

Figure 8. Percent clay and average EC values for samples from Core 1 (squares) and Core 2 (inverted triangles). Because EC data from the upper and lower 3 cm of sample interval reflect the transition between intervals, only those samples >6 cm in thickness were included in the regression. Similarly, EC data from the upper and lower 3 cm of a sample interval were not used to compute the average EC value for that interval.

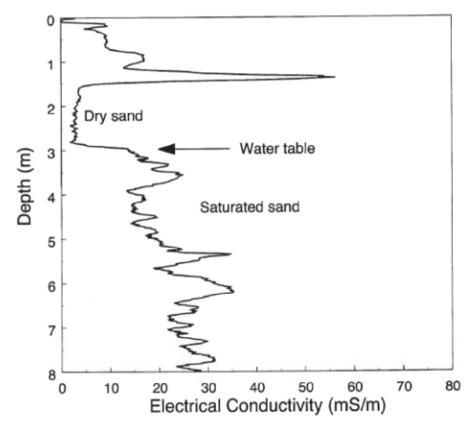
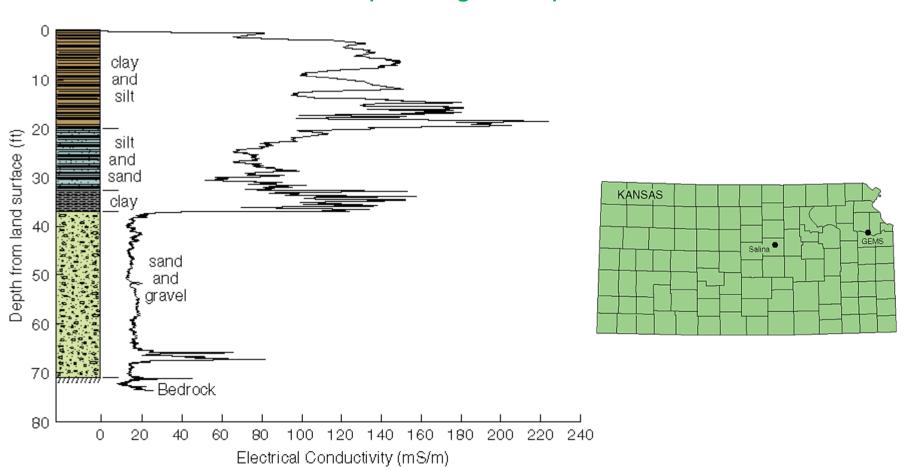


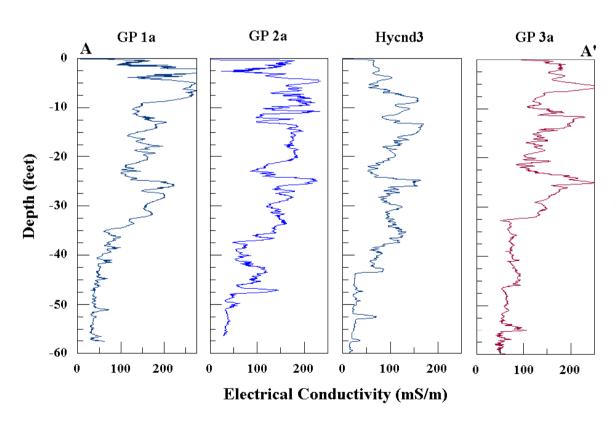
Figure 11. Direct-push EC log from the east bank of the Arkansas River near Kinsley, Kansas.

(Schulmeister et al. 2002)

