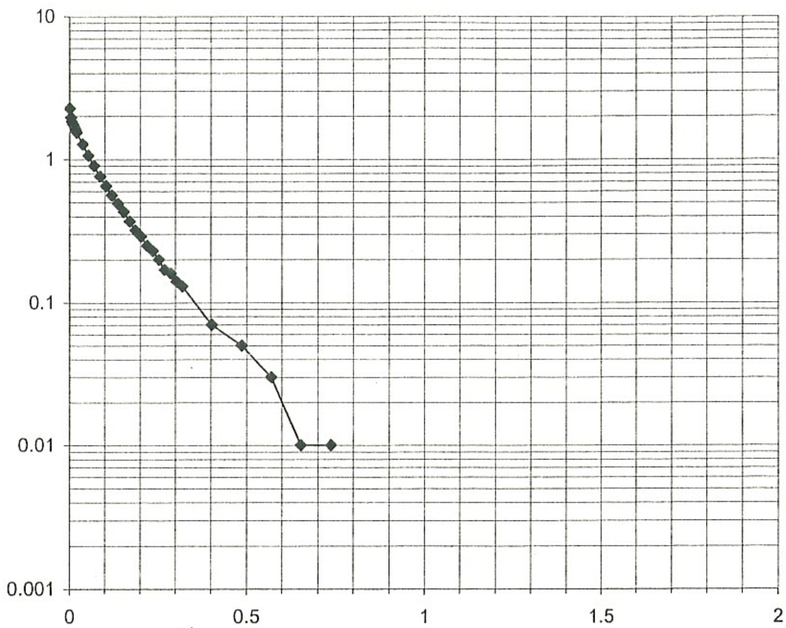
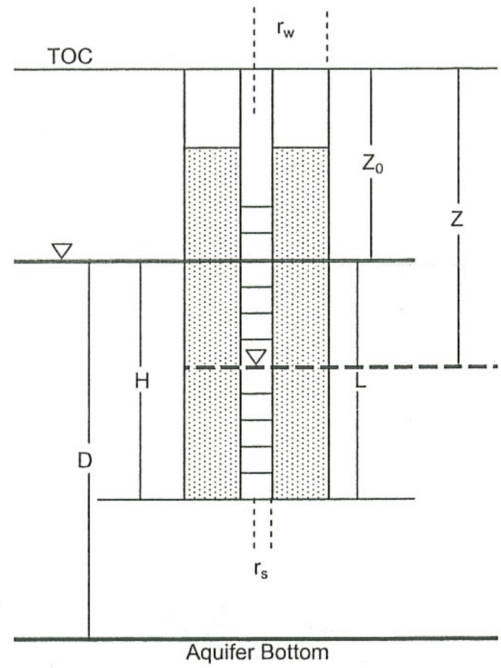


Project Name:	Standard Motor Products
Address:	Long Island City, NY
Well Number:	MW9S (Test 1)
Date:	7/29/2003



y_0 = **0.8** (ft) D = **14.22** (ft) r_s = **0.167** (ft) n = **0.375**

y_t = **0.4** (ft) H = **14.22** (ft) r_w = **0.5** (ft) Z_0 = **3.83** (ft)

dt = **0.08** (min.) L = **14.22** (ft)

$a = \ln[y_0/y_t]/dt$ = **8.6643** $c = \ln[(D-H)/r_w]$ =

$b = L/r_w$ = **28.44** $d = \ln[R_e/r_w]$ = **2.5202** $r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2}$ = **0.3334** (ft)

When D>H: A = B =

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

(The values of A, B, and C are a function of b, and are obtained from the attached table)

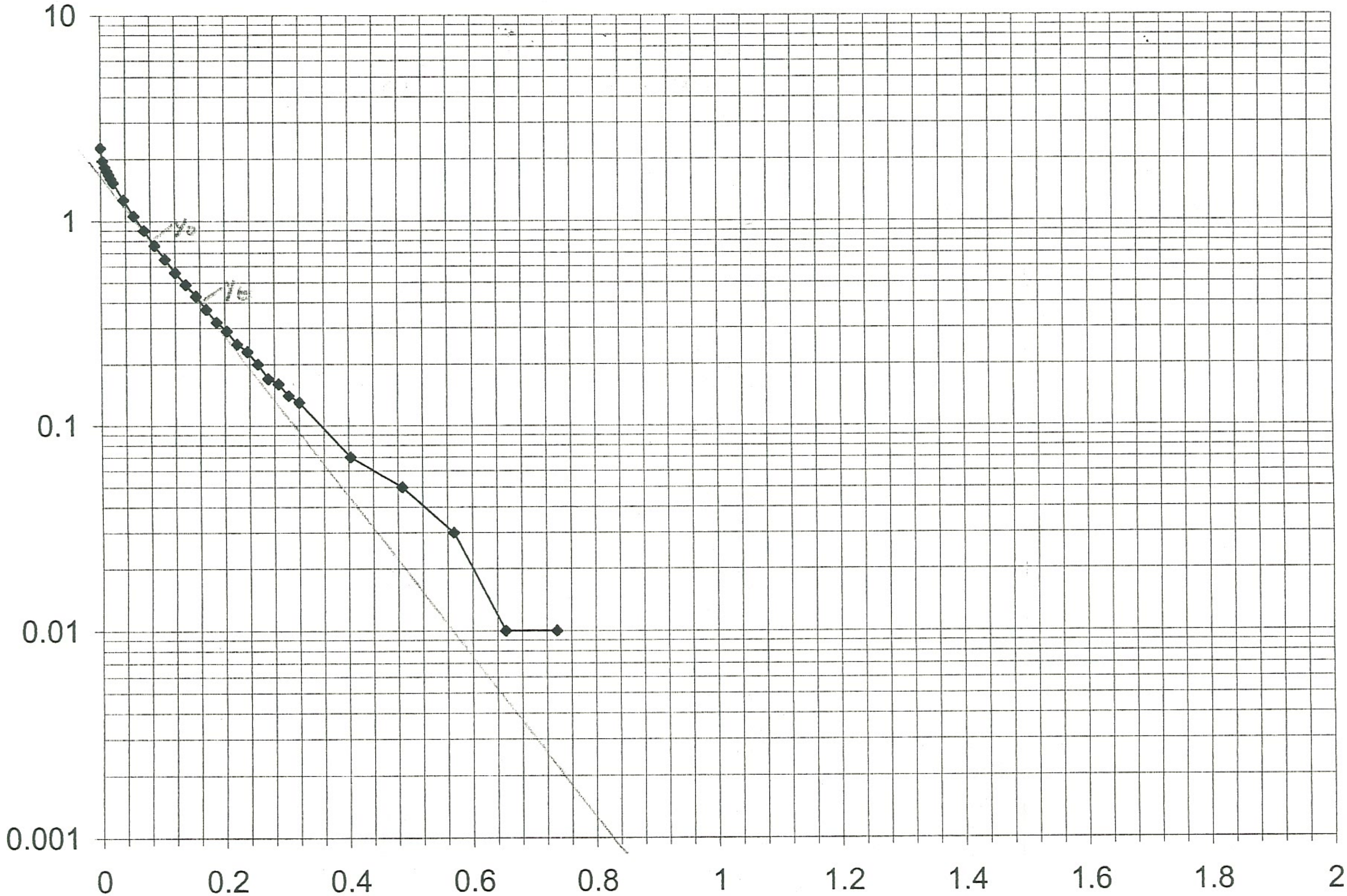
When D=H: C = **1.94**

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

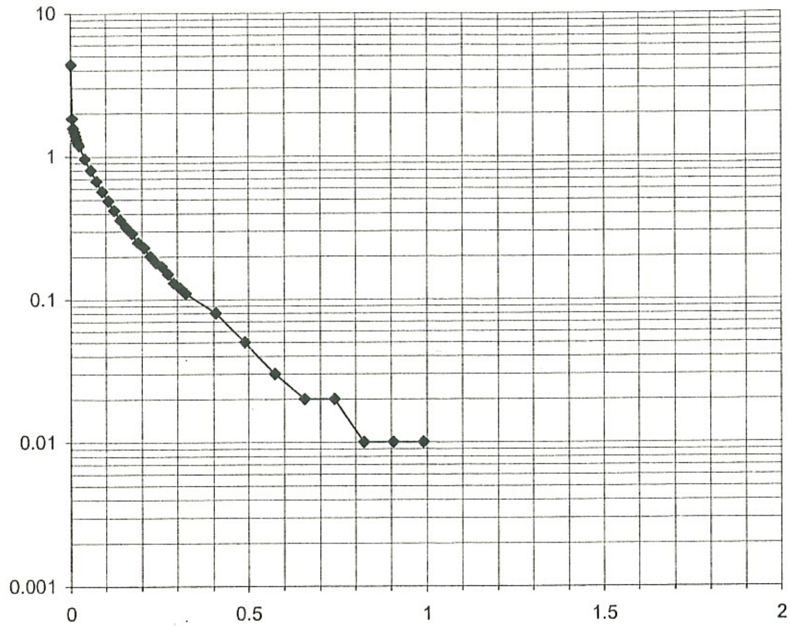
$K = \dfrac{(r_c^2)\,d}{2\,(L)}$ (a) = **0.0854** ft/min = **122.92** ft/day

mw 95 - 1

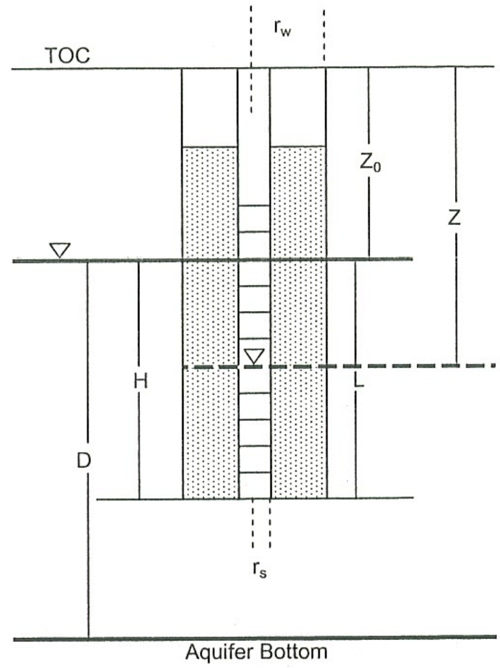


$y_0 = 0.8$
$y_t = 0.4$
$dt = 0.16 - 0.08 = 0.08$

$K = 122.92$ ft/day



Project Name:	Standard Motor Products
Address:	Long Island City, NY
Well Number:	MW9S (Test 2)
Date:	7/29/2003



y_0 = **0.6** (ft)
y_t = **0.3** (ft)
dt = **0.08** (min.)

D = **14.19** (ft)
H = **14.19** (ft)
L = **14.19** (ft)

r_s = **0.167** (ft)
r_w = **0.5** (ft)

n = **0.375**
Z_0 = **3.86** (ft)

$a = \ln[y_0/y_t]/dt$ = **8.6643**

$c = \ln[(D-H)/r_w]$ =

$b = L/r_w$ = **28.38**

$d = \ln[R_e/r_w]$ = **2.518**

$r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2}$ = **0.3334** (ft)

When D>H: A = B =
and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

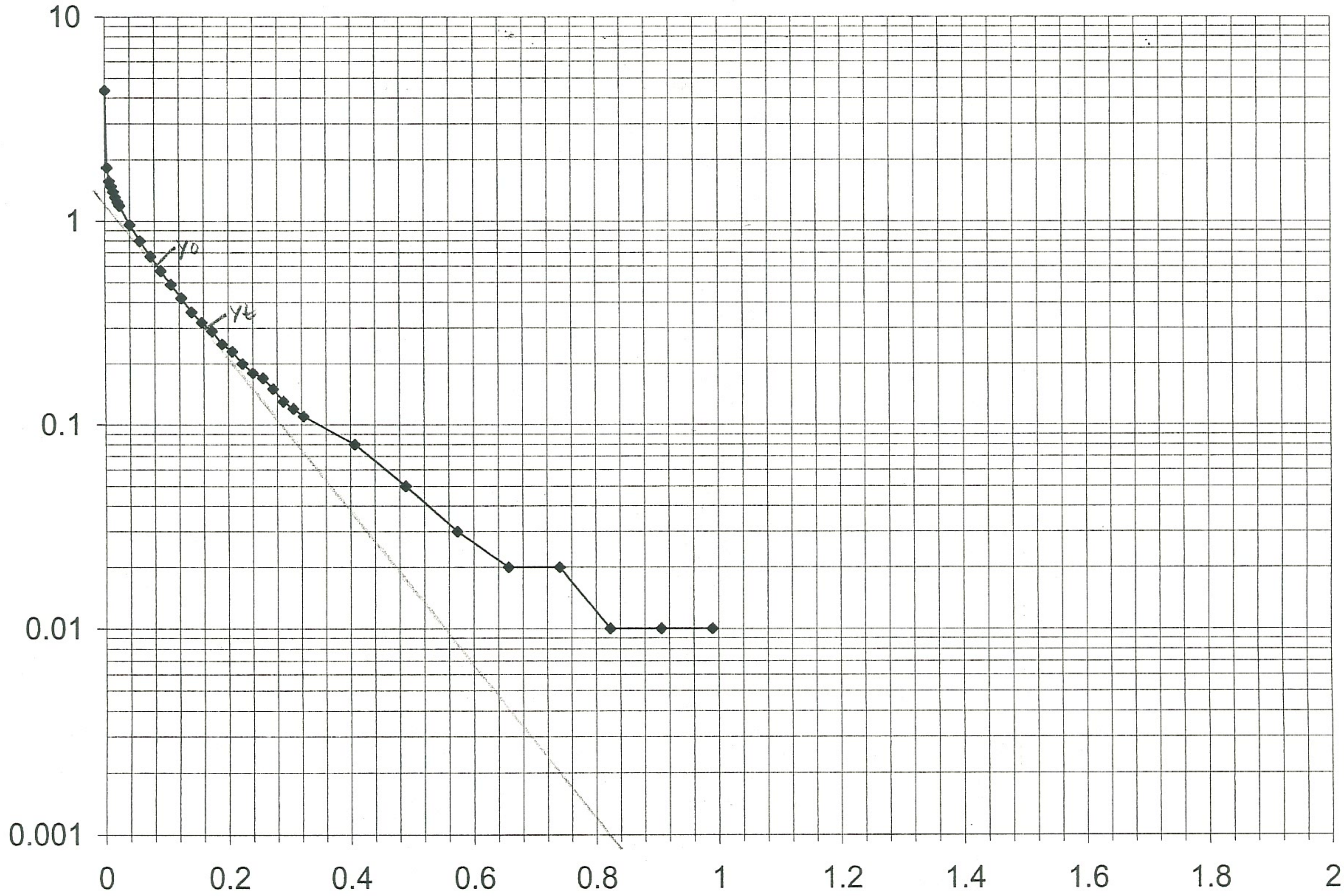
(The values of A, B, and C are a function of b, and are obtained from the attached table)

