### **KERSEY & COMPANY**

DRILLING AND OIL PRODUCTION Phone SH 6-3671 • P. O. Box 316 • 808 W. Grand ARTESIA. NEW MEXICO 88210

May 21, 1965

Oil Conservation Commission State of New Mexico State Capitol Building Santa Fe, New Mexico

> Re: Application for Administrative approval to expand the Twin Lakes flood by the conversion of four producing wells to injection wells.

5

Gentlemen:

.

In accordance with Commission Order No. R-1470, Kersey & Co. respectively request administrative approval to convert the following wells to water injection in Eddy County, New Mexico.

| Lease      | Well No. | Location  |
|------------|----------|---|
| Twin Lakes | 7        | Unit M - Section 28,<br>T18S, R28E.             |
| Twin Lakes |          | Unit M - Section 28                             |
| Yates      | 2        | Unit <sup>°</sup> C - Section 33<br>T18S, R28E. |
| Yates      | 3        | Unit D - Section 33<br>T18S, R28E.              |

The following data pertinent to the proposed expansion are given:

(1) The proposed wells are directly offset by producing wells which have shown response to the waterflood project. See attached for C-116 and Exhibit No. 1.

(2) Exhibit No. 1 indicated all offset operators and injection wells in the Twin Lakes Flood. A copy of this application and a waiver form is being sent to Petroleum Corporation of Texas and International Oil and Gas Company as they are the offset operators to the proposed expansion. These waivers will be forwarded to you as soon as they are received.

(3) Exhibit No. 2 indicated present injection data. It is evident that some of the wells are not as receptive to water injection as others, thus, it is desirable to place wells on injection as early as responses warrant in order to maintain a flood balance.

(4) Exhibit No. 3 gives performance curves for the overall waterflood project.

(5) Exhibit No. 4 is disgramatic sketch of the proposed injection well.

(6) Injection water is furnished this project by the Petroleum Corporation of Texas and is fresh water furnished by the Caprock Water Company. The maximum anticipated injection rate is 250 barrels of water per day.

(7) Twin Lakes No. 1 and No. 7 wells will be completed for injection as follows: 3 1/2" E.U.E. tubing will be set through the upper Grayburg Zone at 2000<sup>1</sup> - 2015<sup>1</sup>. Zone will be perforated and lightly fractured. Water will be injected under a Baker tension packer set at 1990' on plastic lined 1 1/4" tubing.

(8) Yate\$ #2 and #3 will be completed by cementing new 4 1/2" 9.5# casing through the upper Grayburg zone at 2015' - 2030', then perforating and lightly fracturing. A Baker tension packer set at 2000' on 2" plastic coated tubing will be used for injection. Please note that originally it was planned to drill injection well No. 15 located in Unit M, Section 28 but in the interest of economy and overall conservation it has been decided to convert Yates #2 to injection and not drill well No. 15.

Permission was granted previously to convert Twin Lakes No. 7 to injection. When the well was cleaned out preparatory to placing on injection it flowed oil and in the interest of conservancy it was decided to wait for conversion of this well until the oil production dropped down. Such is the case now and the well only produces a few barrels per day.

We will appreciate any consideration the Commission can give in expediting this request.

Yours very truly,

KERSEY & COMPANY Haved Icusey

Harold Kersey

HK:cq

# GAS-OIL RATIO REPORT

| OPERATOR |       | Kerse    | y & Compai | ny               | POOL                 | <br>Artes | a |   |   |    |
|----------|-------|----------|------------|------------------|----------------------|-----------|---|---|---|----|
| ADDRESS  | P. O. | Box 316, | Artesia,   | N. Mex.          | MONTH OF             | <br>May,  |   |   |   | 65 |
|          |       |          |            |                  |                      |           | ١ | , | - |    |
|          |       |          |            | (See Instruction | ons on Reverse Side) |           |   |   |   |    |

