

Aerojet Nuclear Company

Interoffice Correspondence

6607311-1

July 1, 1976

J. F. Whitbeck
UPD

FLOW PREDICTIONS FOR RRGE-1 - RCSt-21-76

An analysis of the existing flow/drawdown data from Raft River has just been completed. The maximum artesian free-flow rate that can be maintained at 80 psig wellhead pressure and over a 100-day period is 200-350 gpm. The results are based on very limited flow duration (up to 6 days) and various initial conditions (from cold to hot). Mathematical hand calculations and computer model predictions are in general agreement.

Attached are four computer generated curves which plot drawdown against flow rate and time against pressure drop (at 200 gpm). These curves represent the best predictive results attainable at this time. Curves that plot time against pressure drop at 300 gpm and 400 gpm will be available early next week. Also attached are two temperature-time curves at 200 gpm.

The results described above are based on only two known boundaries around RRGE-1. Boundaries generally have an adverse effect on well production and must be anticipated. Therefore, it would be prudent to plan on flowing the well at 200 gpm during the testing period. A flow rate of 250 gpm could probably be maintained under the test requirements but anything over that amount would definitely be risky.

The cold shut-in wellhead pressure is 145.5 psig and the hot is 175 psig.

Bill Kettenacker can be contacted for further information as predicted by the computer model.

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cc: JFKunze
CGCooper
DGoldman
RWGould
WWHickman
LGMiller
RLMiller
GLMines
DTNeill
JWNeitzel
SJPrestwich
RDSanders
RJSchultz
DHSuckling

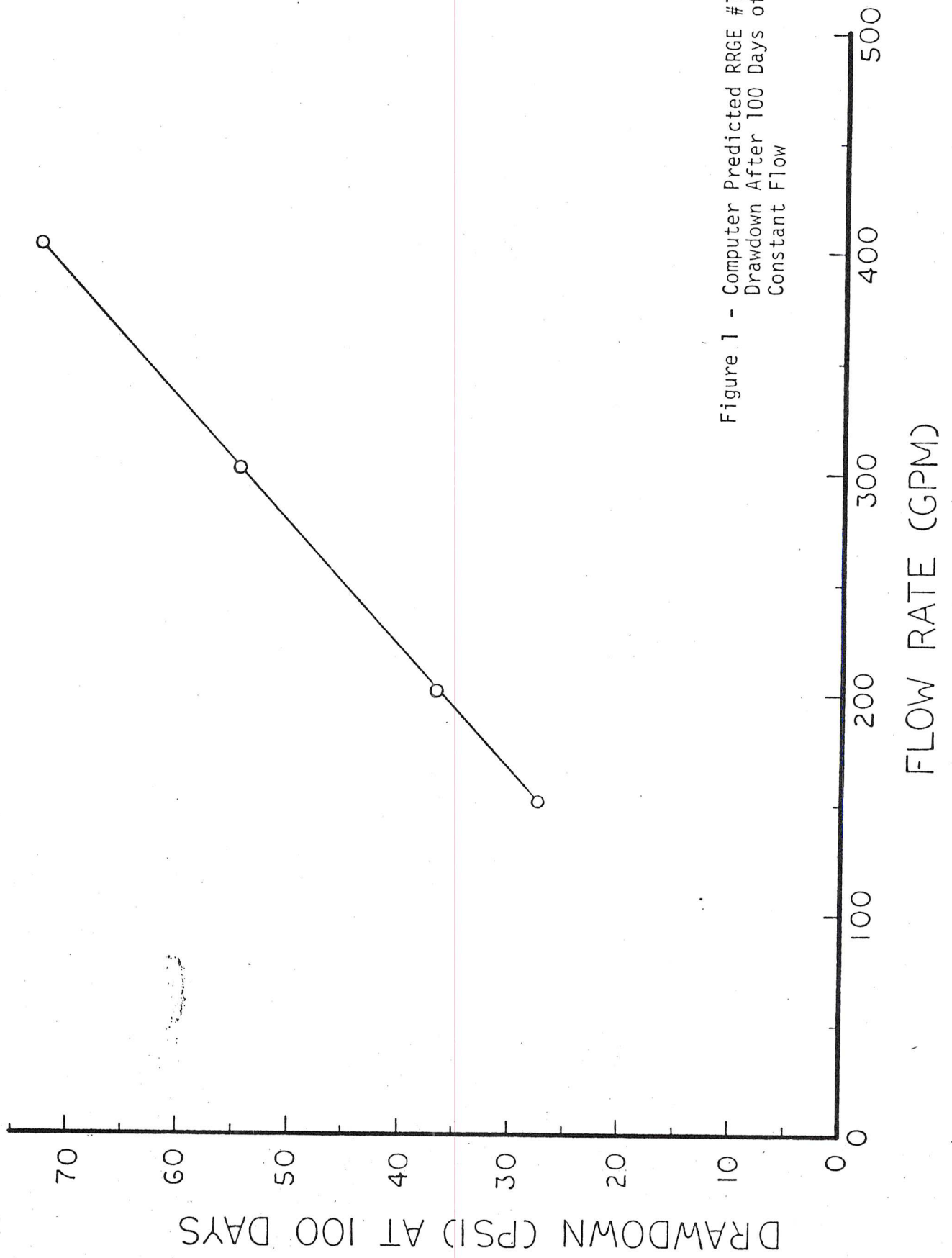
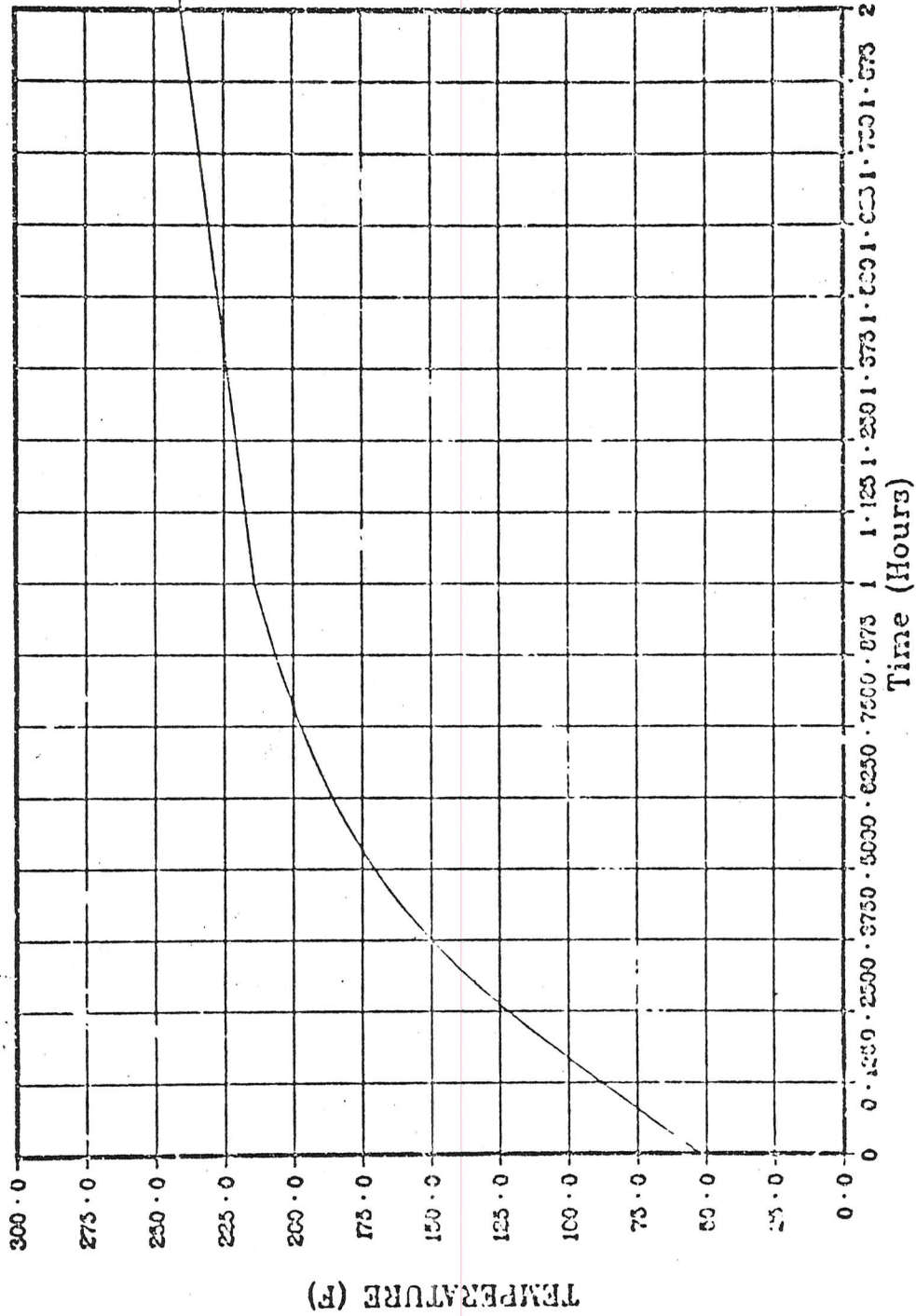


