Water Policy Interim Committee
January 15, 2008
Hamilton, Montana

Update

Montana Bureau of Mines and Geology

John Metesh

✓Develop work plan
- case study
- report(s)

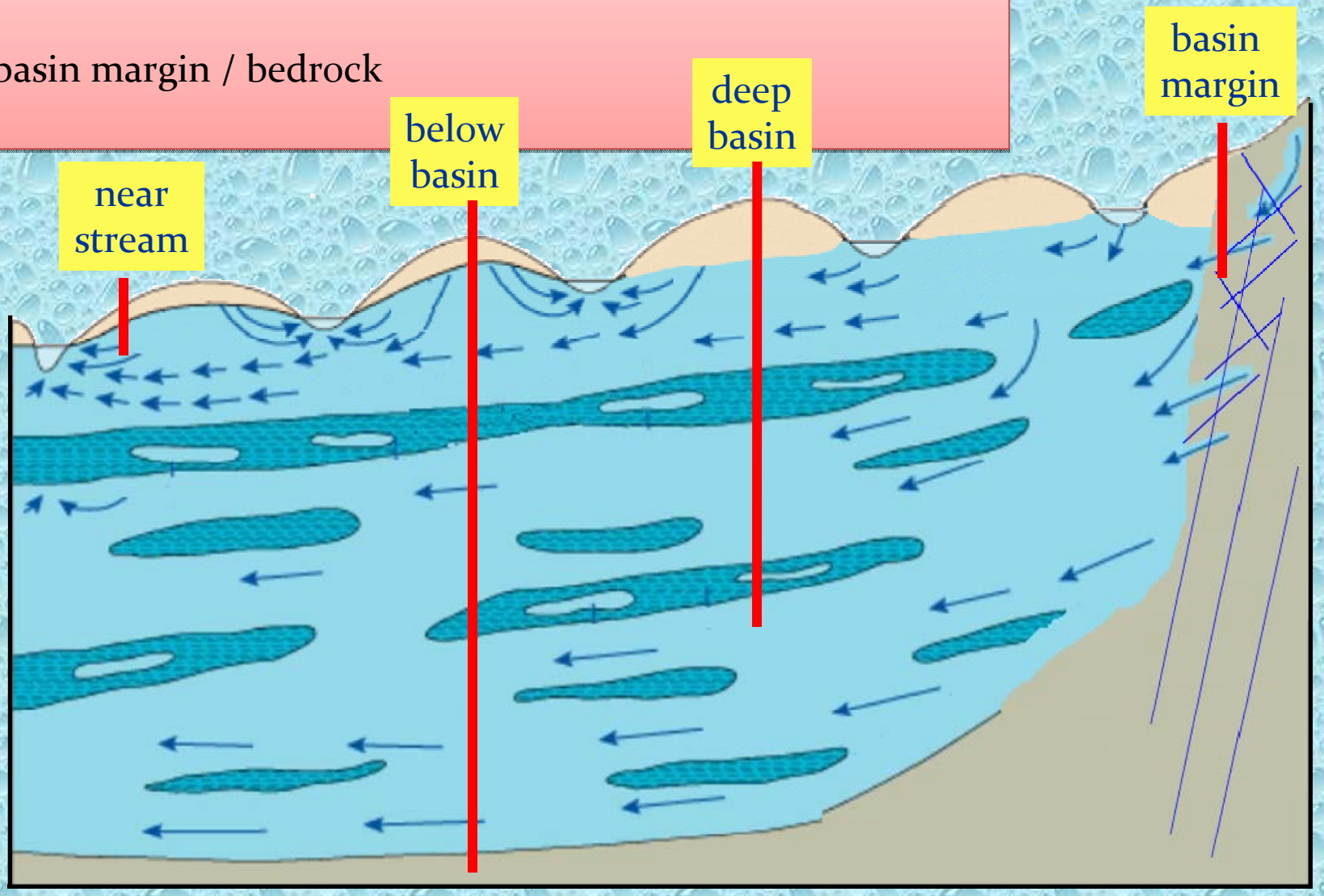
Case Study
- ✓ review permits
- ✓ select field site(s)
- ✓ compile existing data
- ✓ develop conceptual model(s)
- ✓ design field experiment(s)
- ➢ collect / compile data
  - water levels
  - aquifer tests
  - chemistry

