

## RESERVE OIL AND GAS COMPANY

FIRST SAVINGS BUILDING, MIDLAND, TEXAS 79701  
TELEPHONE: 915/682-4341June 10, 1975  
W 72-426

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Attention Mr. Joe D. Ramey

Re: Application of Reserve Oil and Gas  
Company to Expand South Langlie  
Jal Unit Waterflood Project

Gentlemen:

New Mexico Oil Conservation Commission Order No. R-4022A, dated October 14, 1970, authorized Reserve Oil and Gas Company to initiate a waterflood project in the South Langlie Jal Unit, Jalmat Oil Pool, by the injection of water into the Seven Rivers and Queen formations through ten injection wells. The injection of water into the ten authorized wells was commenced April 16, 1971. On January 12, 1972, New Mexico Oil Conservation Commission Order R-4240 authorized the expansion of the waterflood project to include South Langlie Jal Unit Well No. 23 as a water injection well. Water injection into this well commenced February 4, 1972. As of May 1, 1974, a total of 7,202,336 barrels of water has been injected into the eleven injection wells.

Reserve requests authorization to convert the following wells to water injection wells:

<u>Well No.</u>	<u>Unit Letter</u>	<u>Location</u>
SLJU No. 24	O	1650' FEL & 660' FSL, Sec. 18, T-25-S, R-37-E, Lea County, New Mexico
SLJU No. 26	M	330' FWL & 330' FSL, Sec. 17, T-25-S, R-37-E, Lea County, New Mexico

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In support of this application, the following exhibits are attached:

- Exhibit A     Map of South Langlie Jal Unit Area
- Exhibit B     Diagrammatic Sketch of Typical Well Log and  
                 Vertical Limits, South Langlie Jal Unit
- Exhibit C     Log of South Langlie Jal Unit No. 24
- Exhibit D     Log of South Langlie Jal Unit No. 26
- Exhibit E     Diagrammatic Sketch of South Langlie Jal Unit No. 24
- Exhibit F     Diagrammatic Sketch of South Langlie Jal Unit No. 26
- Exhibit G     Production History of Wells Offsetting Proposed  
                 Injection Wells
- Exhibit H     Production History of Proposed Injection Wells
- Exhibit I     Production and Injection History of South Langlie Jal Unit

The conversion of South Langlie Jal Unit Wells No. 24 and 26 to injection wells will result in an improvement of the injection pattern of the waterflood project which should result in a more thorough and efficient sweep of the oil by the waterflood. Exhibit A indicates the location of the existing and proposed injection wells in the area.

It is proposed to inject approximately 350 barrels of water per day into the Seven Rivers and Queen formations of each of the proposed injection wells as indicated on Exhibit B. Injection will be down 2 3/8" internally coated tubing below a tension type packer set approximately 50 feet above the perforated interval or casing seat as indicated on Exhibits C and D. The tubing-casing annulus will contain fresh water inhibited for corrosion protection. The water for injection will be purchased from the Skelly water system. This water is saline and classified as non-potable. In addition to the water purchased from Skelly, the produced water from the Unit will also be injected.

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As indicated on Exhibit G, South Langlie Jal Unit Wells 20 and 22 (which offset the proposed injection wells) have experienced a substantial response to the water injection project. South Langlie Jal Unit Wells 25 and 27, which also offset the proposed injection wells, have not yet experienced a response to the water injection project.

A copy of this application has been sent to the offset operators listed below via certified mail.

Your consideration of this application will be greatly appreciated.

