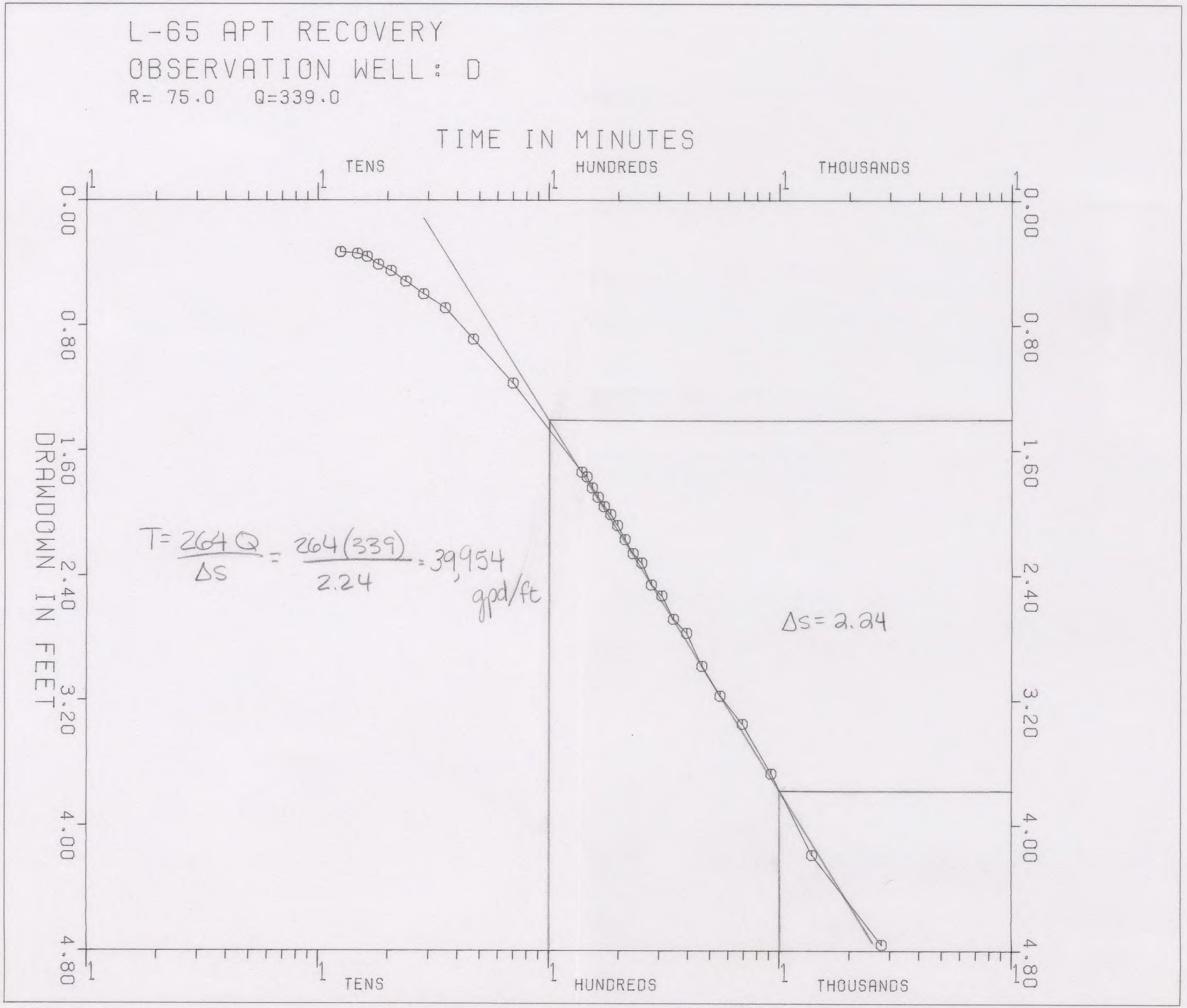

L-65 APT RECOVERY
OBSERVATION WELL: D
R= 75.0 Q=339.0
TIME IN MINUTES
TENS
HUNDREDS
THOUSANDS
DRAWDOWN IN FEET
0.00
0.80
1.60
2.40
3.20
4.00
4.80
T= 264 Q / Δs = 264(339) / 2.24 = 39,954 gpd/ft
Δs = 2.24

Neuman ✓

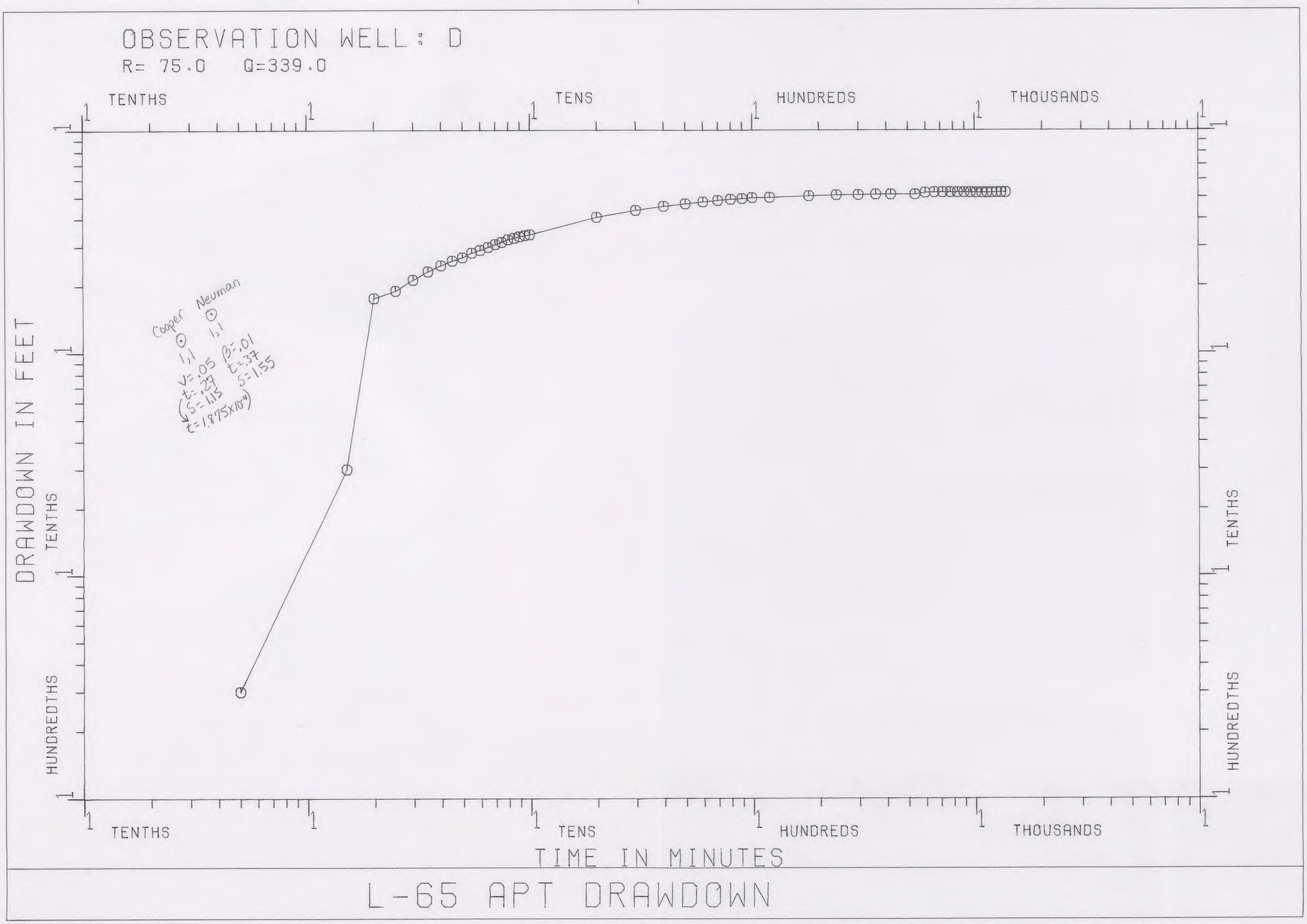
$T = \frac{114.6 Q W(u_{A,B})}{s} = \frac{114.6(339)(1)}{1.55} = 25{,}064$ gpd/ft

