

JOHN A. YATES

Oil Producer

ARTESIA: NEW MEXICO - 88210

XXXXXXXXXXXXX
DIAL 746.3558

August 7, 1969

Mr. A. L. Porter Jr, Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico, 87501

Case 4208

Re: Application to Inject Water into Seven Rivers
Formation, Millman East Pool, Eddy County

Dear Mr. Porter:

Application is hereby submitted by John A. Yates of Artesia for original authority to inject water into the Seven Rivers formation for a waterflood program in the Millman East (Seven Rivers) Pool, Eddy County, New Mexico. The area is located approximately 19 miles southeast of Artesia.

Permission is asked to convert two producing wells to input located as follows:

[John A. Yates- Mary Lou #1 1650/N 330/E (Unit H) Sec 29-19-28
John A. Yates- Caroline #4 1650/N 330/W (Unit E) Sec 28-19-28

Cumulative production from the Mary Lou lease thru May 1969 is 25,485 barrels oil, and productivity has declined to 36 BOPM from four wells. Cumulative production from the Caroline lease thru May 1969 is 57,018 barrels oil, and productivity has declined to 136 BOPM from five wells.

The oil pay is a series of thin porous limestone interbedded with sand bodies in the uppermost 140 feet of the Seven Rivers formation, occurring at depths of 1045-1200 feet, and appears as bar-type stratigraphic traps on a north-easterly strike, approximately one-third mile in width. There are no core data available for this pool, but production decline curves indicate relatively high permeabilities and a solution gas depletion mechanism.

Original oil in place is estimated at about 600 STBO/ac-ft, and primary production at about 93 STBO/ac-ft, or approximately 16 percent of oil in place. It is anticipated that injectivity will be 275 BWPD per well at 500 psi well-head pressures. Source water will be fresh water from the Double Eagle Corp., an authorized transporter and vender of Ogallala water from the Caprock.

A plat showing the location of the proposed injection wells and other wells within a two-mile radius, and indicating the lessees and producing formations is appended (Exhibit I). Diagrammatic sketches and copies of the electric logs of the proposed input wells are also attached (Exhibits II, III and IV).

