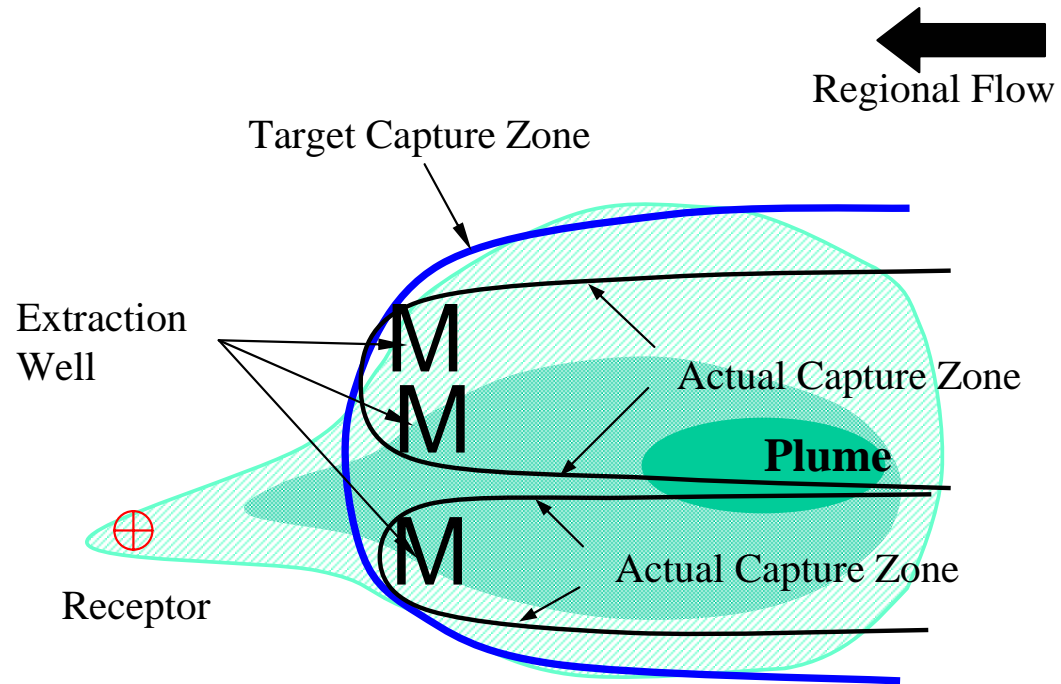
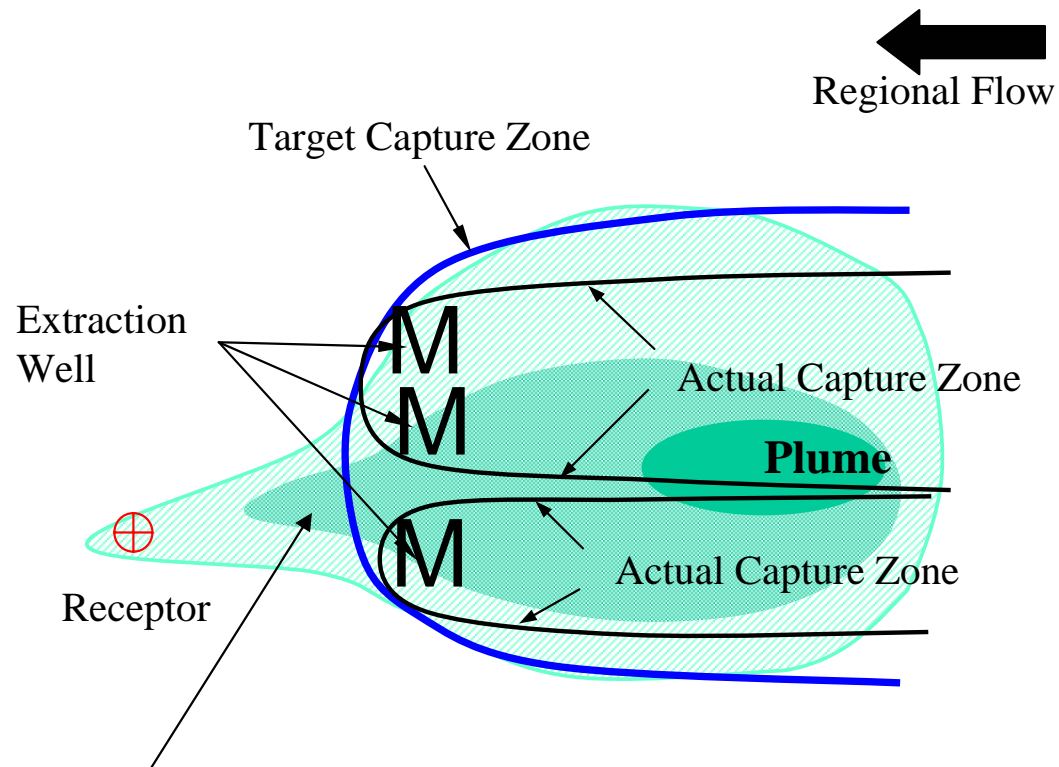