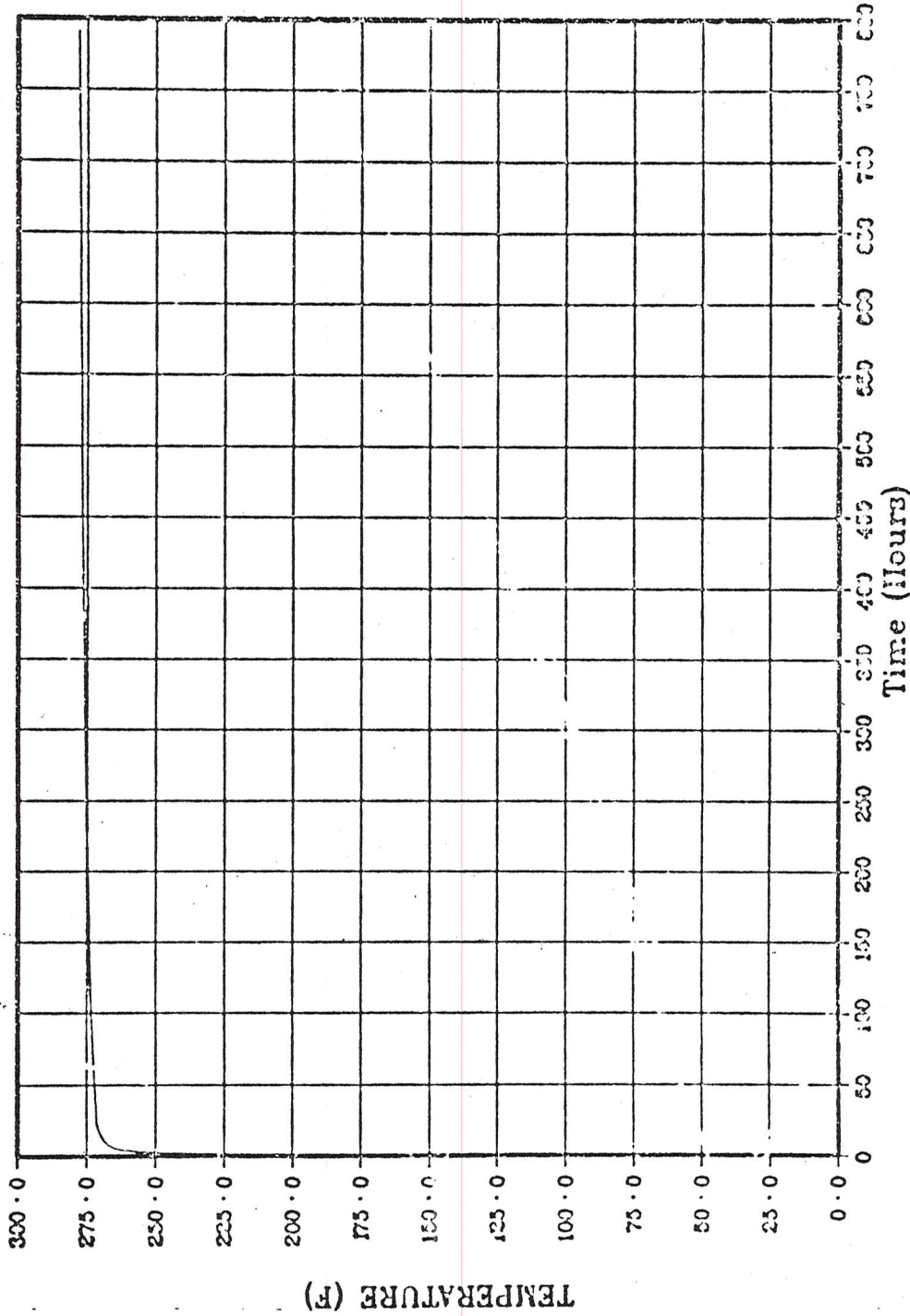
Figure 1 - Computer Predicted RRGE #1
Drawdown After 100 Days of
Constant Flow