Respectfully submitted,

JOHN A. YATES

DOCKET MAILED

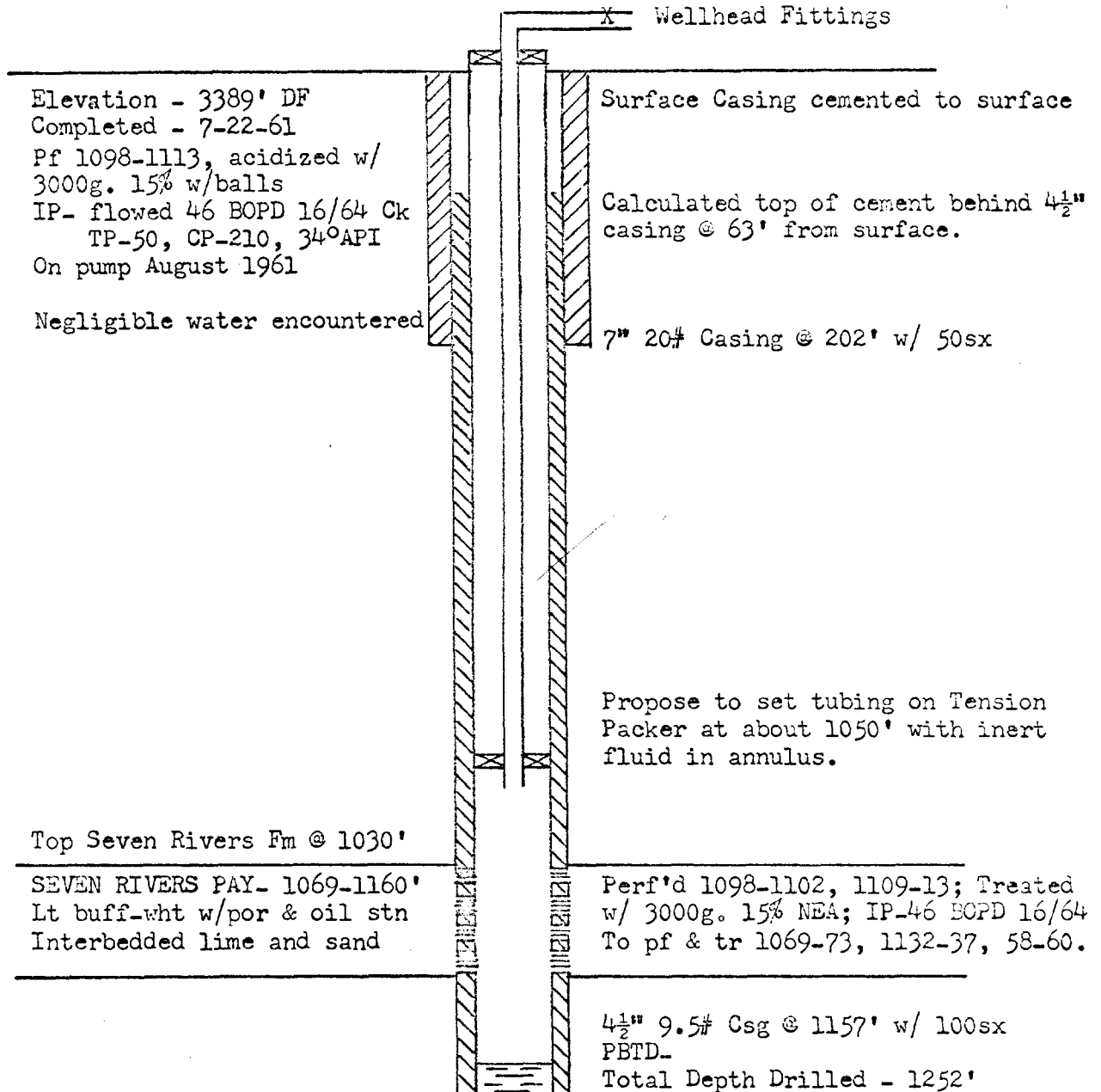
Date 8/15/69

Case 4208

DIAGRAMMATIC SKETCH OF INJECTION WELL

JOHN A. YATES - MARY LOU NO. 1
1650/N 330/E, H-29-19-28
Millman, East (Seven Rivers)
Eddy County, New Mexico

