool, or 4365 pounds per square inch, and that, therefore, the maintenance of approximately such pressure is necessary to prevent waste in the form of reservoir condensation and to promote the greatest ultimate recovery of such hydrocarbons as will be obtained at the surface in liquid form.

Fourth: The Commission finds that the reservoir pressure may be maintained by controlling the rate of withdrawal from the field in the event there is an active water drive, but in the event no active water drive exists, such pressure may be maintained by injecting gas into the formation. In the event an active water drive exists, such injection may not be necessary and the gas may be otherwise utilized or stored in any available reservoir below the surface of the earth, the Commission hereby granting authority for tests to determine if gas may be safely injected into any formation above the present producing horizon.

Fifth: The Commission finds that due to the porosity, permeability, bottom hole pressure and uniformity of formation shown by the evidence herein adduced that one well will efficiently, effectively and without waste drain an area of one hundred (160) acres, and therefore, in order to prevent waste and avoid the drilling of unnecessary wells and to provide a proper spacing rule, the same is hereby fixed at one well to be drilled within 100 feet of the center of each governmental 160-acre tract and that the drilling unit for the said field is hereby fixed at a governmental subdivision of 160 acres.

Provided, that the Commission, taking cognizance of the fact that certain wells have heretofore been drilled and certain wells are now drilling in the said McKamie area on a pattern other than fixed by this order and that it is necessary in order to adjust the correlative rights of the interested parties that acreage be allotted to said wells for allowable purposes and to prevent the drilling of unnecessary wells within the said developed area, it is provided that all wells which have heretofore been drilled or which are now drilling, shall be granted for allowable purposes one hundred sixty (160) acres or so much thereof as may be available and

contiguous to the tract of land on which the said wells are respectively located. However, the allotted acreage shall be reduced should future development prove some portion thereof non-productive.

Sixth: The Commission finds that the gas produced from the said pool contains in excess of 4,000 grains of hydrogen sulphide per 100 cubic feet of gas and for that reason is unfit for use in its natural state in generating heat, light and power for domestic purposes. The Commission further finds that there is a market for approximately 20,000 cubic feet of gas per productive acre per day for the drilling of wells and other purposes. The Commission finds that due to the nature of this particular gas, the type of market available and the necessary production methods, it is impossible and impractical to require the utilization of all of the gas allowable currently and regularly each day and consequently that gas which forms a part of the allowable gas that is not utilized may be vented and flared during the development period of the field.

Seventh: The Commission finds from the evidence adduced that it may be practical and economically feasible to remove the hydrogen sulphide and other deleterious substances from the gas produced from the McKamie Pool, and the Commission further finds that such substances should be removed, if feasible, prior to reinjecting the gas back to the reservoir from which it was produced or to any other reservoir suitable for the storage of such gas.

O R D E R

Therefore it is ordered that the rules and regulations of statewide application, promulgated as Order No. 2-39, March 4, 1939, should and shall apply when applicable to the Gas Pool of the McKamie Field, and it is ordered that effective this date, and until further notice the Field Rules for the Gas Pool of the McKamie Field are as follows:

RULE I. SPACING - No well (except those now drilling) shall hereafter be drilled in the McKamie Gas Area at any point more than 100 feet from the center of a governmental 160-acre drilling unit.

Provided: That the Commission may grant such exceptions, after notices and upon hearing, as may be reasonably necessary where it is shown, and the Commission finds, that a well drilled in accordance with the stated spacing rule would be outside the pool or topographical conditions are such as to make drilling difficult. However, whenever an exception is granted, the Commission shall take such action as will offset any advantage which the person securing the exception may have over other producers by reason of the drilling of the well as an exception.

RULE II. DRILLING UNIT - Not more than one well shall be drilled on any one hundred sixty (160) acre tract or one hundred sixty (160) acre subdivision of a lease, except as provided above. To a well which is drilled upon such 160-acre unit, the one hundred sixty (160) acres upon which it is drilled shall be assigned to that particular well.

Provided: That when two or more separately owned tracts of land are embraced within this established drilling unit, the owners thereof may validly agree to integrate their interests and to develop their lands as a drilling unit. Where, however, such owners have not agreed to integrate their interests, the Commission shall, for the prevention of waste, or to avoid the drilling of unnecessary wells, require such owners to do so and to develop their lands as a drilling unit. All orders requiring such integration shall be made after notice and hearing, and shall be upon terms and conditions that are just and reasonable, and will afford to the owner of each tract the opportunity to recover or receive his just and equitable share of the oil and gas in the pool without unnecessary expense, and will prevent or minimize reasonably avoidable drainage from each developed unit which is not equalized by counter drainage. The portion of the production allocated to the owner of each tract included in a drilling unit formed by an integration order shall, when produced, be considered as if it had been produced from such tract by a well drilled thereon. In the event such integration is required, the operator designated by the Commission to develop and operate the integrated unit shall have the right to charge to each other interested owner the actual expenditures required for such purpose not in excess of what are reasonable, including a reasonable charge for supervision, and the operator shall have the right to receive the first production from the well

drilled by him thereon, which otherwise would be delivered or paid to the other parties jointly interested in the drilling of the well, so that the amount due by each of them for his share of the expense of the drilling, equipping and operation of the well may be paid to the operator of the well out of production, with the value of the production calculated at the market price in the field, at the time such production is received by the operator or placed to his credit. In the event of any dispute relative to such costs, the Commission shall determine the proper costs.

RULE III. CASING PROGRAM - The casing program of all wells hereafter drilled to the Gas Pool of the McKamie Field shall be as follows, unless otherwise ordered:

(a) A minimum of 350 feet of surface casing shall be set and cemented with sufficient cement to fill the annular space back of the casing up to the surface of the ground. Cementing shall be done by the pump and plug method. Cement shall be allowed to set a minimum of twenty-four hours.

(b) A second string of casing shall be set into the Massive Anhydrite which is encountered at a depth of approximately 4200 feet subsurface and shall be cemented with sufficient cement calculated to fill the annular space back of the casing up into the surface casing, using not less than fifteen hundred sacks of cement. Cementing shall be done by the pump and plug method. Cement shall be allowed to set a minimum of thirty-six (36) hours under pressure before drilling the plug or initiating tests. Said second string of casing shall be new casing or reconditioned casing which has been tested to two thousand (2000) pounds per square inch pressure.

Before drilling the plug in the second string of casing, the casing shall be tested by pump pressure in the presence of an offset operator or an agent of the Commission, or both. After the mud-laden fluid in the hole has been displaced by clear water, pump pressure of at least one thoudand (1000) pounds per square inch shall be applied. If at the end of thirty minutes the pressure gauge shows a drop of one hundred fifty (150) pounds or more, the operator shall do that which is necessary to cause the second string of casing to be set and cemented so that it will hold said pressure for thirty (30) minutes without a drop of more than one hundred fifty (150) pounds in pressure.

(c) The producing string of casing shall consist of new casing, mill-tested to at least twenty-eight hundred (2800) pounds pressure per square inch, which shall be set below the first porosity of the lime formation, or set completely through and perforated into the effective porosity of the lime formation. Cementing shall be done by the pump and plug method. Said producing string shall be cemented with not less than one thousand (1000) sacks of cement and shall be allowed to stand a minimum of twenty-four hours under the pressure required to pump the plug to bottom and a minimum total of seventy-two hours before drilling the plug and the casing.

Before drilling the plug in the producing string of casing, the casing shall be tested by pump pressure in the presence of an offset operator or an agent of the Commission, or both. After the mud-laden fluid in the hole has been displaced by clear water, a pump pressure of fifteen hundred (1500) pounds per square inch shall be applied. If at the end of thirty minutes the pressure gauge shows a drop of fifty pounds or more in pressure, the operator shall do that which is necessary to cause said string of casing to be so set and cemented that it will hold said pressure for thirty minutes without a drop of more than fifty pounds in pressure.

RULE IV. COMPLETION - Each operator shall notify the Commission in writing at least twenty-four (24) hours before completing a well, the time at which said well will be completed. If said well be completed by the operator in conformity with the regulations of the Commission, a completion certificate shall be issued to such operator. Completion certificates shall be withheld until the well has been completed in accordance with the rules of the Commission. Pipe line companies and all other purchasers or carriers are forbidden to accept oil or gas from any well until the completion of such well is approved by certificates of compliance.

RULE V. ALLOCATION OF PRODUCTION - The total quantity of gas which may be lawfully produced each day from the McKamie Gas Pool, and liquid hydrocarbons incident to such gas production, shall be determined by the Commission. The said total quantity of gas which may be lawfully produced daily from the McKamie Gas Pool is hereafter that volume as shown on the Commission's Schedule of Allowed Production issued from time to time as an order after hearing, as is provided by law.

However, the initial schedule issued next after the effective date of this order, February 5, 1941, shall provide that the daily allowable production of gas for individual wells in the McKamie Gas Pool shall be upon an acreage basis being a maximum of 20,000 cubic feet of gas per acre per day and a maximum of 2.5 barrels of condensate per acre per day, and that each acre within each of the established drilling units shall have assigned to it a daily volume of gas commensurate with that fixed and allowed each and every other producing acre within the pool; provided, however, that the Commission shall also fix a maximum condensate allowable per acre per day, based upon gas-condensate tests.

RULE VI. GAS TO BE METERED - All gas produced from the gas pool of the McKamie Field shall be measured by an orifice meter immediately after it leaves the separator and prior to any point of diversion. The record of the measurement (preferably in the form of a seven-day chart) shall be available to the Commission's representative at all times and these measurements shall be used in obtaining operating well gas-liquid ratios. The meters required shall be installed on the gas line of every liquid and gas separator.

RULE VII. All connections subject to well pressure shall be of at least six thousand (6000) pounds per square inch test.

RULE VIII. The duly authorized agent of the Commission is hereby authorized to make gas-condensate and gas-liquid ratio tests and bottom hole pressure tests on any well at any time and the owner of such wells is hereby directed to do all things that may be required of him by the Commission's agent to properly make such tests.

RULE IX. All flowing wells shall be equipped with, and produced through tubing of not more than two and one-half ($2\frac{1}{2}$) inches in diameter. Bottom of tubing shall not be higher than the top of the producing formation. If tubing is perforated, the perforations shall not extend above the top of the formation. Tubing shall be free of obstructions in order to permit free entrance of bottom hole instruments, excepting bottom hole chokes.

RULE X. All flowing wells must be produced through a liquid and gas separator of ample capacity and in good working order. Sufficient tankage shall be provided for each well to permit the proper taking of the production. Well or working tanks shall be so operated as to permit proper gauging.

RULE XI. All swabbing and bailing operations shall be completed in the daylight hours before sunset. Drill stem tests shall likewise be made during the daylight hours.

RULE XII. All permanent tanks, or battery of tanks, must be surrounded by a dyke or fire wall, with a capacity of at least one and one-half ($1\frac{1}{2}$) times that of the capacity of the tank or battery of tanks.

RULE XIII. Any rubbish or debris that might constitute a fire hazard shall be removed to a distance of at least one hundred fifty (150) feet from the vicinity of wells, tanks and pump stations. All waste shall be burned or disposed of in such manner as to avoid creating a fire hazard or polluting streams and fresh water strata.

RULE XIV. When coming out of the hole with the drill pipe, drilling fluid shall be circulated until equalized and a fill-up line shall be turned into the casing to insure a full load of fluid on the bottom of the hole at all times.

RULE XV. REPORTING - While the Commission has found and classified the liquid produced in the McKamie Gas Pool as "condensate", it is ordered that for reporting purposes the rules governing the reporting of oil to this Commission shall apply to the liquid produced in said field. Specifically, the Commission's Form 9, "Monthly Producer's Report", Form 10, "Well Status Report", and Form 11, "Gas Well Report", attached hereto, must be on file, properly executed as instructed on the reports. In the event such reports are not received in the Commission's offices in accordance with instructions, pipe lines will be instructed to disconnect from such properties.

It is ordered that each operator in the McKamie Gas Field shall, commencing immediately and proceeding diligently, make whatever tests and experiments that are necessary to determine if the hydrogen sulphide and other deleterious substances

can be removed from the gas produced from the said pool. The Commission desires a progress report from the operators at the next statewide oil and gas hearing, setting out the findings of the operators in this matter.

It is further ordered that this docket be kept open to consider any claims of discrimination or hardship, and to offer administrative relief, if possible, and that the Commission is anxious to hear at public hearing, evidence pertaining to any peculiarities of any or all of the wells in the reservoir affected by this order.

ARKANSAS OIL AND GAS COMMISSION

A. M. CROMELL
Director of Conservation & Production

It is so ordered by the Commission:
O. C. Bailey, Chairman
J. D. Reynolds
Ed Hollyfield
Robert J. Short
R. S. Warnock, Jr.
Basil Hoag
Edwin B. Keith

TUTWILER AND CADIMUM SULFATE TEST

GAS IN McKAMIE FIELD

IAFAYETTE COUNTY, ARKANSAS

Atlantic Refining Company
Bodcaw No. 1 and No. 2

COMPOSITE TEST

Test No. 1	4500 grains H_2S per 100 Cubic Feet
Test No. 2	4480 grains H_2S per 100 Cubic Feet
Average	4490 grains H_2S per 100 Cubic Feet
Mercapatans	Absent

ANALYSIS FOR CO_2

Test No. 1	CO_2 + H_2S = 12.4%
Test No. 2	CO_2 + H_2S = 12.6%
Average	CO_2 + H_2S = 12.5%
Finally Hydrogen-sulphide	7.1%
Carbon-dioxide	5.4%

These tests were run by Mr. Gordon, a representative of the Girbotol Company. Mr. Gordon said their plants could remove the Hydrogen-sulphide at reasonable cost.

The Girbotol process will remove Hydrogen-sulphide and Carbon-dioxide simultaneously.

L. L. JORDAN,
Gas Engineer
ARKANSAS OIL & GAS COMMISSION
February 5, 1941

FORM 11—(Statewide)
5M—3-39—69840—C.-McB.

ARKANSAS OIL AND GAS COMMISSION
El Dorado, Arkansas

COMBINED MONTHLY REPORT ON GAS WELLS AND GAS PIPE LINES

(Natural Gas Used or Transported from Wells Classified as Gas Wells by the Commission)

MAKE SEPARATE REPORT FOR EACH RESERVOIR AND FOR SWEET AND SOUR GAS

Month of_____, 19____

Reporting Operator_____, Function_____
(Producer, Gasoline or Pipe Line Co.)

Report Made at_____

Address Correspondence to:_____

Kind of Gas_____ Reservoir_____ Field_____

RESERVOIR SUMMARY—
LIMIT TO THIS RESERVOIR AND OPERATIONS OF REPORTING OPERATOR THEREIN

Total monthly take from reservoir, M. C. F._____ Fluid produced_____ bbls.

Daily average take, M. C. F._____

Number of wells from which gas is taken_____

Pressure Base used in computing Gas Volumes_____

WELL OWNER	GAS WELLS FROM WHICH GAS IS TAKEN					GAS AND FLUID		
	Name of Lease	Well No.	Daily Potential M. C. F.	Drainage Acreage	Rock Pressure	TOTAL FOR MONTH		Gravity Fluid
						Gas M. C. F.	Fluid Barrels	

NOTE: "Fluid" refers to crude oil and condensate produced and disposed of in paying quantities.

DISPOSITION OF GAS TAKEN FROM RESERVOIR OR FIELD

DISPOSITION OF GAS		M. C. F. FOR MONTH
By	Co. as Pipe Line Gas (Light and Fuel)	
By	Co. for Lease Use	
By	Co. to Extract Gasoline and Sell Residue	

Report under Pipe Line Gas only that gas going to pipe line that is not delivered to a Gasoline Plant. If gas is taken or produced from same reservoir in more than one county, list volumes for each county separately.

EXPLANATION

Use space below for any explanation that may be necessary in connection with this report.

(AFFIDAVIT)

I/we hereby swear (or affirm) that the statements herein made are a full and correct report.

Signed_____

Subscribed and sworn to before me this_____day of_____, 19____

My commission expires_____

_____
Notary Public

INSTRUCTIONS: The original of this report shall be filed as soon after the first of the month as possible and never later than the fifteenth. A copy of all reports should be retained by the reporting company for the purpose of reference in case of inquiry and correspondence.

List wells alphabetically by Counties, by well owners, and by lease names under well owners. For acreage use proven contiguous acreage under lease or contract on which well is located. If more than one well is on same lease, divide total proven lease acreage by number of wells to determine acreage for each well. For rock pressure and open flow potential use results of last official test.

If any well or wells shall be disconnected from or any new wells connected to reporting company's pipe line, such changes shall be reported to the Commission by letter.

Each pipe line or gasoline company taking gas shall prepare a separate report for each reservoir or field from which they are taking gas in the State of Arkansas, which report shall include all gas taken by them in such field. If any producer or well owner is taking gas from the well for any purpose whatsoever which gas is NOT delivered into a pipe line and reported on this form by such pipe line or gasoline company, said producer or well owner shall make a report of such gas to the Commission on this form. Care must be exercised to see that no duplication of gas volumes occurs and the producer or well owner who makes such a report should include only the gas which he produces from the well over and above that delivered to the pipe line or gasoline company who will report the pipe line gas in their report.

Form 10—(Controlled Fields)
5M—1-41—75013—C.-McB.

ARKANSAS OIL AND GAS COMMISSION
El Dorado, Arkansas

WELL STATUS REPORT AND GAS--OIL RATIO

PRODUCER_____ FIELD_____

ADDRESS_____ Calendar Month_____, 19__ COUNTY_____ RESERVOIR_____

Show Each Well in Pool—File Between 1st and 15th of Each Month

LEASE NAME	Well No.	Date Tested	Length of Test (Hours)	METHOD OF TEST Meter, Pitot, Prover, Well Tester, Etc.	Show if Flowing, Pumping, Air Lift, Gas Lift, Jetting, Intake, Dead, Temp. Closed	FLOWING WELL DATA				PRODUCTION DURING TEST (24-Hour Rate) (Total Monthly Figures Preferred)			Gas-Oil Ratio	OIL Corr. Gravity API at 60°F.
						Choke Size	Pressures			Water, Barrels	Oil, Barrels	Gas, M Cubic Feet		
							Tbg.	Csg.	Trap					

AFFIDAVIT ON REVERSE SIDE

YOU ARE REQUESTED TO USE CARE IN THE PREPARATION OF THIS FORM AS THE DATA ARE MOST IMPORTANT

AFFIDAVIT

I/we hereby swear (or affirm) that the statements herein made are a full and correct report.

Signed_____

Subscribed and sworn to before me this_____day of_____, 19____

My commission expires_____

_____
Notary Public

Form 5—(Controlled Fields)
10M—2-39—6938S—C Mcil.

ARKANSAS OIL AND GAS COMMISSION
El Dorado, Arkansas

MONTHLY PRODUCER'S REPORT---CRUDE OIL

PRODUCER_____ FOR MONTH OF_____, 19____

ADDRESS_____ ORGANIZATION NO._____
(Street) (City) (State)

FIELD_____ POOL_____ COUNTY_____

Line No. (1)	LEASE NAME (2)	TRANSPORTATION AGENT FOR OIL PRODUCED (3)	NEW COMPLETIONS		WELLS ABANDONED		WELL DATA		
			Well No. (4)	Date (5)	Well No. (6)	Date (7)	No. Pumping and Agit. (8)	No. Flowing (9)	Total Producing (10)
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									

TOTALS_____

Line No. (11)	Total Capacity of Lease Stock Tanks (12)	Total Oil on Hand at End of Month (13)	Total Pipe Line Runs (14)	Total Deliveries to Trucks (15)	Total Other Disposition (Explain in Remarks) (16)	Total on Hand at Beginning of Month (17)	Total Oil Produced (18)	Total Allowable (19)	Over-Production (20)	Under-Production (21)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
Tot.										

AFFIDAVIT

I/we hereby swear (or affirm) that the statements herein made are a full and correct report.

Signed_____

Subscribed and sworn to before me this_____day of_____, 19____

My commission expires_____ _____
Notary Public

(INSTRUCTIONS ON REVERSE SIDE)

ARKANSAS OIL AND GAS COMMISSION
EL DORADO, ARKANSAS
FEBRUARY 4, 1941

Reference No. 6-41

IN RE: UNITIZATION OF JONES SAND POOL

ORDER FOR THE UNIT OPERATION OF A PORTION OF THE JONES SAND POOL OF THE SCHULER FIELD OF UNION COUNTY, ARKANSAS

On this the 4th day of February, 1941, there was heard by the Arkansas Oil and Gas Commission at a public hearing held at El Dorado, Arkansas, the application of Marine Oil Company et al for an order approving an agreement for the unit operation of a portion of the Jones Sand Pool of the Schuler Field in Union County, Arkansas, for the production of oil and gas therefrom; for an order approving an agreement executed by persons owning royalty payable on oil and gas produced from the proposed unitized area with respect to operating the proposed unitized area as a unit; for an order permitting the operators of leases and lands which shall constitute the proposed unitized area to construct and operate a repressuring plant to effect pressure maintenance in, or repressuring of, the Jones Sand under the proposed unitized area, for an order permitting the operation of the proposed unitized area as a unit for the production of oil and gas therefrom; and for an order establishing a formula with respect to the allowable production of wells producing from the Jones Sand, either within or without the unitized area, and from the evidence adduced at said hearing the Commission finds:

1. That ten days prior to this hearing, notice that the application heretofore mentioned would be heard on this date was given to J. S. Rushing, trustee, by the applicants in said application by mailing a copy of the application, together with a copy of each exhibit referred to therein, to the said J. S. Rushing, trustee, by registered mail. That the said J. S. Rushing, trustee, is the only operator producing oil or gas from the Jones Sand Pool, other than the persons who are applicants in the application heretofore mentioned. That notice of the fact that this application would be heard on this date, giving the time and place at which the application would be heard, was published in the issue of the El Dorado Daily News published on January 24, 1941, and in the issue of said publication published on January 26, 1941, and that more than seven days prior to this hearing, a written notice of the fact that this hearing would be held at this time and at this place was mailed by the Commission to each person owning royalty payable with respect to oil or gas produced from that part of the Jones Sand proposed by the application heretofore mentioned to be unitized for operation as a unit under the orders of this Commission.

2. That the Jones Sand Pool of the Schuler Field of Union County, Arkansas, was discovered after January 1, 1937, and that the Jones Sand Pool is a common source of supply of oil.

3. That it is necessary for this Commission to control and regulate the production of oil and gas from the Jones Sand Pool of the Schuler Field in order to conserve oil and gas existing in said pool, and in order to prevent the waste of such oil and gas.

4. That the following orders with respect to the Jones Sand Pool will be effective to prevent waste of oil and gas now in said Jones Sand Pool, will protect the co-equal and correlative rights to crude oil and natural gas of operators in the Jones Sand Pool and will result in a larger quantity of oil being produced ultimately from the Jones Sand Pool.

WHEREFORE, the Oil and Gas Commission of the State of Arkansas hereby issues each of the following orders:

A. There is attached hereto, marked Exhibit 1 and made a part hereof by reference for all purposes as fully and completely as though copied in full herein a true copy of an agreement entitled "Unit Operation Agreement for the Operation of the Jones Sand Horizon of the Schuler Field in Union County, Arkansas", executed as of January 15, 1941, by Lion Oil Refining Company, Phillips Petroleum Company, Texas Canadian Oil Corporation, The Atlantic Refining Company, Crescent Drilling Company, Inc., Delta Drilling Company, Sklar Oil Corporation, T. H. Barton, O. C. Bailey, J. D. Trimble, Edwin M. Jones, C. H. Murphy, Ruth Hurley, Joe B. Hurley, Jr., Lou Ann Hurley, J. K. Mahony, Emma Riley, Bertie W. Murphy, Emon A. Mahony,

Patty Joe Montgomery, G. P. Gammill, Trustee, J. I. Roberts, and C. H. Murphy, Jr., providing for the operation of that portion of the Jones Sand Pool heretofore owned in severalty by the parties executing said agreement, the land under which the portion of the Jones Sand Pool comprising the proposed unit lies being described in accordance with the governmental survey in Exhibit "A" to said agreement; and being familiar with the terms and provisions of the agreement which is Exhibit 1 hereto, this Commission does approve said agreement, and it is hereby ordered that from and after February 15, 1941, that portion of the Jones Sand Pool underlying the lands described in Exhibit "A" to said agreement be operated by the persons who have executed said agreement as a unit for the production of oil and gas from the Jones Sand Pool in accordance with the terms of said agreement, and in accordance with the terms of the Royalty Pooling Agreement hereinafter mentioned.

B. There is attached hereto, marked Exhibit 2 and made a part hereof by reference for all purposes as fully and completely as though copied in full herein a true copy of an agreement entitled "Royalty Pooling Agreement", heretofore executed by more than one hundred eighty-five (185) persons who at the date of this order own more than seventy-five (75) per cent of all royalty payable with respect to oil and gas produced from that portion of the Jones Sand which shall hereafter be operated as a unit for the production of oil and gas, as ordered in the preceding paragraph A; and being familiar with the terms and provisions of said agreement, this Commission does hereby approve said agreement and order that said agreement shall remain in effect between the parties who have, as of this date, signed said agreement, and between those persons and all persons who shall hereafter become proper parties to said agreement, so long as that portion of the Jones Sand Pool ordered to be operated as a unit by the provisions of the preceding Paragraph A is operated as a unit for the production of oil or gas.

And it is further ordered that so long as said portion of said pool is operated as a unit for the production of oil or gas, the rights of all persons entitled to any portion of the oil or gas produced from that portion of the Jones Sand ordered to be operated as a unit by the provisions of Paragraph A hereof, as against any person who has executed the Unit Operation Agreement which is Exhibit 1 hereto, and as against any other person entitled to any portion of the oil or gas produced from the portion of the Jones Sand pool so operated as a unit, shall be determined solely and exclusively by the provisions of the Royalty Pooling Agreement which is Exhibit 2 hereto, taken together with the Unit Operation Agreement which is Exhibit 1 hereto.

C. The persons executing the Unit Operation Agreement which is Exhibit 1 hereto are hereby authorized, ordered and directed to construct and operate a repressuring plant to effect pressure maintenance in, or repressuring of, the Jones Sand formation of the Schuler Field by re-injecting into the Jones Sand formation natural gas produced therefrom, natural gas obtained from any other source, air or any other appropriate substance which plant shall be constructed and placed in operation within a reasonable length of time.

It is further ordered that from and after seven A. M., February 15, 1941, the operator of the unitized area described in Exhibit 1 hereto may produce all of the oil permitted to be produced from the unitized area described in that agreement from any well or wells now situated on the unitized area, and it is ordered that such oil shall be produced in a manner which will tend to utilize the minimum quantity of free gas, or gas in solution in the Jones Sand Pool, each day in producing the quantity of oil allowed to be produced from the unitized area under the orders of this Commission.

D. It is further ordered that from and after February 15, 1941, and until further ordered by the Commission, the daily pool allowable for the Jones Sand Pool shall be 13,500 barrels of oil. Thereafter, and until such time as gas produced from said Jones Sand Pool shall be returned to the reservoir as contemplated under the Unitization Agreements, the daily pool allowable shall be allocated as between the unitized area and the area not so unitized as follows:

To the unitized area there is allocated, and said area shall be allowed to produce daily, 95.7564%, its basic percentage factor, of such daily pool oil allowable. To the wells producing from the Jones Pool but located outside said unitized area there is allocated, and said wells shall be permitted to produce daily, 4.2436%, their basic percentage factor, of such daily pool oil allowable. Said 4.2436% allocated to the wells not located on the unitized area shall be further allocated to the wells as follows:

NAME OF WELL	BARRELS PER DAY
Alice Sidney, Morgan No. 2	90
Alice Sidney, Morgan No. 3	92
Alice Sidney, Powledge No. 1	105
Alice Sidney, Powledge No. 2	95
Alice Sidney, Powledge No. 3	95
Alice Sidney, Powledge No. 4	96

It is further provided and ordered, however, that in producing said allowable oil, as above set out, said unitized area shall not be permitted to produce during any 24-hour day a greater volume of gas than that total volume arrived at by multiplying the total daily oil allowable in barrels assigned to said unitized area by 2500, and no well listed above as producing outside said unitized area, and no drilling unit upon which such well is drilled, shall be permitted to produce during any 24-hour day a greater volume of gas than that total volume arrived at by multiplying the daily oil allowable, expressed in barrels, assigned to the well by 2500.

If, as and when, any gas produced from the Jones Sand pool is returned to the reservoir, the basic percentage factors hereinabove specified for allocating the oil production as between the unitized area and units outside the unitized area shall be adjusted from time to time to compensate for reservoir displacements and to give credit in terms of allowable oil for such gas returned to said reservoir, in accordance with the following allocation formula, to the end that the quantity of oil produced from the unitized area as compared with the quantity produced from without the unitized area shall be in inverse proportion to the net volumetric withdrawals of oil and gas from the pool:

The ratio of the basic percentage allowed per unit to the net reservoir volume voided by oil plus net gas produced from said unit - divided by the sum of such ratios for the pool - shall give the adjusted percentage factor for each unit.

The net reservoir volume voided by oil and net gas produced shall be calculated for each unit as follows: The "net gas produced" shall be computed at its volume under reservoir conditions existing from time to time, to which shall be added the volume of the oil produced - measured at existing reservoir pressure and temperature.

The net volume of gas produced on any unit shall be the total volume of gas produced, minus the volume of such gas injected into the reservoir.

The word "unit", as used in the above formula, shall mean the unitized area or any established drilling unit outside the unitized area.

The daily allowable of oil permitted to be produced from the unitized area shall be ascertained by multiplying the daily allowable of oil permitted to be produced from the Jones Sand Pool by the adjusted percentage factor applicable to the unitized area, and the daily allowable of oil permitted to be produced by any drilling unit outside the unitized area shall be ascertained by multiplying such pool allowable by the adjusted percentage factor applicable to that particular unit.

It is further ordered and declared to be the established policy of the Oil and Gas Commission that should any additional well be drilled on a drilling unit not included in the unitized area of the Jones Pool which produces oil or gas from said common source of supply, allowables (oil or gas or both oil and gas) shall be assigned to such new well and unit in such manner and on such basis as to give full effect to the principle that withdrawals shall be controlled volumetrically, to the end that all fluids taken from the well and not returned to the reservoir shall be charged to the well or unit as constituting a part of the allowable of such well or unit.

E. It is further ordered that, so long as the unitized area described in Exhibit 1 hereto is operated as a unit, each person owning any royalty payable in

respect to oil produced from the Jones Sand Pool under any drilling unit heretofore fixed with respect to production from said pool shall, in lieu of and in substitution for, the royalty heretofore payable to such person with respect to such production, be paid by the operator, or operators, of the unitized area, in full and complete satisfaction of all of his right to such royalty, a sum equivalent to the market value at the well of the quantity of oil produced and saved from the unitized area, which quantity of oil shall be arrived at by the following formula:

The quantity of oil which any such person, or his predecessor, or predecessors, in title was, or were, entitled to receive from a particular drilling unit, with respect to the Jones Sand horizon, during any 24-hour day, in accordance with the allowable production schedule published by the Arkansas Oil and Gas Commission, effective August 1, 1940, shall be ascertained, and it shall be ascertained what percentage of the total oil permitted by said schedule to be produced daily from the Jones Sand, with respect to all of the drilling units included in the unitized area, the quantity of oil so ascertained constitutes.

During the operation of the unitized area as a unit, that particular person shall be paid, with respect to his rights in that particular drilling unit, as royalty on oil produced each day, from the entire unitized area, the market value at the well of a quantity of oil to be ascertained by multiplying the total production of oil from the unitized area on that day by the percentage factor ascertained as above.

If any person owns on the date the unit operation is begun an interest in the royalty payable on oil produced from more than one of the drilling units forming the unitized area, the royalty to which he shall be entitled thereafter, from the unitized area as a whole, shall be ascertained by a calculation with respect to each such drilling unit on the basis heretofore stated, and adding the results obtained by each such calculation.

With respect to gas produced from the unitized area during the unit operation, and sold or used off the unitized area, the royalty payable to any person shall be calculated in the same manner as heretofore provided with respect to royalty payable on oil produced from the unitized area, on the basis of the market price of the gas in the field. It is provided, however, that for the purposes of this provision, the market price for gas in the field shall never be deemed to be more than the actual selling price for which any particular gas is sold in the field.

F. Any order, rule or regulation of this Commission, heretofore promulgated. which is in conflict herewith, is hereby rescinded and set aside in so far as it conflicts with any provision of this order.

Further, the Commission does issue the following rules governing the production of oil and gas and the reporting of said production from the Jones Sand Pool of the Schuler Field:

Rule I. The designated operator of the unitized area, and the operator or operators not included in the unitized area, shall file with the Commission a "Monthly Producer's Report" on the Commission's Form 9, showing thereon the full information requested, specifically under Columns 2 to 12 inclusive for each lease, except Columns 4 and 5 shall be used to designate the number of each well producing within a lease during the calendar month and Columns 6 and 7 shall be used to designate the number of each well that was closed to production during the calendar month.

Rule II. GAS TO BE METERED - Effective March 15, 1941, all gas produced from the Jones Sand Pool of the Schuler Field shall be accounted for by orifice meter measurement. The record of the measurement (preferably in the form of a seven-day chart) shall be available to the Commission's representative at all times and these measurements shall be used in obtaining operating gas-oil ratios. The meters required shall be installed on the gas vent line of every oil and gas separator at a point upstream from the first point of diversion of gas.

Rule III. Said operators shall also file with the Commission a "Well Status Report" on the Commission's Form 10, showing thereon the full information requested for each and every well within each lease, except where leases or wells within a lease are closed to production for the entire calendar month, then these wells or leases shall be shown on the report as being non-productive for the entire calendar month.

All gas volumes reported on Form 10 shall be calculated and corrected to a base pressure of 14.65 pounds per square inch, temperature of 60 degrees Fahrenheit, and a specific gravity based upon quarterly tests.

It is ordered that each operator in the Jones Sand Pool of the Schuler Field file with the Commission, not later than February 20, 1941, under oath, an inventory of all stocks of Jones Sand oil, determined by actual physical gauge, as of 7 A. M., February 15, 1941.

It is ordered that this docket be kept open to consider any claims of discrimination or hardship, and to offer administrative relief, if possible, and that the Commission is anxious to hear at public hearing, evidence pertaining to any peculiarities of any or all of the wells in the reservoir affected by this order.

ARKANSAS OIL AND GAS COMMISSION

A. M. CROWELL
Director of Conservation & Production

It is so ordered by the Commission:
Edwin B. Keith, Acting Chairman
J. D. Reynolds
Ed Hollyfield
Robert J. Short
R. S. Warnock, Jr.
Basil Hoag

A. M. McCORKLE, CHAIRMAN
OPERATORS COMMITTEE

GLENN STALEY, CHAIRMAN
ENGINEERING COMMITTEE

LEA COUNTY OPERATORS COMMITTEE

HOBBS, NEW MEXICO

March 27, 1941

Hon. Carl Livingston
N.M. Oil Conservation Commission,
Santa Fe, N.M.

Dear Mr. Livingston:

Re your letter of March 24 with reference to the Langlie repressuring project, the details of placing this unit on the proration schedule are being worked out by Mr. Frank Gray of the Anderson Prichard Oil Corporation and myself, and it will go on the schedule as of April 1.

Yours very truly,

Glenn Staley

Glenn Staley

GS:M

cc: E.A. Hanson
E.H. Wahl

NEW MEXICO OIL CONSERVATION COMMISSION
HOBBS, NEW MEXICO

March 31, 1941

COPY

Mr. E.H. Wohl,
Anderson-Pritchard Corporation
Oklahoma City, Oklahoma.

RE: Case No.22, Order #340,
Langlie Untized Repressuring Project.

Dear Mr. Wohl:

Reference is made to your letter of March 18, in connection with the above captioned matter. Enclosed please find carbon copy of the writer's letter, dated March 24, addressed to your counsel, the Honorable J.O.Seth of Santa Fe.

Yours very truly,

cc J.O.Seth,
Attorney
Santa Fe, N.M.

OIL CONSERVATION COMMISSION

By _____
Carl B. Livingston,
Attorney

ANDERSON-PRICHARD OIL CORPORATION

PRODUCERS REFINERS

REFINERIES CYRIL, OKLA. AND COLORADO, TEXAS

GENERAL OFFICES

OKLAHOMA CITY, OKLA.

March 18, 1941.

The Oil Conservation Commission of New Mexico
Santa Fe, New Mexico.

In re: Unitization of that portion of the Langlie Pool embracing the $S\frac{1}{2}$ $SW\frac{1}{4}$ of Section 4, and the $S\frac{1}{2}$ $SE\frac{1}{4}$ and $SE\frac{1}{4}$ $SW\frac{1}{4}$ of Section 5 and E/2 and $E\frac{1}{2}$ $NW\frac{1}{4}$ of Section 8 and W/2 of Section 9, all in Township 25 South, Range 37 East, N.M.P.M., Lea County, New Mexico.

Gentlemen:

Upon referring to your Order No. 340, in Case No. 22, in the Matter of the Petition of Anderson-Prichard Oil Corporation and Stanolind Oil and Gas Company for themselves and for other operators in the affected portion of the Langlie Pool, Lea County, New Mexico, it is noted that such Order recites that it shall become effective on the first of the month succeeding the month in which the Secretary of the Interior shall approve the "Langlie Area Unitization Agreement" therein referred to. Accordingly, you are hereby advised that said "Langlie Area Unitization Agreement" was approved by the Secretary of the Interior of the United States on February 28, 1941, thereby placing your said Order in effect on March 1, 1941. We assume that in order to complete your records you will want official confirmation from the Interior Department as to such approval and the date thereof. Hence, we are today writing Mr. Ernest A. Hanson, Supervisor Oil and Gas Operations, U.S.G.S. at Roswell, New Mexico, to give you such confirmation.

In the light of the foregoing, we would appreciate it if you would furnish us, as early as possible, with a Proration Schedule for the month of March for the Langlie Participating Unit Area as a unit, pursuant to the terms of your Order.

Yours truly,

E. H. Wahl

Land Department

E.H.Wahl:td

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 997
Roswell, New Mexico
March 20, 1941

The Oil Conservation Commission of New Mexico,
Santa Fe, New Mexico.

Attention: Mr. Carl Livingston

Gentlemen:

Reference is made to Case No. 22, Order No. 340, containing order of the commission dated January 28, 1941, on the petition of operators of the Langlie pool, Lea County, regarding unitization, repressuring or other conservation measures for the purpose of increasing ultimate recovery from the pool.

Section 4 of the order provides that it shall become effective on the first day of the month succeeding the month in which the Secretary of the Interior shall approve said Langlie Unitized Repressuring Project. This letter may be considered official notice that said Langlie agreement was approved by the Secretary of the Interior February 28, 1941, thereby placing your order in effect on March 1, 1941.

It would appear that such changes in proration procedure as may be necessary to meet the requirements of the order should be made effective on that date.

Very truly yours,

Ernest A. Hanson

ERNEST A. HANSON,
Supervisor, Oil and Gas Operations.

EAH:LJL
cc: Anderson-Prichard Oil Corporation
Glenn Staley, State Proration Office

March 24,1941

Honorable J.O. Seth
Santa Fe, New Mexico

RE: Case No.22, Order #240,
Langlie Unitized Repressuring Project.

Dear Judge Seth:

Enclosed please find three copies of letter from Ernest A. Hanson, Supervisor Oil and Gas Operations, giving notice that the Secretary of the Interior on February 28,1941, had approved the Langlie Area Unitization Agreement.

Section 4 of the Commission's Order #240, provides:

> " 4. That this order shall become effective on the first day of the month in which the Secretary of the Interior shall approve said Langlie Unitized Repressuring Project."

copy of which Order is enclosed for your information. The effective date, therefore, will be on March 1,1941. However, in that the notice has not been received until March 22, towards the end of the current monthly proration period, the provisions of the Order could not go into operation until the ensuing monthly proration period beginning April 1.

Very truly yours,

4 Encls.

OIL CONSERVATION COMMISSION

By_____
Carl B. Livingston,
Attorney

OIL CONSERVATION COMMISSION

March 24, 1941

COPY

Mr. Glenn Staley,
Proration Umpire,
Hobbs, New Mexico

RE: Case #22, Order #340,
Langley Unitized Repressuring
Project.

Dear Mr. Staley:

Enclosed please find copy of letter from Ernest A. Hanson, Supervisor Oil and Gas Operations, giving notice that the Secretary of the Interior, on February 28,1941, had approved the Langlie Area Unitization Agreement.

Section 4 of the Commission's Order #340, provides:

> "4. That this order shall become effective on the first day of the month in which the Secretary of the Interior shall approve said Langlie Unitized Repressuring Project."

copy of which Order is enclosed for your information. The effective date, therefore, will be on March 1,1941. However, in that the notice has not been received until March 22, towards the end of the current monthly proration period, the provisions of the Order could not go into operation until the ensuing monthly proration period beginning April.

Very truly yours,

OIL CONSERVATION COMMISSION

2 Encl.

By _____
Carl B. Livingston
Attorney

OIL CONSERVATION COMMISSION

January 30, 1941

COPY

Honorable Weston Payne
Anderson-Prichard Oil Corporation
Oklahoma City, Oklahoma

Re: Order No. 340, Case No. 22, in the matter of the petition of Anderson-Prichard Oil Corporation and Stanolind Oil & Gas Company, for themselves and for other operators in the effected portion of the Langlie Pool in Lea County.

Dear Buck:

Enclosed please find copy of the order of the Commission in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By _____
Carl B. Livingston
Attorney

CBL:ik
Enc.

OIL CONSERVATION COMMISSION

January 30, 1941

COPY

Honorable A. M. McCorkle
Stanolind Oil & Gas Company
Fort Worth, Texas

Re: Order No. 340, Case No. 22, in the matter of the petition of Anderson-Prichard Oil Corporation and Stanolind Oil & Gas Company, for themselves and for other operators in the affected portion of the Langlie Pool in Lea County.

Dear Mr. Mac:

Enclosed please find copy of the order of the Commission in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By _____
Carl B. Livingston
Attorney

CBL:ik
Encl.

January 29, 1941

Mr. Edgar Kraus
Atlantic Refining Company
Carlsbad, New Mexico

Re: Order No. 339, Case No. 23, in the matter of the petition of the Operators' Committee for the operators in the Loco Hills Pool, Eddy County, in connection with the proposal of a collective pressure maintenance program for said pool.

Re: Order No. 340, Case No. 22, in the matter of the petition of Anderson-Prichard Oil Corporation and Stanolind Oil & Gas Company, for themselves and for other operators in the affected portion of the Langlie Pool in Lea County.

My dear Edgar:

Enclosed please find copies of the orders of the Commission in the above captioned matters.

Very truly yours,

OIL CONSERVATION COMMISSION

By _____
Carl B. Livingston
Attorney

CBL:ik
Encls.

January 29, 1941

Honorable Harry Leonard
Roswell, New Mexico

Re: Order No. 339, Case No. 23, in the matter of the petition of the Operators' Committee for the operators in the Loco Hills Pool, Eddy County, in connection with the proposal of a collective pressure maintenance program for said pool.

Re: Order No. 340, Case No. 22, in the matter of the petition of Anderson-Prichard Oil Corporation and Stanolind Oil & Gas Company, for themselves and for other operators in the affected portion of the Langlie Pool in Lea County.

My dear Harry:

Enclosed please find copies of the orders of the Commission in the above captioned matters.

Very truly yours,

OIL CONSERVATION COMMISSION

By_____
Carl B. Livingston
Attorney

CBL:ik
Encls.

January 29, 1941

Honorable Ernest O. Hanson
Supervisor, Oil & Gas Operations
U. S. Geological Survey
Roswell, New Mexico

Re: Order No. 339, Case No. 23, in the matter of the petition of the Operators' Committee for the operators in the Loco Hills Pool, Eddy County, in connection with the proposal of a collective pressure maintenance program for said pool.