$S = \frac{Tt}{2693 r^2}\left(\frac{1}{u_A}\right) = \frac{25064(.37)}{2693(75^2)}(1) = 6.1 \times 10^{-4}$

Cooper

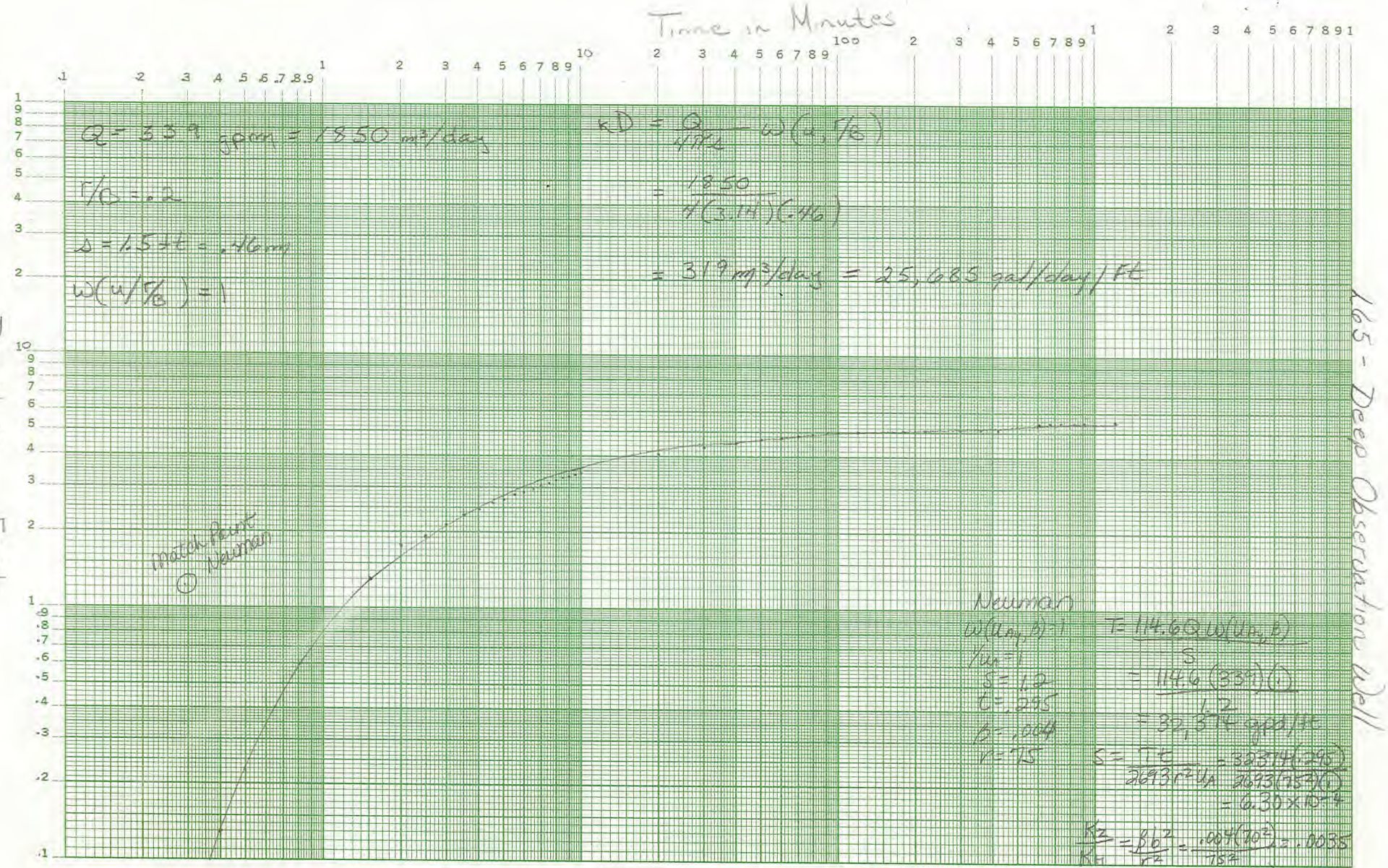
$T = \frac{1440 Q L(u,v)}{4\pi s (7.48)} = \frac{1440(339)(1)}{4\pi(1.15)(7.48)} = 4516$ ft²/day
33,780 gpd/ft

