

July 24, 1972

OIL CONSERVATION COMMISSION

PERMIT

FILE NO.

4808

Skelly

10-4-72

File: Skelly Unit  
Lease No. 73617  
Grayburg-Jackson Pool  
Eddy County, New Mexico

Re: Application for waterflood expansion

New Mexico Oil Conservation Commission  
State Land Office Building  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Attention: Mr. Secretary-Director

Gentlemen:

Skelly Oil Company respectfully requests administrative approval to expand its Skelly Unit waterflood in the Grayburg-Jackson Pool, Eddy County, New Mexico. The Skelly Unit waterflood project was authorized by order R-2900 issued May 4, 1965 and amended by order R-3214 dated April 7, 1967.

The Skelly Unit waterflood has been expanded as follows:

1. Initial injection Wells 42, 44, 46, 52, 54, and 56 in 1965 by R-2900.
2. Expand and convert Wells 24 and 34 in July, 1967 by R-3214.
3. Expand and convert Well 98 in December, 1967 by WFX278.
4. Expand and convert Wells 19, 21, 22, 24, 26, 30, 32, 38, 40, 48, 58, 71, 73, 83, 85, 86, and 105 in March, 1968 by R-3214.
5. Expand and convert Wells 64, 66, 67, 75, 77, 89, 93, and 95 in August, 1968 by WFX290.
6. Expand and convert Wells 79 and 81 in August, 1970 by WFX327.
7. Expand and convert Wells 69, 91, and 100 in December, 1970 by WFX354.
8. Expand and convert Wells 87 and 102 in May, 1971 by WFX357.
9. This application for Well No. 114.

DISTRICT OFFICE  
FILE COPY

COPIES TO:

Atlantic Richfield, P. O. Box 1610, Midland, Texas 79701

Catty Oil Company, P. O. Box 1231, Midland, Texas 79701

Hanagan & Hanagan, P. O. Box 1737, Roswell, New Mexico 88201

William A. & Edward R. Hudson, 1510 1st Nat'l Bank Bldg., Ft. Worth, Texas 76100

Kersey and Company, 808 West Grand, Artesia, New Mexico 88210

Murchison & Closuit & Mr. Ernest Closuit, 1019 Ft. Worth Nat'l Bank Bldg.  
Ft. Worth 2, Texas 76100

State Land Office, P. O. Box 2088, Santa Fe, New Mexico 87501

New Mexico Oil Conservation Commission, Drawer DD, Artesia, New Mexico 88201

United States Geological Survey, P. O. Drawer "U", Artesia, New Mexico 88201

The subject waterflood as governed by the provisions of Rule 701, 702, and 703 of the Oil Conservation Commission rules and regulations; provided that the Secretary-Director of the Commission may approve expansion of the Grayburg-Jackson Skelly Unit waterflood project to include additional wells, within said unit area, on water injection as may be necessary to complete an efficient waterflood pattern. We consider this application to be included under this provision.

Skelly Oil Company desires to expand the waterflood and requests administrative approval to convert the following well to water injection:

Township 17 South, Range 31 East  
Skelly Unit Well No. 114, Unit Letter D, Section 14

Under order R-3214 Skelly Oil Company was authorized to effect a waterflood project in the Grayburg-Jackson Pool in the Skelly Unit by the selective injection of water into various zones throughout the Grayburg-Jackson vertical producing interval. Skelly Oil Company requests approval to inject into the Grayburg-Jackson interval in the subject well. It is our intention to equip the proposed injector as an injector in the Grayburg-Jackson interval and also a producer in the Seven Rivers zone. Application for dual completion of this well has already been submitted.

Attached is a map showing all wells within a two mile radius, a unit plat showing the present and proposed injection wells, schematic diagram and log sections of the proposed well, an analysis of the water to be injected, and duplicate copy of C-115 on offsets.

Limited response has been noted in the area of Well No. 114; although less than desired magnitude for this area due to the limited volumes of water which have been injected into this portion of the unit. The proposed injection well's producing capacity and other producing wells which directly offset the proposed injection well are shown by the following tabulation:

Skelly Ut. Well No.	Daily Production			Daily Production		
	Date	Oil	Water	Date	Oil	Water
183 m	Feb., 1966	2.7	24.0	April, 1972	3.6	7.1
108	April, 1971	17.0	25.7	April, 1972	18.4	26.8
114 (Prop. WIW)	Jan., 1972	New Well		April, 1972	4.0	0.2
102	April, 1971	1.0	0.6	April, 1972	3.0	2.0

Injection water will be purchased from Double Eagle Water Company. The water is fresh and taken from the Ogallala formation as shown by the water analysis. Anticipated injection rate is 300 to 600 BPD at pressure of 1,500 to 2,000 psig.

This proposed expansion is in line with our plan of operation for the Skelly Unit.

Skelly Unit  
Page No. 3  
July 24, 1972

Offset operators are being notified by a copy of this application in accordance with the attached mailing list.