Re: Order No. 340, Case No. 22, in the matter of the petition of Anderson-Prichard Oil Corporation and Stanolind Oil & Gas Company, for themselves and for other operators in the affected portion of the Langlie Pool in Lea County.

My dear Ernest:

Enclosed please find copies of the orders of the Commission in the above captioned matters.

Very truly yours,

OIL CONSERVATION COMMISSION

By _____
Carl B. Livingston
Attorney

CBL:ik
Encls.

January 29, 1941

Honorable Glenn Staley
Proration Umpire
Hobbs, New Mexico

Re: Order No. 339, Case No. 23, in the matter of the petition of the Operators' Committee for the operators in the Loco Hills Pool, Eddy County, in connection with the proposal of a collective pressure maintenance program for said pool.

Re: Order No. 340, Case No. 22, in the matter of the petition of Anderson-Prichard Oil Corporation and Stanolind Oil & Gas Company, for themselves and for other operators in the affected portion of the Langlie Pool in Lea County.

My dear Glenn:

Enclosed please find copies of the orders of the Commission in the above captioned matters.

Very truly yours,

OIL CONSERVATION COMMISSION

By_____
Carl B. Livingston
Attorney

CBL:ik
Encls.

SKELLY OIL COMPANY

TULSA, OKLAHOMA

PRODUCTION DEPARTMENT
H. M. STALCUP, VICE PRESIDENT
J. S. FREEMAN, ASSISTANT

December 2, 1940

Oil Conservation Commission
Santa Fe, New Mexico

Case No. 22 - Langlie Pool

Gentlemen:

We would like to have this letter considered by the Oil Conservation Commission in relation to Case No. 22, to be heard at 9 a.m., December 11, 1940.

Our opinion is that the Oil Conservation Commission should encourage experimental repressuring. The Skelly Oil Company started the first New Mexico project in the Skelly Sims area. Undoubtedly, additional oil can be recovered in the better pools of the sand area with fairly regular sand bodies. There are various questions as to the economic or profitable results, which only future operations will determine.

The Oil Conservation Commission should follow the policy of the United States Department of the Interior in the South Burbank pressure maintenance pool, Oklahoma, where allowables of input wells are transferred to other wells on the same lease. Also, for practical reasons such as preventing gas channeling, it may be necessary after a year of gas input to allow the oil allocation on any 160-acre lease, under repressuring for one year or more, to be produced from any well on that 160-acre lease.

The most important matter, of which the Commission should take judicial notice before issuing an order for repressuring, unitization, or other conservation measures in the Langlie pool sections embraced by Case No. 22, is that many adjacent gas wells in the Langlie pool are not taking gas ratably and are producing larger volumes of gas daily than the oil wells in the vicinity, which gas production is causing rapid bottom hole pressure decline. This evidence was presented to the Commission in a hearing during the latter part of August. It will certainly be discriminatory and inconsistent to endeavor to require gas to be returned to the formation on the four sections involved, and at same time allow six gas wells about a mile north and a few within a mile to the east to produce, proportionately to the oil wells, undue large volumes of gas. The August gas hearing did not request said gas

wells to be shut in, but that the daily volume of gas produced by each well be comparable to the daily volume of gas produced in the Langlie oil wells with highest daily gas production. We earnestly request the Commission that they encourage gas repressuring experiments for the conservation of reservoir energy, and, at same time, take steps to guard against undue daily production by adjacent gas wells in the Langlie pool, which produce from approximately the same zone as the oil wells.

Very truly yours,

SKELLY OIL COMPANY

By C. Lin C. Roe.

CCR/mb
cc-Mr. Dunlavey

COUNTY OFFICERS
TONY TRUJILLO, SHERIFF
HELEN SHIELDS, CLERK
A. J. GILLIS, TREASURER
T. B. LONGWELL, ASSESSOR
ROSALIO NOGALES, PROBATE JUDGE
LEE BRISCOE, SCHOOL SUPT.

STATE OF NEW MEXICO
COUNTY OF OTERO
ALAMOGORDO, NEW MEXICO

COMMISSIONERS
R. G. WALKER, DIST. 1
ALAMOGORDO
F. A. SMITH, DIST. 2
TULAROSA
FRANK BENNETT, DIST. 3
CIENEGA

November,27.1940.

Mr Carl B. Livingston
Attorney State Land Office
Santa Fe, New Mexico

Dear Sir:

You will find enclosed your office copy for your files, this covers MODIFICATIONS AND AMENDMENTS TO CONTRACT NO. 4055, I am sorry this was over looked so long, as I now understand,when I send the Bond and $ I,000.00 deposit the entire matter will be closed. The Southwest Lumber Company are to sign an Indimnity Bond after a meeting of Stockholders within the next few days after that happens the bond will be issued and the deposit made as you suggest.

We are going to need the timber application forms some time next week, Mr Moissman will meet me for looking over the timber about friday of this week, and we should finish the job by wednesday of next week.

With best personal wishes, I am

Sincerely,
Ben Longwell
BEN LONGWELI

A. M. McCORKLE, CHAIRMAN
OPERATORS COMMITTEE

GLENN STALEY, CHAIRMAN
ENGINEERING COMMITTEE

LEA COUNTY OPERATORS COMMITTEE

HOBBS, NEW MEXICO

December 3, 1940

Hon. Carl Livingston

State Land Office,

Santa Fe, N.M.

Dear Sir:

This will acknowledge receipt of the notices for publication for the hearings set by the Commission on the 11th. and 12th. of December.

Thanking you, I am,

Yours very truly,

GS:M

Glenn Staley

NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The Oil Conservation Commission, by law invested with jurisdiction as the oil and gas regulatory body of the State of New Mexico, hereby gives notice of the following public hearings to be held at the Capitol, Santa Fe, New Mexico:

Case No. 12

The petition of Andersen-Prichard Oil Corporation and Stanolind Oil & Gas Company, for themselves and for other operators in that part of the Langlie Pool, Lea County, lying generally in Sections 4, 5, 8 and 9, T. 25 S. R. 37 E., N.M.P.M., for an order by the Commission regarding the unitization, repressuring, or other conservation measures as to that portion of said Pool in order to increase the ultimate recovery therefrom. This case is set for 9:30 A.M., December 11, 1940.

Case No. 25

The petition of Frank H. Hadlock for a well location in the W½NW¼ Sec. 16, T. 20 S., R. 32 E. (Halfway Pool), for structural reasons, closer to the exterior unit boundary than is conformable to existing rules of the Commission. This case is set for 10:30 A.M., December 12, 1940.

Any person having any interest in the subject of the said hearings shall be entitled to be heard.

Given under the seal of said Commission at Santa Fe, New Mexico, on November 25, 1940.

OIL CONSERVATION COMMISSION

Sgd. Frank Jordon
Commissioner of Public Lands

Sgd. A. Andrews
State Geologist

NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The Oil Conservation Commission, by law invested with jurisdiction as the oil and gas regulatory body of the State of New Mexico, hereby gives notice of the following public hearings to be held at the Capitol, Santa Fe, New Mexico:

Case No. 23

The petition of the Operators' Committee for the operators in the Loco Hills Pool in Eddy County, in connection with the proposal of a collective pressure maintenance program for said Pool, for an order from the Commission permitting a ten percent increase over and above the normal allowable for each month until the principal investment in said pressure maintenance program has been amortized; the production of the monthly allowable of wells selected as input wells from another well or wells owned by the operator, preferably on the same basic lease, in order to preclude the penalizing of operators whose wells are used as input wells--with special reference to the following wells proposed to be so used: N.M. Fair-Brainard No. 6, and Bassett & Simcy No. 6B-State. This case is set for 9:00 P.M., December 11, 1940.

Case No. 24

The petition of N.M. Fair, Bert Aston, Charles A. Schaurich, Carl A. Hatch, J.R. Cole, Sidney Johnson and Anna Franklin, for a location for a well for oil and gas in the northwest corner of the NW¼SE¼, Section 32, T. 17 S., R. 30 E., (Loco Hills), for structural reasons, at a point closer to the boundary line of said 40-acre tract than is permitted by present rules of the Commission. This case is set for 9:00 A.M., December 12, 1940.

Case No. 21-B (Gas-Oil Ratio)

The adoption of a final gas-oil ratio order for the producing fields in Eddy County and other areas in New Mexico except Lea County, recessed in Case No. 21 from the hearing of August 29, 1940, to November 15, 1940, and not heard at said latter date, is now set for hearing on December 12, 1940, at 2:00 P.M.

Any person having any interest in the subject of the said hearings shall be entitled to be heard.

Given under the seal of said Commission at Santa Fe, New Mexico, on November 25, 1940.

OIL CONSERVATION COMMISSION

Sgd. Frank Worden
Commissioner of Public Lands

Sgd. A. Andreas
State Geologist

November 27, 1940

Honorable G. H. Card
Stanolind Oil & Gas Company
Fort Worth, Texas

My dear Mr. Card:

Enclosed please find calendar giving consecutive order of hearings set by the Commission. All interested parties are requested to be ready.

Very truly yours,

OIL CONSERVATION COMMISSION

By_____
Carl B. Livingston
Attorney

CBL:ik
Enc.

OIL CONSERVATION COMMISSION

November 25, 1940

Honorable J. O. Seth
Attorney at Law
Santa Fe, New Mexico

My dear Judge Seth:

Enclosed please find two copies each of the publications of hearings in Eddy and Lea Counties respectively.

The petition of Anderson-Prichard Oil Corporation, et al., for repressuring of a portion of Langlie Pool, Lea County, is the first case set - 9:00 A. M., December 11th. In the afternoon of that same day, the Loco Hills repressuring matter in Eddy County is to be heard.

Two unorthodox well locations, because of structural reasons (closer to the unit boundary than is warranted by the rules), are set for the morning of December 12th -- one by R. W. Fair, et al., (Loco Hills), Eddy County, and one by Frank B. Hadlock (Halfway Pool), Lea County.

Case No. 21-B (Gas-Oil Ratio) applies only to Eddy County and other areas in New Mexico except Lea County. The Lea County hearing was closed at the hearing of August 29, but recessed as to Eddy County and other areas to November 15, but the Commission was widely scattered at that time and could not convene. Therefore, that particular phase of Case No. 21 is now revived and published as Case No. 21-B, to be heard in the afternoon of December 12th.

Very truly yours,

Carl B. Livingston
Attorney

CBL:ik
Encls.

OIL CONSERVATION COMMISSION

November 25, 1940

COPY

Santa Fe New Mexican
Santa Fe, New Mexico

Gentlemen:

There is enclosed herewith a Notice for Publication, which you are kindly requested to publish once immediately. You are also requested to furnish this Commission with a copy containing this publication.

Immediately upon completion of the publication, be sure to transmit to the Oil Conservation Commission your affidavit of publication.

Upon sending to the Commission your affidavit of publication, please send your statement in duplicate and enclosed purchase voucher also in duplicate.

Very truly yours,

OIL CONSERVATION COMMISSION

By _____
Carl B. Livingston
Attorney

CBL:ik
Encls.

OIL CONSERVATION COMMISSION

November 25, 1940

COPY

Hobbs Daily News-Sun
Hobbs, New Mexico

Gentlemen:

There is enclosed herewith a Notice for Publication, which you are kindly requested to publish once immediately. You are also requested to furnish this Commission with a copy containing this publication.

Immediately upon completion of the publication, be sure to transmit to the Oil Conservation Commission your affidavit of publication.

Upon sending to the Commission your affidavit of publication, please send your statement in duplicate and enclosed purchase voucher also in duplicate.

Very truly yours,

OIL CONSERVATION COMMISSION

By_____
Carl B. Livingston
Attorney

CBL:ik
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 THE STATE OF NEW MEXICO FOR THE
PURPOSE OF CONSIDERING:

CASE NO. 22.

ORDER NO. 340.

THE PETITION OF ANDERSON-PRICHARD OIL CORPORATION AND STANOLIND OIL & GAS COMPANY, FOR THEMSELVES AND FOR OTHER OPERATORS IN THAT PART OF THE LANGLIE POOL, LEA COUNTY, LYING GENERALLY IN SECTIONS 4, 5, 8 and 9, T. 25 S., R. 37 E., N.M.P.M., FOR AN ORDER BY THE COMMISSION REGARDING THE UNITIZATION, REPRESSURING, OR OTHER CONSERVATION MEASURES AS TO THAT PORTION OF SAID POOL IN ORDER TO INCREASE THE ULTIMATE RECOVERY THEREFROM.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at nine o'clock A. M., December 11, 1940, at Santa Fe, New Mexico.

NOW, on this 28th day of January, 1941, the Commission having before it for consideration the testimony adduced at the hearing of said case and being fully advised in the premises, the Commission finds:

F I N D I N G S

1. That that portion of the Langlie Pool in Lea County, New Mexico, which is referred to in Paragraph 1 of the petitioner's petition should be defined as including the following tracts of land, to-wit:

> S/2 of SW/4 of Section 4; and the S/2 of SE/4 and the SE/4 of SW/4 of Section 5; and the E/2 and the E/2 of the NW/4 of Section 8; and the W/2 of Section 9, all in Township 25 South, Range 37 East, N.M.P.M. Lea County, New Mexico.

2. That the proposed plan for conserving the reservoir energy in the said field as set forth in the petition as involving

the use of the unitization principle, the use of the principle of repressuring, and maintaining the pressure thereof should be approved in its general aspects.

3. That the plan set forth in the petition providing for the monthly allowable to be allocated to the unit as a whole instead of to the forty-acre units, with authorization to produce the same from any wells in the area that seem best adapted for said production without waste should be approved.

IT IS THEREFORE ORDERED:

1. That that portion of the Langlie Pool in Lea County, New Mexico, which is referred to in Paragraph 1 of petitioners' petition, is hereby defined as including the following tracts of land, to-wit:

> S/2 of SW/4 of Section 4; and the S/2 of SE/4 and the SE/4 of SW/4 of Section 5; and the E/2 and the E/2 of the NW/4 of Section 8; and the W/2 of Section 9, all in Township 25 South, Range 37 East, N.M.P.M., Lea County, New Mexico.

2. That the proposed plan for conserving the reservoir energy in the said field as referred to in the petition and as incorporated in the "Langlie Area Unitization Agreement", shall hereafter be known as the Langlie Unitized Repressuring Project.

3. (a) That for the purpose of proration the total amount of oil now or hereafter allocated to the developed forty-acre units within the participating area shall be allocated to the participating area as a unit. In determining the total allocation in the participating unit as set out hereinbefore, those wells capable of producing the Langlie Pool top allowable upon the effective date of this order and those wells thereafter so capable, shall hereafter be considered as capable of producing the Langlie Pool

current monthly top allowable throughout the life of the Project. The allowable for any marginal well shall not be decreased during the life of the Project, provided however that in no event shall the allowable for such wells exceed the current top allowable for the Langlie Pool.

Any well used as an input well shall then and thereafter be given the top allowable for the Langlie Pool. The use of any input well shall first be approved by the regulatory body having jurisdiction in the instant case.

(b) That permissible back allowable accumulated in favor of all of the units in said area are similarly allocated to the unit as a whole, with similar permission to produce same from the wells best adapted for the purpose.

4. That this order shall become effective on the first day of the month succeeding the month in which the Secretary of the Interior shall approve said Langlie Unitized Repressuring Project.

OIL CONSERVATION COMMISSION

By John E. Miles
Governor

By E. S. Rodgers
Commissioner of Public Lands

By A. Andreas
State Geologist

FINDINGS

In the matter of the petition of The Anderson-Prichard Oil Company and the Stanolind Oil & Gas Company for themselves and other operators of a portion of the Langlie pool:

1. That portion of the Langlie pool in Lea County, New Mexico, which is referred to in paragraph 1 of the petitioners' petition should be defined as including the following tracts of land, to wit:

o o o o o o

2. The proposed plan for conserving the reservoir energy in the said field as set forth in the petition as involving the use of the unitization principle, the use of the principle of repressuring, and maintaining the pressure thereof should be approved in its general aspects.

3. That the plan set forth in the petition providing for the monthly allowable to be allocated to the unit as a whole instead of to the forty-acre unit\s, with authorization to produce the same from any wells in the area that seem best adapted for said production without waste should be approved.

ORDER NO. [illegible]

IT IS THEREFORE ORDERED:

1. That portion of the Langlie Pool in Lea County, New Mexico, which is referred to in paragraph 1 of petitioners' petition, is hereby defined as including the following tracts of land, to wit:

> S/2 of SW/4 of Section 4; and the S/2 of SE/4 and the SE/4 of SW/4 of Section 5; and the E/2 and the E/2 of the NW/4 of Section 8; and the W/2 of Section 9, all in Township 25 South, Range 37 East, N.M.P.M., Lea County, New Mexico.

2. The proposed plan for conserving the reservoir energy in the said field as referred to in the petition and as incorporated in the "Langlie Area Unitization Agreement", shall hereafter be known as the Langlie Unitized Repressuring Project.

3. (a) For the purpose of proration the total amount of oil now or hereafter allocated to the developed forty-acre units within the participating area shall be allocated to the participating area as a unit. In determining the total allocation in the participating unit as set out hereinbefore, those wells capable of producing the Langlie Pool top allowable upon the effective date of this order and those wells thereafter so capable, shall hereafter be considered as capable of producing the Langlie Pool current monthly top allowable throughout the life of the Project. The allowable for any marginal well shall not be decreased during the life of the Project, provided however that in no event shall the allowable for such wells exceed the current top allowable for the Langlie Pool.

Any well used as an input well shall then and thereafter be given the top allowable for the Langlie Pool. The use of any input well shall first be approved by the regulatory body having jurisdiction in the instant case.

(b) That permissible back allowable accumulated in favor of all of the

units in said area are similarly allocated to the unit as a whole, with similar permission to produce same from the wells best adapted for the purpose.

4. This order shall become effective on the first day of the month succeeding the month in which the Secretary of the Interior shall approve said Langlie Unitized Reprocessuring Project.

Done at Santa Fe, New Mexico, this ____ day of _____, 1941.

JPP

ANDERSON-PRICHARD OIL CORPORATION

PRODUCERS REFINERS

REFINERIES CYRIL, OKLA. AND COLORADO, TEXAS
GENERAL OFFICES
OKLAHOMA CITY, OKLA.

December 18, 1940.

Oil Conservation Commission
Of The State of New Mexico,
Santa Fe, New Mexico.

Attention: Mr. Livingston.

Re: Unitization of portion of Sections 4, 5, 8 and 9, Township 25 South, Range 37 East, N.M.P.M., Langlie Area, Lea County, New Mexico.

Dear Mr. Livingston:

I am informed by our Mr. Weston Payne that at the hearing, held by the Commission on December 11th concerning the above subject, an original executed copy of an agreement styled "Langlie Area Unitization Agreement" entered into under date of November 19, 1940, by and between Anderson-Prichard Oil Corporation, The Illinois Oil Company, R. Olsen Oil Company, El Paso Natural Gas Company, Stanolind Oil and Gas Company, and Western Gas Company, was submitted to the Commission in evidence and that such executed copy was subsequently withdrawn with the understanding that a certified copy of such agreement be furnished for the record. Accordingly, a duly certified copy of said agreement is enclosed herewith for that purpose.

Yours very truly,

E. H. Wahl

Land Department.

E.H.Wahl:cn
Encl

ANDERSON-PRICHARD OIL CORPORATION

PRODUCERS REFINERS

REFINERIES CYRIL, OKLA. AND COLORADO, TEXAS

GENERAL OFFICES

OKLAHOMA CITY, OKLA.

December 18, 1940.

Oil Conservation Commission
Of The State of New Mexico,
Santa Fe, New Mexico.

Attention: Mr. Livingston.

Re: Unitization of portion of Sections 4, 5, 8 and 9, Township 25 South, Range 37 East, N.M.P.M., Langlie Area, Lea County, New Mexico.

Dear Mr. Livingston:

I am informed by our Mr. Weston Payne that at the hearing, held by the Commission on December 11th concerning the above subject, an original executed copy of an agreement styled "Langlie Area Unitization Agreement" entered into under date of November 19, 1940, by and between Anderson-Prichard Oil Corporation, The Illinois Oil Company, R. Olsen Oil Company, El Paso Natural Gas Company, Stanolind Oil and Gas Company, and Western Gas Company, was submitted to the Commission in evidence and that such executed copy was subsequently withdrawn with the understanding that a certified copy of such agreement be furnished for the record. Accordingly, a duly certified copy of said agreement is enclosed herewith for that purpose.

Yours very truly,

E. H. Wahl

Land Department.

E.H.Wahl:cn
Encl

C E R T I F I C A T E.

The undersigned, P. H. Anderson, a Vice-President of Anderson-Prichard Oil Corporation, a Delaware corporation, hereby certifies that the attached instrument is a full, true, exact, and complete copy of "Langlie Area Unitization Agreement" made and entered into on the 19th day of November, 1940, by and between Anderson-Prichard Oil Corporation, a Delaware corporation; The Illinois Oil Company, a Texas corporation; R. Olsen Oil Company, a Delaware corporation; El Paso Natural Gas Company, a Delaware corporation; Stanolind Oil and Gas Company, a Delaware corporation; and Western Gas Company, a Delaware corporation, as appears from the original executed instrument now in the possession of Anderson-Prichard Oil Corporation.

P. H. Anderson

Subscribed and sworn to before me this the 16th day of December, A. D. 1940.

C. L. Norris
Notary Public.

My commission expires

August 26, 1942.

19th November

Delaware

Delaware

Delaware

[illegible]

(h) To [illegible] whether [illegible] setting [illegible] should be established.

(i) To prescribe the various types [illegible] of insurance to be carried by the operator [illegible] the carrier thereof.

(j) To approve or disapprove the proposed abandonment of any well or wells located upon any participating area.

(k) To approve or disapprove the proposed [illegible] disposition of jointly owned materials and equipment by operator.

(l) To require the taking of inventories and to compensate or offset settlements of material overages and shortages determined at the time of inventories which cannot be settled, compensated or agreed upon [illegible] for the purpose of [illegible] the inventories to the records of the [illegible]

(m) [illegible]

(n) To establish [illegible] the [illegible] prohibition [illegible] the prohibition of all [illegible] from [illegible] and unlawful, or [illegible]

(o) To determine [illegible] the [illegible] prohibitions covered hereby [illegible] and filing of all [illegible] for taxation purposes, and the payment of taxes assessed against the [illegible] covered hereby and the production [illegible]

(p) To adopt rules and regulations for the proper functioning, including the selection of the time and place for holding meetings, the calling thereof, and the manner of taking votes at any meeting, to meet not [illegible] once every three months on the call of the chairman, or upon his failure to so call such meeting, upon the call of any member of the committee.

(q) Generally, in addition to doing the things specifically provided, to advise with the operator generally concerning the operations, and to do any and all other things necessary and convenient for carrying out the terms and spirit of this agreement.

[illegible] contract.

The Committee shall act upon and determine all matters [illegible] before it. Separate votes shall be taken as to matters concerning each separate productive or possibly productive horizon, and each member of the Committee shall have the right to cast votes on all matters concerning each separate horizon within the Unit Area subject to this agreement. As to the participating area for the Wasatch horizon, as hereinafter defined, each member of the Committee shall have a vote in the proportion that the leasehold or working interest percentage of his principal on the basis of the percentages allocated to the several tracts of land within said participating area, as set forth in Article 2f hereof, bears to the total of all leasehold or working interests in such participating area, but on all matters concerning any other horizon within the Unit Area subject to this agreement, each member of the Committee shall have a vote in the proportion that the number of acres in said Unit Area, the leasehold or working interests of which are owned by his principal, bears to the total of all leasehold or working interests in the entire Unit Area, until a participating area for that horizon shall have been established, as hereinafter provided, and thereafter each member shall have the right to cast votes on all matters concerning such horizon in the proportion that the then determined leasehold or working interest percentage of his principal in such participating area of Wasatch as set forth in Article 2f hereof, bears to the total leasehold or working interests in the [illegible]

participating Area. Except as otherwise provided in Articles XII, XVII and XXIV hereof, a vote of the majority percentage in interest in any Participating Area shall be binding upon all of the parties as to such Participating Area; provided, however, that should the interest of any one of the parties hereto be a majority interest, the vote of at least two other members of the "Committee" shall be required in addition to the vote of the representative of such majority interest to bind all the parties

V.

PLAN OF DEVELOPMENT. From and after the effective date of this Agreement, except as permitted by Article XIV hereof, no well shall be drilled within the Participating Area for the Langlie horizon subject to this Agreement, except with the approval of the "Committee" and the Federal Oil and Gas Supervisor. As to lands within the Unitized Area lying outside such Participating Area, the owner or owners of oil and gas leases may, at its or their discretion and at its or their sole cost and expense, develop such non-participating acreage for the production of oil and gas through drilling not in excess of one well on any 40 acre legal subdivision thereof without the consent of the "Committee", andin the event commercial production, in the opinion of the "Committee", from the Langlie horizon results therefrom, each such well and the 40 acre subdivision, upon which said well shall have been drilled, shall be taken into and made a part of such Participating Area on such percentage basis of participation as the "Committee" may determine to be fair and equitable, subject to the approval of the Secretary of the Interior

VI.

ALLOCATION OF PRODUCTION. All "Unitized Substances" produced from the Langlie horizon within the Participating Area, as hereinafter defined, except any part thereof used for such Participating Area for production and development purposes, for repressuring, or recycling, or unavoidably lost,

shall be apportioned among and allocated to the several tracts of land comprising the Participating Area on a relative percentage basis of estimated future recovery, which relative percentages the parties hereto agree to be as follows:

Twp 25 South, Rge. 37 West, N.M.P.M.	
Section 5 - S½ SE¼	19.49%
Section 8 - N½ NE¼	22.37%
Section 8 - E½ NW¼	11.66%
Section 8 - S½ NW¼ & N½ SW¼	31.19%
Section 9 - NW¼ NW¼	6.29%
Section 9 - N½ SW¼	9. %

VII.

PARTICIPATION. The lands described in Article VI hereof are hereby established as the existing Participating Area for the "Unitized Substances" from the Langlie horizon, and for convenience are hereinafter referred to as the "Existing Participating Area".

The Langlie horizon, as used herein, is defined as that section or strata from zero elevation to 400 feet below sea level.

All production from the Langlie horizon within the Participating Area shall be allocated, effective the first of the month following the approval of this Agreement by the Secretary of the Interior, on the basis provided in Article VI hereof. Attached hereto, marked Exhibit "A", is a schedule showing the ownership of the operating rights and royalty interests according to legal subdivisions of the public land survey or aliquot parts thereof and the percentage interest of each owner in the total Participating Area for the production of the "Unitized Substances" from the Langlie horizon. The Participating Area for the Langlie horizon as established shall be enlarged from time to time to include additional lands, as provided in Article V hereof, and a new schedule of percentage interests conformable thereto shall thereupon be fixed and allocations based thereon shall be made beginning on the first of the month following such approval of the enlarged producing area. No land shall be removed from the existing Participating Area, as herein established, or subsequently enlarged. There shall be no retroactive apportion

ments or allocation of production or adjustments of accounts by reason of any enlargement of the Participating Area.

It is understood and agreed that this Unit Agreement shall not preclude any owner or owners of an oil and gas lease within the Unit Area from drilling and exploring for the production of oil and/or gas from horizons other than the Langlie horizon, and in the event commercial production of oil and/or gas is encountered in some other horizon or horizons, the party or parties owning the wells producing from such other horizon or horizons shall be solely responsible therefor and may operate and produce such wells at their sole expense and for their sole benefit, subject, however, to the lease terms, and royalties in amount or value of production from any such well on land of the United States shall be paid as specified in the lease affected, provided, that if any such well is located on land not owned by the United States royalty shall be paid in accordance with existing leases or agreements relative thereto; it being understood and agreed that on Federal leases on which the royalty rate is based on the amount of production, the production from the Langlie horizon shall not be averaged with production from other horizons for royalty settlement purposes.

If development results in production in any horizon other than the Langlie horizon in sufficient amount to justify establishment of a separate participating area, a separate participating area for production of the "Unitized Substances" from each such horizon hereafter proved to be commercially productive shall, subject to the approval of the Secretary of the Interior, be established and shall, when approved, be effective the first of the month following the approval thereof by the Secretary of the Interior, and be subject to the applicable terms and conditions as herein provided in regard to the Participating Area for the Langlie horizon herein established; provided, however, that all "Unitized Substances" produced from each such Participating Area so established, except any part thereof used for such Participating Area for production and development purposes, for repressuring, or recycling, or unavoidably lost, shall be apportioned among and allocated to the

several tracts of land comprising such particular Participating Area and each such tract shall have allocated to it such percentage of production as the "Committee", with the consent and approval of the Secretary of the Interior, may unanimously determine to be fair and equitable.

VIII.

DEVELOPMENT AND OPERATIONS ON LANDS OUTSIDE THE PARTICIPATING AREA. Any party or parties hereto owning or controlling the leasehold or operating rights in any 40 acre legal subdivision included in the Unit Area believed to contain deposits of "Unitized Substances", but not within the existing Participating Area, may, at its or their sole cost and expense, drill a well at such location thereon as may be approved by the Federal Oil and Gas Supervisor, and should said well, in the opinion of the "Committee", when so drilled result in a commercially productive well from the Unitile horizon, it may be operated and produced by the party or parties so drilling the same without allocating the production therefrom to the existing Participating Area until such time as the acreage upon which such well is located shall be included within the existing Participating Area, pursuant to the provisions of Article V hereof. If any well so drilled results in production of "Unitized Substances" insufficient, in the opinion of the "Committee", to justify inclusion in the existing Participating Area, the party or parties so drilling such well shall be wholly responsible therefor and may operate and produce the well at its or their sole expense and for its or their sole benefit, subject, however, to the lease terms, and royalties in amount or value of production from any such well on land of the United States shall be paid as specified in the lease affected, unless otherwise authorized in writing by the Secretary of Interior, provided that if such well is located on land not owned by the United States, royalty shall be paid in accordance with existing leases or agreements relative thereto.

IX.

ALLOCATION OF [illegible] AS OPERATING CHARGES. All cost and expense incurred on and after the effective date of this agreement in connection with the development and operation of any participating area for the production, storing, treating, handling, and marketing of oil, gas and other hydrocarbon substances from the horizon embraced in said participating area shall be borne by the respective owners of leases or working interests on the lands embraced in said participating area in the proportion that their respective leasehold or working interest ownerships bear to the combined leasehold or working interest in such participating area, as set forth in Article VI hereof for the Langlie horizon and as set out in Article VII hereof as to other horizons.

All materials, well equipment or other personal property situated upon and used in such operations within said Participating Area on the effective date of this Agreement shall be and remain the separate property of the party or parties that furnished or supplied the same, but shall be available to Operator for use in the operation of said Participating Area or any part thereof, free of rental. The Operator shall have the right to move such material and equipment between leases within the Participating Area, but in such event the Operator shall pay to the owners of the material and equipment the value thereof and a charge for a like amount shall be made against, and such material and equipment shall be owned by, the parties in the proportions set forth in the next preceding paragraph of this Article. All repairs to or replacements of the materials, equipment or other personal property above mentioned and all materials, equipment or other personal property placed upon and used in the operation of said Participating Area, after the effective date of this Agreement, shall be paid for and owned by the lease owning parties hereto in the proportions set forth in the next preceding paragraph of this Article.

X.

[illegible] each part, by one owning the

allocated under this [illegible] but only under the term to be paid direct to the royalty owners by the producers of the Unitized Substances. The royalty shall be due or payable only on gas produced from such Participating Area in excess of the amount of gas used for repressuring, recycling and other lease operations within such Participating Area, but on any gas production which is processed through any casinghead gasoline plant, royalty on casinghead gasoline or other commercial products extracted from all gas so processed shall, subject to the rules and regulations of the Secretary of the Interior, be paid in accordance with the terms and provisions of Casinghead Gas Contracts now existing or which may be hereafter entered into.

Each party hereto and each owner of royalty rights or interests except the United States shall be liable for and pay all taxes levied on his or its property included in this agreement, including production taxes levied by any lawful taxing authority on the amount of the Unitized Substances allocated to his or its tract or tracts.

XV.

GOVERNMENT ROYALTIES AND RENTALS. [illegible] Royalty to the United States shall be paid by the respective owners of leasehold rights at the rates specified in the respective federal leases on the amount of production allocated to the tracts thereof; [illegible] provided that, for leases on which the royalty rate depends on the daily average production per well, the royalty rate for each Participating Area shall be determined by [illegible]

next preceding from such Participating Area, and in making such determination, all oil wells shut in, with the approval of the Supervisor for conservation purposes, in such Participating Area including productive oil wells with excess gas-oil ratios and any and all wells of any character actually used for repressuring or recycling shall be counted as producing oil wells; and for leases in which the royalty rate on gas depends on the average daily gas production per well, the royalty rate in such Participating Area shall be determined for each lease by the average daily production of gas per well subject to this Agreement producing from such Participating Area, and in making such determination, all recycled gas shall be subtracted from the gas produced, and all wells capable of producing gas and included as productive oil wells shall be counted as producing gas wells.

Royalty to the United States shall be computed and paid in accordance with rules and regulations approved by the Secretary of the Interior and upon his demand shall be paid in kind.

Rentals for lands of the United States subject to this Agreement at the rates specified in the respective Federal leases shall be paid by each respective lease owner or suspended, as determined by the Secretary of the Interior, pursuant to applicable law and regulations, anything in this Agreement to the contrary notwithstanding.

XII

DISPOSITION OF PRODUCTION. Each of the lessee owning parties hereto shall have the right and privilege, upon reasonable notice to Operator, and upon the payment of, or securing the payment of production taxes and taxes measured by production and the royalty interest thereon, of receiving in kind or of separately disposing of its proportionate share of the oil, gas and other hydrocarbon substances produced and saved from the unitized premises; provided, however, that in the event of the failure or neglect of any party to exercise the right and privilege of receiving in kind or separately disposing

of its proportionate share of such production, Operator shall have the right to purchase any such products for its own account, or to sell the same to any of the parties hereto, or to others, at not less than the prevailing market price. Any extra expenditure incurred by reason of the delivery of its proportionate part of the production to any one party shall be borne by such party.

XIII.

CONSERVATION. Operations shall be conducted so as to provide for the most economical and efficient recovery of "Unitized Substances" to the end that maximum ultimate recovery may be obtained without waste. For the purpose of more properly conserving the natural resources of the lands embraced within this Agreement, the production of "Unitized Substances" shall at all times be without waste as defined by State or Federal law; shall be limited to such production as can be put to beneficial use with adequate realization of values; and in the discretion of the Secretary of the Interior shall be limited by the beneficial demand as determined by said Secretary for oil or for gas, whichever would tend to avoid excessive production of either gas or oil.

XIV.

DRAINAGE. The respective operators shall take appropriate and adequate measures to prevent drainage of oil or gas from lands subject to this Agreement by wells on lands not subject to this Agreement, or, with approval of the Secretary of the Interior, pay a fair and reasonable compensatory royalty as determined by the Federal Oil and Gas Supervisor.

XV

PLANS SUBMITTED TO AGREEMENT. (a) The parties hereto, or consenting hereto, holding title, rights or leases covering lands subject

to this Agreement not owned by the United States, hereby agree that, insofar as their interests are concerned, the provisions of all leases and contracts relating to such lands shall be deemed modified to conform hereto, and that no such lease shall be deemed to terminate or expire during the life of this Agreement.

(b) The parties hereto, or consenting hereto, holding leases embracing lands of the United States subject to this Agreement consent that the Secretary of the Interior shall and said Secretary by his approval of this Agreement does hereby establish, alter, change or revoke the drilling, producing and royalty requirements of such leases and the regulations in respect thereto to conform said requirements to the provisions of this Agreement.

The Secretary of the Interior and the several grantors in all operating or working agreements on Federal leases and all lessors of privately owned lands further agree and consent that during the effective life of this Agreement the prospecting, drilling and producing operations performed under the terms hereof, upon any land subject hereto, will be accepted and deemed to be operations under and for the benefit of all such leases; that suspension of operation or production on any such lease shall be deemed not to have occurred if there be operations or production on any part of the Unit Area subject to this Agreement; that during the life of this Agreement no such lease shall be deemed to expire by reason of failure to produce wells situated on land therein embraced; and that suspension of all operations and production on the Unit Area pursuant to direction or consent of said Secretary shall be deemed to constitute such suspension pursuant to such direction or consent with respect to each such lease.

XVI.

COVENANTS TO RUN WITH LAND. The covenants herein run with the land until this Agreement terminates and any grant, transfer or lease of

any interest hereby, or any [illegible] subject hereto, shall be conditioned on the non-[illegible] of all obligations and liabilities owed by the grantee, transferee, lessee or other successor in interest, and as to federal land shall be subject to approval by the Secretary of the Interior. No provision of this Agreement shall be construed as creating any obligation or privilege for the benefit of any person or corporation not a party hereto, or not expressly contemplated herein.

XXII

EFFECTIVE DATE AND TERM. This Agreement shall become effective on the first of the calendar month next following approval by the Secretary of the Interior and shall remain in effect for a term of five years and so long thereafter as oil or gas is or can be produced in commercial quantities from any part of the lands included in the Unit Area, or until it is proved that the Unit Area is incapable of commercial production of oil or gas, and with the approval of the Secretary of the Interior notice of termination for non-productivity is given by the respective owners of the operating rights to all parties in interest; provided, however, that with the consent of the Secretary of Interior first had and obtained, this Agreement may be sooner terminated at any time in the event the Committee unanimously finds or determines that the production of oil from the Participating Area through approved or prevailing methods is not successful or is impracticable; provided, that if any party so desires, it may be released from all obligations and liability not previously incurred under this Agreement by assigning, surrendering and transferring to the other [illegible] owning, prorata to all of the right, title and interest in the several leases, said working interest to be held by each, prorata to participation in Unit Area respective to all interests in the Participating Area, [illegible] Thereupon [illegible] shall be fully relieved from [illegible]

not relieve said assignor [illegible] from the performance of the covenants to the execution and delivery of any such instrument.

XXIII

TRANSFER OF INTEREST. No assignment, mortgage or other transfer affecting the leases covered hereby, the production therefrom, or equipment thereon, shall be made unless the same shall cover the entire undivided interest of assignor, mortgagor or other in all of said leases, it being the intent of this provision to maintain the unit ownership, development and operation of the Unitized Area; provided, that the sale of a lesser interest than the seller's entire undivided interest may be made upon securing the unanimous approval of the "Committee" thereto in writing.

In the event any party desires to sell all or any part of its interest in the Unitized Area, the other lease owning parties hereto shall have a preferential right to purchase the same. In such event, the selling party shall promptly communicate to the other lease owning parties hereto the offer received by it from a prospective purchaser ready, willing and able to purchase the same, together with the name and address of such prospective purchaser, and said parties shall thereupon have an option for a period of twenty (20) days after the receipt of said notice to purchase such undivided interest for the benefit of the remaining lease owning parties hereto as may agree to purchase the same; provided, that any interest so acquired shall be shared by the parties purchasing the same upon the basis of their then existing interest in the Participating Unitized Area; provided, further, the limitations of this paragraph shall not apply where any party hereto desires to dispose of its interest by merger, reorganization, consolidation or sale of all its assets, or a sale of its interest hereunder to a subsidiary or to any company in which such party hereto owns a majority of the stock, or to mortgage its interest.

XXIV

EFFECTIVE PERIOD, TERMINATION AND CONDITIONS OF [illegible] All provisions

and the disposal thereof shall be in conformity with allocations, allotments, and quotas made or fixed by any duly authorized person or regulatory body having jurisdiction under any federal statute or statute of the State of New Mexico; provided, that the Secretary of the Interior is vested with authority, pursuant to the mandatory acts of March 4, 1931, and of August 21, 1935, to alter or modify from time to time in his discretion, the rate of prospecting and development and the quantity and rate of production under this Agreement, such authority being hereby limited to alteration or modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification.

XX

EXISTING AGREEMENTS NOT AFFECTED. The parties hereto and all parties consenting to this Agreement agree that this Agreement shall not cancel or supersede the existing leases, drilling and operating agreements, overriding royalty agreements, or other agreements affecting the Unit Area owned or held by the parties subscribing or consenting hereto, and the same shall continue in full force and effect except to the extent that they, or any one or more thereof, are in conflict with the provisions of or are modified by this Agreement, and in case of conflict between this Agreement and any one or more of said leases, drilling and operating agreements, overriding royalty agreements or other agreements, the provisions of this Agreement during its effectiveness shall govern and control, and such other Agreements shall be and the same are hereby modified and amended accordingly; provided, however, that it is specifically understood and agreed that that certain Contract of date November 6, 1939, between Independent Oil & Gas Corporation, L. B. Pritchard, J. Steve Anderson, The Ohio Oil Company, and The Illinois Oil Company, as First Parties, and El Paso Natural Gas Company, as Second Party, which Contract is known as the "Pre-existing Contract", is not to be considered

as in any manner changed or modified by the provisions of this agreement, but said Contract is recognized as the proper valid contract under which the Unitized Area is to be developed, except that that part of Article VII of said "Representing Contract" relating to the division or allocation of charges by El Paso Natural Gas Company for gas furnished under said Contract for representing the Unit Area shall be, as it is, hereby amended, altered or modified to conform to the provisions of Article IX of this agreement.

In respect to the production of gas from the "Unitized Area", it is understood that the El Paso Natural Gas Company holds "Development and Operating Agreements", dated November 3, 1939, from all the parties hereto except the Stanolind Oil and Gas Company, covers the Company and the Herschbach Drilling Company covering the production of gas from said area, including other areas, and that the El Paso Natural Gas Company has certain rights under the "Representing Contracts" mentioned in the preceding paragraph hereof to gas that will remain in the Pueblo Horizon after the oil is exhausted therefrom. It is specifically understood and agreed that nothing herein shall prevent the El Paso Natural Gas Company from producing the gas from said Unit Area under the terms of said "Development and Operating Agreements" and said "Representing Contracts" above described, and the "Committee" and Operator provided for herein shall recognize the rights of El Paso Natural Gas Company to so produce said gas.

IX

SUSPENSION OF OBLIGATIONS. All, either this Agreement, or any portion thereof, or in said leases, drilling and operating agreements, overriding royalty agreements or any other agreement or agreements to the contrary notwithstanding, it is hereby expressly agreed that the obligations of the holder or holders of operating rights hereby held under such leases, drilling and operating agreements, overriding royalty agreements, or

any other agreement or agreements, shall be suspended to the extent that performance is prevented by weather conditions, strikes, lockouts, acts of God, or calamitous visitations, unavoidable accidents, rules and regulations of Federal, State or other Governmental agency under asserted authority, or for any cause beyond the control of the respective owners of operating rights signatory hereto.

XXII

NOTICES. All notices or demands required hereunder to be given to parties signatory hereto or consenting hereto, or statements to be rendered, may be given by mail to addresses set forth in connection with signatures hereto and to consents hereof, provided that any change in address shall be binding upon the holder or holders of operating rights if given by registered mail.

XXIII.

NO WAIVER OF CERTAIN RIGHTS. Nothing in this Agreement contained shall be construed as a waiver by any party signatory hereto or consenting to this Agreement of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any law of the State of New Mexico, of the United States, or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive.

XXIV

NO PARTNERSHIP Nothing in this Agreement contained, implied, or contemplated, shall create, or be deemed to have created, a partnership between the parties hereto, or any of them.