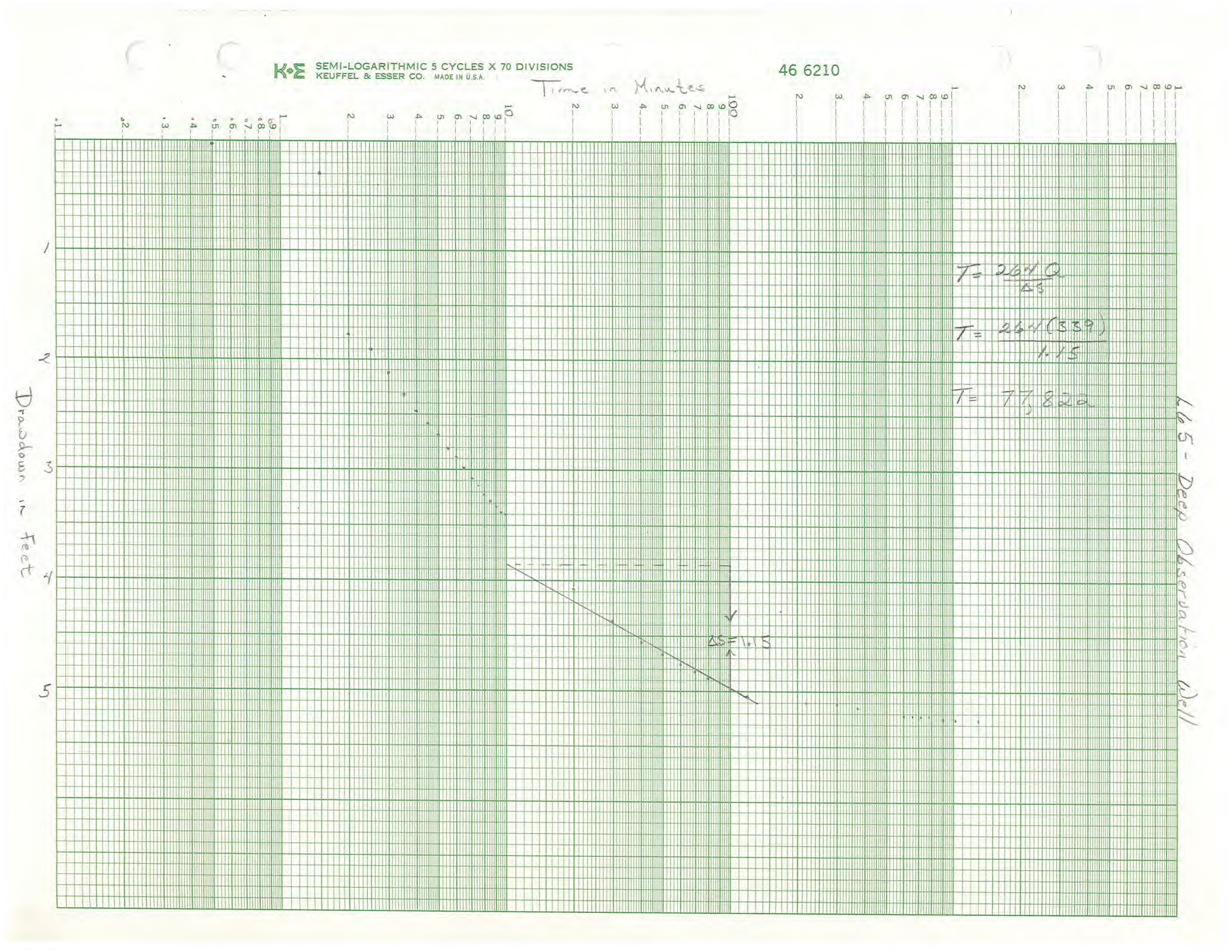
$S = 4T\frac{t/r^2}{4\mu} = 4(4516)\frac{\frac{1.875\times10^{-4}}{75^2}}{1} = 6.02 \times 10^{-4}$

