

GENERAL CRUDE OIL COMPANY

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NEWPORT BEACH, CALIFORNIA
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July 27, 1973

California Coastal Zone Conservation Commission
South Coast Region
666 E. Ocean Blvd.
Long Beach, California

Re: Claim of Exemption - General Crude Oil Co.
and G. E. Kadane & Sons


Gentlemen:

As of this date we are delivering under separate cover Application for Exemption Under Vested Rights (27404) by General Crude Oil Company and G. E. Kadane & Sons. In addition to answering the questions in the application form we have included a brief history of the "Banning Lease" operations and furnished a set of exhibits which relate to the factual material in the application.

If any additional information is required, please do not hesitate to inform us.

Yours very truly,

GENERAL CRUDE OIL COMPANY


J. S. Gilstrap
JSG/ba

GENERAL CRUDE OIL CO.
AND
G. E. KADANE & SONS
APPLICATION FOR EXEMPTION UNDER
VESTED RIGHTS (27404)
TO
CALIF. COASTAL ZONE CONSERVATION COMM.
SOUTH COAST REGION

CALIFORNIA COASTAL ZONE CONSERVATION COMMISSION
SOUTH COAST REGION

P.O. Box 1450, Long Beach, California 90801

Telephone: 213/436-4201, 714/846-0648

APPLICATION FOR EXEMPTION UNDER VESTED RIGHTS (27404):

In order to establish claim of exemption from commission permit requirements under the vested rights section, Division 18, of public resources code the following form must be completed.

27404. If, prior to the effective date of this division, any city or county has issued a building permit, no person who has obtained a vested right thereunder shall be required to secure a permit from the regional commission, providing that no substantial changes may be made in any such development, except in accordance with the provisions of this division. Any such person shall be deemed to have such vested rights if, prior to Nov. 8, 1972 he has in good faith and in reliance upon the building permit diligently commenced construction and performed substantial work on the development and incurred substantial liabilities for work and materials necessary therefor. Expenses incurred in obtaining the enactment of an ordinance in relation to the particular development or the issuance of a permit shall not be deemed liabilities for work or material.

1. Name, address, and telephone number of applicant:

General Crude Oil Company and

G. E. Kadane & Sons. (Please see Section 1 of attached

statement for further details).

Zip Code

Area Code

2. Name, address, and telephone number of applicant's representative, if any:

See Section 2 of attached Statement.

Zip Code

Area Code

3. Describe exactly the development claimed to be exempt. Include all incidental improvements such as utilities, roads, etc. Attach a site plan or other drawing depicting the development and the location in relationship to the general area. Development address.
4. Describe those portions of the development that are completed, and give the dates of completion.

TO BE FILLED IN BY THE COMMISSION:

Application Number _____ Date Filed _____

Public Hearing Date _____

5. Describe those portions of the development that were under construction as of

November 8, 1972 See Section 5 of attached Statement

and February 1, 1973 " " " " " "

and describe the stage of construction on each of those dates.

6. Describe those portions of the development remaining to be constructed.

See Section 6 of attached Statement

7. On what date did actual work on the development commence? If grading, foundation work, structures or similar items are involved, list separately the dates on which work on each of these items commenced. Estimate percentage of total work completed as of permit application date.

See Section 7 of attached Statement

8. List all required approvals, permits, and reports from any public agencies, including federal agencies, and list which of those approvals have been obtained and when. Supply legible copies. List those approvals, permits, and reports which remain to be obtained. Include copies of all permits, reports, and approvals obtained. Specify zoning. See Section 8 of attached Statement.

9. State the expected total cost of the development, excluding expenses incurred in securing any necessary governmental approvals and permits. See Section 9 of attached Statement.

10. State the amount of money which had been expended on the development (excluding all expenses incurred in securing any necessary governmental approvals) on November 8, 1972 and February 1, 1973.

See Section 10 of attached Statement.

11. List the amount and nature of all liabilities incurred and when they were incurred. List any remaining liabilities to be incurred and when these are anticipated to be incurred.

See Section 11 of attached Statement.

12. Does the development contain a concept of phases or segments? Explain. See Section 12 of attached Statement.

13. When is it anticipated that the total development will be completed?

See Section 13 of attached Statement.

CERTIFICATION:

I hereby certify that the information in this application and all attached exhibits are full, complete, and correct; I understand that any misstatement or omission of the requested information or of any information subsequently requested, shall be grounds for denying the permit; for suspending or revoking a permit issued on the basis of these or subsequent representations, or for the seeking of such other and further relief as may seem proper to the Commission.

Name

Title

Applicant's Representative

STATEMENT IN SUPPORT OF APPLICATION
FOR EXEMPTION UNDER VESTED RIGHTS (27404)

INTRODUCTION

General Crude Oil Company and G. E. Kadane & Sons, joint lessees of an oil producing lease currently operated by General Crude Oil Company, located on the Banning and Beeco properties in portions of Sections 20 and 29 T. 6S., R. 10W., S.B.B. & M. Orange County, California, claim the production operations on that lease are covered under the Vested Rights provision of Section 27404 of the Coastal Zone Conservation Act and are therefore exempt from the permit provisions of Section 27400 of the Act.

The history of the primary and secondary oil producing operations since the completion of the discovery well in May of 1943 has been as follows.

During 1943 D. W. Elliott and Signal Oil and Gas Company drilled and placed on production Townsend Well No. 1 and Well No. 2.

In November 1944, Macco Construction Company purchased the two completed oil wells from Elliott - Signal and concurrently obtained a term type oil lease covering approximately 590 acres from Townsend Land Company. Subsequently, Townsend Land Company's lessor's interests were assigned to individuals and the property became known as the "Banning Lease". Macco Construction Company assigned their lessee interest to Macoil Corporation, a separate corporation which was formed to operate their oil producing interest.

The term of this lease through amendments and assignments extends to late 1994, at which time total ownership reverts to Beeco, Ltd.

Between November of 1944 and August of 1951, Macoil Corporation drilled 109 wells. During this interim approximately 4,000,000 barrels of oil were produced. The original oil in-place as of August 1951 was estimated by an outside engineering firm to be in excess of 100,000,000 barrels with an ultimate recovery by primary production methods of approximately 9,000,000 to 10,000,000 barrels. The exploratory development of the "Banning Lease" reserves was for all practical purposes totally completed. The drilling and construction activities since that date have been interrelated and designed to obtain an increased rate of oil production, as well as a greater ultimate recovery of this very valuable and necessary natural resource before the lease termination in 1994.

In August 1951, G. E. Kadane & Sons purchased the lessee interest and assets of Macoil Corporation. Between August 1951 and September 1966, G. E. Kadane & Sons drilled 61 additional wells to bring the total to 172 wells. Included in these 61 wells were 10 replacement producing wells and 10 air injection wells for the insitu secondary recovery program which was initiated in early 1958.

Insitu secondary recovery is a process by which air injected into the oil bearing formation oxidizes a portion of the residual oil. The oxidization increases the temperature of the oil bearing formation causing additional oil to be released and produced that would be unrecovered in primary producing operations. Use of this secondary recovery process requires that the number and spacing of both producing and air injection wells be developed and maintained in a proper and orderly relationship and sequence. What appears to be varied activities on the surface becomes a common interrelated process in the oil bearing formation.

The drilling of the 172 wells up to September 1966 required the construction and installation of support facilities as follows:

1. Many miles of interconnecting lease road system.
2. Centralized tank farm for crude oil dehydration, gauging and storage and shipment of oil into the purchasing company's pipeline.
3. Electrical distribution system.
4. Oil gathering pipeline system.
5. Individual well production testing system.
6. Gas gathering pipeline and metering system.
7. Pipelines for fresh water distributing system.
8. Produced water cleaning system for disposal of brine to sewer plant.
9. Central air compressor plant.
10. Pipelines for compressed air distribution system to injection wells.
11. An installation for the treatment of produced gas.
12. Pipeline system to gather untreated gas.
13. Steam generation plants.
14. Pipelines for steam distribution system.
15. Buildings for office, garage, employee change rooms, equipment repair, material storage, etc.

In September 1966, General Crude Oil Company purchased one half of G. E. Kadane & Sons' ownership in the "Banning Lease" and in February of 1971 became operator of the property.

In order to increase the insitu secondary recovery

program initiated by G. E. Kadane & Sons in 1958, the accelerated drilling of additional wells and the installation of surface facilities commenced in 1964 and has continued. As a result, a total of 312 wells have been drilled. In addition, compressor and gas reactor capacity has been tripled. Tank farm crude oil dehydration capacity has been doubled. All the interrelated surface facilities have been increased in proportion to the wells drilled.

The increased crude oil production to date and the estimated remaining reserves until 1994 are very substantial when compared with the August 1951 reserves estimate. The total oil production through March 1973 was approximately 18,000,000 barrels. A reasonable estimate of future production until the present lease termination in 1994 is something in excess of 24,000,000 barrels for an ultimate total of over 42,000,000 barrels, the equivalent of 42% of the original oil in-place. This compares with the 1951 ultimate estimate of nine to ten million barrels or 9 to 10% of the original oil in-place.

The development and operation of the "Banning Lease" has required a total expenditure in excess of \$26,000,000 from which approximately \$23,000,000 revenue has been received, leaving a deficit of approximately \$3,000,000. These expenditures were made in good faith for the continuation and expansion of the secondary recovery program and related work initiated by G. E. Kadane & Sons in 1958.

All of the operations on the "Banning Lease" since 1943 have been made in accordance with the rules and regulations of the Division of Oil & Gas, Orange County Department of Building & Safety and Air Pollution Control District.

The Applicant estimates that the "Banning Lease"

development to date which includes the drilling of 312 wells and the installation of the required surface equipment and facilities is at least 90% of that which will be in operation during any future given period of time. No exploratory drilling is necessary or included in the remaining program for the "Banning Lease" secondary recovery operation.

The Applicant submits that because of the volume of work done, the interdependent and interrelated nature of the project and the substantial amounts of money spent and in accord with all of the required discretionary and ministerial permits and regulations of various governmental units, that a Vested Right as provided in Section 27404 of the Public Resources Code has been acquired and that the Applicant should be permitted to proceed with the continuing primary and secondary oil production program which includes the following activities.

1. Continued operation and maintenance of all existing and future producing wells and injection wells, together with the surface support facilities necessary to obtain maximum oil recovery before termination of the present lease in 1994.
2. The drilling of additional producing wells, additional injection wells, and replacement, redrilling or repair of existing or new wells in order to continue the secondary recovery program initiated in 1958.
3. The repair, maintenance, replacement and expansion of the surface support equipment and facilities presently installed. In addition, this would include the modification and/or addition or the complete

replacement of the existing system used for the treatment of produced gas so as to conform to any future standards as set forth by regulatory bodies concerning environmental factors.

4. The abandonment of wells and the removal of surface facilities and equipment in accordance with the requirements and approval of the State Division of Oil & Gas and the Orange County Building & Safety Department.
5. Upon abandonment of wells and removal of surface equipment and facilities to return the surface of the land to the relative natural condition that existed prior to the oil producing operations.

The Applicant also submits that its operation during the limited term of the "Banning Lease" serves the public interest not only in providing a very critical natural resource, but also will be an interim highest and best use until the owners and appropriate governmental agencies can determine the ultimate use of the property.

The Vested Right claimed is the Right to continue the primary and secondary oil production operations including the activities specifically described in this application, the surface location of which activities is located in County territory as outlined on the attached map marked Exhibit No. 1. The area encompassed in this surface use is approximately 480 acres. The subsurface location of such activities is also outlined on Exhibit No. 1.

DETAILED INFORMATION REQUESTED
IN OFFICIAL APPLICATION FORM

Section 1.

Name, address and telephone number of applicant:

General Crude Oil Company and
G. E. Kadane & Sons, Lessees of
"BANNING LEASE", and
General Crude Oil Company, as Operator
for said Lessees.

P. O. Box 1487
Newport Beach, California 92663
Attention: Mr. Robert M. Scarborough
District Manager
714 - 642-3350

Section 2.

Name, address and telephone number of applicant's
representative, if any:

Mr. J. S. Gilstrap
c/o General Crude Oil Company
P. O. Box 1487
Newport Beach, California 92663
714 - 642-3350

Section 3.

Describe exactly the development claimed to be exempt.
Include all incidental improvements such as utilities,
roads, etc. Attach a site plan or other drawing
depicting the development and the location in
relationship to the general area.

The surface and subsurface oil well drilling and
producing operations located on the "Banning Lease" in
Sections 20 and 29, T. 6S., R. 10W., S.B.B. & M., Orange
County, California.

The surface operations on the "Banning Lease" are
within County territory and are bounded as follows:

On the North by undeveloped area within the City
of Costa Mesa.

On the East in the northerly portion by residential
development adjacent to a developed area occupied by offsetting
oil production. This portion of the area is within the City
of Costa Mesa. On the East southerly of the Costa Mesa city
limit, is a development in progress within the City of
Newport Beach.

On the South, a residential area in the City of Newport Beach. This developed area is separated from the lease premises by Coast Highway and an arm of the Santa Ana River which act as a buffer between the lease and the residential and commercial development.

On the West by the Greenville Banning Channel and the Santa Ana River which separate that boundary from the area within the City of Huntington Beach. The area within the City of Huntington Beach adjacent to the West side of the Santa Ana River is occupied by Orange County Sanitation District Sewer Plant No. 2 and offset producing oil wells not owned or operated by the Applicant. (See Exhibit No.1).

The production and development was initiated on the subject property in May 1943 when E. W. Elliott completed the first commercially productive oil well. Production operations and development have been continuous since that date.

General Crude Oil Company is the current operator of the oil producing operation for claimants General Crude Oil Company and G. E. Kadane & Sons.

The estimated future production by primary and secondary methods of over 24,000,000 barrels of oil is anticipated by the end of the lease term in November, 1994. Scarcity of this critical natural resource could result in an economic climate and technical advances which could materially increase the estimates of future oil production.

The development to date has resulted in the drilling of 312 wells which as of May 31, 1973 were in the following status.

1. Producing	181 wells
2. Air Injection	30 wells
3. Idle	42 wells
4. Abandoned	59 wells

According to the status of the secondary recovery operation at any given time in the future, all of the wells listed above are subject to major repair, redrilling or replacement. It is estimated that there will not be in excess of 340 wells in active use at any given period of time during the remaining lease term.

It is anticipated that as the end of the lease term approaches, an orderly final abandonment of wells will take place. These abandonments must be made in accordance with the regulations of the Division of Oil and Gas, the Orange County Department of Building & Safety, as well as the 1944 Townsend Lease requirement which provide for return of the surface to a condition similar to that before the oil wells were drilled.

The existing improvements and surface developments which are incidental to and in support of the above well drilling and producing program is as follows:

1. Many miles of interconnecting lease road system.

This road system is oiled and maintained in a condition to provide access to each well for lease personnel and heavy well repair or drilling equipment. This road system may be modified to meet the requirements of any future drilling occasioned by a change or modification of the secondary recovery program. (See Exhibit No. 2).

2. Well pumping units.

All of the wells on the "Banning Lease" with the exception of air injection wells are equipped with small electric driven pumping units. These units are removed from location whenever a well is abandoned.

3. Oil gathering pipelines to transport oil from each well to a centrally located lease tank farm.

These pipelines must be maintained in good operating condition. Since any future wells will be located within the present pipeline system, it is not anticipated that the system will be materially expanded.

(See Exhibit No. 3).

4. Lessee owned electrical distribution system.

All electricity to operate the lease is purchased from the Southern California Edison Company through a central meter and transformer bank and is then distributed through a system constructed, owned and maintained by the Lessee. This system will be modified or added to in accordance with the requirements of the secondary recovery production operation. (See Exhibit No. 4).

5. Pipeline system for individual well testing.

This system is operated in conjunction with the production pipeline system and has in addition to oil well pipe lines, individual weighmeters which are used to determine the daily production rate of individual wells. (See Exhibit No. 5).

6. Pipelines for gas gathering system.

This system includes facilities to measure the quantity of gas produced and to transport the gas to be used in lease operations, and to be disposed of at the gas treating installation. (See Exhibit No. 6).

7. Centralized lease tank farm.

This installation includes steel storage tanks oil-water separation tanks, boilers for heating crude oil, heater-treaters and an oil skimming system to prepare produced brine for disposal to County Sewer Plant. It is anticipated that other than normal maintenance, repair or modification of this plant, the only addition will be the installation of a vapor recovery system and the installation of closed oil skimmer tanks to replace open cleaning system. (See Exhibit No. 7).

8. Fresh water pipeline system to connect to each oil well, tank farm installation and oil well steaming facilities.

This system to be repaired or modified as required by secondary recovery production operations. (See Exhibit No. 8).

9. Centrally located oil well steaming facilities.

These facilities have steam lines which connect the facilities with individual oil wells. Additional portable steamers are utilized in different locations where the steam is conducted from the steamers to individual wells (See Exhibit No. 9).

10. Gas engine driven and electric motor driven air compressors used to provide air for the air injection wells. (See Exhibit No. 10).
11. Pipeline system connecting air compressor plants with individual air injection wells.
This system includes the necessary metering and control devices to control the air injection rate into each well. (See Exhibit No. 10).
12. Gas treater installations.
These installations are composed of equipment which are used to convert waste gas to a quality as required by the Air Pollution Control District, together with the necessary pipeline system connecting the wells with the treaters. (See Exhibit No. 11).
13. Fencing around perimeter of lease.
This chain-link fencing is installed and maintained in accordance with the requirements of the Orange County Department of Building & Safety. (See Exhibit No. 12).
14. Buildings for general office, field offices, employee change rooms, garages, heavy equipment repair shops, material storage yards, etc.
(See Exhibit No. 12).

Section 4.

Describe those portions of the development that are completed, and give the dates of completion.

The development to date has been the production of about 18,000,000 barrels of oil by primary and secondary recovery oil production methods. The operation required to produce this oil has been the drilling of 312 wells, together with the construction of the necessary support facilities listed in Section 3 above.

Section 5.

Describe those portions of the development that were under construction as of November 8, 1972 and February 1, 1973 and describe the stage of construction on each of those dates.

As of November 8, 1972, 295 wells had been drilled and 17 wells were under development.

As of February 1, 1973, 310 wells had been drilled and 2 wells were in process of being completed.

Section 6.

Describe those portions of the development remaining to be constructed.

Until the end of the lease term in 1994, it is anticipated that as explained in Section 3, the remaining development and operation of the property will require the drilling of additional wells along with the repair, redrilling or replacement of existing wells so that there might be a total of 340 wells in service at any given time. Other support equipment would be installed as and when required.

Section 7.

On what date did actual work on the development commence? If grading, foundation work, structures or similar items are involved, list separately the dates on which work on each of these items commenced. Estimate percentage of total work completed as of permit application date.