November 19

P. H. Anderson

(SEAL)

T. H. Marshall

December 5

John L. Herschbach

(SEAL)

Karl R. Natho

December 7th

C. C. Cragin
Vice-

(SEAL)

J. E. Franey

November 19

R. Olsen

(SEAL)

R. C. Leverich

December 7th

C. C. Cregin
Vice-

(SEAL)

J. E. Franey

December 4th

E. F. Bullard
Vice-

(SEAL)

(signed) C. A. Markey
Assistant

19th November
P. H. Anderson

P. H. Anderson

(Signed) Clara P. Johnson

June 28, 1944
(Notarial Seal affixed)

TEXAS

Dallas

5 December
John L. Herschbach

John L. Herschbach

(Signed) Thelma Beam

June 1, 1941
(Notarial Seal affixed)

TEXAS

El Paso

9th December

C. C. Cregin

Vice-

C. C. Cregin

(signed) A. C. Martch

My commission expires:
May 31, 1941
(Notarial Seal affixed)

STATE OF OKLA.)
) ss
County of Osage)

On this the 19 November

appeared R. Olsen

being by me duly sworn, did say that he is the President of the OIL COMPANY, a corporation, and that said instrument to the within and foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said R. Olsen acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

(signed) Wm. G. Mapres

My commission expires:
Dec. 18th, 1942
(Notarial Seal affixed)

STATE OF _____)
) ss
County of _____)

On this the _____ day of _____, 19__, before me appeared _____, to me personally known, who being by me duly sworn, did say that he is the _____ President of the _____, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

TEXAS

El Paso

9th December

C. C. Cragin

Vice-

C. C. Cragin

(Signed) A. C. Martch

My commission expires:
May 31, 1941
(Notarial Seal affixed)

STATE OF Oklahoma)
) ss
County of Tulsa)

On this the 16th day of December 1940, before me appeared E. F. Bullard to me personally known, who, after being by me duly sworn, did say that he is the Vice President of STANOLIND OIL AND GAS COMPANY, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said E. F. Bullard acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

(signed) M. K. MacCarty

My commission expires:
Jan. 26, 1943
(Notarial Seal affixed)

[illegible]

Pursuant to the authority vested in the Secretary of the Interior, under the Act approved March 4, 1931 (46 U. S. Statutes at Large, 1523), and the Act approved August 21, 1935 (49 U. S. Statutes at Large 674) amending the Act approved February 25, 1920 (41 U. S. Statutes at Large 437), in order to secure the proper protection of the public interest, I, ________________, Secretary of the Interior, this ____ day of ________________, 1940, hereby take the following action:

A. Approve the attached agreement, entered into between AMERADA [illegible] CORPORATION, THE [illegible] OIL COMPANY, [illegible] OIL COMPANY, [illegible] COMPANY, EL PASO NATURAL GAS COMPANY, STANOLIND OIL AND GAS COMPANY and [illegible] GAS COMPANY, and others subscribing thereto;

B. Determine and certify that the plan of development and operation of the Langlie Field, New Mexico, contemplated in said agreement is for the purpose of more properly conserving the oil and gas resources of said field and is necessary and advisable in the public interest;

C. Certify that each and every lease heretofore or hereafter issued for a period of twenty years for lands of the United States subject to said agreement, from the effective date thereof, and concurrently therewith, as modified by this Agreement, shall be continued in force beyond the twenty years specified in the lease, and until the termination of said agreement;

D. Certify that the issuance of this approval, certification and determination certificate is for the purpose of giving this Unit Agreement the force and effect of a unit or cooperative plan under the terms and conditions specified in the Acts of March 4, 1931, and August 21, 1935, supra.

____
Secretary of the Interior

CONSENT

In consideration of the execution of the foregoing Unit Agreement to which this consent is attached, the undersigned owners of certain interests in lands or royalties or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his particular ownership or interest briefly described opposite his signature, consent to the inclusion of said lands within the Unit Area therein defined, approve and adopt the terms of said Unit Agreement as applicable to said several lands and interests, agree that the drilling and development requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and of the proceeds of gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

SIGNATURES	DATES	[illegible]
E. J. Wells	1940	[illegible]
INDIAN PETROLEUM CORPORATION By ____________ President Attest: ____________ Secretary	1940	Same as preceding

By _____
President

Attest:

_____
Secretary

_____
Alice M. Stevens

_____
L. L. Armstrong

_____
C. T. Doren

_____
Bessie Ohenstein

_____
J. H. Paulsen

_____
W. L. Polglase

_____
Martin J. Todd

_____
Mary C. Wehrendt

_____
Elizabeth Van Vleet

State of Iowa,
County of Cerro
Gordo, ss.
On this _____

Page

Lottie Gregory

ALBEMARLE PETROLEUM CORPORATION

By

President

Attest:

Secretary

Lottie Gregory

1940

Lottie Gregory

1940

Lottie Gregory

1940

ALBEMARLE PETROLEUM CORPORATION

1940

By

President

Attest:

Secretary

1940

1940

STATE OF _____)
) ss
County of _____)

On this the _____ day of _____, 1940, before me appeared _____, to me personally known, who, after being by me duly sworn, did say that he is the _____ President of _____, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:
_____

* * * * * * * * *

STATE OF _____)
) ss
County of _____)

On this the _____ day of _____, 1940, before me appeared _____, to me personally known, who, after being by me duly sworn, did say that he is the _____ President of _____, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:
_____

* * * * * * * * *

STATE OF _____)
) ss
County of _____)

On this the _____ day of _____, 1940, before me appeared _____, to me personally known, who, after being by me duly sworn, did say that he is the _____ President of _____, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:
_____

STATE OF _____)
) ss
County of _____)

On this _____ day of _____, 1960, before me personally appeared _____, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that _____ executed the same as _____ free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:

_____

STATE OF _____)
) ss
County of _____)

On this _____ day of _____, 1960, before me personally appeared _____, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that _____ executed the same as _____ free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:

_____

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State of _____)
) ss.
County of _____)

On this _____ day of _____, 19__, before me personally appeared _____, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that _____ executed the same as _____ free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:

_____

STATE OF _____)
) ss.
County of _____)

On this _____ day of _____, 19__, before me personally appeared _____, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that _____ executed the same as _____ free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:

_____

STATE OF _____)
) ss.
County of _____)

On this _____ day of _____, 19__, before me personally appeared _____, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that _____ executed the same as _____ free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:

_____

Total Area of Participating Areas = 320 Acres

Lease No. & Description-Ownership.	Percent of lease within participating area.	Percent of participating area entitled to lease.	Percent ownership by U. S. in lease owned by Lessee.	Percent ownership by U. S. in lease owned by designated owner.	Percent of production from entire participating area accruing to designated owner.
E. J. Wells	60	30.42%			
T. 25 S, Rge. 37 E, N.M.P.M.					
Sec. 5 - S½ SE					
Ownership of Working Interest:					
Anderson-Prichard Oil Corporation -	1/2-x				x
The Illinois Oil Company -	1/2-x				x
Ownership of Royalty Interest:					
United States of America			12½%		xx
E. J. Wells			.062500		.036135
Indian Petroleum Corporation			3.670313		.21638
Ralf Feather Oil Company			.031250		.03021
Ella M. Bivens			.015625		.01760
L. E. Armstrong			.125000		.03571
C. M. Bowen			.125000		.03571
Bessie Chenstein			.125000		.03571
J. W. Fauson			.046875		.00870
J. L. McLaine			.046875		.00870
Martin J. Weil)					
Mary M. Behrendt)					
Elizabeth Ann Weil)			.046875		.00870
Alice G. Henry, Executrix of Estate of Fred T. Henry, Dec'd.			.007813		.01147
Jal	80	38.25%			
T. 25 S, Rge. 37 E, N.M.P.M.					
Sec. 8 - N½ NE					
Ownership of Working Interest:					
Anderson-Prichard Oil Corporation -	1/2-x				x
K. Kleen Oil Company -	1/2-x				x
Ownership of Royalty Interest:					
United States of America			12½%		xx
A. M. Barnes			1.08850%		.34950%
Stanolind Oil and Gas Company			6.25 xxx		1.8981 xxx
E. J. Langlie "A"	160	81.75%			
T. 25 S, Rge. 37 E, N.M.P.M.					
Sec. 8 - N½ NE & E½ SE					
Ownership of Working Interest:					
Anderson-Prichard Oil Corporation - x			68.75%		56.096315
Ownership of Royalty Interest:					
E. J. Langlie			.25		.165937
V. H. Kleen			.15		.15598
Marshall & Winston, Inc.			.2		.15195
Oil Royalties Corporation			.1		.13995
E. A. Roberts			1.83333		1.26763
E. B. Gregory			.08333 xxx		.80798 xxx
A. M. Barnes			1.33%		.8704
United States of America			8.		1.8506

Lease Name-Description-Ownership	Gross Acres	Net Acres	Working Interest	Royalty Interest	Net Revenue Interest
Stuart					
T. 25 S. Rge. 37 E. N.M.P.M.	40	5.0625			
Sec. 9 - NE NW					
Ownership of Working Interest:					
Anderson-Prichard Oil Corporation - *					*
Ownership of Royalty Interest:					
United States of America				Mining Lease	**
A. G. Barnes				.125000	.093750
Stanolind-Langlie "A"	80	2.5			
T. 25 S. Rge. 37 E. N.M.P.M.					
Sec. 9 - N½ SW					
Ownership of Working Interest:					
Stanolind Oil and Gas Company			.37.5%		7.875%
Ownership of Royalty Interest:					
F. J. Langlie				5%	.045
G. N. Cloyes				5	.045
Marshall & Winston, Inc.				5	.045
Oil Royalties Corporation				5	.045
F. A. Andrews				4.83333	.435
L. W. Gregory				.83333 ****	.060 ****
United States of America				5	.450
Burleson	80	11.68			
T 25 S. Rge. 37 E. N.M.P.M.					
Sec. 8 - E½ NW					
Ownership of Working Interest:					
Keenchoch Drilling Company			48.1875%		4.9191%
Western Gas Company			48.1875		4.9191
Ownership of Royalty Interest:					
Amerada Petroleum Corporation				8.1250%	.3543%
F. C. and Naomi Burleson				9.5156	.4099
Argo Oil Corporation				6.4843	.0377
E. A. Harris				1.9531	.0877
Culbertson & Irwin, Inc.				.7969	.0085
C. E. Benson				.3906	.0155
C. M. Wilson				.1953	.0078
Peggy Cady				.0977	.0114
E. W. K. Andrew				.0977	.0114
Aletha M. Root				.0977	.0114
Peter Conner				.0977	.0114

* No constant figure can be given because a Government royalty varying in rate with rate of production must be deducted before computation of this owner.

** Rate of Government royalty on this lease varies with rate of production. No constant figure can be given.

*** The revenue from this interest is to be applied toward the retirement of a certain oil payment in the original sum of $600,000.00 from this and other properties. When such oil payment has been retired, this interest reverts to owner thereof, Richard Oil Corporation and T. Otsen Oil Company.

**** This interest is contingent. Lessee is drilling offset to save 80-acre interest therein.

* The working interests of these parties are subject to the reduction and operating rights held by the lessee which has assigned, as security against said operations, production and proceeds therefrom, and the interest of lessee by the between said parties and [illegible] as trustee, dated December 8, 1950.

Case # 22.
9:00 A. M., December 11, 1940.

Petition of Anderson-Prichard Oil Corporation, et al.

Name	Company	Address
Odell	Stanolind	Roswell
Frank E. Hagen	Anderson-Prichard Oil Corp.	Hobbs, N. M.
T. N. Gard	Stanolind O. & G. Co.	Ft. Worth
J. C. Anderson	Shell Petroleum Corp.	Midland, Texas
R. W. [illegible] A. Swanson	U. S. Geological Survey	Roswell N. M.
[illegible]	El Paso Natural Gas Co.	El Paso Tex
Allen D. [illegible]	Cities Service Oil Co.	Hobbs N. M.
Kilmer & Quinn	" " " "	" "
S. P. Hannifin	Magnolia Petroleum Co.	Roswell ✓
Ed. Downing	" " "	Kermit, Texas.
J. J. Benton	Warren Petroleum Co.	Jal, N. M.
R. A. Lucas	" " "	Long Beach, Calif
[illegible] Stacy	[illegible]	[illegible] N. M.
Elvis Kahn	Atlantic Ref. Co.	Carlsbad N. M.
J. J. Zumpfick	Humble O. & R. Co.	Roswell
D. R. McKeithan	Phillips Pet. Co.	Bartlesville, Okla.
C. A. Davis	Phillips Pet. Co.	Amarillo, Tex
Weston Payne	Anderson Prichard Oil Corp.	Oklahoma City
W. H. Brown	Anderson-Prichard oil Corp.	Oklahoma city
Henry Bedford	State of	Roswell
Joe Griffith	New Mexico	"
Ray Obenauer	Oil	Hobbs
Ray Rodgers	State of New Mexico	Santa Fe
Carl B. Livingston	N. M. Oil Conservation Commission	Santa Fe.

NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The Oil Conservation Commission, by law invested with jurisdiction as the oil and gas regulatory body of the State of New Mexico, hereby gives notice of the following public hearings to be held at the Capitol, Santa Fe, New Mexico:

Case No. 22.

The petition of Anderson-Prichard Oil Corporation and Stanolind Oil & Gas Company, for themselves and for other operators in that part of the Langlie Pool, Lea County, lying generally in Sections 4, 5, 8 and 9, T. 25 S., R. 37 E., N.M.P.M., for an order by the Commission regarding the unitization, repressuring, or other conservation measures as to that portion of said Pool in order to increase the ultimate recovery therefrom. This case is set for 9:00 A. M., December 11, 1940.

Case No. 25.

The petition of Frank B. Hadlock for a well location in the W½NE¼NE¼, Sec. 16, T. 20 S., R. 32 E. (Halfway Pool), for structural reasons, closer to the exterior unit boundary than is conformable to existing rules of the Commission. This case is set for 10:00 A. M., December 12, 1940.

Any person having any interest in the subject of the said hearings shall be entitled to be heard.

Given under the seal of said Commission at Santa Fe, New Mexico, on November 25, 1940.

OIL CONSERVATION COMMISSION

By _____
Commissioner of Public Lands

By _____
State Geologist

AFFIDAVIT OF PUBLICATION

State of New Mexico, }
County of Lea }

I, THOMAS G. SUMMERS
PUBLISHER

Of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once ~~a week~~ in the regular and entire issue of said paper, and not in a supplement thereof for a

period of ONE DAY ~~weeks,~~

~~beginning with~~ the issue dated Nov 27, 1940

~~and ending with the issue dated~~ ~~193~~

Thomas G. Summers
Publisher.

Sworn and subscribed to before me

this 30th day of November, 1940.

J. R. Barker
Notary Public.

My commission expires 10-17-43, 193

(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publicaton has been made.

LEGAL NOTICES

(Pub. Nov. 27, 1940)
NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION
COMMISSION

The Oil Conservation Commission, by law invested with jurisdiction as the oil and gas regulatory body of the State of Ne wMexico, hereby gives notice of the following public hearings to be held at the Capitol, Santa Fe, New Mexico:

Case No. 22.

The petition of Anderson-Pichard Oil Corporation and Stanolind Oil and Gas Company, for themselves and for other operators generally in Sections 4, 5, 8 and 9, T. 25 S., R. 37 E., N. M. P. M., for an order by the Commission regarding the unitization, repressuring, or other conservation measures as to that portion of said Pool in order to increase the ultimate recovery therefrom. This case is set for 9:00 A. M., December 11, 1940.

Case No. 25.

The petition of Frank B. Hadlock for a well location in the W 1-2 NE 1-4 NE 1-4, Sec. 16, T. 20 S., R. 32 E. (Halfway Pool), for structural reasons, closer to the exterior (unit) boundary than is conformable to existing rules of the commission. This case is set for 10:00 A. M., December 12, 1940.

Any person having any interest in the subject of the said hearings shall be entitled to be heard.

Given under the seal of said Commission at Santa Fe, New Mexico, on November 25, 1940.

OIL CONSERVATION COMMISSION
By (Sgd.) Frank Worden
Commissioner of Public Lands
By (Sgd.) A. Andreas
State Geologist
(SEAL)

LEGAL ADVERTISING

NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The Oil Conservation Commission, by law invested with jurisdiction as the oil and gas regulatory body of the State of New Mexico, hereby gives notice of the following public hearings to be held at the Capitol, Santa Fe, New Mexico:

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The petition of Anderson-Prichard Oil Corporation and Stanolind Oil & Gas Company, for themselves and for other operators in that part of the Langlie Pool, Lea County, lying generally in Sections 4, 5, 8 and 9, T. 25 S., R. 37 E., N. M. P. M., for an order by the Commission regarding the unitization, repressuring, or other conservation measures as to that portion of said Pool in order to increase the ultimate recovery therefrom. This case is set for 9:00 A. M., December 11, 1940.

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Any person having any interest in the subject of the said hearings shall be entitled to be heard.

Given under the seal of said Commission at Santa Fe, New Mexico, on November 25, 1940.

OIL CONSERVATION COMMISSION.
By Frank Worden,
Commissioner of Public Lands.
By A. Andreas,
State Geologist.
(SEAL)
Publish Nov. 26, 1940.

4.16

4.16

Received payment,

.....

By.....

Affidavit of Publication

State of New Mexico, } ss.
County of Santa Fe }

I, L. B. Floyd, being first duly sworn, declare and say that I am the (Business Manager) ~~(Editor)~~ of the Santa Fe New Mexican, a daily newspaper, published in the English Language, and having a general circulation in the City and County of Santa Fe, State of New Mexico, and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 of the Session Laws of 1937; that the publication, a copy which is hereto attached, was published in said paper once each week for 1 consecutive weeks, and on the same day of each week in the regular issue of the paper during the time of publication, and that the notice was published in the newspaper proper, and not in any supplement, once each week for 1 weeks consecutively, the first publication being on the 26th day of November, 1940, and the last publication on the ..... day of ....., 19.....; that payment for said advertisement has been (duly made), or (assessed as court costs); that the undersigned has personal knowledge of the matters and things set forth in this affidavit.

L. B. Floyd

Manager.

Subscribed and sworn to before me, this 28th day of November, A. D., 1940

Anna K. Ormsbee

Notary Public.

My Commission expires

June 9, 1941

November 23, 1940.

Oil Conservation Commission,
Santa Fe, New Mexico.

The undersigned, Anderson-Prichard Oil Corporation and Stanolind Oil and Gas Company, for themselves and for other operators in the Langley Pool, state:

1. That the operators in that part of the Langley Pool lying generally in Sections 4, 5, 8 and 9, Township 25 South, Range 37 East, N. M. P. M., have generally reached an agreement that that portion of said pool should be unitized and repressuring or other conservation measures should be undertaken, in order to increase the ultimate recovery from said pool.

2. That extensive study has been made of the area above described and engineering and geological information indicates, in the opinion of these petitioners, that said area is of such a nature that it might be unitized and repressuring and similar conservation operations undertaken without injury to the remainder of said Langley Pool or other adjoining lands.

3. That a considerable amount of back allowable has accumulated to the credit of wells in the area above described, which these petitioners believe may be produced in addition to the current allowable, by means of repressuring and other similar conservation measures, without waste or other injury to the pool and adjoining lands.

4. That said proposed repressuring and other conservation measures will necessitate the use of certain wells for input of gas and possibly other wells will have to be shut in by reason of high gas-oil ratio and similar matters, necessitating the transfer of the current allowable and back allowable from the wells used for input of gas, and other wells shut in, to other wells within the area above described.

5. That the area presently under consideration for unitization involves land belonging to the United States, with the exception of approximately 80 acres which are owned in fee, and the Department of the Interior of the United States is urging that unitization, repressuring and similar conservation measures be adopted in the area.

WHEREFORE, petitioners pray:

1. That this Commission authorize the unitization of said area.

2. That this Commission approve repressuring and similar conservation measures.

3. That the monthly allowable be allocated to the unit as a whole, instead of to 40 acre units, with authority to produce the same from any wells in the area that seem best adapted for said production without waste; that the back allowable now accumulated in favor of all the wells in said area be similarly allocated to the unit as a whole, with similar permission to produce same from the wells best adapted for that purpose.

4. That the Commission indicate by approval on the unit agreement, or in some other manner, its approval of said agreement.

5. That the Commission order a hearing on the foregoing matters at an early date.

ANDERSON-PRICHARD OIL CORPORATION,

By _____
Its Manager of Production.

STANOLIND OIL AND GAS COMPANY,

By J. H. Moyan by G. H. Card
Its Division Superintendent.

AGREEMENT

THIS AGREEMENT, Made and entered into this _____ day of _____, 1940, by and between AMERADA-PETROLEUM OIL CORPORATION, a Delaware corporation, THE ILLINOIS OIL COMPANY, a Texas Corporation, R. OLSEN OIL COMPANY, a Delaware corporation, WESTERN GAS COMPANY, a _____ _____ corporation, EL PASO NATURAL GAS COMPANY, a _____ corporation, and STANOLIND OIL AND GAS COMPANY, a _____ corporation,

WITNESSETH:

THAT WHEREAS, on the 19th day of November, 1940, the parties hereto entered into a certain agreement styled "Langlie Area Unitization Agreement", which agreement, among other things, provided for the unitization of the following described lands situate in Lea County, New Mexico, to-wit:

> S/2 of SW/4 of Section 4; and the S/2 of SE/4 and the SE/4 of SW/4 of Section 5; and the E/2 and the E/2 of the NW/4 of Section 8; and the W/2 of Section 9, ALL in Township 25 South, Range 37 East, N.M.P.M., Lea County, New Mexico,

such unitization to become effective on the first of the month following the approval of said "Langlie Area Unitization Agreement" by the Secretary of the Interior of the United States; and,

WHEREAS, it is in the interest of conservation and to the mutual benefit of the parties hereto to commence immediately with the operations contemplated under said "Langlie Area Unitization Agreement" without awaiting the formal approval of said "Langlie Area Unitization Agreement" by the Secretary of the Interior

NOW, THEREFORE, in consideration of the premises, the mutual benefits to be derived herefrom and the promises, covenants and agreements hereinafter contained, it is hereby agreed by and between the parties hereto that all the provisions of said "Langlie Area Unitization Agreement" shall become binding and effective as between the parties hereto on the 1st day of December, 1940,

irrespective of the date of the bond approval thereof by the Secretary of the Interior, and that immediately upon the signing of this Agreement the "Committee" members provided for in the said "Vacuum Area Unitization Agreement" shall be appointed by the parties hereto and, upon the effective date of this Agreement, said "Committee" shall begin to exercise the powers, duties and functions delegated to and imposed upon it by the terms and provisions of said "Vacuum Area Unitization Agreement".

The terms, covenants and conditions of this Agreement shall extend to and be binding upon and shall inure to the benefit of the parties hereto and their respective successors and assigns.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed the day and year first above written.

ATTEST:

_____
Secretary

AMERADA-HESS-ARD OIL CORPORATION

By _____
Vice-President

ATTEST:

_____
Secretary

THE ATLANTIC OIL COMPANY

By _____
President

ATTEST:

_____
Secretary

H. GIBBS OIL COMPANY

By _____
President

ATTEST:

_____
Secretary

SUNRAY GAS COMPANY

By _____
President

ATTEST:

_____
Secretary

EL PASO NATURAL GAS COMPANY

By _____
President

ATTEST:

_____
Secretary

SKELLY OIL COMPANY

By _____
President

STATE OF OKLAHOMA)
) ss.
County of Oklahoma)

On this the ____ day of ____, 1940, before me appeared ____, to me personally known, who, after being by me duly sworn, did say that he is the Vice-President of ____, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said ____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

Notary Public

My commission expires:

____

STATE OF OKLAHOMA)
) ss.
County of ____)

On this the ____ day of ____, 1940, before me appeared ____, to me personally known, who, after being by me duly sworn, did say that he is the President of THE LEADERS OIL COMPANY, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said ____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

Notary Public

My commission expires:

____

STATE OF OKLAHOMA)
) ss.
County of Oklahoma)

On this the ____ day of ____, 1940, before me appeared ____, to me personally known, who, after being by me duly sworn, did say that he is the President of H. OSBY OIL COMPANY, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said ____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

Notary Public

My commission expires:

STATE OF _____)
) ss.
County of _____)

On this the _____ day of _____, 19__, before me appeared _____ to me personally known, who, after being by me duly sworn, did say that he is the _____ president of _____ NATIONAL, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:

_____

STATE OF _____)
) ss.
County of _____)

On this the _____ day of _____, 19__, before me appeared _____ to me personally known, who, after being by me duly sworn, did say that he is the _____ president of _____ NATIONAL, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:

_____

and between [illegible] corporation, [illegible] corporation, a [illegible] corporation, a [illegible] corporation, a [illegible] corporation, and [illegible], a [illegible] corporation, and such other owners of land in [illegible] as may be oil or gas deposits within the exterior [illegible] of the lands [illegible], hereinafter referred, as any thereafter [illegible]

[illegible]

RECITALS

[illegible] and lessees covering [illegible] of the land [illegible], and [illegible] boundaries, have heretofore [illegible] and to the [illegible] of [illegible] February 25, 1920 (41 Stats. 437) as amended and

WHEREAS, the Secretary [illegible] of Congress, approved [illegible] (41 Stats. 1355) and June 11, 1934 (48 Stat. 974) authorize [illegible] and their representatives to unite with each other, or jointly or severally with others, in collectively adopting and operating [illegible] a cooperative or unit plan of development or operation of any [illegible] oil or gas [illegible], field or pool for the purpose of more properly conserving the natural resources thereof whenever determined and certified by the Secretary of the Interior to be necessary or advisable in the public interest; and

WHEREAS, the [illegible] Act, as amended, [illegible] a single oil and gas [illegible] or pool [illegible] of the date of March 1, 1931 and June 11, 1934, [illegible]

[illegible]

Page 2.

WHEREAS, for the purpose of more properly conserving the oil and gas resources of said area, field or pool, it is necessary, convenient and advisable in the public interest, for the parties signatory hereto and the parties consenting hereto, with the consent of the Secretary of the Interior, to unite in a unit plan of development, and operation to promote economical and efficient development, the maximum recovery of oil, gas and associated hydrocarbon substances that may be produced from said unit area through repressuring or other methods of stimulating production without waste, and a fair apportionment of the benefits involved among the parties entitled thereto;

NOW, THEREFORE, in consideration of the premises and the promises hereinafter contained, the parties hereto, and the parties consenting hereto, agree severally among themselves and with the Secretary of the Interior, as follows:

I.

ENABLING ACT AND REGULATIONS. The provisions of the act of Congress of February 25, 1920, as amended, supra, insofar as applicable, are accepted and made a part hereof, and all development and operation under this agreement shall be subject to the operating regulations heretofore and pertinent and reasonable regulations hereafter approved by the Secretary of the Interior under act of Congress of February 25, 1920, as amended, supra, to the extent that such regulations are not inconsistent with the specific terms of the leases or of this agreement, particularly in the matter of rates of royalty and rental, and to the extent that they are not in conflict with the laws of the State of New Mexico; provided, that on lands not owned by the United States, only such regulations as govern prospecting, development, and production operations are hereby accepted.

II.

UNIT AREA. The following described lands are hereby designated and

recognized as constituting the Langlie Unit Area:

Twp. 25 South, Rge. 37 East, N.M.P.M.
Section 4 - $S\frac{1}{2}$ $SW\frac{1}{4}$
Section 5 - $S\frac{1}{2}$ $SE\frac{1}{4}$ and $S\frac{1}{2}$ $S\frac{1}{2}$
Section 8 - $E\frac{1}{2}$ and $E\frac{1}{2}$ $W\frac{1}{2}$
Section 9 - $W\frac{1}{2}$

III.

UNITIZED SUBSTANCES. All oil, gas, natural gasoline and associated hydrocarbons within the Unit Area subject hereto, hereinafter called "Unitized Substances", are by the terms of this agreement unitized

IV

OPERATOR AND PLANNING COMMITTEE. All development and operations for the "Unitized Substances" within the Participating Area for the Langlie Unit Area, as herein defined, subject hereto shall be conducted and managed by one Operator, to be designated and appointed by a Planning Committee, for such period or duration and upon such terms and conditions as such Committee shall deem best, provided, that all such development and operations shall be in accordance with the terms and conditions of this agreement and shall be planned and co-ordinated by such Committee. Said Planning Committee, hereinafter designated as the "Committee", is hereby created, consisting of one member to be appointed jointly by El Paso Natural Gas Company and Western Gas Company, their successors and assigns, and one member to be appointed by each of the following parties, their successors or assigns, who shall subscribe to this agreement:

Anderson-Prichard Oil Corporation,
The Illinois Oil Company,
J. Glenn Oil Company,
Forenbach Drilling Company,
Standard Oil and Gas Company

Any member appointed or elected to serve on the "Committee" may be changed from time to time by the principal or principals appointing or electing a member and by notice to the Operator and the remaining members of the Committee or other principals in writing, as such notice

Powers of Planning Committee. The Committee shall have the following powers, functions, duties, and obligations:

(a) To appoint an operator and to fix the period, duration and terms and conditions of the operator's service.

(b) From time to time, when deemed necessary or expedient, to substitute or replace operator with another operator, provided such substitution shall not be effective until _____ days after written notice thereof to the then existing operator, unless such operator sooner consents thereto.

(c) To plan, coordinate, direct and supervise all operations on the Unit Area.

(d) To approve or disapprove the proposed drilling of additional wells in the Langlie Participating Area, or in any other participating area which may hereafter be established, and to determine the location of said wells, provided that the consent and approval of the drilling of any well shall be construed to mean the approval of all necessary expenditures in drilling, completing and equipping such well, including the necessary lease tankage.

(e) To determine from which wells located upon any participating area production shall be taken, and the rate of production therefrom, with due regard for market demand, operating practices, and conservation measures.

(f) To approve or disapprove operator's advance estimates of costs and expenditures and any proposed expenditure of operator in any sum in excess of $5,000.00, except as provided in Subdivision (d) hereof.

(g) As to any well drilled outside of any participating area,

[illegible] will have encountered on special proration, and to be [illegible] the percentage basis of proration upon which such oil and the [illegible] obligation upon which it has been drilled shall be taken into any participating area now or hereafter established, and thereafter to instruct and advise the operator respecting the proper reduction of costs, expenses and proceeds of production for the period since the effective date of any such allocation.

(h) To determine at any time whether or not a new participating area should be established.

(i) To prescribe the various types and amounts of insurance to be carried by the operator and to designate the carrier thereof.

(j) To approve or disapprove the proposed abandonment of any well or wells located upon any participating area.

(k) To approve or disapprove the proposed sale and disposition of jointly owned materials and equipment by operators.

(l) To require the taking of inventories and to compromise or effect settlements of material overages and shortages determined on the item of inventories which cannot be settled, compromised or agreed upon by the auditors for the purpose of effecting prompt reconciliation of the inventories to the records of the working interest owners.

(m) To employ, at the option, as auditor or inspector to represent all of the working interest owners in drilling, [illegible] and checking operations [illegible] to

lating to said participating unitized properties, the expense of such work to be charged to the joint account.

(n) To terminate this Unit Plan at any time that the "Committee" unanimously advises or determines that the production of oil from the Langlie Participating Area through repressuring or recycling methods is not successful, or is impracticable.

(o) To determine, designate and direct, from time to time, who shall attend to the rendition of all the properties covered hereby for taxation, the making and filing of all lawfully required reports for taxation purposes, and the payment of taxes assessed against the unitized properties covered hereby and the production therefrom.

(p) To adopt rules and regulations for its proper functioning, including the selection of the time and place for holding meetings; the calling thereof, and the manner of taking votes on any questions; to meet not less than once every three months on the call of the chairman, or upon his failure to so call such meetings, upon the call of any member of the "Committee".

(q) Generally, in addition to doing the things specifically provided, to advise with the operator generally concerning its operations, and to do any and all other things necessary and convenient for carrying out the terms and spirit of this agreement.

(e) The powers and functions of the Planning Committee, pertinent to which reference is made in subsections (b), (c), (d), (f), (g), and (h) of this Article shall be subject to such powers of direction, approval or disapproval of the Secretary of the Interior or his representative over the operator as may be lawfully conferred upon him by law, regulation, or by this contract.

The Committee shall act upon and determine all matters coming before it. Separate votes shall be taken as to matters concerning each separate productive or possibly productive horizon, and each member of the Committee shall have the right to cast votes on all matters concerning each separate horizon within the Unit Area subject to this agreement. As to the Participating Area for the Lansdale horizon, as herein defined, each member of the Committee shall have a vote in the proportion that the leasehold or working interest percentage of his principal on the basis of the percentages allocated to the several tracts of land within said Participating Area, as set forth in Article VI hereof, bears to the total of all leasehold or working interests in such Participating Area, but on all matters concerning any other horizon within the Unit Area subject to this agreement, each member of the Committee shall have a vote in the proportion that the number of acres in the Unit Area, the leasehold or working interests of which are owned by his principal, bears to the total of all leasehold or working interests in the entire Unit Area, until a Participating Area for that horizon shall have been established, as hereinafter provided, and thereafter each member shall have the right to cast votes on all matters concerning such horizon in the proportion that his then determined leasehold or working interest percentage of his principal in such Participating Area, as provided in Article VII hereof, bears to the total of all leasehold or working interests in such established Partici-

pating Area. Except as otherwise provided in Articles VII, XVII and XVIII hereof, a vote of the majority percentage interest in any Participating Area shall be binding upon all of the parties as to such Participating Area; provided, however, that should the interest of any one of the parties hereto be a majority interest, the vote of at least two other members of the "Committee" shall be required in addition to the vote of the representative of such majority interest to bind all the parties

V

PLAN OF DEVELOPMENT. From and after the effective date of this Agreement, except as permitted by Article XIV hereof, no well shall be drilled within the Participating Area for the Langlie horizon subject to this Agreement, except with the approval of the "Committee" and the Federal Oil and Gas Supervisor. As to lands within the Unitized Area lying outside such Participating Area, the owner or owners of oil and gas leases may, at its or their discretion and at its or their sole cost and expense, develop such non-participating acreage for the production of oil and gas through drilling not in excess of one well on any 40 acre legal subdivision thereof without the consent of the "Committee", andin the event commercial production, in the opinion of the "Committee", from the Langlie horizon results therefrom, each such well and the 40 acre subdivision, upon which said well shall have been drilled, shall be taken into and made a part of such Participating Area on such percentage basis of participation as the "Committee" may determine to be fair and equitable, subject to the approval of the Secretary of the Interior

VI.

ALLOCATION OF PRODUCTION. All "Unitized Substances" produced from the Langlie horizon within the Participating Area, as hereinafter defined, except any part thereof used for such Participating Area for production and development purposes, for repressuring, or recycling, or unavoidably lost,

shall be apportioned among and allocated to the several tracts of land comprising the Participating Area on a relative percentage basis of estimated future recovery, which relative percentages the parties hereto agree to be as follows:

Township 28 South, Range 37 East, N.M.P.M.	
Section 5 - S½ SE¼	15.00%
Section 8 - N½ NE¼	22.37%
Section 8 - E½ NW¼	11.66%
Section 8 - S½ SW¼ & N½ SE¼	31.19%
Section 9 - NW¼, NW¼	6.28%
Section 9 - N½ SW¼	9. %

VII

PARTICIPATION. The lands described in Article VI hereof are hereby established as the existing Participating Area for the "Unitized Substances" from the Langlie horizon, and for convenience are hereinafter referred to as the "Existing Participating Area".

The Langlie horizon, as used herein, is defined as that section or strata from zero elevation to 400 feet below sea level.

All production from the Langlie horizon within the Participating Area shall be allocated, effective the first of the month following the approval of this Agreement by the Secretary of the Interior, on the basis provided in Article VI hereof. Attached hereto, marked Exhibit "A", is a schedule showing the ownership of the operating rights and royalty interests according to legal subdivisions of the public land survey or aliquot parts thereof and the percentage interest of each owner in the Total Participating Area for the production of the "Unitized Substances" from the Langlie horizon. The Participating Area for the Langlie horizon as established shall be enlarged from time to time to include additional lands, as provided in Article V hereof, and a new schedule of percentage interests conformable thereto shall thereupon be fixed and allocations based thereon shall be made beginning on the first of the month following such approval of the enlarged producing area. No land shall be removed from the existing Participating Area, as herein established, or subsequently enlarged. There shall be no retroactive apportion-

ments or allocation of production or adjustments of accounts by reason of any enlargement of the Participating Area

It is understood and agreed that this Unit Agreement shall not preclude any owner or owners of an oil and gas lease within the Unit Area from drilling and exploring for the production of oil and/or gas from horizons other than the Langlie horizon, and in the event commercial production of oil and/or gas is encountered in some other horizon or horizons, the party or parties owning the wells producing from such other horizon or horizons shall be solely responsible therefor and may operate and produce such wells at their sole expense and for their sole benefit, subject, however, to the lease terms, and royalties in amount or value of production from any such well on land of the United States shall be paid as specified in the lease affected, provided, that if any such well is located on land not owned by the United States royalty shall be paid in accordance with existing leases or agreements relative thereto; it being understood and agreed that on Federal leases on which the royalty rate is based on the amount of production, the production from the Langlie horizon shall not be averaged with production from other horizons for royalty settlement purposes.

If development results in production in any horizon other than the Langlie horizon in sufficient amount to justify establishment of a separate participating area, a separate participating area for production of the "Unitized Substances" from each such horizon hereafter proved to be commercially productive shall, subject to the approval of the Secretary of the Interior, be established and shall, when approved, be effective the first of the month following the approval thereof by the Secretary of the Interior, and be subject to the applicable terms and conditions as herein provided in regard to the Participating Area for the Langlie horizon herein established; provided, however, that all "Unitized Substances" produced from each such Participating Area so established, except any part thereof used for such Participating Area for production and development purposes, for repressuring, or recycling, or unavoidably lost, shall be apportioned among and allocated to the

several tracts of land comprising such particular Participating Area and each such tract shall have allocated to it such percentage of production as the "Committee", with the consent and approval of the Secretary of the Interior, may unanimously determine to be fair and equitable.

VIII.

DEVELOPMENT AND OPERATIONS ON LANDS OUTSIDE THE PARTICIPATING AREA. Any party or parties hereto owning or controlling the leasehold or operating rights in any 40 acre legal subdivision included in the Unit Area believed to contain deposits of "Unitized Substances", but not within the existing Participating Area, may, at its or their sole cost and expense, drill a well at such location thereon as may be approved by the Federal Oil and Gas Supervisor, and should said well, in the opinion of the "Committee", when so drilled result in a commercially productive well from the Langlie horizon, it may be operated and produced by the party or parties so drilling the same without allocating the production therefrom to the existing Participating Area until such time as the acreage upon which such well is located shall be included within the existing Participating Area, pursuant to the provisions of Article V hereof. If any well so drilled results in production of "Unitized Substances" insufficient, in the opinion of the "Committee", to justify inclusion in the existing Participating Area, the party or parties so drilling such well shall be wholly responsible therefor and may operate and produce the well at its or their sole expense and for its or their sole benefit, subject, however, to the lease terms, and royalties in amount or value of production from any such well on land of the United States shall be paid as specified in the lease affected, unless otherwise authorized in writing by the Secretary of Interior, provided that if such well is located on land not owned by the United States, royalty shall be paid in accordance with existing leases or agreements relative thereto.

IX.

ALLOCATION OF DEVELOPMENT AND OPERATING CHARGES. All cost and expense incurred on and after the effective date of this agreement in connection with the development and operation of any participating area for the production, storing, treating, handling, and marketing of oil, gas and other hydrocarbon substances from the horizon embraced in said participating area shall be borne by the respective owners of leases or working interests on the lands embraced in said participating area in the proportion that their respective leasehold or working interest ownerships bear to the combined leasehold or working interest in such participating area, as set forth in Article VI hereof for the Langlie horizon and as set out in Article VII hereof as to other horizons.

All materials, well equipment or other personal property situated upon and used in such operations within said Participating Area on the effective date of this Agreement shall be and remain the separate property of the party or parties that furnished or supplied the same, but shall be available to Operator for use in the operation of said Participating Area or any part thereof, free of rental. The Operator shall have the right to move such material and equipment between leases within the Participating Area, but in such event the Operator shall pay to the owners of the material and equipment the value thereof and a charge for a like amount shall be made against, and such material and equipment shall be owned by, the parties in the proportions set forth in the next preceding paragraph of this Article. All repairs to or replacements of the materials, equipment or other personal property above mentioned and all materials, equipment or other personal property placed upon and used in the operation of said Participating Area, after the effective date of this Agreement, shall be paid for and owned by the lease owning parties hereto in the proportions set forth in the next preceding paragraph of this Article.

X

RENTAL AND ROYALTY PAYMENTS. Each party hereto owning the

[illegible] and shall pay all [illegible] taxes, [illegible] possible it will become necessary or expedient to [illegible] or the use or operations under which such party holds the undivided [illegible] and [illegible] such leasehold rights shall be separately liable for and shall pay the premiums on the lease bonds or other bonds required for maintenance of its leasehold rights on the separate tracts and shall indemnify the United States against all such losses for which it is separately liable. Likewise, each party hereto holding the leasehold rights on the separate tracts herein involved shall be separately liable for and shall pay all royalties which it may be obligated to pay on account of said tracts based on the amount of the Unitized Substances allocated under this Agreement to said tracts but may order the same to be paid direct to the royalty owners by the purchaser of the Unitized Substances. Said royalty shall be due or payable only on gas produced from each Participating Area in excess of the amount of gas used for repressuring, recycling and other lease operations within such Participating Area, but on any gas production which is processed through any casinghead gasoline plant, royalty on casinghead gasoline or other commercial products extracted from all gas so processed shall, subject to the rules and regulations of the Secretary of the Interior, be paid in accordance with the terms and provisions of Casinghead Gas Contracts now existing or which may be hereafter entered into.

Each party hereto and each owner of royalty rights or interests except the United States shall be liable for and pay all taxes levied on his or its property included in this Agreement, including production taxes levied by any lawful taxing authority on the account of the Unitized Substances allocated to his or its tract or tracts.

XI.

GOVERNMENT ROYALTIES AND RENTALS. Royalty to the United States shall be paid by the respective owners of leasehold rights at the rates specified in the respective Federal leases on the amount of production allocated to the lands thereof; provided that, for leases in which the royalty rate on all or some of the acreage of oil production per well, the royalty rate in each Participating Area shall be determined for each lease by the average [illegible] production of all oil wells subject to [illegible]

ment producing from such Participating Area, and in making such determination, all oil wells shut in, with the approval of the Supervisor for conservation purposes, in such Participating Area including productive oil wells with excess gas-oil ratios and any and all wells of any character actually used for repressuring or recycling shall be counted as producing oil wells; and for leases in which the royalty rate on gas depends on the average daily gas production per well, the royalty rate in such Participating Area shall be determined for each lease by the average daily production of gas per well subject to this Agreement producing from such Participating Area, and in making such determination, all recycled gas shall be subtracted from the gas produced, and all wells capable of producing gas and included as productive oil wells shall be counted as producing gas wells.

Royalty to the United States shall be computed and paid in accordance with rules and regulations approved by the Secretary of the Interior and upon his demand shall be paid in kind.

Rentals for lands of the United States subject to this Agreement at the rates specified in the respective Federal leases shall be paid by each respective lease owner or suspended, as determined by the Secretary of the Interior, pursuant to applicable law and regulations, anything in this Agreement to the contrary notwithstanding.

XII.

DISPOSITION OF PRODUCTION. Each of the lease owning parties hereto shall have the right and privilege, upon reasonable notice to Operator, and upon the payment of, or securing the payment of production taxes and taxes measured by production and the royalty interest thereon, of receiving in kind or of separately disposing of its proportionate share of the oil, gas and other hydrocarbon substances produced and saved from the unitized premises; provided, however, that in the event of the failure or neglect of any party to exercise the right and privilege of receiving in kind or separately disposing

of its proportionate share of such production, Operator shall have the right to purchase any such products for its own account, or to sell the same to any of the parties hereto, or to others, at not less than the prevailing market price. Any extra expenditure incurred by reason of the delivery of its proportionate part of the production to any one party shall be borne by such party.

XIII.

CONSERVATION. Operations shall be conducted so as to provide for the most economical and efficient recovery of "Unitized Substances" to the end that maximum ultimate recovery may be obtained without waste. For the purpose of more properly conserving the natural resources of the lands embraced within this Agreement, the production of "Unitized Substances" shall at all times be without waste as defined by State or Federal law; shall be limited to such production as can be put to beneficial use with adequate realization of values; and in the discretion of the Secretary of the Interior shall be limited by the beneficial demand as determined by said Secretary for oil or for gas, whichever would tend to avoid excessive production of either gas or oil.