When D=H: C = **1.94**
and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

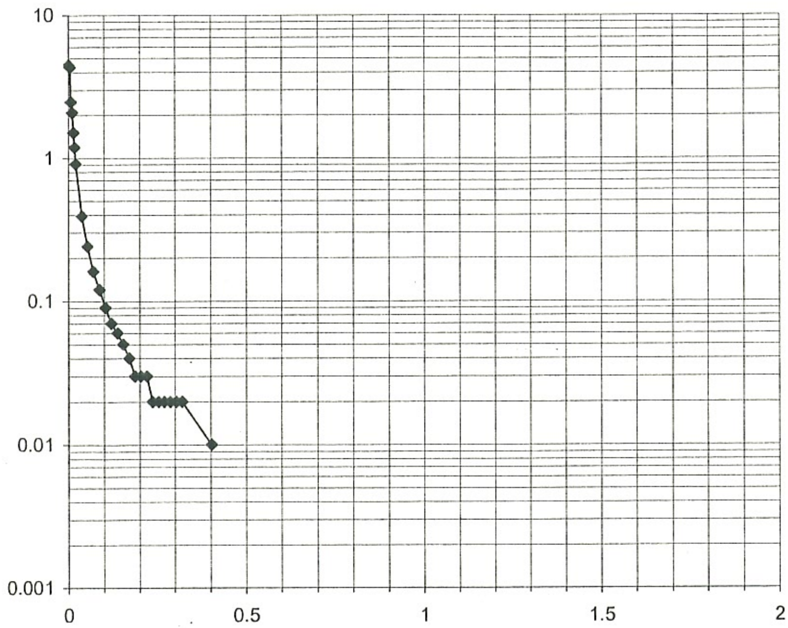
$K = \frac{(r_c^2)\, d}{2\,(L)}$ (a) = **0.0855** ft/min = **123.08** ft/day

MW95-2

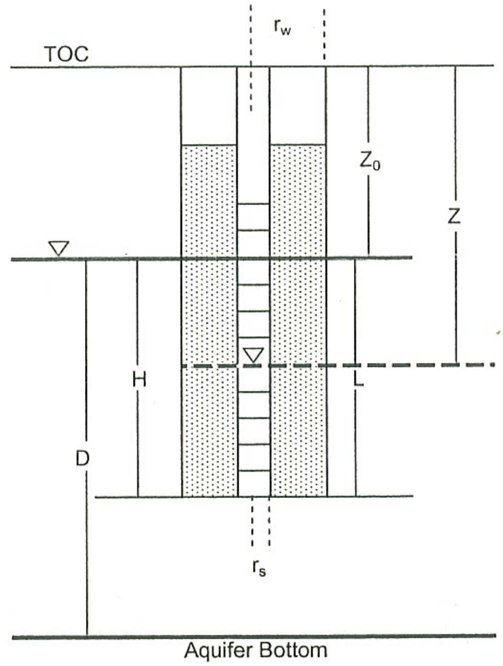


$y_0 = 0.6$
$y_t = 0.3$
$dt = 0.16 - 0.08 = 0.08$

$k = 123.08$ ft/day



Project Name:	Standard Motor Products
Address:	Long Island City, NY
Well Number:	MW9D (Test 1)
Date:	7/29/2003



y_0 =	**0.4**	(ft)	D =	**33.86**	(ft)	r_s =	**0.167**	(ft)	n =	**0.375**	
y_t =	**0.008**	(ft)	H =	**33.86**	(ft)	r_w =	**0.5**	(ft)	Z_0 =	**4.00**	(ft)
dt =	**0.16**	(min.)	L =	**33.86**	(ft)						

$a = \ln[y_0/y_t]/dt$ = **24.45** $\qquad c = \ln[(D-H)/r_w]$ =

$b = L/r_w$ = **67.72** $\qquad d = \ln[R_e/r_w]$ = **3.2462** $\qquad r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2}$ = **0.3334** (ft)

When D>H: A = B =

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

(The values of A, B, and C are a function of b, and are obtained from the attached table)

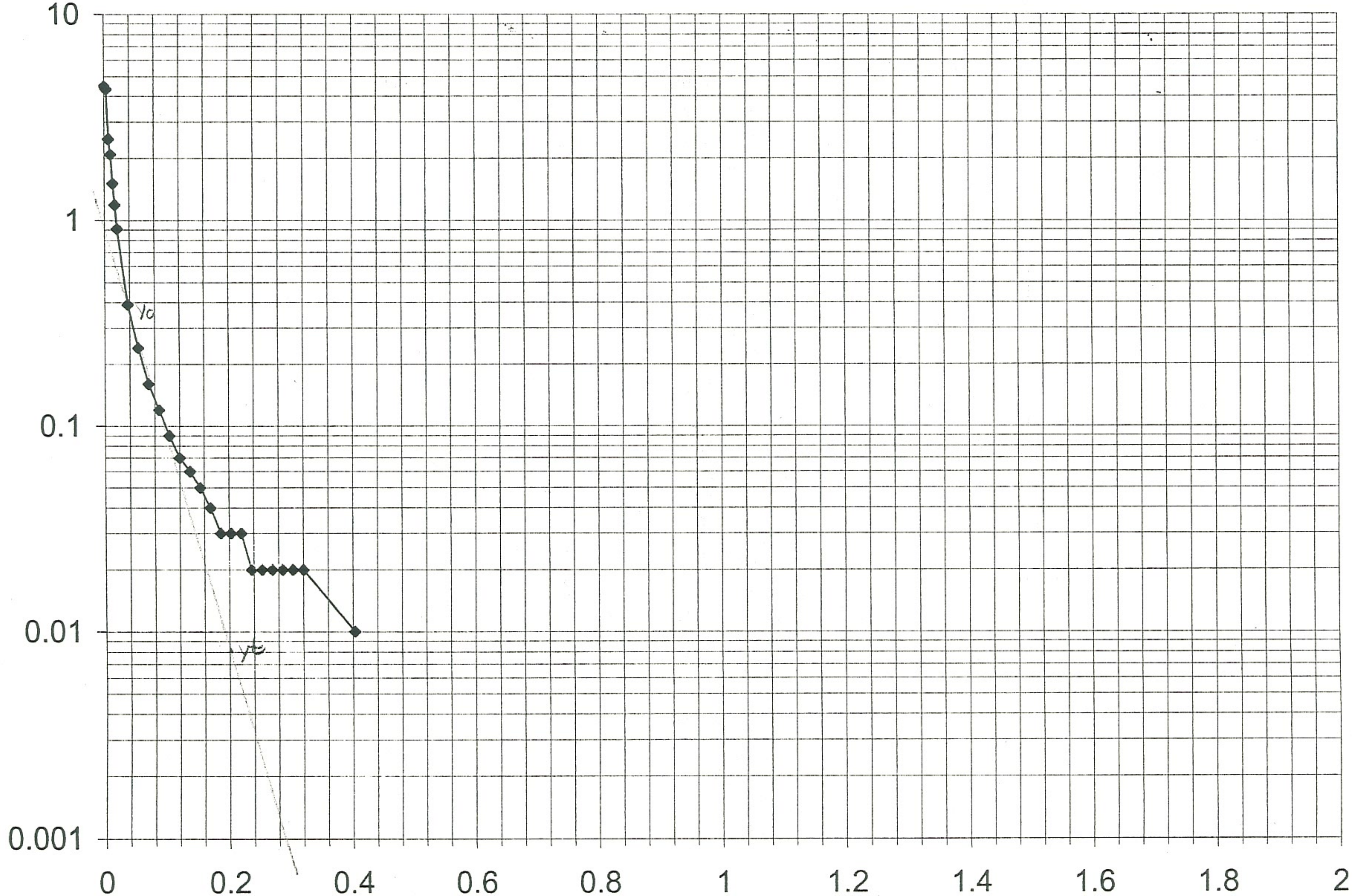
When D=H: C = **3.19**

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

$K = \dfrac{(r_c^2)\,d}{2\,(L)}$ (a) = **0.1303** ft/min = **187.64** ft/day

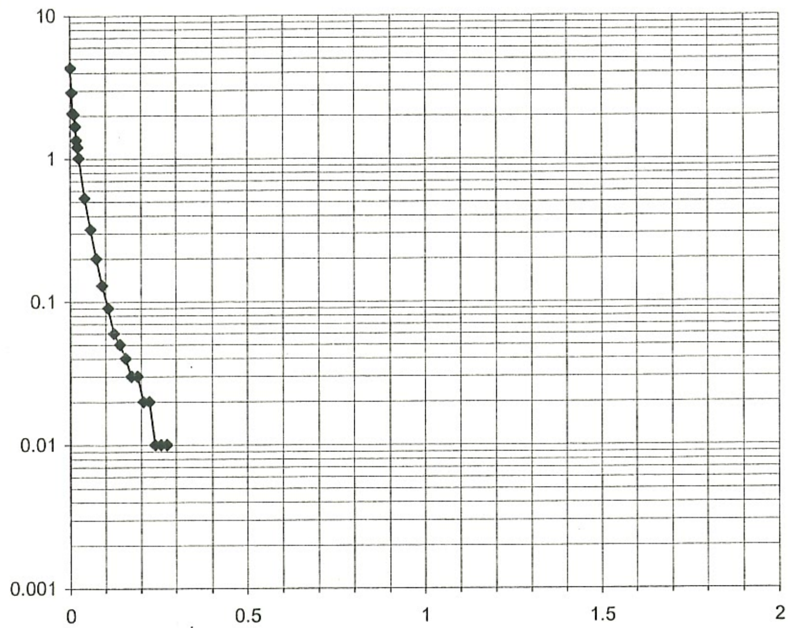
MW9D-1

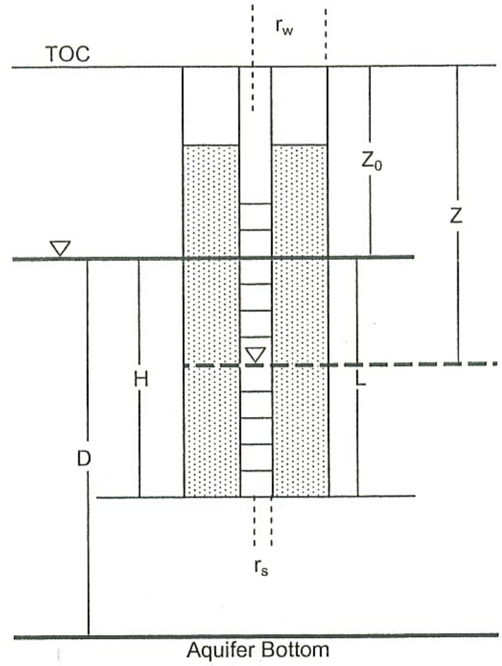


yo = 0.4
yt = 0.008
dt = 0.2 − 0.04 = 0.16

K = 187.64 ft/day

Project Name: Standard Motor Products
Address: Long Island City, NY
Well Number: MW9D (Test 2)
Date: 7/29/2003





y_0 =	**0.06** (ft)	D =	**33.85** (ft)	r_s =	**0.167** (ft)	n =	**0.375**
y_t =	**0.003** (ft)	H =	**33.85** (ft)	r_w =	**0.5** (ft)	Z_0 =	**4.01** (ft)
dt =	**0.12** (min.)	L =	**33.85** (ft)				

$a = \ln[y_0/y_t]/dt$ = **24.964**　　$c = \ln[(D-H)/r_w]$ =

$b = L/r_w$ = **67.7**　　$d = \ln[R_e/r_w]$ = **3.2458**　　$r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2}$ = **0.3334** (ft)

When D>H: A = 　　B =
and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

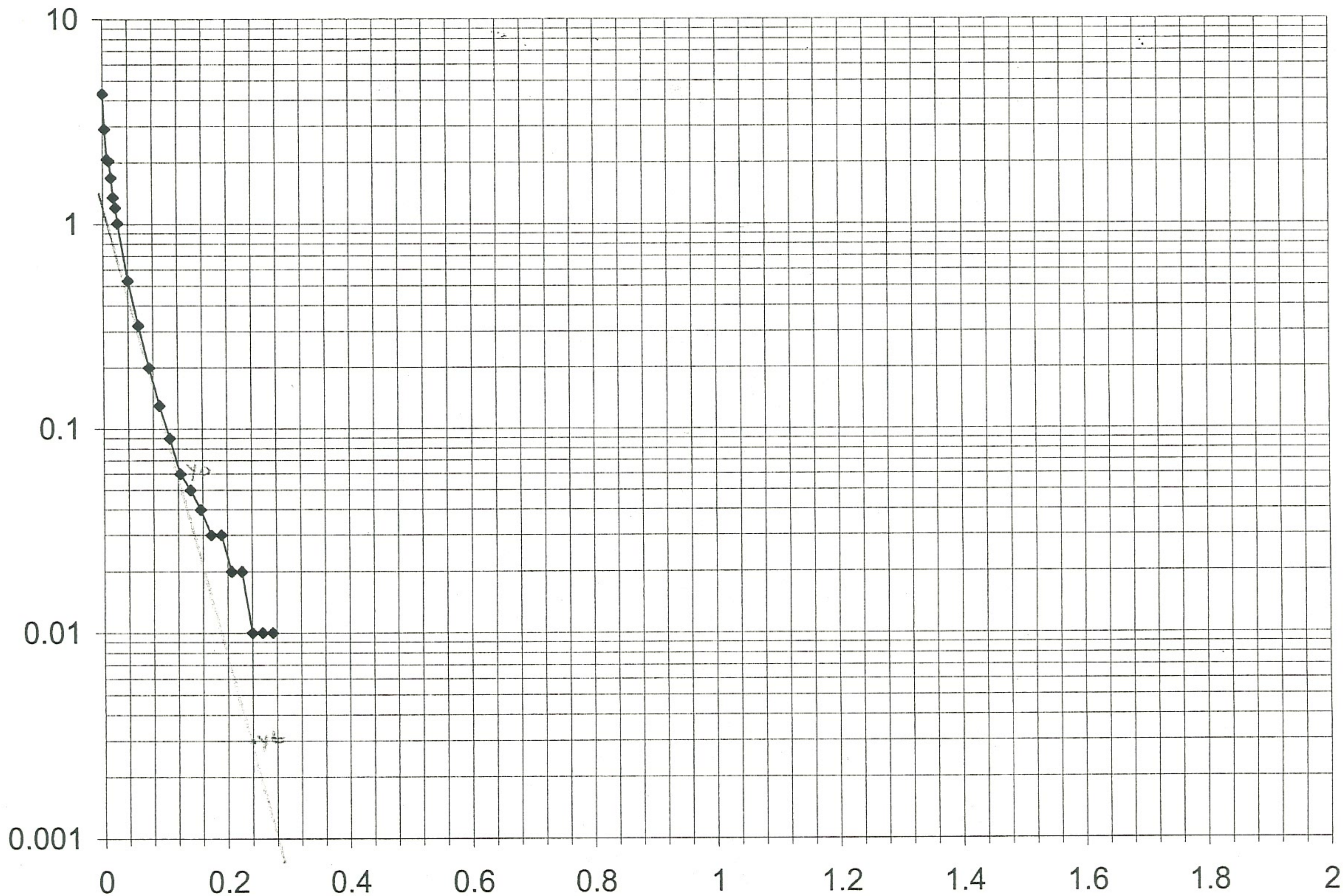
(The values of A, B, and C are a function of b, and are obtained from the attached table)