RRGE #1 WELL HEAD TEMPERATURE



FLOW IS A CONSTANT 200 GPM FROM RRGE #1 LOCATED AT FIELD NODE 2057

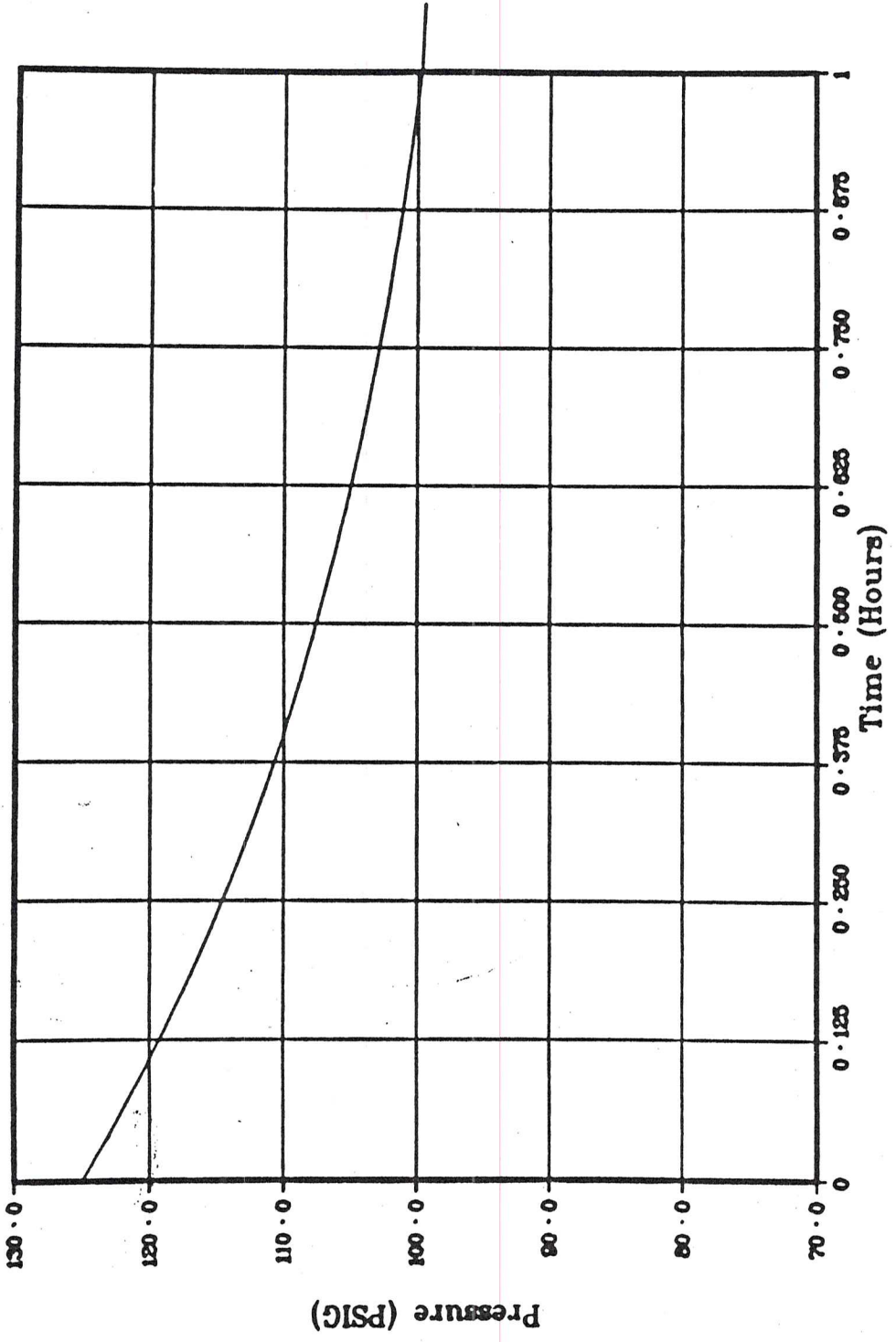
RRGE #1 WELL HEAD TEMPERATURE



FLOW IS A CONSTANT 200 GPM FROM RRGE #1 LOCATED AT FIELD NODE 2037

PLOT 1 21.03.68 TUES 28 JUN, 1978 JOB=ACR008F. 13500. DISPLAY VER 4.11

RRGE #1 WELL HEAD PRESSURE

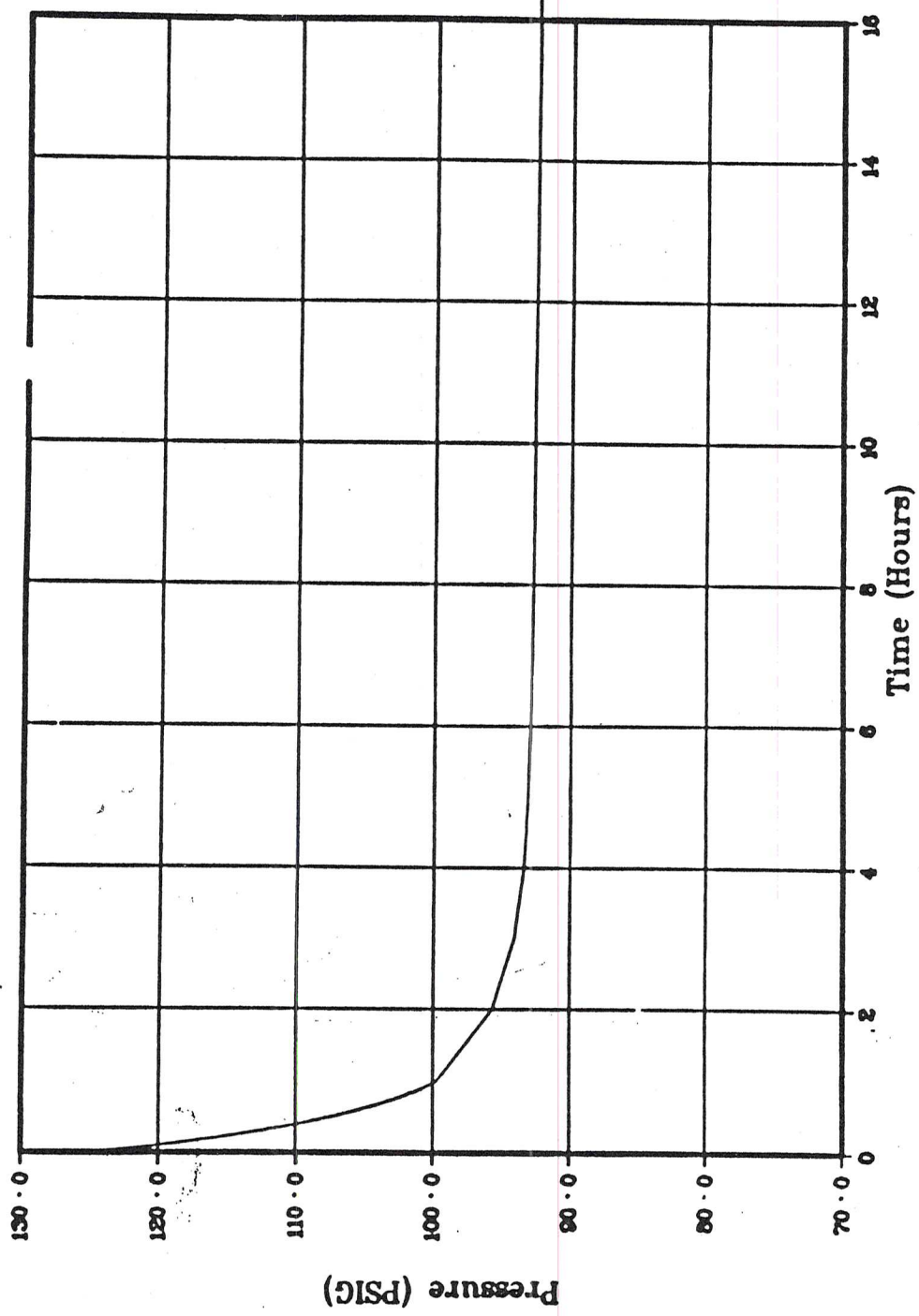


