

MINUTE ITEM

31. UNIT AGREEMENT, UNIT OPERATING AGREEMENT, EXHIBITS, AND FIELD CONTRACTOR AGREEMENT, LONG BEACH UNIT, WILMINGTON OIL FIELD, LOS ANGELES COUNTY - L.B.W.O. 10,155.

The Chairman welcomed the Special Subcommittee of the Senate Research Committee consisting of:

Senator Virgil O'Sullivan, Chairman
Senator Stanley Arnold, Member
Senator Stephen P. Teale, Member
Senator John A. Murdy, Jr., Member
Senator John F. McCarthy, Member

and

the following members of the Assembly Committee on Manufacturing, Oil and Mining Industry:

Assemblyman Joseph M. Kennick, Chairman
Assemblyman James E. Whetmore, Vice Chairman
Assemblyman Hale E. Ashcraft, Member
Assemblyman H. E. Booth, Member
Assemblyman P. L. Soto, Member

Senator Dolwig and Assemblyman C. George Deukmejian were also present.

The Chairman then read the following statement:

"Before the Lands Commission today for consideration are proposed agreements submitted by the City of Long Beach setting forth terms for the development of the Long Beach Unit of the Wilmington Oil Field.

"Revenues to the State of California from this development should run into hundreds of millions of dollars during the next 35 years. We hope that substantial income will be produced soon enough to contribute significantly toward the relief of our present tight fiscal situation. Every dollar taken from the tidelands means that one dollar less must come from the pockets of our taxpayers.

"Petroleum engineers believe this field may prove to be the second richest in the country. Estimates of its recoverable oil range up to 1.5 billion barrels.

"The purpose of this hearing primarily is to permit the City of Long Beach and other interested parties to express their views on these agreements.

"The Lands Commission will not reach a decision on this matter today. However, we will not procrastinate in our deliberations.

"The Long Beach Unit (sometimes referred to as the East Wilmington Field) covers some 6,700 acres and includes 4,500 acres of tide and submerged lands held in trust by the City of Long Beach.

"The Lands Commission will authorize no development inconsistent with the preservation of the natural beauty and recreational utility of the coastline.

"In summary, it is the hope of the Lands Commission, with the help of those present today, to bring about the development of this oil field in keeping with the best interests of all the people of California."

Thereafter, the Executive Officer presented the attached calendar item. There followed a period in which questions were asked by various members of the Legislature and answered by the Chairman, the Executive Officer, and Deputy Attorney General Jay L. Shavelson.

Subsequent thereto, the Executive Officer read communications into the record from:

1. Long Beach Unified School District
2. Property Owners Oil Development Association
3. Richfield Oil Corporation
4. Texaco Inc.
5. Standard Oil Company of California, Western Operations, Inc.
6. Signal Oil and Gas Company
7. A telegram from Continental Eastern Corporation

Subsequently, appearances were made on behalf of the City of Long Beach by the following:

Mr. Gerald Desmond, City Attorney
Mr. Harold A. Lingle, Deputy City Attorney
Mr. Leonard Brock, Petroleum Properties Administrator
Mr. Raymond Kealer, City Councilman

Further appearances were made by members of industry as follows:

Mr. L. E. Scott, representing Pauley Petroleum Inc.
Mr. Durland Clark, representing Shell Oil Company

These gentlemen presented statements which represented their objective views and suggestions relative to the City's contract proposals.

The Executive Officer acknowledged the receipt of a telegram from John Mitchell, President of Jade Oil and Gas Company.

At the conclusion of the presentations herein set forth, the Chairman announced that the City's proposal would be taken under advisement for further consideration at the March Commission meeting. He thanked legislative members for their presence at the meeting and stated that the Commission would keep them informed.

(For complete details, see Transcript, Calendar Item 28, Meeting of the State Lands Commission, February 28, 1963.)

Attachment

Calendar Item 28 (13 pages)

CALENDAR ITEM

28.

UNIT AGREEMENT, UNIT OPERATING AGREEMENT, EXHIBITS, AND FIELD CONTRACTOR AGREEMENT, LONG BEACH UNIT, WILMINGTON OIL FIELD, LOS ANGELES COUNTY - L.B.W.O. 10,155.