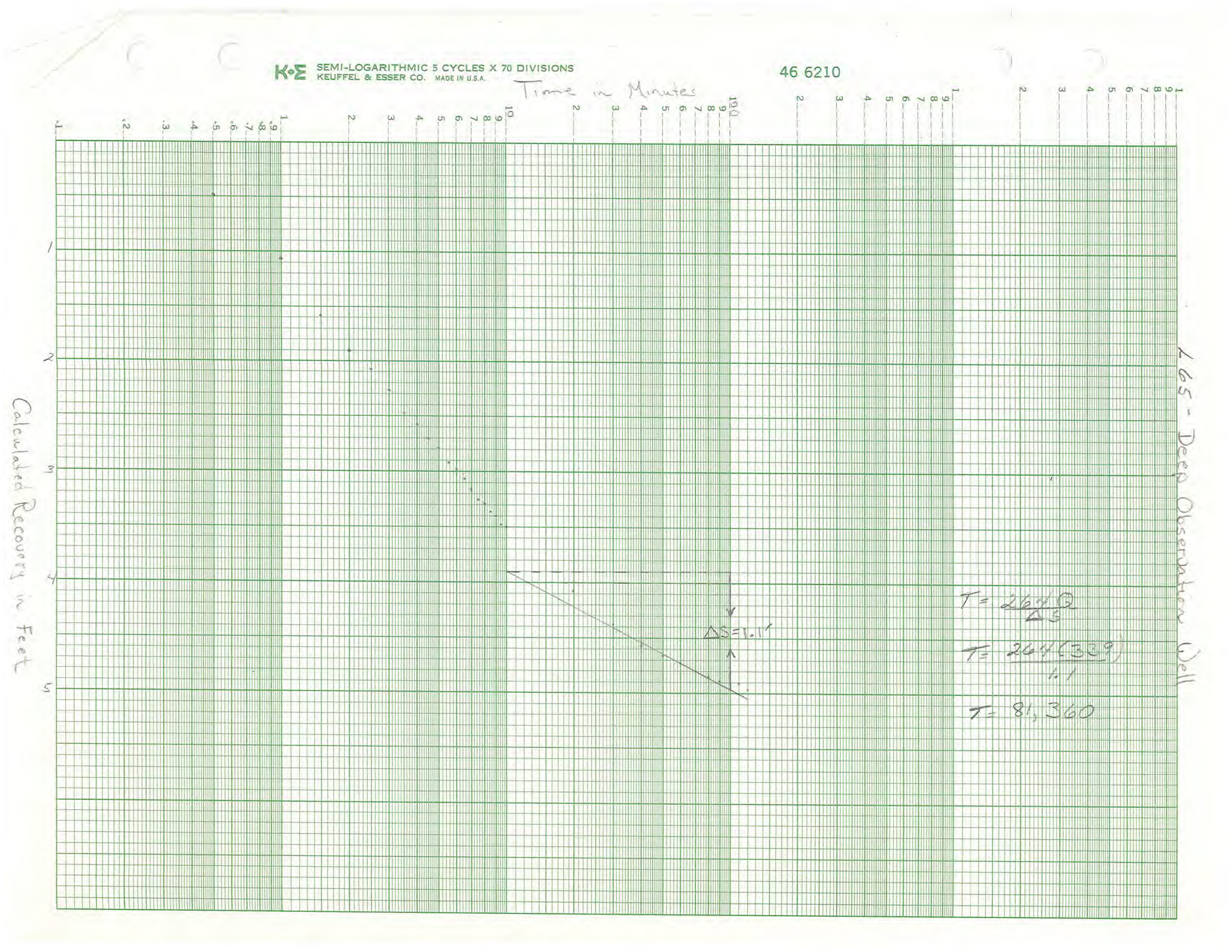


L-65 APT DRAWDOWN

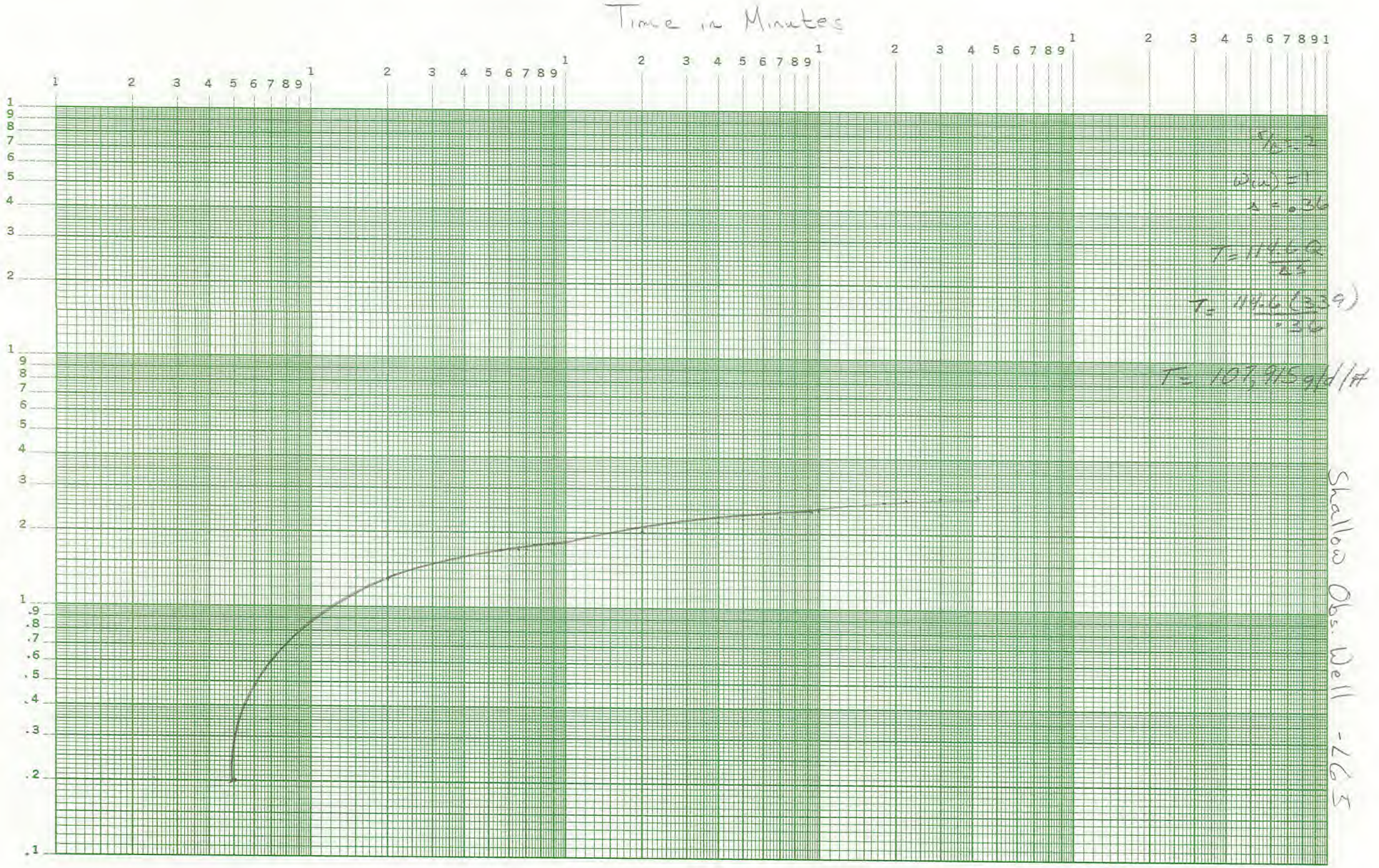
46 7522

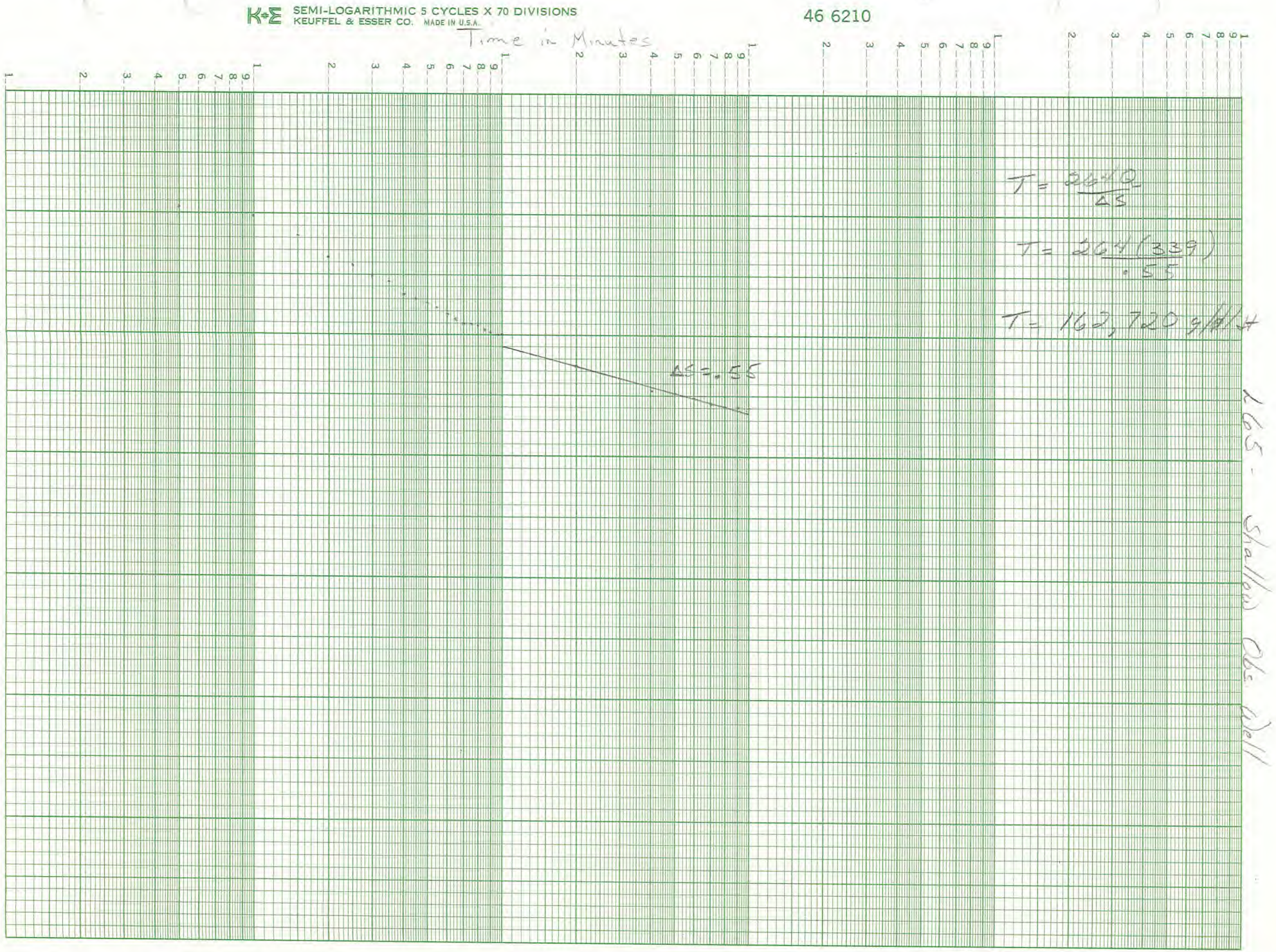



K+E SEMI-LOGARITHMIC 5 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.
46 6210
Time in Minutes
Drawdown in Feet
$T = \frac{264 Q}{\Delta s}$
$T = \frac{264 (539)}{1.15}$