Very truly yours,

RESERVE OIL AND GAS COMPANY



Erd M. Johnson

ck

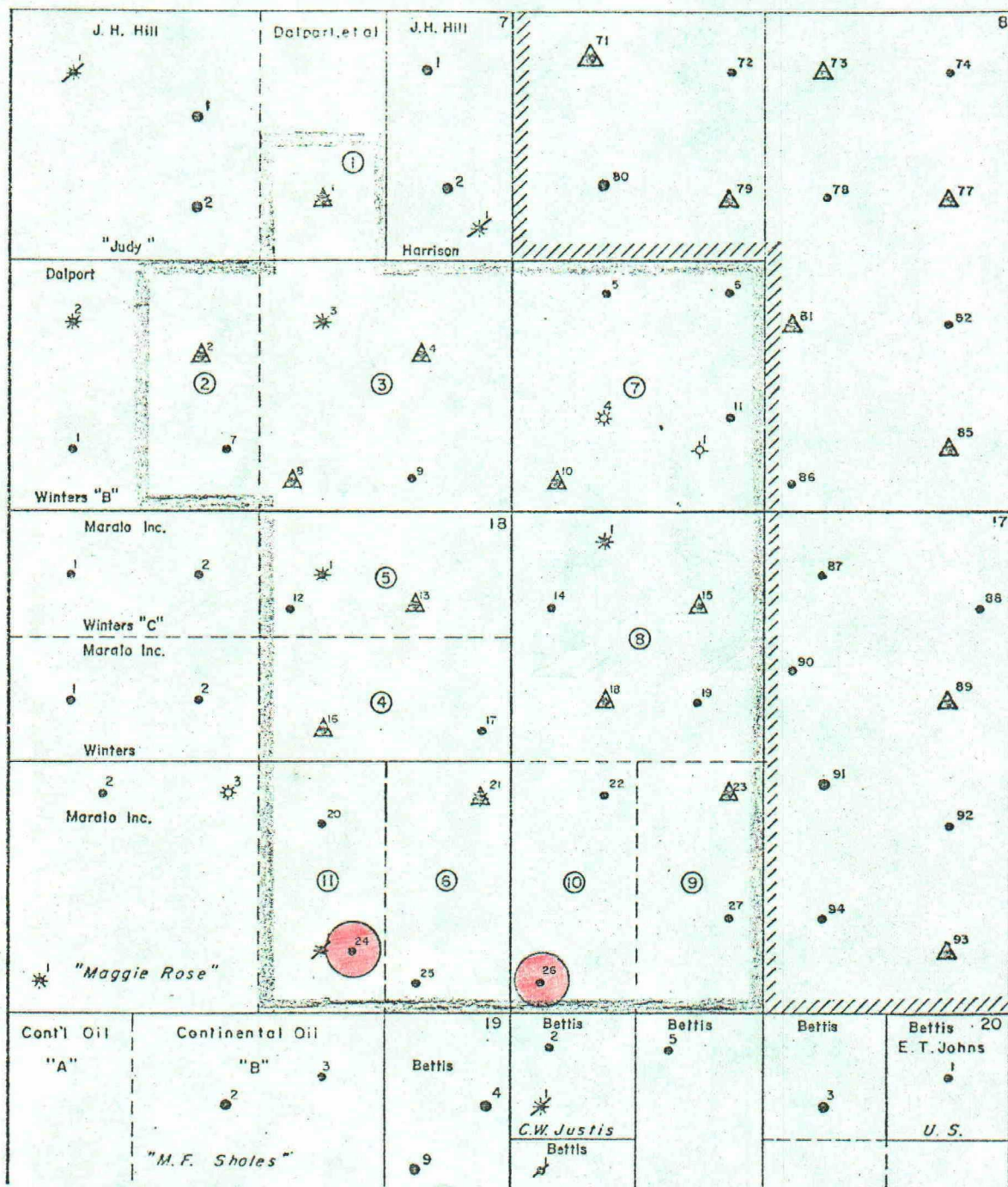
Attachments

cc: Bettis, Boyle & Stovall  
P. O. Box 1168  
Graham, Texas 76046

Continental Oil Company  
P. O. Box 460  
Hobbs, New Mexico 88240

Maralo, Inc.  
P. O. Box 832  
Midland, Texas 79701

R 37 E

T  
25  
S

//// UNIT BOUNDARY - LANGLE-JAL (UNION TEXAS PETR.)

//// UNIT BOUNDARY - SO. LANGLE-JAL (R.O.G.)

① TRACT NUMBER

▲ INJECTION WELL

● Proposed Injection Well

EXHIBIT A

RESERVE OIL &amp; GAS CO.

SOUTH LANGLE - JAL UNIT

JALMAT (OIL) FIELD

LEA COUNTY, NEW MEXICO

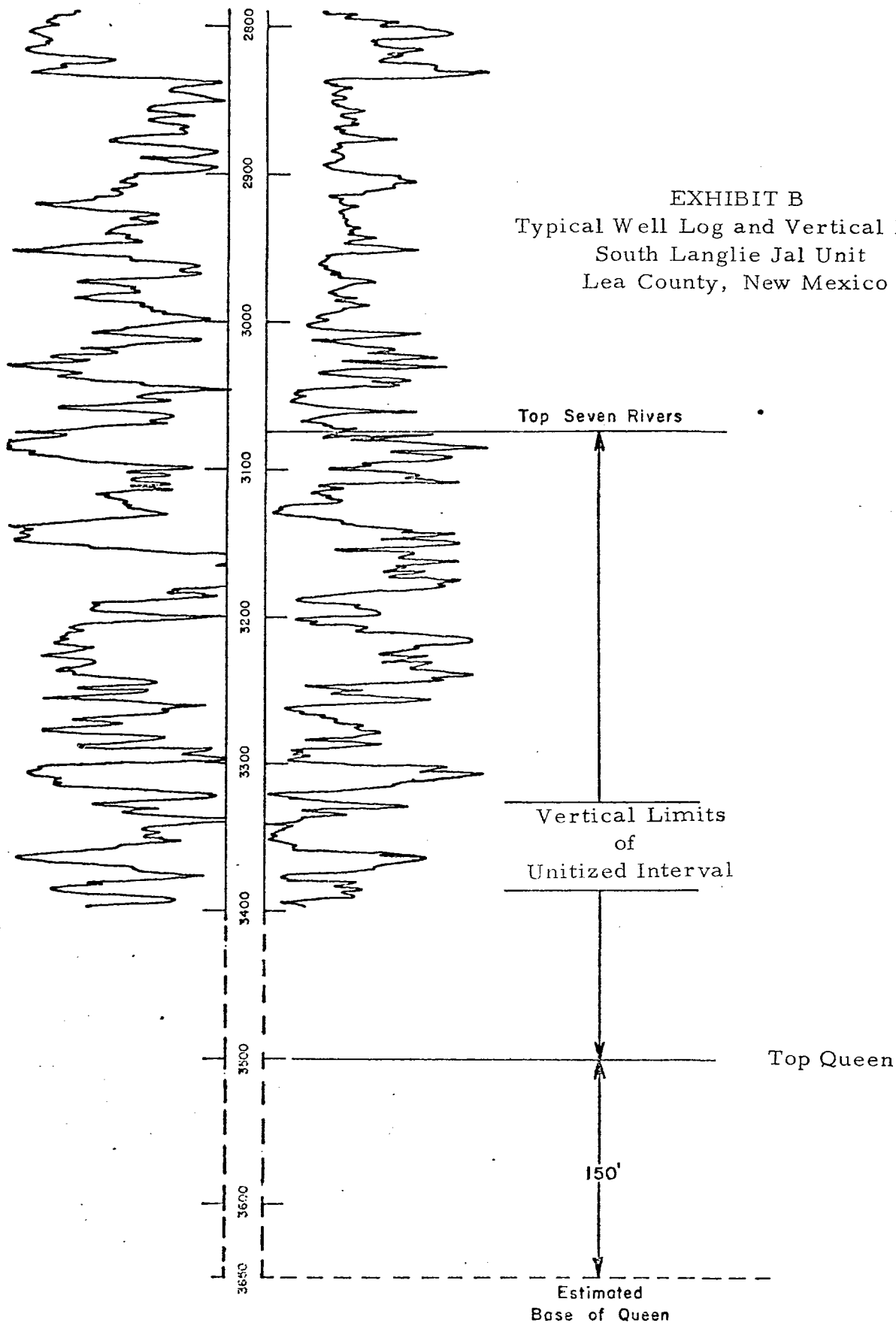
GRAPHIC SCALE FEET

1000 500 0 1000 2000

DRAWN BY	REVISOR BY	RESERVE OIL & GAS COMPANY
DATE	DATE	
APPROVED	APPROVED	
DATE	DATE	

RESERVE OIL AND GAS COMPANY  
 South Langlie Jal Unit No. 18  
 Sec. 17, T-25-S, R-37-E