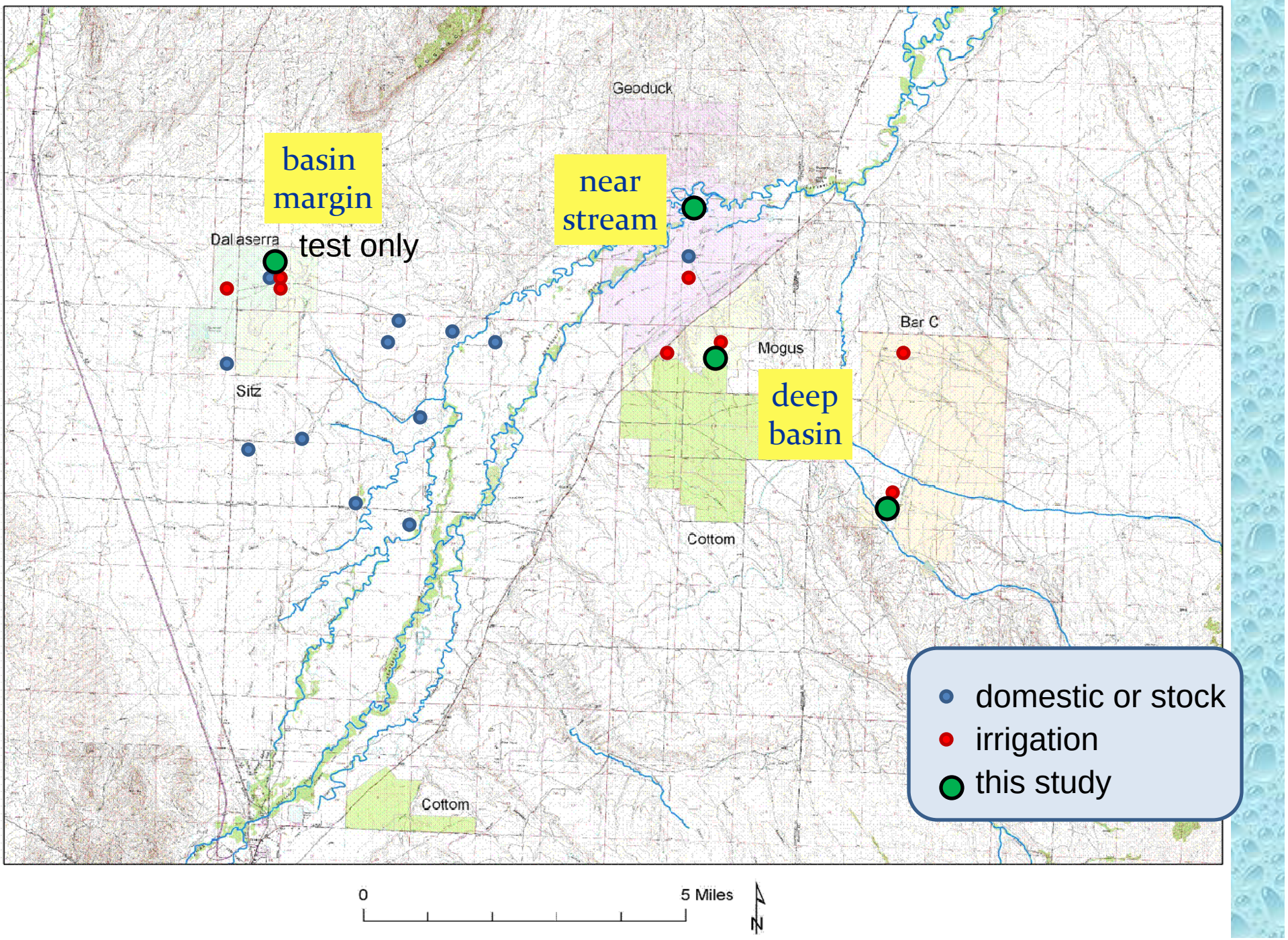
near stream shallow alluvial aquifer;