XIV.

DRAINAGE. The respective operators shall take appropriate and adequate measures to prevent drainage of oil or gas from lands subject to this Agreement by wells on lands not subject to this Agreement, or, with approval of the Secretary of the Interior, pay a fair and reasonable compensatory royalty as determined by the Federal Oil and Gas Supervisor.

XV

LEASES CONFORMED TO AGREEMENT. (a) The parties hereto, or consenting hereto, holding title, rights or leases covering lands subject

to this Agreement not owned by the United States, hereby agree that, insofar as their interests are concerned, the provisions of all leases and contracts relating to such lands shall be deemed modified to conform hereto, and that no such lease shall be deemed to terminate or expire during the life of this Agreement.

(b) The parties hereto, or consenting hereto, holding leases embracing lands of the United States subject to this Agreement consent that the Secretary of the Interior shall and said Secretary by his approval of this Agreement does hereby establish, alter, change or revoke the drilling, producing and royalty requirements of such leases and the regulations in respect thereto to conform said requirements to the provisions of this Agreement.

The Secretary of the Interior and the several grantors in all operating or working agreements on Federal leases and all lessors of privately owned lands further agree and consent that during the effective life of this Agreement the prospecting, drilling and producing operations performed under the terms hereof, upon any land subject hereto, will be accepted and deemed to be operations under and for the benefit of all such leases; that suspension of operation or production on any such lease shall be deemed not to have occurred if there be operations or production on any part of the Unit Area subject to this Agreement; that during the life of this Agreement no such lease shall be deemed to expire by reason of failure to produce wells situated on land therein embraced; and that suspension of all operations and production on the Unit Area pursuant to direction or consent of said Secretary shall be deemed to constitute such suspension pursuant to such direction or consent with respect to each such lease.

XVI.

COVENANTS TO RUN WITH LAND. The covenants herein run with the land until this Agreement terminates and any grant, transfer or lease of

any interest hereto, or any lands or leases subject hereto, shall be conditioned on the assumption of all privileges and obligations hereunder by the grantee, transferee, lessee or other successor in interest, and as to Federal land shall be subject to approval by the Secretary of the Interior. No provisions of this Agreement shall be construed as creating any obligation or privilege for the benefit of any person or corporation not a party hereto, or not expressly consenting hereto.

XVII

EFFECTIVE DATE AND TERM. This Agreement shall become effective on the first of the calendar month next following approval by the Secretary of the Interior and shall remain in effect for a term of five years and so long thereafter as oil or gas can be produced in commercial quantities from any part of the lands included in the Unit Area, or until it is proved that the Unit Area is incapable of commercial production of oil or gas, and with the approval of the Secretary of the Interior notice of termination for non-productivity is given by the respective owners of the operating rights to all parties in interest; provided, however, that with the consent of the Secretary of Interior first had and obtained, this Agreement may be sooner terminated at any time in the event the "Committee" unanimously finds or determines that the production of oil from the Participating Area through repressuring or recycling methods is not successful or is impracticable; provided, that if any party so desires, it may be released from all obligations and liability not previously incurred under this Agreement by assigning, conveying and transferring to the other lease owning parties hereto all of its right, title and interest in the leases covered hereby, said assigned interest to be held by the assignees in proportion to their then respective leasehold interests in the Participating United Areas. Thereupon the rights of such party to any benefits thereafter accruing hereunder shall cease; provided, however, such assignment shall

not relieve said assigning party from any liabilities incurred prior to the execution and delivery of any such assignment.

XVIII

TRANSFERS OF INTEREST. No assignment, mortgage or other transfer affecting the leases covered hereby, the production therefrom, or equipment thereon, shall be made unless the same shall cover the entire undivided interest of assignor, mortgagor or seller in all said leases; it being the intent of this provision to maintain the unit ownership, development and operation of the Unitized Area; provided, that the sale of a lesser interest than the seller's entire undivided interest may be made upon securing the unanimous approval of the "Committee" thereto in writing.

In the event any party desires to sell all or any part of its interest in the Unitized Area, the other lease owning parties hereto shall have a preferential right to purchase the same. In such event, the selling party shall promptly communicate to the other lease owning parties hereto the offer received by it from a prospective purchaser ready, willing and able to purchase the same, together with the name and address of such prospective purchaser, and said parties shall thereupon have an option for a period of twenty (20) days after the receipt of said notice to purchase such undivided interest for the benefit of the remaining lease owning parties hereto as may agree to purchase the same; provided, that any interest so acquired shall be shared by the parties purchasing the same upon the basis of their then existing interest in the Participating Unitized Area; provided, further, the limitations of this paragraph shall not apply where any party hereto desires to dispose of its interest by merger, reorganization, consolidation or sale of all its assets, or a sale of its interest hereunder to a subsidiary or to any company in which such party hereto owns a majority of the stock, or to mortgage its interest.

XIX

RATE OF PROSPECTING, DEVELOPMENT AND PRODUCTION. All production

and the disposal thereof shall be in conformity with allocations, allotments, and quotas made or fixed by any duly authorized person or regulatory body having jurisdiction under any Federal statute or statute of the State of New Mexico; provided, that the Secretary of the Interior is vested with authority, pursuant to the mandatory acts of March 4, 1931, and of August 21, 1935, to alter or modify from time to time in his discretion, the rate of prospecting and development and the quantity and rate of production under this Agreement, such authority being hereby limited to alteration or modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification.

XX.

EXISTING AGREEMENTS NOT CANCELLED. The parties hereto and all parties consenting to this Agreement agree that this Agreement shall not cancel or supersede the existing leases, drilling and operating agreements, overriding royalty agreements, or other agreements affecting the Unit Area owned or held by the parties subscribing or consenting hereto, and the same shall continue in full force and effect except to the extent that they, or any one or more thereof, are in conflict with the provisions of or are modified by this Agreement, and in case of conflict between this Agreement and any one or more of said leases, drilling and operating agreements, overriding royalty agreements or other agreements, the provisions of this Agreement during its effectiveness shall govern and control, and such other agreements shall be and the same are hereby modified and amended accordingly; provided, however, that it is specifically understood and agreed that that certain Contract of date November 3, 1938, between Anderson-Prichard Oil Corporation, L. H. Prichard, J. Steve Anderson, S. Clegg Oil Company, and The Illinois Oil Company, as First Parties, and El Paso Natural Gas Company, as Second Party, which Contract is known as El Paso Agreement, is not to be considered

as in any manner changed or modified by the provisions of this Agreement, but said Contract is recognized as the repressuring contract under which the Unitized Area is to be repressured, except that that part of Article VII of said "Repressuring Contract" relating to the division or allocation of charges by El Paso Natural Gas Company for gas furnished under said Contract for repressuring the Unit Area shall be, and is, hereby amended, altered or modified to conform to the provisions of Article IX of this agreement.

In respect to the production of gas from the "Unitized Area", it is understood that the El Paso Natural Gas Company holds "Development and Operating Agreements", dated November 6, 1950, from all the parties hereto except the Stanolind Oil and Gas Company, Eastern Gas Company and the Herschbach Drilling Company covering the production of gas from said area, including other areas, and that the El Paso Natural Gas Company has certain rights under the "Repressuring Contract" mentioned in the preceding paragraph hereof to gas that will remain in the Langlie horizon after the oil is exhausted therefrom. It is specifically understood and agreed that nothing herein shall prevent the El Paso Natural Gas Company from producing the gas from said Unit Area under the terms of said "Development and Operating Agreements" and said "Repressuring Contract" above described, and the "Committee" and Operator provided for herein shall recognize the rights of El Paso Natural Gas Company to so produce said gas.

XXI

SUSPENSION OF OBLIGATIONS. Anything in this Agreement, or any portion thereof, or in said leases, drilling and operating agreements, overriding royalty agreements or any other agreement or agreements to the contrary notwithstanding, it is hereby expressly agreed that the obligations of the holder or holders of operating rights hereunder under such leases, drilling and operating agreements, overriding royalty agreements, or

any other agreement or agreements, shall be suspended to the extent that performance is prevented by weather conditions, strikes, lockouts, acts of God, or calamitous visitations, unavoidable accidents, rules and regulations of Federal, State or other governmental agency under asserted authority, or for any cause beyond the control of the respective owners of operating rights signatory hereto.

XXII

NOTICES. All notices or demands required hereunder to be given to parties signatory hereto or consenting hereto, or statements to be rendered, may be given by mail to addresses set forth in connection with signatures hereto and to consents hereof, provided that any change in address shall be binding upon the holder or holders of operating rights if given by registered mail.

XXIII

NO WAIVER OF CERTAIN RIGHTS. Nothing in this Agreement contained shall be construed as a waiver by any party signatory hereto or consenting to this Agreement of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any law of the State of New Mexico, of the United States, or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive.

XXIV

NO PARTNERSHIP Nothing in this Agreement contained, implied, or contemplated, shall create, or be deemed to have created, a partnership between the parties hereto, or any of them

XIV

QUIET OF TITLE. Each party hereto, except the United States of America, warrants and agrees to defend the title to the rights and interests claimed by him or it as hereinafter set out opposite his or its name in Exhibit "A" hereof.

XV

SPECIAL PROVISION-HERSCHBACH DRILLING COMPANY. At the time of the drafting of this agreement, it is not definitely known that Herschbach Drilling Company will join in the execution hereof, and it is hereby understood and agreed that even though said Herschbach Drilling Company may never join in the execution hereof, this Agreement, nevertheless, shall be binding upon and effective as to all the other parties hereinabove named, when all such other parties shall have executed the same. In the event said Herschbach Drilling Company shall fail, neglect or refuse to join herein, prior to the effective date of this Agreement, it is understood and agreed by and between the parties subscribing hereto, that then all allocations of development and operating charges and of production in connection with the existing Participating Area shall be revised or recalculated as follows:

Twp. 25 South, Rge. 37 East, N.M.P.M.	
Sec. 5 - S½ SE¼	30.70%
Sec. 8 - N½ NE¼	23.75%
Sec. 9 - N½ NW¼ (excluding Interest of Herschbach Drilling Company)	6.15%
Sec. 8 - S½ NW¼ & E½ SE¼	33.10%
Sec. 9 - NW¼ NW¼	6.25%
Sec. 9 - N½ SW¼	9.56%

but said Herschbach Drilling Company may thereafter, with the consent of the "Committee" and upon such terms as the "Committee" may then determine, join in the execution of this Agreement on such basis as may have been determined by the "Committee", subject to the approval of the Secretary of the Interior, and in the event of such joinder, such Agreement shall become binding upon and effective as to said Herschbach Drilling Company on the first of the month following the date of such joinder; thereupon a new schedule of percentage interest conformable to such Agreement shall be fixed and allocations of development and operation charges and of production shall be based thereon

XXVII

COUNTERPARTS This Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed and have set opposite their respective names the date of execution and a list of the lands in which the respective signatory party claims an interest made subject to this Agreement.

ANDERSON-PRICHARD OIL CORPORATION

By _____ Vice-President

ATTEST:

_____ Secretary

Dated _____ 1940
List of Lands
Twp 25 South, Rge. 37 East, NMPM
Sec. 4 - S½ SW¼
Sec. 5 - S½ SE¼ & SE¼ SW¼
Sec. 8 - E½
Sec. 9 - NW¼

THE ILLINOIS OIL COMPANY

By _____ President

ATTEST:

_____ Secretary

Dated _____ 1940
List of Lands
Twp 25 South, Rge. 37 East, NMPM
Sec. 4 - S½ SW¼
Sec. 5 - S½ SE¼ & SE¼ SW¼

WESTERN GAS COMPANY

By _____ President

ATTEST:

_____ Secretary

Dated _____ 1940
List of Lands
Twp. 25 South, Rge 37 East, NMPM
Sec. 8 - E½ NW¼

R. OLSEN OIL COMPANY

By _____ President

ATTEST:

_____ Secretary

Dated _____ 1940
List of Lands
Twp. 25 South, Rge. 37 East, NMPM
Sec. 8 - N½ NE¼

HERSCHBACH DRILLING COMPANY

By _____ President

ATTEST:

_____ Secretary

Dated _____ 1940
List of Lands
Twp. 25 South, Rge. 37 East, NMPM
Sec 8 - E½ NW¼

EL PASO NATURAL GAS COMPANY

By _____
President

ATTEST:

_____
Secretary

Dated _____ 1940
List of Lands
Twp. 24 South, Rge. 37 East, NMPM
Sec 4 - S½ SW¼
Sec 5 - S½ SE¼ & SE¼ SW¼
Sec 8 - E½
Sec 9 - NW¼

STANOLIND OIL AND GAS COMPANY

By _____
President

ATTEST:

_____
Secretary

Dated _____ 1940
List of Lands
Twp. 25 South, Rge 37 East, NMPM
Sec 8 - N½ NE¼
Sec 9 - SW¼

****

STATE OF OKLAHOMA)
) SS
County of Oklahoma)

On this the _____ day of _____, 1940, before me appeared _____, to me personally known, who, after being by me duly sworn, did say that he is the Vice-President of ANDERSON-PRICHARD OIL CORPORATION, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:

_____

****

STATE OF _____)
) SS
County of _____)

On this the _____ day of _____, 1940, before me appeared _____, to me personally known, who, after being by me duly sworn, did say that he is the _____ President of THE ILLINOIS OIL COMPANY, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:

_____

Page #11

STATE OF _____)
) ss
County of _____)

On this the _____ day of _____, 19__, before me appeared _____, to me personally known, who, after being by me duly sworn, did say that he is the _____ President of _____, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written

_____
Notary Public

My commission expires:

_____

STATE OF OKLAHOMA)
) ss
County of Oklahoma)

On this the _____ day of _____, 19__, before me appeared _____, to me personally known, who, after being by me duly sworn, did say that he is the _____ President of G. GLENN OIL COMPANY, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written

_____
Notary Public

My commission expires:

_____

STATE OF _____)
) ss
County of _____)

On this the _____ day of _____, 19__, before me appeared _____, to me personally known, who, after being by me duly sworn, did say that he is the _____ President of _____, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:

_____

STATE OF _____)
) ss
County of _____)

On this the _____ day of _____, 1940, before me appeared _____, to me personally known, who, after being by me duly sworn, did say that he is the _____ President of STANOLIND OIL AND GAS COMPANY, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:

_____

STATE OF _____)
) ss
County of _____)

On this the _____ day of _____, 1940, before me appeared _____, to me personally known, who, after being by me duly sworn, did say that he is the _____ President of STANOLIND OIL AND GAS COMPANY, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:

_____

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APPROVAL, CERTIFICATION AND DETERMINATION

Pursuant to the discretionary authority in the Secretary of the Interior, under the act approved March 4, 1933 (47 U. S. Statutes at Large, 1483), and the Act approved August 21, 1935 (49 U. S. Statutes at Large 674) amending the Act approved February 25, 1920 (41 U. S. Statutes at Large 437), in order to secure the proper protection of the public interest, I, _____ Secretary of the Interior, this _____ day of _____, 1940, hereby take the following action:

A. Approve the attached agreement, entered into between ANDERSON PRICHARD OIL CORPORATION, THE ILLINOIS OIL COMPANY, H. OLSEN OIL COMPANY, HUNSCHBACH DRILLING COMPANY, EL PASO NATURAL GAS COMPANY, STANOLIND OIL AND GAS COMPANY and WESTERN GAS COMPANY, and other subscribing thereto;

B. Determine and certify that the plan of development and operation of the Langlie field, Lea County, New Mexico, contemplated in said agreement is for the purpose of more properly conserving the oil and gas resources of said field and is necessary and advisable in the public interest;

C. Certify that each and every lease heretofore or hereafter issued for a period of twenty years for lands of the United States subject to said agreement, from the effective date thereof, and concurrently therewith, as modified by this Agreement, shall be continued in force beyond the twenty years specified in the lease, and until the termination of said agreement;

D. Certify that the issuance of this approval, certification and determination certificate is for the purpose of giving this said Agreement the force and effect of a unit or cooperative plan under the terms and conditions specified in the acts of March 4, 1931, and August 21, 1935, supra

_____
Secretary of the Interior

CONSENT

In consideration of the execution of the foregoing Unit Agreement to which this consent is attached, the undersigned owners of lands or interests in lands or royalties or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his particular ownership or interest briefly described opposite his signature, consent to the inclusion of said lands within the Unit Area therein defined, approve and adopt the terms of said Unit Agreement as applicable to said several lands and interests, agree that the drilling and development requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and of the proceeds of gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

SIGNATURES	DATE	LIST OF LANDS ALL OF WHICH ARE SITUATED IN TWP 25 SOUTH, RGE 37 EAST, N.M.P.M.
E. J. Wells	1940	Sec. 4 - S½ SW¼ Sec. 5 - S½ NW¼ & SW¼ SW¼
INDIAN PETROLEUM CORPORATION	1940	Same as preceding

By _____
President

Attest:

_____
Secretary

SIGNATURES	DATES	LIST OF TRACTS IN OR WHICH ARE SITUATED IN THE E. HALF SOUTH, RGE. 37 EAST, N.M.P.M.
REED FLATHER OIL COMPANY	 1940	Same as preceding
By _____ President		
Attest:		
_____ Secretary		
_____ Ella M. Fivens	 1940	Same as preceding
_____ L. L. Armstrong	 1940	Same as preceding
_____ C. E. Bowen	 1940	Same as preceding
_____ Bessie Ohenstein	 1940	Same as preceding
_____ J. M. Pauson	 1940	Same as preceding
_____ W. L. Melding	 1940	Same as preceding
_____ Martin J. Weil	 1940	Same as preceding
_____ Mary W. Behrendt	 1940	Same as preceding
_____ Elizabeth Ann Weil	 1940	Same as preceding
_____ Alice G. Henry, Executrix of Estate of Fred T. Henry, Deceased.	 1940	Same as preceding
_____ A. E. Barnes	 1940	[illegible]
_____ F. A. Langlie	 1940	[illegible]

W. H. Rieger		1940	Same as preceding
RINGOLD & MARVIN, INC		1940	Same as preceding
By President			
Attest:			
Secretary			
OIL ROYALTIES CORPORATION		1940	Same as preceding
By President			
Attest:			
Secretary			
P. L. Andrews		1940	Same as preceding
L. N. Gregory		1940	Same as preceding
Lottie Gregory		1940	Same as preceding
ALERADA PETROLEUM CORPORATION		1940	Same as preceding
By President			
Attest:			
Secretary			
W. H. Rieger Jr.		1940	Same as preceding
Frank Carlo Jr.		1940	Same as preceding

STATE OF _____)
{ SS
County of _____)

On this the _____ day of _____, 1940, before me, appeared _____, to me personally known, who, after being by me duly sworn, did say that he is the _____ President of _____, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:
_____

* * * * * * * * *

STATE OF _____)
{ SS
County of _____)

On this the _____ day of _____, 1940, before me appeared _____, to me personally known, who, after being by me duly sworn, did say that he is the _____ President of _____, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:
_____

* * * * * * * * *

STATE OF _____)
{ SS
County of _____)

On this the _____ day of _____, 1940, before me appeared _____, to me personally known, who, after being by me duly sworn, did say that he is the _____ President of _____, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said _____ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:
_____

Page 4.

STATE OF _____)
) ss
County of _____)

On this _____ day of _____, 1940, before me personally appeared _____, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that _____ executed the same as _____ free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:
_____

* * * * * * * * *

STATE OF _____)
) ss
County of _____)

On this _____ day of _____, 1940, before me personally appeared _____, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that _____ executed the same as _____ free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:
_____

* * * * * * * * *

STATE OF _____)
) ss
County of _____)

On this _____ day of _____, 1940, before me personally appeared _____, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that _____ executed the same as _____ free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:
_____

STATE OF _____)
) ss
County of _____)

On this _____ day of _____, 1940, before me personally appeared _____, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that _____ executed the same as _____ free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:
_____

* * * * * * * * *

STATE OF _____)
) ss
County of _____)

On this _____ day of _____, 1940, before me personally appeared _____, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that _____ executed the same as _____ free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:
_____

* * * * * * * * *

STATE OF _____)
) ss
County of _____)

On this _____ day of _____, 1940, before me personally appeared _____, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that _____ executed the same as _____ free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year in this certificate first above written.

_____
Notary Public

My commission expires:
_____

EXHIBIT "A"
Langlie Horizon
Total Area of Participating Acreage - 680 Acres.

Lease No.-Description-Ownership.	Acreage of Lease within Participating Area.	Percent of production from entire participating area allocated to lease.	Percent represented by W.I. in lease owned by Designated owner.	Percent represented by N.P.I. in lease owned by Designated owner	Percent of Production from entire participating area accruing to designated owner.
W. J. Wells	80	19.48%			
T. 25 S, Rge. 37 E, N.M.P.M.					
Sec. 5 - S½ SE					
Ownership of Working Interest:					
Anderson-Prichard Oil Corporation -	1/2-x		*		
The Illinois Oil Company -	1/2-x		*		
Ownership of Royalty Interest:					
United States of America				Sliding Scale	**
W. J. Wells				.33926%	.06613%
Indian Petroleum Corporation				3.67051	.71538
Red Feather Oil Company				.31250	.06091
Ella M. Bivens				.08928	.01740
L. E. Armstrong				.13189	.02571
C. M. Bowen				.13189	.02571
Bessie Chenstein				.13189	.02571
J. W. Pauson				.04464	.00870
L. McElaine				.04464	.00870
Sophia J. Weil)					
Mary M. Behrendt)					
Elizabeth Ann Weil)				.04464	.00870
Alice G. Henry, Executrix of Estate of Fred T. Henry, Dec'd.				.05884	.01147
Jul	80	22.37%			
T. 25 S, Rge. 37 E, N.M.P.M.					
Sec. 8 - N½ NE					
Ownership of Working Interest:					
Anderson-Prichard Oil Corporation -	1/2-x		*		
H. Olsen Oil Company -	1/2-x		*		
Ownership of Royalty Interest:					
United States of America				Sliding Scale	**
A. K. Barnes				1.5525%	.3495%
Stanolind Oil and Gas Company				6.25 ***	1.3081 ***
P. F. Langlie "A"	160	31.15%			
T. 25 S, Rge. 37 E, N.M.P.M.					
Sec. 8 - S½ NE & E½ SE					
Ownership of Working Interest:					
Anderson-Prichard Oil Corporation - x			85.93758%		26.868916%
Ownership of Royalty Interest:					
P. F. Langlie				.5%	.1558%
W. B. Mieger				.5	.15585
Marshall & Winston, Inc.				.5	.15585
Oil Royalties Corporation				.5	.15585
F. [illegible]				4.85333	1.51278
L. [illegible]				.65867 ***	.20528 ***
A. C. Burns				1.5625	.48703
United States of America				5.	1.5585

Lease Name-Description-Ownership.	Acreage of Lease within participating Area	Percent of production from entire participating area allocated to lease	Percent participation presented by W.I. in lease owned by designated owner	Percent participation presented by R.I. in lease owned by designated owner.	Percent of production from entire participating area accruing to designated owner.
Stuart T. 25 S. Rge. 37 E. M.M.P.M. Sec. 9 - NW NW	40	3.33%			
Ownership of Working Interest: Anderson-Prichard Oil Corporation ** x					
Ownership of Royalty Interest: United States of America				Sliding Scale **	
A. E. Barnes				1.3125%	.03828%
Stanolind-Langlie "A" T. 25 S. Rge. 37 E. M.M.P.M. Sec. 9 - ~~W~~ NW	80	6. %			
Ownership of Working Interest:					
Stanolind Oil and Gas Company			87.5%		7.875%
Ownership of Royalty Interest:					
T. J. Langlie				6%	.045
M. M. Kinges				.5	.045
Marshall & Winston, Inc.				.5	.045
Oil Royalties Corporation				.5	.045
O. A. Andrews				4.65350	.435
E. T. Gregory				.66667***	.060***
United States of America				5	.450
Burleson T 25 S. Rge. 37 E. M.M.P.M. Sec 8 - E½ NW	80	11.66%			
Ownership of Working Interest:					
Kerschbach Drilling Company			43.1875%		4.9191%
Western Gas Company			43.1875		4.9191
Ownership of Royalty Interest:					
Amerada Petroleum Corporation				3.1250%	.3643%
W. W. and Naomi Burleson				3.5156	.4099
Argo Oil Corporation				5.4688	.6377
E. A. Yaries				1.9531	.2277
Culbertson & Irwin, Inc.				.5859	.0683
O. K. Monson				.3906	.0455
C. H. Wilson				.1953	.0228
Parrot Cady				.0977	.0114
W. W. & A. Andrew				.0977	.0114
Aletta E. Root				.0977	.0114
Peter Conner				.0977	.0114

* No constant figure can be given because a Government royalty varying in rate with rate of production must be deducted before computation of this amount.

** Rate of Government royalty on this lease varies with rate of production. No constant figure can be given.

*** The revenue from this interest is to be applied toward the retirement of a certain oil payment in the original sum of $600,000.00 from this and other properties. When such oil payment has been retired, this interest reverts in equal shares to Anderson-Prichard Oil Corporation and R. Olsen Oil Company.

**** This interest in controversy. Lottie Gregory claims a one third interest therein.

x The working interests of these parties are subject to gas development and operating rights held by R. Olsen Natural Gas Company, as more fully defined and set forth in certain "Development and Operating Contracts" entered into by said Burleson and parties and R. Olsen Natural Gas Company under date of November 8, 1939.

Case No. 2 File No. 1
Transcripts — Petition of Undersigned
Richard Oil Corp., et al TRANSCRIPT

"Tuftear"
FILING FOLDER

Case No.

22 Filed

Application, Transcript,
Small Exhibits, Etc.

CASE NO. 22

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

THE PETITION OF ANDERSON PRICHARD OIL CORPORATION AND STANOLIND OIL & GAS COMPANY, FOR THEMSELVES AND FOR OTHER OPERATORS IN THAT PART OF THE LANGLIE POOL, LEA COUNTY, LYING GENERALLY IN SECTIONS 4, 5, 8 AND 9, T. 25 S., R. 37 E., N.M.P.M., FOR AN ORDER BY THE COMMISSION REGARDING THE UNITIZATION, RE-PRESSURING, OR OTHER CONSERVATION MEASURES AS TO THAT PORTION OF SAID POOL IN ORDER TO INCREASE THE ULTIMATE RECOVERY THEREFROM.

TRANSCRIPT OF PROCEEDINGS AT HEARING IN THE
CITY HALL BUILDING
SANTA FE, NEW MEXICO
DECEMBER 11, 1940.

Pursuant to order of the Commission, duly made and entered, setting December 11, 1940, at nine o'clock A. M., for hearing in the above entitled matter, said hearing was convened at nine o'clock A. M. of December 11, 1940, in the City Hall Building, Santa Fe, New Mexico, the Commission sitting as follows:

HON. FRANK WORDEN, Commissioner of Public Lands, Secretary
Hon. A. Andreas, State Geologist, Member
Hon. Carl B. Livingston, Attorney for the Commission

APPEARANCES:

NAME	COMPANY	ADDRESS
J. Seth	Stanolind	Santa Fe, N. M.
Fra Gray	Anderson-Prichard Oil Corp.	Hobbs, N. M.
G. Card	Stanolind O. & G. Co.	Ft. Worth, Texas
J. Gordon	The Illinois Oil Co.	Dallas, Texas
Ern A. Hanson	U.S.Geol. Survey	Roswell, N. M.
C. Cragin	El Paso Naturel Gas Co.	El Paso, Texas
All B. Gibson	Cities Service Oil Co.	Hobbs, N. M.
Delr R. Guinn	" " " "	Hobbs, N. M.
S. Hannifin	Magnolia Petroleum Co.	Roswell, N. M.
Edwning	" " "	Kermit, Texas
J. Benton	Westetes Pet. Corp.	Jal, N. M.
R. Earle	" " "	Long Beach, Cal.
Gl Staley	Proration Office	Hobbs, N. M.
Ed Kraus	Atlantic Pet. Co.	Carlsbad, N. M.
J. Griffith	Humble O. & R. Co.	Roswell, N. M.
D. McKeithen	Phillips Pet. Co.	Bartlesville, Okla.
C. Daniels	" " "	Amarillo, Texas
Wel Payne	Anderson Prichard Oil Corp.	Oklahoma City, Okla.
W. Brown	" " " "	Oklahoma City, Okla.
He Godford	Gulf	Roswell, N. M.
Joiffith	Humble	Roswell, N. M.
Rayborung	O.C.L.	Hobbs, N. M.
Tovis	O.C.L.	Hobbs, N. M.
Rodgers	State of New Mexico	Santa Fe, N.

The hearing was called to order by Mr. Frank Worden, who announced that the Chairman of the Commission, the Honorable John E. Miles, Governor of New Mexico, was out of the state. At the request of Mr. Worden, Mr. Livingston read the call of the hearing as follows:

"NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The Oil Conservation Commission, by law invested with jurisdiction as the oil and gas regulatory body of the State of New Mexico, hereby gives notice of the following public hearing to be held at the Capitol, Santa Fe, New Mexico:

Case No. 22

The petition of Anderson-Prichard Oil Corporation and Stanolind Oil & Gas Company, for themselves and for other operators in that part of the Langlie Pool, Lea County, lying generally in Sections 4, 5, 8 and 9, T. 25 S., R. 37 E., N.M.P.M., for an order by the Commission regarding the unitization, repressuring, or other conservation measures as to that portion of said Pool in order to increase the ultimate recovery therefrom. This case is set for 9:00 A. M., December 11, 1940.

Any person having any interest in the subject of the said hearings shall be entitled to be heard.

Given under the seal of said Commission at Santa Fe, New Mexico, on November 25, 1940.

OIL CONSERVATION COMMISSION

By (Sgd.) FRANK WORDEN
Commissioner of Public Lands

By (Sgd.) A. ANDREAS
State Geologist"

BY MR. WORDEN: The Commission is ready to proceed.

BY MR. SETH: We would like to produce witnesses on behalf of petitioners.

(Witnesses called and sworn, and Exhibits 1, 2 and 3 marked for identification)

W. K. DAVIS

being called as a witness on behalf of the petitioners, and having been first duly sworn, was examined by Mr. Seth, and testified as follows:

DIRECT EXAMINATION

Q Will you please state your name?

A W. K. Davis

Q What is your profession?

A Geologist.

Q And by whom are you presently employed?

A The El Paso Natural Gas Company.

Q Will you state briefly your training and experience?

A Two and one-half years field experience in geology; four years college work.

Q Are you familiar with the portion of the Langlie Pool in Lea County involved in this yearing?

A I am.

Q Have you worked in that portion of the pool since you have been employed by the El Paso Natural Gas Company?

A I have.

Q Mr. Davis, referring to Petitioner's Exhibit No. 1, here on this easel, this solid color, what does that represent?

A That is the acreage that will participate in the unit.

Q That will be the acreage that will actually participate if the agreement is apprived?

A Right.

Q And these shaded lines?

A That is the acreage that will have the opportunity to participate in case of future development.

Q And these lines on this exhibit, what do they represent?

A Contours on top of the Langlie Pool at ten foot intervals.

Q This 260, 270, 280, does that indicate --

A Sub-sea -- the formation encountered.

Q The smaller figures then indicate it is closer to sea level -- the lower figures indicate it is higher?

A Right.

Q What type of structure is the oil produced in this portion of the Langlie Pool coming from?

A The zone contour map extends south from the main Langlie field with a dip of approximately 100 feet to the mile to the south and east and west.

Q Why is the production limited on the down slope of that area?

A As you see, going down slope the character of the zone changes from a sand to an impervious sandy shale, and it, more or less, is so tight there is no commercial production.

Q Have there been wells drilled to the south and east?

A Yes, two wells to the south and one to the east. In each case they penetrated the Langlie producing zone, and found them non-productive and plugged, and completed t[illegible] gas wells.

Q That refers to the two wells immediately south?

A Yes, sir.

Q And they plugged that? The one to the southeast, marked "5", is a plain dry hole?

A I believe it is a dry hole, yes, sir.

Q Would the condition of the zone you have described about -- you stated, I believe, the sand on the dip to the south and east changed to sandy shale?

A Yes, sir.

Q What would that indicate as to a favorable or unfavorable condition for a repressuring project?

A It would indicate a favorable condition, in that it would eliminate input gas by horizontal reinjection in each direction.

Q And as already shown by production, as being in place until disturbed?

A It is evident the cap immediately above the Langlie zone is impervious enough to form an excellent reservoir.

Q The fact that the oil has remained there throughout an indefinite time would indicate the cap is impervious?

A That is right.

Q Will you refer to Exhibits 2 and 3 and explain what those mean?

A Exhibit A-A, No. 2, is a north-south cross section in this area.

Q Is it indicated by A-A on Exhibit No. 1?

A Yes.

Q What is No. 3, marked "Cross B-B"?

A A cross section east and west across the area.

Q Across on the line marked "B-B" on No. 1?

A Yes, sir.

Q Do these exhibits show the condition in each well drilled in?

A Yes, sir, they are developed from the sample description of the formation on the well.

Q I don't know whether the cap shows it or not, but will you explain the colors on the exhibit?

A The green represents solid formation; the brown represents the

the anhydrite; the blue, the lime; the red is the shale or sand.

Q They are marked in here in straight lines. Is that brought in merely on a percentage basis?

A The samples are determined by percentage.

Q In this well is it solid or anhydrite down to where it is entirely blank?

A In most cases the samples were not taken, but markers were generally used over the entire field up to the solid section.

Q Are there two zones in that area?

A Principally the main sand body, as correlated on this cross section, and probably two or three sand members comprise this.

Q Are you speaking now of the Langlie zone?

A Yes sir.

Q Is that indicated approximately by the exhibit marked "Top Langlie Sand"?

A The marker used principally in that area was in regard to contour work, etc.

Q Now, this shows the Yates Sand and the Langlie Sand. Which is the oil producing sand?

A The Langlie Sand is the oil producing sand.

Q What, if anything, is produced from the Yates Sand?

A The Yates is principally a gas producing horizon.

Q Are any wells in the area producing from it?

A Several that were capable. I don't believe there are any producing gas at the present time.

Q What would you say is the approximate thickness of the Langlie Sand?

A The average thickness of the area would probably be around 13 to 14 feet.

Q Go back to Exhibit No. 1. You stated the solid color areas are the ones that would participate in this agreement at this time?

A Yes, sir.

Q The areas shown by the diagonal lines is, in your judgment, areas that might come into the unitization, if and when drilled?

A That is right.

Q There has been no drilling as yet in the area shown by the diagonal

lines?

A No, sir.

Q Are you familiar with the ownership in the area there at that place?

A Yes, sir.

Q You might state first the ownership, as distinguished from the leases. I will ask you, is all the area, except eighty acres, owned by the United States?

A Yes, sir, it is.

Q That includes both the participating area and the area that might possibly come in?

A Yes, sir.

Q What about the eighty acres?

A It is owned by Burleson, in Sec. 8.

Q Is that the area over here -- what part of Sec. 8?

A The $E\frac{1}{2}$ of the $NW\frac{1}{4}$ of Sec. 8, T. 25 S., R. 37 E.

Q The operating ownership, can you give that of the whole area?

A The Anderson Prichard and the Illinois Oil Company each own one-half in the half of the working interest in the Wells lease in Sec. 5, and Anderson-Prichard Oil Company and the Olsen Company each own one-half of the working interest in the Jal lease in Sec. 8.

Q That is the fee land?

A No, sir, that is government land. Anderson-Prichard owns all the working interest in the Langlie lease in Sec. 8, and also the Stuart lease in Sec. 9. Stanolind Oil Company owns all the working interest in the Langlie lease in Sec. 9. The Western Gas Company and Clay Brothers Drilling Company each own one-half of the working interest in the Burleson lease in Sec. 8.

Q Is that the fee land?

A That is the fee land.

Q Mr. Davis, from your experience in this pool, and your qualifications as a geologist, do you believe that the proposed unitization and repressuring project would be workable?

A The geological conditions are favorable for repressuring in this area.

Q Do you believe repressuring and unitization operations would tend to increase the ultimate recovery from this area?

A I do.

Q Have you with you the history of each of the wells in this area?

A I have. (Witnesses produces report, marked "Petitioner's Exhibit No. 4).

Q That includes the log?

A No, sir, it does not include the log in each case. The drilling time and information as the well is drilled.

Q And the well history?

A Right.

Q And the bottom hole pressure survey?

A Yes, sir, the gas-oil ratio survey.

Q And the equipment of each well?

A Yes, sir.

Q The ownership and overriding royalty interest?

A Yes, sir.

Q Have you collected that from each of the wells involved in this area?

A I have.

Q That comes from the company records and the Commission records at Hobbs and similar sources?

A Yes, sir.

BY MR. SETH: For the convenience of the Commission we have collected all of this, and we would like to introduce it as to each well, as Exhibit No. 4.

BY MR. WORDEN: Alright.

Q Have you anything further, Mr. Davis, that you think -- Did you state there was no gas production in the Yates?

A I meant to refer to the fact that there is no gas being produced from the wells at the present time.

Q And there is no oil in the sand either?

A No, sir.

Q There is gas being produced in the Yates sand?

A Not in that immediate area.

Q Isn't there one well producing gas?

A It may be used for lease purposes.

Q But no oil being produced, in any event?

A No, sir.

BY MR. LIVINGSTON:

Q Mr. Davis, I believe you testified as to the land ownership. All the land embraced in the proposed unitization area is either United States government land or privately owned land?

A That is right.

Q And there is no state land within that area?

A No, sir.

BY MR. SETH:

Q This map, Exhibit No. 1, shows all the producing wells, does it not?

A Yes, sir.

Q And shows all the producing wells in the area immediately adjoining?

A That is right.

Q There is one well in the NW¼ SW¼ of Sec. 4; that unit on which that well is located is the only unit with a producing well that adjoins this area?

A That is right.

Q Who owns the working interest in that?

A It is government owned acreage, and the working interest is owned by Anderson-Prichard.

Q Now, those Exhibits Nos. 1, 2 and 3, and the Exhibit No. 4, the well history, represent the facts as they exist on the ground, that you have gathered from all available sources, is that true?

A They do.

BY MR. ANDREAS: Is there any objections to the unitization of this particular tract? (Question asked of all representatives present, and no one answered).

If there is no objection, I think we are ready for the other witnesses.

Witness dismissed.

WESTON PAYNE

being called as a witness on behalf of the Petitioners, and having been first duly sworn, was examined by Mr. Seth, and testified as follows:

DIRECT EXAMINATION

Q State your name please.

A Weston Payne.

Q What is your profession?

A I am a petroleum engineer privately employed as manager of production by Anderson-Prichard Oil Company.

Q Have you had any training along the lines of your employment?

A Yes, I was graduated in engineering in 1916, and I have had twenty-three years of varied experience in the operation and management of oil properties.

Q And how many years have you been in contact with this area here involved in this hearing and shown on Exhibit No. 1?

A I have been familiar with the area since its discovery, Anderson-Prichard having drilled the discovery well in the area.

Q Will you describe briefly the movement of oil in a reservoir?

A Oil moves from the reservoir into the penetrating well by reason of one or more of several forces, these forces being gas pressure, by reason of water encroachment, the force of gravity and compaction of loosely consolidated rocks, from the withdrawal of pressure. These forces tend to move oil from the areas of high pressure to the areas of low pressure. However, they are resisted by other forces which exist within the reservoir, such as the pore friction, capilarity and adhesion; the prominence of which depends upon the physical character of the oil and gas, such as viscosity, surface tension, density, etc.

Q What is known as primary recovery, in an oil pool?

A Primary recovery in a pool indicates that portion of the oil which is recovered by natural forces and without assistance of artificial energy.

Q The flow?

A Yes, oil actually produced in the bore hole and lifted to the surface without the use of outside energy.

Q Describe the condition that exists when primary recovery is exhausted?

A At such time when primary recovery in a pool is exhausted the force impelling the oil and the force which retards the oil are in equilibrium, therefore no motion can take place, therefore no movement of oil takes place.

Q What is the force that is producing the oil in this pool,- water drive or gas drive?

A The prevailing force is gas pressure.

Q Any indication of water drive?

A If so, only to a very minor extent.

Q Is it possible to recover oil left after the primary force is exhausted and when, as you state, the forces are in equilibrium?

A Yes, it is possible to recover a portion that is left upon the exhaustion of primary means by the injection of artificial energy; it might be gas energy; it might be in the form of water; it might be a combination of the two.

Q What means do you recommend for the secondary recovery of this Langlie area under consideration?

A I think at the present stage of this pool, what is commonly known as repressuring would have a tendency to be best applied in this area.

Q Describe briefly how this would operate.

A It is proposed to select key wells, or wells in which the high pressure gas would be injected, and inject gas into such well or wells; then by a careful analysis of pressures in the surrounding areas, observe the effect of such repressuring with the hope of at least maintining present pressures, or eliminating a further decline in bottom hole pressure. The theory of repressuring becomes beneficial chiefly through its ability to maintain at a maximum the drainage control of a given area. By "drainage control" is meant th e the area of influence of a given well. In the original discovery of a pool, a given well has a much larger area of drainage influence, due to large bottom hole pressure, and consequently a large energy factor. As the bottom hole pressure of a reservoir decreases, the drainage influence decreases, and the well declines in production,

due chiefly to these outstanding factors. The fact there is decreasingly less oil in a given area, and the fact that the drainage influence of a well is gradually diminishing, so by consolidating a group of wells and apply the theory of repressuring, you gain control, not only over the unit of forty acres, but over the whole area in which the project is located, and have control -- as well as control of the withdrewals from the reservoir, and you gradually will have more favorable conditions than the conditions that existed under normal individual well operations.

Q This repressuring, it may be a considereble period of time before it affects the field?

A As far as we know, there is no way to tell the effective date. Unfortunately we do not have as much control information in this particular pool, due to lack of core samples. All we do know positively is that the physical conditions favor such a project. We can't tell whether the effects will be noticed within thirty days' time or six months time, but we believe eventually the effects will become known, and will result in a beneficial condition.

Q The amount of gas used, and the pressure under which it is injected into the area would have to be determined by experiment,-- trial and error?

A That is right. We are hoping -- in starting the project we would hope to gain and save the information as developed, in order to determine the best direction to take.

Q It is understood by everyone that these operations are at all times subject to the supervision of the Commission, so far as state land is concerned?

A Yes, sir, that is right. And this experiment will be conducted in a manner which -- the information of which we hope to make public to anyone interested.

Q Can you state the particular advantages you hope from the repressuring of this particular area?

A Based upon experience in similar projects, we think it reasonable to expect to increase the ultimate recovery of this area, in percentages varying from fifteen to twenty per cent.

Q Why?

A Well, experiments in projects similar to this one have developed such recoveries.

Q This increase in from fifteen to twenty-five per cent in ultimate recovery, which you think may result, would more than offset the expense of this repressure operation?

A Yes, we consider it an economical problem.

Q This idea of repressure, is it in any way new?

A No, there have been various types of repressure operations during the past ten years. There have been some outstanding projects, and some not publicly known.

Q Can you state where they have been?

A Yes, in the State of Oklahoma there have been such projects. In the Burbank Field, the Green Pool in Texas, and there have been numerous ones in the Kansas pools, and in some of the pools in Illinois -- two or three projects, and also several projects in operation in California, and in the Kons Pool.

Q Have they been, in the main, successful?

A Yes, those projects have been, on the average, successful.

Q Have you tabulated information on the past decline of bottom hole pressure in this area?

A I have selected a few key wells to show the rate of decline.

BY MR. SETH: I would like to offer Petitioners' Exhibits Nos. 1, 2, 3 and 4 in evidence.

Q Now, this Exhibit No. 5, these lines, I notice are different colors?

A Yes, those colors indicate different wells.

Q Take the red lines first.