When D=H: C = **3.19**
and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

$K = \frac{(r_c^2)\,d}{2\,(L)}$ (a) = **0.1331** ft/min = **191.62** ft/day

mw9D-2

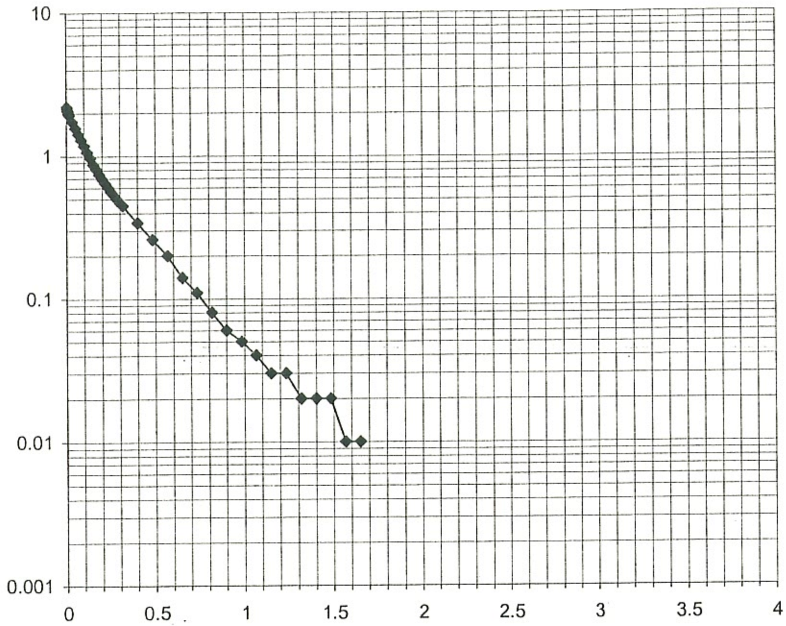


$y_o = 0.06$

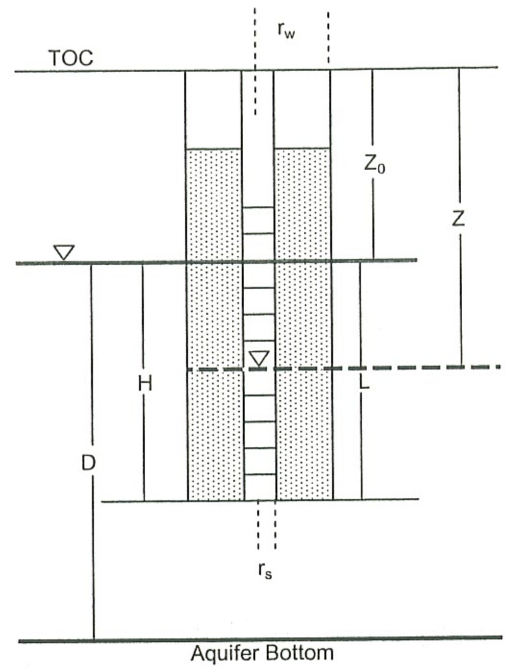
$y_t = 0.003$

$dt = 0.24 - 0.12 = 0.12$

$K = 191.62$ ft/day



Project Name:	Standard Motor Products
Address:	Long Island City, NY
Well Number:	MW10 (Test 1)
Date:	7/29/2003



y_0 =	**0.9** (ft)	D =	**12.97** (ft)	r_s =	**0.167** (ft)	n =	**0.375**
y_t =	**0.005** (ft)	H =	**12.97** (ft)	r_w =	**0.5** (ft)	Z_0 =	**4.58** (ft)
dt =	**1.6** (min.)	L =	**12.97** (ft)				

$a = \ln[y_0/y_t]/dt$ = **3.2456** $\quad$ $c = \ln[(D-H)/r_w]$ =

$b = L/r_w$ = **25.94** $\quad$ $d = \ln[R_e/r_w]$ = **2.4439** $\quad$ $r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2}$ = **0.3334** (ft)

When D>H: A = $\quad$ B =

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ $\quad$ {when c < 6}

or

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ $\quad$ {when c > or = 6}

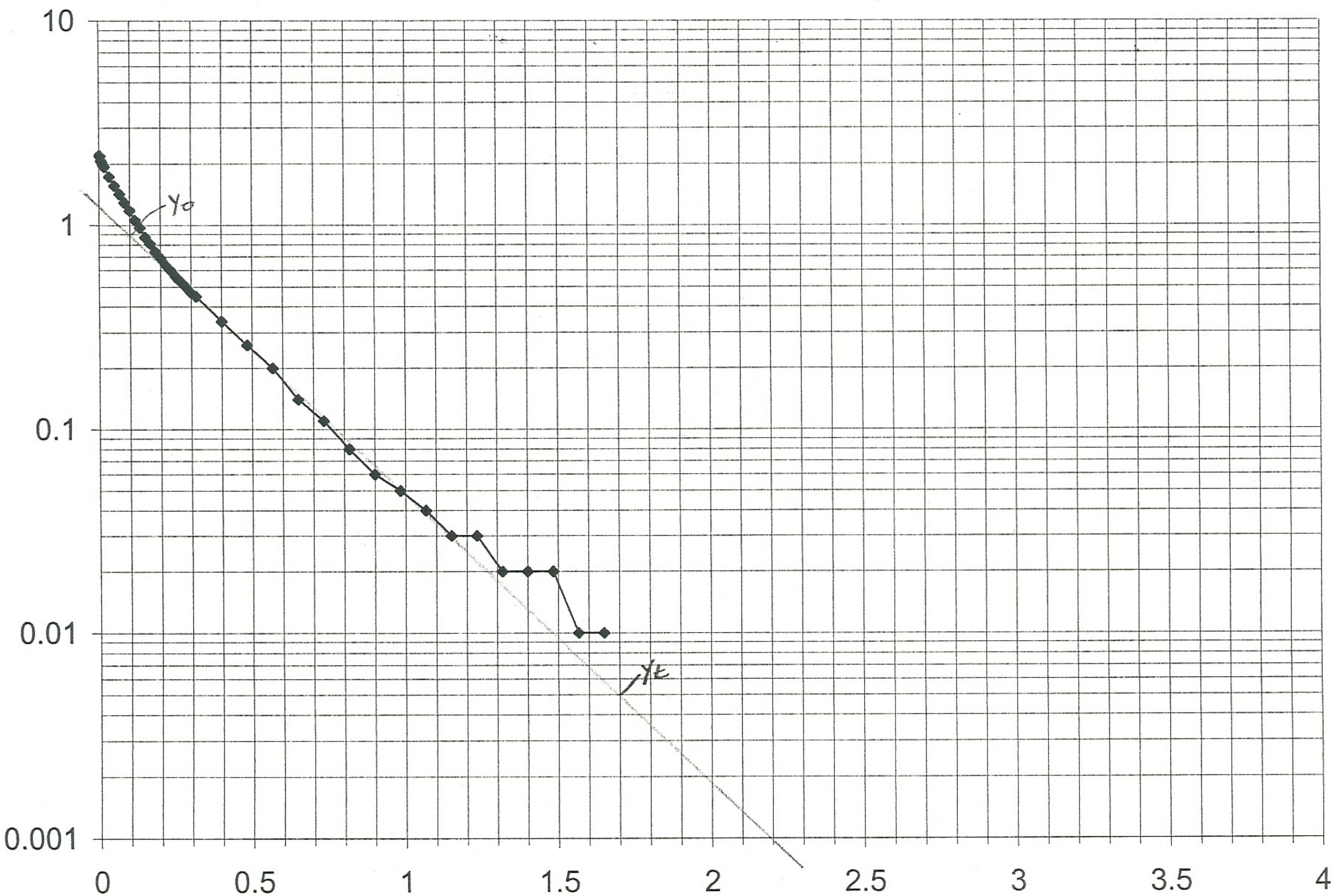
(The values of A, B, and C are a function of b, and are obtained from the attached table)

When D=H: C = **1.85**

and

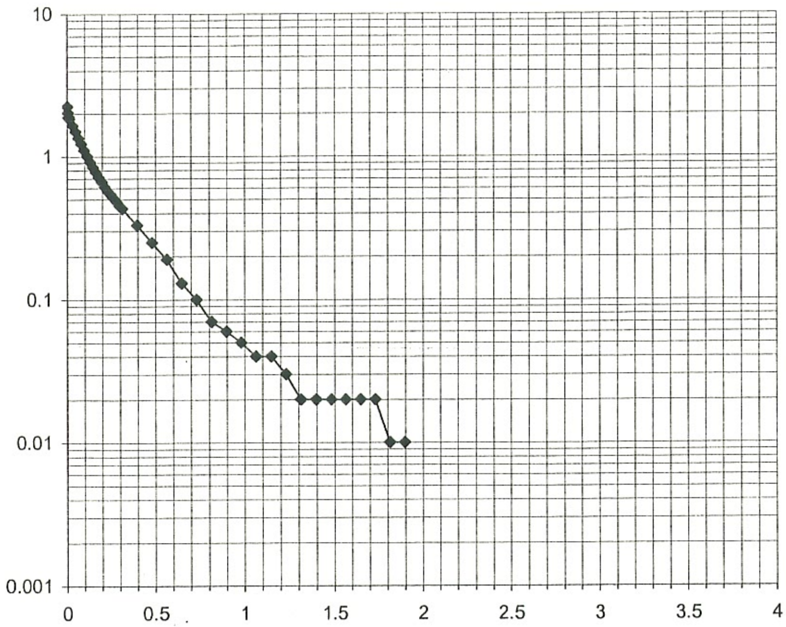
$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

$K = \dfrac{(r_c^2)\ d}{2\ (L)}$ (a) = **0.034** ft/min = **48.956** ft/day mw10 - 1

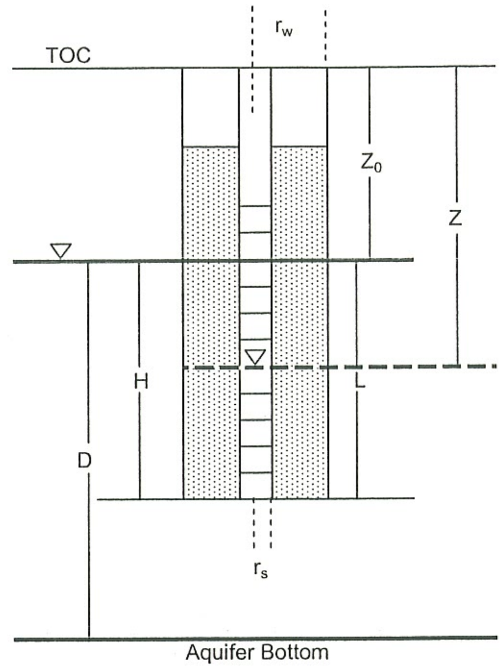


$y_o = 0.9$
$y_t = 0.005$
$dt = 1.7 - 0.1 = 1.6$

$k = 45.96$ ft/day



Project Name:	Standard Motor Products
Address:	Long Island City, NY
Well Number:	MW10 (Test 2)
Date:	7/29/2003



y_0 = **0.9** (ft) D = **12.96** (ft) r_s = **0.167** (ft) n = **0.375**

y_t = **0.08** (ft) H = **12.96** (ft) r_w = **0.5** (ft) Z_0 = **4.59** (ft)

dt = **0.7** (min.) L = **12.96** (ft)

$a = \ln[y_0/y_t]/dt$ = **3.4577** $c = \ln[(D-H)/r_w]$ =

$b = L/r_w$ = **25.92** $d = \ln[R_e/r_w]$ = **2.4431** $r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2}$ = **0.3334** (ft)

When D>H: A = B =
and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

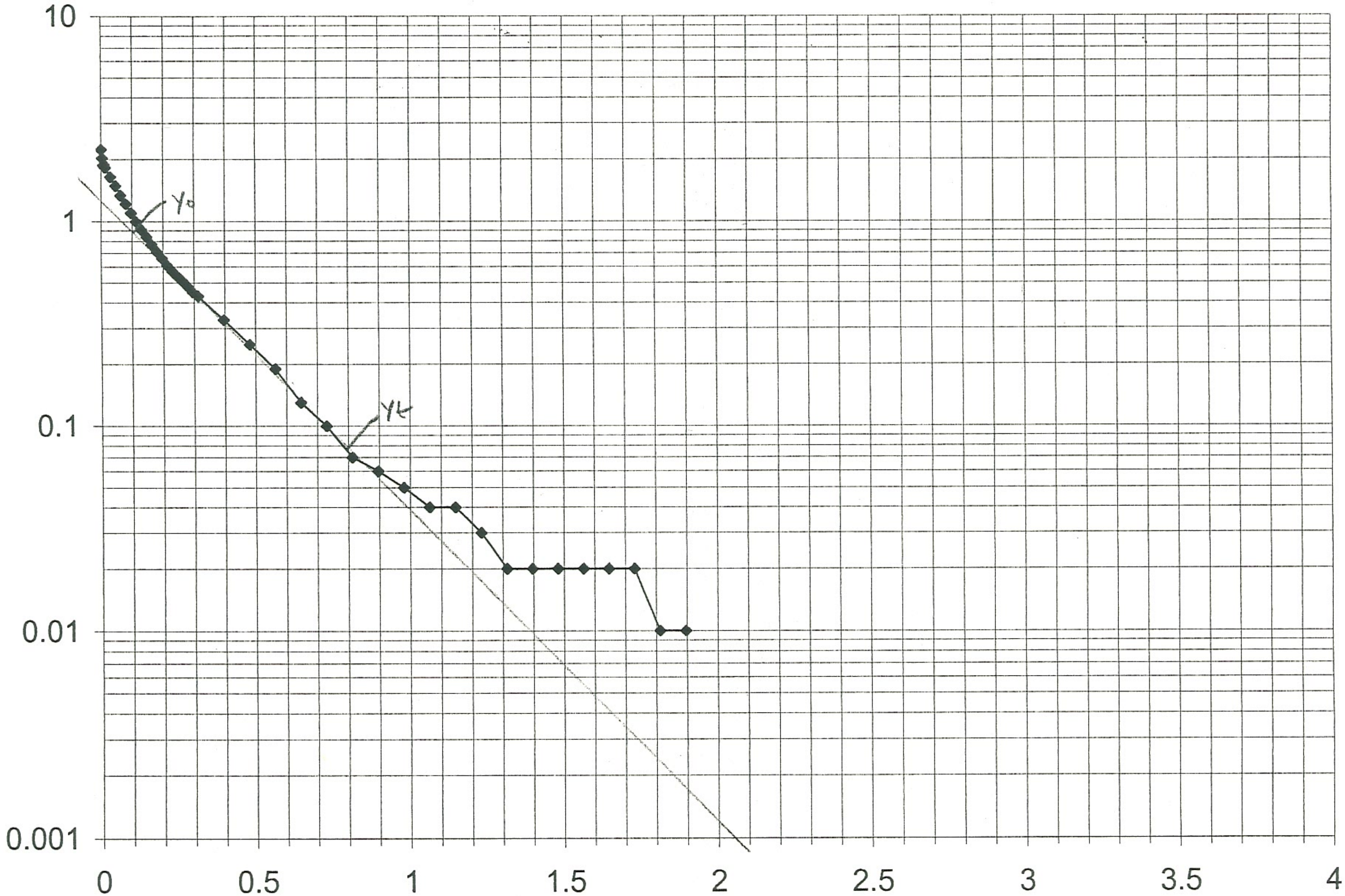
$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

(The values of A, B, and C are a function of b, and are obtained from the attached table)

