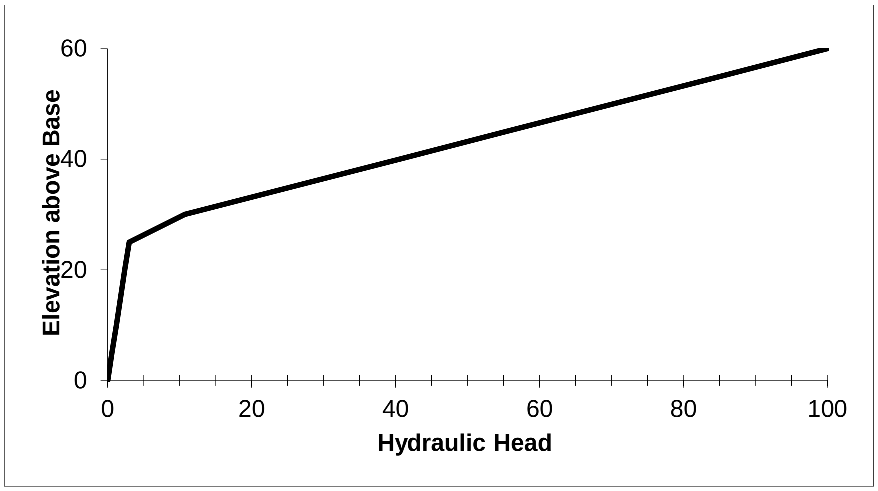
Direct solution for flux		
	K	num cells
zone 1	0,0004	6,5
zone 2	0,01	5,5
zone 3	0,0001	0
Keq	0,000714	
q	0,00119	

z	K zone cell	K cell	H	q	zone 1	zone 2	zone 3
60	1	0,0004	100		1	0	0
55	1	0,0004	85,11905	0,00119	1	0	0
50	1	0,0004	70,2381	0,00119	1	0	0
45	1	0,0004	55,35714	0,00119	1	0	0
40	1	0,0004	40,47619	0,00119	1	0	0
35	1	0,0004	25,59524	0,00119	1	0	0
30	1	0,0004	10,71429	0,00119	1	0	0
25	2	0,01	2,976192	0,00119	0	1	0
20	2	0,01	2,380954	0,00119	0	1	0
15	2	0,01	1,785716	0,00119	0	1	0
10	2	0,01	1,190477	0,00119	0	1	0
5	2	0,01	0,595239	0,00119	0	1	0
0	2	0,01	0	0,00119	0	1	0

Map of node and cell numbers			
	node	cell	
1	-		1
2	-		2
3	-		3
4	-		4
5	-		5
6	-		6
7	-		7
8	-		8
9	-		9
10	-		10
11	-		11
12	-		12
13	-		13