A The development of the red line represents No. 1 well, indicating the pressures on a vertical scale, and the accumulated recovery on a horizontal scale. These charts are made to indicate the rate of decline of bottom hole pressure with various amounts of withdrawal. The red line in the bottom group represents the rate of decline in potential in the same wells. The top charts represent the decline of bottom hole pressure, and the bottom in potential.

Q During this period -- the bottom figures represent the total potential of the well during that period?

A Yes, sir.

Q Take No. 1 -- what was the rate of decline?

A The bottom hole pressure declined from about 1150 to 830, and its potential declined from 200 barrels to 60 barrels. During the period of production about 58,000 barrels of oil were produced.

Q Take the second one, the green, No. 3, Langlie.

A The greenindicates No. 3 Langlie. The top indicates the decline in bottom hole pressure from 950 to 680 pounds, and the potential, the bottom curve indicates a decline in potential from 480 barrels to 310 barrels.

Q And during that period the well produced 29,000 barrels of oil?

A Yes, sir.

Q You have shown No. 4 Langlie and No. 2 Wells?

A Yes, sir, these wells were considered because they are tight wells. In the area, although there is some variation in the decline of the wells, there .. no wide variation.

Q One well has gotten down to a bottom hole pressure of about 575?

A That is correct.

Q Each of the four showed a rapid decline in bottom hole pressure?

A Yes, they have showed a rapid decline.

Q And in potential?

A And potentials.

BY MR. SETH: We offer Exhibit No. 5 in evidence.

BY MR. ANDREAS: Over what period of time was that?

A I do not have the time, but it represents from the discovery well, shallow production, to the present.

BY MR. ANDREAS: Approximately?

A Approximately five years.

BY MR. SETH:

Q When was the discovery well drilled in that pool?

A I believe in 1935 -- I am not certain.

Q And the other wells were drilled some time afterwards?

A Yes, sir, they were drilled during the ensuing years.

Q At what pressure were the well or wells in this area first produced naturally?

A They first produced naturally at pressures varying from 500 pounds to 700 pounds, depending upon the gas-oil ratio. A well with a low,--

extremely low gas-oil ratio ceases to produce at relatively high pressure. As a matter of fact, one well in the group does not produce satisfactorily naturally at better than 700 pounds bottom hole pressure, while another well will flow at 500 pounds or slightly over.

Q When a well reaches that state, in the absence of repressuring, what steps will become necessary to continue production of oil?

A I don't understand --

Q When a well reaches that stage where it will not flow, what steps would be indicated to make it produce?

A There are two stages in the cycle of production of oil. At one stage energy is required to bring the oil to the surface, or into the bore hole, and the other type is necessary to lift the oil to the surface. In the case of the natural flow, nature produces the energy, but there comes a time when the well is only capable of providing energy to move the oil into the bore hole; therefore, in order to lift such oil to the surface, artificial means must be resorted to, such as some type of pumping, gas lift, etc.

Q Is that an expensive undertaking?

A Yes, rather expensive, from the standpoint of first cost as well as maintenance.

Q Mr. Payne, several times in your testimony you have referred to pounds of pressure. I take it that means pounds per square inch?

A Yes, sir.

Q For what period of time has this Langlie repressure been under consideration?

A We have seriously considered some form of artificial recovery in this area for better than two years.

Q Has it been considered by all interested parties, as well as the United States?

A Yes, say for the past year and a half there has been a concerted effort among all of the operators as well as the federal government toward accomplishing some form of secondary recovery.

Q Have the operators reached an agreement?

A Yes, with the exception of one, the operators who participate in the ownership of these leases have executed a unit or communitization agreement.

Q Have you that agreement?

A I have before me the original copy of the Langlie area unitization agreement.

Q Signed by all the operators, the owners of working interests in the pool with the exception of one?

A Yes, it is. The agreement is executed by the Anderson-Prichard Oil Company, the Illinois Oil Company, the Western Gas, the Olsen Oil, the El Paso Natural Gas Company, and the Stanolind Oil & Gas Company.

Q What is the one outfit that has not signed?

A The only one that does not appear is the Herschbach Drilling Company.

Q Are they the owners of one half of the working interest in the patented land?

A Yes, Herschback Drilling Company and the Clay Brothers own the chief interest in the Burleson No. 1 and No. 2.

Q Who owns the other half interest?

A The other half interest is owned by the El Paso Natural Gas Company and the Western.

Q Have they signed the agreement?

A They have signed the agreement.

Q How is it proposed to handle the interest of the one-half working interest that has not signed?

A It has been suggested that inasmuch as this lease does not enter into the agreement in its entirety, that the operation of the same be maintained on the present basis, and not intermingled, or comingled with the other leases in the area.

Q That is, that the owners of the one-half working interest be permitted to produce one half of the allowable for those two particular wells?

A That is right.

Q Has that agreement been the subject of many meetings and extended discussions?

A Yes. The members of this group of properties have endeavored for the past six months to work out an amicable solution of this problem.

BY MR. WORDEN: Have you a copy of that agreement you refer to?

BY MR. SETH: If the Commission please, we would like to retain the original signed agreement. We will, however, furnish the Commission with copies of this agreement, not signed, and we will, within a few days, furnish the Commission copies of this with the signatures typed in.

Q There has been no change since this was mimeographed?

A No, sir, so far as I know there has been no change.

BY MR. SETH: We would like to retain the original for the time being, but will submit a copy to the Commission.

Q Have you been familiar with the making of this agreement?

A Yes, sir, I have attended practically all of the meetings.

Q Do you believe the provisions of that agreement will be fair and equitable to all concerned?

A Yes, we think so. We have attempted to prepare an agreement that would accomplish purposes contemplated, and accomplish the same in a fair and equitable manner.

Q In a general way, what do you contemplate to do down there if this is approved by the Commission?

A Well, the first steps would be to select an operating committee among the operators, and the operating committee, in turn, will select an operator for the operation of these joint properties.

Q Would that operator or committee select a well or wells to be used for input?

A Yes, the committee would not only select the input wells, but control all important steps in the operation of this property.

Q There might be involved closing in some existing wells, in addition to those used for input wells?

A Yes. We are hoping permission will be granted to shift production in a manner which would tend to conserve the reservoir energy and ultimately produce the largest quantity possible of oil. If it is found that a certain well does not respond, and is a producer, we are hoping to be given permission to transfer the allowable of such wells to other wells; and in the case of the injection wells, which are incapable -- there will be several injection wells, as well as producers -- we are hoping to have permission to transfer such

allowable to other wells within the group.

Q It is intended to make these shifts and work out a plan of production in consultation with the State Geologist, this Commission and the officials of the Department of the Interior?

A Yes, that is true. We expect the operating committee to keep in close touch with the Conservation Commission and federal government officials.

Q It is clearly recognized that this agreement is at all times subject to the final control of this Commission and the Department of the Interior of the United States?

A That is correct.

Q And are all of these contemplated shifts provided for in the contract?

A I am not certain they are announced specifically. The operating agreement provides for the manner in which these properties will be operated.

Q It is left largely in the control of the operating committee?

A Subject to this contract. I might state there are two agreements: The agreement just introduced,- the unitization agreement, which has been approved by all of the participants except the Herschbach Drilling Company; and there is another agreement being circularized for approval by all in the operators' agreement, which sets out the terms and methods under which these properties will be operated.

Q Copies of that were likewise filed with the Commission at the time the hearing was requested?

A Yes, sir.

Q And acomplete copy, when signed, will likewise be filed?

A That is correct.

Q The idea underlying the unitization agreement is that the current allowable by the Commission be allocated to the unit as a whole to be produced under this agreement?

A Yes, we are hopeful of being granted permission to consider the allowable of the unitized group in its entirety, rather than being considered as individual units, as has been done heretofore.

Q But the total will be merely the current allowable for each well in the unit?

A Yes, the total allowable for the unit would be the sum of the allowable,- the marginal wells plus the top wells.

Q The total allowable of the unit would be the total allowable of the wells in the unit, and the allowable of each well determined in accordance with the established practice of the Commission?

A Well, we wouldn't go so far as to suggest the manner of determining, but it would be determined by the Commission.

Q In the usual manner?

A Yes, sir.

Q It might be possible, of course, if this project is successful,- it might make the marginal well a top allowable, but that would be determined after tests?

A Yes, the more successful this project will ultimately be, the more likelihood there would be of changing the ability of the individual wells to produce. We hope to improve the flow conditions, and in so doing, we might increase or decrease the flow of a given well.

Q No additional allowable is sought by reason of this repressure project?

A No, we will not ask any additional allowable be granted.

Q The back allowable -- some has accumulated?

A Yes, these wells, in past operations, have accumulated some back allowable.

Q And in the petition you are requesting that the back allowable may be produced, if a market is found, under the same conditions as current allowable?

A That is correct.

Q If the back allowable can be produced, and a market can be found, is it to be produced on a per day, per month basis -- what would you say, roughly?

A I think the rate of production of this allowable would depend somewhat on conditions found to exist after the plan becomes operative, but in no case, to produce the back allowable at a rapid rate, probably not to exceed five barrels per well per day.

Q Is this back allowable set up in the regular monthly proration schedules of the Commission?

A Yes, that is correct.

Q Do you believe that production as a unit, in the same manner as current production of selected wells, would be better than attempting to produce each individual well?

A I think conditions will be developed by this project which will be much more beneficial to the area as a whole than could hoped to be developed by single well operation, yes.

Q If the unit and repressure agreement is approved, all oil produced from the well, either current or back allowable, should be produced --

A I might state in connection with secondary recovery -- we refer to that here as repressure -- the introduction of artificial energy has a tendency to speed up recovery in a given reservoir and also reduce unit cost of production of such oil, and of course, of most importance, it is capable of developing an increase in the ultimate recovery of a reservoir.

Q This back allowable,-- in connection with that, are the petitioners asking for anything more than what back allowable has been already allocated to wells in this area?

A No, we are merely asking whatever back allowable has accumulated to individual wells be granted the unit as a whole.

BY MR. ANDREAS:

Q In event some marginal wells at the present time are not able to produce their allowable, you think that should be given other wells?

A I don't think I understand.

Q We will say there is a marginal well in the area, which you do have, and the repressure program does not benefit that particular well; it does have, say, 2,000 barrels of back allowable; it is not benefitted, therefore, it should not be entitled to get that back allowable through entering into this unit?

A We consider -- I don't think there is any way of pre-determining the uniformity of success. There will probably be areas that will receive small benefit, and areas of large benefit. We believe the project will benefit the area in general.

Q I grant that. I don't see, if a well was not benefitted and was a marginal well with back allowable which it could never produce, that the back allowable should not be given to other wells.

A The main reason, we think, should once this project be undertaken -- the idea of individual wells clearly becomes clouded and it will be difficult to determine what the individual well will produce.

Q After the program is once started you will soon find out whether they have been benefitted. If they have not been benefitted, certainly that back allowable could never be produced by that well.

A There might be, and probably will be cases where the well will eventually be brought back to top allowable.

BY MR. WORDEN: How did the marginal well get the back allowable? It should be taken off the record.

BY MR. SETH:

Q It got it before the period when it was determined to be a marginal well?

A Right.

Q This whole matter, in your judgment, is going to depend on the success of the project, and will take months to work out?

A Yes, we think it will. There is no definite way to determine the time required.

Q Is there the available gas for carrying it out?

A Yes, sir, the mechanics of supplying gas are practically finished at present.

Q Gas is there to be used?

A Gas is there to be used; the line is laid to the corner of the unit group.

Q Do you know whether the unitization agreement, at lease in principle, has been approved by the Secretary of the Interior?

A It has been approved by verbal discussions in principle, yes, sir.

Q Do you recommend it, from your professional training and experience, as a conservation measure to increase the ultimate recovery of oil from this area?

A Yes, we consider it a worth-while undertaking and deserving of every effort to put it into effect.

Q The companies are willing to spend the necessary money to put it in operation?

A Yes, sir, they have agreed.

Q Do you know the number, or approximate amount of back allowable

credited to those wells in that area at this time?

A I think it is approximately 14,000 barrels, by Mr. Staley's figures.

Q Could you tell the Commission -- give us some reason why that has accumulated -- why those runs have not been made in that area?

A I don't know the exact reasons. I imagine some has accumulated by reason of pipe line restrictions; probably some may be the inability of the individual wells to produce oil.

Q Have you in the past had trouble getting the pipe line people to run oil, or inability to produce oil?

A I would say it is a combination of the two. There has been a certain amount of pipe line restrictions.

BY MR. WORDEN:

Q Do you feel like the marginal wells that have been credited with more production than they were able to produce, do you feel they should come in and have the opportunity to make up the allowable, the same as where the pipe line and and market conditions have regulated that, and the back allowable has increased through that?

A I feel we are entitled to the back allowable, due to the fact that we are creating an improved condition in the operation of these leases, which will enable them ultimately to produce more oil. We feel we are entitled to whatever back allowable was originally granted to the individual wells. Why that back allowable should be withheld -- it has never been cancelled -- now that we are changing from a 40-acre unit to communitization unit, and so long as the communitization unit is capable of producing oil conservatively, we feel we are entitled to it.

Q Wouldn't that put the committee, or proration in the same position as to every other marginal well in the State of New Mexico, provided we made the allowable available in this particular field? Wouldn't we be establishing a precedent under which anybody who had a marginal well could come in and get the back allowable?

A I think not, for the reason that there is a distinction in what we are doing in that we are endeavoring to increase the ultimate recovery in a given area,-- a few operators taking the gamble -- we are taking the risk of damaging our properties permanently, but we feel the risk is justified, and for that reason, we feel the thing must be

considered under all the circumstances.

Q I was just trying to get clear in my own mind what effect the decision might have on others.

A It seems to me this type of project we are suggesting is modern -- ten years from now we will not look upon it with any particular doubt. Something is being developed rapidly. It is an improved method of operation. Naturally, we feel we will be benefitted from such operation, and if we are, the State of New Mexico will reap benefits.

BY MR. ANDREAS: I see no objection where it was due to the inability of the pipe line operation, but to pick a well that could not make it, I don't see that you would be entitled to that.

BY MR. WORDEN: If you could bring a well up to the point where it will produce, you would be entitled to it, but if you could not bring the well up --

A We feel we are correct in asking for it, due to the fact that the unit operation of the area is being changed.

BY MR. SETH:

Q If these wells were put on pump and thereby could make the back allowable, under existing practice there would be no objection to making that up?

A No. A well declines on natural production, and as a rule is capable of producing more oil artifically than it can produce naturally, and in all probability there are marginal wells that would probably be capable of producing larger quantities of oil than they now produce.

Q The plan is a substitute for pumping, which you all hope will be more efficient and assist in ultimate recovery?

A That is right.

Q The input well itself might have a large amount of back allowable accumulated in various ways?

A Yes.

Q And that necessarily would have to be distributed to other wells in the area?

A Yes, the injection well could no longer serve as a producing well.

Q Including the back allowable it has?

A Yes, sir.

Q And the current allowable and back allowable, although produced from

some other well, the owner will get the benefit?

A Yes, he would be compensated by the distribution to other wells.

Q And the input well, if used for a long time, would undoubtedly be frozen?

A That is right. It would lose its identity as a producing well.

Q No further satisfactory tests could be made?

A No, it would not be practicable to test a well as a producer of oil because it would spoil any advantage you might have accumulated by reason of the injection.

Q And the owners of the intake wells would have to take that chance?

A Yes, sir.

Q About what per cent of the oil is left in the ground by ordinary methods of production?

A When you exhaust the primary means?

Q Both ways.

A Well, on an average there is probably 60 to 75% of the original oil in place in the ground upon the exhaustion of primary means. We think it reasonable to expect a recovery of from 15 to 25% of that remaining oil be secondarily recovered.

Q You think this percent secondarily recovered by this plan would exceeed what would be obtained by ordinary means?

A Yes, I feel it would exceed it by from 15 to 25%.

BY MR. SETH: I believe that is all.

Witness dismissed.

C. C. CRAGIN

being called as a witness on behalf of the petitioners, and having been first duly sworn, was examined by Mr. Seth, and testified as follows:

Q State your name.

A C. C. Cragin.

Q You are manager of the El Paso Natural Gas Company?

A Yes.

Q Have you been familiar with the negotiations leading up to the re-pressuring matter now before the Commission?

A Yes.

Q Your company proposes to furnish the gas to be used in the repressure plan?

A Yes.

Q Is the gas available?

A Yes.

Q Would the gas be used in this plan that would ordinarily be used in some industry?

A It is gas that is now going to waste, gas from these leases and others.

Q Would the gas used have the natural gasoline extracted before using?

A Yes.

Q Has your company equipment in readiness to start on this project?

A Yes, we have a compression station, completed since last May. Two of these compressors we have are capable of putting in gas up to 2,000 pounds per square inch, a capacity of 3,000,000 cubic feet per day.

Q It would be a matter of small moment to connect up with the input well?

A We are all ready to go. The pipe line is all ready to shoot.

Q Your company has a working interest in some of the leases?

A We have half a working interest with Herschbach Drilling Company in the $NW\frac{1}{4}$ of Sec. 8.

Q The $E\frac{1}{2}$ of the $NW\frac{1}{4}$?

A The $E\frac{1}{2}$ is the only producing area. We have the whole quarter section.

Q Do you believe this repressure arrangement should be approved?

A Yes.

Q Have repressure contracts, with these contractors been approved by the Department of the Interior?

A Yes, in the summer of 1939 some 6,000 acres of gas rights, from the Anderson Prichard Company, Anderson himself and Prichard personally, the Olson Oil Company, and the Illinois Oil Company, together with holdings we owned, under the rules of the Department of the Interior; so we put in an application setting forth all the aims and objectives of this repressure program, and part of the sale agreement, which was labled a cooperative agreement at the suggestion of the Department, as an exhibit of that application we presented our repressure contract, in which we agreed to repressure, as an experiment, Area A

shown in pink on No. 1, and if that was successful, we would offer a similar contract to all producers on the whole south Langlie structure for repressuring the whole area, except the extreme end and a very little area which we figured too far gone. Set forth in the contract was the schedule of rates for repressuring, figuring the amounts used,

I would like to make a statement in connection with the questions to Mr. Payne by Mr. Worden. Recently the pressure in the southern and southeastern Langlie area, in Township 26, declined, a good many wells, below the line where it required us to put in a pressure station. It was a big producer at first, but it accumulated back allowable when it began to dedine, and we have had a satisfactory operation since, and increased the production in one well two and a half times and brought the production of the well up to 70 barrels a day. In many we want to apply the back allowable. All we want to ask to do is the same that you have already done.

Q That contract, you were requested to attach the application for excess acreage, that was approved?

A Our application, a waiver of limitation of acreage was approved by the Secretary of the Interior.

Q As I understand, this plan covers substantially this area?

A Yes, sir.

Q And even if not successful, you are obligated to furnish gas for repressuring?

A Yes, sir.

Witness dismissed.

ERNEST A. HANSON,

being called as a witness on behalf of the petitioners, and having been first duly sworn, was examined by Mr. Seth, and testified as follows:

DIRECT EXAMINATION

Q State your name.

A Ernest A. Henson.

Q What is your official position?

A Supervisor of the U. S. Geological Survey.

Q Does this Langlie Pool come under your supervision?

A The oil and gas, yes, sir.

Q It is within your jurisdiction?

A Yes, sir.

Q You have been familiar with the negotiations that have lead up to this unitization agreement?

A Yes.

Q You have sat in at many of the meetings in this connection?

A Yes.

Q Can you state the attitude of the Interior Department, in general, towards repressure agreements involving land belonging to the United States?

A I could not speak for the Department on that matter, but as a field officer of the Department, interested in the technical features of the field administration, statutes and regulations, I feel it is a very constructive effort towards conservation.

Q You know the Department approved the arrangement Mr. Cragin just testified about?

A Yes, the agreement was approved about a year ago.

Q And ever since that approval, this unitization agreement has been under consideration?

A Yes, sir.

Q And Mr. Cragin's company is obligated to furnish the necessary gas?

A Yes, sir.

Q It is equipped to carry out this agreement?

A Yes, fully equipped.

Q And you, individually, would you recommend approval of this unitization agreement and the repressure plan?

A I would recommend their approval, yes.

Q And would recommend the approval by your superior officer?

A Yes, sir.

Witness dismissed.

BY MR. SETH: If the Commission please, I will state, as attorney for the Stanolind, they heartily favor this agreement.

GLENN STALEY,

Being called as a witness for the petitioners, and having been first duly sworn, was examined by Mr. Seth, and testified as follows:

DIRECT EXAMINATION.

Q State your name.

A Glenn Staley.

Q What position do you hole?

A Proration umpire.

Q Have you been holding such position in Lea County since the Langlie Pool was brought in?

A I have.

Q Can you state to the Commission the amount of back allowable now carried on the monthly proration sheet to the credit of the wells in this pool?

A I think it is in the neighborhood of 14,000 barrels. We have a tabulation on it.

Q You have that tabulation?

A Yes sir.

Q I hand you Petitioners' Exhibit No. 6, and ask if that is the tabulation?

A It is.

Q Is that correct?

A That is.

Q That shows the amount on the first page, the total amount of shortage to the credit of each well?

A It does.

Q And it totals 14,651 barrels?

A Yes, sir.

Q Then the following sheets give in detail from month to month, for each well in the area?

A That is correct.

BY MR. SETH: We offer this in evidence.

Witness dismissed.

BY MR. SETH: That is all we have to offer.

BY MR. HANSON: There are some new technical considerations and some new administrative problems which, no doubt, will affect the Commission and ourselves, and if desirable, we would like very much to meet with you and thresh out some of the difficulties.

BY MR. WORDEN: We would be very glad to.

BY MR. HANSON: Thank you.

WESTON PAYNE,

being recalled as a witness on behalf of the petitioners, was examined by Mr. Seth, and testified as follows:

DIRECT EXAMINATION

Q Mr. Payne, will you state, if you know, the ownership of the NW¼ SW¼?

A Anderson-Prichard.

Q Do you know who owns the area immediately west, the N½ SE¼ of Sec. 5?

A There is a tract in that section owned by Italo.

Q But that land is really government land?

A Yes, sir, all government land.

Q Who did you state owns the lease?

A Italo owns a portion of the Wells Tract. Mr. Gray could testify as to that.

Q Have you a map showing the land ownership?

(Witness hands Mr. Seth a map).

I hand you Exhibit No. 7, and ask if that is the map showing the land ownership?

A Yes sir.

Q With the exception of the W½ NW¼ of Sec. 4 and the E½ NE¼ of Sec. 5, does it show the land ownership with that exception?

A Yes, sir.

Q It is all government permits?

A Or state lands.

BY MR. SETH: We offer that in evidence.

BY MR. WORDEN: If there is nothing further on Case No. 22, the Commission will recess until two o'clock, P. M. to take up Case No. 23.

Pursuant to recess taken, the Commission convened at two o'clock in the afternoon of December 11, 1940, Mr. Worden presiding, and the following proceedings were had:

BY MR. WORDEN: At the finish of taking testimony, we recessed until two o'clock in order to give anybody in Case No. 22 an opportunity to present anything they wished to bring up. Is there anybody present who has anything further to be taken up in Case No. 22?

BY MR. SETH: We are through.

BY MR. WORDEN: We will close that case, then.

PETITIONERS' EXHIBIT No. 4

"ANDERSON PRICHARD OIL CORP.

LANGLIE #1

WELL INFORMATION

Casing Record	10" - 708' - none 8-5/8" OD - 1200' - 66 sacks 5½" OD - 3194' - 300 sacks
Special Equipment	None
Tubing Record	2" at 3466'

GEOLOGICAL INFORMATION

Elevation	3162 DF 3158 Gd
Top Anhydrite	1140
Base Salt	2640
Top Brown Line	2680
Top Yates Sand	2830
Gas Shows	2700-90, 2865-75, 2898-2920, 3409-30, 3135-39, 3197-3218.
Total Depth	3485 PB 3469
Oil Zones	3332-39 3440-51
Drilling Time	None- Cable Tools
Special Tests	attached

GENERAL INFORMATION

Royalty Division	Attached
Accumulated Production to January 1, 1940	91,842
Initial Production	60 BO/24 hrs. natural, shot 30 qts. 3400-3450 no change in either gas or oil.

WELL HISTORY

Langlie #1

This well was spudded in 1-21-35 with cable tools and drilled to 2875' at which point a sudden flow of gas blew the tools up to 2869' where they stuck. While fishing for them a blind box and the lower half of a set of drilling jars was lost on top of them and could not be fished out so a whipstock was set at 2447'. The tools went back into the old hole after drilling past the whipstock so another whipstock and 60' of 6" drill pipe was cemented in the holetop of whipstock was 2360'. A Rotary was then moved in which successfully drilled past the cable tools to a depth of 3194' where 5½" OD casing was cemented. Cable tools were used from that depth to 3485' the total depth.

An estimated 2,000 MCF gas was encountered at 3212' which quickly blew down to an estimated 250 MCF. A slight show of oil was encountered at 3332' and another show of gas from 3409-12'. After drilling sand from 3440' -51 the well sprayed 2.9 BOPH. It was then drilled on down to 3485' and encountered salt water at 3483 (-321) so was plugged back to 3470' with lead wool and from 3470' to 3468' with solid lead plug with iron mandrel which successfully shut off the water. The well was shot 8-25-35 with 1 quart of SNG per foot from 3400' to 3420' and from 3440' to 3450' which did not change the production of either oil or gas.

No further work was done on the well until August 1939 at which time it was cleaned out to bottom.

LANGLIE #1

WELL EQUIPMENT

3199'		5½" OD 17# Ygstn R-2 Gd C Blk Smls Casing
1214'		8 5/8" OD 32# Blk LW (SH) Casing
700'		10 3/4" OD 40# Blk LW (SH) Casing
1	set	6 5/8 "-1" x 8" x 45" Anchor Clamps
1	set	10 3/4" OD-1¼" x 8" x 43" Anchor Clamps
1		4½" 2000# Type 1079 Durogauge Pressure Gauge
1		5½" Od 3000# test OCT Type T-16-C Stripper Tubing Head for 2 3/8" OD Tubing
1		8 5/8 " OD x 5½" OD Rector Type Hp Braden Head with Std Gland
1		10 3/4" x 8 5/8" OD ditto
1		10 3/4" OD x 10'10" Std Blk LW Casing Nipple
1		2 3/8" OD x 4' 4.7# EUE 10 thd API Gd C Blk Smld Tub Nipple
2		2 3/8" OD x 6' ditto
1		2 3/8" OD x 10' ditto
3462'		2 3/8" OD 4.7# EUE 10 thd API Blk Smls Tubing
3		2" 3000# test Westcott AS NRS SE Gate Valve
1		2" 3000# test McClatchie Hydro Seal Plug Valve
1		3" 3000# test Westcott AS SE NRS Gate Valve
1		3" 3000# test WKM Gate Valve

Royalty Interest

Langlie #1, #2, #3, #4,

Commissioner General Land Office Roswell, New Mexico		5% of 8/8 Government Royalty
P. J. Langlie 10 South 1st. St., Alhambra, California		½% of 8/8 Permittee Royalty of Pipe Line Runs
W.M. Klages 1411 So. Catalina Ave. Los Angles, California		½% of 8/8 Premittee Royalty of Pipe Line Runs
F. A. Andrews 233 S. Van Ness Ave. Los Angeles, California		4-15/18% of 8/8 Permittee Royalty of Pipe Line Runs
Marshall & Winston, Inc. 480 L. W. Hellman Bldg., Los Angeles, California		½% of 8/8 Permittee Royalty of Pipe Line Runs
Oil Royalties Corporation 422 I. N. Van Nuys Bldg., Los Angeles, California		½% of 8/8 Permittee Royalty of Pipe Line Runs
L. W. Gregory c/o Washington & Western Branch of Bank of America 2201 West Washington Los Angeles, California		4/9% of 8/8 Permittee Royalty of Pipe Line Runs
L. W. Gregory	SUSPENSE	2/9% of 8/8 Permittee Royalty of Pipe Lines Runs
A. K. Barnes First National Bank Bldg. Denver, Colorado		1/64 of 8/8 Overriding Royalty of Pipe Line Runs
First National Bank of Chicago Chicago, Illinois		85.9375% of Working Interest

ANDERSON * PRICHARD OIL CORP.

LANGLIE #2

WELL INFORMATION

Casing Record	13" OD - 248 - 250 sacks 9-5/8" OD - 2707' - 500 sacks. 7" OD - 3250' - 200 sacks
Special Equipment	7" OD x 2-7/8 OD Guiberson Type C Control Head Hook Wall Packer set at 3180'.
Tubing Record	2½" at 3420'.

GEOLOGICAL INFORMATION

Elevation	3170 DF 3160 Gd
Top Anhydrite	1102
Base Salt	2660
Top Brown Lime	2710
Top Yates Sand	2835
Gas shows	2800 3000
Total Depth	3466
Oil Zones	3440-3455
Drilling Time	Attahhed
Special Tests	Attached

GENERAL INFORMATION

Royalty Division	Attached to Langlie #1 Well Record
Accumulated Production to January 1, 1940.	46,343
Initial Production	162 BOPD natural, shot 80 qts. 3436-3466 then flowed 15 BOPH.

WELL HISTORY, LANGLIE #2

The well was spudded 7/14/37 and drilled with rotary to total depth. Shows of gas were encountered at 2930 and 3000'. After cementing 7" casing at 3250, the well was drilled to 3331 using oil for circulating fluid, and blown dry with gas, and showed no gas or oil; at 3417 the well showed a small amount of gas; and after unloading at 3466 it flowed 54 barrels oil in 8 hr. thru 7" casing with 3½" OD drill pipe in hole, so tubing was run to 3460 and the well was completed.

After running tubing and completing the well, gas started leaking thru the 13" Braden head, and an investigation showed pressure between the 9-5/8" and 7" casing. To repair this condition a Baker cement retainer was set in the 7" casing at 3140, and circulation was established between the 7" and 9-5/8" casings by gun perforating 10 holes in the 7" at 2800 to 2803. 12" mud was circulated between the two strings and 80 sax cement pumped in thru perforations. This was allowed to set 72 hurs., and when the cement was drilled out, the 7" casing was blown dry. After setting for about 1 hour the cement around the perforations suddenly gave way, and an estimated 20 million feet gas came thru the perforations. A squeeze cement job was then started, but before pumping in any cement it decided to determine what pressure would be required to pump fluid into the formation. Pressure was built up to 1000" at which point the cement retainer gave way. Tubing was lowered to test to see if the retainer was still in place. The tubing was first lowered to 3170 which showed that the retainer had gone down the hole. Then, when picked up, it stopped at the point where the retainer had been set, pulled loose, and then when lowered again would not go past the spot where the retainer had been set. It was then thought that the retainer had reset itself, so to protect it 10 sax of cement were spotted on top of it. After setting 48 hrs, tubing was lowered to find the top of the cement plug, but went down to the point at which the retainer had been set. It was then found that by turning the tubing it would go down, and was finally worked down to a point below the 7" casing shoe, no cement being found. Another retainer was then set at 3170', and 15 sax of cement was spotted on top of it. This plug was allowed to set 60 hrs. Mud was then circulated out with clear water, and the gas from the perforations was permitted to blow for 6 hrs. The gas was then killed with clear water and the water circulated out the mud. Another retainer was then run in the hole to 2760, the mud circulated out with clear water and the gas allowed to partially unload the hole. When gas showed up on the surface, the retainer was set at 2760, and clear water pumped into the formation thru the perforations. The formation started taking water at 1800" pressure, but after 5 or 6 barrels had been pumped in, dropped to 800". After pumping in about fifteen barrels of water the cement (54 sax) was pumped in. 1000" pressure was required to pump the cement into the formation. This cement wasallowed to set 80 hrs. and when the retainer was drilled out, the plug was found at 2760 to 2800', which showed definitely that the formation back of the perforations had taken cement. After drilling out this cement the hole was blown dry and allowed to set 2 hrs. This test showed the gas from the perforations completely sealed off. The cement retainer below the perforations was then drilled out and the hole cleaned out to the bottom.

The well was then shot with 80 qts. of SNG from 3436' to 3466'. After cleaning out to bottom tubing was run to 3420' with hook wall pakoer set at 3180'. The well was completed 9-27-37 flowing 113 BO the last 12 hours of a 48 hour test with Gas/Oil ratio of 1920.

Drilling Time in Minutes

Langlie #2

1230	1240	40	1800	1810	30	2370	2380	70
	50	30		20	40		90	50
	60	25		30	30		2400	25
	70	25		40	30	2400	10	20
	80	20		50	30		20	20
	90	23		60	32		30	20
	1300	15		70	50		40	35
1300	10	27		80	45		50	20
	20	20		90	40		60	25
	30	30		1900	50		70	30
	40	20	1900	10	15		80	20
	50	27		20	20		90	55
	60	11		30	12		2500	95
	70	15		40	8	2500	10	62
	80	18		50	6		20	35
	90	13		60	9		30	60
	1400	20		70	10		40	43
1400	10	20		80	8		50	32
	20	25		90	7		60	55
	30	20		2000	40		70	45
	40	15	2000	10	45		80	35
	50	15		20	15		90	40
	60	19		30	20		2600	45
	70	30		40	12	2600	10	50
	80	33		50	43		20	55
	90	20		60	40		30	55
	1500	20		70	19		40	50
1500	10	15		80	14		50	40
	20	30		90	25		60	50
	30	25		2100	20		70	45
	40	65	2100	10	21		80	50
	50	45		20	22		90	
	60	80		30	20		2700	
	70	60		40	10	2700	10	85
	80	20		50	40		20	95
	90	20		60	60		30	90
	1600	35		70	35		40	105
1600	10	25		80	25		50	135
	20	50		90	35		60	103
	30	30		2200	45		70	120
	40	30	2200	10			80	130
	50	35		20	25		90	105
	60	65		30	10		2800	15
	70	75		40	20	2800	10	105
	80	65		50	20		20	145
	90	30		60	30		30	125
	1700	20		70	20		40	131
1700	10	17		80	70		50	111
	20	28		90	45		60	168
	30	30		2300	25		70	130
	40	12	2300	10	20		80	165
	50	29		20	20		90	175
	60	44		30	35		2900	90
	70	55		40	90	2900	10	90
	80	130		50	45		20	125
	90	70		60	60		30	197
	1800	40		70	60		40	52

Drilling Time in Minutes
Langlie #2

2940	2950	144	3231	3232	32	3287	3288	15
	60	124	v	33	35		89	10
	70	85		34	25		90	10
	80	105		35	30		91	10
	90	110		36	35		92	15
	3000	155		37	30		93	32
3000	10	140		38	20		94	38
	20	105		39	20		95	38
	30	130		40	12		96	32
	40	140		41	18		97	40
	50	193		42	20		98	30
	60	172		43	25		99	45
	70	80		44	18		3300	20
	80	40		45	14	3300	1	23
	90	60		46	18		2	22
	3100	20		47	17		3	20
3100	10	25		47	29	S. L. M.	4	18
	16	60		48	21		5	30
	20	40		49	14		6	10
	30	160		50	23		7	10
	40	155		51	10		8	7
	50	208		52	10		9	9
	60	137		53	10		10	9
	70	180		54	20		11	12
	80	210		55	20		12	9
	90	215		56	15		13	10
	3200	135		57	10		14	10
3200	1	10		58	10		15	9
	2	5		59	10		16	12
	3	17		60	10		17	13
	4	18		61	5		18	17
	5	17		62	10		19	13
	6	22		63	13		20	17
	7	12		64	10		21	23
	8	16		65	12		22	22
	9	27		66	30		23	19
	10	30		67	25		24	18
	11	24		68	30		25	21
	12	20		69	35		26	27
	13	26		70	40		27	30
	14	27		71	35		28	43
	15	24		72	32		29	45
	16	24		73	32		30	55
	17	18		74	30		31	55
	18	24		75	26		32	45
	19	27		76	32		33	36
	20	24		77	27		34	22
	21	30		78	22		35	16
	22	28		79	18		36	16
	23	28		80	19		37	9
	24	23		81	31		38	8
	25	36		82	45		39	9
	26	30		83	40		40	6
	27	28		84	35		41	6
	28	35		85	37		42	5
	29	35		86	33		43	5
	30	32		87	20		44	4
	31	28					45	10

Drilling Time in Minutes
Langlie #2

3345	3346	7	3404	3405	25	3461	3462	5
	47	7		6	20		63	6
	48	13		7	23		64	5
	49	22		8	27		65	13
	50	23		9	30		66	28
	51	19		10	18			
	52	27		11	22			
	53	45		12	20			
	54	30		13	3			
	55	25		14	2			
	56	30		15	1			
	57	30		16	10			
	58	23		17	17			
	59	14		18	30			
	60	6		19	33			
	61	22		20	21			
	62	25		21	27			
	63	22		22	32			
	64	27		23	37			
	65	44		24	28			
	66	9		25	30			
	67	6		26	42			
	68	4		27	27			
	69	7		28	15			
	70	7		29	22			
	71	12		30	28			
	72	43		31	6			
	73	21		32	28			
	74	22		33	26			
	75	28		34	29			
	76	8		35				
	77	12		36	21			
	78	20		37	22			
	79	10		38	53			
	80	5		39	25			
	81	5		40	20			
	82	3		41	30			
	83	7		42	20			
	84	15		43	8			
	85	10		44	4			
	86	15		45	3			
	87	20		46	3			
	88	24		47	5			
	89	22		48	8			
	90	27		49	6			
	91	19		50	18			
	92	18		51	24			
	93	29		52	20			
	94	14		53	31			
	95	16		54	21			
	96	19		55	22			
	97	10		56	23			
	98	24		57	34			
	99	18		58	30			
	3400	25		59	33			
3400	1	13		60	31			
	2	22		61	6			
	3	30						
	4	24						

OPEN FLOW TESTS

Langlie #2

October - 1937		August - 1939	
1st 12 hrs.	13 BOPH	1st 24 hrs.	65 Bbls.
2nd 12 hrs.	11 "		
3rd 12 hrs.	11 "		
4th 12 hrs.	10 "		
November - 1937			
1st 6 hrs.	80 Bbls.		
January - 1938			
1st 12 hrs.	14 BOPH		
2nd 12 hrs.	8 "		
3rd 12 hrs.	9 "		
4th 12 hrs.	8 "		
March - 1938			
1st 8 hrs.	14 BOPH		
Next 12 hrs.	8 "		
Next 6 hrs.	8 "		
Next 6 hrs.	8 "		
Next 3 hrs.	8 "		
December - 1938			
1st 24 hrs.	130 Bbls.		
2nd 24 hrs.	110 "		
3rd 24 hrs.	103 "		

BOTTOM HOLE PRESSURE SURVEYS

LANGLIE # 2

Date of Survey	Pressure	Bbls. Produced Between Surveys
2-5-39	620#	
3-31-39	555#	2937
7-15-39	540#	5408
8-18-39	522#*	
8-19-39	540#*	
8-20-39	550#*	
8-30-39	580#*	
9-28-39	535#	3323
1-1-40	525#	5143

* Not regular survey

LANGLIE #2

WELL EQUIPMENT

1	3" 6000# test Hughes CS Tee Type Adj. Flow Bean
3256'	7" OD 24# API Gd B Blk Smls Casing
2714'	9 5/8" OD 40# ditto
232'	13" OD 40# Blk LW Casing
1 set	13" OD-1¼" x 8" x 43" Anchor Clamps
2	3" x 16" OCT Tie Down Clamps
1	7" OD HOWCO Float Collar
1	9 5/8" OD Baker Backblue Float Collar
2	4½" 3000# Type 1056 Ash Amer Pressure Gauge
1	9 5/8" OD x 7" OD 6000# test Type H Rector Braden Head
1	13" OD x 9 5/8" OD 3000# test Type M Rector Braden Head
1	7" OD x 12" 24# Blk Smls Csg Nipple
1	2 7/8" OD x 4' 6.50# Blk Smls Tubing Nipple
1	2 7/8" OD x 10' ditto
1	7" OD x 2 7/8" OD Type C Control Head Packer
1	7" OD 3000# test CIW Type ML Tubing Suspender & Blowout Preventor with 2½" Rams
1	7" OD HOWCO Guide Shoe
1	9 5/8" OD Baker Bakblue Guide Shoe
3425'	2 7/8" OD 6.50# API Gd B Blk Smls Tubing
1	2" 3000# test Hammer Plug Valve
3	2" 3000# test AS NRS SE Gate Valves
1	2½" Otis Type C Tubing Closing Valve
1	3" 3000# test WKM Gate Valve

ANDERSON - PRICHARD OIL CORP.

LANGLIE # 3

WELL INFORMATION

Casing Record	9-5/8" OD - 1191' - 500 sacks 7" OD - 3265' - 350 sacks
Special Equipment	Nixon Surface Control Gas Life Installed with Guiberson Type C-1 Control Head Hook Wall Packer set at 3222'
Tubing Record	2½" at 3472'.

GEOLOGICAL INFORMATION

Elevation	3181
Top Anhydrite	989
Base Salt	2720
Top Brown Lime	2770
Top Yates Sand	2860
Gas Shows	2862-2881
Total Depth	3479
Oil Zones	3445-3455, 3470-3479
Drilling Time	Attached
Special Tests	Attached

GENERAL INFORMATION

Royalty Division	Attached to Langlie #1 Well Record
Accumulated Production to January	1, 1940. 39.254
Initial Production	116 BOPD, shot 56 qts. 3469-3479, 3445-3469 then flowed 216 BOPD.

ANDERSON - PRICHARD OIL CORP.

LANGLIE # 3

WELL INFORMATION

Casing Record	9-5/8" OD - 1191' - 500 sacks 7" OD - 3265' - 350 sacks
Special Equipment	Nixon Surface Control Gas Life Installed with Guiberson Type C-1 Control Head Hook Wall Packer set at 3222'
Tubing Record	$2\frac{1}{2}$" at 3472'.

GEOLOGICAL INFORMATION

Elevation	3181
Top Anhydrite	989
Base Salt	2720
Top Brown Lime	2770
Top Yates Sand	2860
Gas Shows	2862-2881
Total Depth	3479
Oil Zones	3445-3455, 3470-3479
Drilling Time	Attached
Special Tests	Attached

GENERAL INFORMATION

Royalty Division	Attached to Langlie #1 Well Record
Accumulated Production to January 1, 1940.	39.254
Initial Production	116 BOPD, shot 56 qts. 3469-3479, 3445-3469 then flowed 216 BOPD.