EXHIBIT II

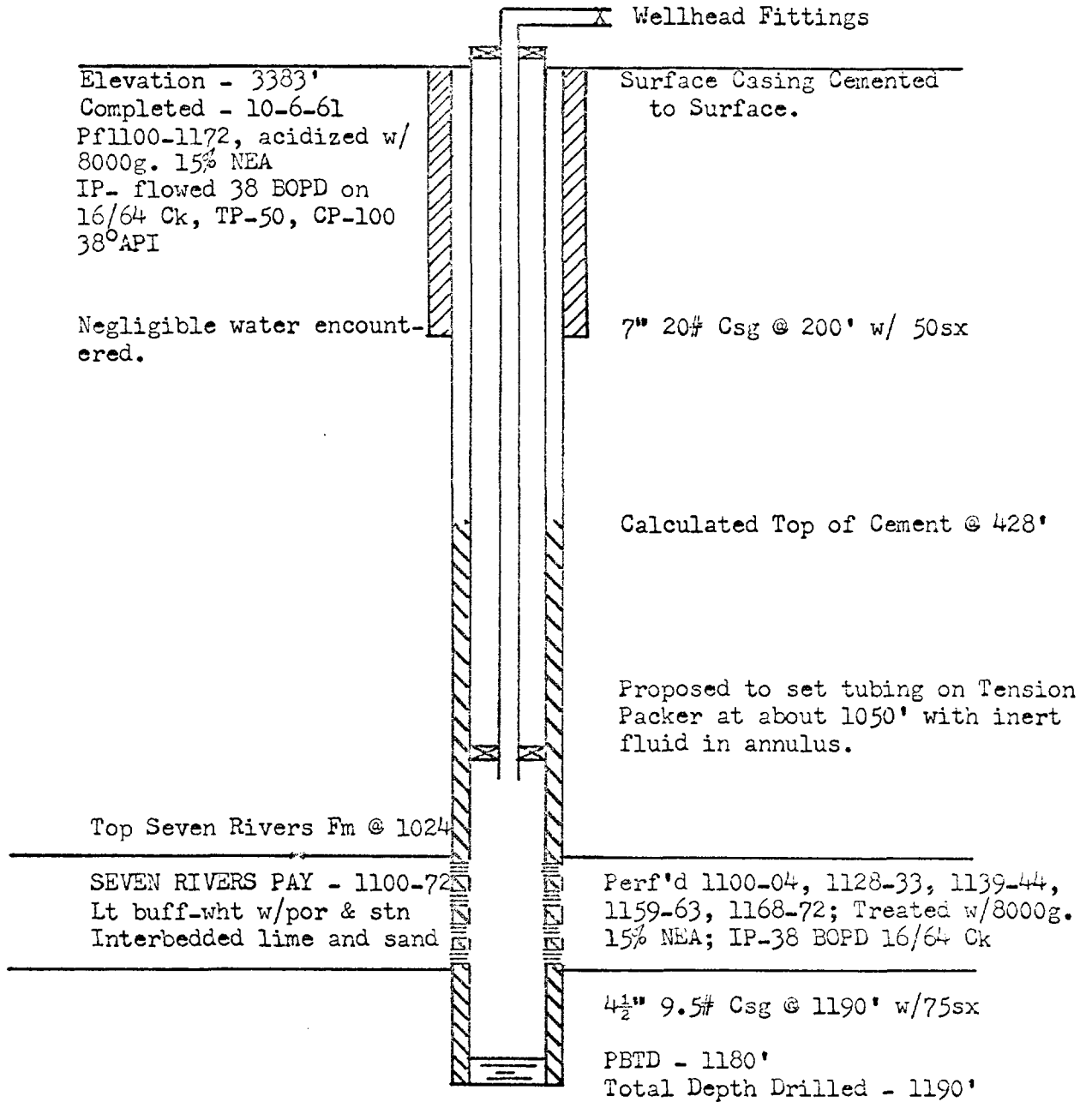


Case 4208

DIAGRAMMATIC SKETCH OF INJECTION WELL

JOHN A. YATES - CAROLINE NO. 4
1650/N 330/W, E-28-19-28
Millman, East (Seven Rivers)
Eddy County, New Mexico