The actual development was started by Elliott-Signal in 1943. Operations and development since then have been continuous and in 1951 resulted in the determination that in-place oil was in excess of 100,000,000 barrels. In 1958 an insitu secondary recovery program was initiated. It is estimated that the 312 wells drilled to date are approximately 90% of the required number to complete the producing operations until 1994. The production to date is approximately 43% of the total estimated amount to be produced by the end of the lease termination in 1994.

Section 8.

List all required approvals, permits, and reports from any public agencies, including federal agencies, and list which of those approvals have been obtained and when. List those approvals, permits, and reports which remain to be obtained. Include copies of all permits, reports and approvals obtained.

Since the commencement of operations in 1943 by Elliott-Signal, the Applicant and its predecessors in interest have conducted all operations pursuant and subject to all necessary ministerial and discretionary permits from the appropriate governmental bodies having jurisdiction. These are the State of California Division of Oil and Gas, Orange County Building and Safety Department and the Orange County Air Pollution Control District.

Sample copies of the applications filed, together with the permits granted are included in this presentation (See Exhibits Nos. 13, 14, 15 and 16).

Section 9.

State the expected total cost of the development, excluding expenses incurred in securing any necessary governmental approvals and permits.

It is estimated that a total of \$66,000,000 will have been spent in the Banning Lease development and operation by the lease termination date in 1994.

Section 10.

State the amount of money which had been expended on the development (excluding all expenses incurred in securing any necessary governmental approvals).

To November 8, 1972	\$26,000,000
To February 1, 1973	\$26,600,000

Section 11.

List the amount and nature of all liabilities incurred and when they were incurred. List any remaining liabilities to be incurred and when these are anticipated to be incurred.

The extent and nature of liabilities incurred in this continuing development project are essentially covered in Sections 5 and 6 above. The remaining

liabilities to be incurred cannot be precisely detailed at this time, however, it can be assumed by extrapolation that the remaining liabilities should be approximately \$40,000,000.

Section 12.

Does the development contain a concept of phases or segments? Explain.

Yes.

The first stage or segment started in 1943 when Elliott-Signal drilled the first commercial producing well.

The second stage of development was the drilling by Macco Construction Company and Macoil Corporation of 109 wells and the installation of necessary support facilities, which proved the amount of oil in-place to be in excess of 100,000,000 barrels.

The third stage was initiation by G. E. Kadane & Sons of the insitu secondary recovery operations in 1958. This stage has been expanded and will continue until near the lease termination in 1994.

The fourth stage will be the orderly abandonment of the property in accordance with the rules and regulations of the appropriate governmental bodies and the returning of the surface of the ground as nearly as possible to its original condition.

Section 13.

When is it anticipated that the total development will be completed?

As indicated previously, under present lease terms the development will be terminated in 1994.

GENERAL CRUDE OIL CO.
AND
G. E. KADANE & SONS
SUPPLEMENT TO
EXEMPTION APPLICATION E-7-27-73-144
TO
CALIF. COASTAL ZONE CONSERVATION COMM.
SOUTH COAST REGION

GENERAL CRUDE OIL COMPANY

Home Office

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R. M. SCARBOROUGH, DIST. MANAGER
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NEWPORT BEACH, CALIFORNIA
92663
TEL. (714) 642-3350

September 7, 1973

California Coastal Zone Conservation Commission
666 East Ocean Boulevard
Suite 3107
Long Beach, California 90801

Gentlemen:

Re: Supplement to Exemption Application E-7-27-73-144
Applicant, General Crude Oil Company and
G. E. Kadane & Sons

This supplement to application No. E-7-27-73-144 is submitted in clarification of the planning that was and is involved in the development of the secondary recovery project area located on the Banning Lease, which development is the subject of the above referenced application.

In 1950 G. E. Kadane & Sons became interested in the purchase of a pre-existing oil lease on the Banning property, which property is more particularly described in the exemption application on file before this commission. G. E. Kadane & Sons was and is an independent oil producer and has developed and operated numerous oil leases in this state and other states in this country. Prior to making the decision to purchase the property, G. E. Kadane & Sons made a complete engineering study and appraisal of the Banning Lease and determined that there were in excess of 100,000,000 barrels of oil in place on this property. They also determined that only approximately 10% of this oil would be recovered utilizing primary oil production techniques. They further determined, however, that with appropriate planning and technical study, a substantial increase in the quantity of oil that could be recovered was possible using secondary recovery techniques.

The company then formulated a master plan for the development of the lease. Pursuant to this master plan they completed their purchase of the property. This master plan contemplated the employment of technical personnel who were experts in the field of secondary recovery, the acquisition of the equipment necessary to pursue secondary recovery, capital investment in wells and other producing facilities, the development of pilot studies to determine the most efficient methods of secondary recovery on the lease, the modification of provisions of the lease so as to permit the utilization of secondary recovery techniques, more extensive engineering and exploratory work on the lease, the development of a drilling and

production program on the lease which would take into account fluctuations in oil price over the term of the lease.

Since the purchase of the lease in 1951 by G. E. Kadane & Sons, they have proceeded in accordance with this master plan of development. Technical consultants have been continuously employed, operating personnel acquired, and a substantial training program utilized to develop the technical skills necessary in order to produce the lease.

They acquired and developed extensive equipment, including compressor plants, steam generating plants, additional tank farm and processing facilities; built and expanded an on-site office building; built repair shops and other similar facilities, developed an electrical distribution system; developed and installed an oil gathering pipeline system; developed and constructed many miles of inter-connecting lease roads; developed and installed an individual well production testing system and a gas gathering pipeline and metering system; developed and installed pipelines for a water distribution system; developed and installed a water cleaning system for disposal of brine; developed and installed pipelines for compressed air distribution; developed and installed a compression system for the treatment of produced gas; developed and installed a pipeline system to gather untreated gas, and developed and installed a steam distribution system.

They drilled 201 wells to February 1, 1973. As of November 8, 1972 295 wells had been completed and were on production and 17 were under development. Those 17 wells have now been completed and are on production. The 201 wells drilled after 1951 are in addition to the 111 wells which were in existence as of the date of the Kadanes' acquisition in 1951.

In 1958, pursuant to the master plan, pilot studies were developed to determine the most efficient methods of secondary recovery on the lease. It was determined that clusters of producing patterns consisting of producing wells surrounding an air injection well was the most efficient method of producing oil on this lease. Each pattern development interlocks with adjoining cluster developments. The master plan envisions the entire lease being covered by such cluster developments. In 1964 it was determined that these efforts should be augmented by steam stimulation.

In 1954 a lease modification was worked out with the lessor to allow secondary recovery operations to be conducted on the lease. After the successful development of the pilot program in 1958, another lease modification was made in 1960 to adjust royalty rates so as to differentiate between oil which would be produced by primary and secondary methods. In connection with this amendment monthly projections were made and encompassed into the modification

as to the anticipated oil production on the lease throughout its term if only primary production methods were utilized. This modification is effective only as long as insitu or thermal secondary recovery techniques are utilized. Complete engineering and reservoir evaluation work was completed on the lease prior to 1960 so as to insure that the most efficient methods were used to recover the oil reserve located within the boundary of the Banning lease, using secondary recovery techniques.

A drilling and production program was worked out. This program took into account fluctuations in projected oil prices over the remaining term of the lease. In accordance with this master plan the rate of development of the lease was slowed from 1958 through 1964 because of the reduction in oil prices in California. Since 1964 we have seen a reversal of the oil price trend, and as prices have increased there has been an accelerated development of the secondary recovery project.

The master plan in existence called for the development of 17 new wells in the latter part of 1972. These wells were under development as of November 8, 1972. The same plan called for an additional development of 28 wells in 1973. This latter group of wells would now be under development but for the passage of Proposition 20. The development of these additional wells would have brought the total number of wells completed on the lease to 340. Under the master plan this would be the total number of wells which would be required to be in operation at any one time on the lease. The operation of the lease, however, will require that many wells now in existence be replaced or redrilled in order to fit into the pattern development required by the master plan throughout the lease. A critical requirement for the success of a full-scale insitu secondary recovery plan is the timely and orderly modification of individual wells or patterns. This modification includes the addition, moving, replacement, rework or abandonment of individual producing wells, injection wells or patterns; together with related support facilities and equipment.

The exhibits which accompany this letter of supplement delineate the approximate location of the 28 additional wells as they relate to the project area.

It is requested that this letter supplement and modify the application filed with the California Coastal Zone Conservation Commission, and that the claim for exemption by General Crude Oil Company and G. E. Kadane & Sons will be as follows:

1. Continued operation and maintenance of existing oil producing and injection wells and associated surface facilities. The "existing" wells to be defined as the 312 wells either drilled or in progress as of November 8, 1972.

California Coastal Zone Conservation Commission

September 7, 1973

5. Performing workover or remedial operation on existing wells necessary to maintain or improve their performance.
3. Replacement, redrilling and repairs to existing injection wells.
4. Replacement, redrilling and reworking of existing oil producing wells.
5. In compliance with the master plan, the drilling of 28 additional new wells within the project area.
6. In compliance with the master plan, replacement, redrilling and reworking of any of the 28 additional new wells.
7. In compliance with the master plan, construction of the necessary additional support, equipment and facilities for the 28 additional new wells.
8. Abandonment of wells in accordance with requirements and approval of the State Division of Oil and Gas and removal of surface equipment and pipelines per State and local agency requirements.
9. Future exploratory drilling within the lease area is not exempted and will require permits.

Respectfully submitted,

General Crude Oil Company and
G. E. Kadane & Sons

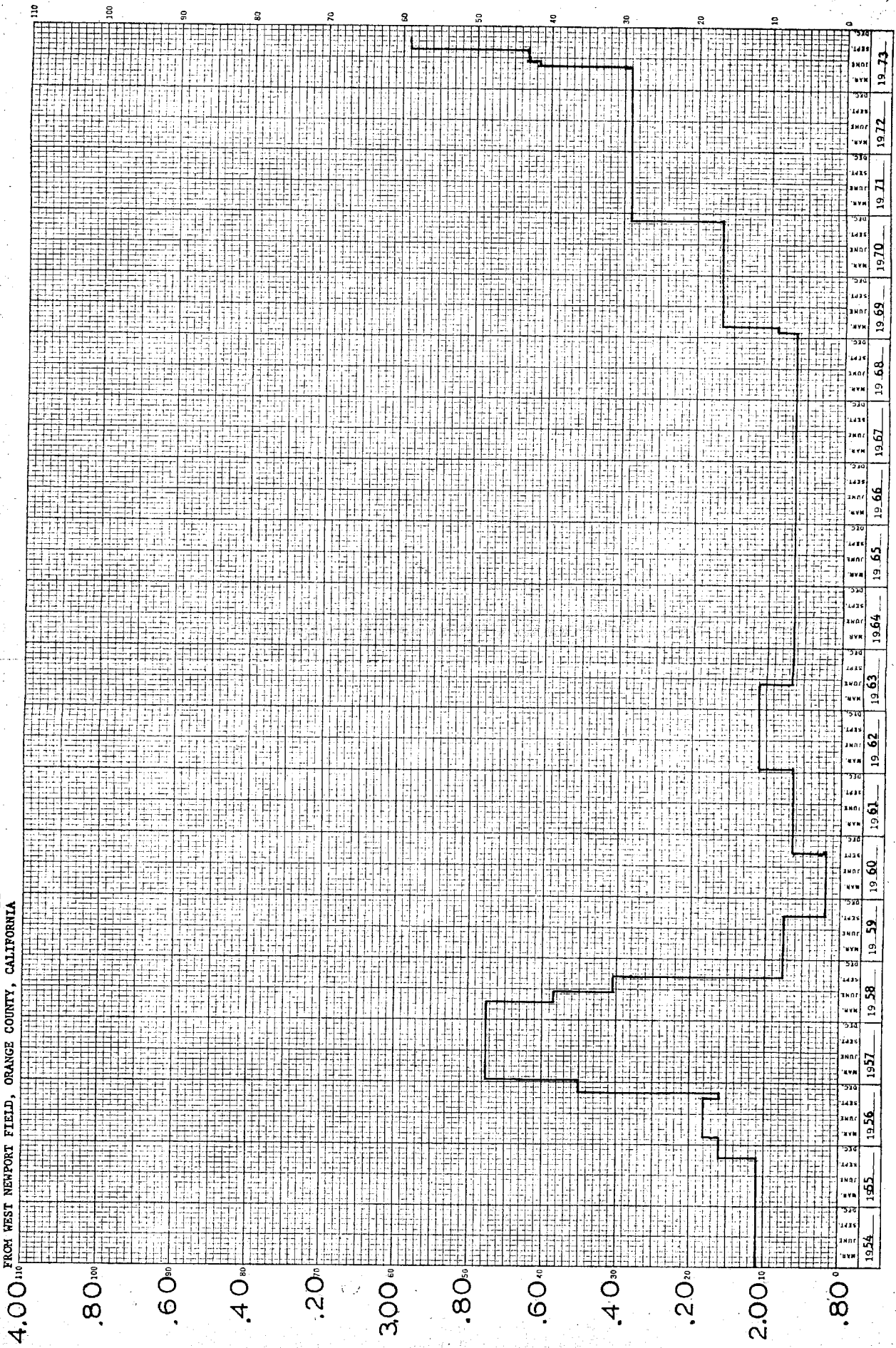

J. S. Gilstrap

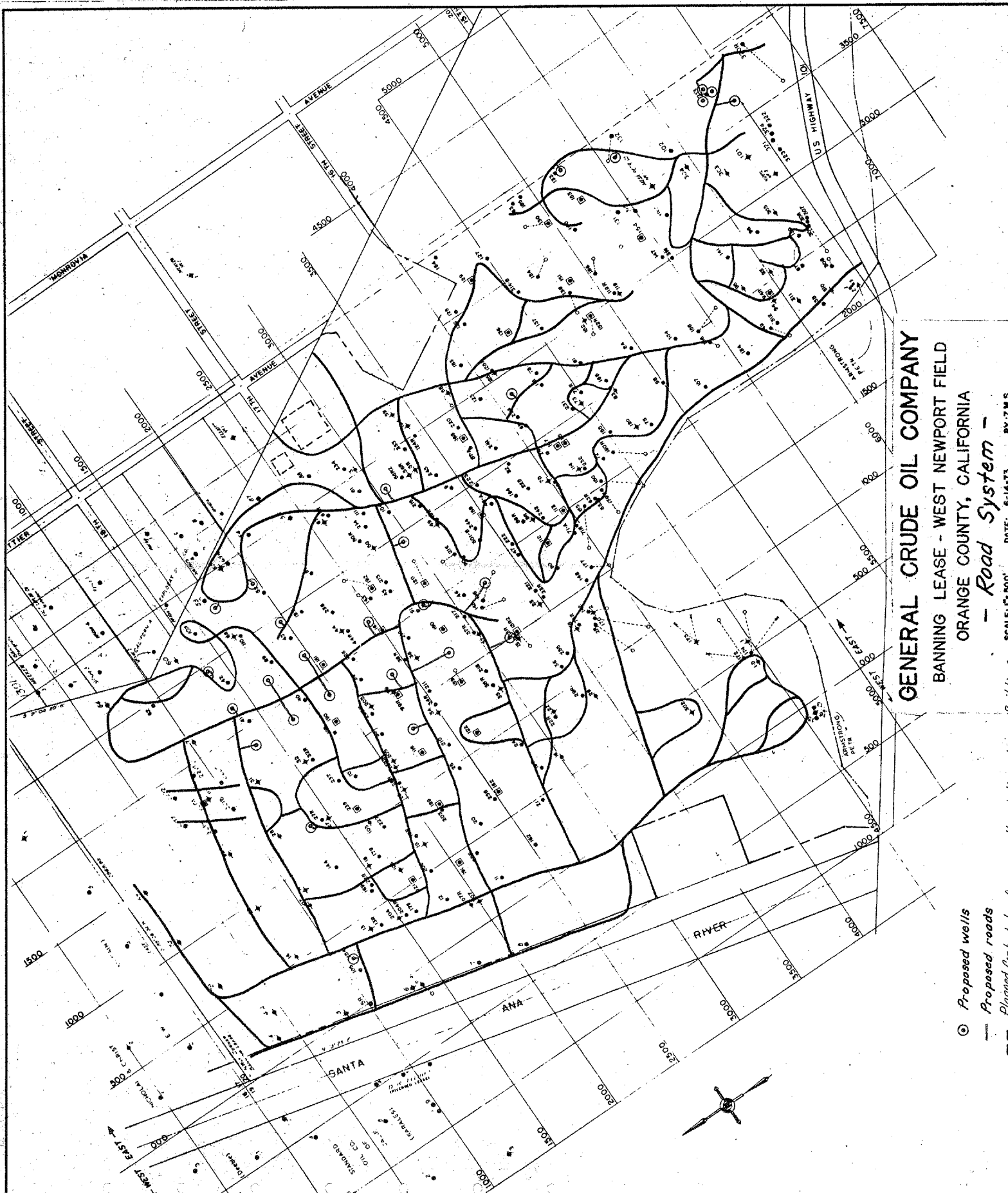
JSG/ba

EXHIBIT INDEX

- No. 1 Banning Lease history of oil prices from 1954-1973.
- No. 2 Map showing lease road system.
- No. 3 Map showing oil gathering pipeline system.
- No. 4 Map showing lessee owned electrical distribution system.
- No. 5 Map showing pipelines and weighmeters for individual well production testing.
- No. 6 Map showing pipelines for gas gathering system.
- No. 7 Map showing pipelines for fresh water distribution system.
- No. 8 Map showing steamer locations and steam pipeline system.
- No. 9 Map showing air compressor plant locations, injection well locations and connecting pipeline system.
- No. 10 Map showing gas treater location and connecting pipeline system.