Drilling Time In Minutes

Langlie # 3

150	160	20		740	750	20		1330	1340	45							
160	170	25		750	760	25		1340	1350	30							
170	180	40		760	770	35		1350	1360	20							
180	190	40		770	780	40		1360	1370	35							
190	200	15		780	790	45		1370	1380	25							
200	210	20		790	800	55		1380	1390	18							
210	220	30		800	810	50		1390	1400	15							
220	230	30		810	820	35		1400	1410	14							
230	240	22		820	830	50		1410	1420	15							
240	250	22	N.B.	830	840	30		1420	1430	22							
250	260	13		840	850	30		1430	1440	12							
260	270	12		850	860	40		1440	1450	15							
270	280	12		860	870	60		1450	1460	18							
280	290	13		870	880	60		1460	1470	14							
290	300	13		880	890	50		1470	1480	16							
300	310	12		890	900	60		1480	1490	16							
310	320	12		900	910	50	N.B.at	1490	1500	15							
320	330	13		910	920	40	915	1500	1510	17							
330	340	15		920	930	40		1510	1520	16							
340	350	15		930	940	40		1520	1530	15							
350	360	15		940	950	40		1530	1540	16							
360	370	15		950	960	40		1540	1550	18							
370	380	15		960	970	50		1550	1560	18							
380	390	15		970	980	55		1560	1570	16							
390	400	15		980	990	60		1570	1580	20							
400	410	15		990	1000	55		1580	1590	15							
410	420	15		1000	1010	60		1590	1600	24							
420	430	15		1010	1020	60		1600	1610	22							
430	440	15		1020	1030	60		1610	1620	24							
440	450	15		1030	1040	60		1620	1630	30							
450	460	30		1040	1050	45		1630	1640	30							
460	470	30	M.B.	1050	1060	105		1640	1650	32							
470	480	30		1060	1070	105		1650	1660	30							
480	490	30		1070	1080	65		1660	1670	50							
490	500	30		1080	1090	65		1670	1680	45	N. B.						
500	510	30		1090	1100	80		1680	1690	35							
510	520	60		1100	1110	100		1690	1700	30							
520	530	60		1110	1120	90		1700	1710	25							
530	540	60		1120	1130	70		1710	1720	30							
540	550	30		1130	1140	75		1720	1730	25							
550	560	30		1140	1150	80	N.B.	1730	1740	15							
560	570	60		1150	1160	85at	1153	1740	1750	28							
570	580	60	N.B.	1160	1170	60		1750	1760	30							
580	590	40		1170	1180	140		1760	1770								
590	600	55		1180	1190	140		1770	1780	25							
600	610	45		1190	1200	35		1780	1790	30							
610	620	45		1200	1210	20		1790	1800	22							
620	630	20		1210	1220	10		1800	1810	11							
630	640	20		1220	1230	25		1810	1820	15							
640	650	20		1230	1240	30		1820	1830	10							
650	660	20		1240	1250	20		1830	1840	12							
660	670	20		1250	1260	25		1840	1850	20							
670	680	20		1260	1270	28		1850	1860	14							
680	690	20		1270	1280	34		1860	1870	15							
690	700	20		1280	1290	30		1870	1880	22							
700	710	20		1290	1300	20		1880	1890	10							
710	720	20		1300	1310	22		1890	1900	10							

Drilling Time In Minutes

Langlie #3

1900	10	15								
10	20	11								
1920	1930	16	2520	2530	25	3130	3140			
30	40	15	30	40	20	40	50	110	N. B.	
40	50	16	40	50	20	50	60	215		
50	60	10	50	60	20	60	70	165		
60	70	7	60	70	20	70	80	180		
70	80	25	70	80	20	80	90	180		
80	90	50	80	90		90	3200			
90	2000	40	2600	2610	10	3200	10	170		
2000	10	15	10	20	15	10	20	120		
10	20	15	20	30	15	20	30	270	N.B. at	
20	30	14	30	40	20	30	40	180	3236	
30	40	16	40	50	15	40	50	195		
40	50	18	50	60	20	50	60	240		
50	60	11	60	70	20	60	70	240		
60	70	15	70	80	40	70	71	20		
70	80	15	80	90	60	71	72	85		
80	90	15	90	2700	40	72	73	15		
90	2100	14	2700	10	55 N.B.	73	74	10		
2100	10	15	10	20	95	74	75	10		
10	20	13	20	30	110	75	76	10		
20	30	15	30	40	85	76	77	10		
30	40	20	40	50	100	77	78	10		
40	50	21	50	60	105	78	79	10		
50	60	15	60	70	70	79	80	10		
60	70	18	70	80	75	80	81	15		
70	80	18	80	90	85	81	82	15		
80	90	25	90	2800	70	82	83	20		
90	2200	20	2800	10	105	83	84	30		
2200	10	13	10	20	105	84	85	25		
10	20	15	20	30	95	85	86	20		
20	30	12	30	40	90	86	87	35		
30	40	16	40	50	75	87	88	25		
40	50	16	50	60	75	88	89	35		
50	60	20	60	70	35	89	90	35		
60	70	21	70	80	35	90	91	15		
70	80	14	80	90	110 N.B.	91	92	5		
80	90	15	90	2900	45	92	93	5		
90	2300	20	2900	10	35	93	94	6		
2300	10	25	10	20	30	94	95	5		
10	20	20	20	30	45	95	96	6		
20	30	32	30	40	60	96	97	18		
30	40	20	40	50	25	97	98	15		
40	50	65	50	60	65	98	99	15		
50	60	25	60	70	120	99	3300	15		
60	70	50	70	80	150	3300	1	15		
70	80	30	80	90	85	1	2	22		
80	90	30	90	3000	95	2	3	28		
90	2400	31	3000	10	85	3	4	33		
2400	10	34	10	20	120	4	5	30		
10	20	25	20	30	60	5	6	25		
20	30	30	30	40	55	6	7	21		
30	40	30	40	50	85	7	8	21		
40	50	25	50	60	125	8	9	25		
50	60	25	60	70	80	9	10	25		
60	70	20	70	80	35	10	11	30		
70	80	25	80	90	30	11	12	30		
80	90	50	90	3100	35	12	13	25		
90	2500	65	3100	10	90	13	14	15		
2500	10	45	10	20	35					
10	20	20	20	30	70					

Drilling Time In Minutes
Langlie #3

3314	3315	10	3373	3374	20	3439	3440	3
15	16	10	74	75	20	40	41	4
16	17	12	75	76	20	41	42	5
17	18	33	76	77	20	42	43	6
18	19	25	77	78	20	43	44	8
19	3320	30	78	79	20	44	45	9
3320	21	30	79	3380	15	45	46	21
21	22	35	3380	81	11	46	47	13
22	23	15	81	82	19	47	48	21
23	24	10	82	83	20	48	49	19
24	25	8	83	84	25	49	3450	18
25	26	17	84	85	20	3450	51	24
26	27	15	85	86	15	51	52	22
27	28	20	86	87	20	52	53	23
28	29	20	87	88	20	53	54	23
29	3330	15	88	89	20	54	55	23
3330	31	20	89	3390	10	55	56	8
31	32	15	3390	91	5	56	57	14
32	33	10	91	92	20	57	58	15
33	34	15	92	93	30	58	59	15
34	35	15	93	94	35	59	3460	20
35	36	10	94	95	20	3460	61	20
36	37	10	95	96	20	61	62	15
37	38	15	96	97	40	62	63	24
38	39	10	97	98	10	63	64	28
39	3340	15	98	99	15	64	65	16
3340	41	30	99	3400	22	65	66	24
41	42	30	3400	1	5 N.B.	66	67	30
42	43	30	1	2	5	67	68	30
43	44	30	2	3	5	68	69	20
44	45	25N.B.	3	4	15	69	3470	13
45	46	10	4	5	15	3470	71	8
46	47	15	5	6	15	71	72	10
47	48	10	6	7	10	72	73	4
48	49	20	7	8	12	73	74	3
49	3350	15	8	9	16	74	75	5
3350	51	15	9	3410	20	75	76	7
51	52	20	3410	11	12	76	77	5
52	53	15	11	12	20	77	78	7
53	54	15	12	13	20	78	79	30
54	55	15	13	14	25			
55	56	15	14	15	15			
56	57	10	15	16	15			
57	58	5	16	17	15			
58	59	5	17	18	10			
59	3360	5	18	19	10			
3360	61	20	19	3420	10			
61	62	20	3420	21	10			
62	63	15	21	22	10			
63	64	20	22	23	10			
64	65	15	23	24	10			
65	66	15	24	25	15			
66	67	10	25	26	15			
67	68	10	26	27	15			
68	69	5	27	28	15			
69	3370	5	SLM-3428-3435					
3370	71	5	3435	3436	15			
71	72	10	36	37	5			
72	73	10	37	38	3			
			38	39	3			

OPEN FLOW TESTS

LANGLIE #3

January - 1938

1st 12 hrs.	7	BOPH
2nd 6 hrs.	6	"
3rd 6 hrs.	5	"
4th 12 hrs.	6	"
5th 6 hrs.	4	"
6th 6 hrs.	5	"

March - 1938

1st 8 hrs	8	BOPH
Next 12 hrs.	6	"
Next 6 hrs.	6	"
Next 6 hrs.	5	"
Next 12 hrs.	5	"
Next 6 hrs.	5	"

July - 1938

1st 6 hrs.	13	BOPH
Next 14 hrs.	6	"
Next 10 hrs.	6	"
Next 14 hrs.	5½	"
Next 4 hrs.	5½	"

December - 1938

1st 24 hrs.	140	Bbls.
2nd 24 hrs.	126	"
3rd 24 hrs.	96	"

August - 1939

1st 3 hrs.	31	Bbls.
2nd 3 hrs.	12	"
1st 24 hrs.	103	"
2nd 24 hrs.	72	"

#
3 BOPH last 6 hours

December - 1939

1st 3 hours	23	Bbls.
2nd 3 hours	7	"
1st 24 hours	74	"
2nd 24 hours	58	"

3 BOPH last 6 hours

BOTTOM HOLE PRESSURE SURVEYS

LANGLIE # # 3

Date of Surveys	Pressure	Bbls. produced Between Surveys
2-5-39	865#	
3-31-39	805#	3223
7-15-39	750#	5482
8-3-39	807#*	
9-28-39	765#	4612
1-1-40	710#	5409

* Not regular surveys- well shut in 15 days

WELL HISTORY

Langlie #3

This well was spudded 10-28-37 and drilled to total depth with rotary drilling equipment. Drillers logged a show of gas from sand 2862'-2881'. After cementing 7" casing at 3265' oil was used for circulation fluid and the well drilled to its total depth without testing. At total depth (3479') 2½" tubing was set at 3422'. Flowing thru open tubing it flowed 116 BO in 24 hrs. with 325 MCF gas per day. It was then shot with 2 quarts SNG per foot from 3469' to 3479' and 2½ quarts SNG per foot from 3445' to 3469'. The well was killed with oil before running the shot but unloaded a few minutes before the shot exploded so actually was shot dry. After cleaning out to bottom, 2½" tubing was set at 3464'. Flowing thru open tubing it produced 216 BO in 24 hrs. with 1,100 MCF gas per day. Choked to 11/64" it produced 90BO in 24 hrs. with 233 MCF gas per day. Completed 11-30-37

No other work was done on the well until 1-25-40 at which time it went dead. Tubing was then pulled and the well cleaned. out to bottom, approximately 50' of cavings haveing been found in the hole. Tubing was reset at 3477' with a Buiberson Type G-1 Control Head hook Wall Packer set at 3222'. A Nixon Type 103 Surface Control Flow Valve was set at 3211' and a Nixon Type 107 SC Flow Valve set at 2586'. A standing was set below the packer at 3466'. The wall was then unloaded with outside gas after which it flowed 94 BO in 1 hr. thru 25/64" choke on its own gas. The following day, 1-31 -40 it flowed 102 BO on its own gas.

LANGLIE #3

WELL EQUIPMENT

1	3" 6000# test Hughes CS Tee Type Adj Flow Bean
3277'	7" OD 24# API Gd B Blk Smls Casing
1181	9 5/8" OD 36# ditto
1 set	9 5/8" OD-1¼" x 8" x 43" Anchor Clamps
1	7" OD HOWCO Float Collar
1	9 5/8" OD Baker Bakblu Bloat Collar
1	5" 2000# Style AH Crosby Press Gauges
1	9 5/8" OD x 7" OD Type HP Rector Braden Head
1	A mast for Nixon Lift
1	7" OD x 30" 24# Blk Smls CSg Nipple
1	2 7/8" OD X 4' 6.50# Blk Smls TOg Nipple
1	2 7/8" OD x 6' Ditto
1	7" OD 3000# test CIW Type NL Tubing Suspender & Blowout Preventor with 2½" Rams
1	7" OD HOWCO Guide Shoe
1	9 5/8" OD Baker Bakblu Guide Shoe
1	3" 3000# test Female Thread Tee
3466'	2 7/8" OD 8.50# API Gd B Blk Smls Tubing
2	2" 3000# test As NRS SE Gate Valves
1	3" 3000# test Orbit OS & Y SE Gate Valve
1	7" OD x 2½" Guiberson Hook Wall Control Head Packer

The following equipment installed by Wilson Supply Co. and to be purchased when the equipment is put in use.

1	Nixon Intermitter
1-	Nixon Wire Line Hoist & Turbine Motor
3500'	Wire Line
1	2" Wire Line Stuffing Box
1 set	Nixon 1¼" Weight Bars
1	2" Standing Valve
1	2" Upset all Steel Flow Valve with 1 Port
1	2" ditto 3 Ports
1	Nixon Measuring Device

ANDERSON - PRICHARD OIL CORP.

LANGLIE #4

Well INFORMATION

Casing Record	9-5/8" OD - 1157' - 5 sacks 7" OD - 3280' - 400 Sacks
Special Equipment	None
Tubing Record	2½" at 3452'

GEOLOGICAL INFORMATION

Elevation	3176
Top Anhydrite	1120
Base Salt	2620
Top Brown Lime	2720
Tope Yates Sand	2860
Gas Shown	2868-73, 2982-99
Total Depth	3477
Oil Zones	3400-3477
Drilling Time	Attached
Special Tests	Attached

GENERAL INFORMATION

Royalty Division	Attached to Langlie #1 Well Record
Accumulated Production to January 1, 1940	30,283
Initial Production	7 BOPH, shot 270 qts. 3392-3477 Then flowed 20 BOPH.

WELL HISTORY

LANGLIE #4

This well was spudded 5-11-38 and drilled to total depth 3477' with rotary drilling equipment. Drillers logged gas shows in sands 2868' to 2877' and 2982' to 2999'. 7" Od-22# casing was cemented at 3280' with 300 sacks common cement but when plug was drilled pressure on casing could not be built up past 900# so hole was bailed. After Bailing 10 hrs. there was still 600' fluid in the hole and some gas was showing so a Baker Cement Retainer was set at 3260' and 100 sacks cement was squeezed into formation. The last Cement went in at 1250# pressure. After setting 72 hrs. The retainer and cement was drilled out and the casing tested with 1000# pressure. There was no decrease in pressure during the 30 minute test.

Oil was used for circulating fluid from 3280' to bottom. No tests were made until the well had been drilled to its total depth. At TD 3477', $2\frac{1}{2}$" tubing was set at 3441' and the well swabbed in. It flowed 42 BO in 6 hours with 250 MCF gas. It was then shot with 270 quarts SNG from 3398' to 3477'. After cleaning out to bottom $2\frac{1}{2}$" tubing was set at 3451'. The well was then tested for 27 hours thru 1" choke on tubing. During the last 13 hours of the test it flowed steadly at the rate of 20 BOPH with 960 MCF gas per day. Choked to 85 BOPD, gas/oil ratio decreased to 700.
Well was completed 5-15-38.

Drilling Time In Minutes

Langlie #4

300	310	30	2270	2280	20	2860	2870	165	
310	320	30	2280	2290	20	2870	2880	60	
20	30	40	90	2300	20	80	90	90	
30	40	95	2300	10	60	90	2900	65	
40	50	45	10	20	40	2900	10	180	N.B.
50	60	40	20	30	20	10	20	45	
60	70	50	30	40	15	20	30	35	
70	80	48	40	50	15	30	40	80	
80	90	42	50	60	20	40	50	45	
90	400	35	60	70	45	50	60	135	
400	10	37	70	80	15	60	70	210	
10	20	38	80	90	15	70	80	230	
20	30	35	90	2400	30	80	90	60	N.B.
30	40	30	2400	10	15	90	3000	45	
40	50	20	10	20	30	3000	10	95	
50	60	15	20	30	30	10	20	70	
60	70	20	30	40	20	20	30	163	
70	80	30	40	50	40	30	40	200	
80	90	30	50	60	65	40	50	190	
90	500	126	N.B. 60	70	25	50	60	55	
500	10	50	70	80	60	60	70	45	
10	20	20	80	90	90	70	80	45	
20	30	25	90	2500	70	80	90	30	
30	40	45	2500	10	25	90	3100	94	N.B.
40	50	30	10	20	15	3100	10	230	
50	60	40	20	30		10	20	205	
60	70	30	30	40	40	20	30	245	
70	80	30	40	50	30	30	40	180	
80	90	25	50	60	35	40	50	90	
90	600	95	60	70	35	50	60	135	
			70	80	35	60	70	120	
2000	2010	N.B.	80	90	30	70	80	165	
10	20	30	90	2600	35	80	90	210	
20	30	20	2600	10	50	90	3200	185	
30	40	25	10	20	N.B.	3200	10	190	N.B.
40	50	25	20	30	35	10	20	225	
50	60	20	30	40		20	30	135	N.B.
60	70	25	40	50	50	30	40	220	
70	80	20	50	60	50	40	50	335	
80	90	20	60	70	45	50	60	285	
90	2100	25	70	80	100	60	70	220	
2100	10	20	80	90	65	70	80	200	
10	20	25	90	2700	160	80	85	200	
20	30	90	2700	10	100	85	86	15	
30	40	20	10	20	80	86	87	17	
40	50	25	20	30	110	87	88	23	
50	60	30	30	40	115	88	89	22	
60	70	12	40	50	105	89	90	21	
70	80	50	50	60	135	90	91	17	
80	90	15	60	70	130	91	92	18	
90	2200	10	70	80	120	92	93	22	
2200	10	10	80	90	120	93	94	25	
10	20	10	90	2800	125	94	95	25	
20	30	45	2800	10	120	95	96	25	
30	40	35	10	20	135	96	97	15	
40	50	35	20	30	165	97	98-	15	
50	60	85	30	40	30	N.B. 98	99	15	
60	70	80	40	50	120	99	3300	20	
			50	60	180				

Drilling Time In Minutes

Langlie #4

3300	3301	15
1	2	10
2	3	15
3	4	10
4	5	8
5	6	7
6	7	7
7	8	6
8	9	10
9	3310	17
3310	11	23
11	12	22
12	13	18
13	14	12
14	15	10
15	16	10
16	17	10
17	18	7
18	19	3
19	3320	3
3320	21	6
21	22	6
22	23	7
23	24	9
24	25	9
25	26	9
26	27	9
27	28	6
28	29	4
29	3330	6
3330	31	11
31	32	23
32	33	26
33	34	16
34	35	22
35	36	26
36	37	22
37	38	29
38	39	31
39	3340	30
3340	41	30
41	42	30
42	43	16
43	44	14
44	45	35
45	46	38
46	47	47
47	48	45
48	49	20 N.B.
49	3350	15
3350	[illegible]	51 5
51	52	7
52	53	16
53	54	17
54	55	18
55	56	17
56	57	17
3357	3358	15
58	59	21
59	3360	12
3360	61	10
61	62	7
62	63	9
63	64	14
64	65	15
65	66	18
66	67	25
67	68	30
68	69	25
69	3370	20
3370	71	20
71	72	20
72	73	27
73	74	18
74	75	20
75	76	20
76	77	20
77	78	23
78	79	20
79	3380	32
3380	81	25
81	82	15
82	83	15
83	84	25
84	85	30
85	86	30
86	87	35
87	88	20
88	89	18
89	3390	50
3390	91	9
91	92	3
92	93	5
93	94	10
94	95	28
95	96	36 N.B.
96	97	15
97	98	9
98	99	5
99	3400	12
3400	1	12
1	2	11
2	3	16
3	4	15
4	5	16
5	6	14
6	7	4
7	8	4
8	9	16
9	3410	10
3410	11	12
11	12	10
12	13	6
13	14	12
14	15	18
3415	3416	17
16	17	13
17	18	17
18	19	19
19	3420	16
3420	21	10
21	22	4
22	23	2
23	24	2
24	25	17
25	26	6
26	27	22
27	28	25
28	29	40
29	3430	45
3430	31	45
31	32	45
32	33	45
33	34	33
34	35	32
35	36	33
36	37	24
37	38	13
38	39	7
39	3440	8
3440	41	5
41	42	27
42	43	33
43	44	18 N.B.
44	45	7
45	46	10
46	47	8
47	48	10
48	49	10
49	3450	20
3450	51	19
51	52	21
52	53	7
53	54	7
54	55	11
55	56	5
56	57	3
57	58	5
58	59	5
59	3460	4
3460	61	5
61	62	6
62	63	22
63	64	12
64	65	17
65	66	11
66	67	16
67	68	13
68	69	6
69	3470	10
		SLM
72	73	10
73	74	7
3474	3475	8
3475	3476	9
3476	3477	6
3477	3477½	4

OPEN FLOW TESTS

LANGLIE #4

August - 1938

1st 2 hrs.	30	BOPH
Next 2 hrs.	25	"
Next 2 hrs.	24	"
Next 4 hrs.	23	"
Next 8 hrs.	21	"
Next 2 hrs.	18	"
Next 3 hrs.	18	"
Next 6 hrs.	17	"
Next 4 hrs.	16	"
Next 11 hrs.	16	"
Next 4 hrs.	18	"

August - - 1939

1st 3 hrs.	78	Bbls.
2nd 3 hrs.	45	"
Next 18 hrs.	225	"
1st 24 hrs.	348	"

9 BOPH last 6 hours.

December - 1939

1st 3 hrs.	71	"
2nd 3 hrs.	45	"
1st 24 hrs.	310	"

BOTTOM HOLE PRESSURE SURVEYS

LANGLIE # 4

Date of Surveys	Pressure	Bbls. Produced Between Surveys
1-21-39	936#	
3-31-39	891#	3949
6-29-39	780#	4880
8-18-39	780#*	
8-20-39	809#*	
8-30-39	850#*	
9-28-39	780#	3766
1-1-40	710#	5356

* Not regular surveys

LANGLIE # 4

WELL EQUIPMENT

1	3" 6000# test Hughes CS Tee Type Adj Flow Bean
3285'	7" OD 22# API Gd B Blk Smls Casing
1144'	9 5/8" OD 36# Ditto
1 set	9 5/8" OD - 1½" x 8" x 43" Anchor Clamps
2	5" 2000# Type 1056 Ash Amer Press Gauges
1	9 5/8" OD x 7" OD 6000# test Type [redacted] HP Rector Braden Head
1	7" OD HOWCO Float Collar
1	9 5/8" OD Baker Bakblue Float Collar
1	7" OD x 24" 24# Blk Smls Cag Nipple
1	2 7/8 OD x 4' 6.50# Blk Smls Tbg Nipple
1	7" OD 3000# test vCIW Type M1 Tubing Suspender & Blowout Preventor with 2⅛" Rams
1	7" OD HOWWCO Guide Shoe
1	9 5/8 OD Baker Bakblu Guide Shoe
3423'	2 7/8 OD 6.50# API Gd Blk Smls Tubing
1	3" 3000# test Kerotest FS RJ Flg Union
2	2" 3000# test McClitchie Lub Plug Valves
1	3" 3000# test Orbit O[redacted]& Y SE Gate Valve

LANGLIE # 1-2-3-4

SURFACE EQUIPMENT

1	2" IBBM Essex Pat. Lock Stop Cock
1	4" IBBM Essex Pat. Lock Stop Cock
134'	2" 3.75# Std Blk LW Line Pipe
3211'	3" 7.7# ditto
793'	4" 11# ditto
56	6' T Iron Line Posts
3	Corner Posts
3	Gate Posts
4	# If 3' x 11' Nat'l Oil & Gas Separator Complete
4	10' x 15' 210 bbl. Nat'l Type 2 Welded Steel Tanks
4	250 bbl. 1 Ring 12 ga. Bolted Steel Tanks
4sets	Walkway Brackets for 10' x 15' tanks
4 sets	ditto 250 bbl. tanks
1	16' Steel Stairway
1	8' ditto
105'	26" Steel Walkway
8	2" Class 125 CI SE Lub Plug Valves
26	3" Class Std IBBM Nrs SE Gate Valves
9	3" Class 125 CI FF Lub Plug Valves with CFBO
6	3" Class 125 CI SE Lub Plug Valves
4	4" Std IBBM Nrs SE Gate Valves
8	4" Class 125 CI SE Lub Plug Valves
1	4" loz. Press-2oz. Vac Statite Vent Valve
1	4" 14 oz. National Stack Valve

ANDERSON - PRICHARD OIL CORP.

JAL # 1

WELL INFORMATION	
Casing Record	9-5/8" OD - 1208' - 500 sacks 7" OD - 3284' - 350 sacks
Special Equipment	None
Tubing Record	$2\frac{1}{2}$" at 3395'
GEOLOGICAL INFORMATION	
Elevation	3203
Top Anhydrite	1050
Base Salt	2740
Top Brown Lime	2750
Top Yates Sand	2870
Gas Shows	2800-2993, 3004-3290, (well unloaded at 3290 & flowed 4000 MCF gas with no oil.
Total Depth	3455
Oil Zones	3370-3390, & 3440-3445
Drilling Time	Attached
Special Tests	Attached
GENERAL INFORMATION	
Royalty Division	Attached
Accumulated Production to January 1, 1940	42,249
Initial Production	330 BOPD natural

WELL HISTORY

JAL #1

This well was spudded 10-29-37 and drilled to TD 3455' with rotary drilling equipment. Drillers logged shows of gas from lime and sand 2800' to 2993' and 3004' to 3290'. At 2993' A Drill Stam Test was made from 2800' to 2993'. The testing tool was open 15 minutes and showed a very small show of gas. Another Drill Stem Test was made from 3004' to 3290'. The tester was open 35 minutes and showed 244 MCF gas per day. At 3290' the well was unloaded by gas lift and at the end of a 5 hour test was making 4000 MCF gas per day with no oil.

After cementing 7" casing at 3284' the well was drilled to its total depth with oil. At 3360' the drilling fluid was unloaded with outside gas. A 3 hour test showed no gas or oil at that depth. At total depth of 3455' it flowed 78 BO in 3 hours thru casing with $3\frac{1}{2}$" OD drill pipe in the hole. On 10-28-37 $2\frac{1}{2}$" tubing was set at 3395'. Flowing thru open tubing it produced 86 BO the last 6 hours of a 30 hour test with gas at the rate of 541 MCF gas per day. Completed 10-30-37.

Drilling Time In Minutes
Jal #1

250	260	30	840	850	18	1477	1487	55
260	270	20	850	860	48	1487	1497	55
270	280	15	860	870	30	1497	1507	25
280	290	15	870	880	45	1507	1517	19
290	300	30	880	890	65	1517	1527	6
300	310	18	890	900	45	1527	1537	17
310	320	22	900	910	33	1537	1547	23
320	330	20	910	920	37	1547	1557	15
330	340	22	920	930	33	1557	1567	50
340	350	23	930	940	40	1567	1577	45
350	360	23	940	950	45	1577	1587	30
360	370	20	950	960	33	1587	1597	30
370	380	25	960	970	40	1597	1607	30
380	390	22	970	980	47	1607	1617	20
390	400	27	980	990	41	1617	1627	40
400	410	30	990	1000	50	1627	1637	35
410	420	32	1000	1010	55	1637	1647	22
420	430	30	1010	1020	54	1647	1657	26
430	440	45	1020	1030	50	1657	1667	32
440	450	30	1030	1040	57	1667	1677	35
450	460	30	1040	1050	55	1677	1687	37
460	470	20	1050	1060	36	1687	1697	17
470	480	26	1060	1070	73	1697	1707	13
480	490	30	1070	1080	62	1707	1717	16
490	500	21	1080	1090	100	1717	1727	15
500	510	27	1090	1100	85	1727	1737	14
510	520	34	1100	1110	84	1737	1747	12
520	530	48	1110	1120	90	1747	1757	13
530	540	27	1120	1130	50	1757	1767	18
540	550	36	1130	1140	35	1767	1777	21
550	560	32	1140	1150	55	1777	1787	38
560	570	38	1150	1160	48	1787	1797	18
570	580	31	1160	1170	64	1797	1807	15
580	590	37	1170	1180	64	1807	1817	15
590	600	26	1180	1190	82	1817	1827	10
600	610	21	1190	1200	55	1827	1837	12
610	620	12	1200	1210	25	1837	1847	13
620	630	18	1210	1215	10	1847	1857	12
630	640	22	1215	1217	5	1857	1867	13
640	650	58	1217	1219	4	1867	1877	19
650	660	60	1219	1221	5	1877	1887	10
660	670	40	1221	1223	4	1887	1897	10
670	680	47	1223	1225	5	1897	1907	7
680	690	43	1225	1227	4	1907	1917	7
690	700	40	1227	1229	3	1917	1927	6
700	710	42	1229	1231	4	1927	1937	6
710	720	33	1231	1233	3	1937	1947	16
720	730	57	1233	1235	4	1947	1957	9
730	740	26	1235	1237	5	1957	1967	8
740	750	39	1237	1239	6	1967	1977	8
750	760	35	1239	1241	5	1977	1987	7
760	770	32	1241	1243	3	1987	1997	10
770	780	31	1243	1245	3	1997	2007	22
780	790	34	1245	1247	2	2007	2017	5
790	800	18	1247	1249	2	2017	2027	18
800	810	20	1249	1251	3	2027	2037	23
810	820	33	1251	1252	2	2037	2047	58
820	830	40	1467	1477	40	2047	2057	11
830	840	60						

Drilling Time In Minutes

2057 to 2067	6	2640 to 2650	20	3065 to 3070	55
77	11	60	22	75	100
87	9	70	25	80	75
97	11	80	30	85	110
2107	9	90	28	90	85
17	29	2700	30	95	55
27	26	10	41	3100	22
37	16	20	55	5	41
47	29	30	56	10	24
57	18	40	73	15	22
67	17	50	64	20	60
77	17	60	65	25	120
87	16	70	95	30	22
97	18	80	96	35	16
2207	19	90	73	40	17
17	32	2800	105	45	73
27	18	10	132	50	107
37	15	20	86	55	115
47	45	30	82	60	120
57	20	40	80	65	130
67		50	87	70	150
80	105	60	91	75	130
90	28	70	79	80	90
2300	25	80	53	90	75
10	15	90	20	95	97
20	22	2900	120	3200	75
30	63	10	25	5	73
40	50	20	60	10	77
50	25	25	52	15	86
60	20	30	23	20	124
70	25	35	20	25	125
80	45	40	20	30	115
90	45	45	67	35	130
2400	15	50	77	40	130
10	10	55	25	45	148
20	7	60	8	50	127
30	19	65	7	55	89
40	14	70	8	60	115
50	46	75	40	65	150
60	16	80	45	70	142
70	13	85	25	75	142
80	10	90	28	80	135
90	20	95	25	85	135
2500	30	3000	40	90	120
10	30	5	51	91	12
20	72	10	55	92	20
30	13	15	52	93	18
40	14	20	48	94	18
50	15	25	32	95	20
60	12	30	43	96	19
70	12	35	65	97	14
80	16	40	92	98	24
90	11	45	48	99	21
2600	10	50	25	3300	26
10	13	55	40	1	23
20	10	60	62	2	35
30	11	65	83	3	30
40	14			4	25

Drilling Time In Minutes

3304 to 3305	15	3361 to 3362	20	3418 to 3419	67
6	3015	63	30	20	3
7	20	64	20	21	42
8	22	65	30	22	40
9	20	66	25	23	3
3310	28	67	12	24	30
11	22	68	14	25	35
12	13	69	10	26	23
13	22	3370	5	27	14
14	37	71	5	28	8
15	41	72	5	29	19
16	41	73	7	3430	18
17	26	74	6	31	23
18	34	75	7	32	16
19	40	76	7	33	10
3320	26	77	10	34	22
21	41	78	10	35	19
22	39	79	11	36	22
23	20	3380	15	37	30
24	22	81	7	38	29
25	23	82	10	3440	15
26	20	83	10	41	4
27	18	84	26	42	2
28	19	85	54	43	1
29	24	86	48	44	1
3330	19	87	48	45	2
31	20	88	28	46	18
32	22	89	37	47	31
33	45	3390	47	48	23
34	48	91	20	49	11
35	45	92	22	3450	25
36	27	93	14	51	25
37	18	94	21	52	15
38	15	95	28	53	13
39	15	96	27	54	22
3340	32	97	27	55	22
41	36	98	27		
42	36	99	23		
43	41	3400	29		
44	27	1	12		
45	36	2	6		
46	33	3	5		
47	17	4	8		
48	20	5	23		
49	25	6	30		
3350	22	7	33		
51	8	8	40		
52	6	9	25		
53	36	10	23		
54	18	11	27		
55	11	12	12		
56	9	13	13		
57	11	14	13		
58	14	15	37		
59	13	16	33		
60	13	17	67		
61	20	18	55		

OPEN FLOW TESTS

JAL #1

November - 1937

1st 6 hrs.	31.15	Bbls.
2nd 6 hrs.	16.88	"
3rd 6 hrs.	14.81	"
4th 6 hrs.	14.62	"
5th 6 hrs.	11.82	"
6th 6 hrs.	12.30	"

January - 1938

1st 12 hrs.	12	BOPH
2nd 6 hrs.	8	"
3rd 6 hrs.	8	"
4th 12 hrs.	9	"
5th 6 hrs.	6	"
6th 6 hrs.	7	"

March - 1938

1st 8 hrs.	6	BOPH
Next 12 hrs.	5	"
Next 6 hrs.	5	"
Next 6 hrs.	4	"
Next 12 hrs.	5	"
Next 6 hrs.	5	"

December - - 1938

1st 24 hrs.	84	Bbls.
2nd 24 hrs.	70	"
3rd 24 hrs.	63	"

August - 1939

1st 3 hrs.	86	Bbls.
2nd 3 hrs.	23	"
1st 24 hrs.	208	"
2nd 24 hrs.	100	"

Flowed 4 BOPH last 6 hrs.

December - 1939

1st 3 hrs.	39	Bbls.
2nd 3 hrs.	24	"
1st 24 hrs.	102	"
2nd 24 hrs.	77	"

3 BOPH last 6 hrs.

BOTTOM HOLE PRESSURE SURVEYS

JAL #1

Date of Surveys	Pressure	Bbls. Produced Between Surveys
2-3-39	720#	
3-31-39	730#	3416
6-29-39	595#	4683
8-30-39	680#*	
9-28-39	710#	3739
12-29-39	595#	5211

* Not regular survey - well shut in 15 days.

JAL # 1

WELL EQUIPMENT

1	3" 6000# test Hughes CS Tee Type Adj Flow Bean
3288'	7" OD 24# API Old Gd C Blk Smls Casing
1190'	9 5/8" OD 36# API Old Gd C Blk Smls Casing
2	2" x 18" OCT Tie Down Clamps
1 set	9 5/8" OD 1¼" x 8" x 43" Anchor Clamps
1	4½" 2000# Type 1079 E Ash Amer Press Gauge
1	5" 3000# Pressure Gauge
1	9 5/8" OD x 7" OD 3000# test Type M Rector Braden Head
1	7" OD HOWCO Float Collar
1	9 5/8" OD Baker Bakblu Float Collar
1	2 7/8" OD x 4' 6.50# Blk Smls Tbg Nipple
1	7" OD 3000# test CIW Type ML Tubing Suspender & Blowout Preventor with 2½" Rams
1	7" OD HOWCO Guide Shoe
1	9 5/8" OD Baker Bakblu Guide Shoe
3400'	2 7/8" OD 6.50# 10 thd API Gd B Blk Smls Tubing
4	2" 3000# test NRS SE Gate Valves
1	2½" Otis Tubing Closing Valve
1	3" 3000# test WKM NRS SE Gate Valve

ROYALTY INTEREST

Jal #1 & #2

Commissioner General Land Office Roswell, New Mexico	Sliding Scale Government Royalty
Stanolind Oil & Gas Company (Until $500,000.00 has been paid from this and other properties per contract 7/16/36 & 11/16/38) Philcade Building Tulsa, Oklahoma	1/16 of 8/8 of Pipe line Runs
A. K. Barnes First National Bank Bldg. Denver, Colorado	1/64 of 8/8 Overriding Royalty of Pipe Line Runs
R. Olsen Oil Company 2811 Ramsey Tower Oklahoma City, Oklahoma	50% of Working Interest
First National Bank of Chicago Chicago, Illinois	50% of Working Interest

ANDERSON - PRICHARD OIL CORP.

JAL # 2

Well INFORMATION

Casing Record	9-5/8" OD - 1150' - 500 sacks 7" OD - 3281' @ 250 sacks
Special Equipment	Guiberson Hook Wall Packer set at 3200'
Tubing Record	2½" at 3447'.

GEOLOGICAL INFORMATION

Elevation	3131
Top Anhydrite	1080
Base Salt	2700
Top Brown Lime	2720
Top Yates Sand	2870
Gas Shows	2893-97, 2900-03.
Total Depth	3479
Oil Zones	3430-35, 3470-75.
Drilling Time	Attached
Special Tests	Attached

GENERAL INFORMATION

Royalty Division	Attached to Jal #1 Well Record
Accumulated Production to January 1, 1940	32,378
Initial Production	105 BO/16 hrs. shot 240 qts. 3400-3479 then flowed 24 BOPH.

WELL HISTORY

Gal#2

This well was spudded 3-17-38 and drilled to TD 3479' with rotary drilling equipment. Shows of gas were logged in sand 2893' to 2897' and 2900' to 2903'. After Cementing 7" casing at 3281' oil was used for circulating fluid down to total depth. No tests were made until the well had been drilled to its total depth. At 3479' 2½" tubing was run to 3450'. The well would not flow after swabbing out drilling fluid but fluid stood within 500' of top of hole. 30 BO was swabbed in 6 hours. It was then shot with 240 qts. SNG from 3402' to 3479'. After cleaning out to bottom tubing was set at 3447' with Guiberson Hook Wall Packer set at 3200'. The well was then swabbed in and tested for 15 hours thru open tubing after recovering drilling fluid. At the end of the test it was flowing at the rate of 22 BOPH with 600 MCF gas per day.

Drilling Time In Minutes

JAL #2

800 to 810	35	1390 to 1400	10	2560 to 2570	65
20	25	10		80	65
30	30	2000 to 2010	4	90	65
40	27	20	15	2600	90
50	28	30	10	10	30
60	35	40	15	20	20
70	34	50	15	30	20
80	28	60	15	40	25
90	38	70	15	50	35
900	35	80	15	60	25
10	30	90	20	70	45
20	35	2100	15	80	30
30	40	10	20	90	40
40	30	20	25	2700	160 N.B.
50	35	30	10	10	195
60	45	40	10	20	240
70	55	50	15	30	265
80	50	60	15	40	95
90	60	70	15	50	80
1000	45	80	10	60	120
10	40	90	15	70	130
20	10	2200	10	80	95
30	10	10	10	90	130
40	20	20	10	2800	120
50	15	30	29	10	135
60	15	40	34	20	135
70	30	50	30	30	130
80	45	60	82	40	
90	25	70	73	50	100
1100		80	30	60	70
10	40	90	30	70	35
20	40	2300	18	80	125
30	40	10	47	90	135
40	63	20	30	2900	105
50	62	30	30	10	80
60	86	40	45	20	205
70	15	50	15	30	60 N.B.
80	18	60	20	40	95
90	12	70	80	50	45
1200	20	80	40	60	50
10	10	90	45	70	85
20	10	2400	20	80	140
30	15	10	15	90	90
40	15	20	25	3000	60
50	10	30	35	10	85
60	10	40	30	20	100
70	10	50	45	30	155
80	10	60	45	40	95 N.B.
90	10	70	65	50	105
1300	10	80	45	60	N.B.
10	10	90	10	70	180
20	10	2500	60	80	65
30	10	10	60	90	100
40	10	20	75	3100	35
50	10	30	60	10	105
60	10	40	60	20	85
70	10	50	60	30	180
80	15	60	60	40	255 N.B.
90	15				

Drilling Time In Minutes

JAL # 2

3140 to 3150	120		3354 to 3355	18		3411 to 3412	15
60	130		56	19		13	23
70	140		57	19		14	12
80	N.B.		58	14		15	20
			59	8		16	4
3282 to 3285	25		3360	8		17	22
90	75		61	4		18	25
95	60		62	5		19	23
3300	80		63	12		3420	10
5	105		64	14		21	12
6	25		65	24		22	15
7	40		66	16		23	12
8	45		67	14		24	13
9	20		68	24		25	8
10	15		69	12		26	12
11	10		3370	16		27	10
12	12		71	9		28	10
13	15		72	9		29	20
14	20		73	5		3430	10
15	11		74	3		31	10
16	12		75	9		32	21
17	12		76	12		33	13
18	10		77	10		34	6
19	9		78	15		35	2
3320	7		79	15		36	1
21	7		3380	16		37	1
22	9		81	19		38	4
23	17		82	30		39	11
24	27		83	30		3440	7
25	26		84	35	N.B.	41	27
26	30		85	17		42	18
27	23		86	20		43	21
28	20		87	20		44	23
29	20		88	20		45	18
3330	15		89	9		46	17
31	17		3390	19		47	14
32	16		91	19		48	24
33	16		92	20			
34	20		93	9			
35	22		94	15			
36	18		95	17			
37	20		96	23			
38	16		97	15			
39	18		98	15			
3340	34		99	15			
41	15	N.B.	3400	15			
42	10		1	13			
43	15		2	12			
44	15		3	15			
45	15		4	5			
46	15		5	4			
47	16		6	2			
48	15		7	2			
49	19		8	12			
3350	20		9	20			
51	15		3410	15			
52	10		11	10			
53	10						
54	15						

OPEN&FLOW TESTS

JAL # 2

August - 1938

1st 24 hrs.	336 Bbls.

December - 1938

1st 24 hrs.	384 Bbls.
2nd 24 hrs.	305 "

August - 1939

1st 3 hrs.	90 Bbls.
2nd 3 hrs.	40 "
1st 24 hrs.	333 "
Next 8 hrs.	87 "

December - 1939

1st 3 hrs.	73 Bbls.
2nd 3 hrs.	37 "
1st 24 hrs.	281 "
2nd 24 hrs.	228 "
Last 6 hrs.	7 BOPH

BOTTOM HOLE PRESSURE SURVEYS

JAL # 2

Date of Survey	Pressure	Bbls. Produced Between Surveys
1-21-39	814#	
3-31-39	847#	4255
6-29-39	745#	4590
8-30-39	835#*	
9-28-39	780#	3833
12-29-39	695#	5286

* Not regular survey - well shut in 15 days.

JAL #2

WELL EQUIPMENT

1	3" 6000# test Hughes CS Tee Type Adj Flow Boan
3282'	7" OD 22# API Gd B Blk Smls Casing
1140'	9 5/8" OD 36# ditto
1 set	9 5/8# OD-1¼" x 8" x 43" Anchor Clamps
1	4½" 3000# Type 1079 D Ash Amer Press Gauge
1	9 5/8 OD 6000# test Type H Rector Braden Head
1	7" HOWCO Float Collar
1	9 5/8 Baker Bakblu Float Collar
1	7" OD x 24" 24# Blk Smls Csg Nipple
1	2 7/8" OD x 4' 6.50# Blk Smls Tubing Nipple
1	7" OD x 2 7/8" OD Guiberson Type G-1 Hook Wall Control Heal Packer
1	7" OD 3000# test CIW Type ML Tubing Suspender & Blowout Preventor with 2½" Rams
1	7" HOWCO Guide Shoe
1	9 5/8" Baker Bakblu Guide Shoe
3444'	2 7/8" OD 6.50# API Gd B Blk Smls Tubing
1	2" 3000# test Hammer Lub Plug Valve
1-	2½" 3000# test WKM NRS SE Lub Conduit Gate Valve
1	3" 3000# Test Orbit OS & Y SE Gate Valve

JAL # 1-2

SURFACE EQUIPMENT

1	9' x 16' Cattle Guard
1103'	2" 3.75# Std Blk LW Line Pipe
2381'	3" 7.7# ditto
365'	4" 11# ditto
22	6' Iron Line Posts
2	Corner Posts
1	Gate Post
2	#5 IF 3' x 11' Nat'l Oil & Gas Separator Complete
4	10' x 15' 210 Bbl Type 2 Nat'l Welded Steel Tanks
4	Steel Walkway Brackets
1	16' Steel Stariway
44'	26" Steel Walkway
3	2" Class 125 CI SE Lub Plug Valves
1	2" 3000# test Hughes CS NRS SE Gate Valve
2	3" Std IBBM NRS SE Gate Valve
4	3" Class 125 CI SE Lub Plug Valves
5	3" Class 125 CI FE Lub Plug Valves with CFBO
2	4" Std IBBM NRS SE Gate Valves
4	4" Class 125 CI SE lub Plug Valves
1	4" 14 oz. National Stack Valve

ANDERSON - PRICHARD OIL CORP.