When D=H: C = **1.85**
and

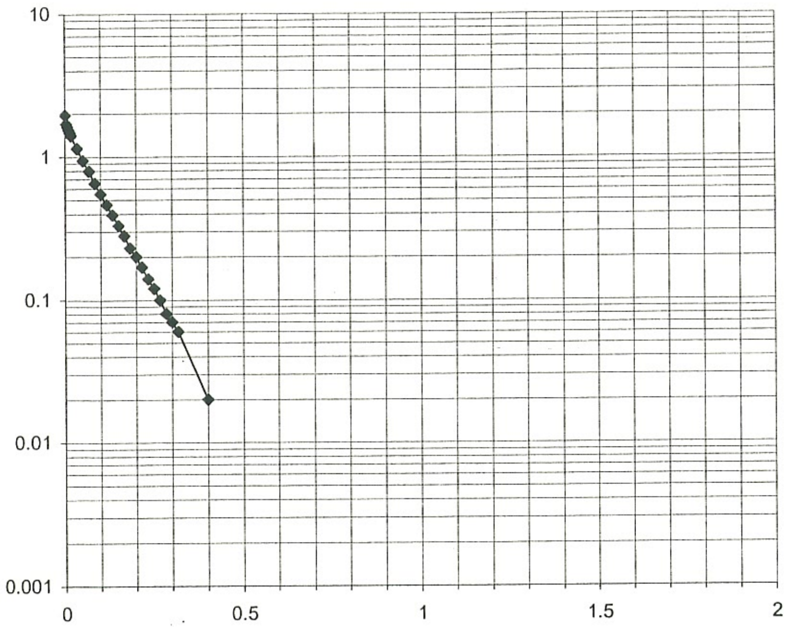
$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

$K = \dfrac{(r_c^2)\,d}{2\,(L)}$ (a) = **0.0362** ft/min = **52.178** ft/day

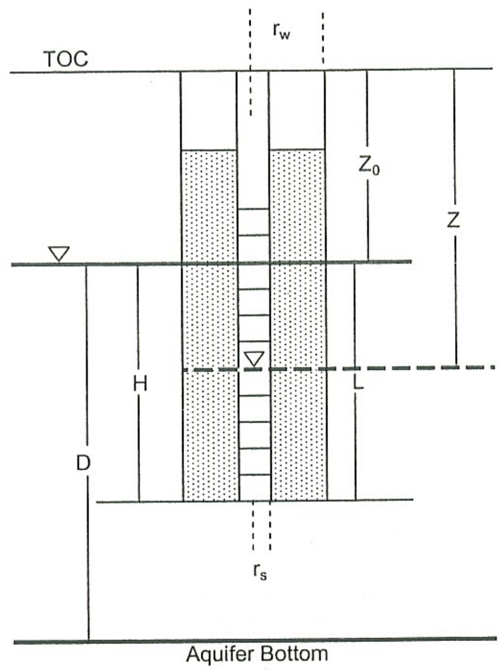


$Y_o = 0.9$
$Y_t = 0.08$
$dt = 0.8 - 0.1 = 0.7$

$K = 52.18$ ft/day



Project Name:	Standard Motor Products
Address:	Long Island City, NY
Well Number:	MW11S (Test 1)
Date:	7/30/2003



y_0 = **1** (ft) D = **14.75** (ft) r_s = **0.167** (ft) n = **0.375**

y_t = **0.08** (ft) H = **14.75** (ft) r_w = **0.5** (ft) Z_0 = **4.21** (ft)

dt = **0.24** (min.) L = **14.75** (ft)

$a = \ln[y_0/y_t]/dt$ = **10.524** $c = \ln[(D-H)/r_w]$ =

$b = L/r_w$ = **29.5** $d = \ln[R_e/r_w]$ = **2.5501** $r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2}$ = **0.3334** (ft)

When D>H: A = B =

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

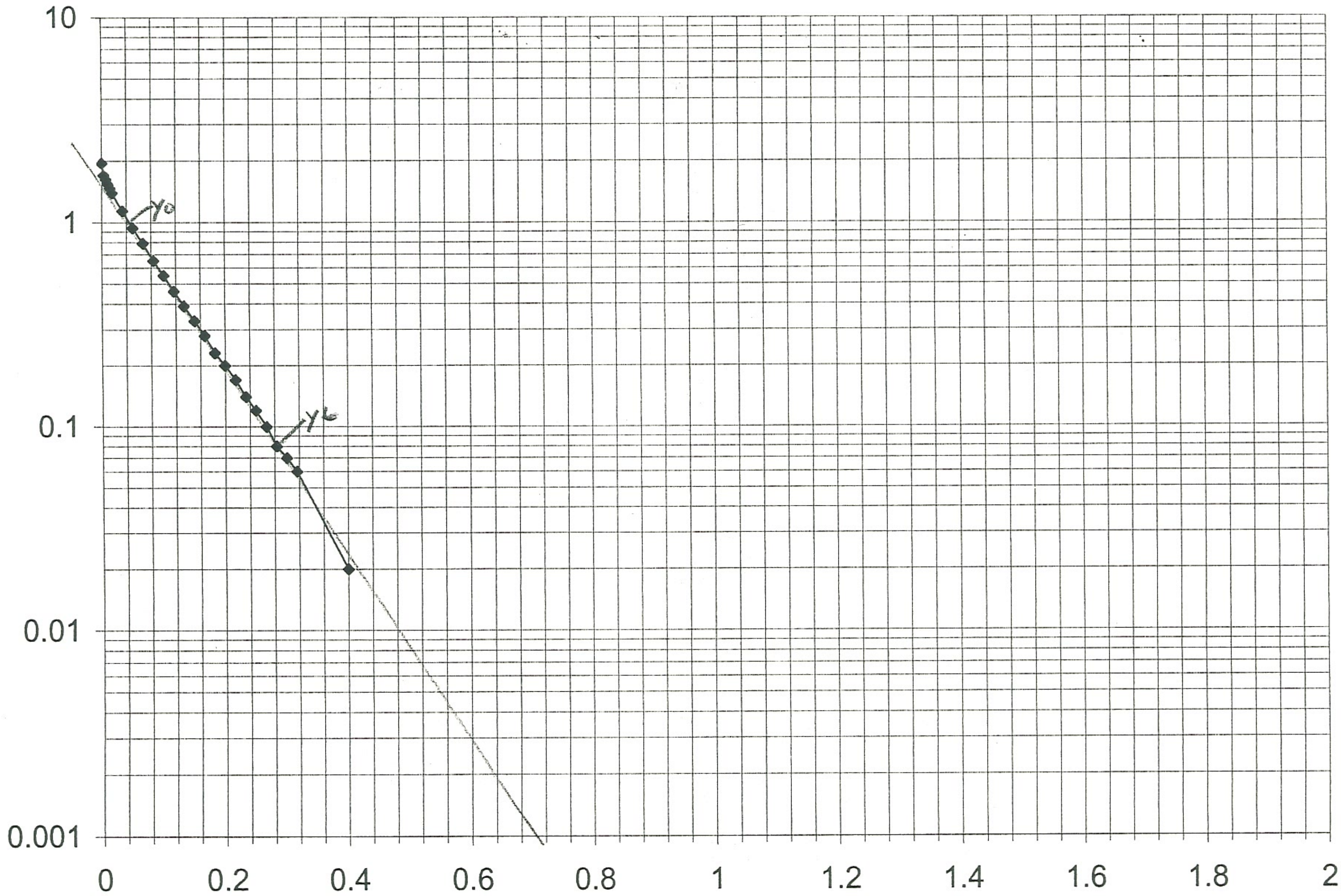
(The values of A, B, and C are a function of b, and are obtained from the attached table)

When D=H: C = **1.98**

and

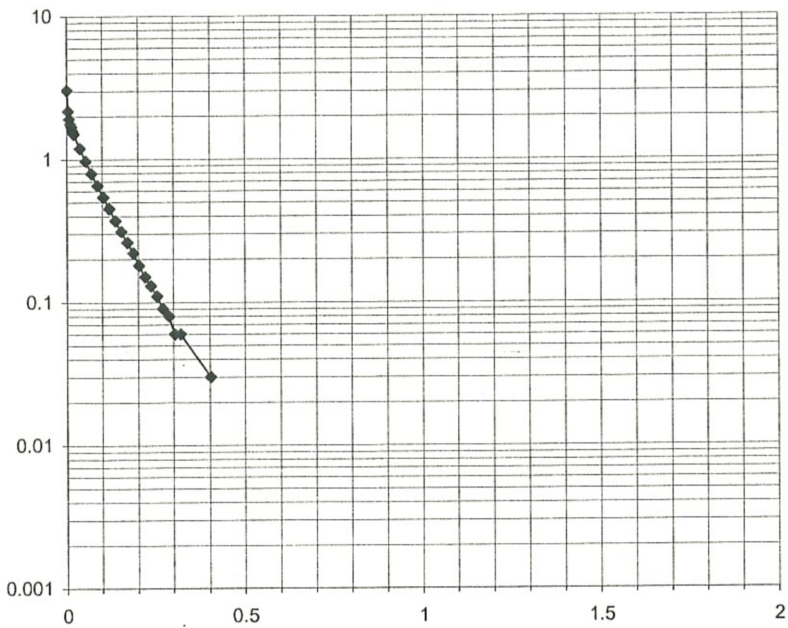
$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

$K = \dfrac{(r_c^2)\,d}{2\,(L)}$ (a) = **0.1011** ft/min = **145.65** ft/day

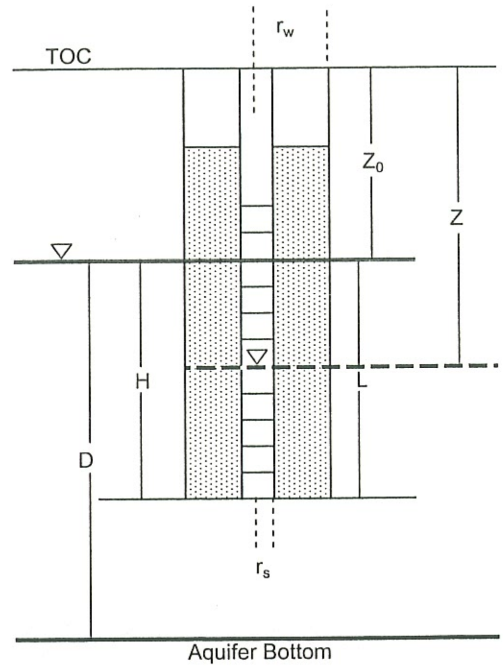


$Y_0 = 1$
$Y_t = 0.08$
$dt = 0.28 - 0.04 = 0.24$

$K = 145.65$ ft/day



Project Name:	Standard Motor Products
Address:	Long Island City, NY
Well Number:	MW11S (Test 2)
Date:	7/30/2003



y_0 = **0.7** (ft)
y_t = **0.08** (ft)
dt = **0.2** (min.)

D = **14.74** (ft)
H = **14.74** (ft)
L = **14.74** (ft)

r_s = **0.167** (ft)
r_w = **0.5** (ft)

n = **0.375**
Z_0 = **4.22** (ft)

$a = \ln[y_0/y_t]/dt$ = **10.845**

$c = \ln[(D-H)/r_w]$ =

$b = L/r_w$ = **29.48**

$d = \ln[R_e/r_w]$ = **2.5494**

$r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2}$ = **0.3334** (ft)

When D>H: A = B =

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

(The values of A, B, and C are a function of b, and are obtained from the attached table)

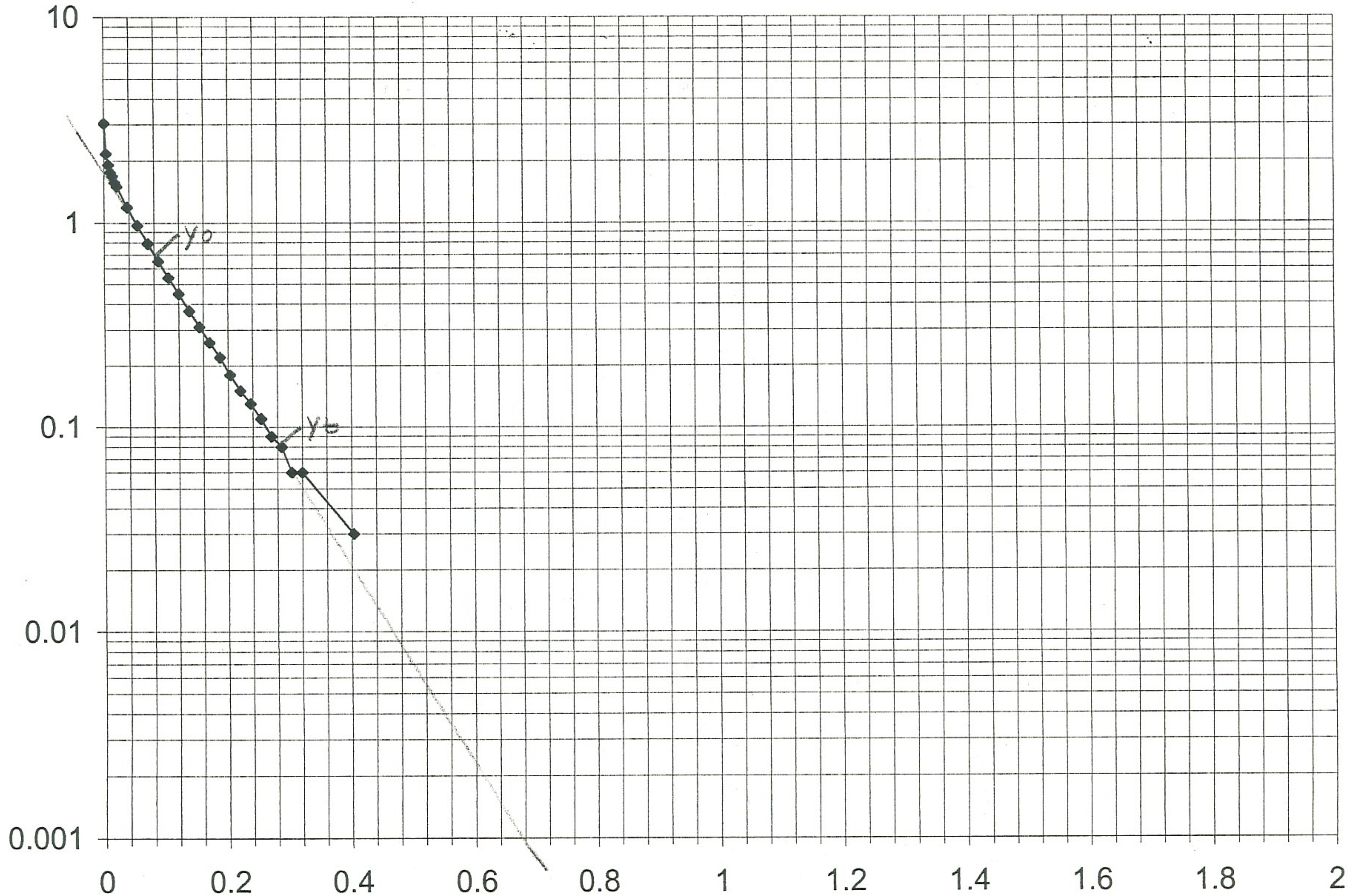
When D=H: C = **1.98**

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

$K = \dfrac{(r_c^2)\,d}{2\,(L)}$ (a) = **0.1043** ft/min = **150.16** ft/day

mw115-2

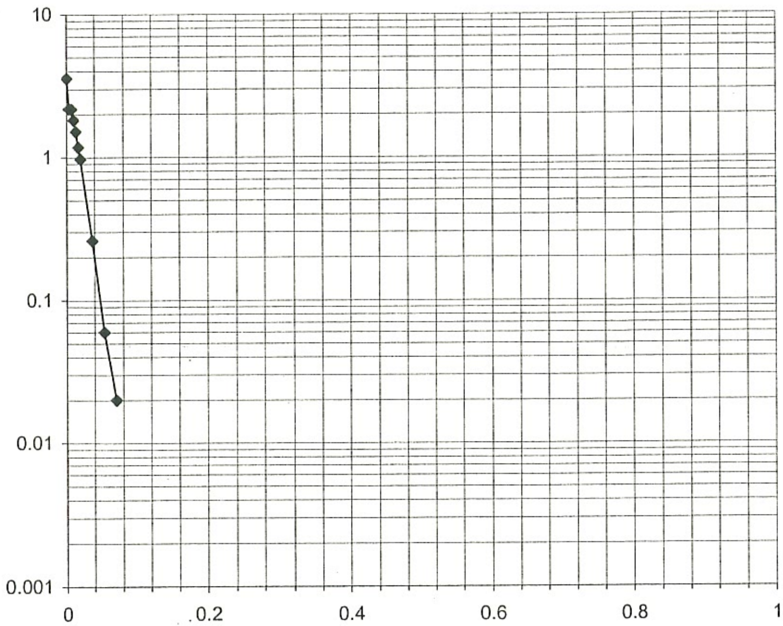


$y_0 = 0.7$

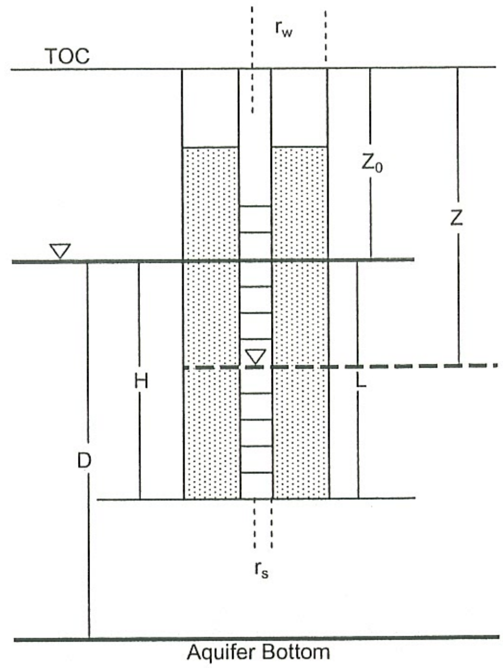
$y_t = 0.08$

$dt = 0.28 - 0.08 = 0.20$

$K = 150.6$ ft/day



Project Name:	Standard Motor Products
Address:	Long Island City, NY
Well Number:	MW11D (Test 1)
Date:	7/30/2003



