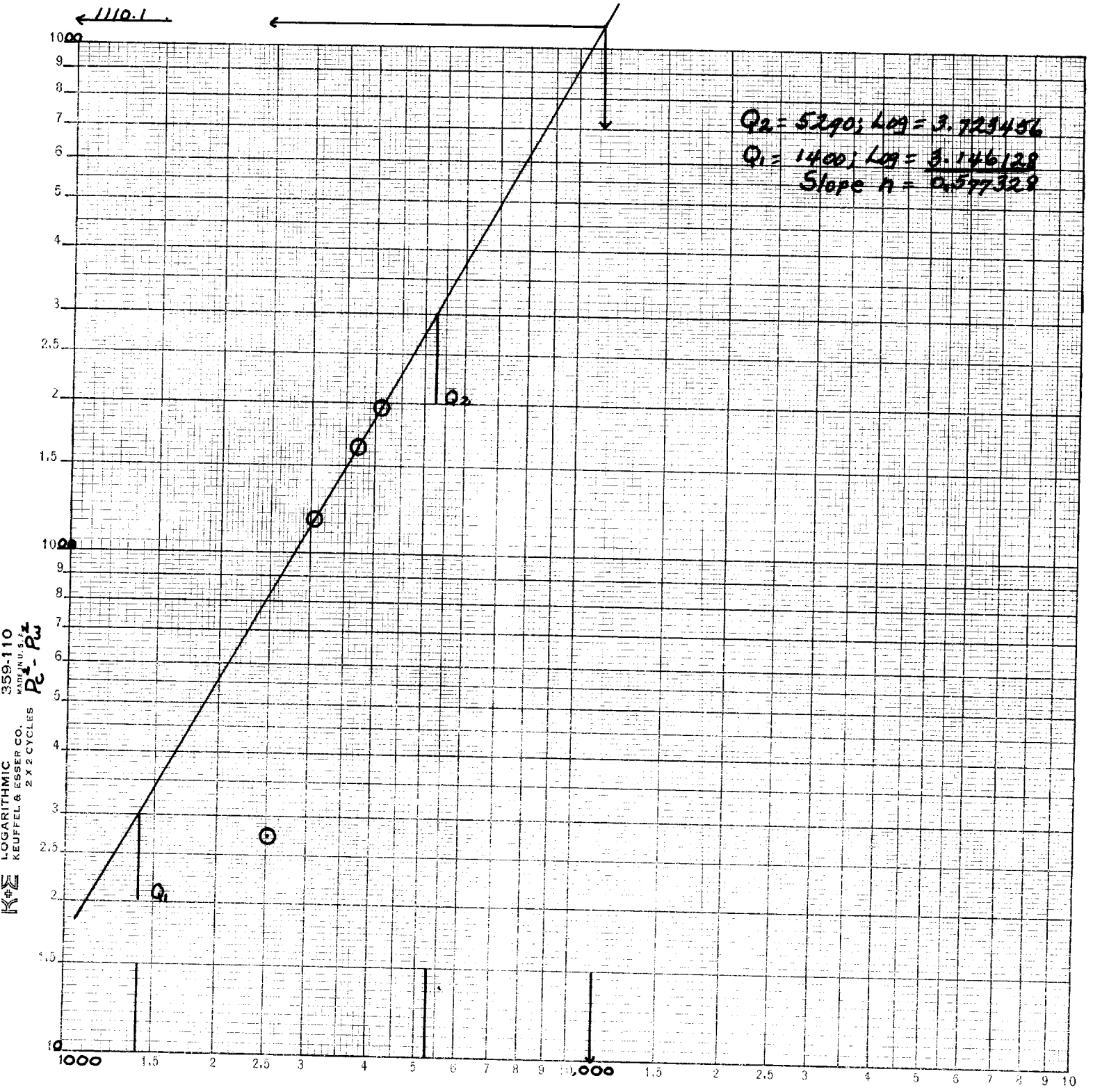


The Texas Co

American Nat'l-Kochane Unit Well #1



$Q = \text{MCF/Day}$

$Q = 11,250$

KE
 LOGARITHMIC
 KEUFFEL & ESSER CO.
 MADE IN U.S.A.
 359-110
 2 X 2 CYCLES

QUESTION 1

1. A particle of mass m is projected from the origin O of a Cartesian coordinate system with an initial velocity u at an angle θ to the horizontal. The particle follows a parabolic path and reaches a maximum height H and a horizontal range R . The acceleration due to gravity is g .

- (a) Derive an expression for the maximum height H in terms of u , θ and g .
- (b) Derive an expression for the horizontal range R in terms of u , θ and g .
- (c) Show that the horizontal range R is the same for complementary angles of projection.