deep basin, confined or semi confined aquifer;

intrabasin or interbasin aquifers below the basin-fill aquifer

basin margin / bedrock



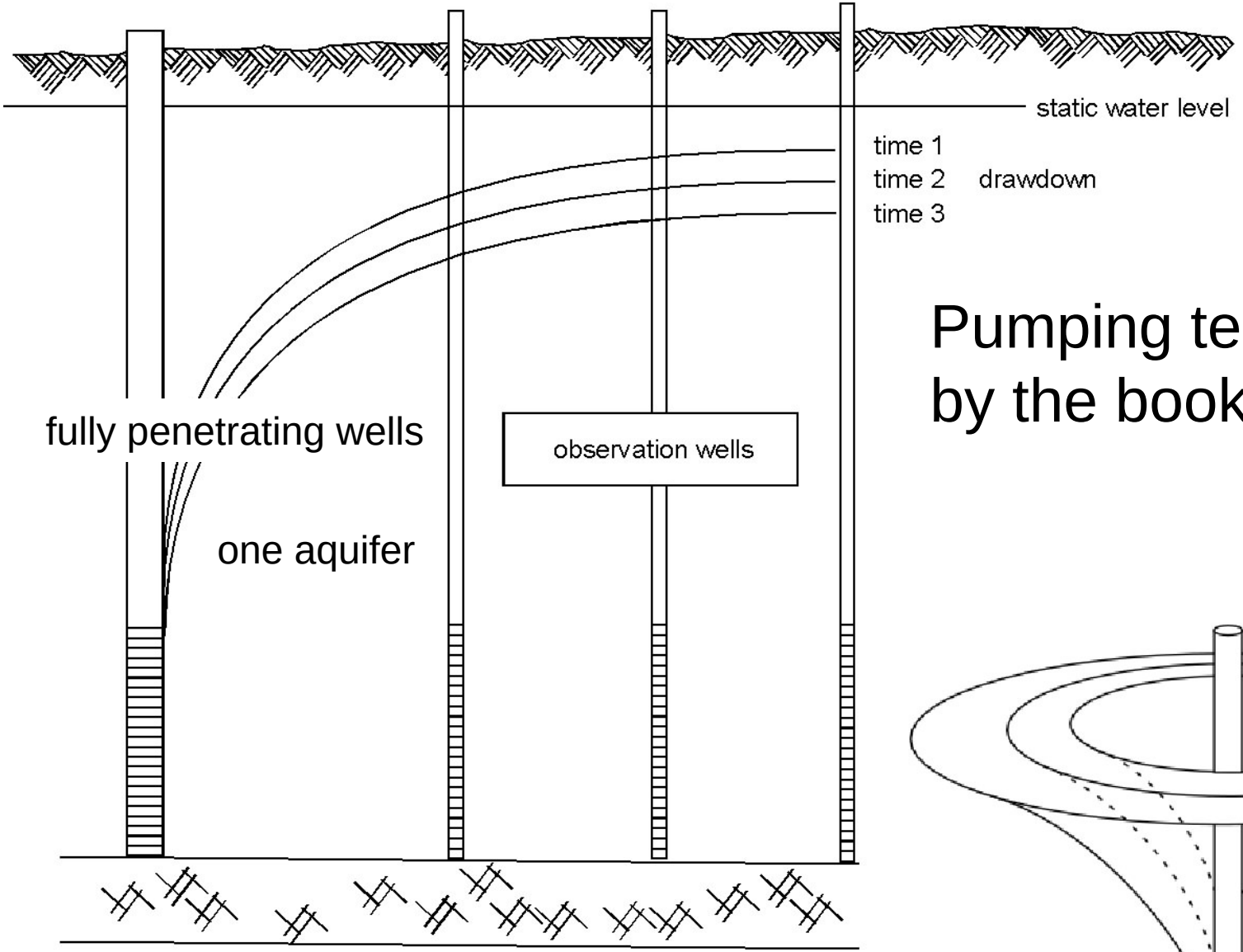

basin margin
test only
near stream
deep basin
Dal aserra