$y_0 =$ **0.6** (ft) $D =$ **34.32** (ft) $r_s =$ **0.167** (ft) $n =$ **0.375**

$y_t =$ **0.03** (ft) $H =$ **34.32** (ft) $r_w =$ **0.5** (ft) $Z_0 =$ **4.28** (ft)

$dt =$ **0.04** (min.) $L =$ **34.32** (ft)

$a = \ln[y_0/y_t]/dt =$ **74.893** $c = \ln[(D-H)/r_w] =$

$b = L/r_w =$ **68.64** $d = \ln[R_e/r_w] =$ **3.257** $r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2} =$ **0.3334** (ft)

When D>H: A = B =

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

(The values of A, B, and C are a function of b, and are obtained from the attached table)

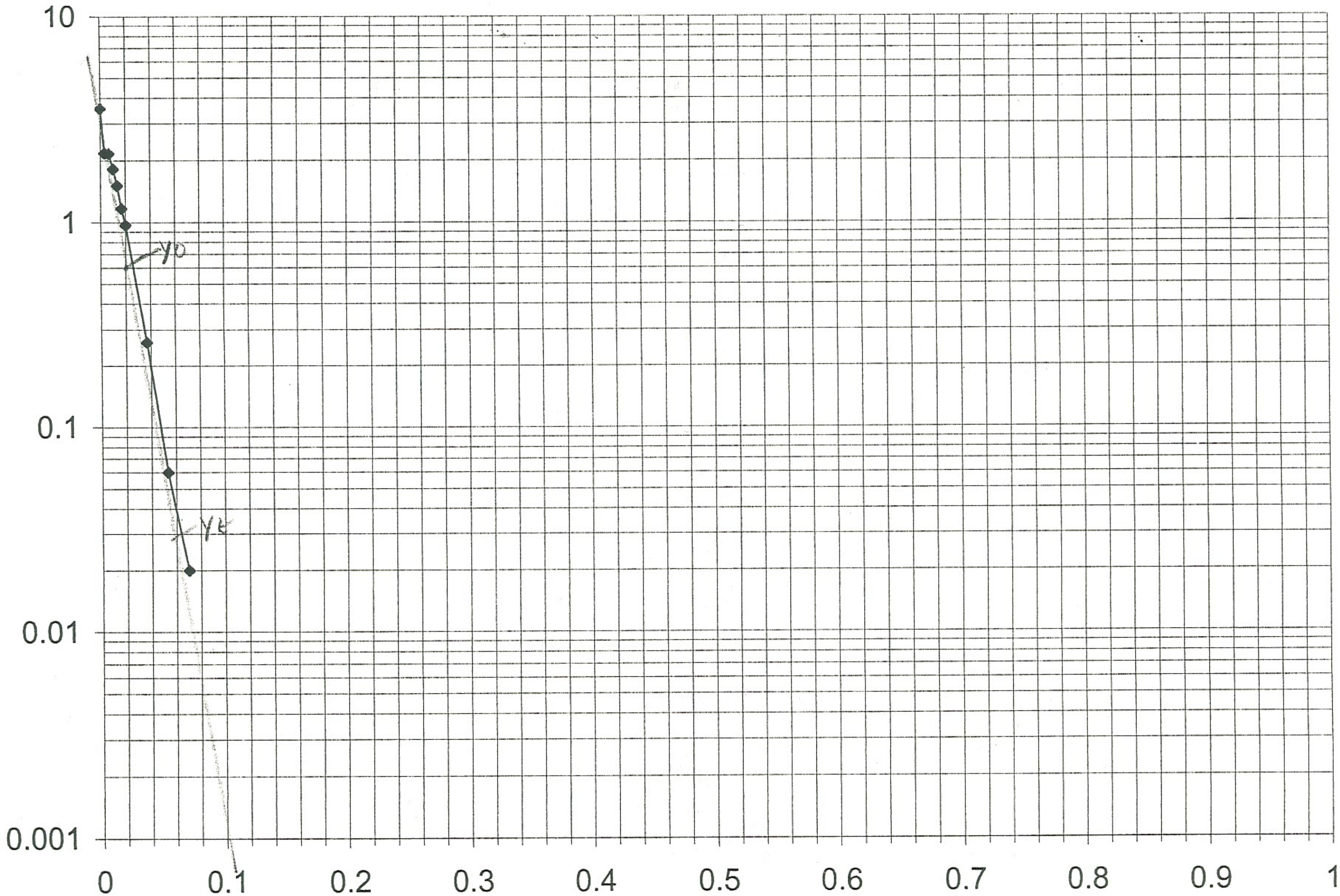
When D=H: C = **3.22**

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

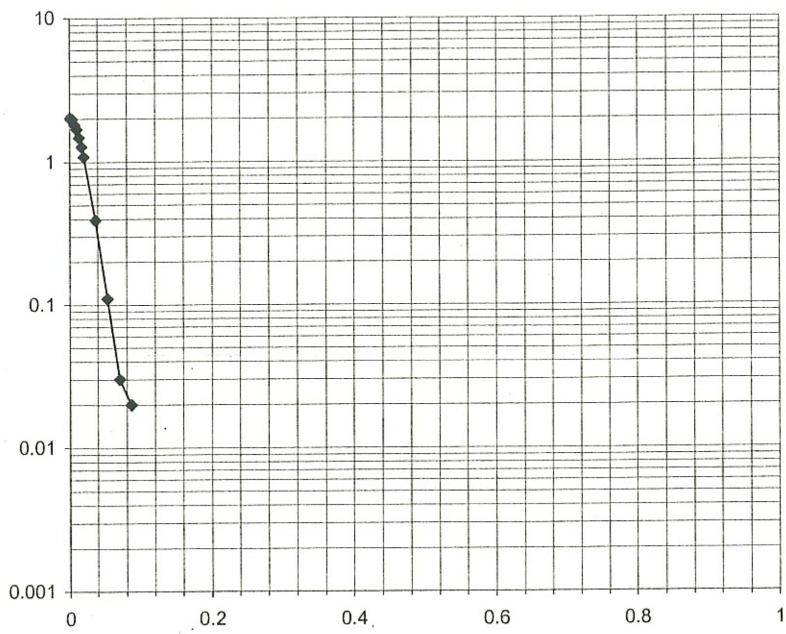
$K = \frac{(r_c^2)\,d}{2\,(L)}\,(a) =$ **0.3951** ft/min = **568.96** ft/day

MW11D-1

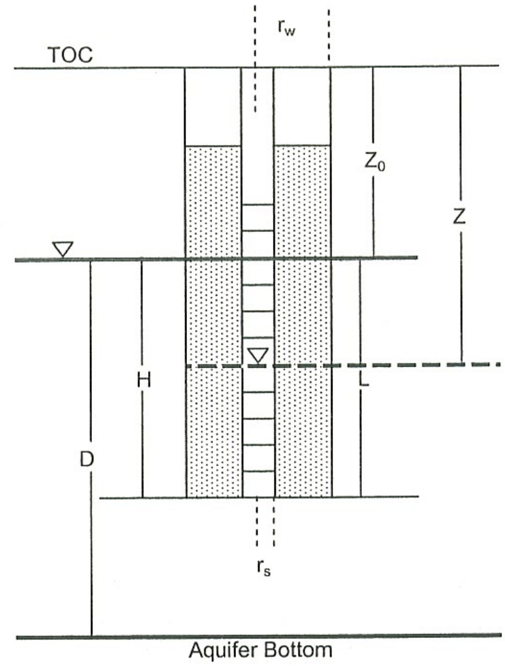


Yo = 0.6
Yt = 0.03
dt = 0.06 - 0.02 = 0.04

K = 568.96 ft/day



Project Name:	Standard Motor Products
Address:	Long Island City, NY
Well Number:	MW11D (Test 2)
Date:	7/30/2003



y_0 =	**1** (ft)	D =	**34.32** (ft)	r_s =	**0.167** (ft)	n =	**0.375**
y_t =	**0.06** (ft)	H =	**34.32** (ft)	r_w =	**0.5** (ft)	Z_0 =	**4.28** (ft)
dt =	**0.04** (min.)	L =	**34.32** (ft)				

$a = \ln[y_0/y_t]/dt$ = **70.335** $\quad c = \ln[(D-H)/r_w]$ =

$b = L/r_w$ = **68.64** $\quad d = \ln[R_e/r_w]$ = **3.257** $\quad r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2}$ = **0.3334** (ft)

When D>H: A = B =

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

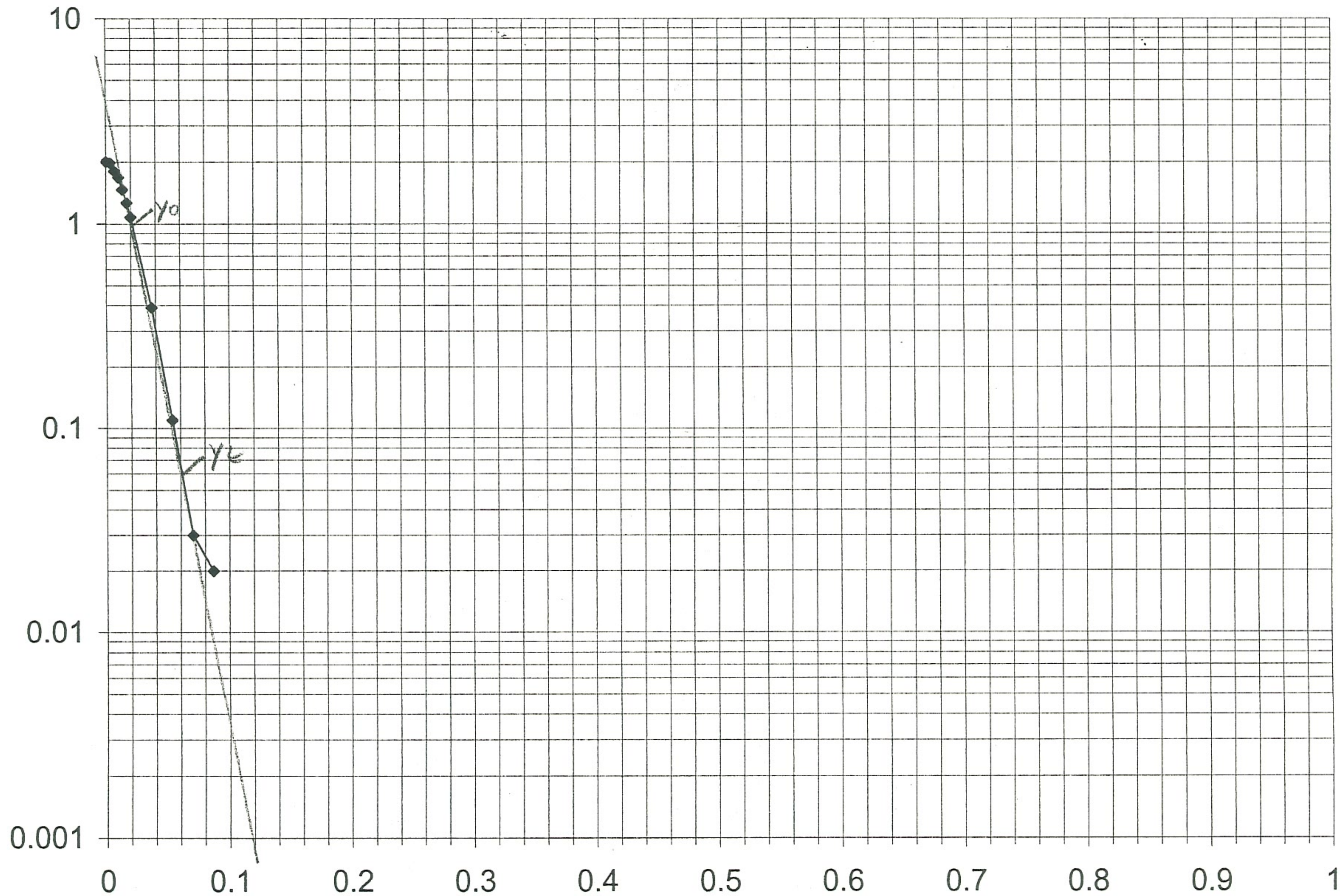
(The values of A, B, and C are a function of b, and are obtained from the attached table)