EXHIBIT III

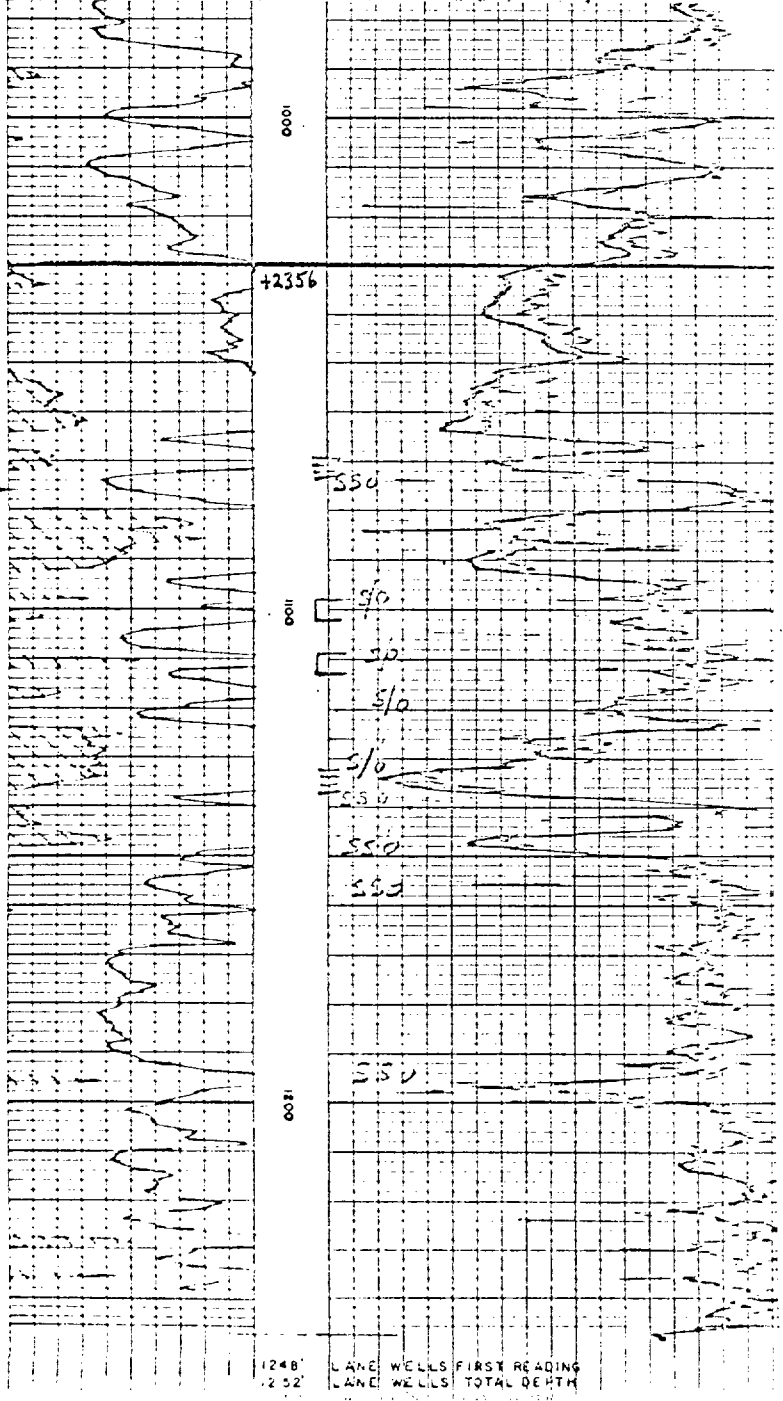


Chad 42-08

FILE NO.	COMPANY JOHN A YATES
WELL	MARY LOU No. 1
FIELD	UNDESIGNATED
COUNTY	EDDY STATE NEW MEXICO
LOCATION	330' FEL, 1650' FNL
Other Services	IES
SEC. 29	TWP. 19 S. RGE 28 E