$T = 77,820$
$\Delta s = 1.15$
Le 5 - Deep Observation Well

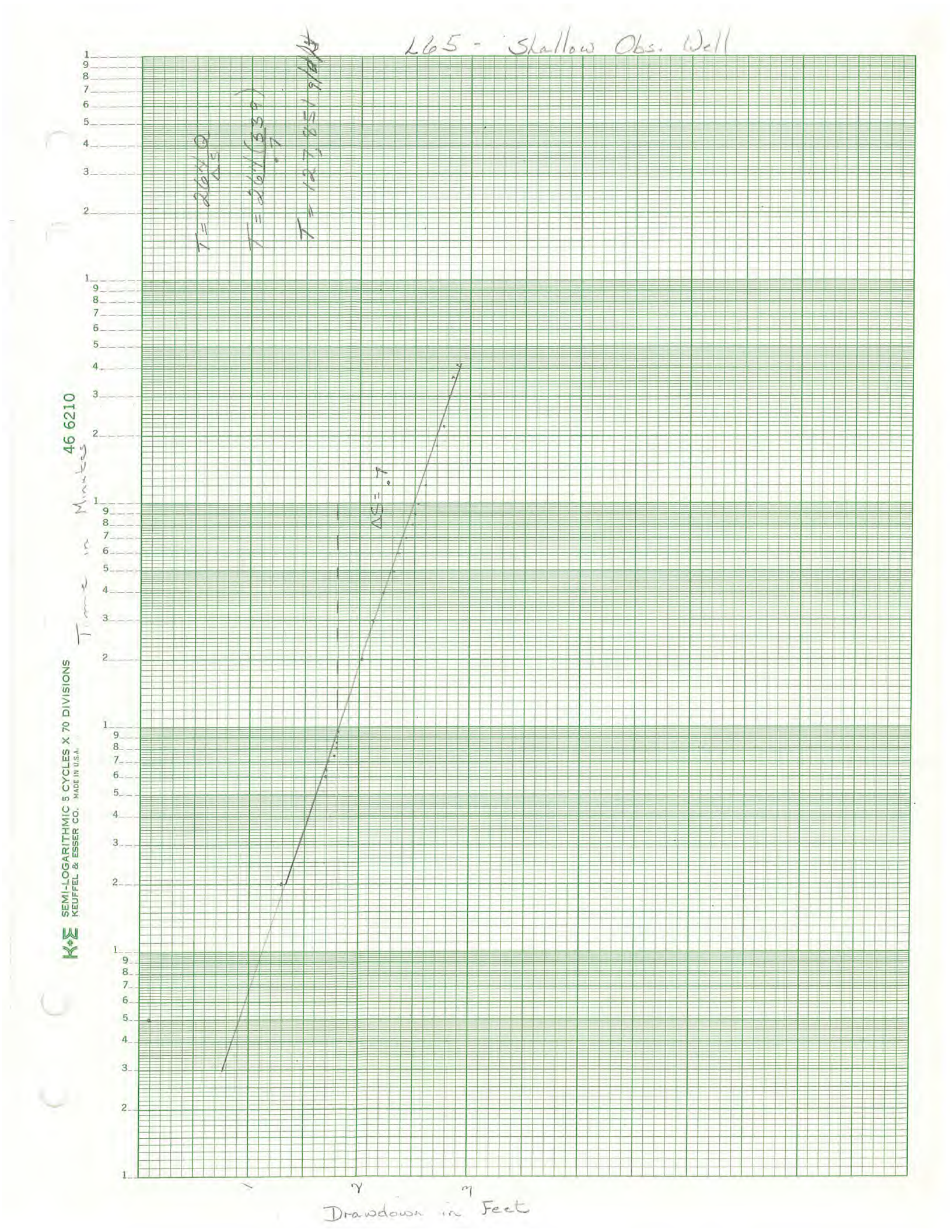

K+E SEMI-LOGARITHMIC 5 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.
46 6210
Time in Minutes
Calculated Recovery in Feet
ΔS = 1.1'
T = 264Q/ΔS
T = 264(308)/1.1
T = 81,360
265 - Deep Observation Well