The City of Long Beach has submitted for approval by the State Lands Commission, in accordance with applicable provisions of law, copies of a Unit Agreement, Unit Operating Agreement, Exhibits, and Field Contractor Agreement, providing for the unitizing of all oil, gas, and other hydrocarbons to be produced from the Long Beach Unit. A resume of events prior to the submittal of these documents follows.

On November 8, 1961, by direction of the City Council of the City of Long Beach, the City Manager forwarded a copy of a report entitled "A Plan for the Development of Oil and Gas Reserves in the Undeveloped Long Beach Townlot and Offshore Areas of the Wilmington Oil Field", dated October 21, 1961. This report was prepared by the Petroleum and Subsidence Control Division of the Long Beach Harbor Department for the Long Beach City Council as an engineering appraisal of oil and gas reserves underlying the undeveloped Townlot and offshore areas that are recoverable under full pressure maintenance. It included a plan for the exploration and exploitation of oil and gas reserves in the subject area in an economic manner that will not despoil the natural beauty of the area, interfere with shipping operations, damage public or private property, or cause subsidence, or be a nuisance to the residents of the City.

The report was primarily designed to suggest bases for development in light of the then existing restrictive drilling ordinances. The criteria for formulating the development plan were based on water injection in the reservoirs of the new area from the very commencement of oil and gas production. This concept became the framework around which the Oil Development Ordinance, Unit documentation, and related contractual documents have been formulated to insure control within the City administration.

On February 27, 1962, the Long Beach electorate approved an Oil Development Ordinance. The Ordinance provides for establishment and designation of a portion of the offshore area as permitted drillsite areas, specifically authorizing the designation of four islands as permitted drillsites from which the entire undeveloped area might be developed. It further recites that (1) engineering reports and interpretations of geological and seismic data indicate that undeveloped oil and gas reserves in economically recoverable quantities underlie portions of the offshore area and of privately and publicly owned uplands referred to as "Townlot Area"; (2) the onshore and offshore areas are within the geographic boundaries of a subsidence area established by the Oil and Gas Supervisor; and (3) that repressuring operations can be expected to prevent and arrest subsidence and should increase the amount of oil ultimately recoverable and protect oil and gas in such lands from unreasonable waste under a unit or cooperative development of underlying pools.

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Pursuant to the Ordinance, drilling and production operations shall be conducted in a manner consistent with approved conservation practices, with exploitation operations to be conducted in accordance with a systematic plan of development in an economic manner consistent with the best oil field practices prevailing in the Wilmington Oil Field. The City will retain the right to control rates of production of oil and gas and the repressuring operations and practices to be conducted under a pressure maintenance plan. The drilling and operating contractor expressly agrees to waive all damages which may be claimed to have resulted as a consequence of water-injection operations and practices conducted or ordered by the City. The offshore area to which the Ordinance is applicable shall be developed as a single tract. The City shall have the sole right to vote the entire Working Interest assigned to Tract 1. Pursuant to the Unit Agreement, Working Interest shall mean any interest held in lands by virtue of fee title (including lands held in trust), or by virtue of any lease (including the rights of lessees under a declaration of inclusion pursuant to Section 3608 of the Public Resources Code and including a carried Working Interest), operating agreement, contract with the City covering the City's portion of the Offshore Area, or otherwise, under or pursuant to which the owner of such interest has the right to drill for, develop and produce Oil and Gas.

Inasmuch as the Harbor Department had recommended that the new area development was to employ the best of the methods and practices consistent with those used in the developed portion, the Commission's staff expressed the need for the preparation of an engineering and economic study of the existing waterflood operations in the developed Wilmington Field.

Accordingly, the City Manager delivered copies of a report entitled "An Appraisal of Waterflooding in the Wilmington Field and Its Effect on Future Income to the City of Long Beach and the State of California", prepared by the Petroleum and Subsidence Control Division of the Long Beach Harbor Department, dated October 3, 1962. The report shows that water injection in the Wilmington Field has proved an extremely effective means of increasing oil recovery. On November 27, 1962, a supplement to the October 3, 1962, report was transmitted; it contained data on the economic analysis of past performance under actual waterflood operations and a comparison with the estimated expenses under assumed primary operations only.

In addition to the review of available Harbor Department reports, an economic analysis of the water-injection program conducted in the developed portion of the Wilmington Field was prepared by the Division staff. This study demonstrates that the costs incurred in the construction of the injection facilities during the first four years of the program are now being offset by substantial increases in oil production and that oil revenue from the developed portion of the Long Beach tidelands will be considerably greater than it would have been if the waterflood program had not been undertaken.