SALES PRICE OF 15.0 TO 15.9 °API GRAVITY CRUDE OIL
FROM WEST NEWPORT FIELD, ORANGE COUNTY, CALIFORNIA





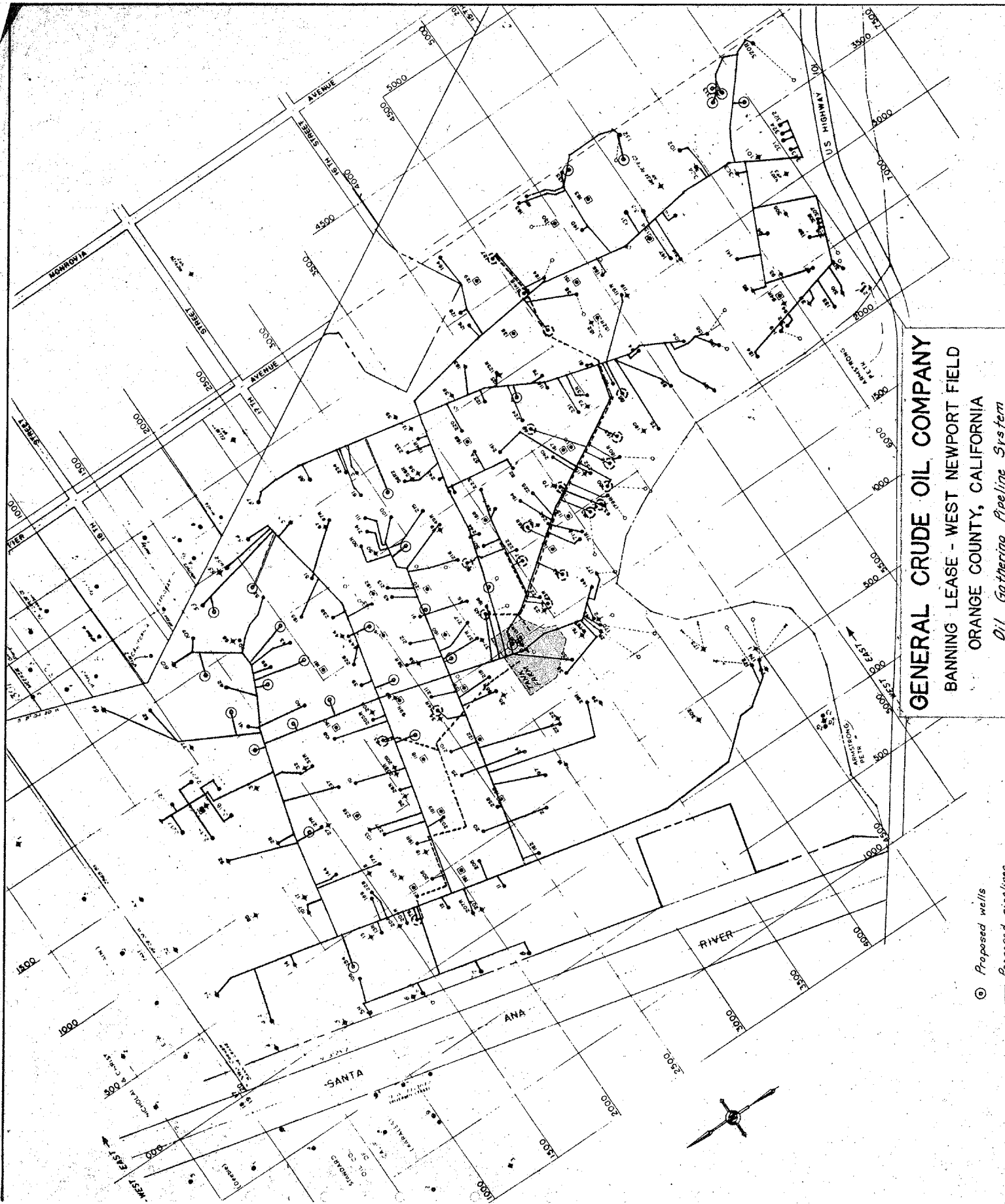
GENERAL CRUDE OIL COMPANY

BANNING LEASE - WEST NEWPORT FIELD
ORANGE COUNTY, CALIFORNIA

- Road System -

- Proposed wells
- - - Proposed roads
- - - Presently existing Lease Buildings

SCALE: 1" = 800' DATE: 6-14-73 BY J.M.S.



GENERAL CRUDE OIL COMPANY

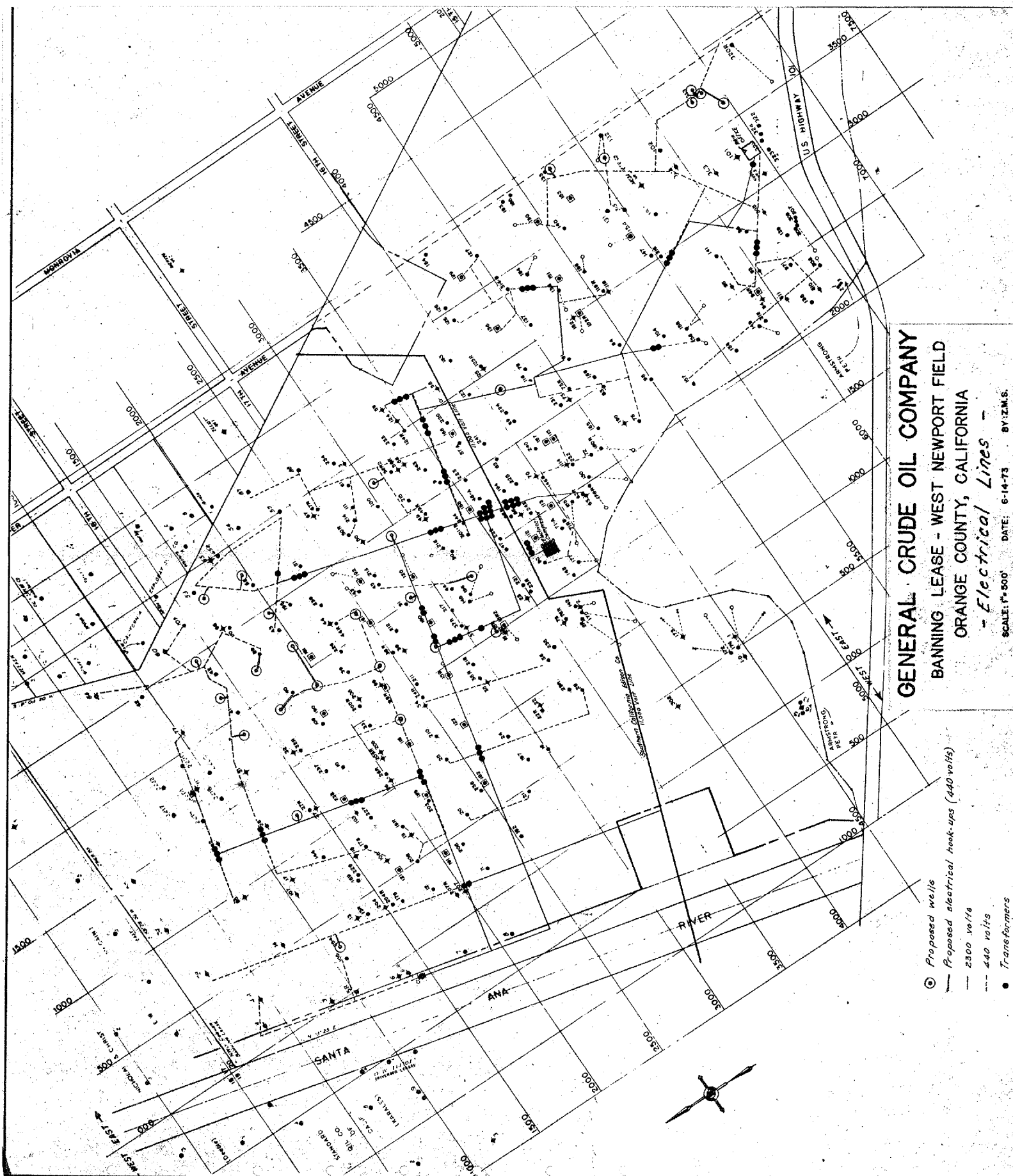
BANNING LEASE - WEST NEWPORT FIELD

ORANGE COUNTY, CALIFORNIA

Oil Gathering Pipeline System

SCALE: 1" = 500' DATE: 6-14-73 BY: J.M.S.

○ Proposed wells
— Proposed pipelines

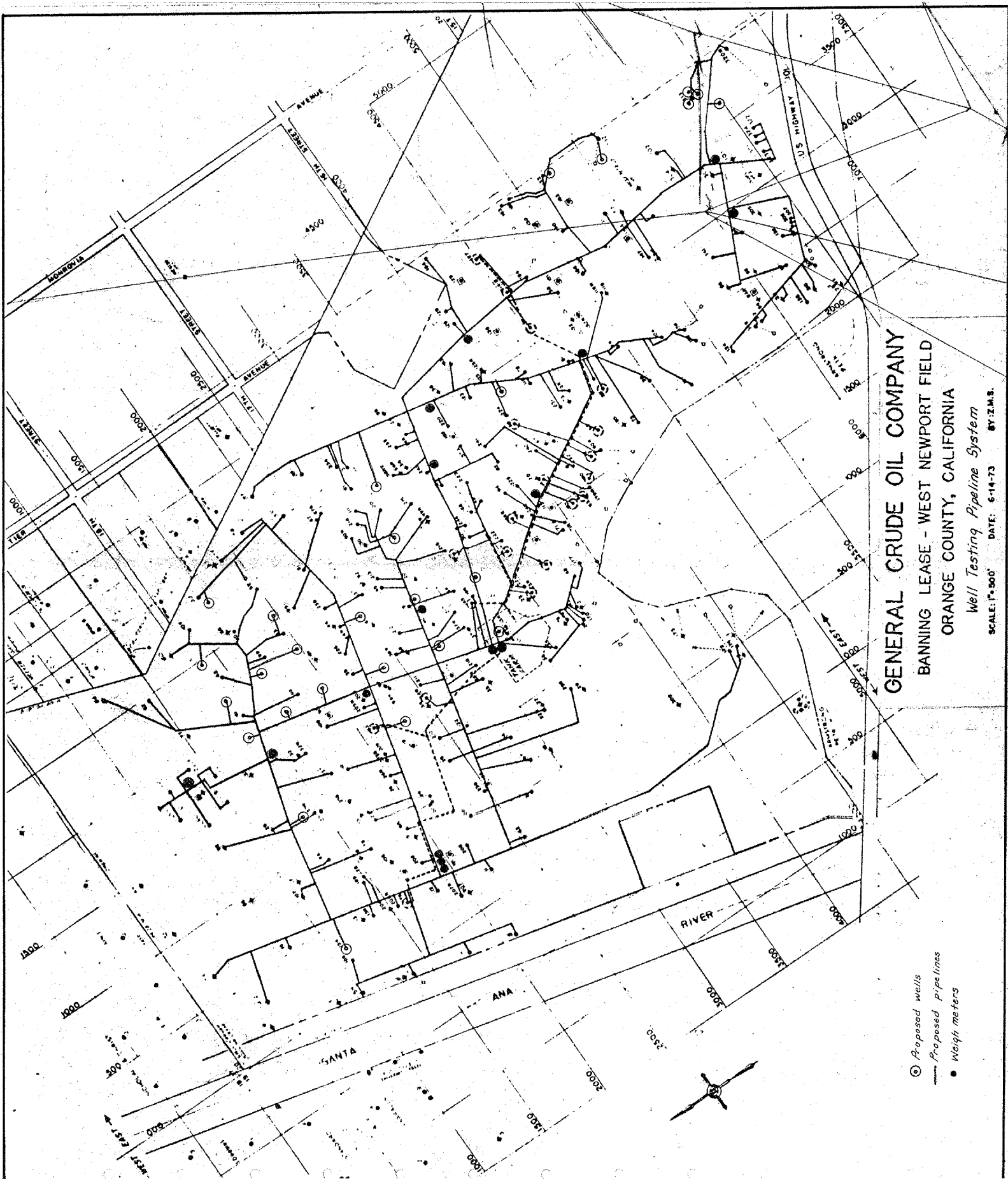


GENERAL CRUDE OIL COMPANY

BANNING LEASE - WEST NEWPORT FIELD
ORANGE COUNTY, CALIFORNIA
- *Electrical Lines* -

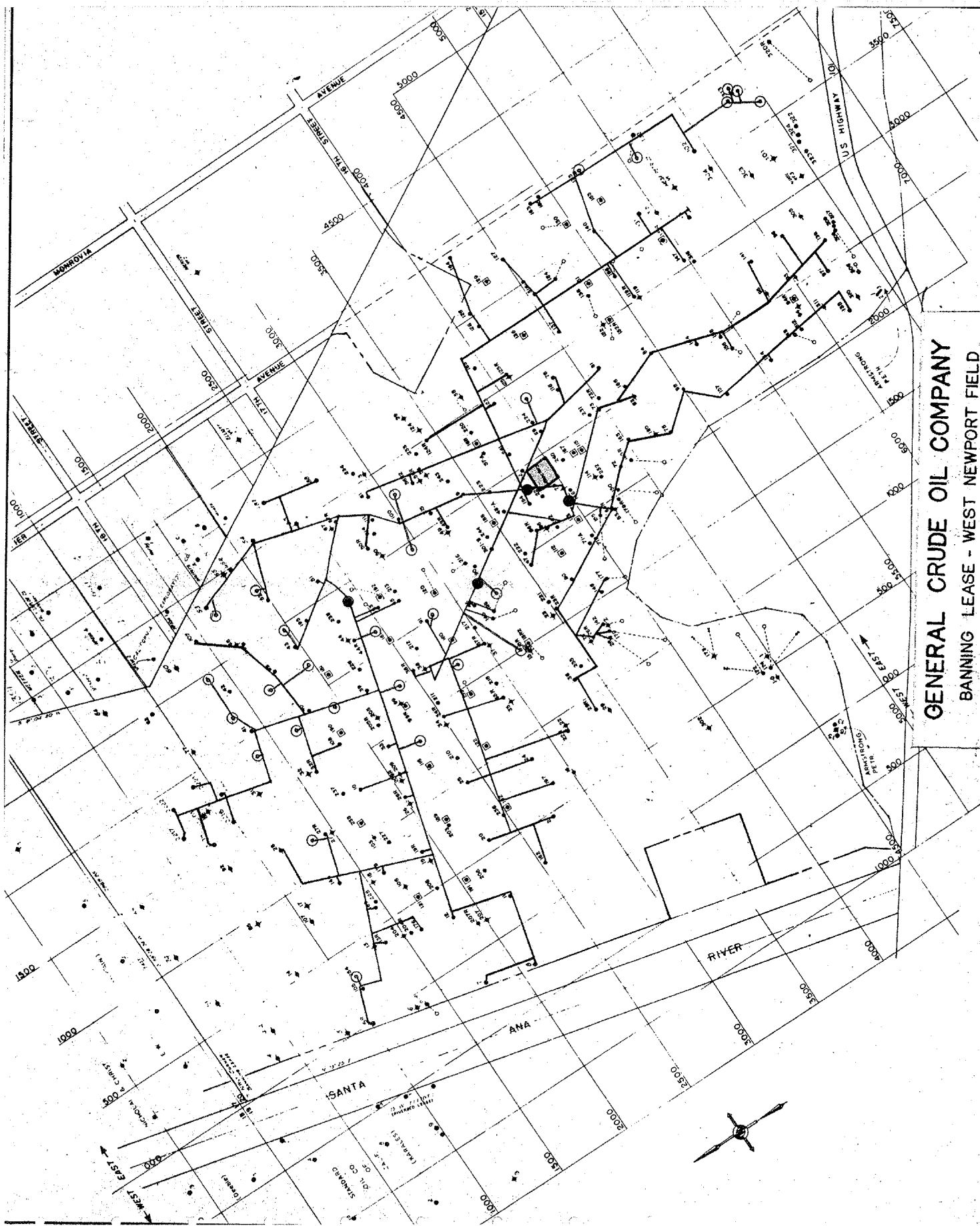
SCALE: 1" = 500' DATE: 6-14-73 BY: J.M.S.

- Proposed wells
- Proposed electrical hook-ups (440 volts)
- 2300 volts
- 440 volts
- Transformers



GENERAL CRUDE OIL COMPANY
BANNING LEASE - WEST NEWPORT FIELD
ORANGE COUNTY, CALIFORNIA
Well Testing Pipeline System
SCALE: 1"=500' DATE: 6-14-73 BY: J.M.S.

- Proposed wells
- Proposed pipelines
- Well meters

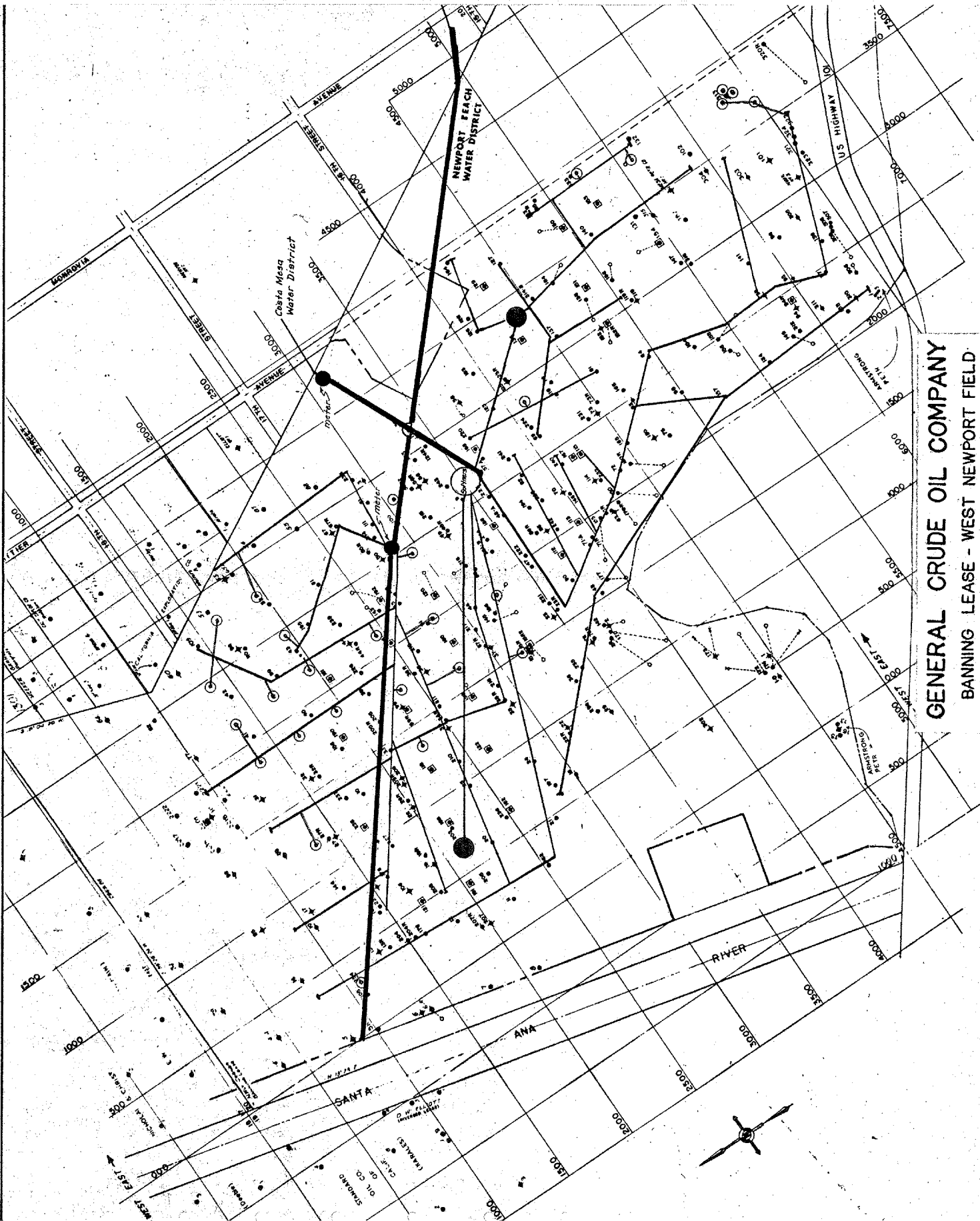


GENERAL CRUDE OIL COMPANY
BANNING LEASE - WEST NEWPORT FIELD
ORANGE COUNTY, CALIFORNIA

Fuel Gas System

SCALE: 1" = 500' DATE: 6-14-73 BY: Z.M.S.