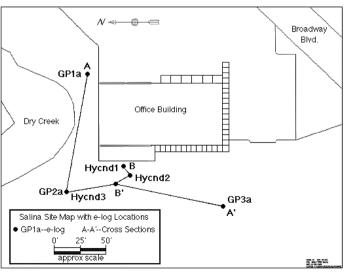




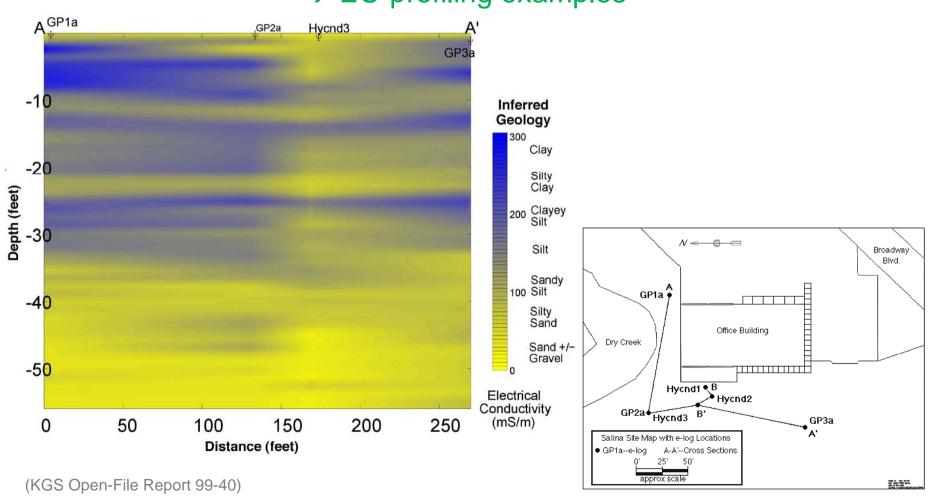




(KGS Open-File Report 99-40)

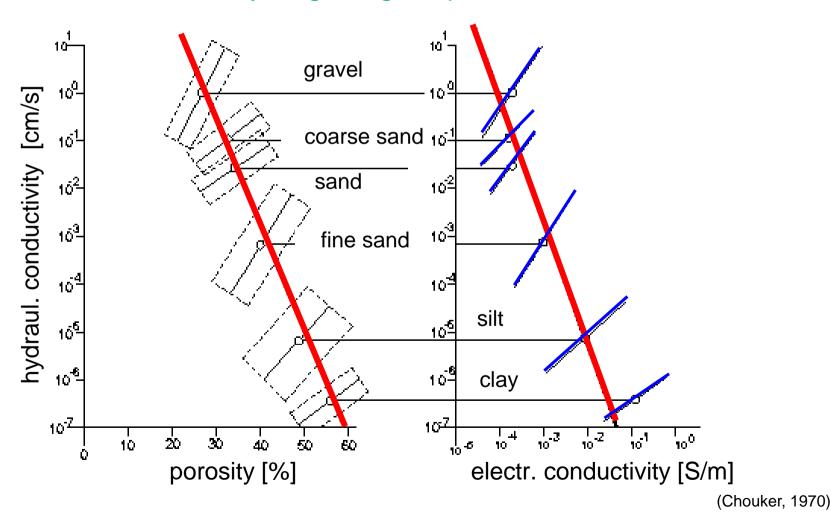








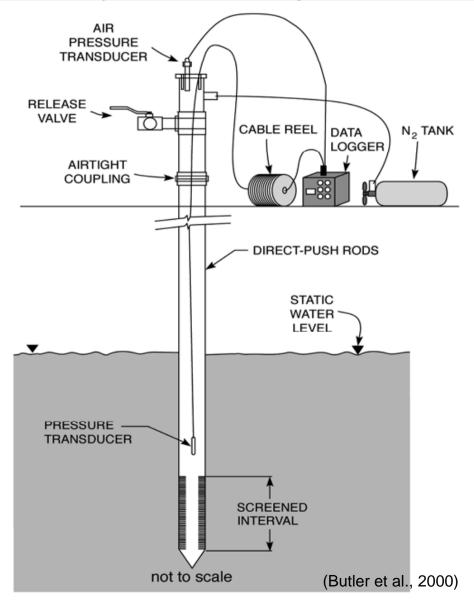
## 3. Relationship between geophysical and hydrogeological parameters