46 7522

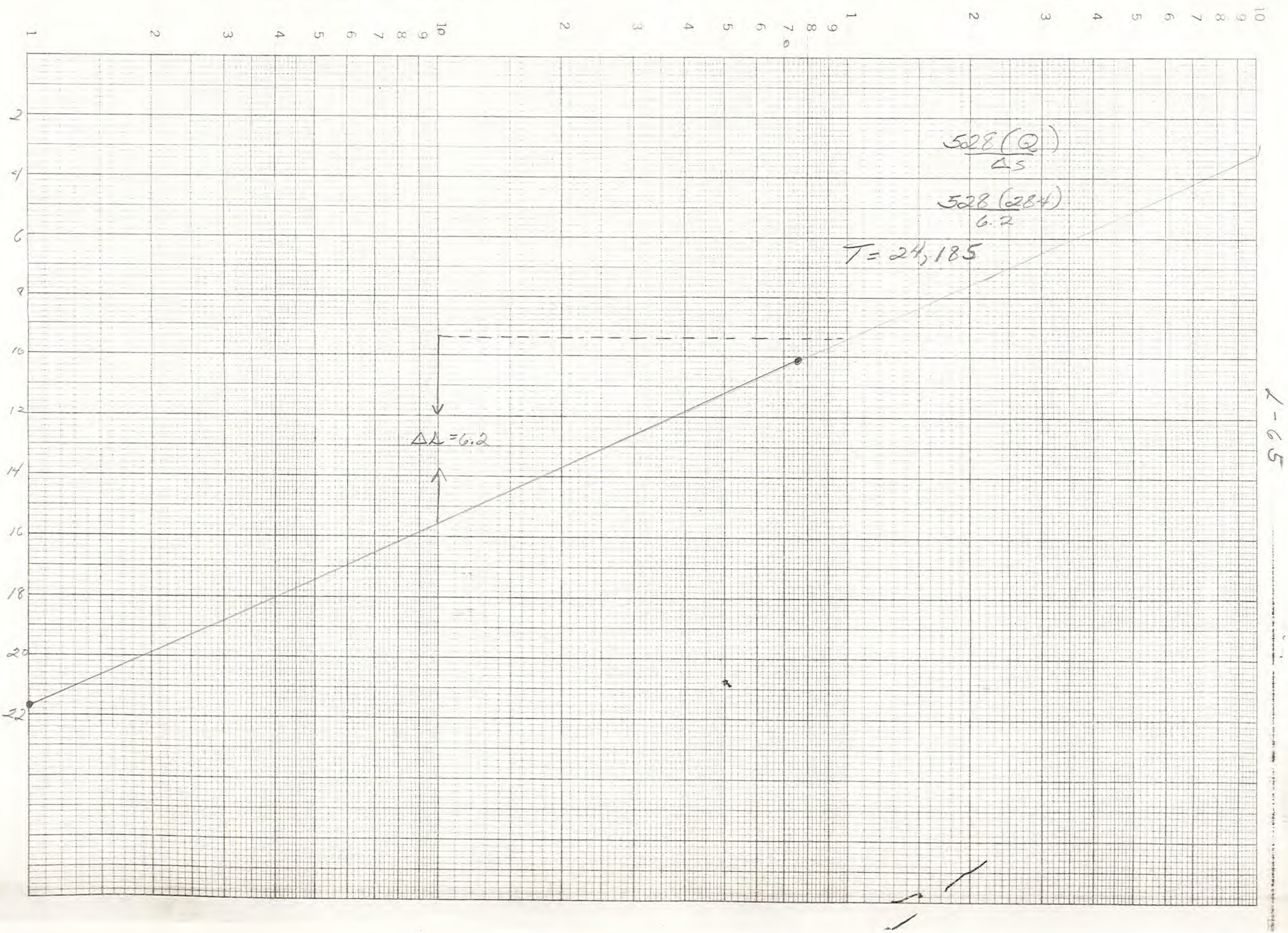




1665 - Shallow Obs. Well


L65 - Shallow Obs. Well
Time in Minutes
Drawdown in Feet
SEMI-LOGARITHMIC 5 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.
46 6210

46 5810



L65DR

deep obs

PUMP WELL NUMBER _____

Measuring Point _____ ft above land surface.

Elevation of Measuring Point _____ ft above mean sea level.

Well Location: T. ____, R. ____, Sec. ____

Well Coordinates: _____ ft N. _____ ft E.

Orifice Size: _____

Recovery — s'rs' calculated recovery

Hour	Depth to Water Held Wet Depth (ft)	Elevation of Water Level (ft)	Piezometer Head (in)	Discharge (gpm)	Remarks (include method of measuring water level)
0	10.90	0			
.5	10.51	.49			
1	9.84	1.06			
1.5	9.32	1.58			
2	9.00	1.90			
2.5	8.82	2.08			
3	8.63	2.27			
3.5	8.42	2.48			
4	8.33	2.57			
4.5	8.18	2.72			
5	8.11	2.79			
5.5	7.97	2.93			
6	7.91	2.99			
6.5	7.82	3.08			
7	7.73	3.17			
7.5	7.66	3.24			
8	7.61	3.29			
8.5	7.55	3.35			
9	7.49	3.41			
9.5	7.42	3.48			
10	7.39	3.51			
20	6.82	4.08			
30	6.54	4.36			
40	6.34	4.56			
50	6.25	4.65			
60	6.17	4.73			
70	6.10	4.8			
80	6.06	4.84			
90	6.01	4.89			
100	5.99	4.91			
120	110 5.98 / 120 5.94	4.924	4.96		
180					
240					
300					
360					

/73.7 from pump well PUMP WELL NUMBER ____ L65D deep obs

Measuring Point ____ ft above land surface.

Elevation of Measuring Point ____ ft above mean sea level.

2' missing on tape

Well Location: T.____, R.____, Sec.____

Well Coordinates: ____ ft N. ____ ft E.