EXHIBIT B  
 Typical Well Log and Vertical Limit  
 South Langlie Jal Unit  
 Lea County, New Mexico



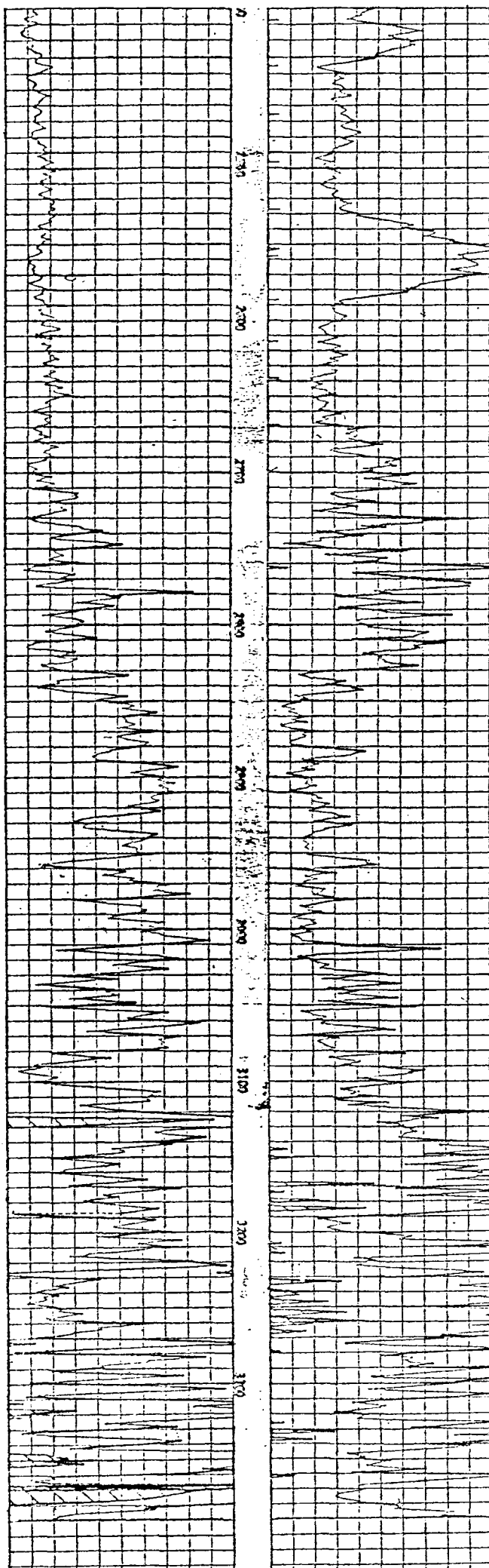


EXHIBIT C  
Log of South Langlie Jal Unit  
Well No. 24



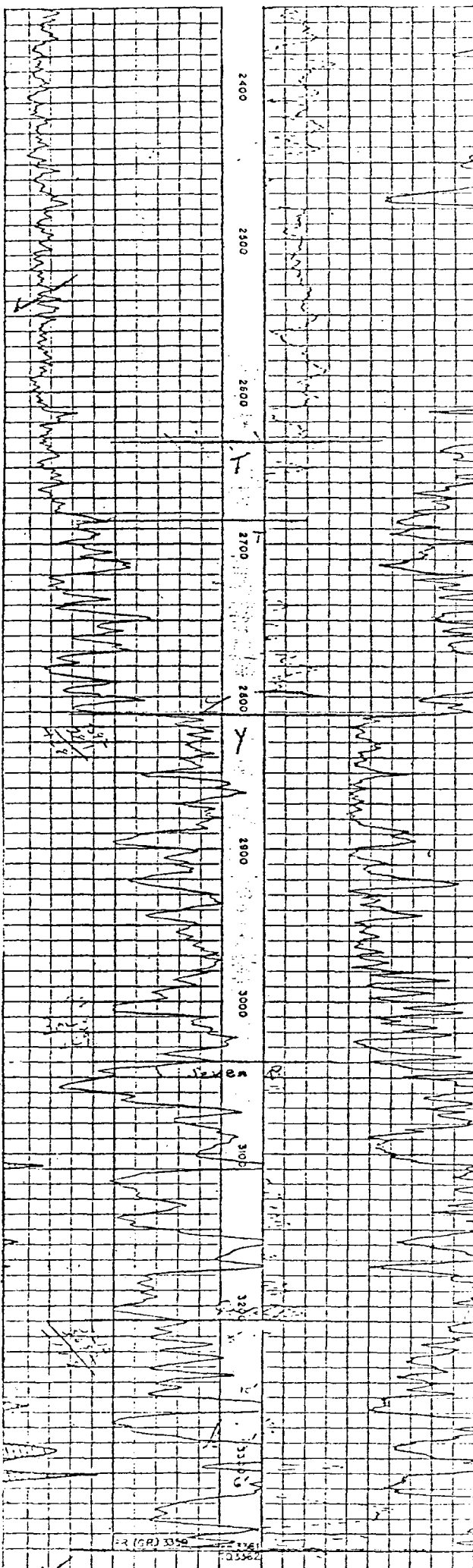