For application to the Long Beach Unit the waterflood program conducted in the developed and partially depleted

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field will require modification. Reservoir characteristics which may vary from those in the developed field are expected to be found in the Long Beach Unit area.

The purpose of the Unit Agreement as submitted by the City is to achieve the following:

1. To promote the conservation of oil and gas in the unitized formations and to secure other benefits obtainable through the development and operation of the unitized formations as a unit under the terms, conditions, and limitations therein set forth;
2. To initiate and conduct repressuring operations in accordance with the provisions of the City Ordinance and the Public Resources Code; and
3. To increase the maximum economic quantity of oil and gas ultimately recoverable from the unitized formations through repressuring operations.

The lands covered by the proposed Long Beach Unit have been divided into three major areas:

1. Tract No. 1 consists of tide and submerged lands granted to the City in trust by the State.
2. Tract No. 2, the Alamitos Beach State Park Parcel, consists of tide and submerged lands in which oil and gas are under the jurisdiction of the State Lands Commission.
3. The remaining tracts are collectively referred to as the "Townlot Area". They are located upon uplands in the central portion of the City of Long Beach.

The surface area overlying the anticipated productive zones of the entire Unit Area is approximately 6700 acres, of which about 4500 acres lie within Tract No. 1. The total recoverable oil reserves in the entire Unit Area are estimated at up to one and one-half billion barrels. Under the initial tract assignments, it is tentatively appraised that approximately 85% of this amount will be allocated to Tract No. 1.

Under the Unit Operating Agreement, the City is designated as Unit Operator and as such agrees to act in accordance with the provisions of the Unit Operating Agreement.

The Unit Operator shall have, subject to the terms, provisions, and limitations expressed in the Unit Agreement and in the Unit Operating Agreement, the exclusive right to develop and operate the Committed Parcels and Unit wells in accordance with the provisions of the said agreements.

The Unit Agreement shall become effective as of 7:00 o'clock A.M. of the first day of the calendar month which commences after all of the following events have occurred:

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1. The parcel, a portion of which constitutes Tract No. 1, has become a Committed Parcel;
2. Parcels which constitute sixty percent (60%) (measured in surface acres) of the Townlot Area within the Participating Area have become Committed Parcels;
3. The City has executed the Unit Agreement and the Unit Operating Agreement as Unit Operator;
4. As to Tract No. 1, the City has entered into a contract with a Field Contractor for the development and operation of such Tract, and the Field Contractor has executed the Unit Agreement and the Unit Operating Agreement; and
5. Approval of the Unit Agreement by the State Oil and Gas Supervisor, pursuant to the provisions of the Public Resources Code.

Unless the Unit Agreement becomes effective pursuant to the foregoing on or before January 1, 1964, or such later date as may be stipulated in writing by the City and the Participants of the Townlot Area, but not later than January 1, 1965, then the agreement would be of no further force or effect whatsoever.

A charge to the Unit, known as Administrative Overhead, will be made by the City, as Unit Operator, and by the Field Contractor. The purpose of this charge is to offset administrative costs incurred by the City and the Field Contractor which are not chargeable as regular Unit costs. Specifically, the City, as Unit Operator, will be entitled to an amount equal to 1%, and the Field Contractor will be entitled to an amount equal to 3% of the net amounts chargeable as Unit expense, excluding costs of litigation claims, taxes, substances purchased for repressuring operations, services of professional consultants, and any arbitration expense.

Within 30 days after the effective date, the Unit Operator shall begin and diligently continue to completion the initial development program. At any time, but not less than 30 days before scheduled completion of subject initial development program, Unit Operator shall submit for approval of the Participants a further plan for development and operation for a period determined by the Participants; however, any such plan submitted and approved shall not continue for a period in excess of one year. The plan shall provide for: (1) the exploration, development, and operation of the Committed Parcels in accordance with good oil field practices; (2) a program of complete pressure maintenance, by water injection, in the unitized formations and extensions thereof to be instituted at the inception of drilling operations; (3) the right of the City to order the shut-in of high-gas low-oil ratio and high-water low-oil ratio wells; and (4) the diligent drilling necessary for the determination of the area or areas of the Committed Parcels capable of producing oil or gas, and for the determination of each and every productive zone or formation therein. Such program shall be complete and adequate for the timely development, production, and repressuring of the unitized formations and for the proper conservation of the oil and gas resources in

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accordance with the provisions of the City Ordinance and of the Public Resources Code. In any such plan the City shall have the right to control the rates of production of oil and gas and the repressuring operations to be conducted.