When D=H: C = **3.22**

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

$K = \dfrac{(r_c^2)\, d}{2\,(L)}$ (a) = **0.3711** ft/min = **534.33** ft/day

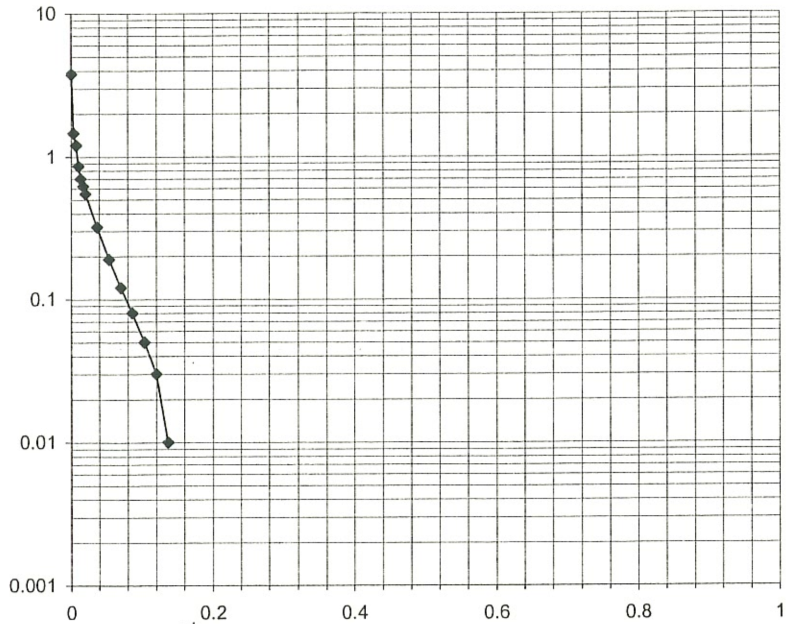


$Y_o = 1$

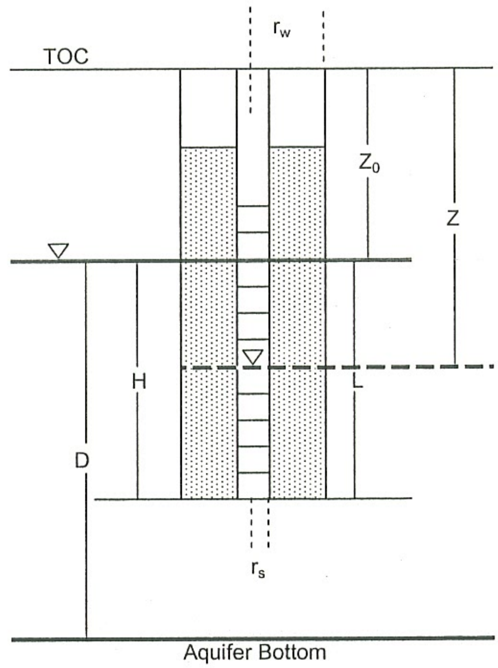
$Y_t = 0.06$

$dt = 0.06 - 0.02 = 0.04$

$K = 534.33$ ft/day



Project Name:	Standard Motor Products
Address:	Long Island City, NY
Well Number:	MW12 (Test 1)
Date:	7/30/2003



y_0 = **0.5** (ft)   D = **15.86** (ft) r_s = **0.167** (ft)   n = **0.375**

y_t = **0.003** (ft)   H = **15.86** (ft) r_w = **0.5** (ft) Z_0 = **3.82** (ft)

dt = **0.18** (min.)   L = **15.86** (ft)

$a = \ln[y_0/y_t]/dt$ = **28.422** $c = \ln[(D-H)/r_w]$ =

$b = L/r_w$ = **31.72** $d = \ln[R_e/r_w]$ = **2.61** $r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2}$ = **0.3334** (ft)

When D>H: A =   B =

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

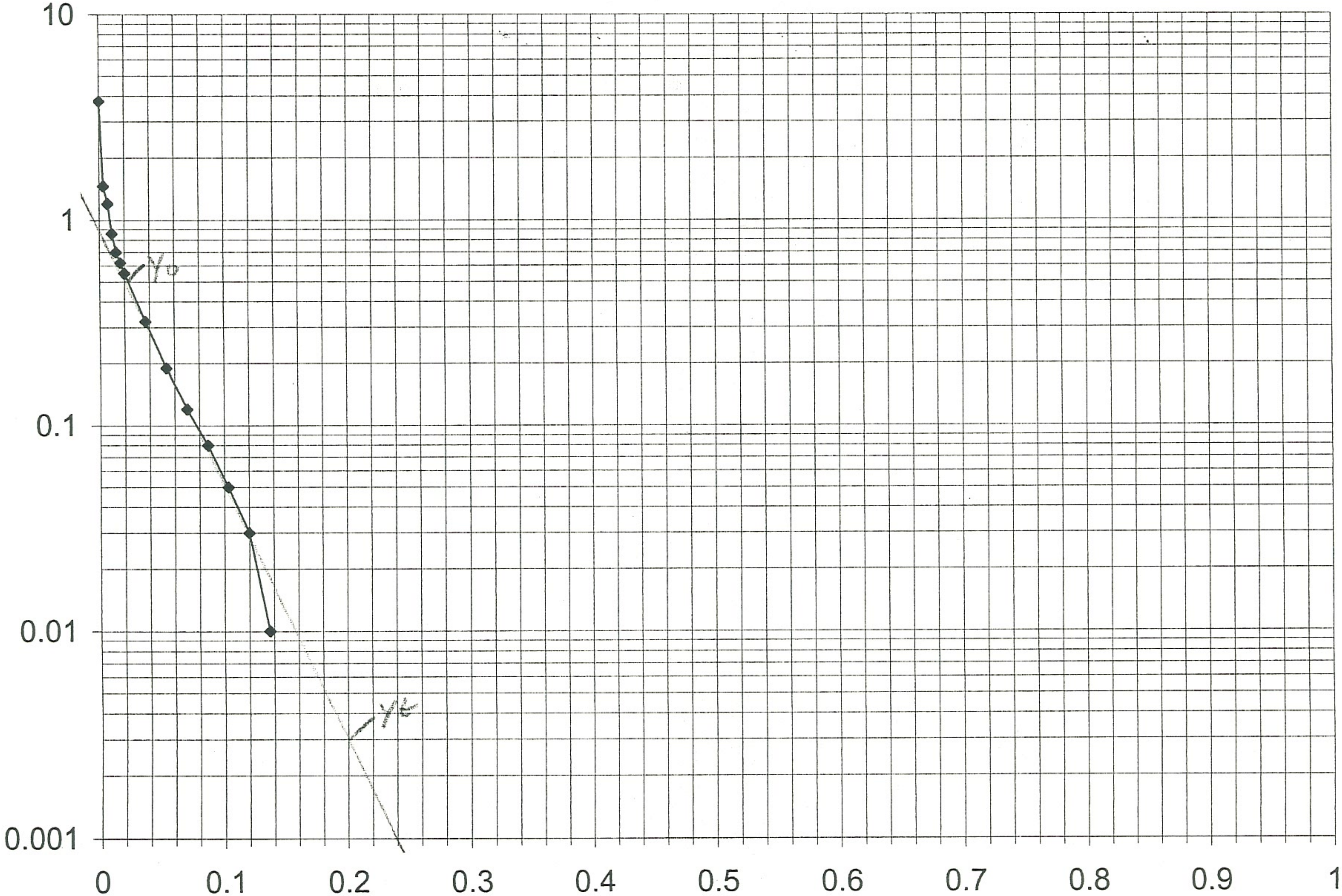
(The values of A, B, and C are a function of b, and are obtained from the attached table)

When D=H: C = **2.06**

and

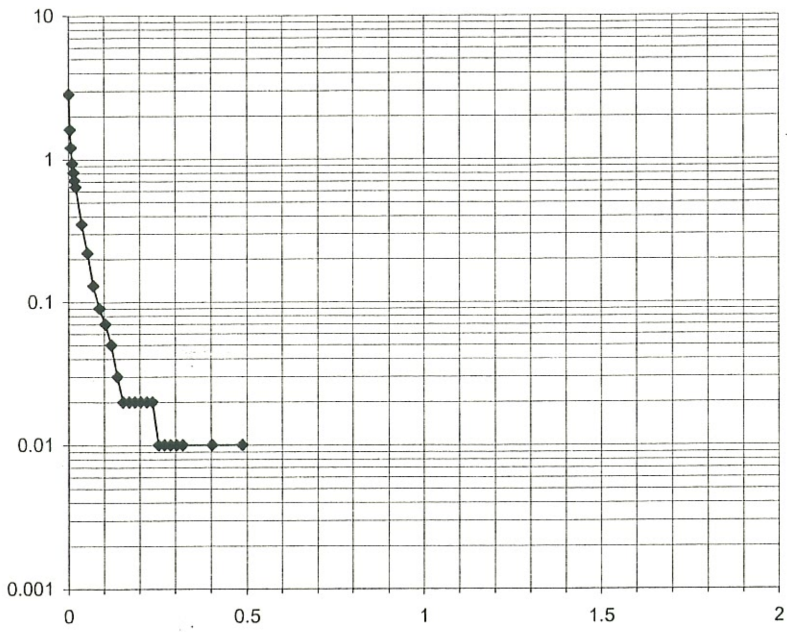
$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

$K = \frac{(r_c^2)\,d}{2\,(L)}$ (a) = **0.26** ft/min = **374.42** ft/day

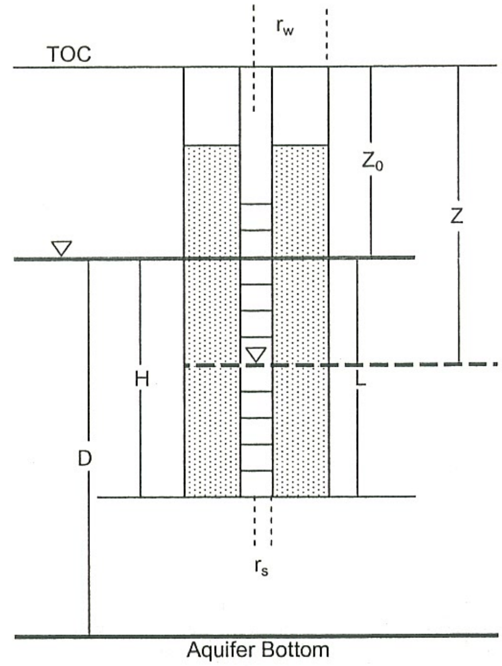


$Y_o = 0.5$
$Y_t = 0.003$
$dt = 0.2 - 0.02 = 0.18$

$K = 374.42$ ft/day



Project Name: Standard Motor Products
Address: Long Island City, NY
Well Number: MW12 (Test 2)
Date: 7/30/2003



y_0 =	**0.04** (ft)	D =	**15.85** (ft)	r_s =	**0.167** (ft)	n =	**0.375**
y_t =	**0.002** (ft)	H =	**15.85** (ft)	r_w =	**0.5** (ft)	Z_0 =	**3.83** (ft)
dt =	**0.12** (min.)	L =	**15.85** (ft)				

$a = \ln[y_0/y_t]/dt$ = **24.964** $c = \ln[(D-H)/r_w]$ =

$b = L/r_w$ = **31.7** $d = \ln[R_e/r_w]$ = **2.6093** $r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2}$ = **0.3334** (ft)

When D>H: A = B =
and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

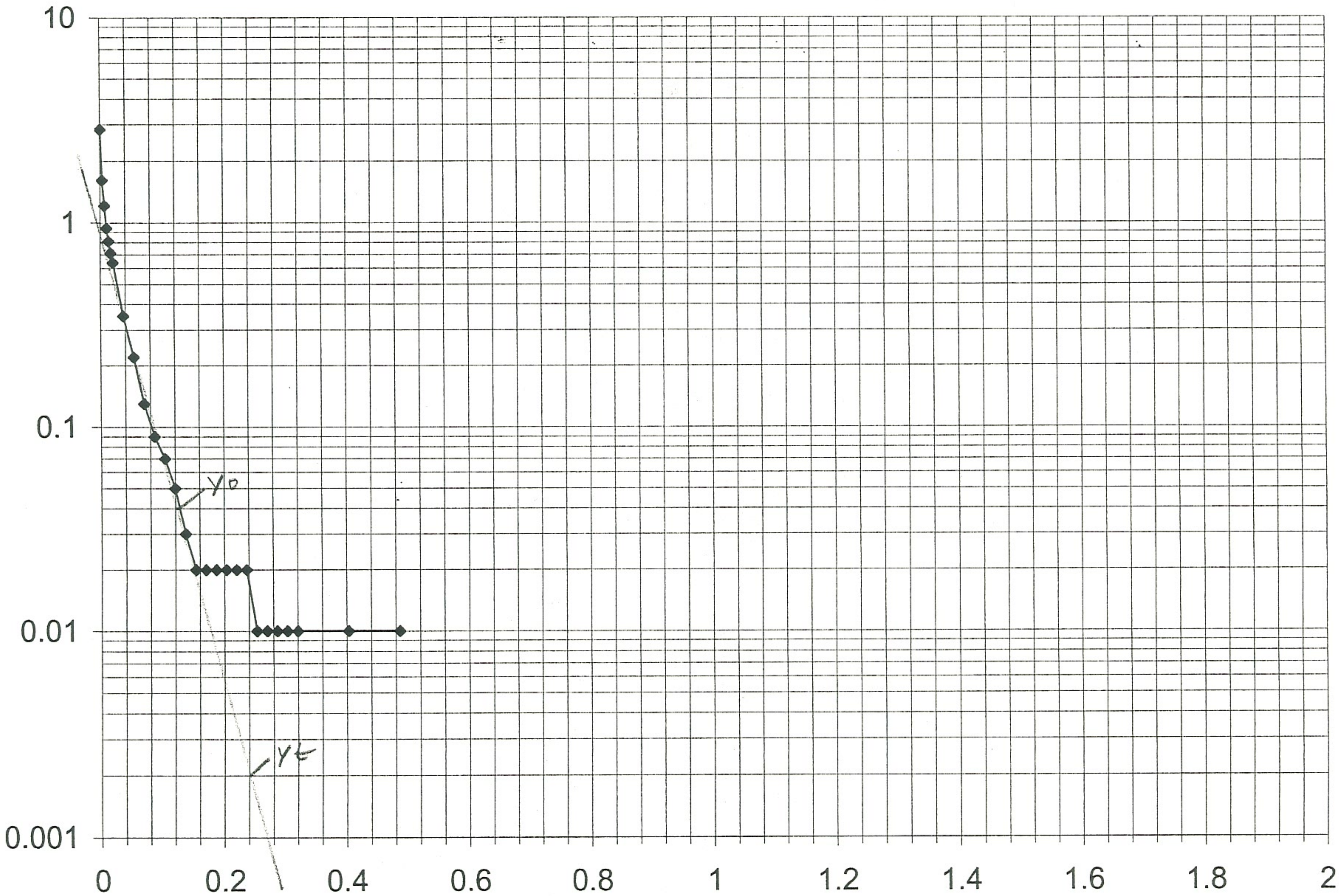
$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

(The values of A, B, and C are a function of b, and are obtained from the attached table)

When D=H: C = **2.06**
and

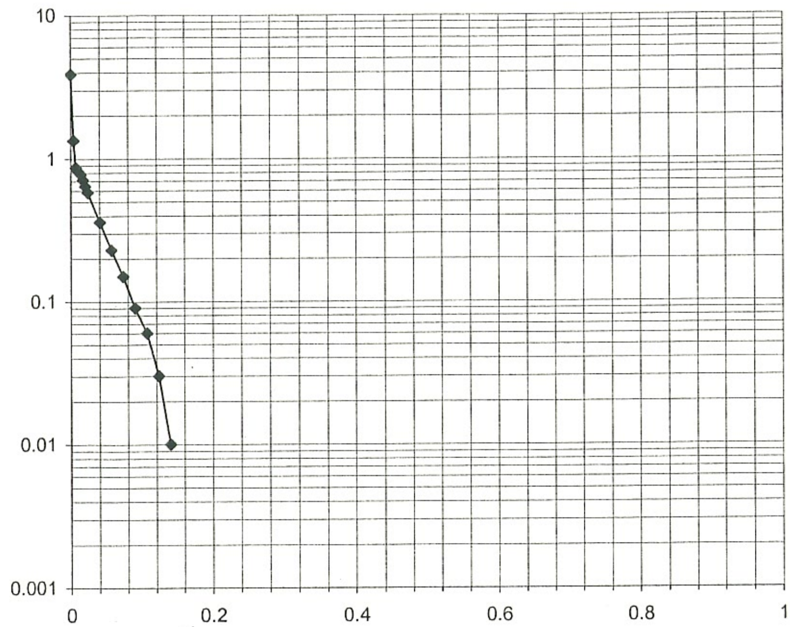
$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