- Scrubbers
- Proposed wells
- Proposed pipelines



GENERAL CRUDE OIL COMPANY

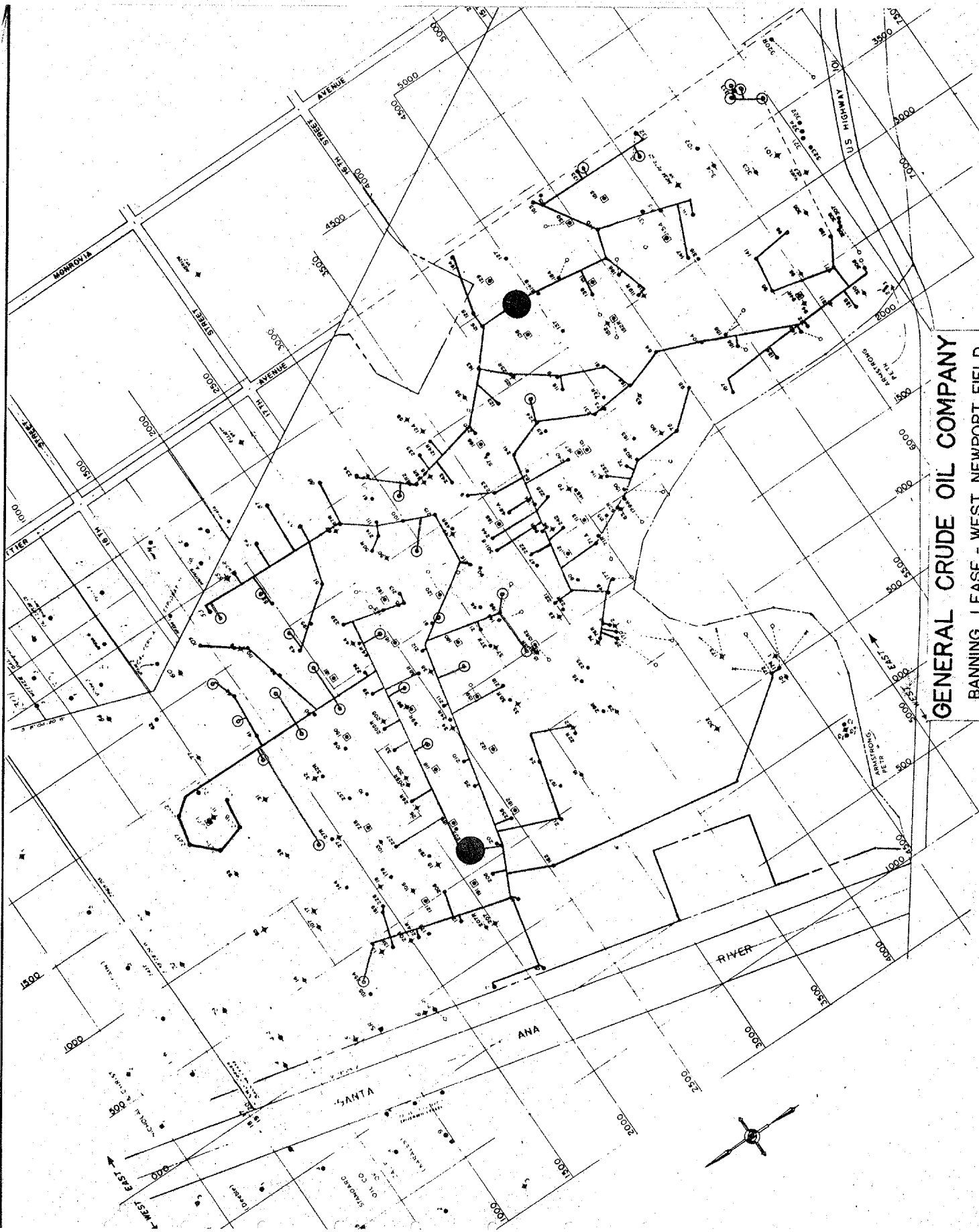
BANNING LEASE - WEST NEWPORT FIELD

ORANGE COUNTY, CALIFORNIA

Fresh Water Pipeline System

SCALE: 1"=500' DATE: 6-14-73 BY: J.M.S.

© Proposed walls
— Proposed pipelines



GENERAL CRUDE OIL COMPANY

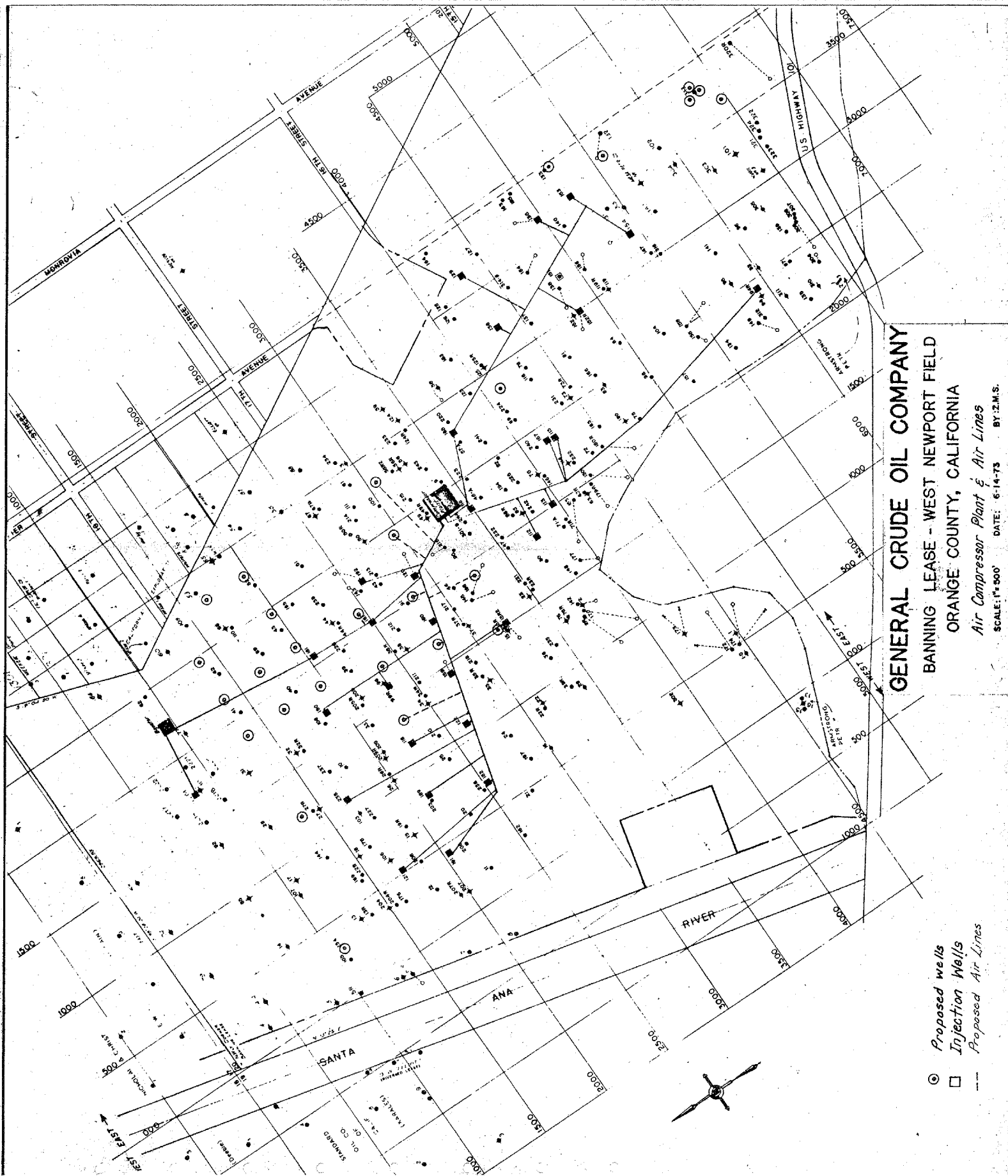
BANNING LEASE - WEST NEWPORT FIELD

ORANGE COUNTY, CALIFORNIA

- STEAM LINES & GENERATORS -

SCALE: 1" = 500' DATE: 6-14-73 BY: J.M.S.

○ Proposed wells
 — Proposed pipelines



GENERAL CRUDE OIL COMPANY

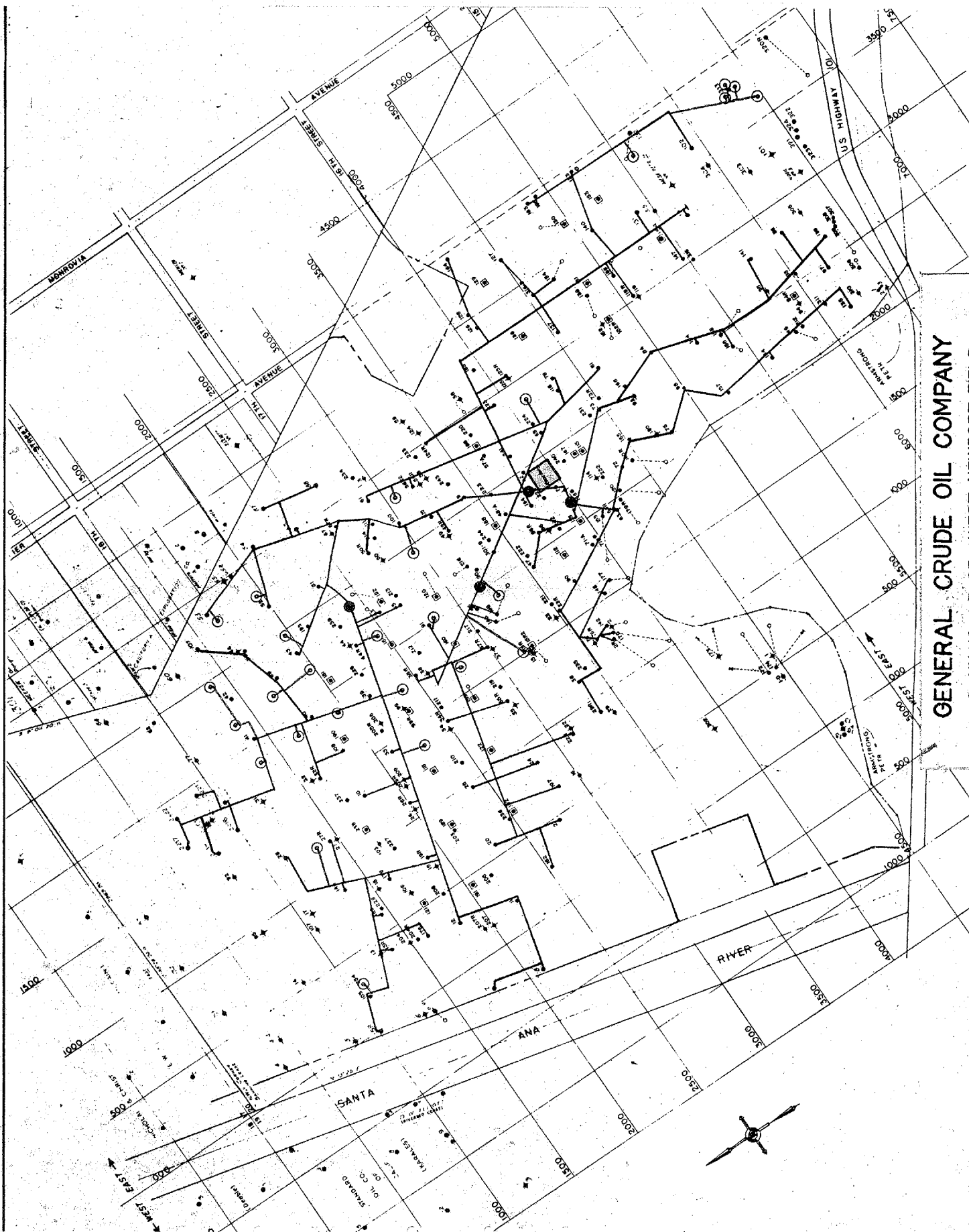
BANNING LEASE - WEST NEWPORT FIELD

ORANGE COUNTY, CALIFORNIA

Air Compressor Plant & Air Lines

SCALE: 1"=500' DATE: 6-14-73 BY: J.M.S.

- Proposed wells
- Injection Wells
- Proposed Air Lines



GENERAL CRUDE OIL COMPANY

BANNING LEASE - WEST NEWPORT FIELD

ORANGE COUNTY, CALIFORNIA

Waste Gas System

--- Proposed pipelines
 ○ Proposed wells
 ● Scrubbers

SCALE: 1" = 800' DATE: 6-14-73 BY: J.M.S.

GENERAL CRUDE OIL CO.
G. E. KADANE & SONS
EXHIBITS FOR APPLICATION

TO

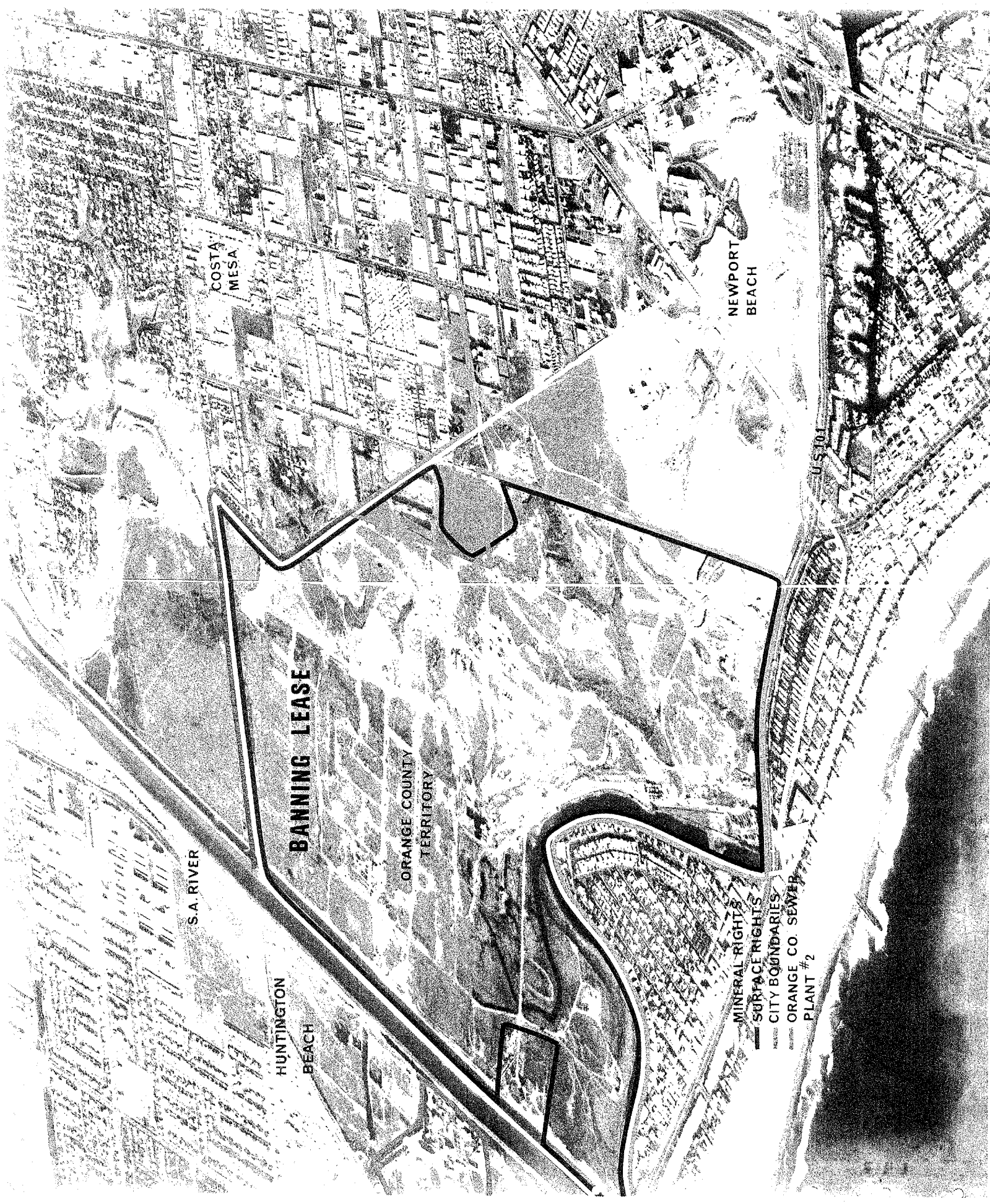
CALIF. COASTAL ZONE CONSERVATION COMM.
SOUTH COAST REGION

FOR

EXEMPTION UNDER VESTED RIGHTS (27404)

EXHIBIT INDEX

- No. 1 Aerial photograph of Banning Lease showing surrounding territory. Mineral lease and surface rights area are outlined.
- No. 2 Map showing lease road system.
- No. 3 Map showing oil gathering pipeline system.
- No. 4 Map showing lessee owned electrical distribution system.
- No. 5 Map showing pipelines and weighmeters for individual well production testing.
- No. 6 Map showing pipelines for gas gathering system.
- No. 7 Map showing location of crude oil storage tanks and produced water disposal system.
- No. 8 Map showing pipelines for fresh water distribution system.
- No. 9 Map showing steamer locations and steam pipeline system.
- No. 10 Map showing air compressor plant locations, injection well locations and connecting pipeline system.
- No. 11 Map showing gas treater location and connecting pipeline system.
- No. 12 Map showing location of fencing around perimeter of lease and buildings for general office, field offices, employee change rooms, garages, heavy equipment repair shops, material storage yards, etc.
- No. 13 Application to Division of Oil and Gas to drill new well and approval of application.
- No. 14 Application to Orange County Building and Safety Department to drill an oil well.
- No. 15 Copy of Orange County "O" Zone ordinance.
- No. 16 Application to Orange County Air Pollution Control District for authority to construct.