WELLS #1

WELL INFORMATION

Casing Record	16" OD - 99' - 30 sacks 8-5/8" OD - 1170' - 100 sacks 5½" OD - 3270' - 300 Sacks
Special Equipment	Packer at 3201
Tubing record	2" at 3441

GEOLOGICAL INFORMATION

Elevation	3210
Top Anhydrite	1080
Base Salt	2660
Top Brown Lime	2690
Top Yates Sand	2850
Gas Shows	2790-2931 & 2965
Total Depth	3500
Oil Zones	3458-3478 & 3482-86
Drilling Time	Attached
Special Tests	Attached

General Information

Royalty Division	Attached
Accumulated Production to January 1, 1940	49, 399
Initial Production	39 BOPD natural, shot 90 qts. 3454-3500 then flowed 66 BO/5 hrs.

WELL HISTORY

Wells #1

This well was spudded 7-27-37 and drilled with cable tools to 2970. Shows of gas were logged at 2790, 2931 and 2965 with hole loaded with water. At 2931 the hole was bailed dry and showed estimated 250 MCF gas per day. The hole was not unloaded below that depth but sufficient gas was encountered at 2965 to blow the tools up the hole. Rotary equipment was used from 2970 to total depth and after cementing 5½" casing at 3270 oil was used for circulating fluid. Tests made by blowing the hole dry with gas at 3313, 3359, and 3444 showed no oil or gas. At 3474 the well produced 2½ BOPH on 2 hour test thru casing with drill pipe in hole. Flowing naturally at 3500' it produced 39 BO in 24 hours by heads every 3 or 4 hours.

The well was then shot with 1½ qts. SNG per foot from 3454-75; 2 qts. per foot from 3474-84; and 2½ qts. per foot from 3484-3500. After cleaning out to bottom 2½" tubing was run to 3427. Flowing thru open tubing it produced 66 BO in 5 hours by heads. Flowing thru 1/8" choke or tubing it produced 143 BO in 17½ hours. Producing at rate of 120 BOPD gas gauged 166 MCF per day.

On 9-19-37 the 2½" tubing was pulled and 2" run back to 3441 with Guiberson Type G-1 Control Head Hook Wall Packer set at 3202. After making this change the well flowed continuously thru 3/4" choke or tubing.

Drilling Time In Minutes

Wells #1

3090	3100	275	3274	3275	35	3333	3334	60
	10	75		76	30		35	35
	20	180		77	10		36	35
	30	340		78	10		37	35
	40			79	10		38	30
	50	540		80			39	30
	60			81	35		40	30
	70	285		82	25		41	20
	80	255		83	25		42	20
	90	540		84	25		43	30
	3200	470		85	20		44	50
3200	1	40		86	35		45	20
	2	70		87	30		46	30
	3	60		88	30		47	30
	4	80		89	35		48	50
	5	80		90	60		49	40
	6	40		91	40		50	
	7	50		92	105		51	
	8	25		93	45		52	20
	9	35		94	50		53	5
	10	130		95	60		54	15
	11	50		96	40		55	10
	12	60		97	45		56	10
	13	60		98	30		57	5
	14	35		99			58	10
	15	15		3300	25		59	5
	16	20	3300	1	20		60	5
	17	30		2	25		61	5
	18	25		3	15		62	5
	19	70		4	30		63	10
	20	50		5	20		64	5
	21	45		6	25		65	10
	22	45		7	30		66	20
	23	60		8	25		67	15
	24	55		9	30		68	10
	25	60		10	25		69	15
	26	50		11	30		70	10
	27	75		12	10		71	15
	28	50		13	15		72	20
	29	70		14	60		73	15
	30	95		15	35		74	5
	31	65		16	25		75	15
	32	85		17	30		76	20
	33	85		18	50		77	9
	34	55		19	25		78	31
	35	65		20	35		79	11
	36	60		21	20		80	9
	37	60		22	25		81	12
	38	60		23	25		82	13
	39	50		24	35		83	17
	40	95		25	25		84	11
	41	85	25	25	20		85	13

Drilling Time In Minutes

Wells #1

3385	3386	10		3427	17	3469	1
	87	11		28	16	70	1
	88	9		29	14	71	2
	89	11		30	13	72	3
	90	7		31	13	73	2
	91	10		32	18	74	6
	92	7		33	11	75	12
	93	10		34	9	76	7
	94	8		35	13	77	9
	95	15		36	4	78	7
	96	15		37	2	79	10
	97	15		38	2	80	12
	98	10		39	2	81	16
	99	15		40	9	82	11
	3400	10		41	16	83	5
3400	1	5		42	16	84	4
	2	5		43	14	85	4
	3	5		44	20	86	4
	4	5		45	18	87	12
	5	10		46	30	88	17
	6	10		47	11	89	31
	7	10		48	9	90	13
	8	16		49	23	91	25
	9	13		50	22	92	22
	10	12		51	24	93	18
	11	15		52	27	94	18
	12	14		53	23	95	22
	13	14		54	32	96	30
	14	11		55	36	97	25
	15	14		56	34	98	20
	16	16		57	30	99	35
	17	8		58	30	3500	35
	18	10		59	5		
	19	15		60	5		
	20	13		61	4		
	21	15		62	5		
	22	10		63	5		
	23	9		64	4		
	24	12		65	3		
	25	16		66	1		
	26	13		67	1		
				68	1		

OPEN FLOW TESTS

WELLS #1

October - 1917

1st 12 hrs	11	BOPH
2nd 12 hrs	6	"
3rd 12 hrs	6	"
4th 12 hrs	6	"

November - 1937

1st 6 hrs	5.87	BOPH
2nd 6 hrs	5.40	"
3rd 6 hrs	5.40	"
4th 6 hrs	5.42	"
5th 6 hrs	5.40	"
6th 6 hrs	5.42	"
7th 6 hrs	5.40	"
8th 6 hrs	5.42	"
9th 6 hrs	5.42	"
10th 6 hrs	5.42	"
11th 6 hrs	5.42	"
12th 6 hrs	5.42	"
13th 6 hrs	5.40	"
14th 6 hrs	5.40	"

January - 1938

1st 12 hrs	8	BOPH
2nd 6 hrs	6	"
3rd 6 hrs	6	"
4th 12 hrs	5	"
5th 6 hrs	5	"
6th 6 hrs	5	"

July - 1938

1st 6 hrs	10	BOPH
Next 14 hrs	7	"
Next 10 hrs	5½	"
Next 14 hrs	5	"
Next 4 hrs	5	"

September - 1939

1st 3 hrs	37	Bbls.
2nd 3 hrs	16	"
Next 18 hrs	66	"
1st 24 hrs	119	"
2nd 24 hrs	69	"

2½ BOPH last 6 hrs

December - 1939

1st 3 hrs	6	Bbls.
2nd 3 hrs	11	"
1st 24 hrs	75	"
2nd 24 hrs	72	"

3 BOPH last 6 hrs.

BOTTOM HOLE PRESSURE SURVEYS

WELLS #1

Date of Survey	Pressure	Bbls. Produced Between Surveys
7-30-39	1136#	
8-18-39	1080#*	
8-19-39	1093#*	
8-20-39	1105#*	
8-30-39	1120#*	
9-27-39	1050#	9476
12-28-39	1065#	6191

*Not Regular Survey.

WELLS #1

WELL EQUIPMENT

1	2" 6000# test Hughes Type T Adj Flow Bean
3287'	5½" OD 17# Ygstn API Gd C Blk Smls Casing
1168'	8 5/8" OD 32# 8 thd Ygstn API Gd C Blk Smls Casing
88'	16" OD 70# 8 thd Std Blk LW Casing
1 set	8 5/8"OD 1" x 6" x 43" Anchor Clamps
1	5" 2000# test Durogauge Press Gauge
1	5½" OD x 2" Hinderliter Type HZ Comp Tubing Head less slips and BO Preventor
1	8 5/8" OD Type L Rector Head
1	5½" HOWCO Float Collar
1	8 5/8" OD Baker Bakblu Float Collar
1	5½" OD x 8" Gd C Blk Smls Csg Nipple
1	5½" OC x 30" Gd C Blk Smls Csg Nipple
1	8 5/8" OD x 32 # Gd C Blk Smls Csg Nipple
1	5½" OD x 2 3/8" Od EUE Guiberson Type G-1 Control Head Packer
1	2" Hinderliter Head Csg Blowout Preventor
1	5½" OD HOWCO Guide Shoe
1	8 5/8" OD Baker Bakblu Guide Shoe
3450'	2 3/8" OD 4.50# Ygstn API Gd C Blk Smls Tubing
1	2" 3000# test WKM Gate Valve
1	2" 3000# test Hughes CS SE NRS Gate Valve
1	5½")D 3000# test Hughes CS SE NRS Comb D & FL Gate Valve
1 set	2" Wedges for 5½" x 2" Hinderliter Tubing Head

ROYALTY INTEREST

WELLS #1 & #2

Commissioner General Land Office Roswell, New Mexico	Sliding Scale Government Royalty
E. J. Wells 7823 12th Street N.W. Washington, D. C.	.0033928 of 8/8 Permittee Royalty of Pipe Line Runs
Indian Petroleum Corp 391 Sutter Street San Francisco, California	.0367051 of 8/8 Permittee Royalty of Pipe Line Runs
Red Feather Oil Co. 701 Symes Bldg. Denver, Colorado	.0031250 of 8/8 Permitte Royalty of Pipe Line Runs
Ella M. Bivens San Clemente, California	.0008928 of 8/8 Permittee Royalty of Pipe Line Runs
L. E. Armstrong Rawlins, Wyoming	.0013189 of 8/8 Permittee Royalty of Pipe Line Runs
C. M. Bowen Rawlins, Wyoming	.0013189 of 8/8 Permittee Royalty of Pipe Line Runs
Bessie Chenstein 3400 E. 1st Street Long Beach, California	.0013189 of 8/8 Permittee Royalty of Pipe Line Runs
J. W. Pauson 391 Sutter Street San Francisco, California	.004464 of 8/8 Permittee Royalty of Pipe Line Runs
W. L. McLaine Higgins Building Los Angeles, California	.0004464 of 8/8 Permitte Royalty of Pipe Line Runs
Martin J. Weil, Mary W. Behrendt & Elizabeth Ann Weil c/o A. L. Weil Higgins Building Los Angeles, California	.0004464 of 8/8 Permittee Royalty of Pipe Line Runs
Alice G. Henry, Executrix of Estate of Fred T. Henry, Deceased 802 Midland Savings Bank Bldg. Denver, Colorado	.0005884 of 8/8 Permittee Royalty of Pipe Line Runs

ROYALTY INTEREST

WELLS #1 &#2

The Illinois Oil Company c/o First National Bank of Chicago Chicago, Illinois (210 Guardian Life Bldg., Dallas, Texas)	50% of Working Interest
First National Bank of Chicago Chicago, Illinois	50% of Working Interest

ANDERSON-PRICHARD OIL CORP.

WELLS #2

WELL INFORMATION

Casing Record	9-5/8" OC - 1163' - 500 sacks 7" OD - 3303' - 300 Sacks
Special Equipment	None
Tubing Record	2½" at 3488

GEOLOGICAL INFORMATION

Elevation	3207
Top Anhydrite	1095
Base Salt	2710
Top Brown Lime	2730
Top Yates Sand	2900
Gas Shows	2788-3099 (1½ million)
Total Depth	3506
Oil Zones	3400-20 & 3470-80
Drilling Time	Attached
Special Tests	Attached

GENERAL INFORMATION

Royalty Division	Attached to Wells #1 Well Record
Accumulated Production to January 1, 1940	27,109
Initial Production	120 BOPD natural, shot 340 qts. 3398-3506 then flowed 480 BOPD

WELL HISTORY

Wells #2

This well was spudded 6-6-38 and drilled with rotary equipment to total depth, 3506'. A show of gas was logged in sand 2909-2925. A drill stem test was made from 2708' to 3099'. The tester was open 21 minutes and showed 1 million gas and 270' drilling fluid with no oil. After cementing 7" casing at 3303' oil was used for circulating fluid. No tests were made until the well had been drilled to its total depth of 3506'. Flowing thru 7" casing with 3½" OD drill pipe in the hole it produced 5 BOPH (by heads every 2½ hours) with 100 MCF gas per day. It was then shot from 3398' to 3506' with 340 quarts SNG. After cleaning out to bottom 2½" tubing was set at 3489'. Flowing thru open tubing it produced 340 BO in 13½ hours, the gauge during last hour of test being 20 bbl. Gas/Oil ratio 1300. Production settled to 12 BOPH the last 14 hours of 30 hour test. Completed 7-5-38.

WELLS #2

DRILLING TIME

250 to 60		720 to 760	40		1230 to 40	24	
70	18	70	45		50	25	
80	20	80	30		60	25	
90	20	90	35		70	26	
300	17	800	55		80	21	
10	20	10	60		90	20	
20	20	20	90		1300	19	
30	23	30	40		10	20	
40	20	40	40		20	20	
50	22	50	50		30	25	
60	20	60	40		40	40	
70	20	70	45		50	35	
80	25	80	45		60	25	
90	35	90	34		70	65	
4 00	30	900	30		80	90	
10	35	10	31		90	19	
20	40	20	36		1400	50	
30	35	30	30		10	25	
40	30	40	35		20	14	
50	30	50	30		30	20	
60	30	60	36		40	20	
70	25	70	30		50	15	
80	30	80	34		60	35	
90	25	90	48		70	45	
500	30	1000	42		80	60	
10	45	10	43		90	30	NB
20	60	20	55		1500	30	
30	70	30	60		10	27	
40	40	40	43		20	41	
50	40	50	35		30	30	
60	35	60	40		40	32	
70	45	70	45		50	40	
80	30	80	50		60	53	
90	40	1 90	35		70	90	
600	25	1100	80		80	15	
10	20	10	130	NB	90	20	
20	12	20	30		1600	7	
30	23	30	55		10	11	
40	20	40	75		20	12	
50	35	50	70		30	15	
60	30	60	88		40	15	
70	30	70	114		50	10	
80	25	80	30		60	20	
90	25	90	35		70	15	
700	23	1200	20		80	30	
10	30	10	19		90	45	
20	40	20	18		1700	13	
30	55	30	22		10	12	
40	35						
50							
	40						

DRILLING TIME, WEELS #2

1710 to 20	15		2240 to 50	75		2700 to10	50	
30	10		60	45		20	100	
40	5		70	35		30	130	
50	10		80	30		40	115	
60	20		90	15		50	105	
70	30					60	100	
80	20		2300	xx 45		70	95	
90	18		10	65		80	185	
1800	20		20	90		90	155	
10	17		30	55				
20	23		40	35		2800	118	
30	27		50	30		10	105	
40	20		60	20		20	140	
50	20		70	20		30	110	NB
60	20		80	20		40	95	
70	27		90	70		50	80	
80	25					60	75	
90	35		2400	20		70	65	
1900	25		10	22		80	30	
10	45		20	23		90	35	
20	40		30	30				
30	30		40	35		2900	75	
40	60		50	40		10	62	
50	60		60	35		20	58	
60	60		70	25		30	30	
70	50		80	45	NB	40	50	
80	90	NB	90	15		50	45	
90						60	60	
2000	40		2500	20		70	160	
10	20		10	10		80	120	
20	35		20	35		90	120	NB
30	30		30	50				
40	45		40	40		3000	60	
50	30		50	20		10	65	
60	20		60	15		20	54	
70	19		70	15		30	50	
80	22		80	10		40	70	
90	20		90	10		50	50	
						60	60	
2100	35		2600	10		70	85	
10	35		10	17		80		
20	20		20	7		90	170	NB
30	25		30	10				
40	28		40	20		3100	-	
50	27		50	13		10	40	
60	30		60	14		2-	75	
70	35		70	22		30	30	
80	35		80	20		40	50	
90	35		90	70		50	105	
			2700	40		60	160	
2200	30					70	125	NB
10	25					80	90	
20	20					90	70	
30	40					3200	128	
40	25							

DRILLING TIME AT WELLS #2

3200 to 3210	137		3364 to 3365	4	
20	150	N.B.	66	7	
30	150		67	10	
40	100		68	10	
50	220		69	10	
60	220		70	17	
70	340	N.B.	71	28	
80	125		72	56	
90	130		73	34	
3300	100		74	53	
05			75	34	
10	65		76	23	
20	240		77	42	N.B.
30			78	20	
31	10		79	25	
32	15		80	25	
33	25		81	25	
34	20		82	12	
35	15		83	28	
36	10		84	25	
37	10		85	25	
38	15		86	25	
39	15		87	20	
40	12		88	20	
41	12		89	20	
42	10		90	5	
43	10		91	10	
44	10		92	20	
45	9		93	28	
46	11		94	27	
47	12		95	25	
48	9		96	24	
49	10		97	21	
50	9		98	25	
51	7		99	12	
52	7		3400	10	
53	8		01	9	
54	14		02	1	
55	19		03	15	
56	35		04	20	
57	25		05	20	
58	37		06	28	
59	33		07	35	
60	11		08	38	
61	10		09	20	N.B.
62	14		10	15	
63	10		11	16	
64	5		12	29	
			13	20	
			14	15	
			15	15	
			16	21	
			17	19	
			18	12	

DRILLING TIME AT WELL #2

3414 to 3415	15	
16	21	
17	19	
18	12	
19	22	
20	20	
21	8	
22	6	
23	15	
24	17	
25	16	
26	21	
27	13	
28	18	
29	17	
30	6	
31	18	
32	11	
33	15	
34	15	
35	15	
36	5	
37	2	
38	2	
39	6	
40	40	
41	20	
42	20	
43	30	
44	46	
45	45	
46	20	
47	55	N.B.
48	19	
49	21	
50	18	
51	21	
52	14	
53	11	
54	17	
55	18	
56	18	
57	15	
58	20	
59	12	
60	16	

3460 to 3461	20
62	17
63	2
64	2
65	2
66	1
67	10
68	10
69	16
70	7
71	17
72	43
73	36
74	30
75	36
76	38
77	14
78	31
79	34
80	26
81	29
82	6
83	7
84	8
85	22
86	30
87	35
88	20
89	30
90	25
91	30
92	20
93	20
94	15
95	20
96	35
97	21
98	7
99	2
3500	2
01	3
02	6
03	4
04	5
05	4
06	12

OPEN FLOW TESTS

WELLS #2

August - 1938

1st hour	55	BOPH
Next hour	42	"
Next 5 hrs	30	"
Next 8 hrs	23	"
Next 2 hrs	24	"
Next 5 hrs	20	"
Next 3 hrs.	19	"
Next 6 hrs	17	"
Next 10 hrs	16½	"
Next 4 hrs	15½	"
Next 3 hrs	16	"

February - 1939

1st 6 hrs	35	BOPH
Next 17 hrs	17½	"
Next 7 hrs	18	"

September - 1939

1st 3 hrs	106	Bbls.
2nd 3 hrs	64	"
Next 18 hrs	290	"
1st 24 hrs	460	"
2nd 24 hrs	198	"

12 BOPH last 6 hours

December - 1939

1st 3 hrs	89	BBls.
2nd 3 hrs	66	"
1st 24 hrs.	376	"
2nd 24 hrs	323	"

14 BOPH last 4 hrs

BOTTOM HOLE PRESSURE SURVEYS

WELLS #2

Date of Survey	Pressure	Bbls. Produced Between Surveys
1-21-39	1082#	
3-30-39	1092#	3645
6-30-39	992#	3597
9-27-39	1033#	3878
12-28-39	1005#	5191

WELLS #2

WELL EQUIPMENT

1	3" 6000# test Hughes CS Adj Flow Bean
3309'	7" OD 22# Ygstn API Gd C Rg 2 blk Smls Casing
1156'	9 5/8" OD 34.75# Lapweld Casing
1 set	9/58"-1½" x 8" x 43" Anchor Clamps
2	4½# 3000# Type 1056 Amer Ash Press Gauges
1	7" OD x 2 7/8# OD EUE OCT Type T-16 Mondrel Type Tubing Head
1	9 5/8" OD x 7" OD AWI & MW Type C Improved Braden Head
1	7" OD HOWCO Float Collar
1	9 5/8" OD Baker Bakblu Float Collar
1	7" OD X 24# 24" API Gd C Blk Smls Csg Nipple
1	2 7/8" OD x 4' 6.50# EUE API Gd C Blk Smls Tubing Nipple
1	2 7/8" OD x 10' 6.50# EUE Smls Tubing API Gd C Nipple
1	7" OD HOWCO Guide Shoe
1	9 5/8" OD Baker Bakblu Guide Shoe
3483'	2 7/8" OD 6.50# EUE Ygstn Api GdC Rg 2 Blk Smls Tubing
1	2" 3000# Test Eureka Plug Valve
1	3" 3000# test Orbit OS & Y SE Gate Valve
1	3" 3000# test Eureka CS Plug Valve

WELLS #1-2 LEASE

SURFACE EQUIPMENT

2	6" x 4" Std Blk Smls Swg Nipples
1	7" x 3" ditto
71'	2" 3.75# Std Blk LW Line Pipe
2403'	3" 7.7# ditto
498'	4" 11# ditto
1	7" OD Std Blk Smls Bull Plug
25	6' T Iron Line Posts
2	Gate Posts
4	Corner Posts
2	#5 IF 4' x 11' Nat'l Oil & Gas Separator Complete
5	8' x 16' 250 bbl. API Bolted Steel Tanks
5 sets	Walkway Brackets
1	8' Steel Stariway
81'	25" Steel Walkeay
9	2" Class 125 CI SE Lub Plug Valves
17	3" Class 125 CI Fe Lub Plug Valves with CFBO
2	3" Std IBBM NR S Sc Gate Valves
5	4" Class 125 CI SE Lub Plug Valves
2	4" Std IBBM NRS SE Gate Valves

ANDERSON - PRICHARD OIL CORP.

STUART #3

WELL INFORMATION

Casing Record	7-5/8" OD - 1165' - 350 sacks 5½" OD - 3281' - 300 sacks
Special Equipment	Nixon Surface Control Gas Lift Installation with packer ser at 3235'.
Tubing Record	2" at 3484'.

GEOLOGICAL INFORMATION

Elevation	3199
Top Anhydrite	1108
Base Salt	2690
Top Brown Lime	2720
Top Yates Sand	2850
Gas Shows	2980-3000
Total Depth	3499
Oil Zones	3420-28, 3480-99.
Drilling Time	Attached
Special Tests	None

GENERAL INFORMATION

Royalty Division	Attached
Accumulated Production to January 1, 1940	15,096
Initial Production	60 BO/48 hrs. natural by heads, shot 270 qts. 3364-3499 then flowed 104 BO/11 hrs.

WELL HISTORY

STUART #3

This well was spudded 10-7-38 and drilled to total depth of 3499' with roatry drilling ecuipment. Shows of gas were logged 2900' to 2982' and from 3048' to 3085'. After Cementing $5\frac{1}{2}$" casing at 3281' oil was sued for circulating fluid. No tests were made until the well had been drilled to 3499'. 2" tubing was then run to 3499' and the well swabbed dry. After setting 2 hours $2\frac{1}{2}$ BO was swabbed out. After this test the tubing was left open and after standing 48 hours the well flowed 60 BO and died. It was then shot from 3389' to 3499' with 270 qts. SNG. After cleaning out to bottom 2" tubingwas set at 3470' and the well swabbed in. Flowing thru open tubing it produced 104 BO in 11 hrs, Flowing thru $\frac{1}{4}$" choke on tubing it produced 95 BOPD with 100 MCF gas per day. Completed 11-10-38.

On 9-3-39 this well was put on gas lift because it would no longer flow on its own gas. A surface intermitter was installed and operated until 1-1-40. With this installation the well produced from35 to 50 BOPD with an input gas/oil ratio of approximately 2500. On 1-5-40 the well was cleaned to bottom. On 1-2-40 tubing was pulled and operations to clean the well were started. Tubing was run back to 3471' with a standing valve at 3444' and a Guiberson Type G-1 Control Head Hook Wall Packer set at 3225'. A Nixon Type 103 flow valve was set at 3188' and a Type 107 Nixon Valve was set at 2695'. At the pr esent time the well is operating an 300# input pressure, the flow valves being open 2 minutes out of each our. Production averages 40 BOPD and the input gas/oil ration is approximately 450.

DRILLING TIME IN MINUTES STUART #3

250 to 260	10		840 to 850	30		1400 to 1410	15				
70			60	35		20	35				
80	10		70	30		30	30				
90	5		80	40		40	30				
300	10		90	50		50	25				
300	10	10	900			60	15				
20	10		900	10	50		70	15			
30	10		20	30	N.B.	80	15				
40	15		30	17		90	15				
50	15		40	23		1500	25				
60	10		50	15		1500	10	25			
70	15		60	15		20	25				
80	10		70	25		30	15				
90	15		80	17		40	15				
400	15		90	18		50	55				
400	10	10	1000	30		60	35				
20	20		1000	10	15	70	70				
30	15		20	45		80	55				
40	15		30	30		90	25				
50	20		40	35		1600	30				
60	15		50	30		1600	10	15			
70	18		60	25		20	25				
80	22		70	25		30	35				
90	25		80	30		40	35				
500	15		90	30		50	25				
500	10	30	1100	10		60	15				
20	35		1100	10	35	70	40				
30	20		20	90		80	60				
40	32		30	90		90	60				
50	23		40	70		1700	25				
60	45		50	85		1700	10	35			
70	30		60	135		20	50				
80	10	N.B.	70	125		30	50	N.B.			
90	10		80	60		40	35				
600	15		90	70		50	30				
600	10	15	1200	60		60	30				
20	20		1200	10	35	70	40				
30	35		20	20		60	65				
40	15		30	25		90	60				
50	20		40	20		1800	25				
60	15		50	13		1800	10	20			
70	15		60	12		20	12				
80	25		70	11		30	12				
90	10		80	19		40	21				
700	10		90	15		50	10				
700	10	15	1300	20		60	10				
20	10		1300	10	15	70	10				
30	10		20	15		80	20				
40	20		30	25		90	10				
50	20		40	15		1900	15				
60	30		50	10		1900	10	15			
70	35		60	10		20	20				
80	25		70	10		30	25				
90	25		80	15		40	15				
800	15		90	18		50	15				
800	10	25	1400	22		60	15				
20	25					70	15				
30	30					80	15				
40	25										

DRILLING TIME IN MINUTES STUART #1

1980 to 1990	15		2540 to 2550	15		3100 to 3110	210				
2000	50			60	15		20	55			
2000	10	60		70	15		30	70			
	20	20		80	20		40	230	N.B.		
	30	30		90	25		50	180			
	40	18		2600	25		60	205			
	50	42	N.B.	2600	10	20		70	210		
	60	20			20	20		80	295		
	70	30			30	25		90	290		
	80	35			40	30		3200	240		
	90	25			50	20	3200	10	225		
	2100	25			60	30		20	280		
2100	10	25			70	30		30	270		
	20	20			80	30	N.B.	40	210		
	30	20			90	35		50	240	N.B.	
	40	25		2700		40		60	160		
	50	30		2700	10	100		70	125		
	60	20			20	160		80	185		
	70	25			30	175		85	180		
	80	10			40	130		86	30		
	90	15			50	155		87	30		
	2200	30			60	90	N.B.	88	40		
2200	10	30			70	115		89	18		
	20	25			80	140		3290	17		
	30	40			90	130		91	17		
	40	25		2800		125		92	22		
	50	25		2800	10	135		93	25		
	60	35			20	100		94	35		
	70	35			30	140		95	36		
	80	60			40	150		96	32		
	90	55			50	130	N.B.	97	30		
	2300	50			60	105		98	34		
2300	10	35			70	90		99	37		
	20	20			80	105		3300	13		
	30	20			90	100	3300	1	28		
	40	20		2900		160		2	30		
	50	95		2900	10	45		3	40		
	60	90			20	28		4	45		
	70	40			30	92		5	50		
	80	35			40	120		6	60		
	90	85			50	85		7	10		
	2400	75			60	165		8	15		
2400	10	25			70	140	N.B.	9	35		
	20	55			80	135		10	40		
	30	35			90	115		11	35		
	40	25		3000		135		12	40		
	50	40		3000	10	125		13	40		
	60	30			20	190		14	25		
	70	40			30	60		15	20		
	80	40	N.B.		40	35		16	25		
	90	40			50	95		17	30	N.B.	
	2500	95			60	95		18	30		
2500	10	100			70	30	N.B.	19	30		
	20	50			80	30		3320	30		
	30	20			90	55	3320	21	30		
	40	15		3100		70		22	15		

DRILLING TIME IN MINUTES STUART #3

3322 to 3323	14		3380 to 3381	22		3437 to 3438	52	
24	16		82	18		39	43	
25	16		83	15		3440	20	N.B.
26	23		84	15		41	15	
27	32		85	12		42	22	
28	35		86	19		43	5	
29	40		87	21		44	13	
3330	30		88	45		45	20	
31	27		89	26		46	20	
32	24		3390	17		47	10	
33	20		91	26		48	5	
34	22		92	34		49	23	
35	22		93	43		3450	15	
36	30		94	35		51	4	
37	40		95	20		52	3	
38	30		96	25		53	7	
39	25		97	25		54	18	
3340	25		98	25		55	16	
41	35	N.B.	99	15		56	9	
42	30		3400	15		57	20	
43	15		3400 1	15		58	23	
44	20		2	15		59	24	
45	11		3	21		3460	13	
46	14		4	14		61	6	
47	20		5	15		62	7	
48	20		6	25		63	17	
49	12		7	27		64	25	
50	10		8	28		65	25	
51	16		9	35		66	30	
52	15		10	30	N.B.	67	30	
53	18		11	25		68	35	
54	14		12	12		69	15	
55	20		13	8		70	20	
56	23		14	15		71	17	
57	17		15	9		72	27	
58	10		16	9		73	25	
59	12		17	17		74	30	
60	18		18	10		75	30	
61	25		19	15		76	15	
62	20		20	15		77	20	
63	25		21	7		78	10	
64	23		22	6		79	10	
65	15		23	7		80	3	
66	15		24	4		81	3	
67	15		25	6		82	2	
68	25		26	10		83	3	
69	15		27	10		84	4	
70	30		28	6		85	8	
71	35		29	24		86	8	
72	45		30	25		87	8	
73	25		31	25		88	6	
74	25		32	30		89	25	
75	30	N.B.	33	40		90	30	
76	14		34	30		91	30	
77	19		35	28		92	43	
78	14		3936	3939		9339	39	
79	14		37	53		94	30	
80	24					95	22	

DRILLING TIME IN MINUTES STUART #3

3495 to 3496	22
97	47
98	40
99	40

BOTTOM HOLE PRESSURE SURVEYS

STUART #3

Date of Survey	Pressure	Bbls. Produced Between Surveys
3-9-39	1050#	
9-27-39 -	890#	6367

STUART #3

WELL EQUIPMENT

3282'	5½" OD 15# API Gd B Blk Smls Casing
1161'	7-5/8" OD 15.7# Armco Slip Joint Casing
1	7-5/8" OD - 1¼x8x43 Anchor Clamp
1	5½" OD x 2-3/8" OD 3000# test OCT Type T-16-C Stripper Tubing Head.
1	7-5/8" OD x 5½" OD 3000# test AI&MW New Improved Type C Braden Head
1	5½" OD HOWCO Float Collar
1	7-5/8" OD Baker Bakblu Float Collar
1	6½" OD x 12" 17# API Gd C Blk Smls Casing Nipple
1	7-5/8" OD x 12" 26# API Gd C Blk Smls Casing Nipple
1	2-3/8" OD x 4' 4.70# API Gd C Blk Smls Tubing Nipple
1	2-3/8" OD x 10' 4.70# API Gd C Blk Smls Tubing Nipple
3336'	2-3/8" OD 4.70# EUE API Gd B Blk Smls Tubing
63'	2-7/8" OD 6.50# EUE API Gd B Blk Smls Tubing
1	2" 3000# test Orbit CS SE OS&Y Gate Valve
1	2" 3000# test Eureka CS SE Plug Valve
2	3" 3000# test Eureka CS SE Plug Valve
1	5½" OD HOWCO Guide Shoe
1	7-5/8" OD Baker Bakblu Guide Shoe
1	5½" OD x 2" Guiberson Hook Wall Packer
1	Nixon A Mast.
1	Nixon Intermitter
1	Nixon Wire Line Hoist & Turbine Motor
3500'	Wire Line
1	2" Wire Line Stuffing Box
1 set	Nixon 1¼" Weight Bars
1	2" Standing Valve
1	2" upset All Steel Flow Valve w/ 1 Port
1	2" upset All Steel Flow Valve w/ 3 port
1	Nixon Measuring Device

BOTTOM HOLE PRESSURE SURVEYS

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63'	2-7/8" OD 6.50# EUE API Gd B Blk Smls Tubing
1	2" 3000# test Orbit CS SE OS&Y Gate Valve
1	2" 3000# test Eureka CS SE Plug Valve
2	3" 3000# test Eureka CS SE Plug Valve
1	5½" OD HOWCO Guide Shoe
1	7-5/8" OD Baker Bakblu Guide Shoe
1	5½" OD x 2" Guiberson Hook Wall Packer
1	Nixon A Mast.
1	Nixon Intermitter
1	Nixon Wire Line Hoist & Turbine Motor
3500'	Wire Line
1	2" Wire Line Stuffing Box
1 set	Nixon 1¼" Weight Bars
1	2" Standing Valve
1	2" upset All Steel Flow Valve w/ 1 Port
1	2" upset All Steel Flow Valve w/ 3 port
1	Nixon Measuring Device

STUART #3

SURFACE EQUIPMENT

1	Grove Universal Gas Regulator
6485'	2" c.75# Std Blk LW Line Pipe
798'	3" 7.7# " " " " "
147'	4" 11# " " " " "
1	#5 IF 3' x 11' National Oil & Gas Separator Complete
2	10' x 15' 210 bbl. Type 2 National Welded Steel Tanks
2	sets Walkway Brackets
1	Steel Stairway for 15' Tank
16'	26" Steel Walkway
1	2" Class 125 CO Se Lub Plug Valve
4	2" 3000# test CS NRS SE Gate Valves
2	3" Class 125 CO FE Lub Plug Valves with CFBO
2	3" Class 125 CI SE Lub Plug Valves
1	3" Std IB SE KC Gate Valve
2	4" Class 125 CI SE Lub Plug Valve
1	4" Std IBBM MRS SE Gate Valve
39'	7" OD 24# API Gd B Blk Smls Csg (Drip)
1	Type B Foxboro Orfice Meter (0-1000#) Static (0-100")Differential
67'	2 3/8" OD 4.70# API Gd B Blk Smls Tubing
1	4" 3000# test Jarecki Flg Union
3	2" 3000# test Eureka CS SE Plug Valves
2	4" " " " " " " "
1	4½" 1000# Ash Amer Press Gauge

ROYALTY INTEREST

STUART #3

Commiscioner General Land Office Roswell, New Mexico	Sliding Scale Government Royalty
A. K. Barnes First National Bank Bldg. Denver, Colorado	1/64 of 8/8 Overriding Royalty of Pipe Line Runs
First National Bank of Chicago Chicago, Illinois	100% working Interest

STANOLIND OIL & GAS COMPANY - LANGLIE A-1

WELL INFORMATION

Casing Record - 8-5/8" 28# - 400 sacks. 5½" 17# - 3244' - 400 sax

Special Equipment - Special long Guiberson Okum packer set at 3449'

Tubing Record - 2½" EUE - 3467' TD

GEOLOGICAL INFORMATION

Elevation	3156'
Top Anhydrite	1090'
Base Salt	2670'
Top Brown Lime	2690'
Top Yates Sand	2840'

Shows

2900' -20 Dead oil stain
3040' -50 Porous slightly stained
3200' -10 Slightly Stained
3220' -30 Grey sand slightly stained
3290' Top Pay
3452' -62 Main Pay
3467' Total Depth

Drilling time Attached

Special Tests - none

GENERAL INFORMATION

Royalty Division - attached

Accumulated production to January 1, 1940-------- 39,400

Bottom Hole Pressure data
Test taked 4-19-30 BHP 407# at -274' flowed 66.57 barrels of oil 48 hrs. with BHP of 235#. Initial production 37 barrels oil per hour through 1" choke w/ natural.

Well History
Langlie A-1 was completed May 27, 1937, at a total depth of 3467' (-310'). On production test it flowed at the rate of 37 barrels oil per hr through a 1" choke 2/1,763 MCF gas. This well has never been shot.
The first appearance of water was noticed December 10, 1937. The water gradually increased until it was making 40% as of October, 1938.

In order to shut off the water a Guiberson formation packer was set at 3449'.on October 27th, '38. Since that time it has produced by flowing. It has however been necessary to swab it a number of times due to it dying from water accumulating or paraffin. Recent 24 hour test show it to be making from 25 to 30 barrels of oil per day and 3 to 7% water with a gas-oil ratio of 740 to 1.

STANOLIND OIL AND GAS COMPANY
P. J. Langlie A-1
Drilling Time

Depth	Time Min	Depth	Time Min
3280		72	23
82	40	74	12
84	56	76	9
86	31	78	15
88	31	80	20
90	20	82	11
92	43	84	10
94	43	86	12
96	31	88	22
98	78	90	36
3300	21	92	40
02	20	94	40
04	32	96	59
06	42	98	39
08	52	3400	30
10	41	02	30
12	32	04	41
14	33	06	30
16	40	08	22
18	32	10	37
20	21	12	42
22	18	14	19
24	18	16	28
26	22	18	19
28	16	20	19
30	16	22	3
32	39	24	4
34	72	26	40
New bit 3335		28	32
36	51	30	32
38	15	32	23
40	14	34	28
42	15	36	30
44	15	38	30
46	15	40	38
48	15	42	21
50	12	44	25
52	11	46	27
54	9	48	38
56	9	50	32
58	21	52	21
60	58	54	9
62	47	56	3
64	40	58	10
66	40	60	11
68	40	62	27
New bit 3570		64	41
70	40	66	64
		SLM 3467	

BOTTOM HOLE PRESSURE SURVEYS

LANGLIE #1

6668

Date	Pressure
9-29-39	810#

STANOLIND OIL AND GAS COMPANY
COPY OF FIELD INVENTORY

Langlie A Lease

State: New Mexico County: Lea Location: Langlie Field Lease No: 484
Date: 2-13-1940 Operator: SO&G Co. Interest: 100%

Unit	Size	Description	Quantity
		WELL #1 - FLOWING	
		DERRICK INSTALLATION	
Derrick	94	Amer size #12 API painted angle steel with 24' base, 5'6" top, steel crown platform, 6"x6"x1/2" starting legs, 333000# cap - on concrete corners.	1
Prod Sill	7"x24'	Casing	2
		WELL HEAD INSTALLATION	
Tbg Head	5½"x2½"	BIW type HX30	1
Casing Hd	8-5/8"x 5½"	Rector type M w/std gland & 2 - 3" outlets	1
Casing Nip	8-5/8" x 10"	32# 10-thd SS	1
do	5½"x 43"	17# 10-thd SS	1
Casing Clamps	8-5/8"	1"x8"x46" anchor	1 set
Sucker Rod Hanger		WKM Fritts type, 50-strand	1
Tretolizer	5-gal	S-M Tretolizer,comp	1
Flow Bean	3"	6000# T Hughes Adj	1
		SUB-SURFACE EQUIPMENT	
Casing	8-5/8"	28# 8-thd LW	1175
do	5½"	17# 10-thd G-C SS	3270
Tubing	2½"	6.5# 10-thd EUE G-C SS	3457
Guide Shoe	8-5/8"	Larkin 32#	1
Float Collar	8-5/8"	do	1
Guide Shoe	5½"	Larkin 17# 10-thd	1
Float Collar	5½"	do	1
Perforated Nipple	2½"x36"	Reg	1
Packer	2"x4-3/4"	10-thd upset x actual OD Guib spiral Oakum wrapped	1
Tubing anchor	2"	4.7# 10-thd EUE CC SS,one end plain	13
		WELL FENCING	
Corner Posts	7'	Angle iron galv steel w/braces	8
Line Posts	7'	ditto	12
Gate	3'x42"	Style F univ walk,w/2½" angle iron post ftgs	1
		WELL #2 - PUMPING	
		DERRICK INSTALLATION	
Derrick	94'	Amer size 12 API painted angle steel w/24' base, 5'6" top, stl crown platform,6"x6"x1/2" starting legs, 6"x6"x3/8" running legs,H-beam BW girt,cap 333000# on concrete corners.	1
Prod Sill	7"x24'	Casing	2
Crown block	3-beam	Amer Stl w/3 - 10"x7' beams,4 CI seprs & 6 - 2-15/16" B.B.Bearings	1
Casing Pulleys	24"x2-15/16"	CI	3
		RIG FRONT	
Pumping Unit	20 HP	OCS Duck type mounted on 5'5"x17'6" fabricated stl base section,comp w/twin crank,dbl reduction gear,ratio 16.6 to 1; twin 8" OCS spec cranks; 8'1/2" Steel Samson post; 16"x8½"x12'10" @ 58# stl walking beam; horsehead type beam hanger; 5" S.O. Center bearings;crosshead bearings,3½"x6'8" twin tubular Pitmans and wrist pins & welded sheet metal belt guard,serial H-1456	1
Unit Sheave	30.6"	PD-4 "C" Sec V type	1
lt	136-C	"C" Sec V-type	4
		ENGINE INSTALLATION	
Engine		McCormick-Dearing Model P-30 comp w/weather hood, serial PB-3160;with 1 Int Model #70 air cleaner 1 Ensign gas-gasoline carburetor 1 Marvel Oiler 1 21" starting wheel	1
Engine sheave	13.5"	PD-4 "C" sec V-type	1

Unit	Size	Description	Quantity
Slide rails		Univ Engine	1 set
Regulator	1"	Reliance house gas	1
Volume tank	5'x13"	S-M gas scrubber,on 3 - 2'8" legs made of 1½" angle iron	1
		WELL HEAD INSTALLATION	
Flow bean	2"	Hughes adj 6000# T T-type	1
Hd	5½"X2½"	BIW PX-64	1
Cag Hd	8-5/8" x5½"	BIW East Tex Spec w/1 - 3" & 1-2" outlet	1
Cag Nip	5½"x44"	17# 10-thd	1
Cag Clamps	13"	1¼"x8"x43"	1 set
Cag Hd	13"x8-5/8"	BIW East Tex Spec w/2 - 3" outlets	1
		SUB SURFACE EQUIPMENT	
Casing	12"	40# 8-thd lapweld	160
Casing (Line Pipe)	8"	29.35# 8-thd LW	1183
Casing	5½"	17# 10-thd CC SS	3222
Tubing	2½"	6.5# 10-thd EUE CC SS	3431
Sucker Rods	3/4"x25'	Axelson #59 API	3325
Guide Shoe	8-5/8"	Baker Bek Blu	1
Float Collar	8-5/8"	Baker Bak Blu w/male & female thds	1
Guide Shoe	5½"	Baker Bak Blu 17# 10-thd	1
Float Collar	5½"	Baker Bak Blu 17# 10-thd	1
Perforated nip	2⅜"x36"	10-thd EUE	1
catcher	5½"x2½"	Guib type E less anchor	1
Plunger Pump	2½"x9'	BMW Admore	1
		BATTERY Serving wells #1&2	
Separator	3'x11'	Nat'l #5-IF,200# T 125# WP Ser #5428,Co #309,w/ 1 - 4" flanged end IB oil valve 1 - inside float assembly 1 - 4" 200# IB IR pressure gauge 1 - 4" SE IB BP relief valve	1
Tank	500 bbl	Amer LP BS w/top SO&G #133	1
do	do	ditto SO&G #135	1
Tank stairway	24"x8'	Amer painted stl w/railing & supports	1
Tank walkway	24"	Amer painted stl w/railing & 2 sets ground brackets	30'
Separator	3'x11'	200# T 125# WP Serial 5364 #5-IF Nat'l O&G Separator with Inside float assembly 1 - 4" FE IB Oil valve 1 - 4" 200# IB IR pressure gauge 1 - 4" SE IB BP relief valve	1
Heater	6'x7'	#2 Nat'l Emulsion Heater	1
C pling	6"	std LP	1
Heating Coil	2"x3'x20'		1
Steam Pump	6"x4"x6"	Oilwell duplex #T-1616	1
Swag nipple	6"x4"	8-thd reg SS	2
		MISC LEASE EQUIPMENT	
Chemical Feeder		BS&B automatic comp w/2" 30# pressure gauge	1
		AT BATTERY	
Fence Gate	2'10"x4'	S-M gate	1
Corner Posts	7'	Angle iron galv stl	8
Line Posts	7'	do	12
		AT WELL #2	
Regulator	1"	C&F LP gas	1
Clamp		#2 hvy-T-handle Ratigan polished rod	1
F ge	4"	Fig F-5 Orifice	1
		LEASE FLOW LINES	
SLP	2"	Well #2 to sepr	268
do	2"	Scrubber tank to engine	16
do	2"	Scrubber tank to gas line	16
do	3"	Riger at well	8
do	4"	Well #1 to sepr	16
do	3"	do	797
do	4"	Riser at sepr	8
do	3"	Well #2 to sepr	841
do	3"	Riser at sepr	8

Unit	Size	Description	Quantity
		BATTERY PIPE	
SLP	2"	Heating lines at heater	662
do	4"	Sepr vent line	362
do	4"	Sepr vent line riser at sepr	13
do	4"	sepr vent line riser to air	22
do	2"	Sepr vent line guy stakes	14
do	2"	Sepr vent line to rolling line at tanks (gas)	492
do	2"	Bleeder from stock tanks to burn pit	262
do	2"	Fence posts at burn pit	84
do	3"	Battery vent line	49
do	3"	Battery vent line riser	18
do	2"	Battery vent line supports	30
do	3"	Battery vent line supports	10
do	2	Fence posts	126
do	4"	Fence posts (Battery)	42
do	2"	Fence posts (Battery)	4
do	4"	battery header	20
do	4"	Battery header riser	9
do	4"	Gravity from sepr to header	37
do	3"	Gravity from sepr to header	130
do	4"	Meter setting	20
do	3"	Sepr Drain	3

Final Transfer GA-517

STANOLIND OIL AND GAS COMPANY - LANGLIE A-1 & A-2

United States of America
c/o Supervisor, Oil & Gas Operations,
U.S.Geological Survey,P.O.Box 997
Roswell, New Mexico — 5% Royalty Interest

P.J.Langlie
10 S 1st Street
Alhambra,California — 1/2% Royalty Interest

W.M.Klages
1411 S. Catalina Street
Los Angeles,California. — 1/2% Royalty Interest

L.W.Gregory
1319 S. Ridgeley Drive
Los Angeles,California — 1/2% Royalty Interest

Lottie Gregory*
1328 - 4th Avenue,
Los Angeles, California — 1/6% Royalty Interest

F.A.Andrews
233 South Van Ness Avenue,
Los Angeles,California — 4-5/6% Royalty Interest

Oil Royalties Corporation
826 Van Nuys Building
Los Angeles, California. — 1/2% royalty Interest

Marshall Winston,Inc
490 I.W.Hellman Building
Los Angeles,California. — 1/2% Royalty Interest

Stanolind Oil and Gas Company
Philcade Building
Tulsa,Oklahoma. — 87-1/2% Working Interest

*The royalty to this participant is at present being withheld until legal difficulties between L.W.Gregory and Lottie Gregory are settled.