$K = \frac{(r_c^2)\, d}{2\,(L)}$ (a) = **0.2285** ft/min = **328.99** ft/day

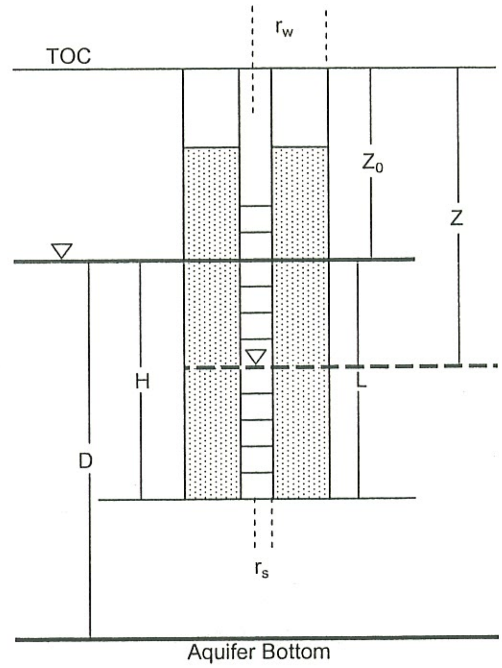


$Y_o = 0.04$
$Y_t = 0.002$
$dt = 0.24 - 0.12 = 0.12$

$K = 328.99$ ft/day



Project Name:	Standard Motor Products
Address:	Long Island City, NY
Well Number:	MW13S (Test 1)
Date:	7/30/2003



$y_0 =$ **0.6** (ft) $D =$ **15.48** (ft) $r_s =$ **0.167** (ft) $n =$ **0.375**

$y_t =$ **0.2** (ft) $H =$ **15.48** (ft) $r_w =$ **0.5** (ft) $Z_0 =$ **3.92** (ft)

$dt =$ **0.04** (min.) $L =$ **15.48** (ft)

$a = \ln[y_0/y_t]/dt =$ **27.465** $c = \ln[(D-H)/r_w] =$

$b = L/r_w =$ **30.96** $d = \ln[R_e/r_w] =$ **2.5884** $r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2} =$ **0.3334** (ft)

When D>H: A = B =

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

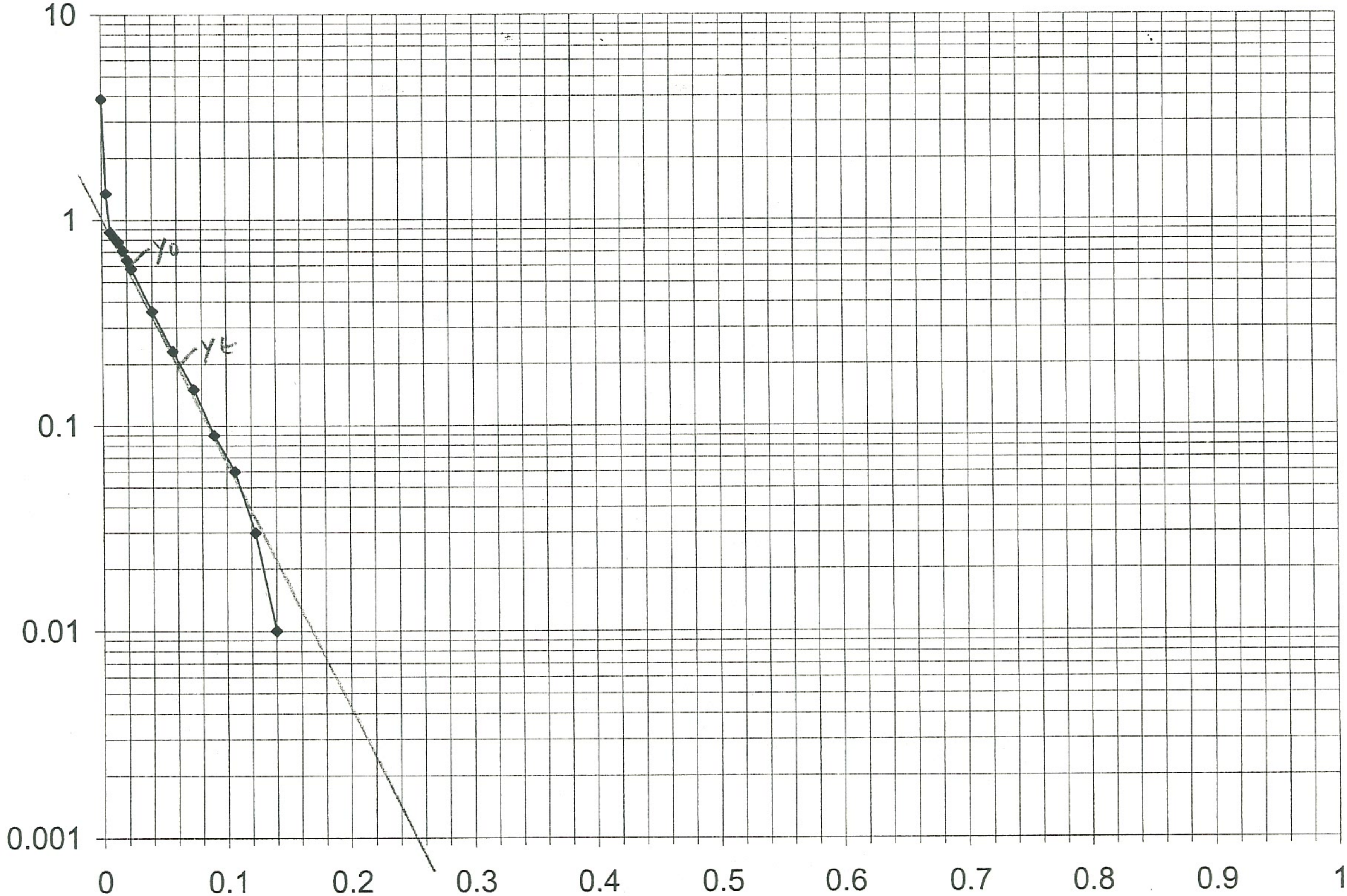
(The values of A, B, and C are a function of b, and are obtained from the attached table)

When D=H: C = **2.04**

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

$K = \dfrac{(r_c^2)\, d}{2\,(L)}\ (a) =$ **0.2553** ft/min = **367.63** ft/day

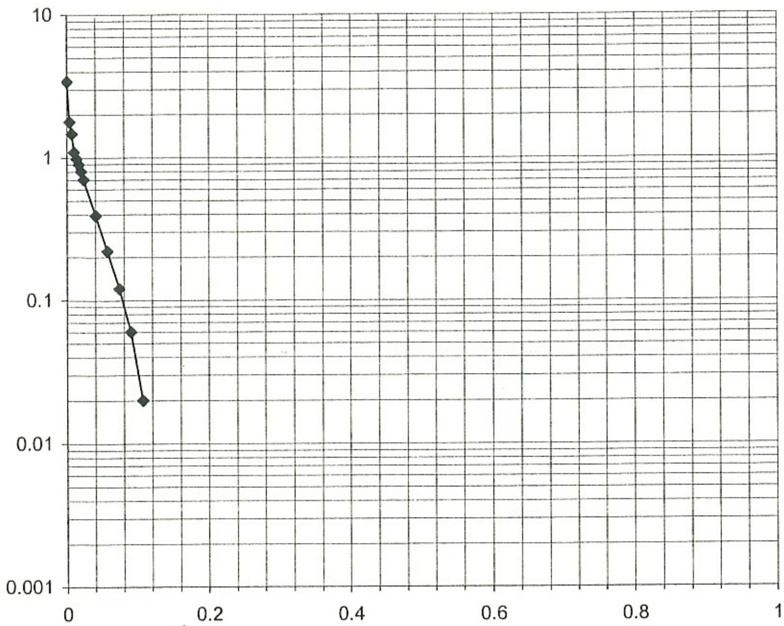


$Y_0 = 0.6$

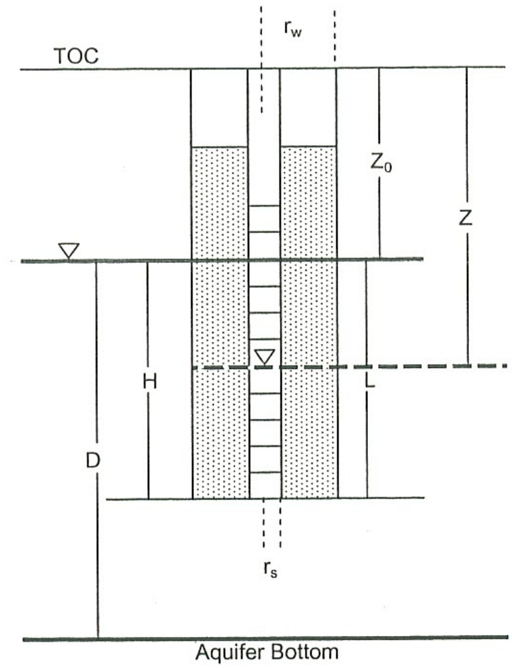
$Y_t = 0.2$

$d_t = 0.06 - 0.02 = 0.04$

$K = 367.63$ ft/day



Project Name: Standard Motor Products
Address: Long Island City, NY
Well Number: MW13S (Test 2)
Date: 7/30/2003



y_0 =	**0.09**	(ft)	D =	**15.46**	(ft)	r_s =	**0.167**	(ft)	n =	**0.375**	
y_t =	**0.005**	(ft)	H =	**15.46**	(ft)	r_w =	**0.5**	(ft)	Z_0 =	**3.94**	(ft)
dt =	**0.08**	(min.)	L =	**15.46**	(ft)						

$a = \ln[y_0/y_t]/dt$ = **36.13** $c = \ln[(D\text{-}H)/r_w]$ =

$b = L/r_w$ = **30.92** $d = \ln[R_e/r_w]$ = **2.5892** $r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2}$ = **0.3334** (ft)

When D>H: A = B =

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

(The values of A, B, and C are a function of b, and are obtained from the attached table)

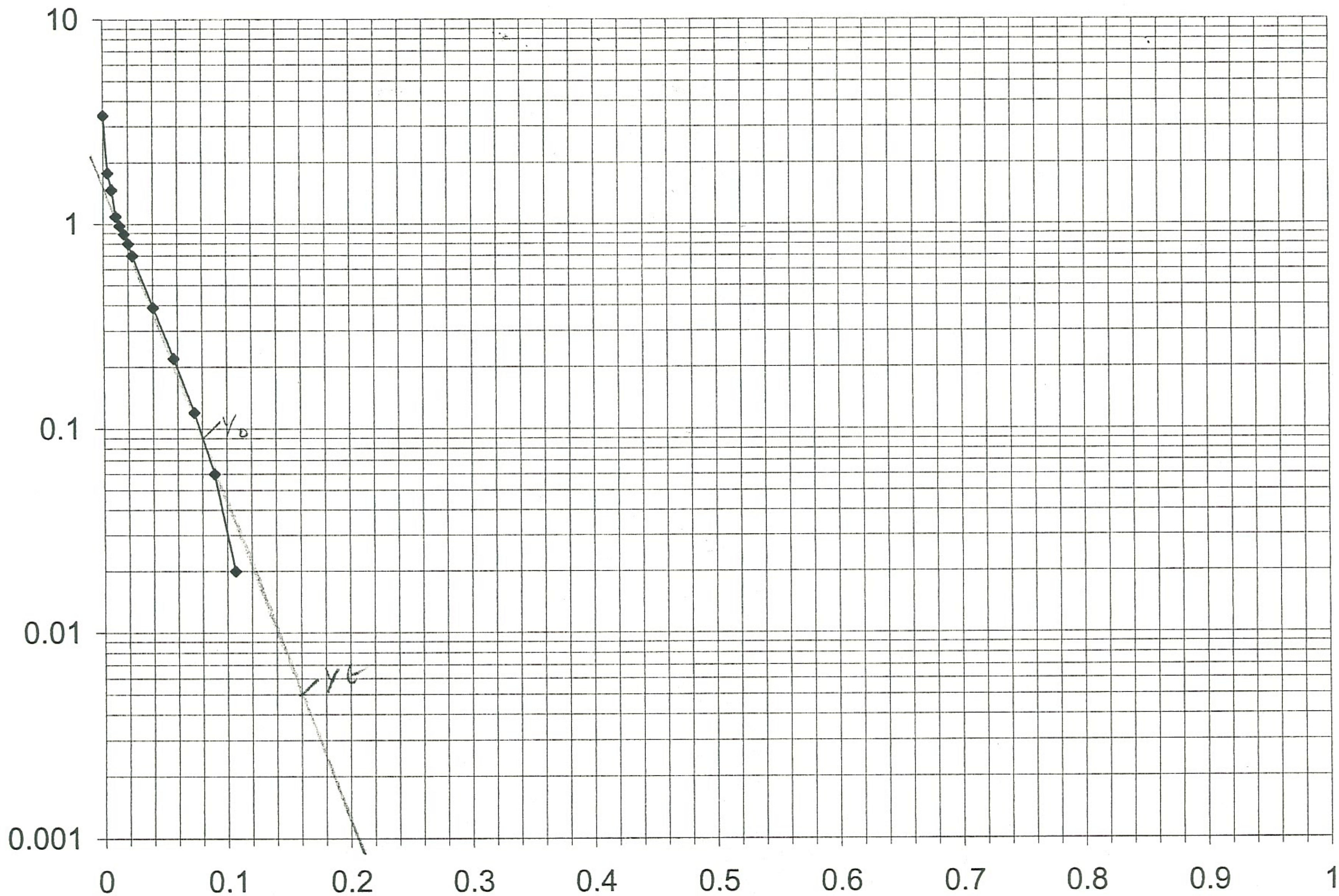
When D=H: C = **2.03**

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

$K = \dfrac{(r_c^2)\, d}{2\,(L)}$ (a) = **0.3364** ft/min = **484.37** ft/day

MW13 S-2



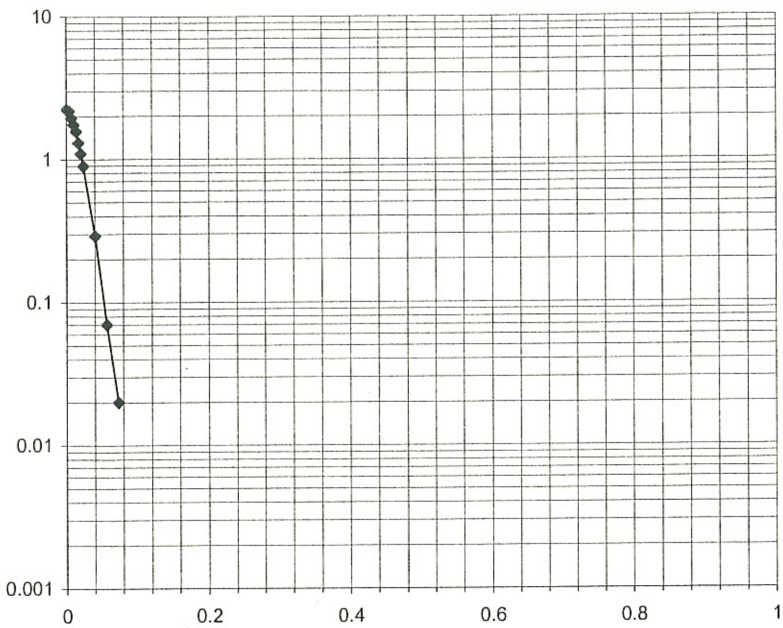
$Y_0 = 0.09$

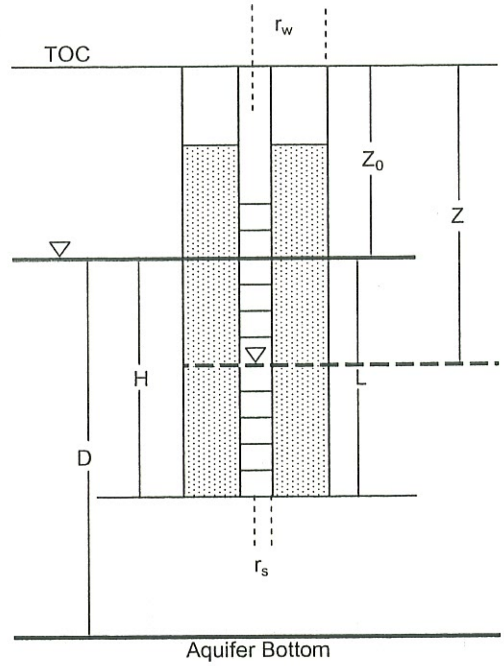
$Y_t = 0.005$

$d_t = 0.16 - 0.08 = 0.08$

$K = 484.37$ ft/day

Project Name:	Standard Motor Products
Address:	Long Island City, NY
Well Number:	MW13D (Test 1)
Date:	7/30/2003





$y_0 =$ **0.9** (ft)
$y_t =$ **0.2** (ft)
$dt =$ **0.02** (min.)