|            | Well I | Date of | ate of Producing | Choke Test | Tert  | Daily              | Produ          | Production During Test |            |                            |
|------------|--------|---------|------------------|------------|-------|--------------------|----------------|------------------------|------------|----------------------------|
| Lease      | No.    | Test    | Method           | Size       | Hours | Allowable<br>Bbls. | Water<br>Bbls. | Oil<br>Bbls.           | Gas<br>MCF | GOR<br>Cu. Ft.<br>Per Bbl. |
| Drilled Au | gust,  | 1925    |                  | i          |       |                    |                |                        |            |                            |
| Initial Pr | oduct  | ion at  | beginn <b>en</b> | g of flo   | od    |                    |                |                        |            |                            |
| ates       | 1      |         |                  |            |       |                    |                | 1/2                    |            |                            |
| Present Pr | oduct  | ion     |                  |            |       |                    |                |                        |            |                            |
| ates       | 1      | 5/11    | Pump             |            |       |                    |                | 4                      |            |                            |
|            |        |         |                  |            |       |                    |                |                        |            |                            |
|            |        |         |                  |            |       |                    |                |                        |            |                            |
|            |        |         |                  |            |       |                    |                |                        |            |                            |
|            |        |         |                  |            |       |                    |                |                        |            |                            |

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60 degrees F. Specific gravity base will be 0.60.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission. In accordance with Rule 301 and Appropriate Pool Rules.

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

| -    | May | 21, |
|------|-----|-----|
| Date |     | ,   |

1965

| Kersey & Company |  |
|------------------|--|
| Company          |  |
| By Harold Leisey |  |
| Owner            |  |
| Title            |  |

Exhibit #2

# GAS-OIL RATIO REPORT

| OPERATOR      | Kersey  | & Company          | POOL                 | Artesia |             |
|---------------|---------|--------------------|----------------------|---------|-------------|
| ADDRESS P. O. | Box 316 | , Artesia, N. Mex. | MONTH OF             | May,    | 19 65<br>19 |
|               |         |                    |                      |         | -           |
|               |         | (See Instructio    | ons on Reverse Side) |         |             |

|     |         |    | Well  | Date of | Date of Producing | Choke Test | Daily | Produ              | iction Du      | ring Test    | GOR        |                     |
|-----|---------|----|-------|---------|-------------------|------------|-------|--------------------|----------------|--------------|------------|---------------------|
|     | Lease   |    | No.   | Test    | Method            | Size       | Hours | Allowable<br>Bbls. | Water<br>Bbls. | Oil<br>Bbls. | Gas<br>MCF | Cu. Ft.<br>Per Bbl. |
|     |         |    |       |         |                   |            |       |                    |                |              |            |                     |
|     | Drilled | in | 1925  |         |                   |            |       |                    |                |              |            |                     |
|     | Initial | Pr | oduct | on at   | beginnin          | g of flo   | bd    |                    |                |              |            | i                   |
| win | Lakes   |    | 2     |         |                   |            | '     |                    |                | 1            |            | 1                   |
|     | Present | Pr | oduct | on      |                   |            | ]     |                    |                |              |            |                     |
| win | Lakes   |    | 2     | 5/12    | Pump              |            |       |                    |                | 5            |            |                     |
|     |         |    |       |         |                   |            |       |                    |                |              |            |                     |
|     |         |    |       |         |                   |            |       |                    |                |              |            |                     |
|     |         |    |       |         |                   | ł          |       |                    |                | l            |            |                     |

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60 degrees F. Specific gravity base will be 0.60.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission. In accordance with Rule 301 and Appropriate Pool Rules.

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

| Date | May | 21, | 1965 |
|------|-----|-----|------|
| Datc |     |     |      |

| Kersey & Company |
|------------------|
| By Harold Kersey |
| Owner            |
| Title            |

# GAS-OIL RATIO REPORT

| OPERATOR | Kersey & Company          | POOL               | Artesia |   |
|----------|---------------------------|--------------------|---------|---|
|          | Box 316, Artesia, N. Mex. |                    |         |   |
|          |                           |                    |         | - |
|          | (See Instruction          | s on Reverse Side) | )       |   |

|     |            | Well  | Date of | Producing Choke | Test Daily -  | Produ         | uction Du          | ring Test      | GOR          |            |                     |
|-----|------------|-------|---------|-----------------|---------------|---------------|--------------------|----------------|--------------|------------|---------------------|
|     | Lease      | No.   | Test    | Method          | Choke<br>Size | Test<br>Hours | Allowable<br>Bbls. | Water<br>Bbls. | Oil<br>Bbls. | Gas<br>MCF | Cu. Ft.<br>Per Bbl. |
|     |            |       |         |                 |               |               |                    |                |              |            |                     |
|     | Drilled De | cembe | r, 1950 |                 |               |               |                    |                |              |            |                     |
|     | Initial P  | oduct | ion whe | en drille       | d             |               |                    |                |              |            | 1                   |
| win | Lakes      | 10    |         |                 |               |               |                    |                | 35           |            |                     |
|     | Present P  | oduct | ion     |                 |               |               |                    |                |              |            |                     |
| win | Lakes      | 10    | 5/13    | Pump            |               |               |                    |                | 15           |            |                     |
|     |            |       |         |                 |               |               |                    |                |              |            |                     |
|     |            |       |         |                 |               |               |                    |                |              |            |                     |
|     |            |       |         |                 |               |               |                    |                |              |            |                     |