COSTA
MESA

NEWPORT
BEACH

U.S. 101

BANNING LEASE

ORANGE COUNTY
TERRITORY

S.A. RIVER

HUNTINGTON
BEACH

MINERAL RIGHTS
SURFACE RIGHTS
CITY BOUNDARIES
ORANGE CO. SEWER
PLANT #2



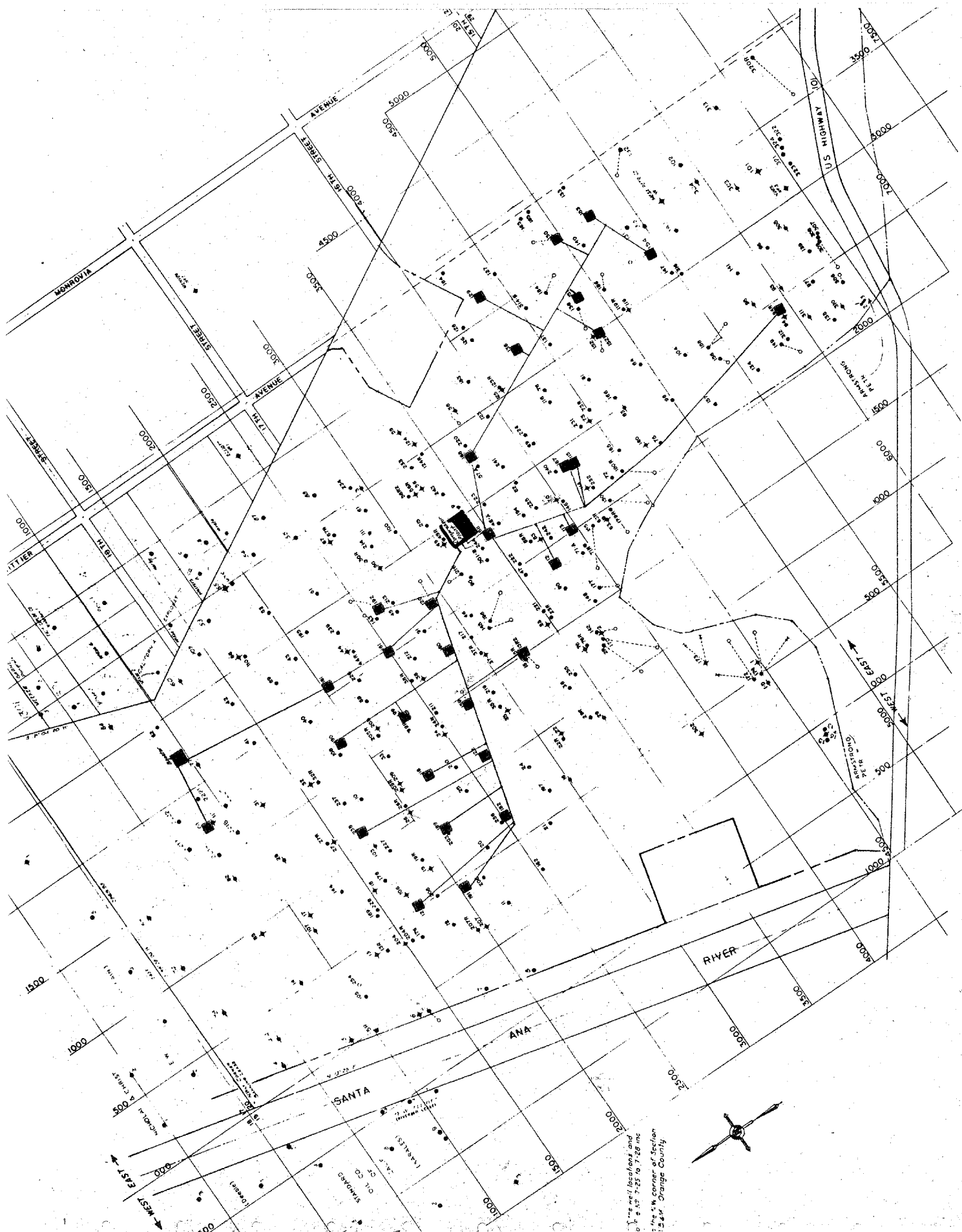
GENERAL CRUDE OIL COMPANY

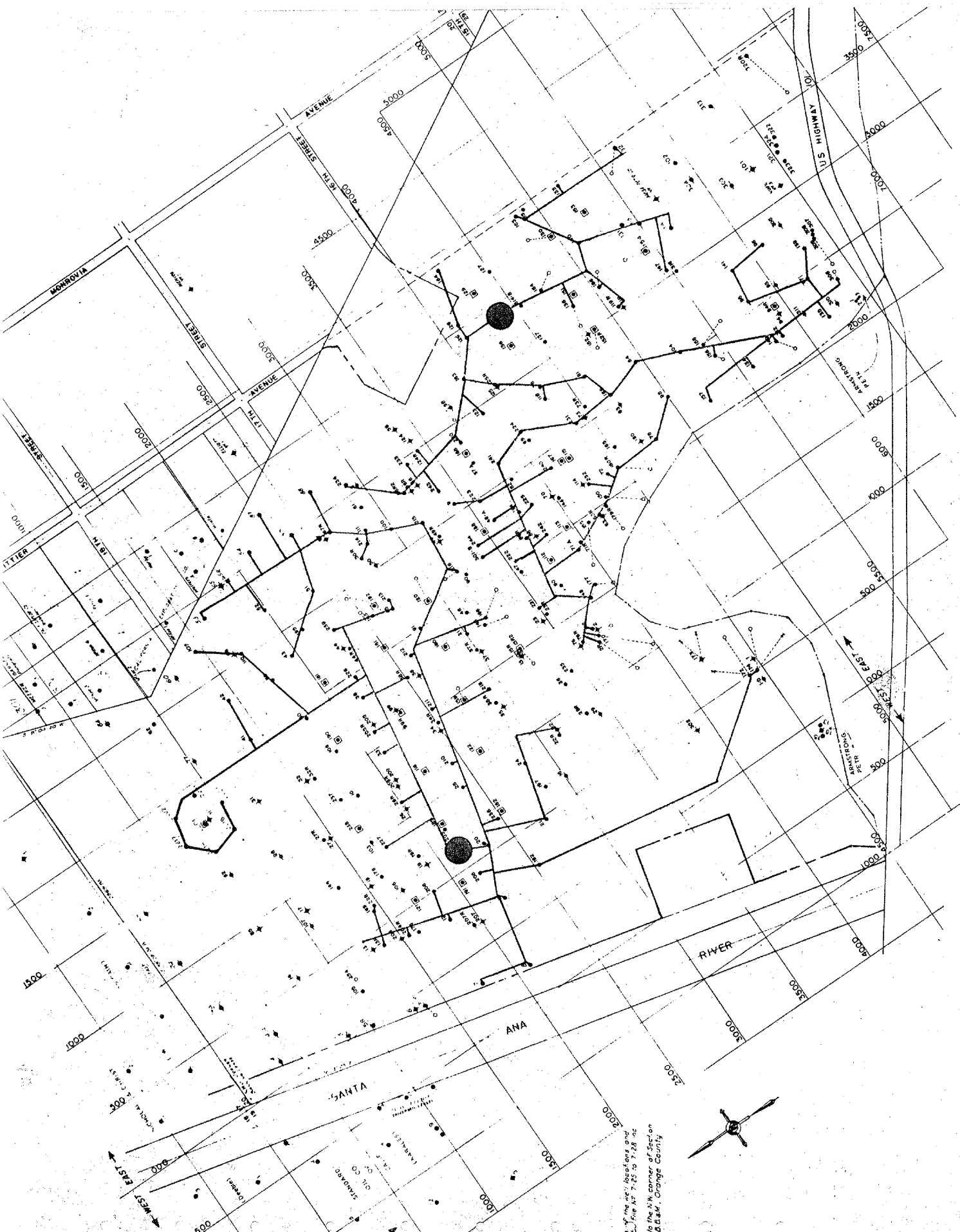
DANINIC LEASE WEST NEWBODI EICI D

- WASTE GAS SYSTEM -
GENERAL CRUDE OIL COMPANY
 BANNING LEASE - WEST NEWPORT FIELD



AIR COMPRESSORS & INJECTION WELLS
GENERAL CRUDE OIL COMPANY
 BANNING LEASE - WEST NEWPORT FIELD





STEAM SYSTEM -

GENERAL CRUDE OIL COMPANY

BANNING LEASE - WEST NEWPORT FIELD



-- FUEL GAS SYSTEM --

GENERAL CRUDE OIL COMPANY

BANNING LEASE - WEST NEWPORT FIELD

● scrubbers

of the well locations and
the NW 1/4 to 1/8 sec
to the NW corner of Section
8 & 1/4, Orange County



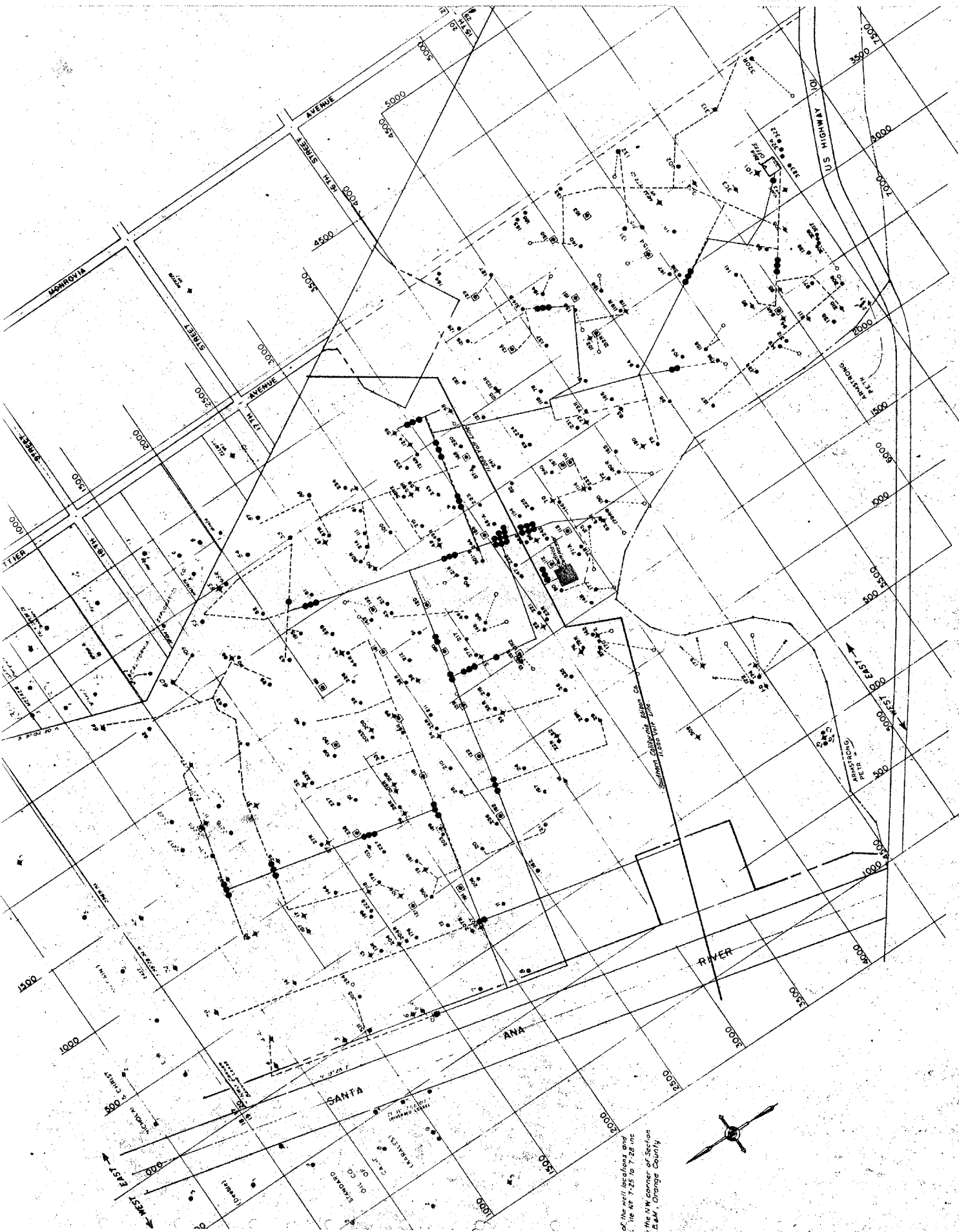
- WELL TESTING SYSTEM -

GENERAL CRUDE OIL COMPANY

BANNING LEASE - WEST NEWPORT FIELD

● weigh meters

The well locations and
a scale of 1" = 100' are
shown in the corner of the map on
the Banning Lease, Santa
Barbara County.



- ELECTRICAL SYSTEM -

GENERAL CRUDE OIL COMPANY

BANNING LEASE - WEST NEWPORT FIELD

— 2300 volts

- - - 440 volts

• transformers

of the well locations and
the NW 1/4 Sec 10 T.28 N.
the NW corner of Section
E.4W, Orange County



- OIL GATHERING SYSTEM -
GENERAL CRUDE OIL COMPANY
RANING LEASE - WEST NEWPORT FIELD

1. The well locations and
production rates are shown
to the 1/4 corner of Section
8 B.M. Orange County



- ROAD SYSTEM -
GENERAL CRUDE OIL COMPANY
BANNING LEASE - WEST NEWPORT FIELD

If the well locations and
a file of 7-25 to 7-28 are
to the NW corner of Section
36 1/4, Orange County

DIVISION OF OIL AND GAS
Notice of Intention to Drill New Well
This notice and surety bond must be filed before drilling begins

Newport Beach Calif. September 26 1972

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division III, Article 4, Public Resources Code, notice is hereby given that it is our intention to commence drilling well No. Banning 240, Sec. 20, T. 6 S.,

R. 10 W., S.B.B. & M., West Newport Field, Orange County.

Legal description of mineral-right lease, consisting of 590± acres, is as follows: On file
(Attach map or plat to scale)

Do mineral and surface leases coincide? Yes _____ No X If answer is no, attach legal description of both surface and mineral leases, and map or plat to scale.

Location of Well: 4085 feet South along section line and 2390 feet East
(Direction) (Direction)

at right angles to said line from the N.W. corner of section 20

Elevation of ground above sea level 85 feet datum.

All depth measurements taken from top of K.B. which is 7 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

PROPOSED CASING PROGRAM

SIZE OF CASING INCHES A.P.I.	WEIGHT	GRADE AND TYPE	TOP	BOTTOM	CEMENTING DEPTHS
10-3/4"	32#	H-40	0	40'	40' to surface
7"	23#	K-55	0	747'	747' to surface
5-1/2"	17#	K-55	700	885'	Slotted liner

Intended zone(s) of completion: "A" Sand 747 - 885' Estimated total depth 885'
(Name) (Depth, top and bottom)

It is understood that if changes in this plan become necessary we are to notify you immediately.

Address P. O. Box 1487
Newport Beach, Ca. 92663

General Crude Oil Company, Operator
(Name of Operator)
By [Signature]

Telephone Number (714) 642-3350

Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 172-1114

Mr. Robert L. Scarborough, Agent
GENERAL CRUDE OIL CO., OPERATOR
P.O. Box 1487
Newport Beach, CA 92663

Inglewood, Calif.
October 2, 1972

DEAR SIR:

(059-20604)
Your proposal to drill Well No. "Banning" 240,
Section 20, T. 6S, R. 10W, S.B. B. & M., West Newport Field, Orange County,
dated 9/26/72, received 9/26/72, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. A COPY OF THIS REPORT SHALL BE POSTED AT THE WELL SITE PRIOR TO COMMENCING OPERATIONS.
2. Drilling fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
3. The surface casing shall be cemented in competent beds and blowout prevention equipment, conforming to this Division's Class II requirements, shall be installed and maintained in operating condition at all times.
4. THIS DIVISION SHALL BE NOTIFIED:
 - a. To inspect the installed blowout prevention equipment.
 - b. To witness a production test within 10 days after the well has been placed on production.

NOTE: This approval is granted under Sec. 3602.1 of the Public Resources code.

ADS:dr

cc Headquarters

Blanket Bond

RECEIVED

OCT - 3 1972

GENERAL CRUDE OIL CO.

JOHN F. MATTHEWS, Jr., State Oil and Gas Supervisor

By W. E. Ingram, Deputy

FEDERAL INSURANCE COMPANY

Rider to be attached to and form a part of Oil Well Blanket Bond No. 8046-79-58, executed by the Federal Insurance Company, effective February 1, 1971, in the amount of \$25,000.00

on behalf of General Crude Oil Company (Operator) and
G. E. Kadane & Sons (Non Operator)
and in favor of Orange County.

In consideration of the premium charged for this bond, it is understood and agreed that the Federal Insurance Company hereby consents that effective from the 26th day of September, 1972 said bond shall be amended as follows:

Coverage under said bond is extended to include:

Banning Wells Nos. 194, 196, 240, 241,
242, 243, 244, Sec. 20, T6S., R10W.,
S.B.B.&M. Survey, West Newport Field,
Orange County, California

The above amendment is made subject to all the terms and conditions of the attached bond.

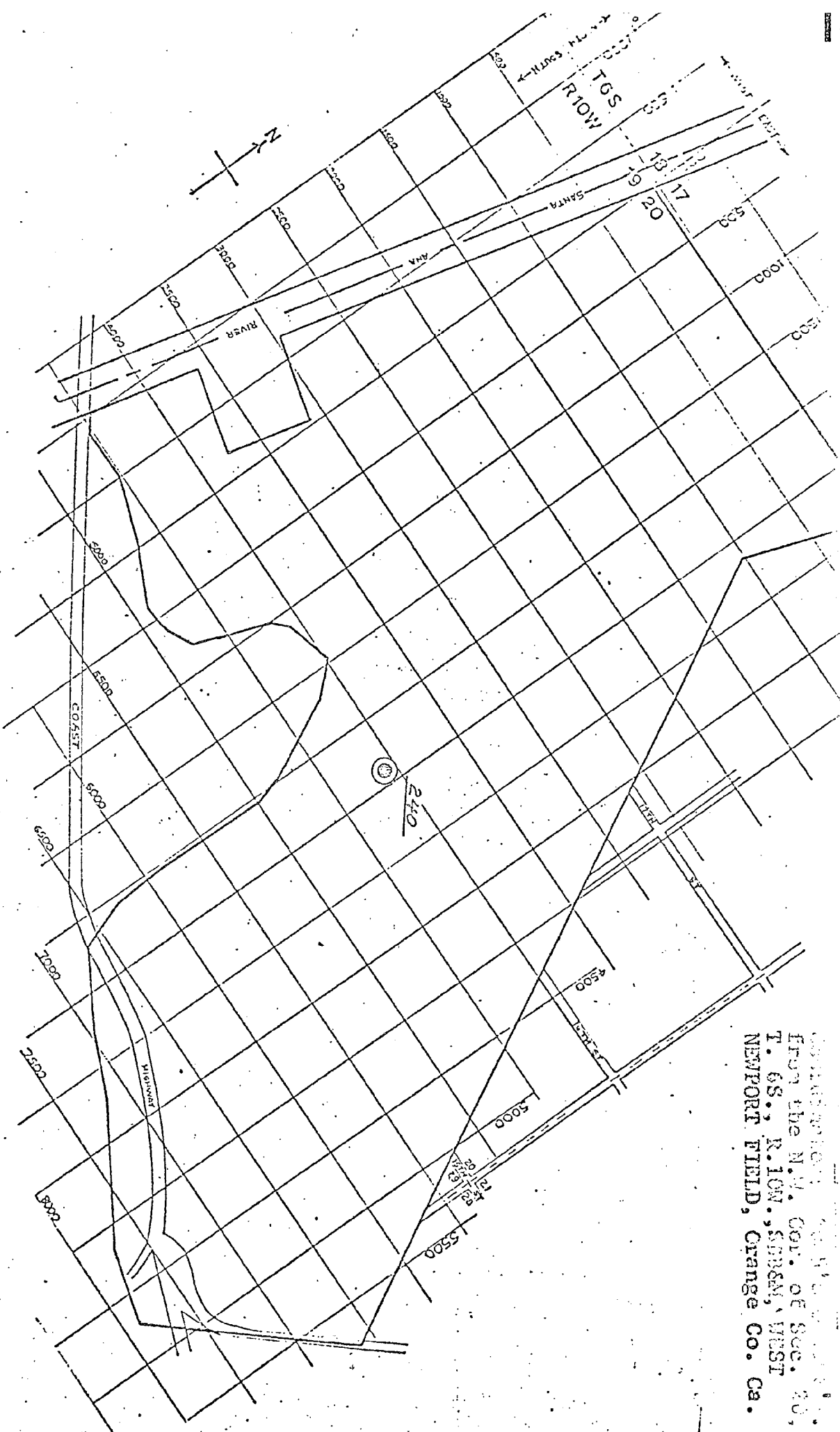
The liability of the Federal Insurance Company under the attached bond and/or this rider shall in no event be cumulative, nor shall it exceed in the aggregate the sum of Twenty-Five Thousand Dollars (\$25,000.00).