The agreement, once effective, shall continue in full force and effect as long as any unitized substance can be produced from the unitized formations in quantities sufficient to pay to produce.

The following are exhibits to the Unit Agreement, and are contained in a bound document entitled "Exhibits to Unit Agreement":

Exhibit "A". A schedule showing the Tracts in the initial Participating Area, the Tract number, Tract description, and the best information available when the exhibit was prepared as to the ownership of the Working Interests.

Exhibit "B". A map showing the Unit Area circumscribed by a heavy black line, and showing the initial Participating Area circumscribed by a red line and showing the Tracts within the initial Participating Area circumscribed by heavy black dashed lines and showing the Tract numbers.

Exhibit "B-1". A map showing that portion of the Townlot Area within the initial Participating Area, and showing the Tracts within said portion of the initial Participating Area circumscribed by heavy black dashed lines and showing the numbers of such Tracts.

Exhibit "C". The initial development program for the first year after the commencement of drilling operations. It provides that within thirty days after the effective date of the Unit, the Unit Operator shall begin construction of the first offshore island, and that within one year after the first island has been completed, construction of the second offshore island will begin.

This exhibit further provides that during the first year following the start of the first development well a minimum of forty wells, including injection and producing wells, shall be undertaken. At least ten of these wells shall be drilled into the Townlot Area.

Exhibit "D". The procedure and the formula to be used in establishing and revising the Tract Assignments.

Tract assignments are based on the weighted acre feet of productive oil and/or gas sands accredited to each unitized formation underlying each tract. Sand volume, gross hydrocarbon value, development costs, injection costs, and production costs are factors used to compute the weighted acre feet.

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This exhibit does not provide a specific standard for determining equity allocations attributable to a gas condensate zone or a dry gas zone. It does, however, provide that where no such standards are expressly stated, equity allocations shall be made according to accepted engineering standards.

Exhibit "E". A standard form of Sharing Agreement to be entered into by the Participants in a Tract in connection with a declaration of pooling designed to pool the Leases and Oil and Gas Rights in all Parcels in such Tract.

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The following exhibit is incorporated within the Unit Operating Agreement:

Exhibit "F". An accounting procedure which sets forth provisions relating to the books, accounts, and records which are to be maintained by the Unit Operator. This exhibit covers also such methods as periodic statements, payments and adjustments, chargeable cost, and material and equipment accounting.

The recited purposes of the Field Contractor Agreement are to set forth the terms and conditions under which the Field Contractor, on behalf of the City as Unit Operator, will operate Tract No. 1 and all parcels committed to the Long Beach Unit, and to set forth the respective rights of the Field Contractor and the City to oil and wet gas products allocated to Tract No. 1. The agreement will be executed by the successful qualified bidder who offers the highest percentage of net profits to the City. The term of the agreement is for 35 years, commencing on the effective date of the agreement.

The Field Contractor Agreement provides for:

- A. Payment by the Field Contractor to the City. During an initial period, the Field Contractor is allowed to retain out of the value of production amounts equal to its operating costs (i.e., all unit expense except the costs of the Offshore Islands, Unit Wells, and tangible property). The balance of the value of production is to be paid over to the City to the extent of monthly amounts of \$3,000,000 during the first three months of the agreement, \$2,000,000 during the succeeding nine months, and \$1,000,000 for all succeeding months until the termination of the initial period. During this initial period, the City will have the option (subject to suspension under certain conditions) to require payment of the aforesaid monthly amounts as advances against future production, to the extent they may exceed the actual value of current production over and above operating costs. The aggregate amount of any such advance is to be charged to a "Production Payment Account", which will accrue interest at the rate of 3.75% per annum. In any month when the value of production over and above operating costs exceeds the aforesaid monthly amounts, such excess is to be retained by the Field Contractor and credited to the "Production Payment Account" to the extent of any unpaid balance therein. Once the bid percentage of total profits exceeds the total of all prior payments to the City, plus interest on the Production Payment Account, plus \$1,000,000, the City's option to receive the aforesaid monthly amounts will cease, and all subsequent payments will remain on the basis of the bid percentage of net profits accruing under the agreement. Contractor's sole source of payment of account is future production from Tract No. 1, and Contractor will have no recourse to any moneys theretofore distributed to the City or the State, or against any other money held by the City or the State.
- B. The City Manager to exercise close supervision over the Field Contractor's operations, including the power to control all Unit Operations and to compel the Field Contractor to perform in accordance with the City Manager's determinations and approvals. There are

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incorporated in the agreement the requirements relating to City's control set forth in the City Ordinance, including the right of the City Manager to control rates of production and repressurization and the right of the City to vote the entire Working Interest in Tract No. 1.