Sitz
Geoduck
Mogus
Bar C
Cottom
Cottom
domestic or stock
irrigation
this study
0
5 Miles
N

Pumping Test Objectives:

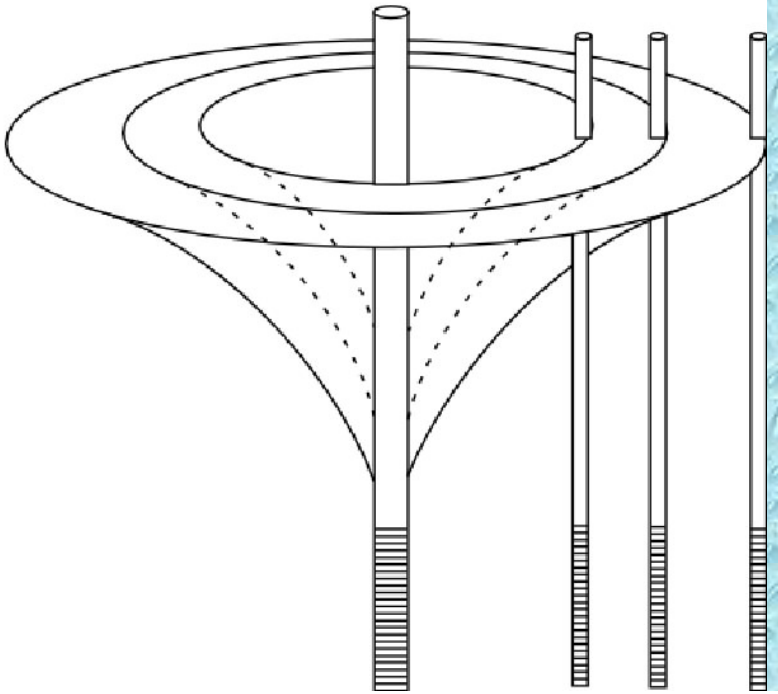
"measure" aquifer properties at
- near stream
- deep basin
- basin margin