Signed, sealed, and dated this 26th day of September, 1972.

GENERAL CRUDE OIL COMPANY

FEDERAL INSURANCE COMPANY

David C. Fisher
Attorney-in-Fact



GENERAL CRUDE OIL COMPANY
BANNING LEASE
WEST NEWPORT FIELD
Scale: 1" = 1000'

From the N.W. Cor. of Sec. 20,
T. 6S., R. 10W., S. 36N., WEST
NEWPORT FIELD, Orange Co. Ca.

APPLICATION FOR PERMIT TO DRILL AN OIL WELL

TO BE FILLED IN BY APPLICANT

FOR OFFICE USE ONLY

WELL NAME Banning 240		ZONING REGULATIONS	
OPERATOR General Crude Oil Co., Operator		APPLICABLE CONDITIONS	
ADDRESS P. O. Box 1487 PHONE 642-3350 Newport Beach, Ca. 92663		PRIMARY <input type="checkbox"/> SECONDARY <input type="checkbox"/> "O" DISTRICT <input checked="" type="checkbox"/>	
LAND OWNER Beeco, Ltd.		A.P. 114-170-23 DIST. NO. 5/A	
ADDRESS 1010 N. Main St. PHONE 558-9333 Suite 725, Santa Ana, Ca. 92701		ZONING APPROVED BY RWV DATE 10-16-72	
RESIDENT AGENT ON WHOM NOTICES MAY BE SERVED		NOTICES REQUIRED	
NAME R. M. Scarborough		1. TRANSFER OF OPERATOR	
ADDRESS P. O. Box 1487 PHONE 642-3350 Newport Beach, Ca. 92663		2. SUSPENSION OF DRILLING OR RE-DRILLING	
NO. OF DWELLINGS WITHIN 150' None 660' None 1320' None		3. RESUMPTION OF DRILLING	
DISTANCE TO NEAREST DWELLING 2200'±		4. CHANGE IN DRILLING CONTRACTOR	
NO. OF ASSEMBLY BUILDINGS, INSTITUTIONS AND SCHOOLS WITHIN 660' None		5. ABANDONMENT	
EXCEPTIONS REQUESTED: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (Must be detailed in separate written request.)		THIS IS A PERMIT WHEN PROPERLY FILLED OUT, SIGNED AND RECEIPTED IN VALIDATION SPACE BELOW.	
BOND NO. 8046-79-58		This permit shall be null and void upon the expiration of sixty days from and after the date hereof unless the work for which this permit is issued shall have been commenced and is being diligently prosecuted towards completion.	
SURETY Federal Insurance Co.		Permission is hereby granted to drill an oil well as described in this application, subject to the provisions of Title 7, Division 7 Article 1, and Division 8, Article 2 of the Codified Ordinances of Orange County.	
ACCESS RIGHTS TO SITE Granted previously <input type="checkbox"/> Attached <input type="checkbox"/>		RECEIVED OCT 24 1972 GENERAL CRUDE OIL CO.	
DRILLING CONTRACTOR: General Crude Oil Co.		Department of Building and Safety F. G. McLellan, Jr., Director	
RIG NO.: 917		By <u>W. W. Hulse</u> W. W. Hulse, Chief, Land Use Division	
"I Hereby acknowledge and state that the information I have provided is correct and agree to comply with all applicable County Ordinances and State Laws."		VALIDATION	
SIGNATURE <u>[Signature]</u> DATE 10-2-72		On File 210,970 150.00 + 7 5 150.00*	
TITLE District Manager			
LEGAL DESCRIPTION (ATTACH TWO)			
PLOT PLANS (ATTACH TWO)			

AN ORDINANCE AMENDING SECTIONS 77.012, 77.013, 77.018, 77.019, 77.012, 77.013, AND 77.014 AND ADDING SECTIONS 77.013.1, 77.013.2, 77.013.3, 77.013.4, 77.013.7, 77.013.12, 77.013.13, 77.013.14, 77.013.15, 77.013.16, 77.013.18, 77.013.19, 77.013.20, AND 77.013.23 TO THE CODIFIED ORDINANCES OF THE COUNTY OF ORANGE, CALIFORNIA

The Board of Supervisors of the County of Orange, California, does ordain as follows:

SECTION 1. Sections 77.012, 77.013, 77.018, 77.019, 77.012, 77.013, and 77.014 of the Codified Ordinances of the County of Orange are hereby amended to read as follows:

Sec. 77.012. Purpose.

(a) It is the intent of this Code to regulate the exploration and drilling for and the production of petroleum so that this activity may be conducted in harmony with other uses of land within this County, thus protecting the people of the County of Orange in the enjoyment and use of their property and providing for their comfort, health, safety, and general welfare.

(b) It is further the intent of the County Board of Supervisors that petroleum operations shall be permitted in all districts within this County subject to the application of this Code, the requirements of which have been carefully designed for the fulfillment of the intent expressed in (a) above.

Sec. 77.013. Definitions.

The following terms as used in this Code shall, unless the context clearly indicates otherwise, have the respective meanings herein set forth in Sections 77.013.1 through 77.013.26.

Sec. 77.018. Drilling and operating.

(a) Location of oil wells.

(1) No oil well shall be drilled within the following distances measured from the center line of any local street, or any highway shown on the Master Plan of Arterial Highways, as amended:

Major Highways	210 feet
Primary Highways	200 feet
Secondary Highways	180 feet
Local Streets	180 feet, except

that in the case of a local street, the right of way of which is more than 60 feet in width, the distance shall be 150 feet plus one half of the existing right of way. In the case of a local street, the right of way of which is more than sixty (60) feet in width, the Superintendent may determine that because of the degree of slope or other feature of the topography, a lesser distance than one half of the right of way in addition to the one hundred fifty (150) feet is reasonable to insure the safety of the traveling public in conformity with the purpose and intent of this provision, in which case the distance thus set by the Superintendent shall prevail.

No oil well shall be drilled within one hundred fifty (150) feet of the nearest rail of a railway which carries passengers for hire.

(2) No oil well shall be drilled within one hundred fifty (150) feet of any building used for human occupancy, nor shall any such buildings be erected within one hundred fifty (150) feet of any oil well not abandoned, except buildings incidental to the operation of the well. No oil well shall be drilled within one hundred fifty (150) feet from the outer boundary line.

(3) No oil well shall be drilled within three hundred (300) feet of any building used as a place of public assembly, institution, or school; nor shall any such building be erected within three hundred (300) feet of any oil well not abandoned.

(4) The Superintendent may suspend any provisions of Subsection (a) in whole or in part, or impose less restrictive requirements if such provisions or requirements are rendered unnecessary or unreasonable by the then existing special features, such as: topography, nature of the use and occupancy of and the proximity to buildings on adjoining property, the height, character and structure of such buildings, the type and character of oil field development and may impose additional safety requirements rendered necessary because of such special features.

(b) Private roads and drill sites.

Prior to commencement of any drilling operations, all private roads used for access to the drill site and the drill site itself shall be surfaced by clean, crushed rock, gravel, or decomposed granite, or oiled, and maintained to prevent dust and mud.

In particular cases these requirements governing surfacing of private roads and drill sites may be altered at the discretion of the Superintendent after consideration of all of the circumstances including but not limited to distances from public streets and highways, distances from adjoining and nearby property owners whose surface rights are not leased by the operator and the purposes for which the property of such owners are or may be used, topographical features, nature of the soil and exposure to wind.

(c) Derricks.

All derricks and masts hereafter erected for drilling or re-drilling shall be at least equivalent to the current American Petroleum Institute Standards.

(d) Signs.

A sign having a surface area of not less than two (2) square feet and no more than six (6) square feet bearing the current name and number of the well and the name and/or initials of the operator shall be displayed at all times from the commencement of drilling operations until the well is abandoned. In the event there are more than two (2) producing wells on one leasehold, it shall be sufficient if the entrances to said leasehold are posted with a sign not less than 18 inches by 24 inches bearing the name of the operator together with the name or designation of the lessee, together with an openly visible sign on each producing well designating the particular number thereof.

(e) Blow-out prevention.

Protection shall be provided to prevent the blow-out of an oil well during drilling and re-drilling operations and shall conform to the requirements of the California Administrative Code, Title 8, Petroleum Safety Orders—Drilling and Production, Article 55, Blow-Out Prevention, Sections 6591, 6591.1, and 6591.2.

(f) Blow-out prevention for wells other than drilling wells.

(1) Protection shall be provided to prevent the blow-out of an oil well, conforming to the requirements of the California Administrative Code, Title 8, Petroleum Safety Orders—Drilling and Production, Article 55, Blow-out Prevention, Section 6592, in the following cases:

a. During perforating, shooting, or cutting off a string of casing.

b. During well servicing operations on a well that is known to have sufficient gas pressure to cause the well to flow, or where the gas pressure is unknown.

(2) The operator shall notify the Superintendent, in writing, at least one (1) day before any of the operations described in this Subsection are commenced. In the event that the day following the day on which notice be given falls on a Saturday, Sunday, or holiday, then such additional days notice must be given as may be required so that there shall be one day, Saturday, Sunday and holidays excepted, between the date notice be given and any of the said operations commenced.

(g) Waiver of blow-out prevention requirements.

The blow-out preventive requirements of the foregoing Subsections (e) and (f) may be waived by the Superintendent upon such conditions and for such operations as he may determine, upon written application by the operator and upon a showing by him of sufficient cause therefor based upon information regarding depth of hole, probable gas pressures to be encountered, the proposed drilling, completion, or abandonment program or whatever further information the Superintendent may require.

(h) Drilling and production waste control.

Rotary mud, drill cuttings, oil field waste, oil or liquid hydrocarbons and all other oil field wastes derived or resulting from, or connected with the drilling of any well shall be discharged into a sump hole or steel tank. Such drill cuttings, rotary mud, and drilling waste materials shall be removed from the drill site upon completion of drilling operations. Tanks used as and for sump purposes shall be removed from the drill site and sump holes shall be drained and back filled within thirty (30) days from and after completion of drilling.

Furthermore, all waste water and all other waste materials resulting from production operations, shall be disposed of into an appropriate waste facility such as, but not limited to, an existing sump, a waste water disposal system, or a sewer, subject to the approval of the agency governing the facility involved.

Excepting temporary sumps for the disposal or storage of materials used for or produced by drilling operations, no new sumps or ponds shall be created without the written approval of the Superintendent of Building and Safety.

(i) Fencing.

All sumps or sump holes and all oil well production equipment having external, moving parts hazardous to life or limb shall be attended 24 hours per day or be enclosed by a steel chain link type fence not less than six (6) feet in height and in addition having not less than three (3) strands of barbed wire sloping outward at approximately a 45° angle and for eighteen (18) inches from the top of the fence. There shall be no aperture below such fence greater than four (4) inches. Fence gates shall be placed at nonhazardous locations and shall be locked at all times when unattended by a watchman or service man.

(j) Cellars.

The following regulations shall apply to cellars:

(1) Every cellar shall be constructed in accordance with the current Uniform Building Code, as amended and adopted by the Board of Supervisors of the County of Orange.

(2) Such cellars shall be kept free from water, oil drilling fluids, or other substances which might constitute a hazard, except during drilling and servicing operations.

(3) The depth of such cellars shall be the vertical measurement between the lowest point of the floor area in the bottom of such cellar and the lowest point of ground or any surface adjacent to the top of the cellar wall.

(4) All multi well cellars exceeding three (3) feet in depth and twenty-five (25) feet in length shall have two separate means of exit or entrance. If the cellar exceeds fifty (50) feet in length, one of the means of entrance or exit shall be a stairway. If the cellar exceeds two hundred (200) feet in length, a third means of entrance or exit shall be provided.

(5) Multi well cellars shall have a steel grate covering with no unobstructed openings in excess of three (3) inches. Materials, equipment, or other appurtenances shall not be stored or placed on the grating so as to interfere with the escape of gases and vapors.

(k) Removal of equipment.

All drilling equipment and the derrick shall be removed from the premises within sixty (60) days following the completion, abandonment or desertion of any well. Once the well is a producing well, it shall be serviced with a portable derrick when required. Drilling operations shall be diligently prosecuted until the well is completed or abandoned.

(l) Soundproofing.

Soundproofing shall comply to the following specifications when required by the provisions of Section 78.024 of this title. Soundproofing acoustical blankets for the drilling derrick and accessory structures shall be: fibrous glass insulation 1 1/2" thick, 0.50 pounds per cubic foot, density, 0.083 pounds per square foot, weight, 0.00010 to 0.00015 fiber diameter (inches) with a phenolic binder having a temperature limit of 450° F., sewed between layers of fire retardant, vinyl fiber glass cloth, 15-17 ounces per square yard sewed with dacron thread D-92 with stitches not more than 6 to the inch. The lacing cord shall be flat vinyl coated tape composed of fibrous glass yarn braided, heat set and bonded. The tape shall have a 50 pound tensile strength. Grommets shall be #4 brass. All doors and similar openings shall be kept closed, during drilling operations, except for ingress and egress.

(m) Alternate materials and methods of construction.

The provisions of this Code are not intended to prevent the use of any material or method of construction not specifically prescribed by this Code, provided any such alternate has been approved, this Code in quality, strength, effectiveness, fire resistance, durability and safety.

The Superintendent shall require that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding its use. Whenever there is insufficient evidence of compliance with the intent of this Code or evidence that any material or any construction does not conform to the requirements of this Code, or in order to substantiate claims for alternate materials or methods of construction, the Superintendent may require tests as proof of compliance to be made at the expense of the owner or his agent by an approved agency.

Test methods shall be as specified by this Code, for the material in question. If there are no appropriate test methods specified in this Code, the Superintendent shall determine the test procedure.

Copies of the results of all such tests shall be retained for a period of not less than two (2) years after the acceptance of the materials or methods.

(n) Sanitary facilities.

Sanitary facilities shall be provided at the drill site during all drilling or re-drilling operations and shall be in accordance with the Standards of the Orange County Health Department.

Sec. 77.019. Abandonment procedure.

It shall be the responsibility of the Superintendent to determine that the drill site and all facilities pertinent thereto have been restored to their original condition as nearly as practicable in conformity with the regulations of this Code including the following requirements:

(a) Standard.

(1) It shall be the responsibility of the operator to comply with the abandonment provision of this Code and he shall furnish the Superintendent the approval of the Division of Oil and Gas, Department of Natural Resources, confirming compliance with all abandonment proceedings under the State law.

It shall be the responsibility of the operator to comply with the abandonment provision of this Code and he shall furnish the Superintendent with a) copy of the approval of Division of Oil and Gas, Department of Natural Resources, confirming compliance with all abandonment proceedings under the State law, and b) a notice of intention to abandon under the provisions of this Section and stating the date such work will be commenced. Abandonment may then be commenced on or subsequent to the date so stated.

Abandonment shall be approved by the Superintendent after restoration of the drill site and the subsurface thereof has been accomplished in conformity with the following requirements:

a. The derrick and all appurtenant equipment thereto shall be removed from the drill site.

b. All tanks, towers, and other surface installations shall be removed from the drill site.

c. All concrete, pipe, wood, and other foreign materials shall be removed from the drill site to a depth of six (6) feet below grade, unless part of a multi well casing then being used in connection with any other well for which a permit has been issued.

d. The oil well casing shall be cut off at a point six feet (6') below the drill site grade at the cellar, but in no case below sea level. Nothing shall be placed in the hole above the point of cut-off until the cut-off has been inspected by the Superintendent and by him found to be in compliance with all applicable provisions of law.

e. The top twenty-five feet (25') of the remaining casing shall be filled with a cement plug to prevent gas fumes from escaping.

f. A steel cap of not less than the same thickness as the well casing shall be tack welded to the casing in a minimum of four (4) places.

g. All holes and depressions shall be filled and packed with native earth. All oil, waste oil, refuse or waste material shall be removed from the drill site.

(b) Conversion to water well.

A well may be converted to a domestic or agricultural water well upon the approval of the Superintendent after:

(1) A request in writing by the landowner has been made to the Superintendent.

(2) An original or certified copy of the approved conversion permit from the Division of Oil and Gas has been furnished the Superintendent.

(3) All the provisions of abandonment in the preceding Subsection have been complied with except that those appurtenances necessary in the opinion of the Superintendent for the operation of a water well may be retained.

Sec. 77.012. Storage facilities.

(a) Storage capacity.

(1) Maximum Tank Capacity for each Producing Oil Well: If oil or other liquid storage facilities are established incidental to a producing well on a drill site, such storage facilities shall not exceed a total of 2,000 barrels per well.

(b) Design and construction of tanks.

All tanks shall be constructed in detailed conformity with the current A.P.I. Standards applicable thereto.

(c) Foundations and supports.

Tanks shall rest directly on the ground or on foundations, supports, or pilings of concrete, masonry, steel, crushed rock, or wood. Exposed piling or steel supports shall be protected by fire resistive materials to provide a fire resistance rating of not less than two (2) hours. Stairs, platforms, and walkways shall be of metal, concrete, or wood.

(d) Spacing between tanks.

(1) No tank for the storage of any flammable liquid shall be located closer than three feet (3') to any other such tank.