Orifice Size: ____

Hour	Depth to Water Held Wet Depth (ft)	Elevation of Water Level (ft)	Piezometer Head (in)	Discharge (gpm)	Remarks (include method of measuring water level)
0	5.65	0			
.5	5.68	.03			
1	6.61	?			
1.5	6.95	.3			
2	7.41	1.76			
2.5	7.55	1.9			
3	7.78	2.13			
3.5	7.97	2.32			
4	8.12	2.47			
4.5	8.24	2.59			
5	8.33	2.68			
5.5	8.46	2.81			
6	8.54	2.89			
6.5	8.63	2.98			
7	8.72	3.07			
7.5	8.79	3.14			
8	8.88	3.23			
8.5	8.93	3.28			
9	8.98	3.33			
9.5	9.02	3.37			
10	9.05	3.40			
20	9.72	4.07			
30	10.02	4.37			
40	10.20	4.55			
50	10.32	4.67			
60	10.41	4.76			
70	10.48	4.83			
80	10.54	4.89			
90	10.57	4.92			
100	10.62	4.97			
120	110hr 10.64 / 120hr 10.65	4.99 / 5.00			
180	10.71	5.06			
240	10.76	5.11			
300	10.77	5.12			
360	10.79	5.14			

L-65 Deep obs

PUMP WELL NUMBER _____

Measuring Point _____ ft above land surface.

Elevation of Measuring Point _____ ft above mean sea level.

Well Location: T. ____, R. ____, Sec. ____

Well Coordinates: _____ ft N. _____ ft E.

Orifice Size: _____

Hour	Depth to Water Held Wet Depth (ft)	Elevation of Water Level (ft)	Piezometer Head (in)	Discharge (gpm)	Remarks (include method of measuring water level)
420	10.79	5.14			
480	pump stops 10.37	~			
540	10.79	5.14			
600	10.82	5.23			
660	10.91	526			
720	10.91	5.26			
780	10.91	5.26			
840	10 90	5.25			
900	10 90	5.25			
960	10 90	5.25			
1020	10 89	5.24			
1080	10 89	5.24			
1140	10 89	5.24			
1200	10.89	5.24			
1260	10.90	5.25			
1320	10·90	5.25			
1380	10.90	5.25			
1440					

L65SR

L-65

PUMP WELL NUMBER _____

shallow obs

Measuring Point _____ ft above land surface.

Elevation of Measuring Point _____ ft above mean sea level.

Well Location: T. ____, R. ____, Sec. ____

Well Coordinates: _____ ft N. _____ ft E.

Recovery

Orifice Size: _____

Hour	Depth to Water Held Wet Depth (ft)	Elevation of Water Level (ft)	Piezometer Head (in)	Discharge (gpm)	Remarks (include method of measuring water level)
0	13.11	0			
.5	12.15	.96			
1	12.08	1.03			
1.5	11.92	1.19			
2	11.75	1.36			
2.5	11.68	1.43			
3	11.60	1.51			
3.5	11.54	1.57			
4	11.44	1.67			
4.5	11.40	1.71			
5	11.37	1.74			
5.5	11.33	1.78			
6	11.28	1.83			
6.5	11.25	1.86			
7	11.20	1.91			
7.5	11.20	1.91			
8	11.19	1.92			
8.5	11.15	1.96			
9	11.13	1.98			
9.5	11.1	2.01			
10	11.1	2.01			
20	10.86	2.25			
30	10.75	2.36			
40	10.65	2.46			
50	10.63	2.48			
60	10.58	2.53			
70	10.55	2.56			
80	10.53	2.58			
90	10.53	2.58			
100	10.51	2.60			
120	10.50	2.61			
180					
240					
300					
360					

Time MD - 10.51

L655

PUMP WELL NUMBER ____

shallow obs

Start Time = 11:30 AM

Measuring Point ____ ft above land surface.

Elevation of Measuring Point ____ ft above mean sea level.

Well Location: T.____, R.____, Sec.____

Well Coordinates: ____ ft N. ____ ft E.

27.7 from pump well

Orifice Size: ____

Tape start at 6'

Hour	Depth to Water Held Wet Depth (ft)	Elevation of Water Level (ft)	Piezometer Head (in)	Discharge (gpm)	Remarks (include method of measuring water level)
0	10.28	0			
.5	10.48	.2			
1					
1.5					
2	~~12.58~~ 11.58	1.30			
2.5	~~12.04~~				
3	~~12.05~~				
3.5	~~12.05~~				
4	~~12.05~~				
4.5	~~12.01~~				
5	~~12.00~~				
5.5	11.96	1.68			
6	11.97	1.69			
6.5	11.97	1.69			
7	12.00	1.72			
7.5	12.04	1.76			
8	12.04	1.76			
8.5	12.06	1.78			
9	12.06	1.78			
9.5	12.08	1.80			
10	12.10	1.82			
20	12.31	2.03			
30	12.41	2.13			
40	12.52	2.24			
50	12.59	2.31			
60	12.64	2.36			
70	12.72	2.44			
80	12.76	2.48			
90	12.78	2.50			
100	12.81	2.53			
120	12.88	2.60			
180	13.00	2.72			
240	13.04	2.76			
300	13.10	2.82			
360	13.11	2.83			

110 min = 12.85

L-65

shallow abs

PUMP WELL NUMBER _____

Measuring Point _____ ft above land surface.

Elevation of Measuring Point _____ ft above mean sea level.

Well Location: T. ____, R. ____, Sec. ____

Well Coordinates: _____ ft N. _____ ft E.

Orifice Size: _____

Hour	Depth to Water Held Wet Depth (ft)	Elevation of Water Level (ft)	Piezometer Head (in)	Discharge (gpm)	Remarks (include method of measuring water level)
420	13.14	2.86			
480	Pump goes off, restart @ 9pm				increases to ± 400 gpm — 12.85
540	13.02				
600	13.07				
660	13.08				
720	13.10				
780	13.11				
840	1310				
900	13 10				
960	13.11				
1020	13 10				
1080	13.10				
1140	13.11				
1200	13.11				
1260	13.12				
1320	13.13				
1380	13.11				gpm ≈ 200 - 250
1440					

L-65
pump well

Tape STARTS AT 6.00 PUMP WELL NUMBER _____

Measuring Point _____ ft above land surface.

Elevation of Measuring Point _____ ft above mean sea level.

Well Location: T. ____, R. ____, Sec. ____

Well Coordinates: _____ ft N.
_____ ft E.