Very truly yours,  
SKELLY OIL COMPANY

(Signed) C. J. LOVE

C. J. Love  
District Production Manager

HED/re

Attachments

Area 2 mile Radius Map  
Lease Plat  
Schematic Diagram  
Log Section  
Water Analysis  
C-115 forms

*HED*

*BOP 7/31*

*n.d.n 3/1*

*JSM*

*PP 8/1/72*

COPIES TO:

Atlantic-Richfield, Box 1610, Midland, Texas 79701

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Hanagan Oil Company, Box 1737, Roswell, New Mexico 88201

Hudson and Hudson, 1510 1st, Nat'l Bank Bldg., Fort Worth, Texas 76100

Kersey and Company, 808 West Grand, Artesia, New Mexico 88210

Murchison & Closuit, 1019 Fort Worth Nat'l Bank Bldg., Fort Worth 2, Texas 76100

U.S.G.S (for approval-two copies) Drawer "U", Artesia, New Mexico 88210

July 24, 1972

BEFORE EXAMINER  
OIL CONSERVATION COMMISSION

EXHIBIT NO. 9

SE NO. 4808

Filed by Skelly

Date 10-4-72

File: Skelly Unit Well No. 114  
Lease No. 736172

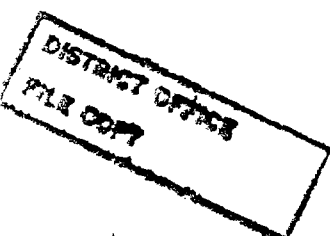
Re: Application for Administrative  
Approval of a Dual Completion

New Mexico Oil Conservation Commission  
State Land Office Building  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Gentlemen:

In the matter of application of Skelly Oil Company seeking administrative approval to dual complete its Skelly Unit Well No. 114 located in unit D of Section 14-17S-31E in the Fren Seven Rivers Pool and the Grayburg-Jackson San Andres Pool, Eddy County, New Mexico, and in support thereof does state:

- A. Skelly Oil Company is the sole owner of oil and gas lease consisting all Sec. 11, all Sec. 14, all Sec. 15, all Sec. 21, all Sec. 22, all Sec. 23, all Sec. 26, all Sec. 27, all Sec. 28, and all Sec. 33, Township 17South, Range 31East, N.M.P.M., Eddy, County, New Mexico.
- B. That Skelly Unit Well No. 114 is located 660 FWL and 660 FWL of Section 14-17S-31E.
- C. That the applicant has prior duals on lease (Wells No. 3 and 11). Applicant does plan to dual complete subject Well No. 114 in the following manner.
  1. Set Baker Model "D" packer at 3,300' to segregate the two zones.
  2. Perforate 5-1/2" Csg. in the Seven Rivers section between 2289 and 2468', also perforated Grayburg-San Andres section between 3373 to 3772'.
  3. Produce by pumping Seven Rivers oil from the upper zone and injecting water into the Grayburg-San Andres thru parallel



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strings of tubing; injection side will be internally coated for protection.

- D. 1. Diagrammatic sketch of the proposed multiple completion showing all down hole conditions.
2. Plat showing location of all wells on applicant's lease also offset wells on offset leases.
3. That all offset operators are hereby notified by a copy of this application.
4. Electric log of subject well with all tops and bottoms of producing zones and intervals of perforations.
5. All of above submitted complete and accurate to the best of our knowledge.

Therefore, applicant prays that Secretary of the Commission grant permission to dual complete the above well in the interest of conservation and protection of correlative rights.

Respectfully submitted,  
SKELLY OIL COMPANY

(Signed) C. J. LOVE

C. J. Love  
District Production Manager

HED/rc

Attachments:

Lease Plat

Area Map

Down Hole Schematic

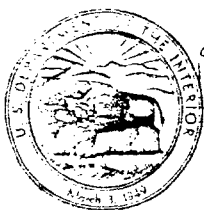
Section of Electric-Log

C-107 Application for Dual -

AED

130P

7/26



3111's copy  
United States Department of the Interior

GEOLOGICAL SURVEY

P. O. Drawer U  
Artesia, New Mexico 88210

September 21, 1972

Skelly Oil Company  
Post Office Box 1351  
Midland, Texas 79701

Gentlemen:

Your letter of September 7, 1972 requests approval to dually complete the Skelly Unit well No. 114 on oil and gas lease Las Cruces 029418(b) located 660/N&W sec. 14, T. 17 S., R. 31 E., N.M.P.M., Eddy County, New Mexico, by producing from the Seven Rivers formation and injecting into the San Andres formation.

The dual completion and operation of this well as outlined in your application is satisfactory to this office and hereby approved subject to approval by the New Mexico Oil Conservation Commission.

Sincerely yours,

Robert L. Beekman  
Assistant District Engineer

cc:  
Roswell

RECEIVED
OIL CONSERVATION COMMISSION
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4808
Skelly
10-4-72