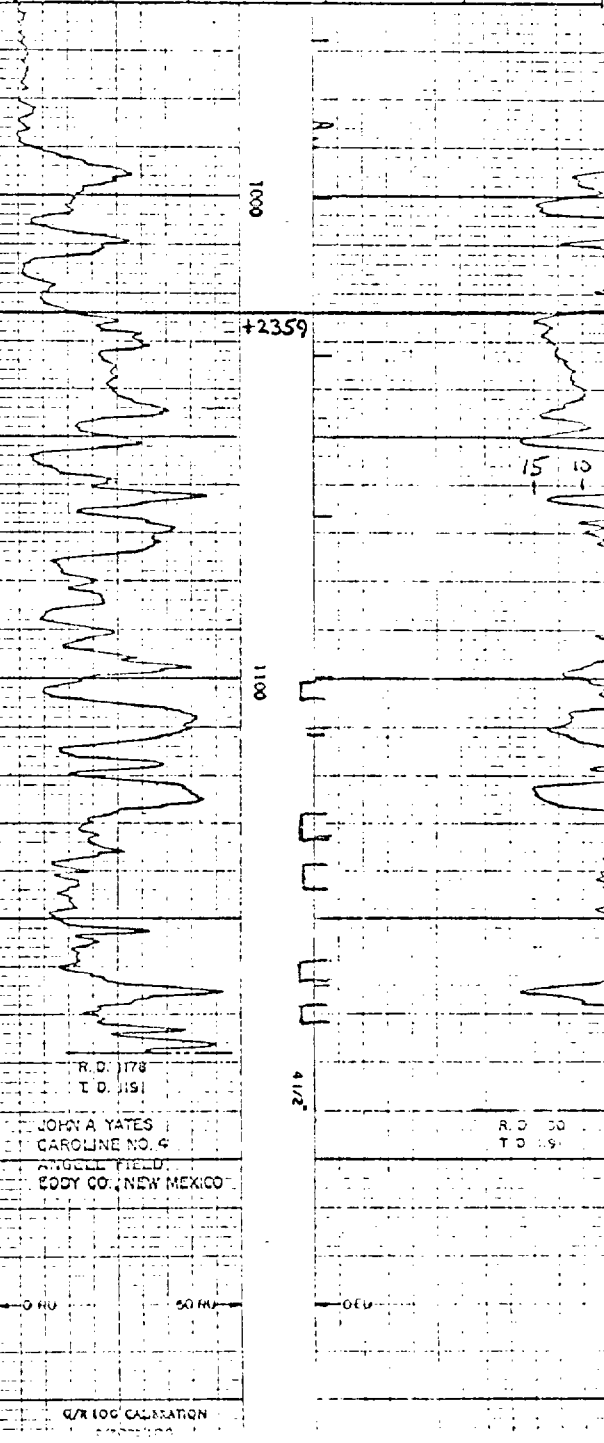
EXHIBIT IV

Permanent Datum	GROUND LEVEL	Elev.	KB
Log Measured from	GROUND LEVEL	Fe. Above Permanent Datum	DF
Drilling Measured from	GROUND LEVEL		GL
Date	7-23-61		
Run No.	ONE		
Depth—Driller	252		
Depth—Logger	252		
Bottom Logged Interval	1248		
Top Logged Interval	100		
Casing—Driller	227		
Casing—Logger	230		
Bit Size	CABLE TOOL		
Type Fluid in Hole	FRESH WATER OIL		
	FULL		
Density and Viscosity			
pH and Fluid Loss			
Source of Sample	PIT		
Rm @ Meas. Temp	34 @ 95		
Rm @ Meas. Temp			
Rm @ Meas. Temp			
Source of Rm and Rmc			
Rm @ BHT	32 @ 85		



FILE NO.	COMPANY JOHN A YATES
WELL	CAROLINE NO. 4
FIELD	ANGELL
COUNTY	EDDY STATE NEW MEXICO
LOCATION	1650' FNL & 330' FNL
Other Services	
SEC. 28	TWP. 19 S. RGE 28 E