EXHIBIT D  
Log of South Langlie Jal Unit  
Well No. 26

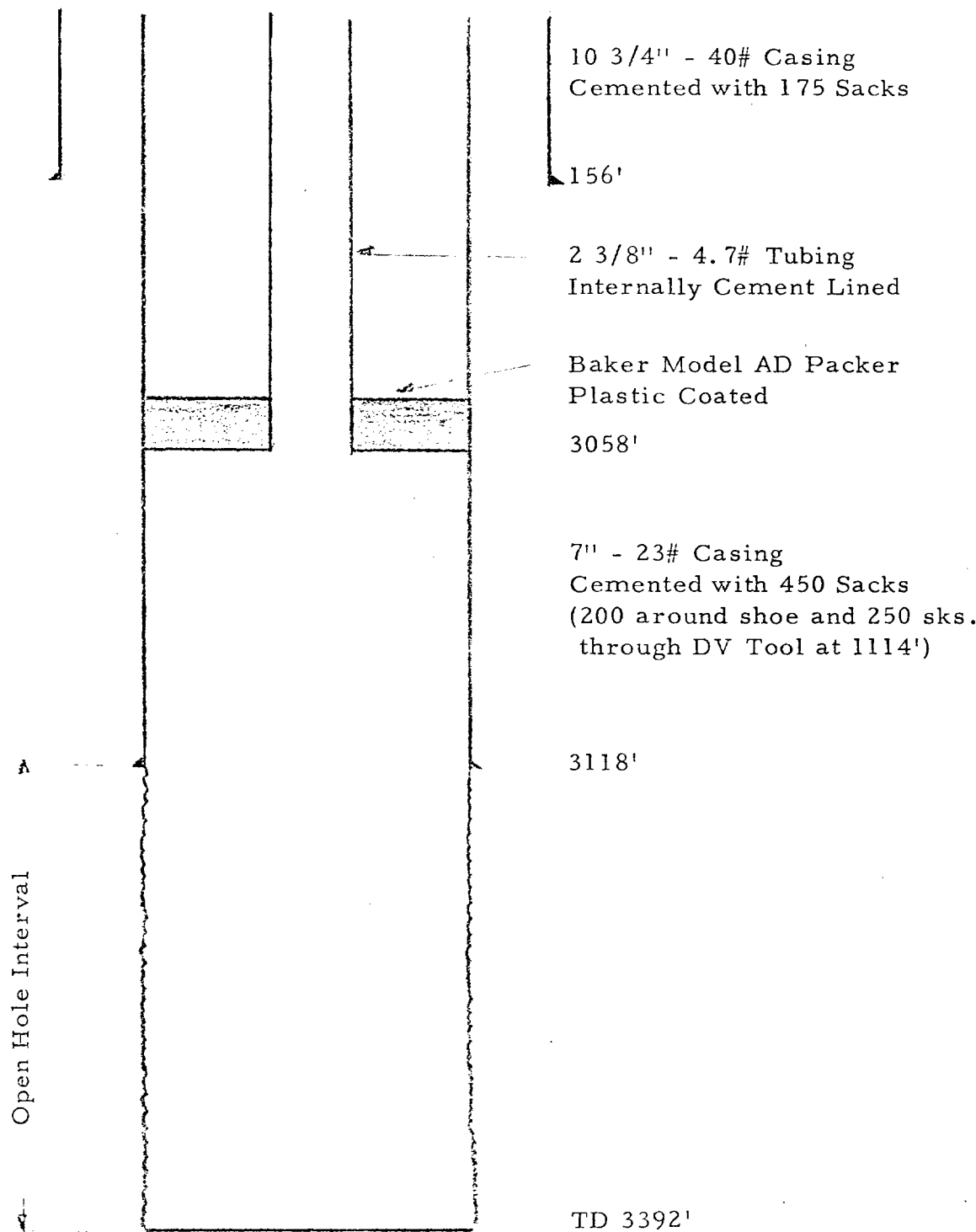


EXHIBIT E  
Schematic Diagram  
Reserve Oil and Gas Company  
South Langlie Jal Unit No. 24  
Jalmat Oil Pool  
Lea County, New Mexico