observe/evaluate response in multiple aquifers

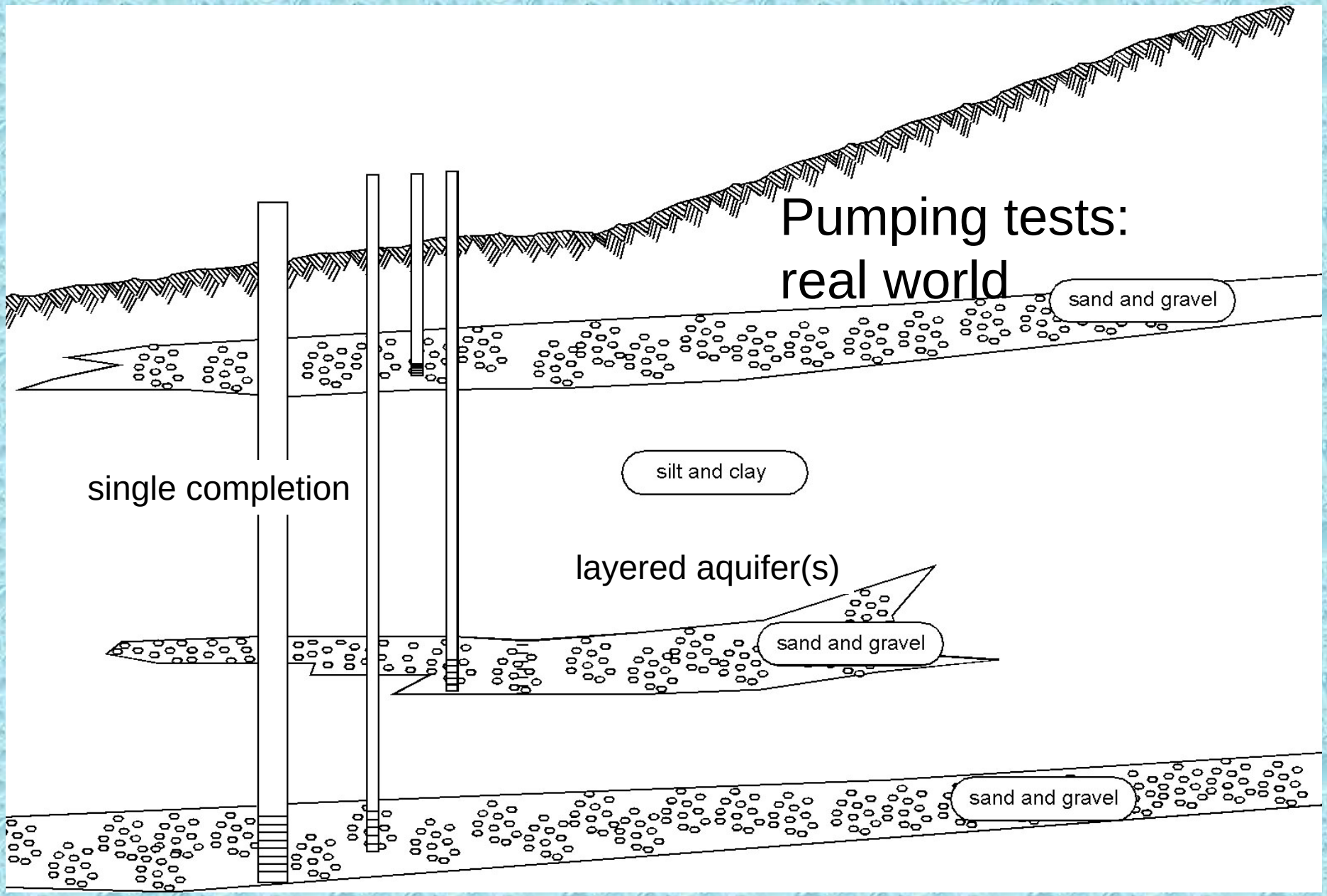
observe/evaluate response in multi-completion wells