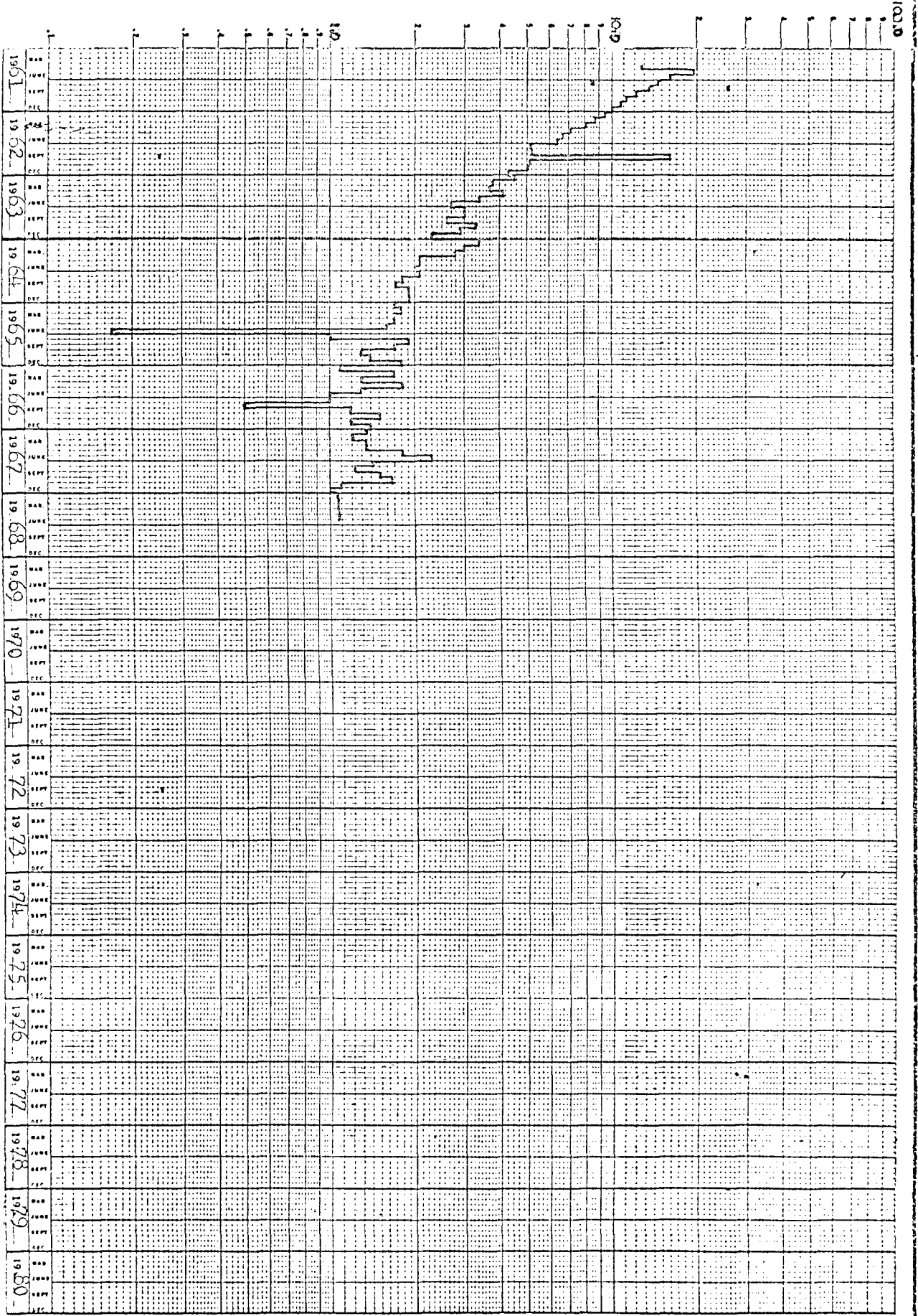
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Rm @ Meas. Temp	34 @ 95		
Rm @ Meas. Temp			
Rm @ Meas. Temp			
Source of Rm and Rmc			
Rm @ BHT	32 @ 85		