FLOW IS A CONSTANT 200 GPM FROM RRGE #1 LOCATED AT FIELD NODE 2067

Figure 2A - Computer Predicted Well Head Pressure at RRGE #1 (0 - 1 hr)

PLOT 1 21.04.27 TUES 28 JUN, 1978 JOB-NO. 15350. DISSEAL FOR 4.11

RRGE #1 WELL HEAD PRESSURE

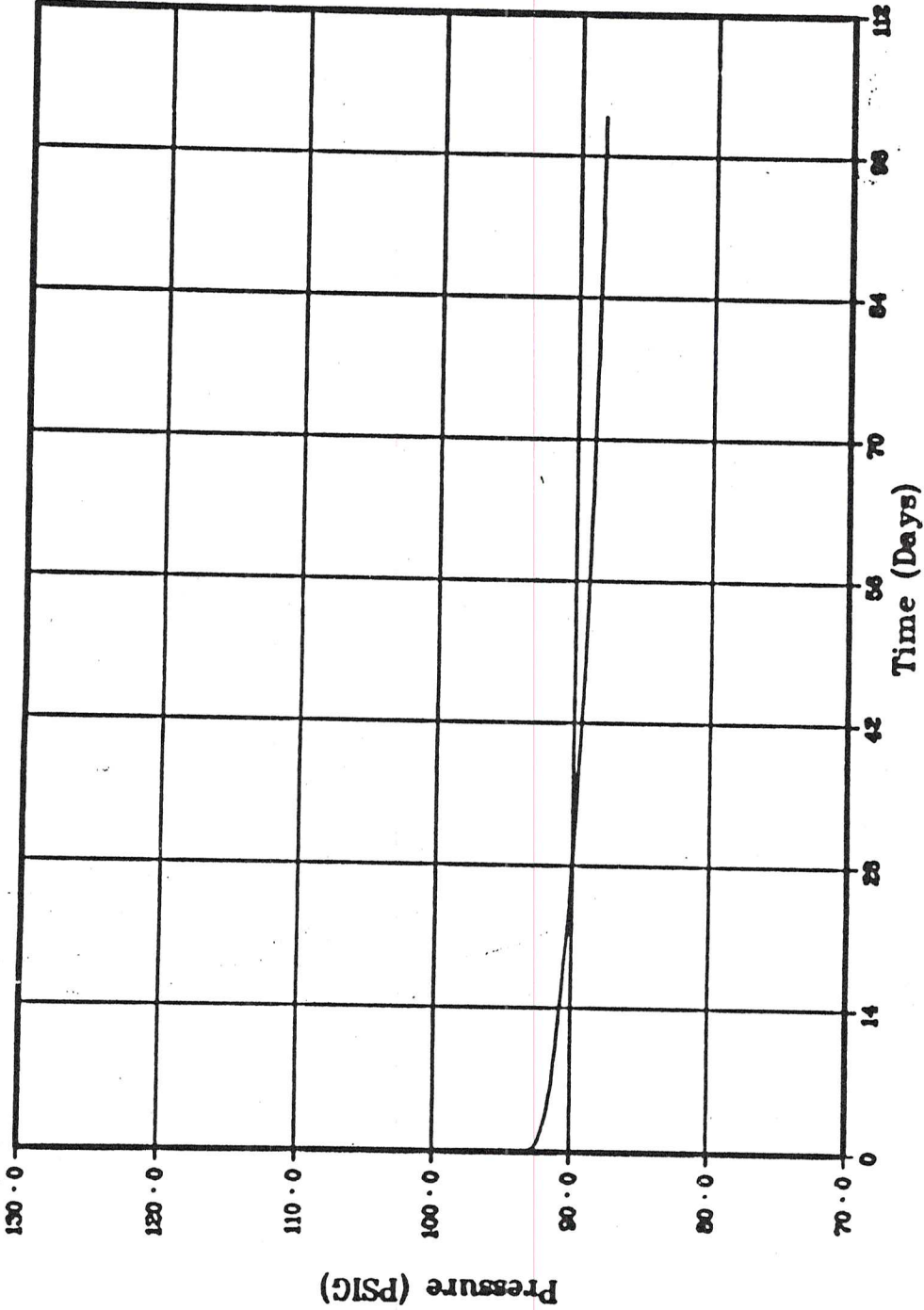


FLOW IS A CONSTANT 200 GPM FROM RRGE #1 LOCATED AT FIELD NODE 2067

Figure 2B - Computer Predicted Well Head Pressure at RRGE #1
(0 - 16 hrs)