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60 degrees F. Specific gravity base will be 0.60.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission. In accordance with Rule 301 and Appropriate Pool Rules,

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

May 21, 1965

|      | Kersey & Company |
|------|------------------|
| •••• | By Harold Keisey |
|      | Owner            |
|      | Title            |

# GAS-OIL RATIO REPORT

| OPERATOR | Kersey & Company        | <b>P</b> OOL       | Artesi | а |
|----------|-------------------------|--------------------|--------|---|
|          | < 316, Artesia, N. Mex. |                    |        |   |
|          |                         |                    |        |   |
|          | (Sec Instruction        | s on Reverse Side) |        |   |

|       |            | Well     | Date of     | Producing     | Choke              | Test           | Daily        | Produ      | iction Dur                 | ing Test | GOR      |
|-------|------------|----------|-------------|---------------|--------------------|----------------|--------------|------------|----------------------------|----------|----------|
| Lease | Lease      | No. Test | Method Size | Test<br>Hours | Allowable<br>Bbls. | Water<br>Bbls. | Oil<br>Bbls. | Gas<br>MCF | GOR<br>Cu. Ft.<br>Per Bbl. |          |          |
|       |            |          | 10(0        |               | _                  |                |              |            |                            |          |          |
|       | Drilled Ja | nuary    | , 1963      |               |                    |                |              |            |                            |          |          |
|       | Initial Pr | oduct    | ion whe     | n drille      | ď                  |                |              |            |                            |          |          |
| Twin  | Lakes      | 14       |             |               |                    |                |              |            | 40                         |          | i<br>  1 |
|       |            |          |             |               |                    |                |              |            |                            |          |          |
|       | Present Pr | oduct    | ion         |               | į                  |                |              |            |                            | i        |          |
| Twin  | Lakes      | 14       | 5/14        | Pump          |                    |                |              |            | 15                         |          |          |
|       |            |          |             |               |                    |                |              |            |                            |          |          |
|       | :          |          |             |               |                    |                |              |            |                            | 1        |          |
|       |            |          |             |               |                    |                |              |            |                            |          |          |
|       |            |          |             |               |                    |                |              |            |                            |          |          |

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60 degrees F. Specific gravity base will be 0.60.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission. In accordance with Rule 301 and Appropriate Pool Rules.

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

Date. May 21, 1965

| Kersey & Company |
|------------------|
| Company          |
| By Harved Kersey |
| Owner 🧹          |
| Tille            |

.....