- C. The resulting dry gas, after deductions for plant shrinkage, loss, and fuel, is to be delivered to the City, and its value is not chargeable to the Working Interest Account.
- D. The agreement provides that the costs of any suit or claim for injury to persons or property not arising from the negligence of the Field Contractor are not chargeable to the Working Interest Account, but are to be borne by the City and the Field Contractor, in accordance with their respective percentage shares in net profits.
- E. The Field Contractor and the City are to be subject to all valid laws of the State, and all the valid rules, regulations, and orders of the Supervisor, and to all other valid and applicable federal, county, and municipal laws, rules, regulations, codes, orders, and the Charter of the City of Long Beach and the City Ordinance. It is not the intention of the agreement to limit, restrict, or prorate Unit production.

The Unit Agreement and the Unit Operating Agreement with accompanying exhibits, and the Field Contractor Agreement (in the form represented by that certain document dated January 25, 1963) have been approved by the Long Beach City Council. The City Council has found that the Unit Agreement is in the interest of increasing the ultimate recovery of oil and gas and protection from waste; that subsidence may possibly be arrested or ameliorated thereby; and that such inclusion is in the interest of safeguarding life, health, welfare, and property. The City Council has also determined that any portion of the surface area of tide and submerged lands intended to be utilized for unit operations is not and with reasonable certainty will not be required for the purposes of commerce, navigation, or fisheries, and will not impair the performance of the public trust. The City Council also authorized the City Manager to offer the Field Contractor Agreement for competitive public bidding upon approval of the document by the State Lands Commission.

The office of the Attorney General has reviewed the legality of the Unit Agreement, Unit Operating Agreement, exhibits thereto, and the Field Contractor Agreement, and has concluded that, provided the Commission (1) secures the additional commitments recommended, and (2) makes the necessary policy determinations, the subject agreements may be deemed to specify adequately the relevant responsibilities and authorities assigned to the Commission, and that there is no legal objection to Commission consideration of these agreements for approval.

The aforesaid recommended additional commitments are set forth in a separate agreement approved by the office of the Attorney General and by the City Council of Long Beach. This agreement (Exhibit "A", L.B.W.O. 10,155) does not purport to vary the terms of the Unitization Agreements or the Field Contractor Agreement and is,

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in the opinion of the office of the Attorney General, valid and enforceable as between the City and the State. It does not purport to affect the contractual rights or obligations of other parties.

The Commission may wish to consider the following:

1. The Unit Agreement is to become effective upon the commitment of 60% of the total Townlot Area. The City has been assured that more than the required 60% of the participating Townlot Area will be committed to the agreement. It also has informal assurance that all parcels of more than one acre whose commitment will be necessary in order to carry out unit operations will be committed.
2. In accordance with the provisions of the Field Contractor Agreement, the successful bidder will acquire control of the production from Tract No. 1, which can ultimately represent a considerable portion of the total California production. In view of the fact that such bidder could already control substantial other production within the State, it might be desirable to consider the effect of this control over a large portion of California production on the public welfare.

Therefore, a percentage of the oil allocated to Tract No. 1 could be made available to small refiners pursuant to competitive public bidding in a manner similar to that utilized by the U. S. Department of the Interior in the sale of its royalty crude oil. It is understood that this procedure requires that qualifying companies be those independent refinery companies who can prove their need for crude oil, and whose total through-put capacity does not exceed 30,000 barrels per day, and whose total employed personnel does not exceed 500.