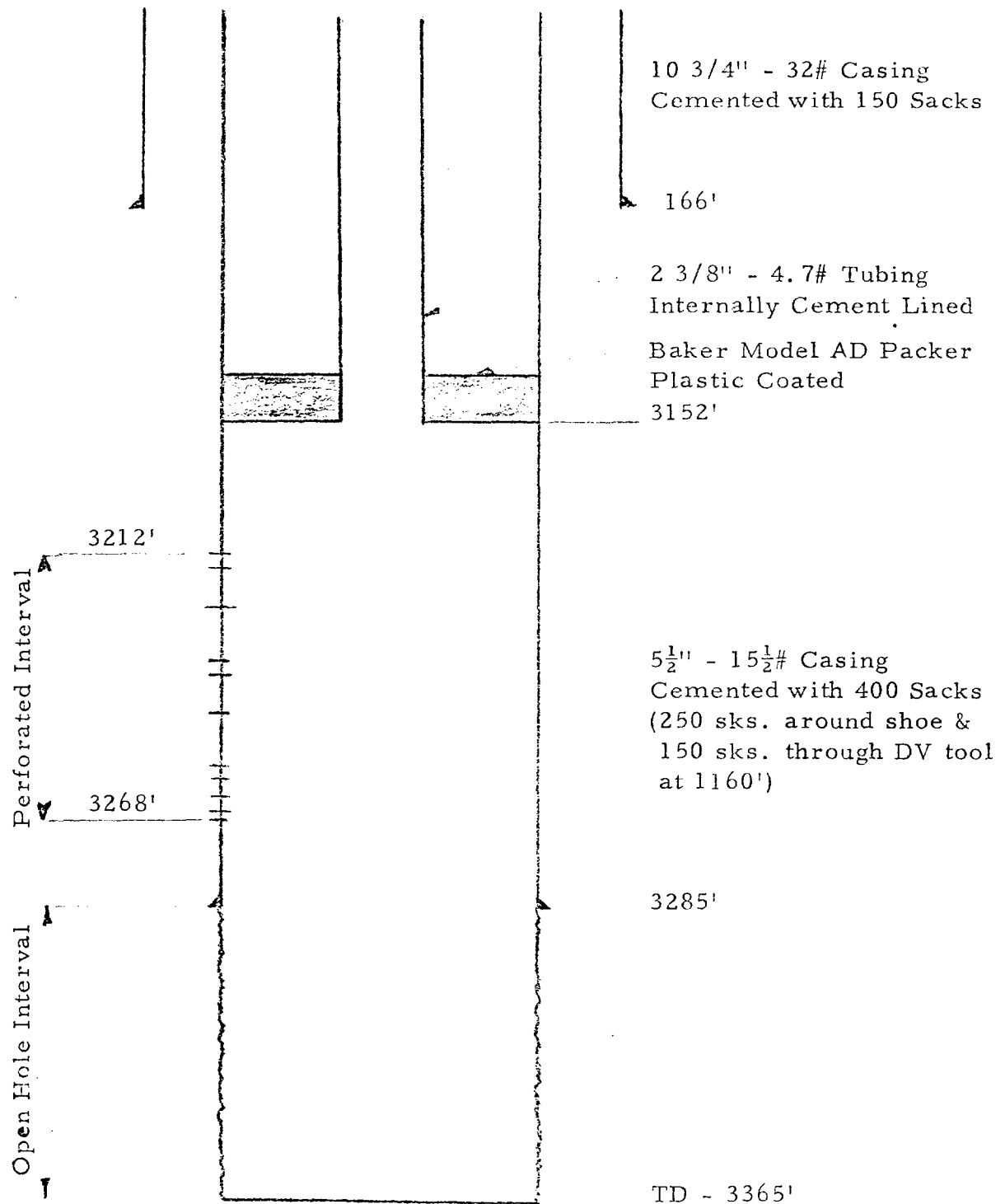
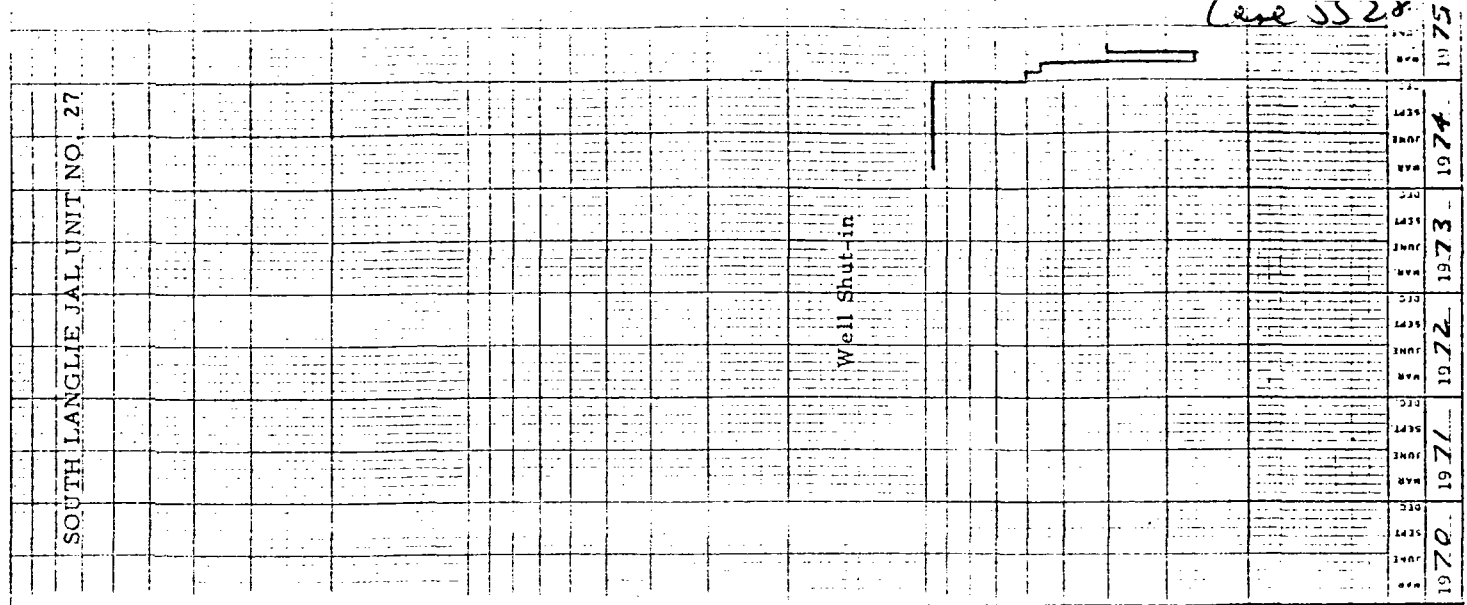