#### → hydraulic methods: Direct Push Slug Test (DPST)

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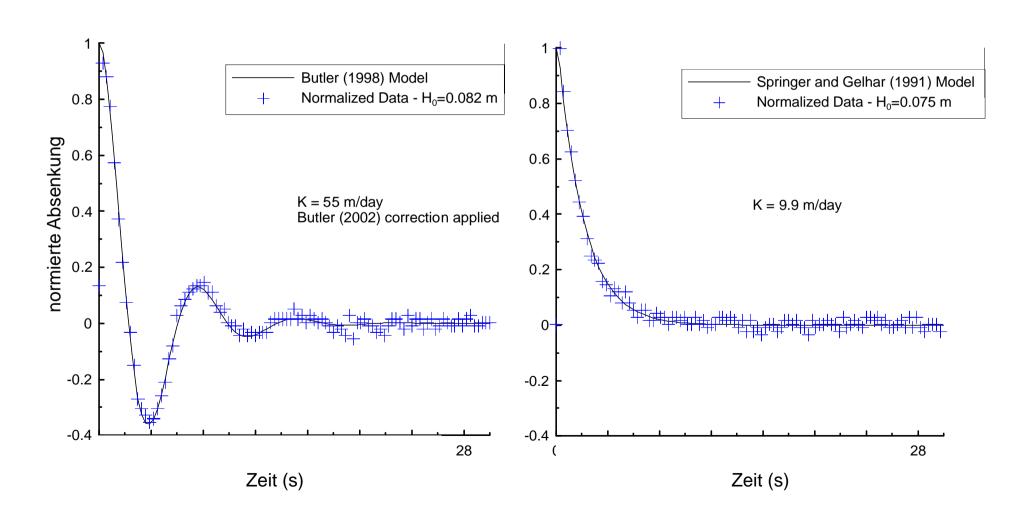




(www.kgs.ku.edu/Hydro/Publications/OFR00\_40/index.html)



### 3. In situ measurements of subsurface conditions → hydraulic methods: Direct Push Slug Test (DPST)





#### 3. In situ measurements of subsurface conditions→ hydraulic methods: Direct Push Slug Test (DPST)

1.00

0.80

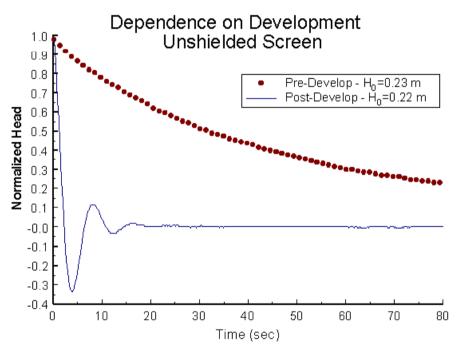
0.60

-0.60

2

6

8



#### <u>Caution</u>: Well development!

Dependence on Development

Hydraulic Profiling

Test 2 - Pre-Develop - H<sub>o</sub>=0.120 m

Test 7 - Post-Develop - H<sub>o</sub>=0.120 m

20

18

0.40 0.20 0.00 -0.20 -0.40

10

Time (sec)

12

14

16

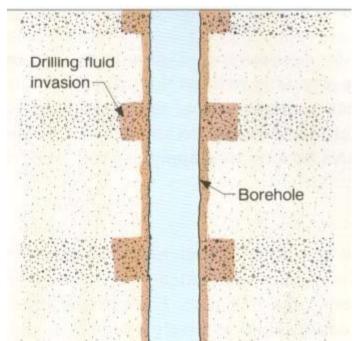
Note: different time scale!



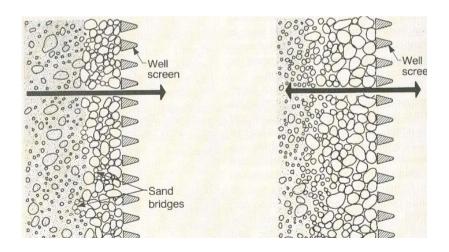
#### 3. In situ measurements of subsurface conditions

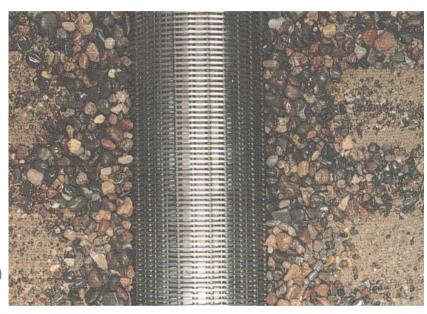
→ hydraulic methods: Direct Push Slug Test (DPST) Well development