Case 4208

WATER & OIL PRODUCTION BBLS/DAY
WATER INJECTION BBLS/DAY

TIME-YEARS

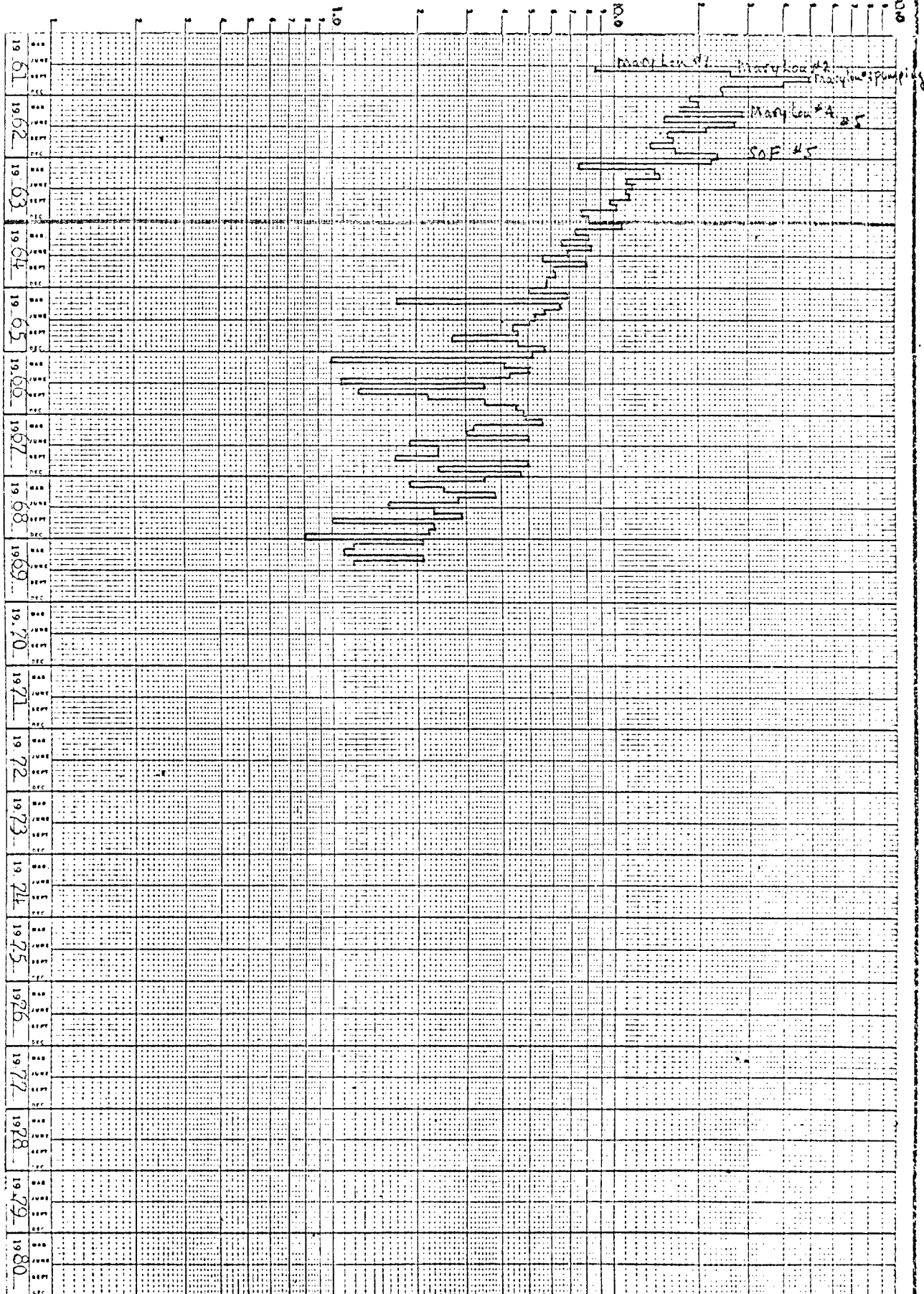


JOHN A. YATES
PRODUCTION DECLINE CURVE
HELEN LEASE
MILMAN EAST (SEVEN RIVERS)