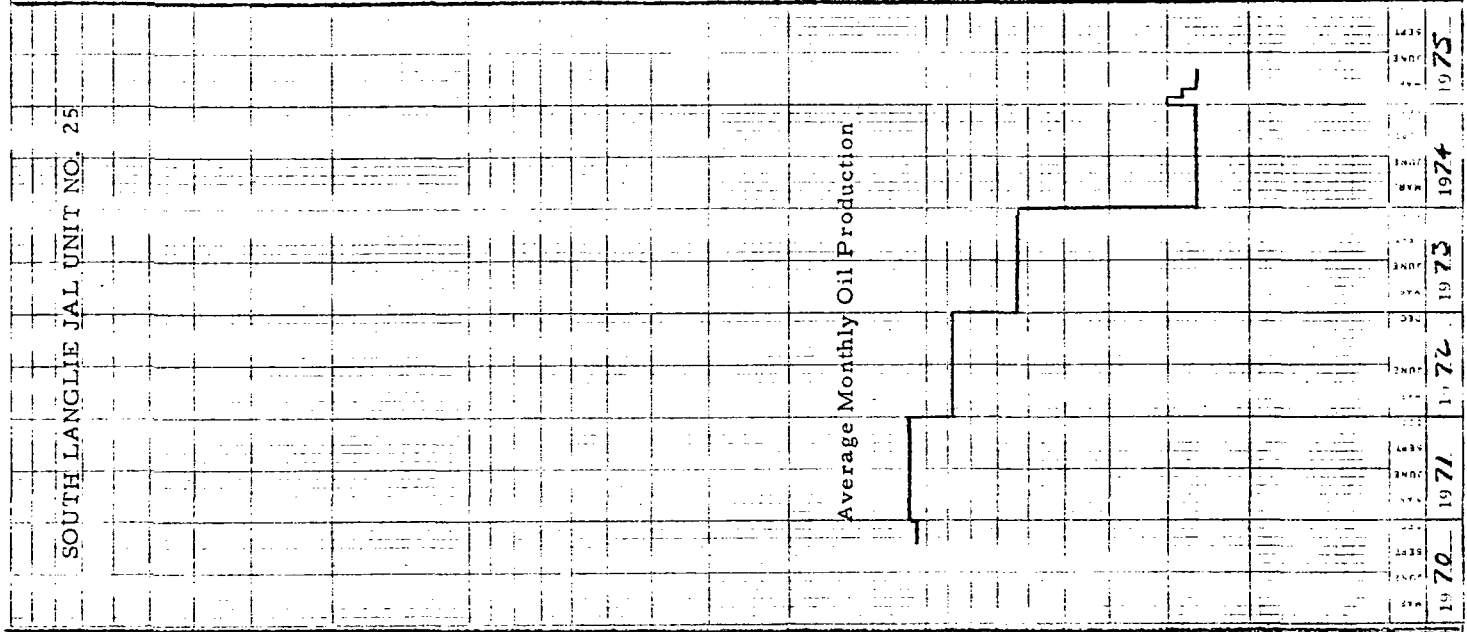
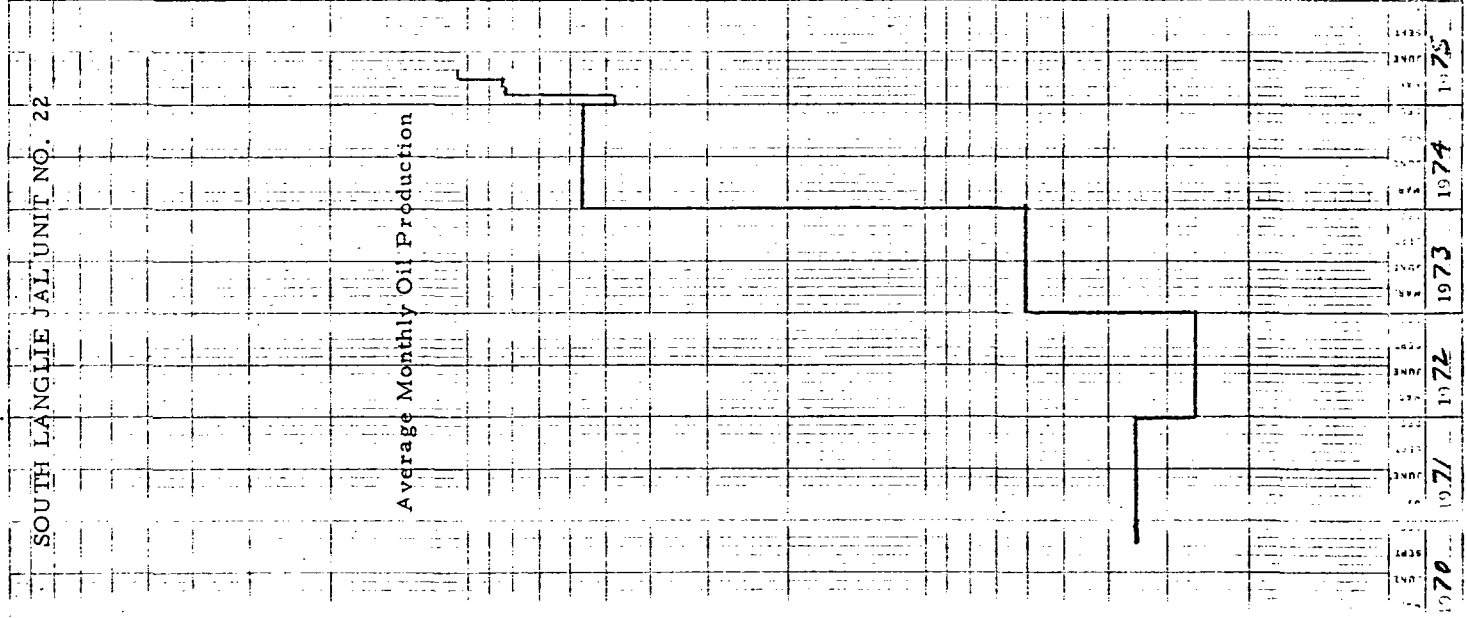