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

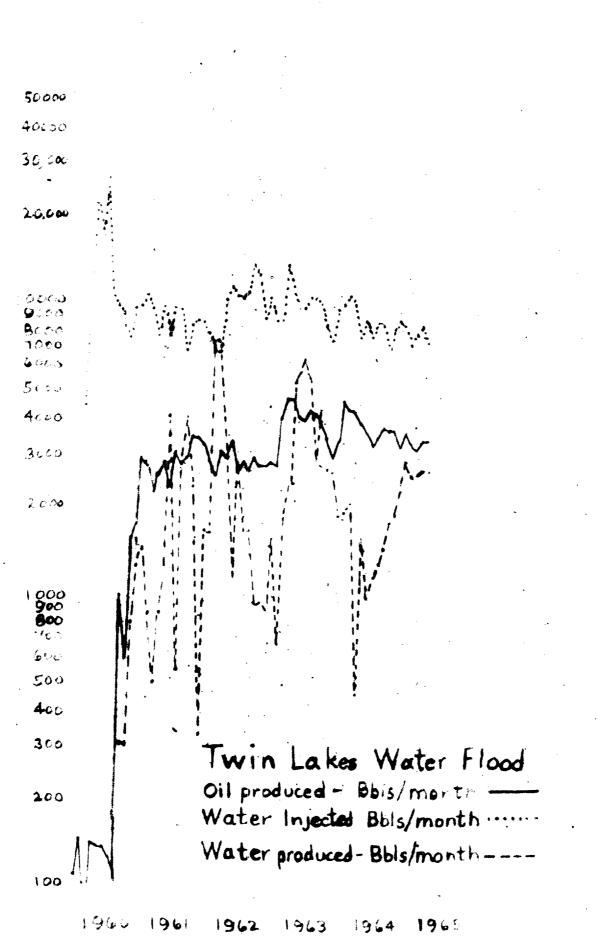
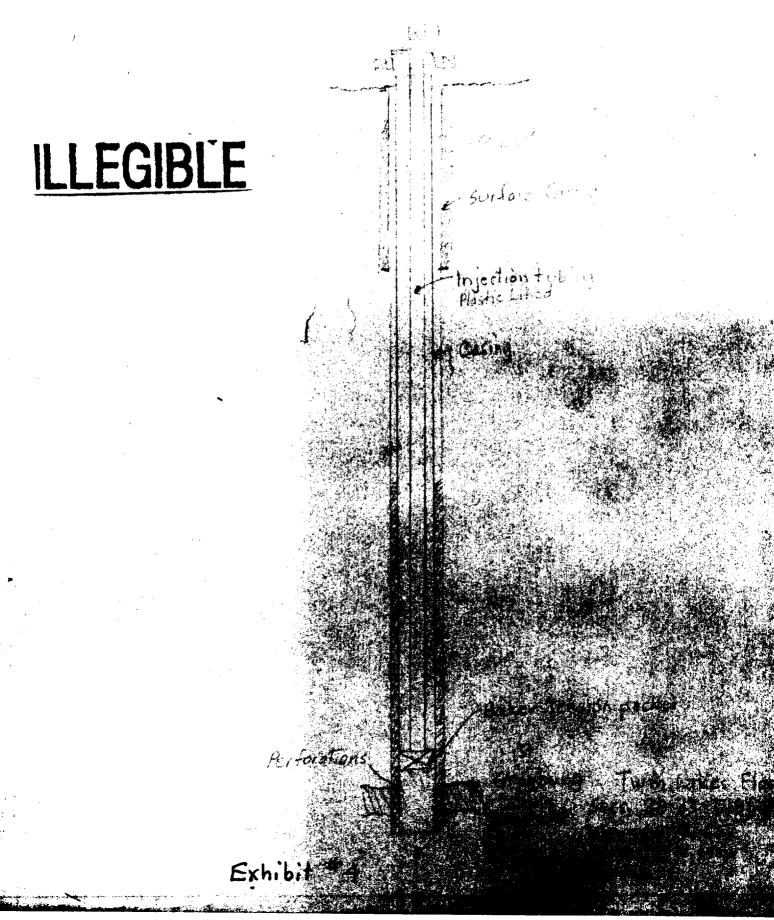


Exhibit #3

The Method of Completing Interior We the Theshe Latter Hord



### **KERSEY & COMPANY**

DRILLING AND OIL PRODUCTION Phone SH 6-3671 • P. O. Box 316 • 808 W. Grand ARTESIA, NEW MEXICO 88210

May 24, 1965

International Oil & Gas Corporation 119 S. Roselawn Ave. Artesia, New Mexico

Gentlemen:

It is the desire of Kersey & Company to expand the water injection program in the Twin Lakes Flood in Eddy County, New Mexico. The expansion is to include the following wells:

| LEASE      | WELL NO. | LOCATION                        |  |  |  |  |
|------------|----------|---------------------------------|--|--|--|--|
| Twin Lakes | 7        | Unit M, Section 28, T18S, R28E. |  |  |  |  |
| Twin Lakes | 1        | Unit M, Section 28, T18S, R28E. |  |  |  |  |
| Yates      | 2        | Unit C, Section 33, T18S, R28E. |  |  |  |  |
| Yates      | 3        | Unit D, Section 33, T18S, R28E. |  |  |  |  |

A fifteen day waiting period is set up by the Commission unless waivers are obtained from all offset operators.

In order to expedite matters, please sign and return two (2) copies of this letter to this office if you have no objection to the proposed expansion.

Yours very truly,

KERSEY & COMPANY

Harold Kersey

HK:cq

COMPANY International Oil & Gas Corporation

melon SIGNED B