$D =$ **34.73** (ft)
$H =$ **34.73** (ft)
$L =$ **34.73** (ft)

$r_s =$ **0.167** (ft)
$r_w =$ **0.5** (ft)

$n =$ **0.375**
$Z_0 =$ **3.59** (ft)

$a = \ln[y_0/y_t]/dt =$ **75.204**

$c = \ln[(D-H)/r_w] =$

$b = L/r_w =$ **69.46**

$d = \ln[R_e/r_w] =$ **3.2676**

$r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2} =$ **0.3334** (ft)

When D>H: $A =$ $B =$
and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

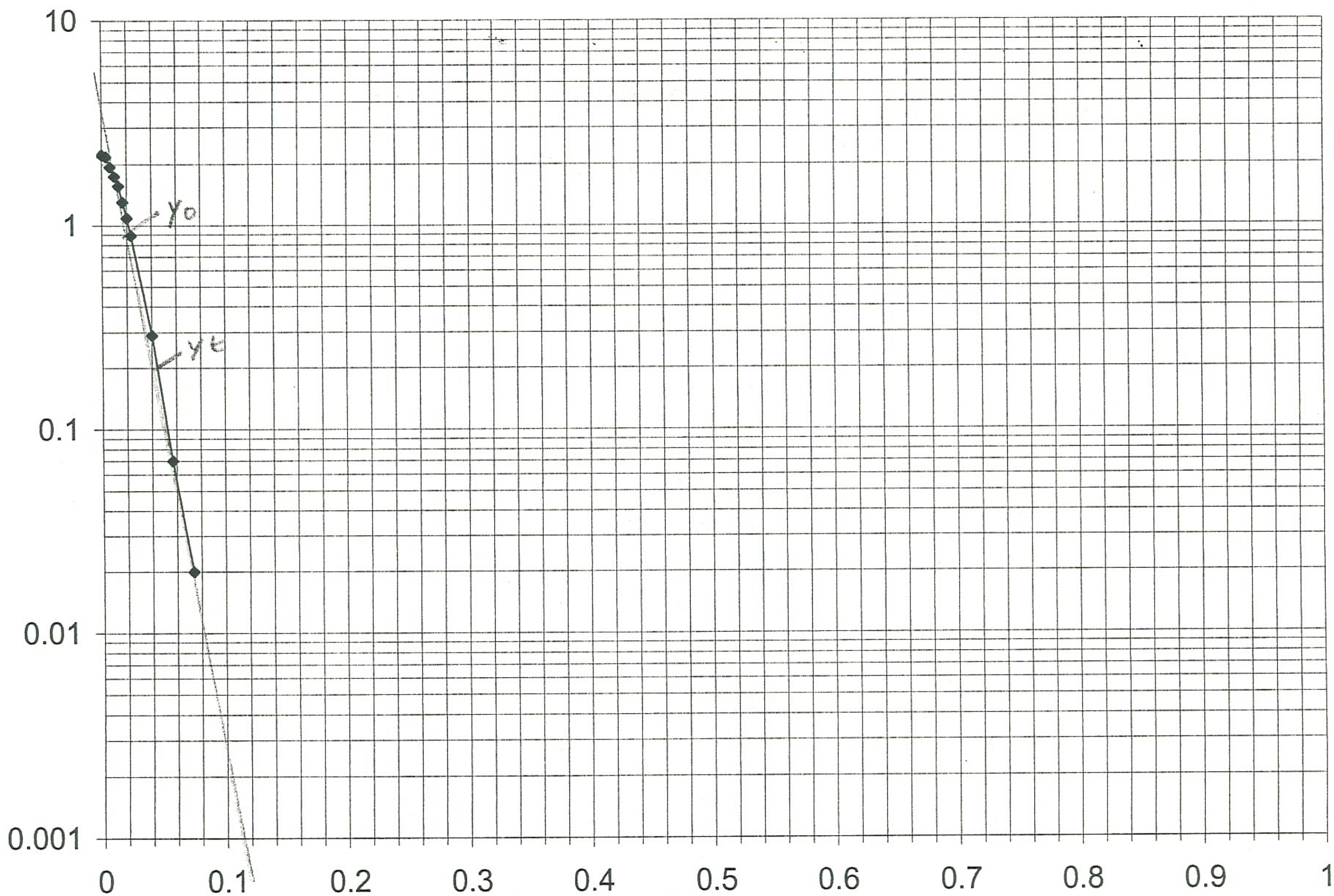
(The values of A, B, and C are a function of b, and are obtained from the attached table)

When D=H: $C =$ **3.24**
and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

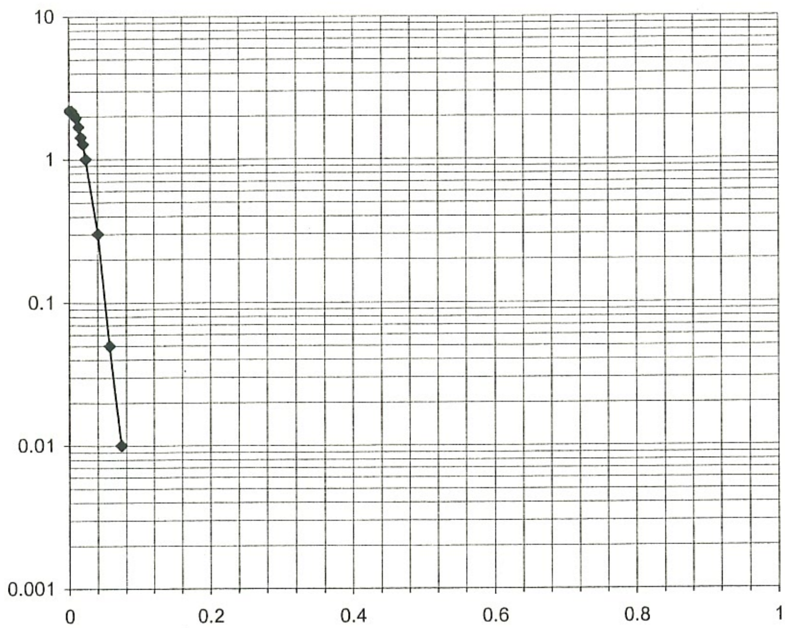
$K = \dfrac{(r_c^2)\,d}{2\,(L)}\ (a) =$ **0.3933** ft/min = **566.41** ft/day

MW-13D-1

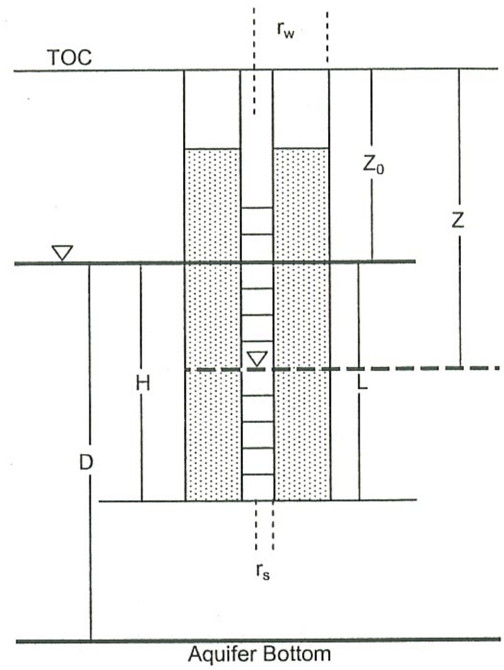


$y_o = 0.9$
$y_t = 0.2$
$dt = 0.04 - 0.02 = 0.02$

$k = 566.41$ ft/day



Project Name:	Standard Motor Products
Address:	Long Island City, NY
Well Number:	MW13D (Test 2)
Date:	7/30/2003



y_0 = **0.2** (ft) D = **34.73** (ft) r_s = **0.167** (ft) n = **0.375**

y_t = **0.001** (ft) H = **34.73** (ft) r_w = **0.5** (ft) Z_0 = **3.59** (ft)

dt = **0.06** (min.) L = **34.73** (ft)

$a = \ln[y_0/y_t]/dt$ = **88.305** $c = \ln[(D-H)/r_w]$ =

$b = L/r_w$ = **69.46** $d = \ln[R_e/r_w]$ = **3.2676** $r_c = [r_s^2+n(r_w^2-r_s^2)]^{1/2}$ = **0.3334** (ft)

When D>H: A = B =

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + Bc)/b]^{-1}$ {when c < 6}

or

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (A + B(6))/b]^{-1}$ {when c > or = 6}

(The values of A, B, and C are a function of b, and are obtained from the attached table)

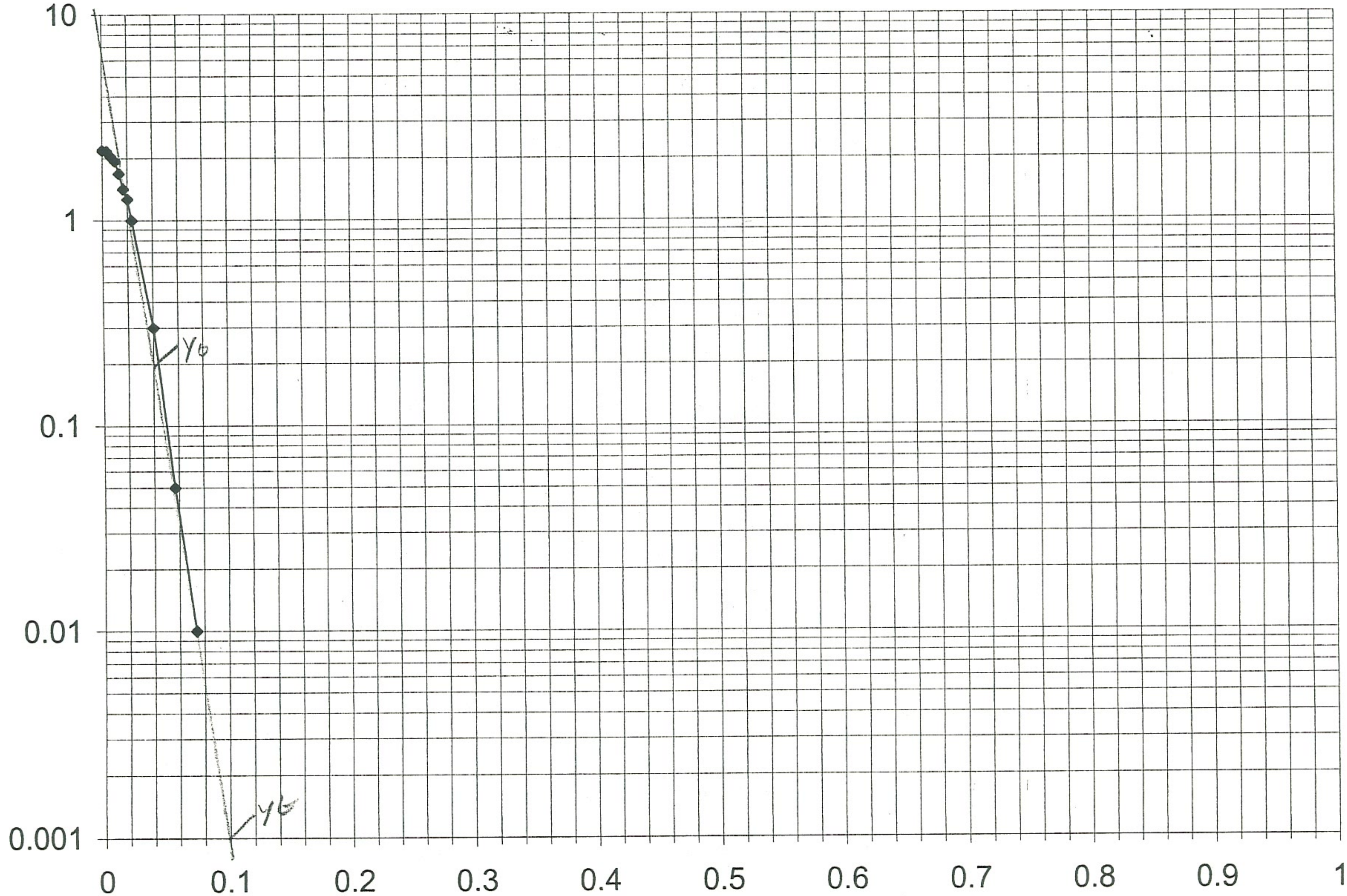
When D=H: C = **3.24**

and

$\ln[R_e/r_w] = [(1.1/\ln(H/r_w)) + (C/b)]^{-1}$

$K = \frac{(r_c^2)\, d}{2\,(L)}\,(a)$ = **0.4619** ft/min = **665.08** ft/day

MW-13D



$Y_0 = 0.2$

$Y_t = 0.001$

$dt = 0.1 - 0.04 = 0.06$

$K = 665.08$ ft/day

SELECTED VALUES OF COEFFICIENTS A, B AND C FOR BOUWER AND RICE SLUG TEST ANALYSIS

L/rw	A	B	C
4	1.68	0.23	0.78
5	1.69	0.24	0.86
6	1.72	0.25	0.92
7	1.75	0.26	0.99
8	1.78	0.26	1.08
9	1.80	0.27	1.11
10	1.82	0.27	1.20
15	1.98	0.30	1.43
20	2.12	0.31	1.64
30	2.30	0.38	2.00
40	2.69	0.44	2.37
50	3.00	0.48	2.62
60	3.28	0.51	2.95
70	3.56	0.59	3.26
80	3.81	0.63	3.45
90	4.10	0.67	3.85
100	4.31	0.72	4.10
150	5.36	0.91	5.55
200	6.00	1.10	6.75
300	6.97	1.50	8.66
400	7.60	1.87	9.89
600	8.37	2.34	11.08
800	8.81	2.63	11.75
1000	9.10	2.87	12.21

Note: Intermediate values of L/rw can be interpolated from the table.