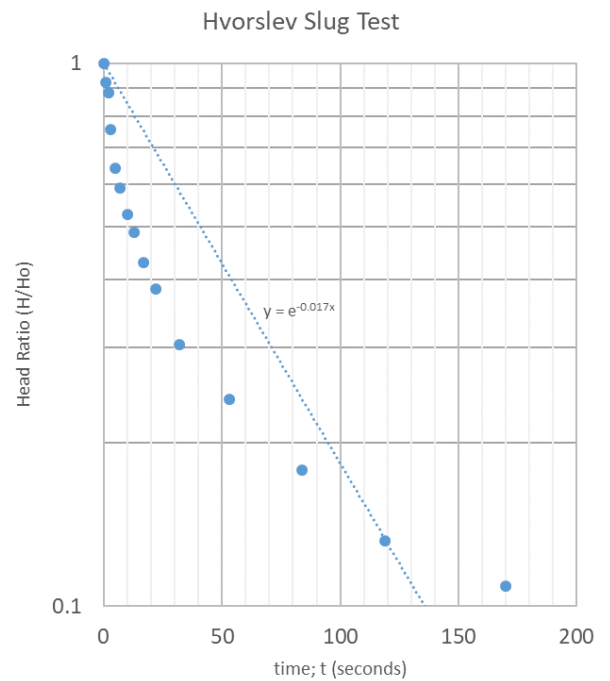
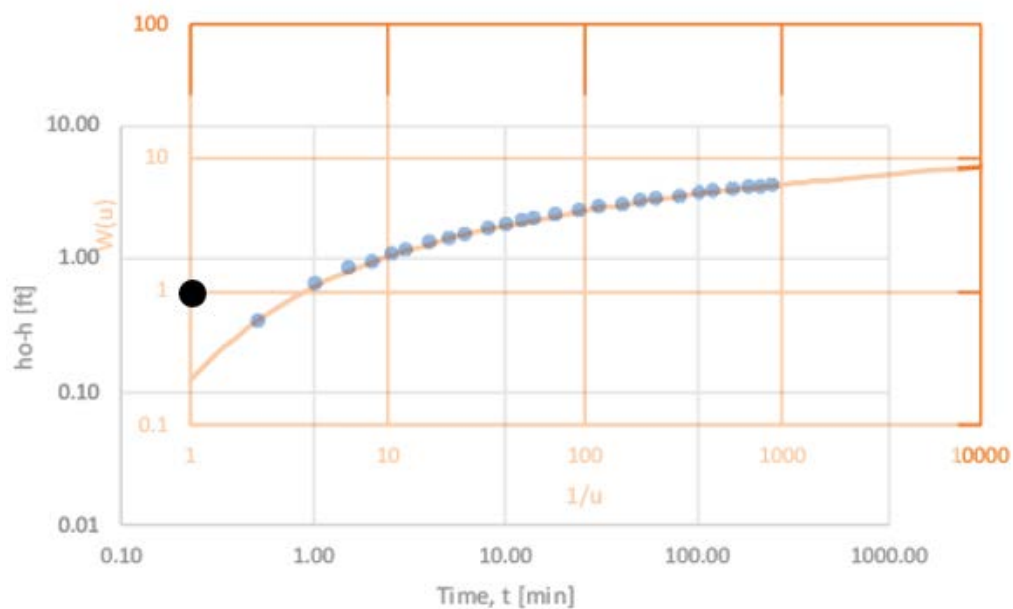


1)

Ho = 174.3 cm			
Time (s)	DTW (cm)	DTW-DTS (cm)	H/Ho
static water (before test)	250		
0	424.3	174.3	1
1	411	161	0.923695
2	404	154	0.883534
3	382	132	0.757315
5	362	112	0.64257
7	353	103	0.590935
10	342	92	0.527826
13	335	85	0.487665
17	325	75	0.430293
22	317	67	0.384395
32	303	53	0.304073
53	292	42	0.240964
84	281	31	0.177854
119	273	23	0.131956
170	269	19	0.109007
245	259	9	0.051635
400	255	5	0.028686
800	251	1	0.005737



2) a) i-ii) field observations plotted over type curve:



iii) List match points and calculate T and S.

W(u) =	1	-
u =	1	-
t =	0.23	min
h ₀ -h =	0.6	ft

See calculations.

iv) 1) What is K in ft/d? See calculations.

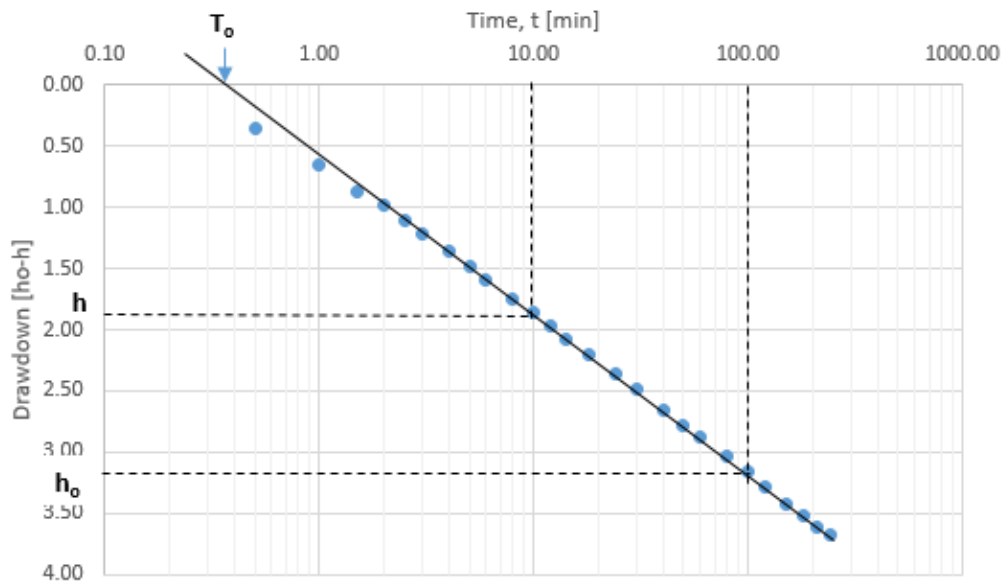
2) We ideally want to measure T and not K because T considers the full saturated thickness of the aquifer.

It takes into account K and the thickness of the aquifer as a measure of aquifer productivity.

T is measurable from a pump test. K is measurable from a slug test, but it is less reliable because it does not account for aquifer thickness and represents a small portion of the aquifer.

b) Jacob-Cooper

See calculations.



c) Compare J-C and Theis methods and suggest why they might differ.

The Theis method is more subjective due to overlapping plots and choosing a match point. However, the J-C method ignores early observations.

T % difference -6.153846154

S % difference 6.538461538