



# SKELLY OIL COMPANY

P.O. Box 730, Hobbs, New Mexico

May 24, 1965

Re: Lovington San Andres Unit  
Lea County, New Mexico

Mr. A. L. Porter, Jr., Secretary-Director  
New Mexico Oil Conservation Commission  
P.O. Box 2088  
Santa Fe, New Mexico

Dear Mr. Porter:

Skelly Oil Company, operator of the Lovington San Andres Unit Waterflood, hereby requests authority to convert its producing Unit Well No. 1 to water injection service. The subject well is located in the SE SE corner of Section 25, T16S, R36E which is within the Unit boundary. Eligibility for conversion of the well by administrative approval under the governing Rule 701 (E) set forth by Order No. 2278 does not apply in that no response in direct offset wells or the subject well has been noted. However, in that no change in Unit allowable will be effected, and that no wells outside the Unit offset the subject well, approval to the proposed conversion by administrative action is requested.

In support of our request we submit the following conclusions ascertained in an engineering study of waterflood performance:

- (1) No response in production has been noted in offset or diagonal offset wells to the Unit Well Nos. 4 and 6 since start of the water injection project,
- (2) Injection rates and wellhead pressures substantiate a pressure fall-off test on Unit Well No. 4 which indicates limited injection capacity in that area of the reservoir,
- (3) Cumulative water volumes injected in Unit Well Nos. 4 and 6 have not been at sufficient rates to obtain the desired response in offset producing wells within a reasonable time period.

Water injection rates in the Unit No. 4 Well have been approximately 165 B/D at a wellhead pressure near the injection plant pressure of 1750 psig. The total volume of water injected into the well to January 1, 1965, has been 112,467 barrels. Unit Well No. 6 has had 96,907 barrels of water injected to January 1, 1965, and its average injection rate has been approximately 130 B/D. Comparison of injection rates in Unit Well Nos. 4 and 6 with the field average of 420 B/D per well indicates the need for an

Lovington San Andres Unit  
Mr. A. L. Porter - May 24, 1965

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additional injection well in the vicinity of these two wells. Cumulative injected water volumes also indicate this need in that an excess of 300,000 barrels per well have been injected into patterns operating under similiar conditions and exhibiting comparable reservoir withdrawal volumes as exist for Unit Well No. 4.

Attached to this letter is a plat of the Lovington San Andres Unit showing the location of Unit Well No. 1 and a schematic diagram depicting the proposed injection well completion. Injection of the Ogallala water, presently used as the Unit water source, will be through internally plastic coated tubing below a packer and into the open hole San Andres interval. Anticipated injection volumes will be approximately 100-125 B/D. Sufficient quantities of cement were used in completion of the well to insure protection of all fresh water sands.

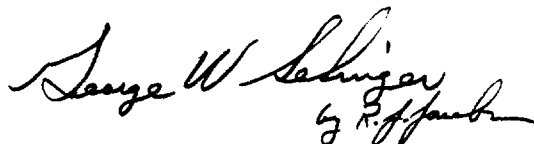
A copy of this letter and attachments have been submitted to the State Engineer's Office in Santa Fe, New Mexico.

It is also the intention of Skelly Oil Company to drill the injection well location situated in the NW SW of Section 36, T16S, R36E, as authorized in the original order for the Unit. Approval has been obtained from Unit partners for drilling this Unit No. 59 well and preparation of required New Mexico Oil Conservation Commission forms are in progress.

Your handling of the matter concerning conversion of Unit Well No. 1 by administrative approval will be appreciated. If you have any questions pertaining to this request, please contact:

Mr. Charles J. Love, District Engineer  
SKELLY OIL COMPANY  
Express 3-5131  
Hobbs, New Mexico

Very truly yours,  
SKELLY OIL COMPANY

A handwritten signature in cursive script, appearing to read "G. W. Selinger", with a smaller signature below it that appears to read "by R. J. [unclear]".