3. In order to provide for maximum industry participation, the area included in Tract No. 1 in the Field Contractor Agreement could be divided for bidding purposes into four equal parcels. Hence, a greater portion of the petroleum industry could share in the production from Tract No. 1. One of the successful bidders could become the Field Contractor for Tract No. 1, and the City Ordinance requirement as to operation of the area as a single tract would not be violated.
4. In view of the highly complex administrative problems which would be encountered, and in view of lower individual oil allocations, it is doubtful that the cumulative bids or aggregate City and State revenues received pursuant to the alternatives set forth in Paragraphs 2 and 3 above would be as high as those which would be received pursuant to the presently formulated plan.
5. Maximum industry participation in a single parcel offer could be afforded by establishing the bid period at not less than six months to provide adequate opportunity for arrangement of joint bids.

EXHIBIT "A"

(L.B.W.O. 10,155)

AGREEMENT BETWEEN CITY AND STATE

1. Provision to Minimize the Distortion in the relative Quantities of Oil and Dry Gas Allocated to Tract No. 1 in Connection with Changes in Tract Assignments.

If, in the event of any adjustment of the allocation of Unitized Substances to Tract No. 1 pursuant to the provisions of Article 5 of the Unit Agreement, there are insufficient quantities of any particular Unitized Substance remaining to complete such adjustment, and it is necessary to substitute another Unitized Substance therefor, the City as Unit Operator shall nevertheless, insofar as practicable and consistent with the terms of the Unit Agreement and Unit Operating Agreement, accomplish such adjustment in such manner as to assure that the quantity of dry gas derived from Unitized Substances allocable to Tract No. 1 is as close as possible to the quantity which would have been derived had the revision of Tract Assignment giving rise to such adjustment been in effect from the effective date of the Unit Agreement.

2. Provision Relating to the Use of Gas In Connection with Unit Operations.

Insofar as the City, in its capacity as Unit Operator or otherwise, is empowered to do so consistent with the terms of the aforesaid agreements, it shall utilize Wet Gas and Residue Dry Gas for the drilling, development and operation of the unit formations and in the delivery of Unitized Substances only to the extent that such use is economically justified, taking into consideration the actual fair market value of such gas as compared to the cost of alternative available methods and/or materials which could be reasonably used for the same purposes.

3. Provision to Assure That Necessity of Further Commission Approval of Agreements is Not Affected.

Approval by the State Lands Commission of the subject agreements does not constitute approval of any other agreements authorized thereunder, and shall not affect the necessity of prior Commission approval of such other agreements where such approval is otherwise required by the Code, the terms of Chapter 29 of the Statutes of California, 1956 Extraordinary Session, or of the Judgment dated September 7, 1956, in Case Number 649466 in the Superior Court of the State of California, in and for the County of Los Angeles.

Approval by the State Lands Commission of the Field Contractor Agreement does not constitute prior approval of any assignment or other disposition thereof pursuant to the terms of Section 23 of such Agreement, nor of any reduction in the Field Contractor's surety bond as provided in Section 31 thereof. Any such assignment or bond reduction shall be deemed an amendment of such Agreement requiring prior Commission approval as provided in Section 10(b) of said Chapter 29.

EXHIBIT "A" (CONTD.)

(L.B.W.O. 10,155)

4. Provision to Eliminate Profit Or Loss From the 1 Percent Overhead Allowance to the City as Unit Operator.

All amounts received by the City as Unit Operator attributable to Tract No. 1 pursuant to the provisions of Section 5.15 of Exhibit F to the Unit Operating Agreement shall be accounted for as Oil Revenue from the Long Beach Tidelands (as such terms are defined in Chapter 29). The City, in accounting for Oil Revenue, shall be entitled to deduct such part of the Salaries and Wages (as defined in said Exhibit F) paid managing officers and other employees (not otherwise chargeable under the provisions of Article 5 of said Exhibit F) and such part of the expenses of its offices (other than offices provided in Sections 5.12, 5.13, and 5.14 of the said Exhibit F) attributable to Tract No. 1, which are legally allowable and are properly attributable under generally accepted accounting principles to the City's functions as Unit Operator of the subject Unit.