Orifice Size: _____

Hour	Depth to Water Held Wet Depth (ft)	Elevation of Water Level (ft)	Piezometer Head (in)	Discharge (gpm)	Remarks (include method of measuring water level)
0	10.08				
.25	16.20				
.50	16.20				
.75	16.66				
1	17.25				
1.5	18.60				
2	22.80				
2.5	23.32				
3	24.07				
3.5	24.55				
4	24.82				
4.5	25.06				
5	25.19				
5.5	25.34				
6	25.43				
6.5	25.55	300 GPM			
7	25.64				
7.5	25.71				
8	25.78				
8.5	25.83				
9	25.87				
9.5	25.94				
10	25.99				
20	26.48				
30	26.71				
40	26.98				
50	27.04				
60	27.12				
70	27.20				
80	27.28				
90	27.34				
100	27.38				
150	27.54				
200	27.67				
250	27.74				

L-65
pump well

PUMP WELL NUMBER _____

Measuring Point _____
_____ ft above land surface.
Elevation of Measuring Point _____ ft above mean sea level.

Well Location: T. ____, R. ____, Sec. ____
Well Coordinates: _____ ft N.
_____ ft E.

Orifice Size: _____

Hour	Depth to Water Held Wet Depth (ft)	Elevation of Water Level (ft)	Piezometer Head (in)	Discharge (gpm)	Remarks (Include method of measuring water level)
0					
.25					
.50					
.75					
1					
1.5					
2					
2.5					
3					
3.5					
4					
4.5					
5					
5.5					
6					
6.5					
7					
7.5					
8					
8.5					
9					
9.5					
10					
20					
30					
40					
50					
60					
70					
80					
90					
100					
150					
200					
250					

L-65
deep well

PUMP WELL NUMBER _____

Measuring Point _____ ft above land surface.

Elevation of Measuring Point _____ ft above mean sea level.

Well Location: T. ____, R. ____, Sec. ____

Well Coordinates: _____ ft N.
_____ ft E.

Orifice Size: _____

Hour	Depth to Water Held Wet Depth TAPE-START at 10' (ft)	Elevation of Water Level (ft)	Piezometer Head (in)	Discharge (gpm)	Remarks (Include method of measuring water level)
0	15.60				
.25	15.90				
.50	16.15				
.75	16.37				
1	16.59				
1.5	16.90				
2	17.10				
2.5	17.32				
3	17.50				
3.5	17.65				
4	17.77				
4.5	17.91				
5	18.00				
5.5	18.08				
6	18.17				
6.5	18.25				
7	18.30				
7.5	18.35				
8	18.42				
8.5	18.45				
9	18.51				
9.5	18.56				
10	18.61				
20	19.15				
30	19.47				
40	19.64				
50	19.74				
60	19.80				
70	19.86				
80	19.92				
90	19.95				
100	19.97				
150	20.05				
200	20.08				
250	20.12				

L-65
deep well

PUMP WELL NUMBER ____

Measuring Point _____ ft above land surface.

Elevation of Measuring Point _____ ft above mean sea level.

Well Location: T.____, R.____, Sec.____

Well Coordinates: _____ ft N.
_____ ft E.

Orifice Size: _____

Hour	Depth to Water Held Wet Depth (ft)	Elevation of Water Level (ft)	Piezometer Head (in)	Discharge (gpm)	Remarks (include method of measuring water level)
0					
.25					
.50					
.75					
1					
1.5					
2					
2.5					
3					
3.5					
4					
4.5					
5					
5.5					
6					
6.5					
7					
7.5					
8					
8.5					
9					
9.5					
10					
20					
30					
40					
50					
60					
70					
80					
90					
100					
150					
200					
250					

L-65
shallow well

PUMP WELL NUMBER _____

Measuring Point _____ ft above land surface.

Elevation of Measuring Point _____ ft above mean sea level.

Well Location: T. ____, R. ____, Sec. ____

Well Coordinates: _____ ft N.
_____ ft E.

Orifice Size: _____

Hour	Depth to Water Held Wet Depth TAPE-START 30' (ft)	Elevation of Water Level (ft)	Piezometer Head (in)	Discharge (ppm)	Remarks (Include method of measuring water level)
0	35.05				
.25	37.58				
.50	37.97				
.75	38.18				
1	38.22				
1.5	38.40				
2	38.43				
2.5	38.43				
3	38.43				
3.5	38.43				
4	38.43				
4.5	38.15				
5	38.47				
5.5	38.50				
6	38.52				
6.5	38.53				
7	38.55				
7.5	38.57				
8	38.58				
8.5	38.60				
9	38.62				
9.5	38.62				
10	38.67				
20	38.72				
30	38.72				
40	38.72				
50	38.72				
60	38.72				
70	38.72				
80	38.72				
90	38.72				
100	38.72				
150	38.78				
200	38.67				
250	38.67				

L-65
shallow well

PUMP WELL NUMBER ____

Measuring Point _____ ft above land surface.

Elevation of Measuring Point _____ ft above mean sea level.

Well Location: T. ____, R. ____, Sec. ____

Well Coordinates: _____ ft N. _____ ft E.

Orifice Size: _____

Hour	Depth to Water Held Wet Depth (ft)	Elevation of Water Level (ft)	Piezometer Head (in)	Discharge (gpm)	Remarks (Include method of measuring water level)
0					
.25					
.50					
.75					
1					
1.5					
2					
2.5					
3					
3.5					
4					
4.5					
5					
5.5					
6					
6.5					
7					
7.5					
8					
8.5					
9					
9.5					
10					
20					
30					
40					
50					
60					
70					
80					
90					
100					
150					
200					
250					

T	T'	T/T'	Δ
1380	0	0	10.90
1381	1	1381	9.84
1382	2	691	9
1383	3	461	8.63
1384	4	346	8.33
1385	5	277	8.11
1386	6	231	7.91
1387	7	198	7.73
1388	8	174	7.61
1389	9	154	7.49
1390	10	139	7.39
1400	20	70	6.82
1410	30	47	6.54
1420	40	36	6.34
1430	50	29	6.25
1440	60	24	6.17
1450	70	21	6.10
1460	80	18	6.06
1470	90	16	6.01
1480	100	15	5.99
1490	110	14	5.98
1500	120	13	5.94

L-65

≈ 200 gpm

gallons start 19066

gallons end 19534

Distance to canal from shallow well - 65'

Distance to canal from deep well ≈ 80'

Recovery starts at 10:30 AM. ∴ pump test is 23hrs long

Total gallons pumped = 468000

GPM = 339