Case 4708

WATER & OIL PRODUCTION BBLS/DAY
WATER INJECTION BBLS/DAY

TIME-YEARS

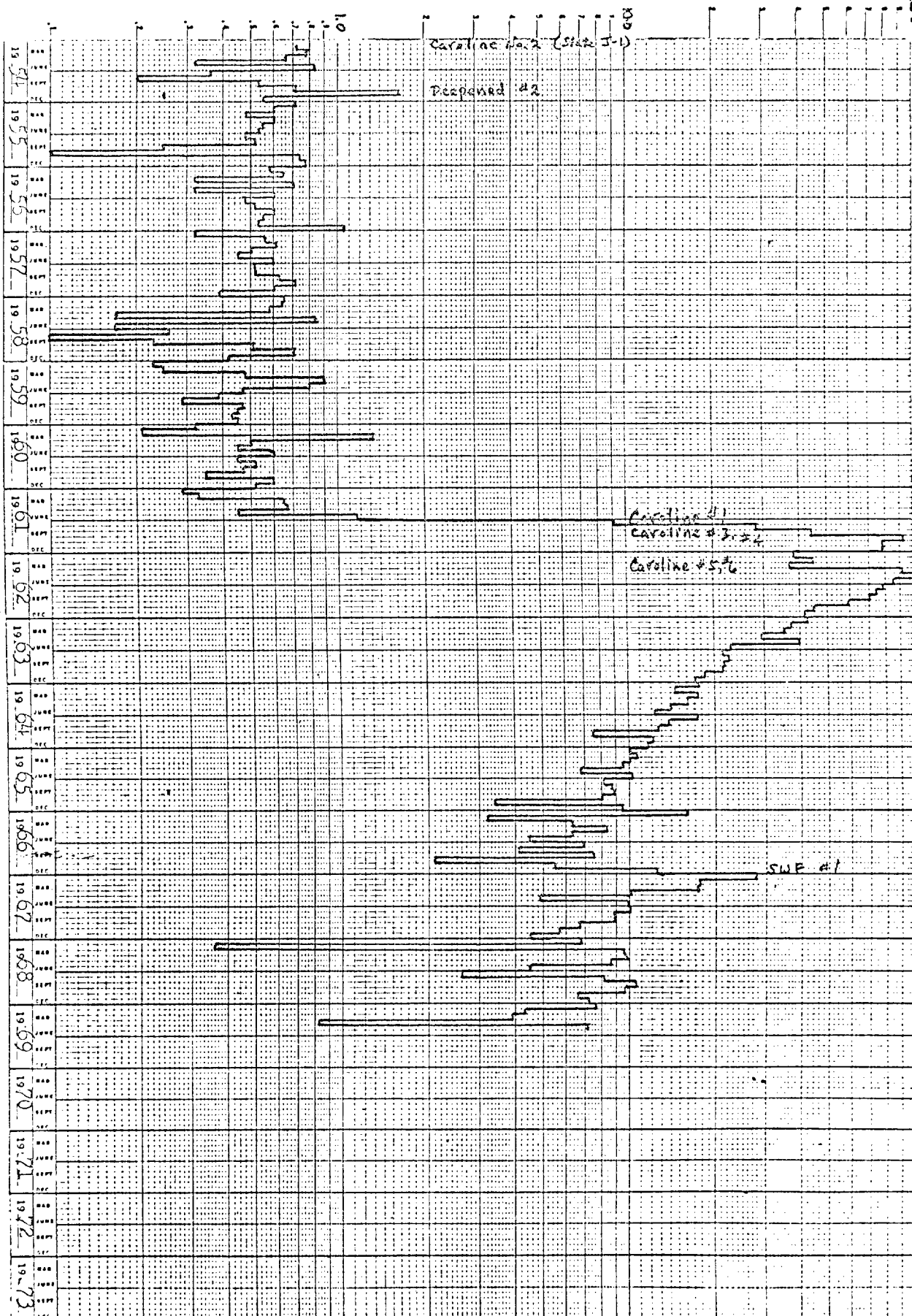


JOHN A. YATES
PRODUCTION DECLINE CURVE
MARY LOU LEASE
MILMAN EAST (SEVEN RIVERS)

Case 4308

WATER & OIL PRODUCTION BBLs/DAY
WATER INJECTION BBLs/DAY

TIME - YEARS



JOHN A. YATES

PRODUCTION DECLINE CURVE

CAROLINE LEASE

MILMAN EAST (SEVEN RIVERS)