5. Provision to Give the Commission a Chance to Study and Criticize Development Plan.

At least thirty-five days prior to the submission of any such plan for the approval of the Participants pursuant to Section 4.3 of the Unit Agreement where such plan covers a period of less than six months, and at least forty-five days prior to such submission where such plan covers a period of six months or more, the City as Unit Operator shall submit to the State Lands Commission for study and review the proposed further plan for development and operation for the originally designated period and each proposed plan for each additional period provided for in said section, together with all relevant geological, operational, economic, and other information upon which such plan is based, or, where the actual inclusion of such information is not practicable, an adequate description thereof and reference to the place and manner in which such information can be examined. The City shall likewise submit to the State Lands Commission at the earliest practicable date, and prior to any Determination of the Participants relative thereto, any proposal to discontinue or change in whole or in part any particular method of operation which is deemed no longer desirable or in accord with good engineering or production practices. In the event the prior submission as provided herein of any such plan or any amendment or modification thereof is rendered impracticable due to the existence of an emergency situation, such plan or amendment or modification thereof shall not cover a period in excess of ninety days.

6. Provision Limiting Commission's Approval to Tract No. 1.

It is understood that the Commission's approvals of the subject agreements relate solely to tide and submerged lands in which oil and gas rights are owned in trust by the City, and represent no commitment concerning inclusion in such Unit of Tract No. 2 nor any other lands in which the State has legal title. It is further understood that the Commission's approval shall not constitute an admission or consent as to the applicability to such State Lands of the City Ordinance of February 27, 1962, nor any other regulatory or taxing ordinance enacted by the City.

EXHIBIT "A" (CONTD.)

(L.B.W.O. 10,155)

7. Operating Procedures.

A. Repressuring.

In conferences for the development of repressuring plans, it will be most desirable that the State send representatives and it will be given adequate time for review and comments as provided elsewhere by agreement between City and State.

Basic criteria for a development and repressuring plan are as follows:

- (1) The repressuring plan must be compatible with now-existing operations in the adjacent areas of the Wilmington Oil Field.
- (2) A peripheral-type flood will be used in all zones but the Ranger Zone.
- (3) The Ranger Zone will be flooded by means of a pattern or line-type flood; however, the water injection shall not commence until sufficient analytical information is available from drilling operations and producing wells to determine the location of injection wells in the pattern flood, in accordance with generally accepted good engineering and reservoir practice. The rate of production will be controlled to achieve the minimum reservoir pressure decline practicable consistent with generally accepted good engineering and reservoir practice.
- (4) The injection and production rates will be balanced with the goal of obtaining the maximum economic quantity of oil. City shall exercise its rights to determine the spacing of wells and the rate of drilling and the rate of production of such wells, so as to prevent the waste of oil and gas and promote the maximum economic recovery of oil or gas from, and to conserve the reservoir energy in, each zone or separate source of supply of oil and gas.
- (5) City will exercise reasonable diligence in the development and operation of wells in any zone capable of producing economic quantities of oil and/or gas.
- (6) In those zones in which a peripheral-type flood is contemplated, the development will start at a known productive location and proceed downstructure until the productive limits are determined. Thereupon an injection well shall be drilled into the aquifer. The rate of injection into the aquifer shall be controlled by existing aquifer pressures.
- (7) Although well spacing will be selected after considering the Field Contractor's proposals, it is understood that current consensus on what is an acceptable program for the development of the Ranger Zone is as follows: This program will proceed in two phases--the exploration wells required to be drilled in the Townlot area by Exhibit C of the Unit Agreement would constitute one phase. The initial drilling

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(L.B.W.C. 10,155)

program for this phase would require the drilling of a line of wells proceeding downstructure, the locations to be compatible with an accepted spacing pattern until the productive limit is reached, and then an injection well would be drilled into the aquifer. The second phase, which could proceed concurrently with the first, would be the full-scale development of the Ranger Zone on the prescribed pattern. It is contemplated that second phase operations will begin with offsetting the wells completed within the Parcel A and PPI properties where existing reservoir conditions are known. Although the drilling of producing and injection wells should proceed simultaneously, actual injection could be held up until every injection location is enclosed by producing wells. It is understood that the State will be promptly informed of any changes in the aforesaid current thinking.

B. State Consultation.

The City shall keep the State informed of proposed programming on all matters concerning its relationship with the Field Contractor. The City shall furnish to a representative designated by the State copies of all written determinations and approvals (including itemized lists of standardized determinations and approvals), at the time of furnishing such written documents to the Field Contractor pursuant to Section 13 of the Field Contractor Agreement. Before exercising powers under the Field Contractor Agreement, the City will consult with the appropriate representatives of the State.

C. Use of Electric Motors.

Whenever practicable and economically feasible, the Unit Operations shall be conducted by use of electric motors. The power for such operations shall be obtained by means other than the use of dry gas from Unit Formations.