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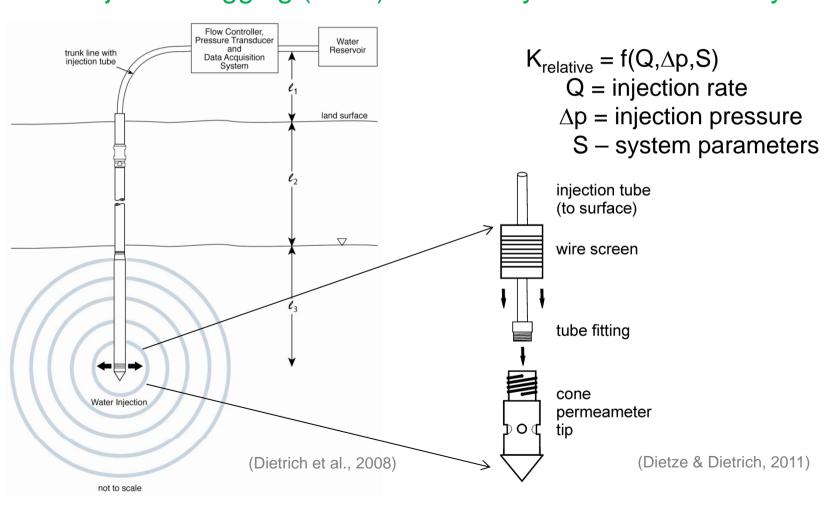


#### methods:

- over pumping
- purging ("surge block")
- (air) jetting



#### 3. In situ measurements of subsurface conditions → Injection logging (DPIL): relative hydraulic conductivity





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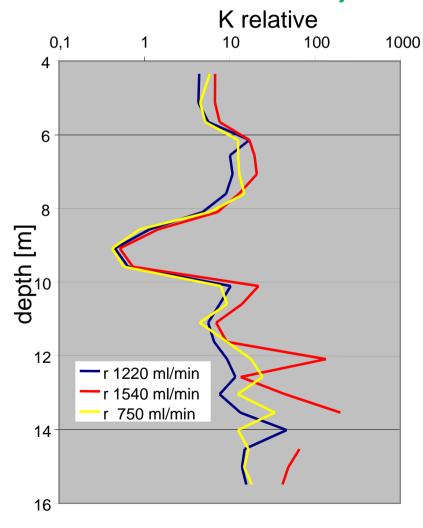
# 3. In situ measurements of subsurface conditions → Injection logging (DPIL): relative hydraulic conductivity



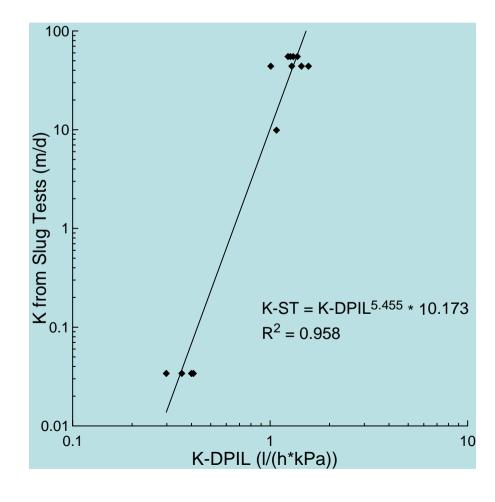




## 3. In situ measurements of subsurface conditions → Injection logging: results



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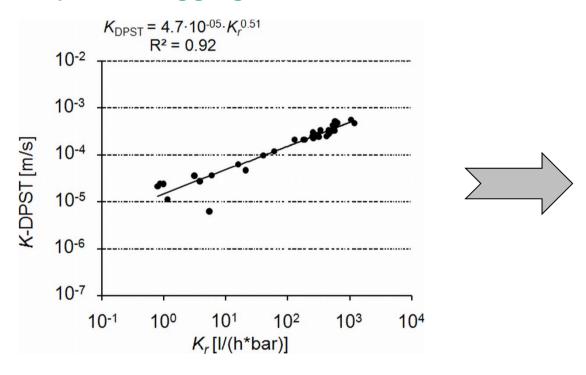




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#### 3. In situ measurements of subsurface conditions

→ Injection logging: results Pirna



Deriving hydraulic conductivity: calibration of DPIL-K-values with K-Slug Tests

(Dietze & Dietrich, 2011)