(2) For tanks above 50,000 gallons individual capacity for the storage of any flammable liquid, except crude petroleum, the distance between such tanks shall not be less than one-half the diameter of the smaller tank.

(3) Tanks for the storage of crude petroleum having capacities not exceeding 125,000 gallons (3,000 barrels) shall not be less than three feet (3') apart; tanks having a capacity in excess of 125,000 gallons (3,000 barrels) shall be not less than the diameter of the smaller tank apart.

(4) The minimum separation between a liquefied petroleum gas container and any other tanks for the storage of any flammable liquids shall be twenty feet (20'). Suitable means shall be taken to prevent the accumulation of flammable liquids under adjacent liquefied petroleum gas containers such as by diking, diversion curbs or grading. When flammable liquid storage tanks are diked, the liquefied petroleum gas containers shall be outside the diked area and at least ten feet (10') away from the center line of the dikes. The foregoing provision shall not apply when liquefied petroleum gas containers of 125 gallon or less capacity are installed adjacent to Class III flammable liquid storage tanks of 275 gallons or less capacity.

(e) Location of tanks.

Minimum distance between any outside above ground tank to the nearest building or line of adjoining property which may be built upon:

(1) Flammable liquids other than those having boil-over characteristics similar to crude petroleum:

Capacity of Tank	Class of Flammable Liquid	Minimum Distance
0 to 275 gals.	III	0 feet
275 to 750 gals.	III	5 feet
0 to 750 gals.	I and II	10 feet
751 to 12,000 gals.	III	10 feet
751 to 12,000 gals.	I and II	15 feet
12,001 to 24,000 gals.	I, II and III	15 feet
24,001 to 30,000 gals.	I, II and III	20 feet
30,001 to 50,000 gals.	I, II and III	25 feet

(2) Crude petroleum and other liquids having boil-over characteristics similar to crude petroleum and flammable liquids with capacity in excess of 50,000 gallons:

STORAGE FACILITIES

Crude Petroleum and Tanks with Capacities in Excess of 50,000 Gallons

Tanks with capacities in excess of 50,000 gallons and all tanks for the storage of crude petroleum shall be located in accordance with the following provisions (applicable to gas-tight tanks including conservation type tanks constructed in compliance with these or equivalent standards):

Product Stored	Tank Protection	Distance From Line of Adjoining Property Which May Be Built Upon Shall Be Not Less Than
Refined Petroleum Products or other flammable liquids not subject to boil-over.	Group A Tanks 1) An approved permanently attached extinguishing system or 2) An approved floating roof.	Greatest dimension of diameter or height of tank, except that such distance need not exceed 120 feet.
	Group B Tanks Not equipped with either of the above	1 1/2 times the greatest dimension of diameter or height of tank except that such distance need not exceed 175 feet.
	Group C Tanks 1) An approved permanently attached extinguishing system or 2) An approved floating roof	2 times the greatest dimension of diameter or height of tank except that such distance shall not be less than 20 feet and need not exceed 175 feet.
Crude Petroleum*	Group D Tanks Not equipped with either of the above.	3 times the greatest dimension of diameter or height of tank except that such distance shall not be less than 20 feet and need not exceed 350 feet.

a. GROUP A TANKS.

Any gas-tight tank* constructed in compliance with these or equivalent standards and equipped either with:

1. An approved permanently attached extinguishing system or,
2. An approved floating roof, which is to be used only for the storage of refined petroleum products or other flammable liquids not subject to boil-over, shall be so located that the distance from the line of adjoining property which may be built upon shall be not less than the greatest dimension of diameter or height of the tank, except that such distance need not exceed 120 feet.

b. GROUP B TANKS.

Any gas-tight tank* constructed in compliance with these or equivalent standards but not equipped either with:

1. An approved permanently attached extinguishing system or,
2. An approved floating roof, which is to be used only for the storage of refined petroleum products or other flammable liquids not subject to boil-over, shall be so located that the distance from the line of adjoining property which may be built upon shall be not less than 1 1/2 times the greatest dimension of diameter or height of the tank, except that such distance need not exceed 175 feet.

c. GROUP C TANKS.

Any gas-tight tank* constructed in compliance with these or equivalent standards and equipped either with:

1. An approved permanently attached extinguishing system or,
2. An approved floating roof, which is to be used for the storage of crude petroleum, shall be so located that the distance from the line of adjoining property which may be built upon shall be not less than twice the greatest dimension of diameter or height of the tank except that such distance shall be not less than 20 feet and need not exceed 175 feet.

d. GROUP D TANKS.

Any gas-tight tank* constructed in compliance with these or equivalent standards and not equipped either with:

1. An approved permanently attached extinguishing system or,
2. An approved floating roof, which is to be used for the storage of crude petroleum, shall be so located that the distance from the line of adjoining property which may be built upon shall be not less than three times the greatest dimension of diameter or height of the tank except that such distance shall be not less than 20 feet and need not exceed 350 feet.

NOTE: The term "approved attached extinguishing system", as used in the foregoing description may be interpreted to apply to:

1. A fixed foam or other recognized extinguishing system embodying a supply of the extinguishing medium, or,
2. A system employing a pipe line for conveying foam from a point outside the site to the tank, or,

3. A portable overhead device for applying foam over the rim of the tank. Where reliance is placed on a pipe line for conveying foam the pipe line shall be so installed and attached as to be an integral part of the tank. Where reliance is placed on a portable overhead device, the practicability of its use shall be demonstrated before approval. Approved foam generating equipment of sufficient capacity should be available on the property, by response of a municipal or other public fire department, or otherwise readily available; and there should be on hand or otherwise readily available a sufficient supply of foam-producing materials as specified in the National Fire Protection Association Standards for Foam Extinguishing Systems, No. 11.

4. Buildings Essential to the Operation of the Storage Facilities: (Building Location) No building used for human occupancy, except buildings essential to the operation of the storage facilities shall be erected within the distances set out in the tables above, from such storage tanks.

*The term gas-tight tank includes so-called conservation type tanks.

(f) Diverse ownership.

Where tank locations of diverse ownership have a common boundary, the Superintendent may, with the written consent of the owners, waive the required distances from the common property line and substitute the space between tanks as provided in this Section.

(g) Dikes, diversion walls and catchment basins.

(1) REQUIRED. Tanks used for the storage of crude petroleum and other flammable liquids having similar boil-over characteristics shall be diked, or provided with approved diversion walls and catchment basins, or combinations thereof.

(2) REPEALED.

(3) LOCATION. No catchment basin or dike impounding area shall be located closer to the outer boundary line or to any building designed for human occupancy (than the diameter or height, whichever is greater) of the largest tank served by such basin or area, nor shall any building designed for human occupancy be erected or placed closer than such distance to any catchment basin or dike impounding area.

(4) CAPACITY. The net capacity of a catchment basin, dike impounding basin, or any combination thereof shall be equal to the capacity of the largest tank, plus 10% of the aggregate capacity of the other tanks served. In computing the required capacity of a catchment basin, dike impounding basin or combination thereof:

a. The volume of the largest tank up to the height of the dike shall be considered as part of the available capacity of a dike impounding basin.

b. No part of the volume of tanks other than the largest tank shall be considered as part of the available capacity.

c. The capacity of a separate catchment basin may be used to reduce the required capacity of a dike impounding basin provided drainage sufficient to prevent overflow of the dike and effective control of flow are provided.

d. The capacity of a single separate catchment basin may be applied to reduce the required capacity of each of the dike impounding basins draining into it.

(5) CONSTRUCTION.

Dikes shall be of earth, concrete or solid masonry designed to be liquid tight and shall be maintained. Where piping passes through dikes, provision shall be made for movement without damage to the dike and to minimize leaks under emergency conditions. Earthen dikes shall be built and maintained at a minimum height of two feet (2'), have sloping sides consistent with the angle of repose of the material used, and be not less than two feet (2') wide at the top. The distance between the inside toe of any dike and the shell of the tank shall be not less than five feet (5') for tanks not more than thirty feet (30') in diameter and ten feet (10') for tanks in excess of thirty feet (30') in diameter.

a. **Spill Dikes.** Where tanks within a common dike impounding basin may cause mutual exposure from spill, spill dikes shall be provided between tanks of 10,000 barrels or greater individual capacity. Groups of tanks of less than 10,000 barrels capacity and not in excess of 15,000 barrels aggregate capacity may be enclosed within a single spill dike. The height of such spill dikes shall not exceed 50% of the height of the main or perimeter dikes.

b. **Drainage.** Drainage shall be provided at a consistent slope of not less than 1% away from tanks and fittings to a sump, drain box or other safe means of disposal located within the dike impounding area and at the greatest possible distance from the shell of the tank. Traps with not less than six (6) inches of liquid seal shall be provided between the sumps, drain boxes or sewer openings within any impounding area and the sewers or drains intended for the disposal of spills. A valve, operable from outside the dike, shall be provided in the dike drain system and shall normally be kept closed.

c. **Disposal.** Approved provisions shall be made for disposing of water and oil retained by dikes, impounding or catchment basins.

(b) Suspension of requirements.

In particular installations, some or all of the requirements of Subsections (d), (e), and (f) of this Section governing storage facilities may be suspended, in whole or in part, or less restrictive requirements may be imposed pending further order of the Superintendent, where such requirements are rendered unnecessary or unreasonable by reason of the then existing special features such as: topography, nature of occupancy and proximity to buildings on adjoining property, the height and character of construction of such buildings, capacity and construction of the proposed tanks and the character of liquids to be stored, the degree of private fire protection to be provided and the facilities of the fire department to cope with flammable liquid fires.

(1) Skim ponds.

Any open, accessible, surface or subsurface installation used for the disposal of permitted waste liquids shall be fenced in accordance with the preceding fencing provision.

(2) Loading by truck from production tank sites.

LOCATION. Tank vehicle loading racks, loading platforms or movable loading upsets or areas dispensing flammable liquids shall be separated from tanks, warehouses, other buildings, public streets and nearest line of property that may be built upon by a clear distance of not less than twenty-five feet (25'), measured from the nearest position of any full steam. Buildings for pumps or for shelter of loading personnel may be part of the loading rack or platform. No person shall load or unload, or permit the loading or unloading of a tank vehicle unless such vehicle is located outside of any public street right-of-way.

LOADING AND UNLOADING OPERATIONS. During the loading or unloading of a tank vehicle, a qualified person shall be at the loading or unloading controls. Provision shall be made for the safe disposal of the oils released by overflow and from loading spouts or lines.

(k) Maintenance of tanks.

All tank tops which are accessible by means of a ladder, stairs, or otherwise shall be maintained in a safe manner. Such tops unless constructed and maintained in compliance with the applicable A.P.I. Standards shall be made of a substantial material with no openings in excess of four (4) inches in any dimension except for gauging hatches and similar openings which can be secured.

Sec. 77.0113. High pressure pipe systems.

All piping systems to be operated at a pressure in excess of twenty percent (20%) of the minimum yield strength of the material with which the pipe is fabricated shall be designed, constructed, operated, and maintained in accordance with the provisions of A.N.S.I. Standards D 31.

Sec. 77.0114. Fire prevention; sources of ignition.

(a) Electrical equipment.

All electrical equipment shall be installed and maintained in accordance with the requirements of the National Electric Code as amended and adopted by the County of Orange.

(b) Internal combustion engines, storage tanks, fired equipment and open flames.

No internal combustion engines, storage tanks, boiler, fired equipment or open flames except welding supervised by the production foreman, drilling foreman, drilling engineer, supervisors, or safety supervisors shall be located closer than twenty-five feet (25') to a producing well nor closer than one hundred feet (100') to a drilling well. Internal combustion engines (and their fuel tanks) used in the drilling, production and servicing of oil wells are exempt from the above provisions. During drilling operations on a drill site of a acre or less in area where two or more wells are drilled and drilling and production equipment are located on such site, the provisions in this subsection relating to distances of storage tanks may be altered at the discretion of the Superintendent after consideration of the special features such as: topographical conditions; nature of occupancy and proximity to buildings on adjoining property and height and character of construction of such buildings; capacity and construction of proposed tanks and character of liquids to be stored; degree of private fire protection to be provided, and facilities of the fire department to cope with flammable liquid fires.

(c) Hauling exhaust.

The engines used in connection with the drilling of any oil well or in any production equipment of any oil well shall be equipped with an exhaust muffler to prevent excessive or unusual noise. Muffs shall be provided on all engines used during drilling operations to prevent the escape of flames, sparks, ignited carbon and soot.

(d) Flammable waste gases and vapors.

Flammable waste gases or vapors escaping from a production drill site shall be burned or controlled to prevent hazardous concentrations reaching sources of ignition or otherwise endangering the area.

(1) **FLARES.** Approved means of ignition shall be provided whenever hydrocarbon gases are released to the air through flames.

(2) **VENTING.** Gases or vapors not burned may be discharged to the atmosphere at not less than twenty feet (20') vertically above grade and not less than twenty-five feet (25') horizontally from any source of ignition and at locations that do not create a hazard to the general area.

(e) Waste control of 7-11 etc.

(1) No person shall permit or cause to be permitted the discharge of any liquid containing crude petroleum or its products into or upon any street, public highway, drainage canal or ditch, storm drain or flood control channel.

(2) No person shall permit or cause to be permitted any oil, waste oil, refuse or waste material to be on the surface of the ground, under, around or near any oil well, pump, boiler, oil storage tank or building except within an oil sump, tank, catchment basin or retaining pond. No new sumps or ponds shall be created without the written approval of the Superintendent of Building and Safety.

(3) All land within twenty-five feet (25') of any oil well, flammable liquid tank or other apparatus in any such well shall be at all times kept free and clear of dry weeds, grass, rubbish or other combustible debris. When this distance is not sufficient to provide reasonable fire safety, a greater distance may be required which shall not exceed the height of the derrick or greatest dimension of the tank.

(f) Smoking.

No person shall smoke, use pipe, permit or allow another person to smoke within fifty (50) feet of any oil well, tank location, or any area contaminated by oil or waste gas.

(g) Fire control equipment.

A minimum of two (2) fire extinguishers shall be maintained at all oil well locations where drilling, servicing or repair work is being conducted. Each such extinguisher shall have a minimum classification of 20B as set forth in National Fire Protection Association No. 10, "Standard for the Installation of Portable Fire Extinguishers."

SECTION 2. Sections 77.013.1, 77.013.2, 77.013.3, 77.013.4, 77.013.7, 77.013.12, 77.013.13, 77.013.14, 77.013.15, 77.013.16, 77.013.18, 77.013.19, 77.013.20, and 77.013.23 are hereby added to the Codified Ordinances of the County of Orange to read as follows:

Sec. 77.013.1. Definitions (A).

ABANDONMENT is the restoration of the drill site as required by these regulations.

A.N.S.I. is the American National Standards Institute.

A.P.I. is the American Petroleum Institute.

APPROVED: Approved by the Superintendent. "Approved type" or "approved design", is and includes improvements, equipment, or facilities of a type or design approved by the Superintendent.

A.S.M.E. is the American Society of Mechanical Engineers.

Sec. 77.013.2. Definitions (B).

BLOW-OUT is the uncontrolled discharge of gas, liquid, or solids or a mixture thereof from a well into the atmosphere.

BLOW-OUT PREVENTER is a mechanical, hydraulic or pneumatic or other device or a combination of such devices secured to the top of a well casing, including valves, fittings, and control mechanisms connected therewith designed and capable of preventing a blow-out.

Sec. 77.013.3. Definitions (C).

CELLAR is an excavation around or above the top joint of the casing in a well.

COMPLETION OF DRILLING: A well is completed, for the purpose of these regulations, thirty (30) days after the drilling crew has been released, unless drilling or remedial operations are resumed before the end of the thirty (30) days.

Sec. 77.013.4. Definitions (D).

DERRICK is any framework, tower, or mast together with all parts of an appurtenance to such structure, including any foundations, pump house, pipe racks, and each and every part thereof, which is or are required, or used, or useful for the drilling for and the production of oil, gas, or other hydrocarbons from the earth except tanks used for storage purposes.

DESERTION is the cessation of operations at a drill site without compliance with the provisions of the Code relating to suspended operations or abandonment.

DILIGENCE as used in these regulations, shall mean that the drilling derrick is in its operating position over the well, properly anchored and supported and that an operating crew is on duty at the drill site at all reasonable times.

DIVISION OF OIL AND GAS shall mean the Division of Oil and Gas of the Department of Natural Resources of the State of California or any other state agency that may in the future be charged with its responsibilities.

DRILLING means digging a hole in earth formation with a power driven drill bit for the purpose of exploring for or developing of oil or gas. Drilling includes those operations that are concerned with the completion of a well. "Drilling" does not include "shot hole".

DRILL SITE is the premises used during the drilling and subsequent life of a well or wells, which is necessary for the safe operations thereof.

Sec. 77.013.7. Definitions (G).

GAS means the gaseous components or vapors occurring in or derived from petroleum or natural gas.

Sec. 77.013.12. Definitions (L).

LESSEE is the possessor of the right to exploit the premises for minerals.

LESSOR is the mineral right owner.

Sec. 77.013.13. Definitions (M).

MAINTENANCE means and includes the repair and replacement of parts of a structure where same does not alter or lessen the strength or stability of the structure.

Sec. 77.013.14. Definitions (N).

NATURAL GASOLINE PLANT or ABSORPTION PLANT is a plant for the processing of natural gas from the production wells and processed into its various components.

Sec. 77.013.15. Definitions (O).

OIL includes petroleum, and **PETROLEUM** includes oil.

OPERATOR is the person, whether proprietor, lessee, or independent contractor, actually in charge and in control of the drilling, maintenance, operation, or pumping of a well or lease.

OUTER BOUNDARY LINE: Where several contiguous parcels of land in one or different ownerships are operated as a single oil or gas lease or operating unit, the term "outer boundary line" means the exterior limits of the land included in the lease or unit. In determining the contiguity of any such parcels of land, no street, road, or alley lying within the lease or unit shall be deemed to interrupt such contiguity.

OWNER is a person who owns a legal or equitable title in and to the surfaces of the drill site.

Sec. 77.013.16. Definitions (P).

PERSON includes any individual, firm, association, corporation, joint venture, or any other group or combination acting as a unit.

Sec. 77.013.18. Definitions (R).

RE-DRILLING shall mean the deepening of an existing oil well or otherwise drilling beyond the extremities of the existing well casing. The provisions of this Code relating to drilling shall be equally applicable to re-drilling.

Sec. 77.013.19. Definitions (S).

SEISMIC PETROLEUM PROSPECTING: Prospecting for oil by means of drilling holes into the ground, placing an explosive charge therein, and detonating such charge, thereby exciting an energy or sound wave through the earth, the results of which are recorded and read by seismograph equipment placed at various locations on the surface of the earth.

Seismic petroleum prospecting is prohibited in the following areas:

(a) The area within 1/4 mile of the boundary of O'Neill Park and of Irvine Park.

(b) The area within one mile landward of the line of Upper Newport Bay as established and adjudicated by Superior Court Case No. 20436.