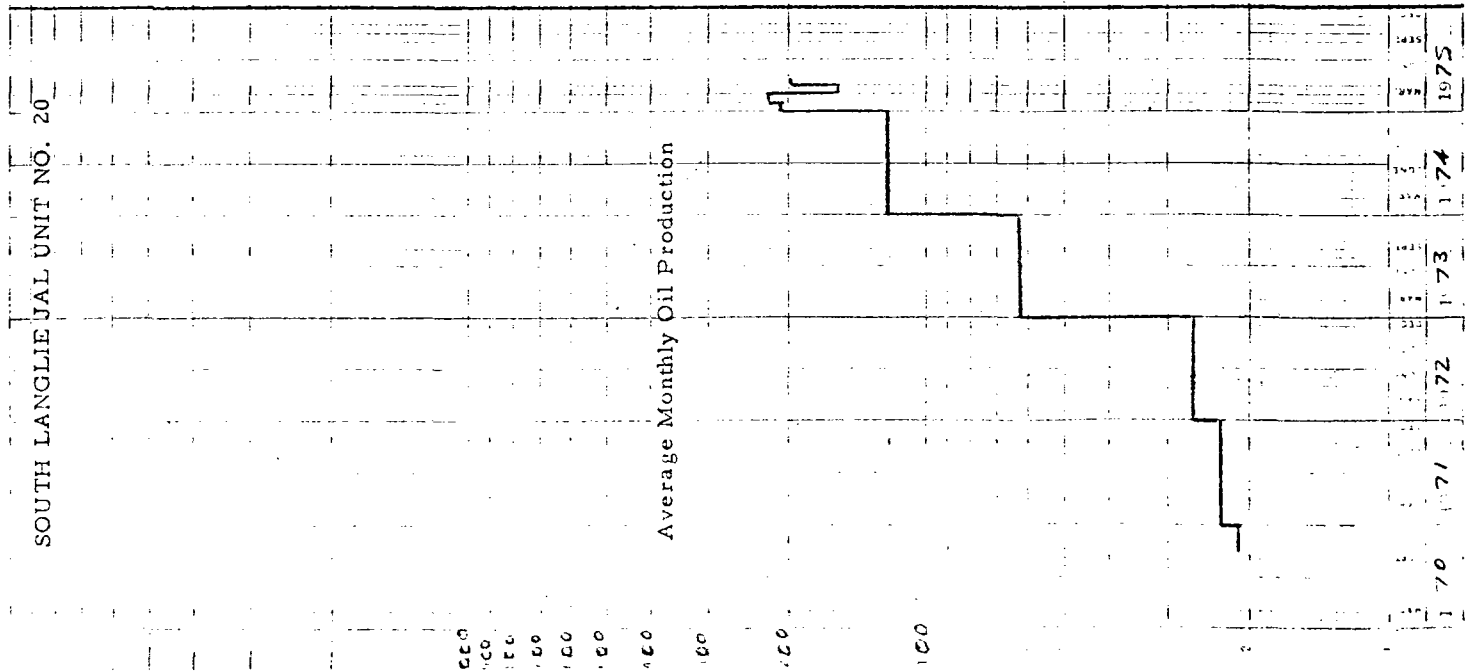
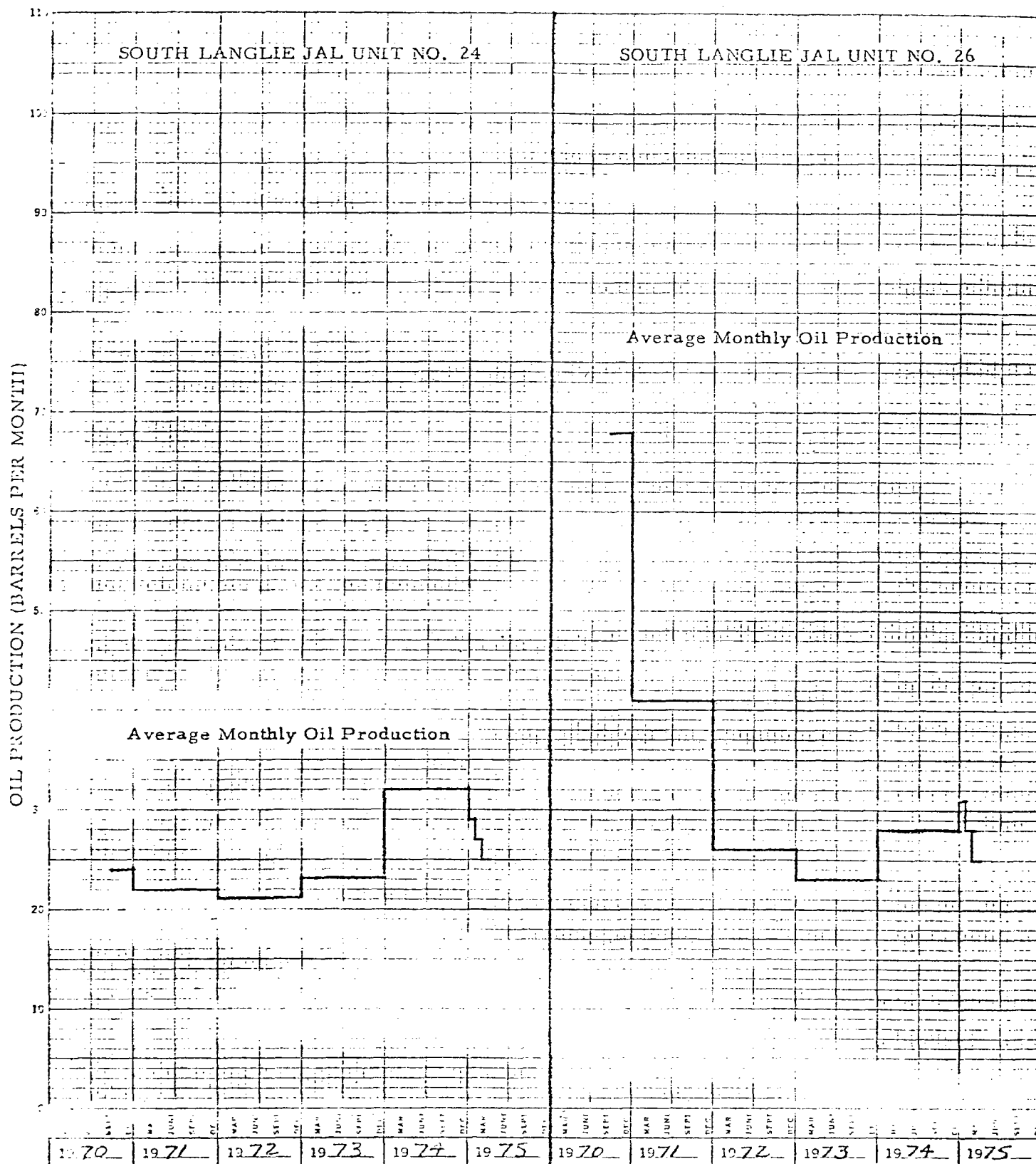