Pumping tests: by the book



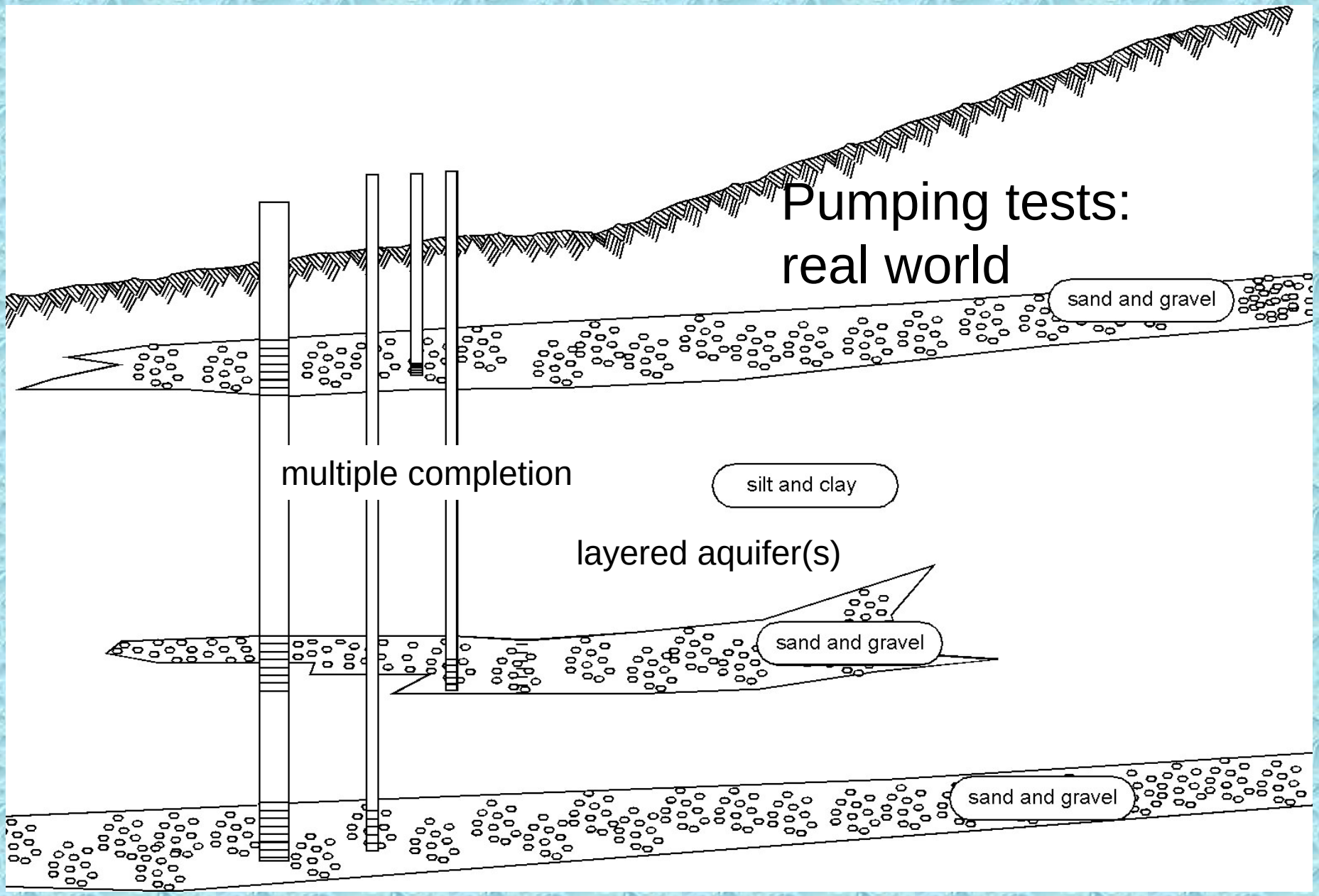
Pumping tests: real world



single completion

layered aquifer(s)

