

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION

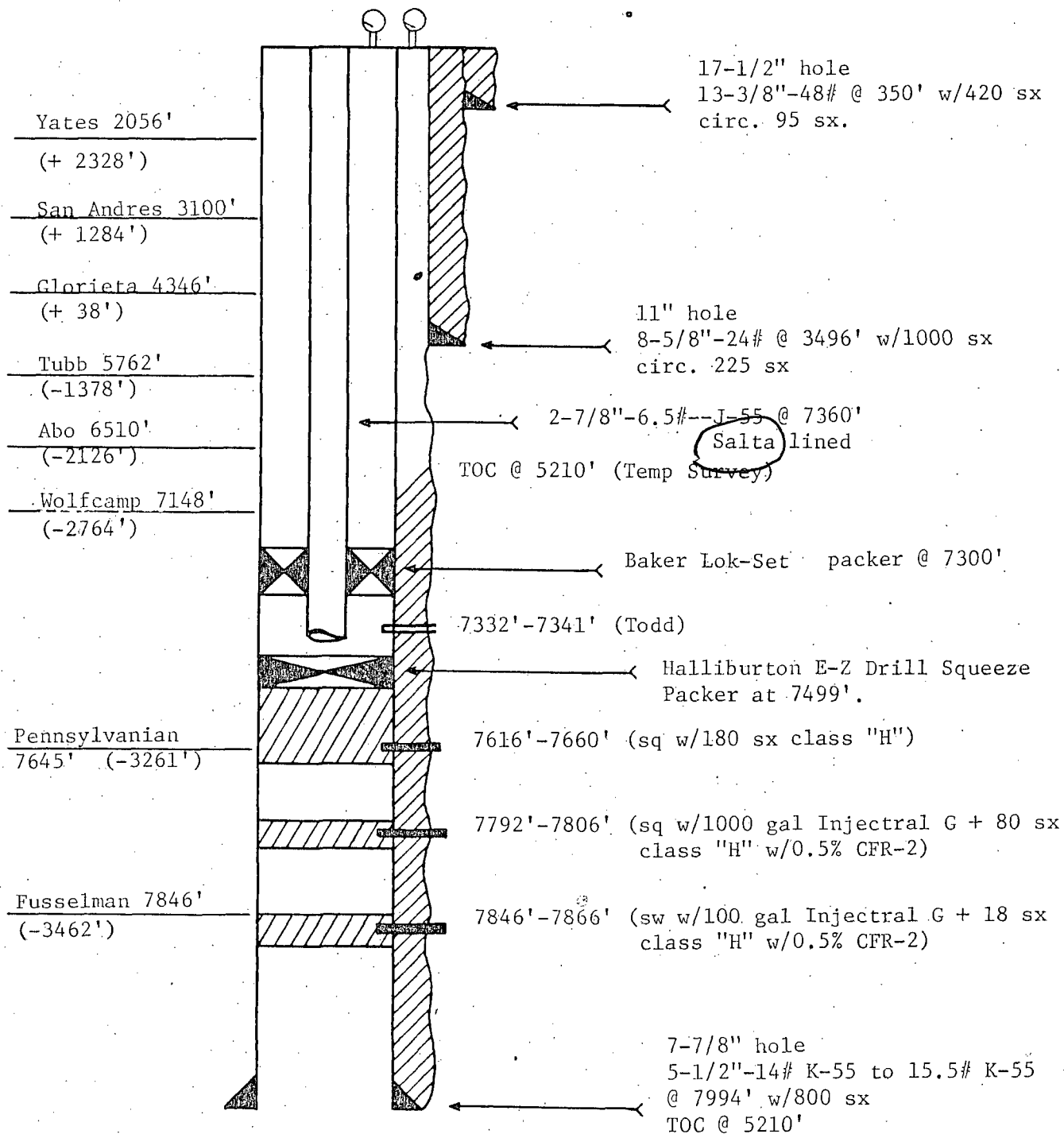
EXHIBIT NO. 8

CASE NO. 7318

Submitted by Phillips

Hearing Date 7-29-81

Peterson "H" No. 1
660' FSL and 510' FWL
Section 29, T-5-S, R-33-E
Roosevelt County, New Mexico



PETERSON 'H' NO. 1
Peterson (South) Field
Water Injection Calculations

Proposed Injection Zone: Wolfcamp (Todd)
 Perforations: 7332'-7341'
 Net Interval: 9'
 Average Porosity: 15.6%
 Formation Volume Factor for Water: 1.01
 Static Fluid Level: 1800'
 Specific Gravity of Fluid: 1.073; 0.465 psi/ft
 BHT: 136°F

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EXHIBIT NO. 9

CASE NO. 7318

Submitted by Ph: M. p.