PLOT 1 21.05.51 TUES 29 JUN 1976 JOB=RRGE#1. 13350. DISSEMINATED 4.11

RRGE #1 WELL HEAD PRESSURE

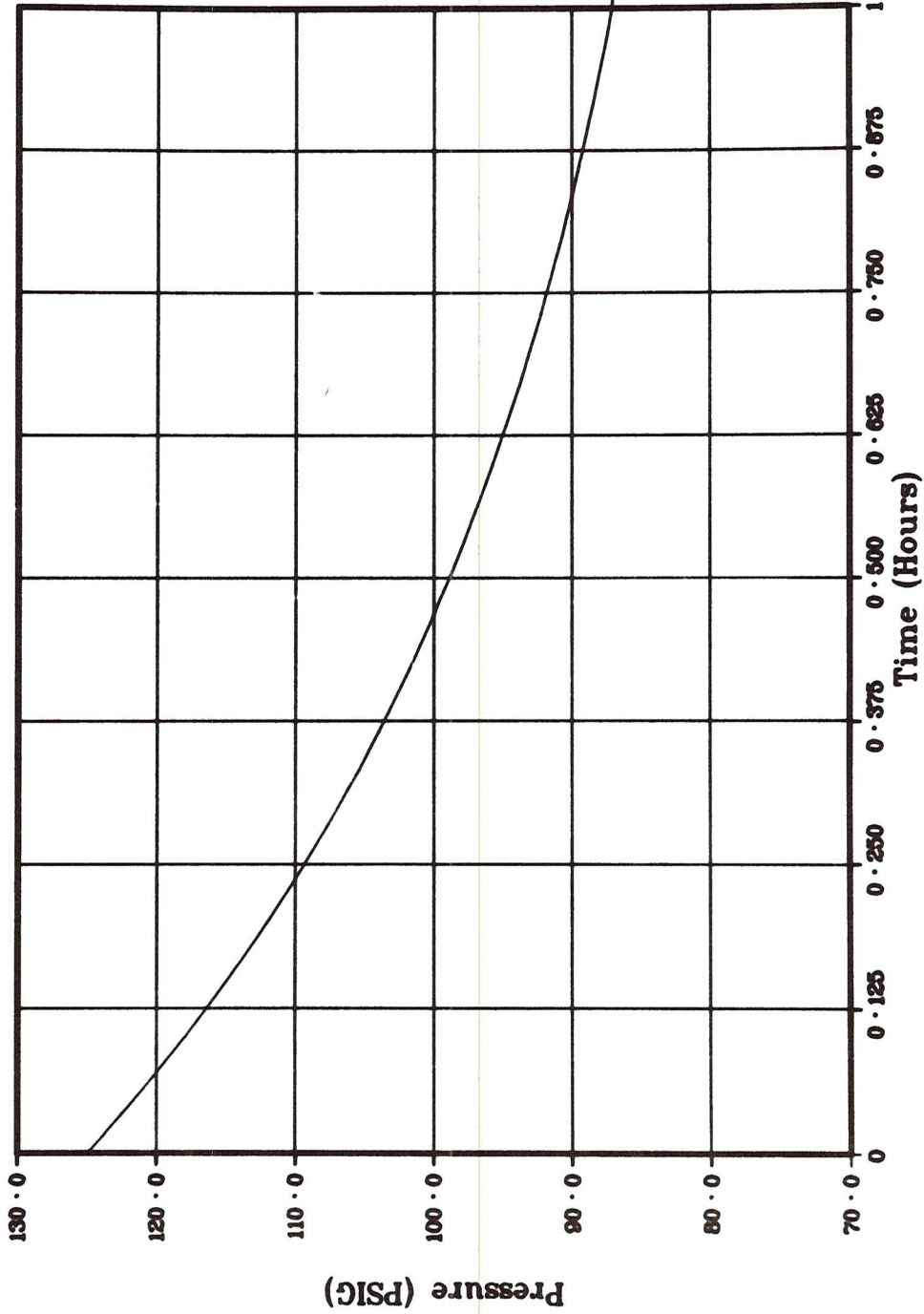


FLOW IS A CONSTANT 200 GPM FROM RRGE #1 LOCATED AT FIELD NODE 2067

Figure 2C - Computer Predicted Well Head Pressure at RRGE #1 (0 - 102 days)