(c) The area within one mile landward of the coast line measured from mean lower low water datum as established by the U. S. Coast and Geodetic Survey from the easterly jetty of the harbor entrance at Newport Beach to the San Diego County line.

SHOT HOLE: The hole drilled in seismic petroleum prospecting.

SOURCE OF IGNITION means any flame, arc, spark, or heated object or surface capable of igniting, flammable liquids, gases, or vapors.

STRUCTURE is that which is built or constructed; a tank, edifice, or building of any kind.

SUPERINTENDENT shall mean and include the Director of Building and Safety of the County of Orange, his assistants, deputies, inspectors, and officers of the Department of Building and Safety of the County of Orange.

SUSPENDED OPERATIONS is the approved, temporary suspension of drilling or re-drilling operations pending a resumption of operations or abandonment.

Sec. 77.013.20. Definitions (T).

TANK is a container, covered or uncovered, used in conjunction with the drilling or production of an oil well, for holding or storing liquids at or near atmospheric pressure.

Sec. 77.013.23. Definitions (W).

WELL or OIL WELL is a well or hole drilled into the earth for the purpose of exploring for or extracting from the earth oil, gas, or other hydrocarbon substances, or a well or hole in the earth by means of and through which oil, gas, and other hydrocarbon substances are extracted, produced, or capable of being produced from the earth, or a well or hole for the purpose of secondary recovery or disposal thereof. "Well" does not include "shot hole."

WELL SERVICING is remedial or maintenance work performed within any existing well which does not involve drilling or re-drilling.

SECTION 3. This Ordinance shall take effect and be in full force thirty (30) days from and after its passage, and before the expiration of fifteen (15) days after the passage thereof shall be published once in the Coastline Dispatch, a newspaper published in the County of Orange, State of California, together with the names of the members of the Board of Supervisors voting for and against the same.

RONALD W. CASPERS
Chairman of the Board of Supervisors
of Orange County, California

(SEAL)

ATTEST:

WILLIAM E. ST JOHN
County Clerk and ex-officio Clerk
of the Board of Supervisors of
Orange County, California

By June Alexander

Deputy

STATE OF CALIFORNIA }
COUNTY OF ORANGE } ss.

I, WILLIAM E. ST JOHN, County Clerk and ex-officio Clerk of the Board of Supervisors, do hereby certify that at a regular meeting of the Board of Supervisors of Orange County, California, held on the 2nd day of August, 1972, the foregoing Ordinance containing three (3) sections was passed and adopted by the following vote:

AYES: SUPERVISORS WILLIAM J. PHILLIPS, RONALD W. CASPERS,
R.W. BATTIN AND DAVID L. BAKER
NOES: SUPERVISORS NONE
ABSENT: SUPERVISORS RALPH B. CLARK

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Board of Supervisors of the County of Orange, State of California, this 2nd day of August, 1972.

WILLIAM E. ST JOHN
County Clerk and ex-officio Clerk
of the Board of Supervisors of
Orange County, California

(SEAL)

Publish Coastline Dispatch
August 9, 1972

By June Alexander
Deputy

ORDINANCE NO. 2612

SECTION 1. Section 78.024 of the Codified Ordinances of the County of Orange is hereby amended to read as follows:
Sec. 78.024. On Production.

SECTION 1. Section 78.024 of the Codified Ordinances of the County of Orange is hereby amended to read as follows:
Sec. 78.024. On Production.

In addition to the definitions set forth by the Comprehensive Zoning Code in Section 78.022, the definitions set forth by the Orange County Oil Code in Section 77.013, shall also apply to the following provisions of this section:

(a) Permitted.

(a) Permitted.

In any district where the district symbol is followed by, as a part of such symbol, parenthetically enclosed letter "O", thus: (O), oil drilling and production of oil, gas, and other hydrocarbon substances is permitted.

(b) Prohibited.

The following areas are hereby declared scenic and recreational areas:

- (1) The area within $\frac{1}{4}$ mile of the boundary of O'Neill Park and of Irvine Park.
 - (2) The area within one mile landward of the line of Upper Newport Bay as established and adjudicated by Superior Court Case No. 20136;
 - (3) The area within one mile landward of the coast line measured from mean lower low water datum as established by the U.S. Coast and Geodetic Survey from the easterly jetty of the harbor entrance at Newport Beach to the San Diego County Line.
- (c) Permitted, Subject to conditions.

(c) Permitted. Subject to conditions.
(1) Within any district not designated with (C) and not

- (1) Further, subject to conditions, within any district not designated with (O) and not above described as a scenic and recreational area, the use of land for the drilling and production of oil, gas and other hydrocarbon substances, is permitted upon the hereinafter described "primary conditions," if at the time of the application for a permit to drill there exists either:
- a. 25 or more dwellings within 1320 feet of the proposed location of the well
or
 - b. Six or more dwellings within 660 feet of the proposed location of the well
or
 - c. Any legally established structure used for housing of mentally or physically ill or aged persons having five or more beds, is within 660 feet of the proposed location of the well.
 - d. In the determination of conditions applicable outside of the "O" Districts, improvements and oil wells located within "O" Districts shall not be considered.

(2) Within any district not designated with (O) and not above described as a scenic and recreational area the use of land for the drilling and production of oil, gas, and other hydrocarbon substances is permitted upon the hereinafter described "secondary conditions," if at the time of the application for a permit to drill neither a. nor b. nor c. as described in Sub-section (1) above exists. In the determination of conditions applicable outside of the "O" Districts; Improvements and Oil Wells located within "O" Districts shall not be considered.

(3) The word "Dwelling" as used in this Section means any building or structure which has for its primary purpose human residence.

(4) Primary conditions.

- a. For site selection and preparation.
 1. For drill site location. No drill site shall be located closer than 1320 feet from any drill site other than a drill site located in an "O" District. For the purpose of this Article, the drill site for an oil well existing on May 28, 1958, shall be deemed to be all of the area within 100 feet from the center of the oil well.
 2. Drill site area. No drill site shall contain more than two and one-half acres or be of such size or shape that it cannot be contained within a square three hundred and thirty feet by three hundred and thirty feet.
 3. Number of wells. The number of wells which may be drilled shall not exceed one well to each five (5) acres in the leased area.
 4. Distance from dwelling. No oil well shall be drilled within 175 feet of any dwelling.
 5. Hours of operation. All work in preparation of the site for drilling shall be conducted only between the hours of 7:00 A.M. and 7:00 P.M.
 6. Roads and excavations. Roads and other excavations shall be planned, constructed and maintained so as to provide stability of fill, minimize disfigurement of the landscape, maintain natural drainage and minimize erosion.

7. Cut and fill slopes. No slope of cut or fill shall have a gradient steeper than 1 foot rise in 1 foot horizontal measurement. Where by reason of the soil condition, the condition of the terrain or size or length of the cut required it is impractical to provide such gradient, the Superintendent of Building and Safety may grant an exception to such requirement provided he first finds that compliance with said requirement is impractical and that the integrity of the neighborhood will be maintained if such exception is granted.

8. Slope planting. All excavation slopes, both cut and fill, shall be planted and maintained with grasses, plants, or shrubs during drilling and production operations, but only to an extent reasonably comparable with the general status of undisturbed surfaces in the vicinity.
9. Fencing.

aa. Drilling. Prior to the commencement of drilling operations, the drill site shall be enclosed by an eight foot high solid fence to reduce sound.

bb. Production. Upon completion of the drilling operation, the drill site shall be enclosed by a solid redwood fence or a solid masonry wall eight feet (8') high on all sides, except those sides on which exists a natural or artificial barrier of equal or greater solidity and height. Solid redwood board gates shall be installed and be equipped with keyed locks and shall be kept locked at all times when unattended. Any and all supporting members of the fence shall be on the interior of said fence. Such fence or wall shall be in lieu of any other fencing requirements.

0. Pipelines. All off-site pipelines serving the drill site shall be buried underground.
1. Parking. Parking for all vehicles including those of employees shall be provided on the drill site. Such parking areas shall be surfaced and maintained to prevent dust and mud.

2. Sanitary facilities. Sanitary facilities shall be provided at the drill site and shall be in accordance with Standards of the Orange County Health Department.

b. For drilling. Drilling operations shall be subject to the following limitations.

1. Soundproofing:
aa. When drilling operations are limited to the hours of 7:00 a.m. to 7:00 p.m., with no operation on Sunday, only minimum soundproofing, as determined by the Director of Building and Safety, shall be required.

bb. When drilling operations are to be conducted continuously, the derrick and all machinery shall be enclosed in soundproofing material or otherwise made soundproof to the satisfaction of the Director of Building and Safety.

2. **Lights.** All lights shall be directed or shielded so as to confine direct rays to the drill site.

8. Delivery of equipment. The delivery or removal of equipment or material from the drill site shall be limited to the hours between 7:00 a.m. and 7:00 p.m., except in case of emergency.

4. Drill pipe storage. No drill pipe shall be racked and made up except between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday, except within the derrick when soundproofed as specified in 6b. above.

5. Power sources. All power sources shall be electric motors or muffled internal combustion engines.

6. Maintenance. The drill site and all facilities shall be maintained in a neat, clean, and orderly condition.

Underground installation. All well head equipment shall be installed in cellars and no portion of such equipment shall be on project above the surface of the surrounding ground.

- Motive power soundproofing. Motive power for production operations shall be completely enclosed in a building or buildings insulated with

- sound deadening materials. Such buildings shall be of residential appearance and no portion thereof shall exceed 16 feet in height.
8. Motive power location. Motive power for production operations shall be located on a drill site.
 4. Height of installation. Except as otherwise herein specifically permitted, no permanent installations at the drill site shall be or project more than 8 feet above the surface of the surrounding ground.
 5. Storage of equipment. There shall be no storage of material, equipment, machinery or vehicle which is not for immediate use or servicing of an installation on the drill site.
 6. Maintenance. The drill site and all permanent installations shall be maintained in a neat, clean and orderly condition.
 7. Storage tank location. Storage tanks shall be located on a drill site.
 8. Storage tank capacity. Storage tank capacity at the drill site shall not exceed a total aggregate of 2000 barrels exclusive of processing equipment.
 9. All surfaces of permanent installations within the drill site shall be painted flat dark green or flat brown.
 10. Removal of Oil. Oil produced at the drill site shall be removed therefrom by an underground pipeline or pipelines at all times more than 180 days from and after the date the first well in the drill site is completed.
 11. Refineries. No refinery, dehydrating or absorption plant of any kind shall be constructed, established, or maintained on the drill site or within the outer boundary line.
 12. Gas burning. Natural gas shall not be vented to the atmosphere nor burned by open flare.
 13. Well Servicing. No well servicing shall be done except between the hours of 7:00 A.M. to 7:00 P.M. except in case of emergency.
 14. Signs. No sign which is visible from outside of the drill site shall be caused, permitted or allowed to be or remain any place on the drill site except: (a) Such signs as are required by law, (b) Warning signs, (c) No trespassing signs.
 15. Landscaping. Shrubs shall be planted and maintained along the exterior of the fence or wall enclosing the drill site to relieve its monotonous appearance. This requirement shall not be construed to limit or prohibit additional site beautification by landscaping or other planting.
 16. Off-site pipelines. Within 30 days from and after completion of the drilling of the first well on a drill site, the work of burying all off-site pipelines shall be commenced and completed within a reasonable time thereafter.
- (5) Secondary conditions.
- a. for site selection and preparation.
 1. Drill site Location. No drill site shall be located closer than 1820 feet from any other drill site. For the purpose of this Article the drill site, for an oil well existing on the effective date of Ordinance Number 1096 shall be deemed to be all of the area within 100 feet from the center of the oil well.
 2. Drill site area. No drill site shall contain more than two and one-half acres or be of such size or shape that it cannot be contained within a square three hundred and thirty feet by three hundred and thirty feet.
 8. Roads and excavations. Roads and other excavations shall be planned, constructed and maintained so as to provide stability of fill, minimize disfigurement of the landscape, maintain natural drainage and minimize erosion.
 4. Cut and fill slopes. No slope of cut or fill shall have a gradient steeper than 1 foot rise in 1 foot horizontal measurement. Where by reason of the soil condition of the terrain or size or length of the cut required it is impractical to provide such gradient, the Superintendent of Building and Safety may grant an exception to such requirement provided he first finds that compliance with said requirement is impractical and that the integrity of the neighborhood will be maintained if such exception is granted.
 5. Slope planting. All excavation slopes, both cut and fill, shall be planted and maintained with grasses, plants, or shrubs during drilling and production operations, but only to an extent reasonably comparable with the general status of undisturbed surfaces in the vicinity.
 6. Off-street parking. An off-street parking area containing not less than 5 parking spaces, each of which shall be at least 10 feet by 20 feet, shall be provided for each well being drilled and shall be surfaced and maintained in accordance with the requirements of The Orange County Oil Code.
 7. Sanitary facilities. Sanitary facilities shall be provided at the drill site and shall be in accordance with standards of the Orange County Health Department.
- b. For drilling.
1. Lights. All lights shall be directed or shielded so as to confine direct rays to the drill site.
 2. Power sources. All power sources shall be electric motors or muffled internal combustion engines.
- c. For production operations.
1. Motive power locations. Motive power for production operations shall be located on a drill site.
 2. Height of pumping equipment. No walking beam type pumping equipment shall project more than ten feet at its highest point of rise above the surrounding ground level.
 3. Storage tank location. Storage tanks shall be located on the drill site.
 4. Height of storage tanks. No oil storage tank shall exceed 18 feet in height above the ground level.
 5. Height of wash tanks. No wash tank shall exceed 24 feet in height nor exceed 8 feet in diameter.
 6. Fencing. Within 30 days from completion of the first well on a drill site, such site shall be enclosed by a solid redwood fence or solid masonry wall 8 feet high on all sides, except those sides on which exists a natural or artificial barrier of equal or greater solidity and height. Solid redwood board gates shall be installed and be equipped with keyed locks and shall be kept locked at all times when unattended. Such fence or wall shall be in lieu of any other fencing requirements.
- (d) Basic safety regulations.
- All drilling and production of oil, gas and other hydrocarbon substances, whether permitted pursuant to this Section, or Section 78.0223 are subject to the regulations of The Orange County Oil Code.
- SECTION 2: This Ordinance shall take effect and be in full force thirty (30) days from and after its passage, and before the expiration of fifteen (15) days after the passage thereof shall be published once in the Buena Park News & Independent, a newspaper published in the County of Orange, State of California, together with the names of the members of the Board of Supervisors voting for and against the same.
- RONALD W. CASPERS
Chairman of the Board of Supervisors
of Orange County, California
- (SEAL)
ATTEST:
WILLIAM E. ST JOHN
County Clerk and ex-officio Clerk
of the Board of Supervisors of
Orange County, California
By JUNE ALEXANDER
Deputy
STATE OF CALIFORNIA
- ss.
COUNTY OF ORANGE
I, WILLIAM E. ST JOHN, County Clerk and ex-officio Clerk of the Board of Supervisors, do hereby certify that at a regular meeting of the Board of Supervisors of Orange County, California, held on the 2nd day of August, 1972, the foregoing Ordinance containing two (2) sections was passed and adopted by the following vote:
- AYES: SUPERVISORS: WILLIAM J. PHILLIPS, DAVID L. BAKER, R. W. RATTIN AND RONALD W. CASPERS
- NAYS: SUPERVISORS: NONE
ABSENT: SUPERVISORS: RALPH B. CLARK
- IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Board of Supervisors of the County of Orange, State of California, this 2nd day of August, 1972.
- (SEAL)
WILLIAM E. ST JOHN
County Clerk and ex-officio Clerk
of the Board of Supervisors of
Orange County, California
By JUNE ALEXANDER
Deputy
- Publish: August 9, 1972.
Buena Park News & Independent — 446.

APPLICATION FOR AUTHORITY TO CONSTRUCT

PLEASE READ INSTRUCTION SHEET BEFORE FILLING OUT THIS FORM

In accordance with the Provisions of the Health & Safety Code, State of California, and the Rules & Regulations of the Orange County Air Pollution Control District, application is hereby made for Authority to Construct the following equipment:

Hirt Vapor Phase Reactor #7 (Details were presented to your office in our application to construct Reactor #1, dated July 14, 1959).

(Give complete name of unit, plus any descriptive details necessary for clarity)

Located at Termination of W. 17th Street Costa Mesa, Calif.
No. Street City or Community

1. Is this application for Basic Process ☐ and/or Control Equipment ☒?
2. Is this an initial ☒ application or a renewal ☐ due to change of ownership ☐, location ☐, or process ☐?
3. If a renewal due to change of ownership or location, give name of previous owner and/or previous location of equipment _____
4. Estimated starting date for construction Jan. 2, 1969 (est. delivery date 2/27/69)
5. Estimated completion date March 1, 1969
6. Estimated cost of construction \$20,000.00
7. Permit to be issued to G. E. KADANE & SONS
(Name of person or firm which is to operate equipment)
8. Address P. O. Box 1487, Newport Beach, Ca.
9. Nature of business Oil Producers
10. Corporation ☐ Partnership ☒, or Individual Owner ☐?
11. Signature of responsible member of firm.

T. W. Bunnell Secondary
Signature Recovery Supervisor
Title

12. Type or print name of person signing T. W. Bunnell
13. Date of application 11/19/68 Phone No. 642-3350

Following to be executed by qualified consulting engineer.

"I hereby certify that I have examined the plans and specifications pertaining to the above designated equipment and process. I further certify that in my opinion the proposed installation, operated in the process specified and using the materials described in the accompanying plans and data, will not produce quantities of air contaminants in excess of those permitted by the State Health & Safety Code and the Rules and Regulations of the Orange County APC District."

SIGNED _____ TITLE _____

Type or Print Name _____ DATE _____

ADDRESS _____ PHONE _____

All plans, specifications and data requested in instruction sheet must accompany this application.

Reactor #8 will be a duplicate of Reactor #7

10/4/60

AIR POLLUTION CONTROL DISTRICT
COUNTY OF ORANGE

10B

PERMIT

IS HEREBY GRANTED TO

G. E. KADANE & SONS

TO OPERATE

ONE HIRT VAPOR PHASE FUME INCINERATOR NO. 8, 50-HP,
located at

Termination of W. 17th St., Costa Mesa, Calif.

SUBJECT TO THE FOLLOWING CONDITIONS

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 20, CHAPTER 2, ARTICLE 3, OF THE HEALTH AND SAFETY CODES OF THE STATE OF CALIFORNIA OR THE RULES AND REGULATIONS OF THE AIR POLLUTION CONTROL DISTRICT.

DATE June 23, 1970

WILLIAM FITCHEN
AIR POLLUTION CONTROL OFFICER

PERMIT NO. 70-2233

By: Douglas F. Jeffrey
Douglas F. Jeffrey (Title)
Air Pollution Engineer

REVOCABLE AND NOT TRANSFERABLE