Hearing Date 7-29-81

1. Estimated BHP of Todd Zone:

$$\left(\frac{7332 + 7341}{2} - 1800 \right) \times 0.465 \approx 2575 \text{ psi}$$

2. Maximum allowable pressure:

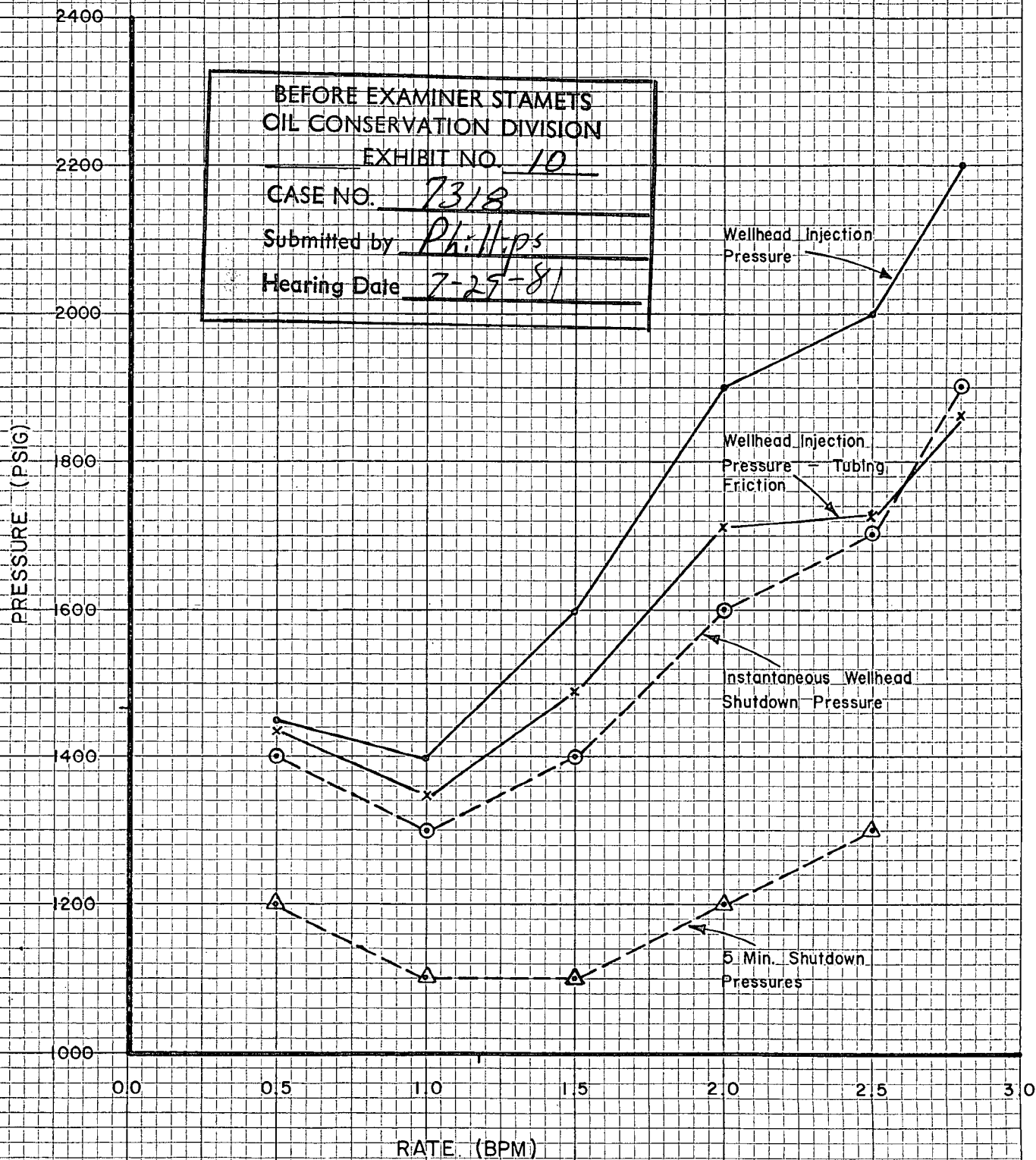
$$0.2 \times 7332 = 1466 \text{ psi}$$

3. Reservoir volume encroached by injected water:

$$\begin{aligned} W_i &= 7758Ah\phi/B_w \\ A &= W_i B_w / 7758h\phi \\ A &= 0.000927W_i \\ A &= \pi r^2 / 43560 \\ r &= (43560A/\pi)^{1/2} \end{aligned}$$

<u>Year</u>	<u>Acres (feet) encroached at 300 BWPD constant</u>	<u>13%/year increase</u>
1	10.2 (376')	10.2 (376')
2	20.3 (531')	21.6 (547')
3	30.5 (650')	34.6 (693')
4	40.6 (750')	49.2 (826')
5	50.8 (839')	65.8 (955')
6	60.9 (919')	84.5 (1082')
7	71.1 (993')	105.6 (1210')
8	81.2 (1061')	129.5 (1340')
9	91.4 (1126')	156.5 (1473')
10	101.5 (1186')	187.0 (1610')
	0.22 miles	0.30 miles

INJECTIVITY TEST
PETERSON "H" NO. 1
2 7/8" 6.5#/FT. TUBING
8.4#/GAL. FLUID



JOHN W. WEST ENGINEERING CO.
412 NORTH DAL PASO, HOBBS, NEW MEXICO

TELEPHONE 3-3942
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TEMPERATURE SURVEY

OPERATOR

PHILLIPS PETROLEUM COMPANY

LEASE

PETERSON "H"

WELL NO.

1

FIELD

DATE & TIME CEMENT JOB COMPLETED

6-25-80 @ 9:25 PM

DATE & TIME SURVEY MADE

6-26-80 @ 10:45 AM

SURVEY RUN BY

J.W.W.

DATUM

KELLY DRIVE BUSHING

WELL DATA

450 SACKS CLASS H CEMENT, AND 350 SACKS CLASS H CEMENT
WITH DIACEL D. BEHIND 8000 FEET OF 5 1/2 INCH CASING IN A
7 7/8 INCH HOLE.

TEMPERATURE IN °F