STANOLIND OIL & GAS COMPANY - LANGLIE A-2

Well Information

Casing Record

13" OD - 40# - 162' - 100 sacks
8-5/8" - 28# - 1185' - 360 sacks
5½" OD - 17# - 3221' - 400 sacks

Special Equipment

This well is equipped with an OCS "Duck" unit and a P-30 McCormick Dearing engine and 3325' of 3/4" sucker rods.

Tubing Record

2½" EUE - 3335'
2½" x 9' B&W Admore liner barrel 3335' to 3344'.

Geological Information

Elevation 3160'
Top Anhydrite 1100'
Base Salt 2660'
Top Brown Lime 2670'
Top Yates Sand 2810'
Gas shows - None logged
Total Depth 3463'
Oil Zones - (Drilling time & samples)

3210'-20 - 240 minutes
3220'-30 - 235 minutes
From 3230' to TD drilled with cable tools.
3415' to 3424' show oil & gas, 3424'-30 inc. oil.
3452' to 3463' hole filling with oil.

Special Tests - None

General Information

Royalty Division - Attached
Accumulated Production to January 1, 1940 - 24, 726.
Initial Production - Swabbed 47.5 B.O. in 7 hrs.shot with 140 qts. SNG 3416' to 3459',after shot flowed IP 121 BOPD thru 1/16" choke w/gas-oil ratio of 512.

Well History

Rotary drilling operations were started on this well September 21, 1937, and drilled to a depth of 3230' where cable tools were moved in and the well completed on Nov. 7, 1937, at a total depth of 3463' (-303'). Well was tested at 3456' and swabbed 27.5 B.O. in 6 hrs. Deepened to TD 3463' and swabbed 47.5 B.O. in 7 hrs. On November 23, 1937, it was shot with 140 qts. of SNG and was then cleaned out by Beckman. After cleaning out it flowed 121 Bbls oil in 24 hrs thru a 1/16" choke. The gas-oil ratio on this test was 512 cu.ft. per. bbl. It continued to flow at the allowable rate of 63 BOPD until January 1938. With the production amounting to 40 Bbls. per day, a string of 1¼" tubing was run February 12, 1938. This was run inside the 2½" tubing. Although some trouble was encountered keeping the well flowing it was produced by flow until June 16, 1938. At this time a pumping unit was installed. On recent tests over a 24 hr. period the oil Production varies from 18 to 20 barrels. The maximum water production has been 2% and was first noticed November 19, 1939. Since the last test the well has been pulled to inspect the pump as it is believed it should pump more than the recent tests have shown.

WESTERN GAS CO. BURLESON #1

WELL INFORMATION

Casing Record	12½" -266'-200 sax 8-5/8"-2767'-900 sax 5½" -3242'-25 sax
Special Equipment	None
Tubing Record	2" - 3429'

GEOLOGICAL INFORMATION

Elevation	3189
Top Anhydrite	1070
Base Salt	2650
Top Brown Lime	2780
Top Yates Sand	2920
Gas Shows	2938'-52' 2990') 1,100 MCF
Total Depth	3476'
Oil Zones (Drilling time & Samples	3342-57 3364-70 3388-3409 3434-52 3468-65
Drilling Time	Attached
Special Tests	None

GENERAL INFORMATION

Royalty Division	Attached
Accumulated Production to January 1, 1940	33,647 btls.
Initial Production	2.2 BO/hr. Gas Lift Csg and DP, Shot 300 qts. 3325'-3476' After Shot Fl. IP 6.4 BO/hr.

WELL HISTORY BURLESON #1

The well was spudded on November 17th, 1937, and at total depth 270' the same day, 247' fo 13" OD casing was run 266'. Plug was drilled, and drilling was resumed on November 20th. Top of the Anhydrite was encountered at 1070' on November 22nd.

On November 25th, 2749' of 8-5/8" OD casing was run to 2767', 3 feet off bottom, and cemented with 900 sax of cement mixed with 4 tons of salt.

Yates sand was picked up at 2920' and began showing gas at a drilling depth of 2938'. The well unloaded itself at 2952', and another increase was found at 2990. The well was unloaded at TD 2992, and tested between drill ipip and casing. The gas gauged 1,140 MCF gas.

At total depth 3250, 3226' of 5½" 17# seamless casing was run to 3242' and cemented with 25 sax cement. The plug was drilled on December 15th, 1937 and the well was drilled in while circulating oil.

At TD 3476, the well tested 22 barrels of oil in 10 hours by gas lift between casing and drill pipe. The hole was then shot with 300 qts. nitroglycerine at 3325 to 3476 shooting with 2 qts. per foot, the hole having been loaded with oil.

After cleaning the well out to the bottom, tubing was run, 3439'1" of 2", tallied overall, set at 3429'9" 47' off bottom. The well then flowed an initial production of 155 barrels of oil with 260 MCF gas flowing through 30/64" choke on the tubing. Completed December 26, 1937

GEOLOGICAL POINTS

Elevation.....3189

Top of Anhydrite.....1070

Base Salt.....l.....2650

Top of Brown Limestone.....2780

Top of Yates Sandstone.....2920

Total Depth.....3476

CASING RECORD

SIZE	AMOUNT	DEPTH	CEMENT
13"	247'	266	200
8-5/8"	2749'	2767'	900 / 4 tons salt.
5-1/2"	3226'	3242'	25
2"	3439'1"	3429'9"	

SPECIAL TESTS

TYPE	DEPTH	RESULTS
Drill pipe & casing	2767-2992	1,140 MCF gas
Gas lift between drill pipe & casing	3242-3476	22 barrels oil in 10 hrs.
Initial flow thru tubing, no packer after shot	3242-3476-	155 barrels of oil with 260 MCF gas thru 30/64" Choke.

DRILLING TIME IN MINUTES BURLESON #1

3252 to 3253	8	3306 to 3307	15
54	11	8	15
55	7	9	15
56	3	10	10
57	4	11	15
58	11	12	13
59	11	13	14
60	11	14	17
61	13	15	15
62	17	16	17
63	13	17	13
64	20	18	8
65	15	19	13
66	18	20	18
67	17	21	20
68	17	22	20
69	18	23	17
70	17	24	20
71	13	25	8
72	18	26	4
73	19	27	8
74	15	28	10
75	15	29	20
76	20	30	20
77	17	31	20
78	17	32	12
79	17	33	11
80	17	34	22
81	17	35	5
82	17	36	14
83	23	37	26
84	22	38	28
85	28	39	24
86	27	40	25
87	25	41	11
88	18	42	14
89	22	43	11
90	16	44	7
91	19	45	5
92	25	46	8
93	14	47	5
94	21	48	8
95	22	49	5
96	15	50	6
97	20	51	4
98	23	52	4
99	18	53	6
3300	15	54	5
1	9	55	6
2	14	56	7
3	20	57	7
4	15	58	18
5	15	59	25
6	15	60	26
		61	30

DRILLING TIME IN MINUTES BURLESON #1

3361 to 3362	26	3415 to 3416	23	3472-73	10
63	15	17	12	73-74	11
64	22	18	7	74-75	23
65	13	19	2	75-76	23
66	4	20	4		
67	2	21	9		
68	5	22	25		
69	4	23	21		
70	4	24	24		
71	16	25	28		
72	25	26	27		
73	32	27	26		
74	25	28	27		
75	10	29	28		
76	10	30	25		
77	15	31	24		
78	13	32	27		
79	15	33	28		
80	14	34	26		
81	23	35	21		
82	23	36	3		
83	6	37	5		
84	13	38	4		
85	16	39	5		
86	18	40	12		
87	17	41	6		
88	17	42	6		
89	20	43	5		
90	5	44	3		
91	4	45	9		
92	4	46	13		
93	4	47	9		
94	4	48	8		
95	4	49	20		
96	5	50	7		
97	5	51	5		
98	5	52	8		
99	5	52	12		
3400	5	54	14		
1	2	55	15		
2	1	56	16		
3	2	57	17		
4	1	58	15		
5	1	59	8		
6	3	60	14		
7	3	61	5		
8	3	62	3		
9	14	63	2		
10	19	64	1		
11	23	65	9		
12	20	66	13		
13	22	67	13		
14	28	68	14		
15	17	69	10		
		70	10		
		71	20		
		72	19		

WELL EQUIPMENT AT HERSCHBACH #I BURLESON

CELLAR CONNECTIONS

1 boarded cellar
1 christmas tree including:
  1 300# Wescott choke
  2 2x6 nipples
  1 2x12 nipple
  1 2" steel tee
  1 2x½ swage
  1 2" 3000# Wescott valve
  1 2" ups x 2" reg swage
  1 5½"x 2" Cameron 4000# tbg head
  1 4x½ hydralic swage
  1 2" 3000# Wescott valve
1 5½ x 18" nipple
1 5½ x 8-5/8" Rector head
2 3x8 hydralic nipples
2 3" 3000# Wescott valve
1 3x2 swage
1 3x8 nipple
2 3" tie down clamps
2 4' 7/8" tie down rods
1 8-5/8x12 nipple
1 8-5/8x 13" Rector head
1 3x2 swage
1 2" 3000# Wescott valve
1 13" casing clamp
1 3x8 nipple
1 3" std tee
1 3x2 swage
1 2" collar
1 2x6 nipple
1 2" hvy maleable tee
3 maleable ells
1 3x2 nipples
1 2" Wescott choke
1 2" maleable union
1 2x12 nipple
1 2x6 nipple
1 2" steel ell
1 2x½ swage
1 2x8 nipple
1 2" collar

TANK BATTERY

2 200 bbl Nat'l Welded tanks complete with stair & walk

SEPARATOR

1 200# Nat'l flow valve & gas valve complete separator
1 set gauge glass connections
2 4x12 nipple
1 3x2 swage
1 2" collar
1 2x10 nipple
1 2" clip gate
3 std 2" bull plugs
1 2" LP Nat'l pop valve
1 4" std bull plug
1 3/4" std bull plug

VENT LINE

1 4" all-thread nipple
1 4" flange union
4 4" std ells
7 joints 4" pipe, 280'
1 4x4 nipple
1 4" Nat'l screw back pressure valve
1 4" collar
1 4x6 nipple

FLOW LINE

1 4x3 swage
860' 3" line pipe, 43 joints
1 3x2 swage
2 3" std tees
1 3" std bull plug
1 3" heavy maleable tee
2 3x6 nipples
2 3" x 20' risors
4 3" std ells
4 3x3 std nipples
2 3x4 nipples
2 3" 2000# hammer unions
2 3" 126# Wescott clip gates
2 3x4 swages
2 3" std ells
1 3x3 nipple
2 3" steel hammer unions

PIPE LINE OUTLET

2 4"x6" std nipples
2 4" look stops

(sizes in inches unless shown otherwise)

WELL EQUIPMENT, BURLESON #1

TANK VENT LINE

2 3x4 std swedges
2 3" std ells
1 3x5 nipple
1 3" grnd jt flange union
24' 3" pipe

TANK BLEEDER

200' 2" pipe
3 2x4 nipples
1 2x6 nipple
2 2" lock stops
4 2" std ells
2 2" std flange unions
1 2" std tee
2 2x8 nipples
1 2x6 nipple
1 2x4 nipple
1 2x10 nipple

TANK FENCE

4 2" x 5' pipe posts
1 Roll barbed wire
1 archway, 2" pipe
13 L iron posts

WELL FENCE

4 2" x 5' pipe posts
1 roll barbed wire
1 archway, 2" pipe
5 L iron posts

(sizes in inches unless shown otherwise)

CASING RECORD AT BURLESON #1

Size	Length	depth	Cement
13"	247	266	225
8-5/8"	2749	2767	900 & 4 tons salt
5½"	3225	3242	25
2"	3430	3439	

Note: 2-1-40, One Nixon Gas lift System complete with mast, turbine, hoist, unloading valve, bottom valve, and standing valve.

BURLESON LEASE, N"¼ - 8-25-37

Herschback Drilling Co., Republic Bank Bldg., Dallas	27/64 WI
Western Gas Co., 10th Floor, Bassett Tower, El Paso	27/64 WI
Amerada Pet. Corp., Box 2040, Tulsa, Okla.	2/64 ORI

F.M.Burleson & Naomi Burleson,Box 683, Lubbock	36/128 of 1/8 RI
Argo Oil Corp., 1st Nat'l Bank Bldg. Denver, Colo.	56/128 of 1/8 RI
E. A. Fariss,511 Ramsey Tower,Oklahoma City, Okla.	20/128 of 1/8 RI
Bulbertson & Irwin Inc.,Box 1071,Midland,Tex.	6/128 of 1/8 RI
G.R.Henson,911 Commercial Bldg.,Shreveport, La.	4/128 of 1/8 RI
G.H. Wilson,510 West Rusk, Marshall, Tex.	2/128 of 1/8 RI
Paget Cady, 37 E. Division St., Chicago, Ill.	1/128 of 1/8 RI
E.W.K.Andrau, 2109 Kingston, Houston,Tex.	1/128 of 1/8 RI
Aletta S. Root,70 E. Walton Place, Chicago, Ill.	1/128 of 1/8 RI
Peter Connor, 435-5th Ave., Chula Vista, Calif.	1/128 of 1/8 RI

WESTERN GAS CO. BURLISON # 2

WELL INFORMATION

Casing Record	12½" - 255 - 125 sax 8 5/8" - 2744 - 700 sax 5½ - 3236 - 20 sax
Special Equipment	None
Tubing Record	2" - 3458'

GEOLOGICAL INFORMATION

Elevation	3168
Top Anhydrite	1090
Base Salt	
Top Brown Lime	2730
Top Yates Sand	2860
Gas Shows	2910-46 3,000 MCF, inc at 3066 to 4,000 MFC, 3071-94 16,000 MCF
Total Depth	3467'
Oil Zones (Drilling Time & Samples)	3322-38 3343-50 (3343-50) 3382-90 3449-55 3459-67
Drilling Time	Attached
Special Tests	None

GENERAL INFORMATION

Royalty Division	None
Accumulated Prod. to January 1, 1940	5,449 bbls.
Initial Prod.	Fl. Natural 1½ BO/hr, Shot 220 qts. 3357-3467, After Shot Fl., I.P. 5.4 BO/hr.

HERSCHBACH DRILLING CO. ET AL

#2 BURLISON

WELL HISTORY

Rigging up on the location was started on the 13th of June, 1939 , with one crew working eight days, three crews working one day. Drilling then commenced on June 22, 1939.

On June 23, 1939, 237'10" of second-hand 13" pipe was set at 255'10", and was cemented with 175 sax of cement. Nippling up was started on June 24th, and the shut-off tested, and the plug drilled on June 25th with an 11" bit.

An 11" hole was drilled to 2750' where casing was run. On July 4, 1939, 2728'11" of 8 5/8" casing was set at 2744'11" and was cemented with 700 sax. On July 9th the plug was drilled out of the pipe with a 6-3/4" bit and oil was used to replace the water as drilling medium.

On July 11 a show of gas was encountered at 2910-2945, and at total depth 2945 was gauged. This gas tested 3,000 MCF with no oil. On July 14 the well was again tested at total depth 3023', and gauged 3,000MCF gas with no oil, at total depth 3066 the gas gauged 4,000 MCF and no oil.

On July 16, at total depth 3071', the well unloaded and was tested. It gauged 16,000 MCF of gas with 250 lbs. back pressure and a spray of oil. The rock pressure was 1250 lbs. The well was then drilled to 3121 and testing was started. The gas out off the connections and operations were suspended to kill the well and replace the connections.

On July 22 and 23, the well was killed using 770 sax of lime dust and 36 sax of Aquagel. On the 24th tubing was started into the well but would not reach bottom. The well was then cleaned out, and tubing re-run on the 26th to 3121', with a 5½" packer at 3097', perforations below the packer. Thre test showed a small amount of gas with no oil. Salt water was then used to displace the mud and the well was deepened to 3234'.

On July 31st, 2" tubing was run to total depth 3234', with a packer at 3135' and perforations below the packer. The well was then swabbed dry and showed a small amount of gas with no oil.

At total depth 3250', 3212' of 5½" casing was set at 3226' and cemented with 20 sax. The plug was tested on August 10th and drilled out with a 4-3/4" bit, using oil to displace the salt water as drilling fluid.

On August 12th, the well was tested through the casing with drill-pipe in the hole by injected gas, this test showed ½ BO/hr.

The well was then deepened to 3467' and on the 14th the well was kicked off by input gas and flowed 1½ BO/hr. natural.

The well was loaded with oil and on the 16th was shot with 220 quarts of nitroglycerine from 3357 to 3467, with a 135' gravel tamp above the shot. The well unloaded after the shot and then bridged at 3267'. The bridge was drilled out and the hole cleaned to 3467' total depth of the well. 2" tubing was then run to 3458'.

After the well unloaded through the tubing it was allowed to flow three hours, and then was gauged flowing 5.4 BO/hr on August 18, 1939.

FORMATION POINTS

Elevation	3168' L & S
Top Anhydrite	1090
Base Salt	
Top Br. Lime	2730
Top Yates	2860

OIL PAYS

3371-3390 3456-3467

GAS PAYS

2910-46 (Yates) 3,000 MCF, 3052-66 (L.Yates) 1,000 MCF (est.), 3070-93 (Queens), 16,000 MCF w/250# B. Pr.

TESTS

(1). 2910-46, 3,000 MCF gas no oil.

(2). @T.D. 3023', 3,000 MCF gas no oil.

(3). @ T.D. 3066', 4,000 MCF gas no oil.

(4). @ T.D. 3071', 16,000 MCF gas, spray of oil, Back-Pressure 250#, shut in Pr. 1250#.

(5). @ T.D. 3121', 2" tubing with packer 3097 perforations below, small gas no oil.

(6). @ T.D. 3224', 2" tubing with packer 3125, perforations below, small gas no oil.

(7). 3226-3401, small gas, 1/2 BO/hr.

(8). T.D. 3467, Natural small gas 1½ BO/hr.

(9). T.D. 3467', After shot, Fl. I.P. 5.4 BO/hr fourth hour of four hour test, no estimate on gas.

CASING & TUBING RECORD

SIZE	AMOUNT	DEPTH	CEMENT
12½"	237'10"	255'10"	100
8 5/8"	2728'11"	2744'11"	700
5½"	3212'0"	3226'0"	20
2" Tubing	3454'0"	3458'0"	--

DRILLING TIME, BURLISON #2

DEPTH	MING	DEPTH	MIN.	DEPTH	MIN.	DEPTH	MIN.
3216		3261	10	3308		3356	
17	19	62	13	09	10	57	25
18	13	63	12	10	13	58	26
19	18	64	18	11	16	59	20
20	20	65	12	12	10	60	35
21	21	66	14	13	9	61	40
22	20	67	8	14	17	62	17
23	13	68	6	15	19	63	13
24	19	69	4	16	17	64	17
25	16	70	4	17	15	65	18
26	20	71	8	18	22	66	20
27	19	72	11	19	20	67	19
28	21	73	13	20	13	68	16
29	19	74	16	21	10	69	18
30	10	75	18	23	9	70	18
31	5	76	15	24	5	71	21
32	8	77	15	25	7	72	12
33	22	78	15	26	7	73	9
34	19	79	17	27	7	74	6
35	15	80	15	28	7	75	9
36	10	81	13	29	10	76	6
37	10	82	20	30	13	77	6
38	20	83	17	31	7	78	6
39	17	84	30	32	6	79	8
40	18	85	28	33	6	80	6
41	15	86	27	34	6	81	9
42	20	87	13	35	5	82	7
43	15	88	13	36	6	83	7
44	11	89	13	37	8	84	5
45	14	90	22	38	8	85	4
46	15	91	14	39	25	86	6
47	15	92	28	40	15	87	7
48	17	93	26	41	13	88	8
49	15	94	29	42	12	89	9
50	13	95	36	43	13	90	11
51	12	96	36	44	5	91	26
52	18	97	42	45	24	92	30
53	24	98	16	46	4	93	30
54	19	99	6	47	13	94	28
55	23	3300	3	48	10	95	40
56	18	01	7	49	7	96	22
57	22	02	13	50	5	97	14
58	20	03	47	51	8	98	11
59	20	04	60	52	11	99	7
60	17	05	60	53	12	3400	14
		06	12	54	8	01	21
		07	18	55	12	02	26
		08	12	56	28	03	14
					15		

DRILLING TIME BURLISON # 2

DEPTH	MIN.
3403	
04	30
05	27
06	25
07	20
08	12
09	11
10	17
11	15
12	15
13	15
14	15
15	15
16	9
17	15
18	16
19	25
20	13
21	9
22	17
23	23
24	18
25	18
26	20
27	15
28	10
29	14
30	23
31	10
32	8
33	17
34	14
35	19
36	10
37	10
38	13
39	17
40	20
41	19
42	14
43	19
44	18
45	18
46	13
47	11
48	20
49	21
50	

DEPTH	MIN.
3449	
50	7
51	8
52	15
53	13
54	9
55	9
56	10
57	12
58	11
59	11
60	4
61	3
62	4
63	25
64	2
65	2
66	3
67	2
68	2
69	4
70	6

Total Depth, Steel line correction
3470 equals 3467

WELL EQUIPMENT AT BURLESON #2

WELL CONNECTIONS

1 13x12 nipple
1 13x 7-5/8 Rector head
1 3" Ex heavy bull plug
1 3x2 Ex heavy swage nipple
1 2" 300# Hughes gate
1 7-5/8 x 8 nipple
1 7-5/8 x 5½ Rector head
2 3x8 hydralic nipple
2 3x6 Ex heavy nipple
2 3" 8th 3000# WKM gate
2 sets 3" clamps,7/8x4x26
2 1½ x 56 De bolts for slamps
1 5½ x 7 swage nipple
1 5½x10 nipple
1 5½ 3000# Hughes gate
1 7" Type T 16B 2000# OCT tubinghead complete
2 4x2 hydralic swage nipple
3 2" 3000# WKM gate
2 2x½ hydralic swage nipple
3 ½" Wlwth all-steel needle valves.
1 2" 8th x 2" 10th seamless nipples
1 2x10 Ex heavy nipple
1 2x8 Ex heavy nipple
1 2" 3000# OCT Series T 108 all-steel tee
1 set 2" tubing hold-down clamps with Stacy boomer & Chain
1 2" Hughes choke

FLOW LINE CONNECTIONS

1 2x10 regula r nipple
1 2x21 reg nipple
1 2" Heavy maleable ell
1 jt 2" pipe, 22'10", 1800# test
24 jts 3" line, 557'6"
1 3x2 Ex heavy swage nipple

FENCE AROUND WELL

4 2" x 5' pipe posts
4 L iron posts

SEPARATOR CONNECTIONS

4 3"mHvy maleable ells
1 3x4 nipple
2 4x3 swage nipples
1 4" Ser. 30 Vanstone bolt type flange unions
1 3x24 nipple
1 Separator,built complete by EPNG
1 2" 250# pop valve
1 2" std collar
1 2x4 std nipple
1 2" Lunk gate valve
1 4x4 nipple
1 4" collar
1 3" collar
1 3x12 nipple
2 3" std ells
1 3x6 nipple
1 4" 200# BS&B oil valve comp.,#1595
1 3x6 nipple
5 jts 3" vent line, 112'3"
3 4x3 regular swages
1 4" maleable tee
1 4" bull plug
1 4" x 12' risor pipe
1 4x8 nipple
1 4x3 welded swage (home-made)
2 3" ells
1 3x3 nipple
2 3" close nipple
1 3" OJC check valve
1 4" back-pressure valve
3 2" ells
2 2" tees
2 2" unions
2 2x6 nipples
1 2x10 nipple
1 2x8 nipple

(Sizes in inches unless otherwise specified)

WELL EQUIPMENT AT BURLESON #2

TANK CONNECTIONS

2 500 bbl Nat'l bolted tanks
107'6" of 3" pipe
4 3" common tees
4 3" hdl bar unions
2 3" bull plugs
2 3" ells
1 3x12 nipple
1 3x6 nipple
1 2" Wescott gate valve
2 4" Welworth stops
2 4x12 nipples
2 3x6 nipples for bleeder lines
2 3" collars
2 3" ells
2 3x2 swages
2 2" Crane stops
40' 2" line pipe, bleeders
2 2" Maleable ells
1 2" maleable tees
1 2" common lip union
1 2x8 nipple
4 3" Ells
5 3x3 nipples
2 3" Walworth stops
3 2" hdl bar unions
2 4x3 swage nipples
2 3" common tees
2 3" bull pligs
2 3x6 nipples
35' 3" pipe on top of tanks
1 2x3 swage
1 2x3 nipple
1 2" lip union

CASING RECORD AT BURLESON #2

Size	Amount	Depth	Sax Cement
13"	237'10"	255	175
8-5/8"	2728'11"	2744	700
5½"	~~3454~~'3212'	~~3458~~ 3226'	20
2" Tbg.	3454	3458	less threads

PETITIONERS' EXHIBIT NO. 4

"PRODUCTION RECORD
REPRESENTING UNIT
IN LANGLIE FIELD, NEW MEXICO

ANDERSON PRICHARD	Jal	1	27	short
"	Jal	2	68	short
"	Langlie	1	6444	short
"	Langlie	2	40	short
"	Langlie	3	59	short
"	Langlie	4	16	over
"	Stuart	3	7428	short
"	Wells	1	631	over
"	Wells	2	631	over
CLAY DRILLING CO	Burleson	1	216	over
"	Burleson	2	614	short
STANOLIND OIL & GAS CO.	Langlie A	1	1072	short
"	Langlie A	2	893	short
TOTAL			14,651	SHORT

ANDERSON-PRICHARD OIL CORPORATION
Wells No. 2
5-25-37

	ALLOWABLE		RUNS		OVER	SHORT	TOTAL
TO 8-1-39							..320
AUGUST	784	25.3	597	19.3		187	
SEPTEMBER	1260	42	1435	47.8	175		
OCTOBER	1468	48	1677	54.1	189		
NOVEMBER	1380	46	1616	53.9	236		
DECEMBER	1395	45	1372	44 2		23	
1940 JANUARY	1240	40	1331	42 9	91		
FEBRUARY	1363	47	1349	46 5		14	
MARCH	1488	48	1487	48		1	
APRIL	1380	46	1360	45 3		20	
MAY	1302	42	1227	39 6		75	
JUNE	1230	41	1163	38 8		67	
JULY	1209	59	1240	40	31		
AUGUST	1147	37	1761	56 3	614		
SEPTEMBER	1060	35	1065	35 5	15		
OCTOBER	1147	37	1134	36 2		13	
TOTAL	18,863		19,814		1,361	400	-320
GRAND TOTAL						OVER...	631

STANOLIND OIL & GAS COMPANY
Langlie A-2
9-25-37

TO 8-1-39	ALLOWABLE	RUNS	OVER	SHORT	TOTAL
AUGUST	288 9 3/5	117 3 8/9		171	
SEPTEMBER	525 17 5/6	597 19 9/10	72		
OCTOBER	620 20	348 11 2/3		272	
NOVEMBER	450 15	489 16 3/4	39		
DECEMBER	465 15	347 12 1/4		91	
1940 JANUARY	496 16	517 16 7/8	21		
FEBRUARY	464 16	579 20	115		
MARCH	496 16	347 11 2/3		149	
APRIL	60 2	486 16 2/3	426		
MAY	496 16	446 14 4/5		50	
JUNE	480 16	205 6 8/9		275	
JULY	310 10	310 10			
AUGUST	310 10	236 7 6/7		74	
SEPTEMBER	300 10	303 10 1/10	3		
OCTOBER	465 15	478 15 1/2	13		
TOTAL	6,225	5,832	689	1,082	
GRAND TOTAL					SHORT...393

STANOLIND OIL & GAS COMPANY
Langlie A-1
9-25-37

	ALLOWABLE	RUNS	OVER	SHORT	TOTAL
TO8-1-39					
AUGUST	320 10 3/3	241 7 8/8		79	
SEPTEMBER	825 27 5/5	663 22 1/1		162	
OCTOBER	930 30	396 12 8/8		534	
NOVEMBER	600 20	512 17 1/1		88	
DECEMBER	620 20	374 12 1/1		246	
1940 JANUARY	279 9	445 14 4/4	166		
FEBRUARY	261 9	460 15 7/7	199		
MARCH	279 9	347 11 2/2	68		
APRIL	90 3	725 24 2/2	635		
MAY	1302 42	1118 36		184	
JUNE	1230 41	464 15 5/5		766	
JULY	620 20	620 20			
AUGUST	620 20	522 16 8/8		98	
SEPTEMBER	600 20	603 20 1/1	3		
OCTOBER	620 20	634 20 4/4	14		
TOTAL	9,196	8,124	1,085	2,157	
GRAND TOTAL					SHORT...1072

CLAY DRILLING COMPANY
Burleson No.2
8-25-37

	ALLOWABLE	RUNS	OVER	SHORT	TOTAL
TO 8-1-39					
AUGUST					
SEPTEMBER	620 21	842 28 1/2	212		
OCTOBER	1488 48	1657 53 4/5	169		
NOVEMBER	1380 46	1304 48 5/6		76	
DECEMBER	139645	1312 42 3/5		83	
1940 JANUARY	1240 40	1122 36 1/2		118	
FEBRUARY	638 22	520 17 2/3		118	
MARCH	1488 48	1541 49 7/8	53		
APRIL	1380 46	1400 46 7/8	20		
MAY	1302 42	1027 33 1/2		275	
JUNE	1230 41	1210 40 2/3		20	
JULY	1934 62 3/4	2050 66 1/2	116		
AUGUST	1147 37	1200 38 7/8	53		
SEPTEMBER	1060 35	450 15		600	
OCTOBER	1147 37	1200 38 7/8	53		
TOTAL	17,449	16,835	676	1,290	
GRAND TOTAL					SHORT.....614

CIA Y DRILLING COMPANY
Burleson No. 1
8-25-37

	ALLOWABLE		RUN		OVER	SHORT	TOTAL
TO 8-1-39							-3886
AUGUST	784	25.3	974	31.4	190		
SEPTEMBER	1260	42.0	1107	36.9		153	
OCTOBER	1488	48.0	1442	46.5		46	
NOVEMBER	1380	46.0	1728	57.6	348		
DECEMBER	1395	45.0	1560	50.3	165		
1940 JANUARY	1240	40.0	1345	43.4	105		
FEBRUARY	957	33.0	650	22.4		307	
MARCH	1488	48.0	1420	45.8		68	
APRIL	1380	46.0	1446	48.2	66		
MAY	1302	42.0	1300	41.9		2	
JUNE	1230	41.0	1175	39.2		55	
JULY	1615	52.0	1322	42.6		293	
AUGUST	1147	37.0	1217	39.2	70		
SEPTEMBER	1050	35	4570	152.3	3520		
OCTOBER	1147	37	1709	55.1	562		
TOTAL	18,863		22,965		5,026	924	-3886
GRAND TOTAL							OVER...216

ANDERSON-PRICHARD OIL CORPORATION
Wells No. 1
5-26-37

	ALLOWABLE		RUNS		OVER	SHORT	TOTAL
TO 8-1-39							-708
AUGUST	784	25.3	597	19.3		187	
SEPTEMBER	1260	42	1435	47.8	175		
OCTOBER	1488	48	1677	54.1	189		
NOVEMBER	1380	46	1616	53.9	236		
DECEMBER	1395	45	1372	44.3		23	
1940 JANUARY	1240	40	1331	42.9	91		
FEBRUARY	1363	47	1349	46.5		14	
MARCH	1488	48	1487	48.0		1	
APRIL	1380	46	1360	45.3		20	
MAY	1302	42	1227	39.6		75	
JUNE	1230	41	1163	38.8		67	
JULY	1209	39	1240	40.0	31		
AUGUST	1147	37	2149	69.3	1002		
SEPTEMBER	1050	35	1065	35.5	15		
OCTOBER	1147	37	1134	36.6		13	
TOTAL	18,863		20,202		1,739	400	-708
GRAND TOTAL							OVER....631

ANDERSON-PRICHARD OIL CORPORATION
Stuart No. 3
9-25-37

	ALLOWABLE		RUNS		OVER	SHORT	TOTAL
TO 8-1-39							-3538
AUGUST	784	25.3	180	5.8		604	
SEPTEMBER	1260	42	1173	39.1		87	
OCTOBER	1488	48	1266	40.8		222	
NOVEMBER	1380	46	1216	40.6		165	
DECEMBER	1395	45	1384	44.6		11	
1940 JANUARY	1240	40	1091	35.2		149	
FEBRUARY	1363	47	1072	37		291	
MARCH	1488	48	1083	34.9		405	
APRIL	1380	46	1075	35.8		305	
MAY	1302	42	1077	34.7		225	
JUNE	1230	41	899	30.0		331	
JULY	1209	39	972	21.4		237	
AUGUST	1147	37	883	28.5		264	
SEPTEMBER	1050	35	883	29.4		167	
OCTOBER	1147	37	720			427	
TOTAL	18,863		14,973		3,890		-3538
GRAND TOTAL							SHORT.. 7428

ANDERSON-PRICHARD OIL CORPORATION
Langlie A-4
8-25-37

TO 8-1-39	ALLOWABLE		RUNS		OVER	SHORT	TOTAL -533
AUGUST	784	25.3	726	23.4		58	
SEPTEMBER	1260	42	1323	44.1	63		
OCTOBER	1488	48	1816	58.6	328		
NOVEMBER	1380	46	1617	53.9	237		
DECEMBER	1395	45	1540	49.7	145		
1940 JANUARY	1240	40	1156	37.3		84	
FEBRUARY	1363	47	1262	43.5		101	
MARCH	1488	48	1461	47.1		27	
APRIL	1380	46	1427	47.6	47		
MAY	1302	42	1269	40.9		33	
JUNE	1230	41	1189	39.6		41	
JULY	1209	39	1225	39.5	16		
AUGUST	1147	37	1172	37.8	25		
SEPTEMBER	1050	35	1055	35.2	5		
OCTOBER	1147	37	1174	37.9	27		
TOTAL	18,863		19,412		893	344	-553
GRAND TOTAL							OVER 16

ANDERSON-PRICHARD OIL CORPORATION
Langlie A-3
8-25-37

	ALLOWABLE		RUNS		OVER	SHORT	TOTAL
TO 8-1-39							-1044
AUGUST	784	25.3	718	23.1		66	
SEPTEMBER	1260	42	1314	43.8	54		
OCTOBER	1488	48	1799	58.0	311		
NOVEMBER	1380	46	1639	54.6	259		
DECEMBER 1940	1395	45	1737	56.0	342		
JANUARY	1240	40	1406	45.4	166		
FEBRUARY	1363	48	1245	42.9		118	
MARCH	1488	48	1733	55.9	245		
APRIL	1380	46	1369	45.6		11	
MAY	1302	42	1157	37.3		145	
JUNE	1230	41	1202	40.0		28	
JULY	1209	39	1194	38.5		15	
AUGUST	1147	37	1155	37.3	8		
SEPTEMBER	1050	35	1046	34.9		4	
OCTOBER	1147	37	1154	37.2	7		
TOTAL	18,863		19,868		1,392	387	-1064
GRAND TOTAL						SHORT.....	59

ANDERSON-PRICHARD OIL COMPANY
Langlie A-2
8-25-37

	ALLOWABLE	%	RUNS		OVER	SHORT	TOTAL
TO 8-1-39							-1281
AUGUST	784	25.3	634	20.5		150	
SEPTEMBER	1260	42	1438	47.9	178		
OCTOBER	1488	48	1744	56.3	256		
NOVEMBER	1380	46	1484	49.5	104		
DECEMBER	1395	45	1865	60.2	470		
1940 JANUARY	1240	40	1574	50.8	334		
FEBRUARY	1363	47	1468	50.6	105		
MARCH	1488	48	1556	50.2	68		
APRIL	1380	46	1497	50.0	117		
MAY	1302	42	1211	39.1		91	
JUNE	1230	41	1057	35.2		173	
JULY	1209	39	1201	38.7		8	
AUGUST	1147	37	1155	37.3	8		
SEPTEMBER	1050	35	1046	34.9		4	
OCTOBER	1147	37	1174	37.9	27		
TOTAL	18,863		20,104		1,667	426	-1281
GRAND TOTAL						SHORT.....	40

ANDERSON-PRICHARD OIL COMPANY
Langlie No. 1
8-25-37

	ALLOWABLE		RUNS		OVER	SHORT	TOTAL
TO 8-1-39							-3157
AUGUST	784	25.3	212	6.8		572	
SEPTEMBER	1260	42	1240	41.3		20	
OCTOBER	1488	48	1714	55.3	226		
NOVEMBER	1380	46	1700	56.7	320		
DECEMBER	1395	45	1426	46.0	31		
1940 JANUARY	1240	40	812	16.2		426	
FEBRUARY	957	33	395	13.6		562	
MARCH	1395	45	601	19.4		794	
APRIL	1380	46	621	20.0		759	
MAY	1054	34	624	20.1		430	
JUNE	1230	41	977	32.6		253	
JULY	682	22	679	21.9		3	
AUGUST	682	22	673	21.7		9	
SEPTEMBER	660	22	625	20.8		35	
OCTOBER	682	22	683	22.0	1		
TOTAL	16,269		12,982		578	3,865	-3157
GRAND TOTAL						SHORT.....	6444

16,269
12,982
3,287

3,287

3865
- 578
3287

3157
3865
7022

7022
6444
578

ANDERSON PRICHARD OIL COMPANY
Jal No. 1
8-25-37

	ALLOWABLE		RUNS		OVER	SHORT	TOTAL
TO 8-1-39							-984
AUGUST 31	784	25.3	720	23.2		64	
SEPTEMBER 30	1260	42.0	1302	43.4	42		
OCTOBER 31	1488	48.0	1809	58.4	321		
NOVEMBER 30	1380	46	1639	54.6	259		
DECEMBER 31 1940	1395	45	1671	53.9	276		
JANUARY	1240	40	1631	52.6	391		
FEBRUARY 29	1363	47	1118	58.5		245	
MARCH 31	1488	48	1562	50.4	74		
APRIL 30	1380	46	1370	45.7		10	
MAY 31	1302	42	1259	40.6		43	
JUNE 30	1230	41	1210	40.3		20	
JULY 31	1209	39	1185	38.2		24	
AUGUST 31	1147	37	1155	37.3	8		
SEPTEMBER 30	1050	35	1047	34.9		3	
OCTOBER	1147	37	1142	36.8		5	
TOTAL	18,863		19,820		1,371	414	- 984
GRAND TOTAL							SHORT.....27

984 - 1398
414 - 1371
1398 - 27

ANDERSON-PRICHARD OIL COMPANY
Jal No. 2
8-25-37

	ALLOWABLE		RUNS		OVER	SHORT	TOTAL
TO 8-1-39							
AUGUST	784	25.3	716	23.1		68	-1217
SEPTEMBER	1260	42	1288	42.9	28		
OCTOBER	1488	48	1788	57.7	300		
NOVEMBER	1380	46	1629	54.3	249		
DECEMBER	1395	45	1804	58.2	409		
1940 JANUARY	1240	40	1804	58.2	564		
FEBRUARY	1363	47.9	1343	46.3		20	
MARCH	1488	48	1321	42.6		167	
APRIL	1380	46	1370	45.7		10	
MAY	1302	42	1217	39.3		85	
JUNE	1230	41	1219	40.6		11	
JULY	1209	39	1197	38.6		12	
AUGUST	1147	37	1109	35.8		38	
SEPTEMBER	1050	35	1038	34.6		12	
OCTOBER	1147	37	1169	37.7	22		
TOTAL	18,863		20.012		1,572	423	-1217
GRAND TOTAL						SHORT.....	68

1572
423
1995

1217
423
1640
1572
-68

C E R T I F I C A T E

I hereby certify that the foregoing and attached one hundred twenty-six and one-half pages of typewritten matter are a true, correct and complete transcript of the shorthand notes taken by me on December 11, 1940, in Case No. 22, and by me extended into typewriting, together with copies of Exhibits Nos. 4 and 6, offered by Petitioners.

WITNESS my hand this 30th day of December, 1940.

Esther Barton

Case 22:

1. Marginal wells should not be allowed full allowable.
2. For this purpose tests should be made at the beginning and at stated intervals to determine which wells are marginal wells.
3. Back allowable should not be allowed where back allowable is due to pipe line proration or market.

Case #23.

CASE 23 File #1

PETITION OF LOCO HILLS OPERATORS COMMITTEE FOR ORDER REGARDING REPRESSURING MATTER

File #1.
Committee

for order regarding repressuring ~~matter~~ 2:00 P. M.
Dec. 11, 1940).