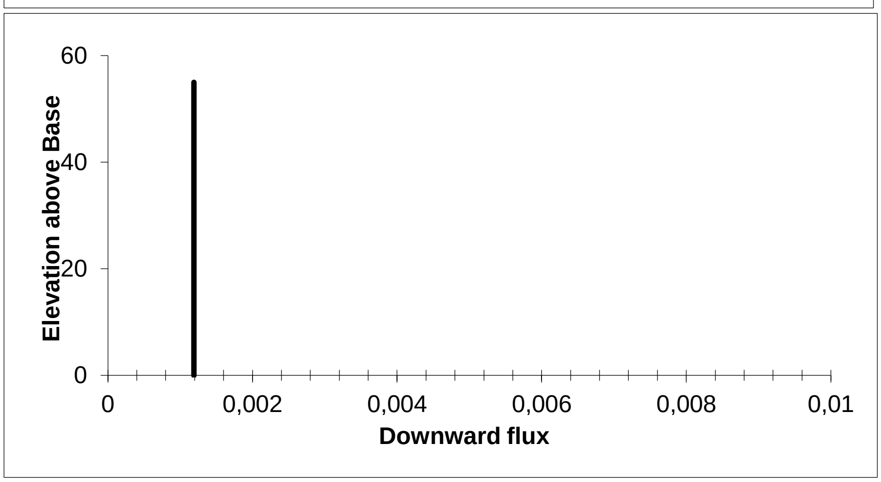


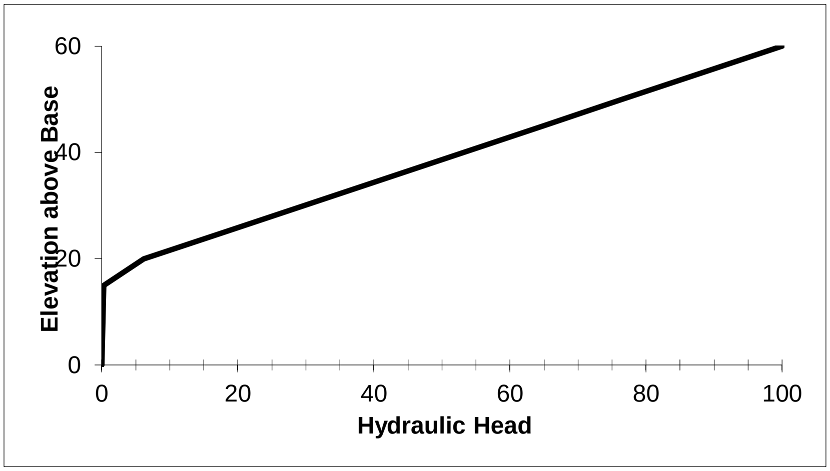
Figure 1. Solution for a two-layer heterogenous model with approximately equal thickness layer with different K values

Direct calculation for flux $q = Keq\frac{\partial H}{\partial l}$

Direct solution for flux		
	K	num cells
zone 1	0,0004	8,5
zone 2	0,05	3,5
zone 3	0,0001	0
Keq	0,000563	
q	0,000938	

z	K zone cell	K cell	H	q	zone 1	zone 2	zone 3
60	1	0,0004	100		1	0	0
55	1	0,0004	88,27183	0,000938	1	0	0
50	1	0,0004	76,5442	0,000938	1	0	0
45	1	0,0004	64,81724	0,000938	1	0	0
40	1	0,0004	53,09097	0,000938	1	0	0
35	1	0,0004	41,36533	0,000938	1	0	0
30	1	0,0004	29,64018	0,000938	1	0	0
25	1	0,0004	17,91535	0,000938	1	0	0
20	1	0,0004	6,190623	0,000938	1	0	0
15	2	0,05	0,28137	0,000938	0	1	0
10	2	0,05	0,187578	0,000938	0	1	0
5	2	0,05	0,093789	0,000938	0	1	0
0	2	0,05	0	0,000938	0	1	0

Map of node and cell numbers			
	node	cell	
1	-		1
2	-		2
3	-		3
4	-		4
5	-		5
6	-		6
7	-		7
8	-		8
9	-		9
10	-		10
11	-		11
12	-		12
13	-		13



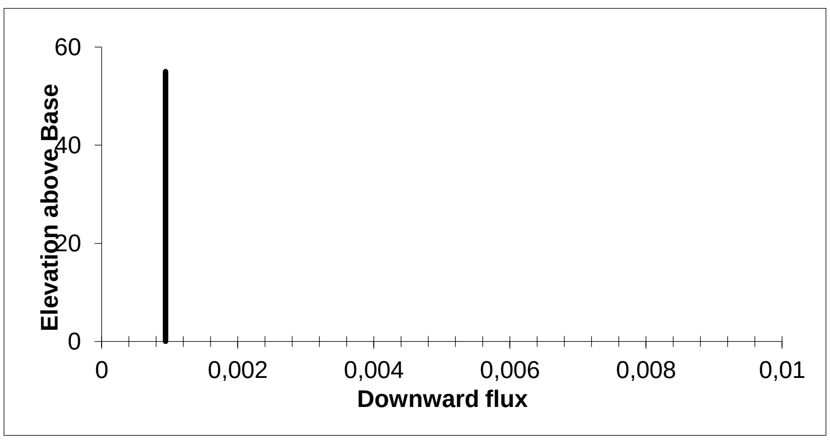


Figure 2. Solution for a two-layer heterogeneous column with non-equal layer thickness and different K values

The Keq is closer to the lower of K values, because equivalent hydraulic conductivity represents the whole unit as a arithmetic mean of the layerd aquifer. Therefore, Keq in this case is calculated as: $Keq=(d_1+d_2)/(d_1/K_1+ d_2/K_2)$

Where d_1 is number of cells for K_1, and d_2 is number of cells for K_2.