PLOT 1 18.52.20 TUES 06 JUL, 1976 JOB=HCK288F. 15560. DISPLA VER 4.11

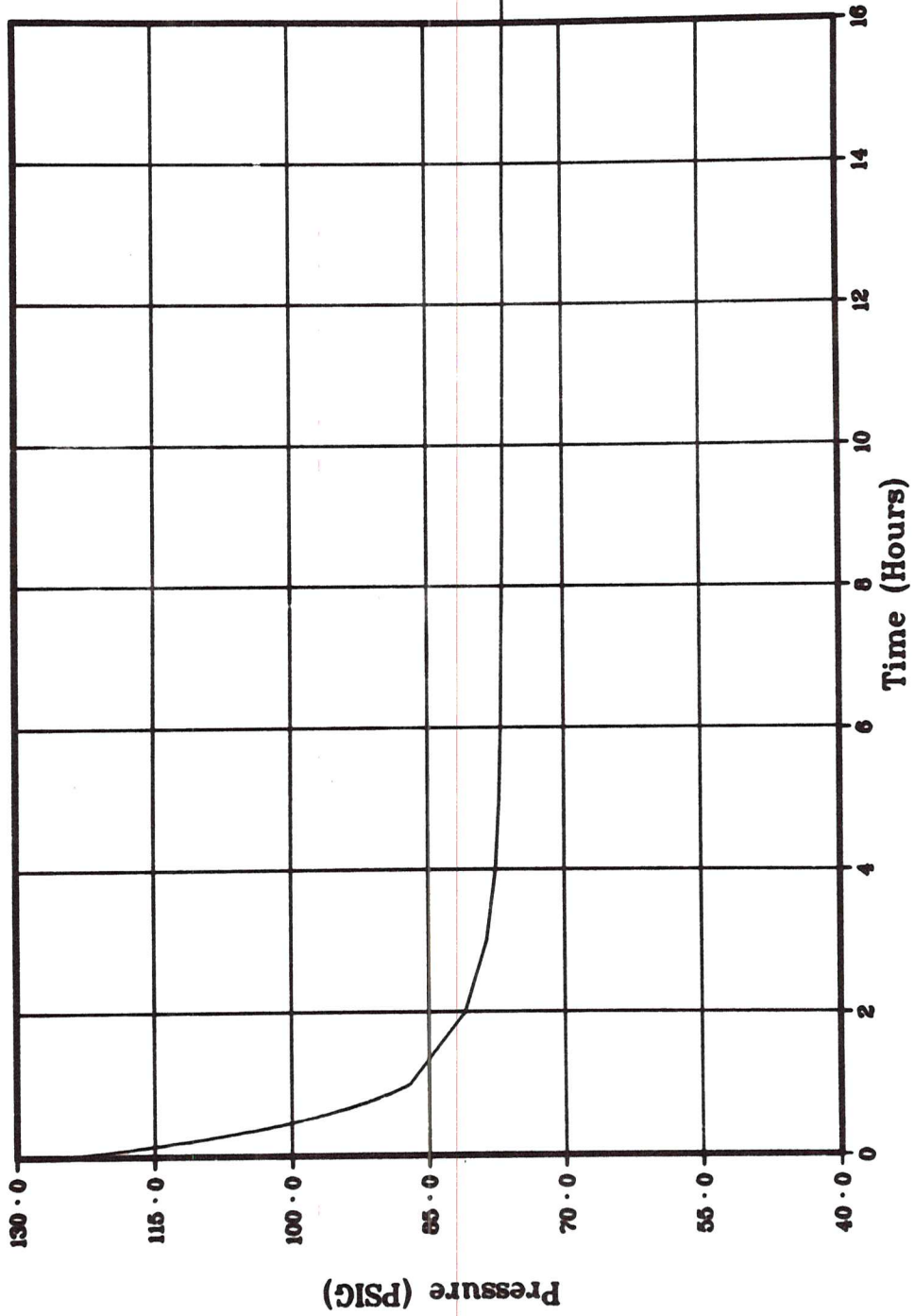
RRGE #1 WELL HEAD PRESSURE



FLOW IS A CONSTANT 300 GPM FROM RRGE #1 LOCATED AT FIELD NODE 2067

PLOT 1 16.55.04 TUES 08 JUL, 1976 JOB-WCK2667. 15560. DISPLA VER 4.11

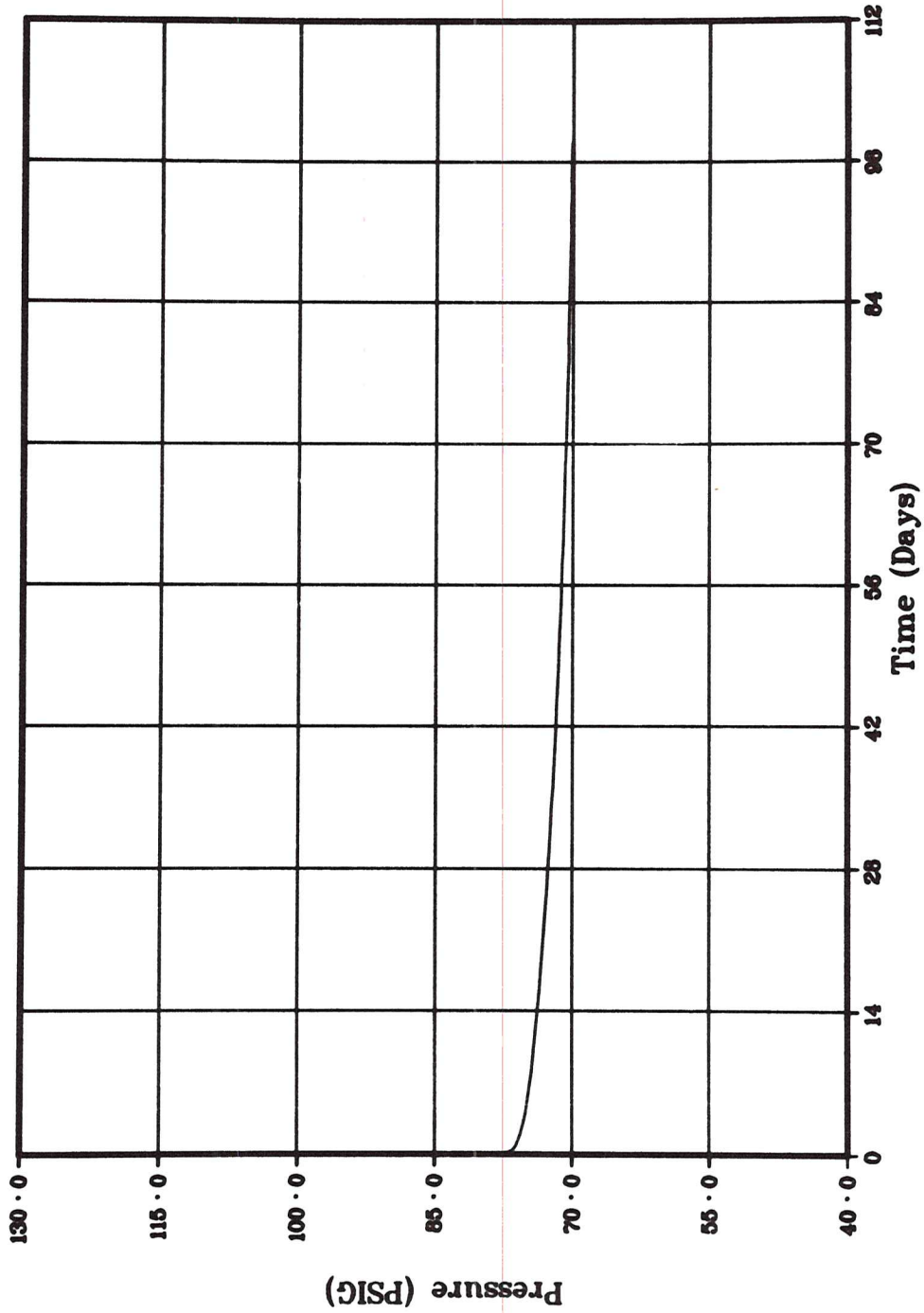
RRGE #1 WELL HEAD PRESSURE



FLOW IS A CONSTANT 300 GPM FROM RRGE #1 LOCATED AT FIELD NODE 2067