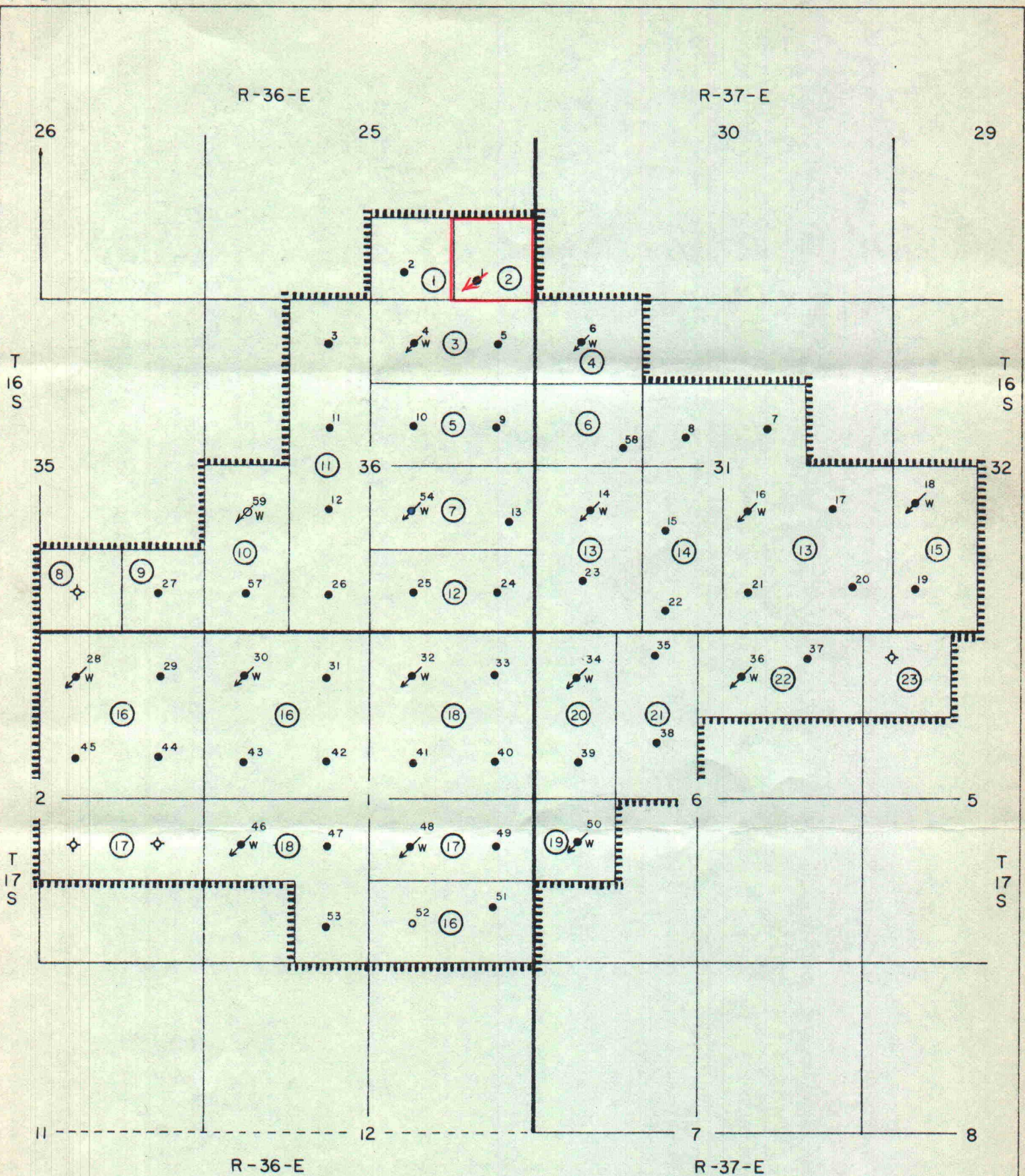
G. W. Selinger

JTC/bh

CC: G. W. Selinger

State Engineer's Office  
P.O. Box 1079  
State Capital  
Santa Fe, New Mexico  
Attn: Frank E. Irby



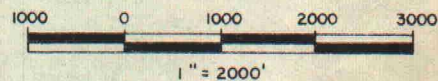


# LOVINGTON SAN ANDRES UNIT LEA COUNTY, NEW MEXICO

## LEGEND

- UNIT AREA
- TRACT NO.
- UNIT WELL NO.