Pumping tests: real world



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  - ➢ collect / compile data
    - water levels
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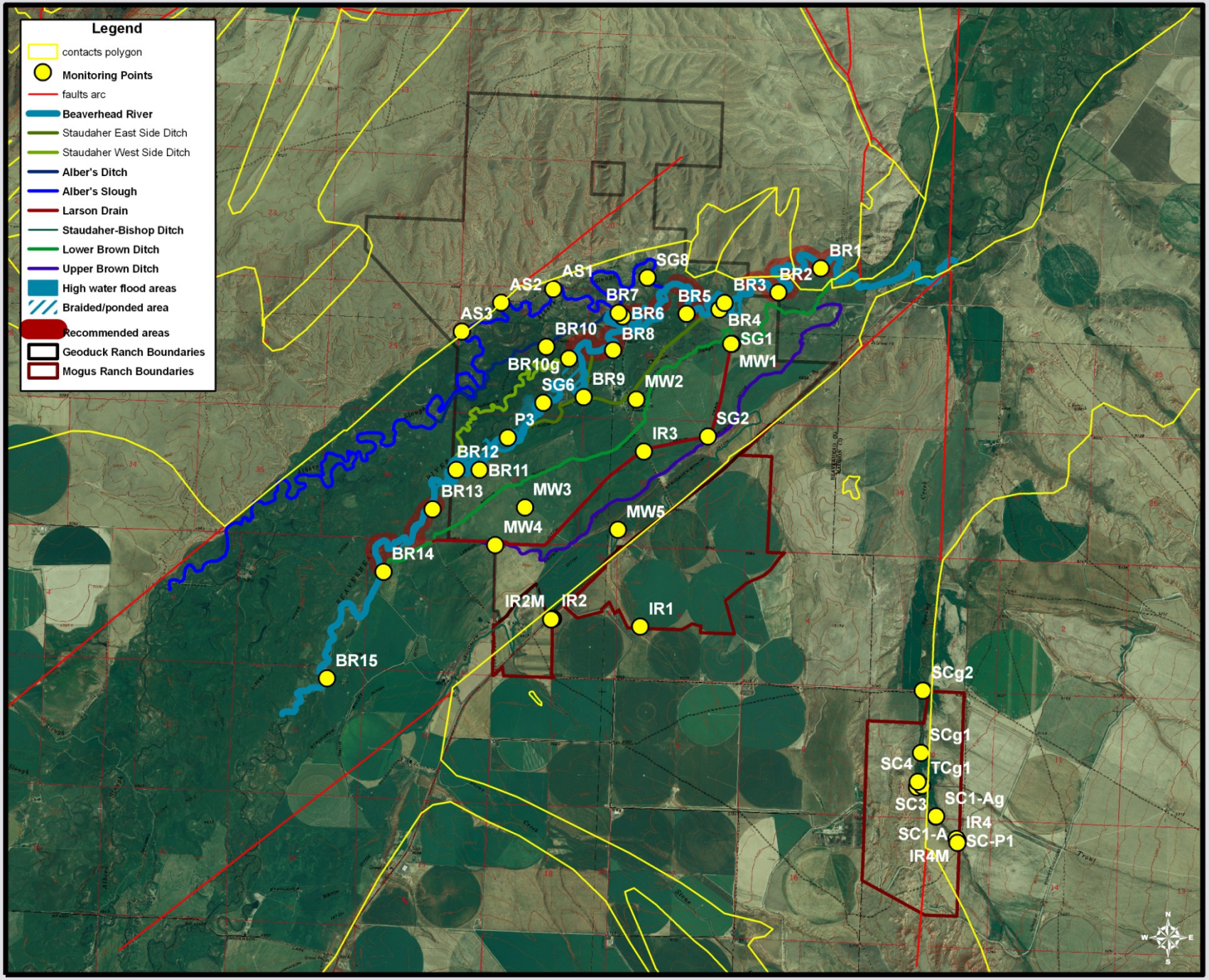
  - ➢ revise (?) conceptual/mathematical model
  - ➢ report of case studies
    - (Beaverhead, West Gallatin, Gallatin)
- ➢ report to WPIC committee (including case studies)


Legend
contacts polygon
Monitoring Points
faults arc
Beaverhead River
Staudaher East Side Ditch
Staudaher West Side Ditch
Alber's Ditch
Alber's Slough
Larson Drain
Staudaher-Bishop Ditch
Lower Brown Ditch
Upper Brown Ditch
High water flood areas
Braided/ponded area
Recommended areas
Geoduck Ranch Boundaries
Mogus Ranch Boundaries
BR1
BR2
BR3
BR4
BR5
BR6
BR7
BR8
BR9
BR10
BR10g
BR11
BR12
BR13
BR14
BR15
AS1
AS2
AS3
SG1
SG2
SG6
SG8
MW1
MW2
MW3
MW4
MW5
P3
IR1
IR2
IR2M
IR3
IR4
IR4M
SC1-A
SC1-Ag
SC3
SC4
SC-P1
SCg1
SCg2
TCg1