PLOT 1 18.53.41 TUES 06 JUL. 1976 JOB-MCK288F. 15500, DISPLA VER 4.11

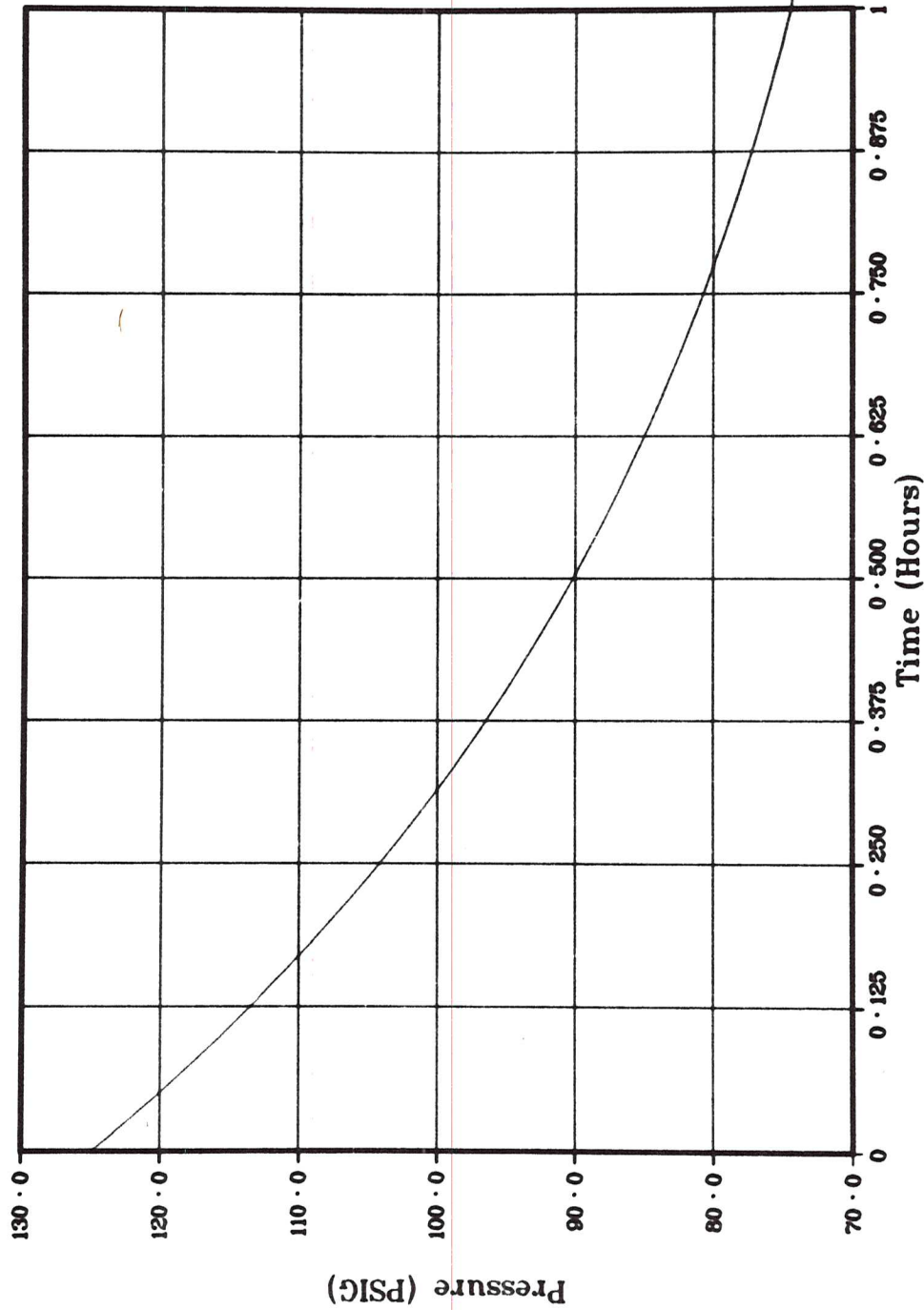
RRGE #1 WELL HEAD PRESSURE



FLOW IS A CONSTANT 300 GPM FROM RRGE #1 LOCATED AT FIELD NODE 2067

PLOT 1 18.30.37 MED 30 JUN, 1976 JOB-MCK268F. 15500. DISSPLA VER 4.11

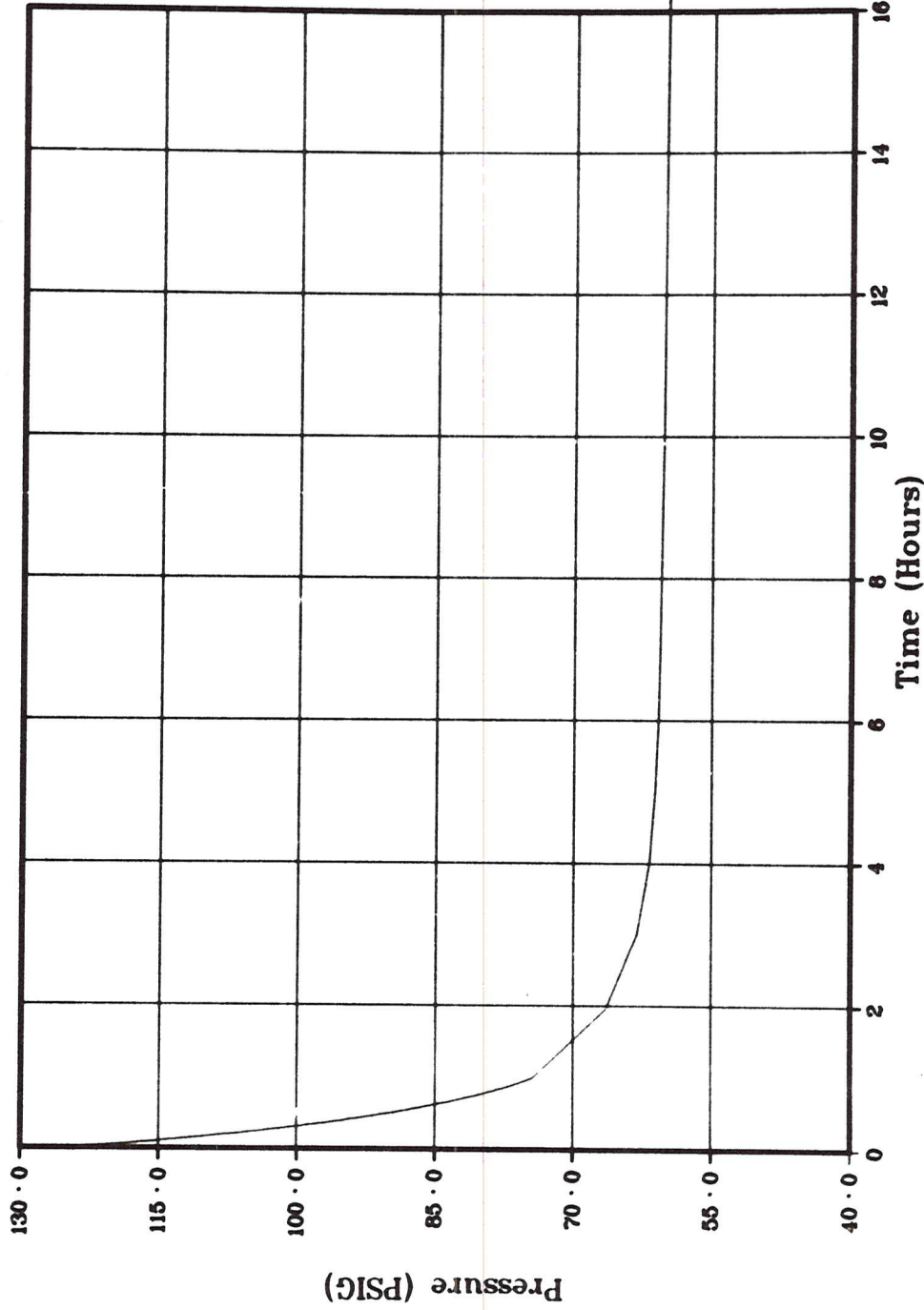
RRGE #1 WELL HEAD PRESSURE



FLOW IS A CONSTANT 400 GPM FROM RRGE #1 LOCATED AT FIELD NODE 2067