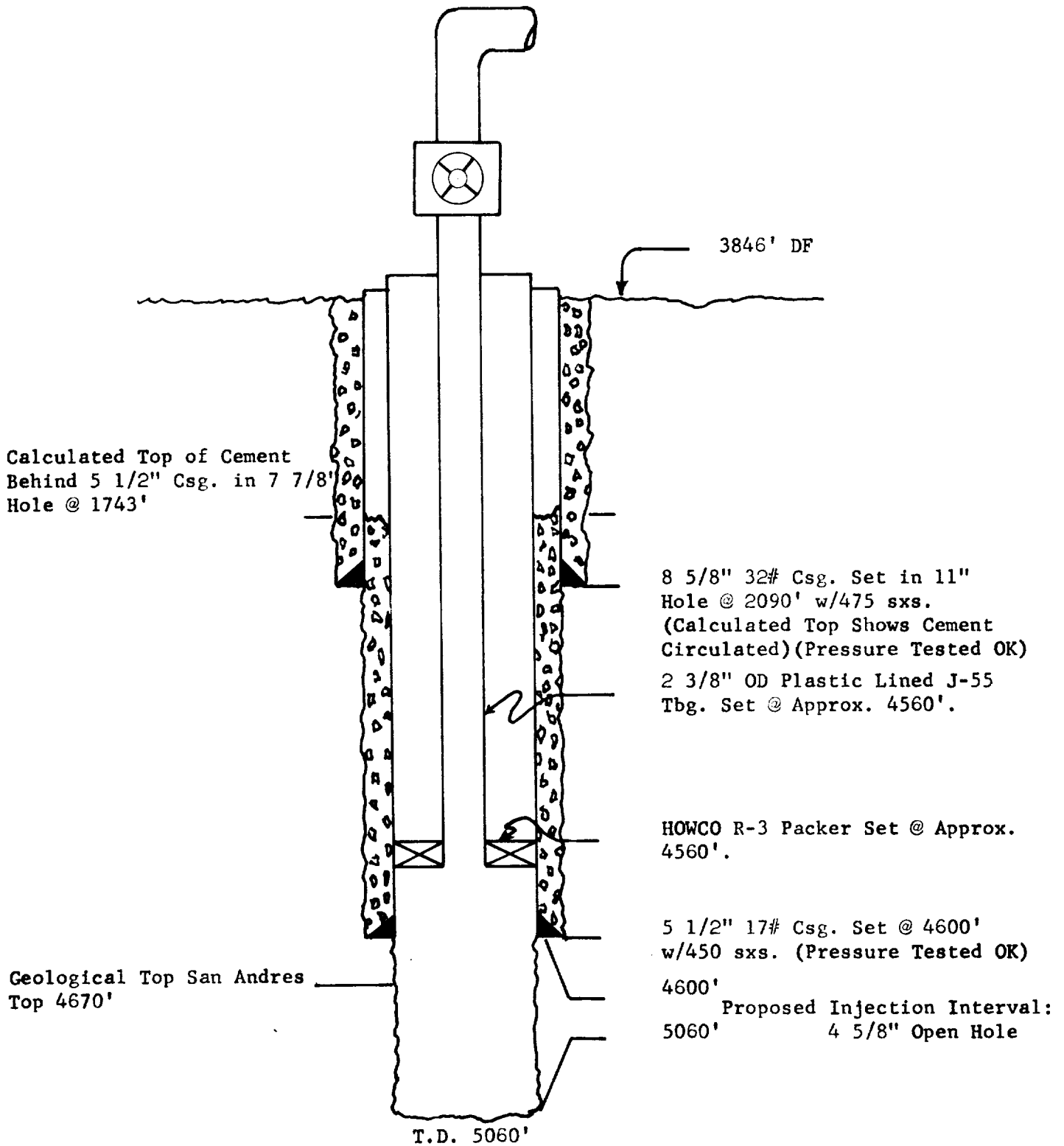
## SCALE





SKELLY OIL COMPANY

LOVINGTON SAN ANDRES UNIT WELL NO. 1  
990' FEL & 330' FSL Section 25, T16S, R36E





STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

June 2, 1965

ADDRESS CORRESPONDENCE TO:  
STATE CAPITOL  
SANTA FE, N. M.

Mr. A. L. Porter, Jr.  
Secretary-Director  
Oil Conservation Commission  
Santa Fe, New Mexico

Dear Mr. Porter:

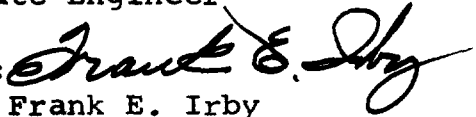
Reference is made to the application of Skelly Oil Company which seeks administrative approval to convert its producing Unit Well No. 1 in the Lovington San Andres Unit Water flood to water injection service, which is dated May 24, 1965.

After reviewing the application and the exhibits attached thereto, it appears that no threat of contamination to the waters which may exist in the area will occur. Therefore, this office offers no objection to the granting of the application, provided the construction and equipping of the proposed injection well are in accordance with the application and diagrammatic sketch.

Yours truly,

FEI/ma  
cc-Skelly Oil Co.  
Charles J. Love  
F. H. Hennighausen

S. E. Reynolds  
State Engineer

By:   
Frank E. Irby  
Chief  
Water Rights Div.