EXHIBIT F  
Schematic Diagram  
Reserve Oil and Gas Company  
South Langlie Jal Unit No. 26  
Jalmat Oil Pool  
Lea County, New Mexico

OIL PRODUCTION (BARRELS PER MONTH)





ILLEGIBLE

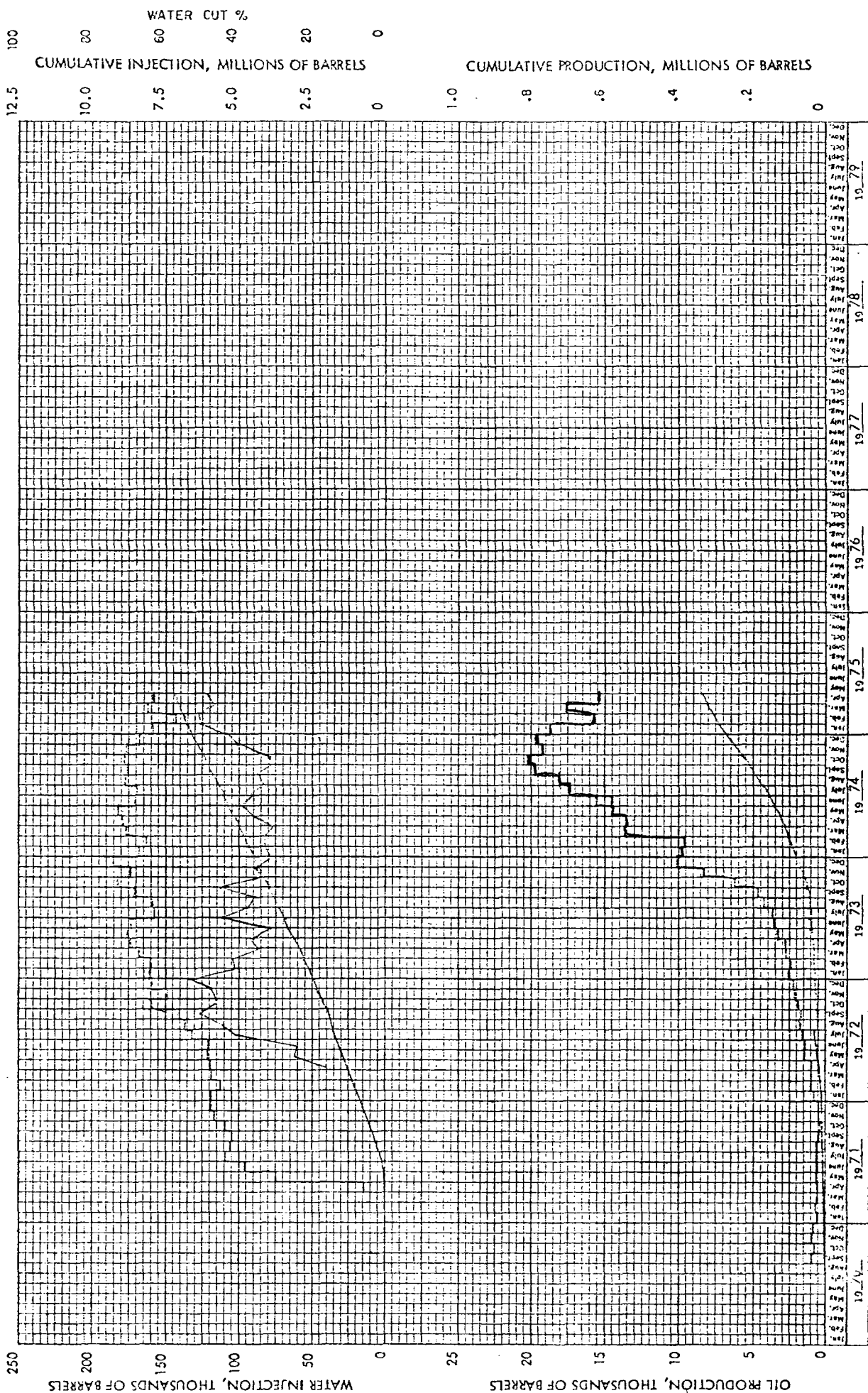


EXHIBIT I

MONTHLY PERFORMANCE  
SOUTH LANGLEIE-JAL UNIT  
LEA COUNTY, NEW MEXICO

# RESERVE OIL AND GAS COMPANY

FIRST SAVINGS BUILDING, MIDLAND, TEXAS 79701  
TELEPHONE: 915/682-4341

September 8, 1975

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Attention Mr. Joe D. Ramey

Re: Reserve Oil and Gas Company  
South Langlie Jal Unit  
Lea County, New Mexico

Gentlemen:

Oil Conservation Commission Administrative Order WFX No. 426 authorized the injection of water into the Seven Rivers and Queen formations of South Langlie Jal Unit Well No. 24, located in Unit O of Section 18, and South Langlie Jal Unit Well No. 26, located in Unit M of Section 17, both in Township 25 South, Range 37 East, NMPM, Lea County, New Mexico.

This is to advise that water injection into South Langlie Jal Unit Well No. 24 commenced on September 6, 1975, and that water injection into South Langlie Jal Unit Well No. 26 commenced on September 5, 1975.

Very truly yours,

RESERVE OIL AND GAS COMPANY



Erd M. Johnson

ck

cc: Oil Conservation Commission  
Box 1980  
Hobbs, New Mexico 88240