PLOT 1 18.32.23 MED 30 JUN, 1976 JOB-WCK266F. 155CO. DISPLA VER 4.11

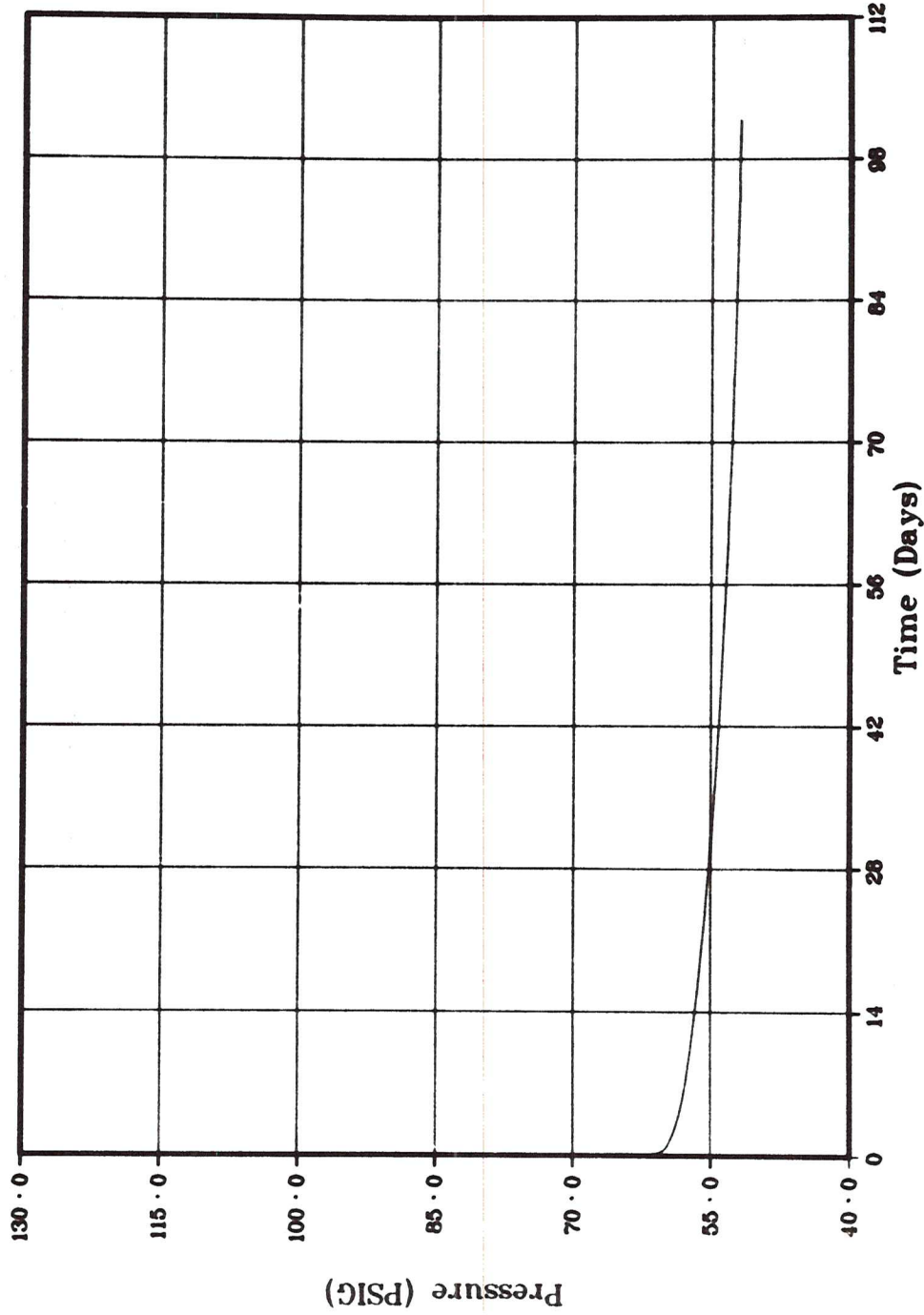
RRGE #1 WELL HEAD PRESSURE



FLOW IS A CONSTANT 400 GPM FROM RRGE #1 LOCATED AT FIELD NODE 2067

PLOT 1 18.34.11 MED 30 JUN, 1976 JOB-MCX268F. 15560. DISPLA VER 4.11

RRGE #1 WELL HEAD PRESSURE



FLOW IS A CONSTANT 400 GPM FROM RRGE #1 LOCATED AT FIELD NODE 2067