Compare Actual Capture Zone to Target Capture Zone

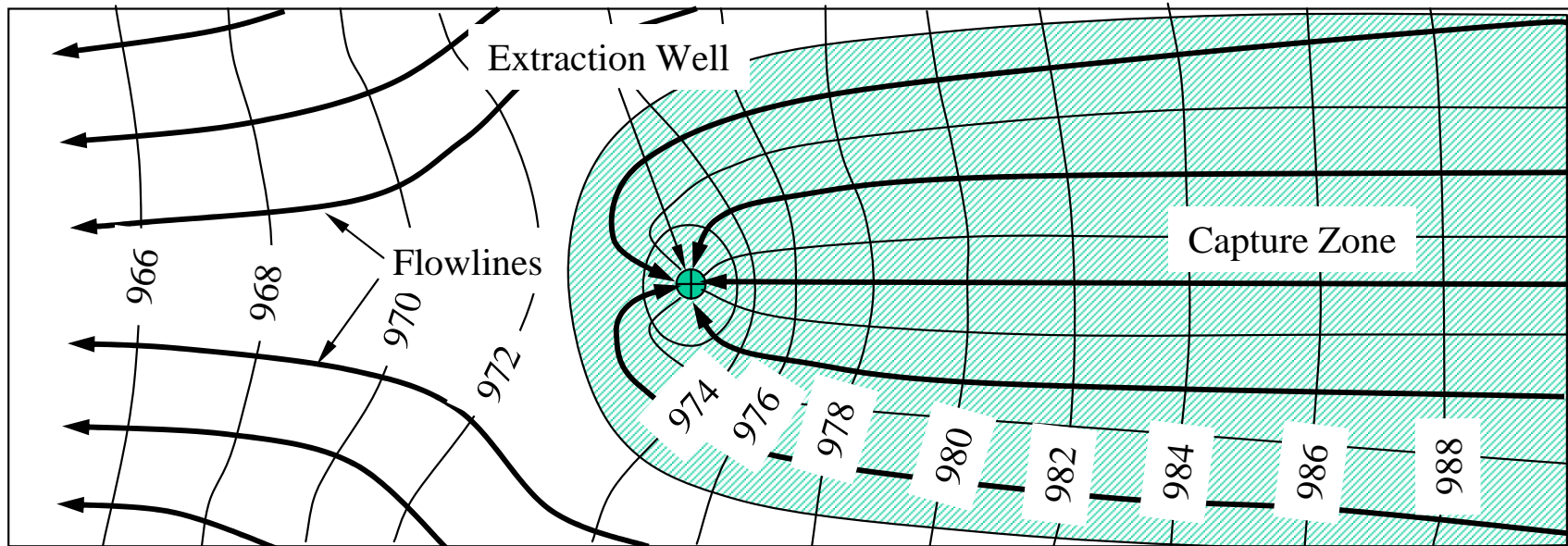


Negative Impact on Protectiveness From “Failed Capture”

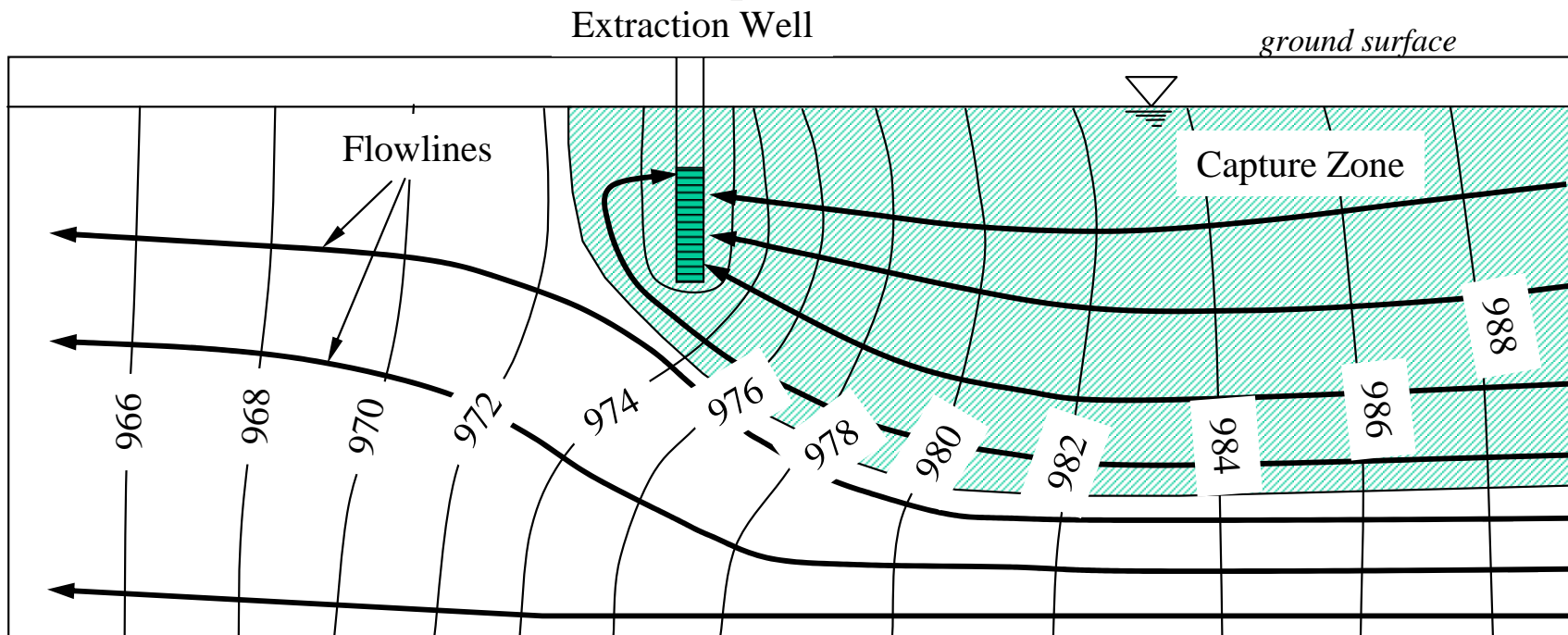


This is a schematic that indicates a gap in capture between extraction wells

Horizontal Capture Zone

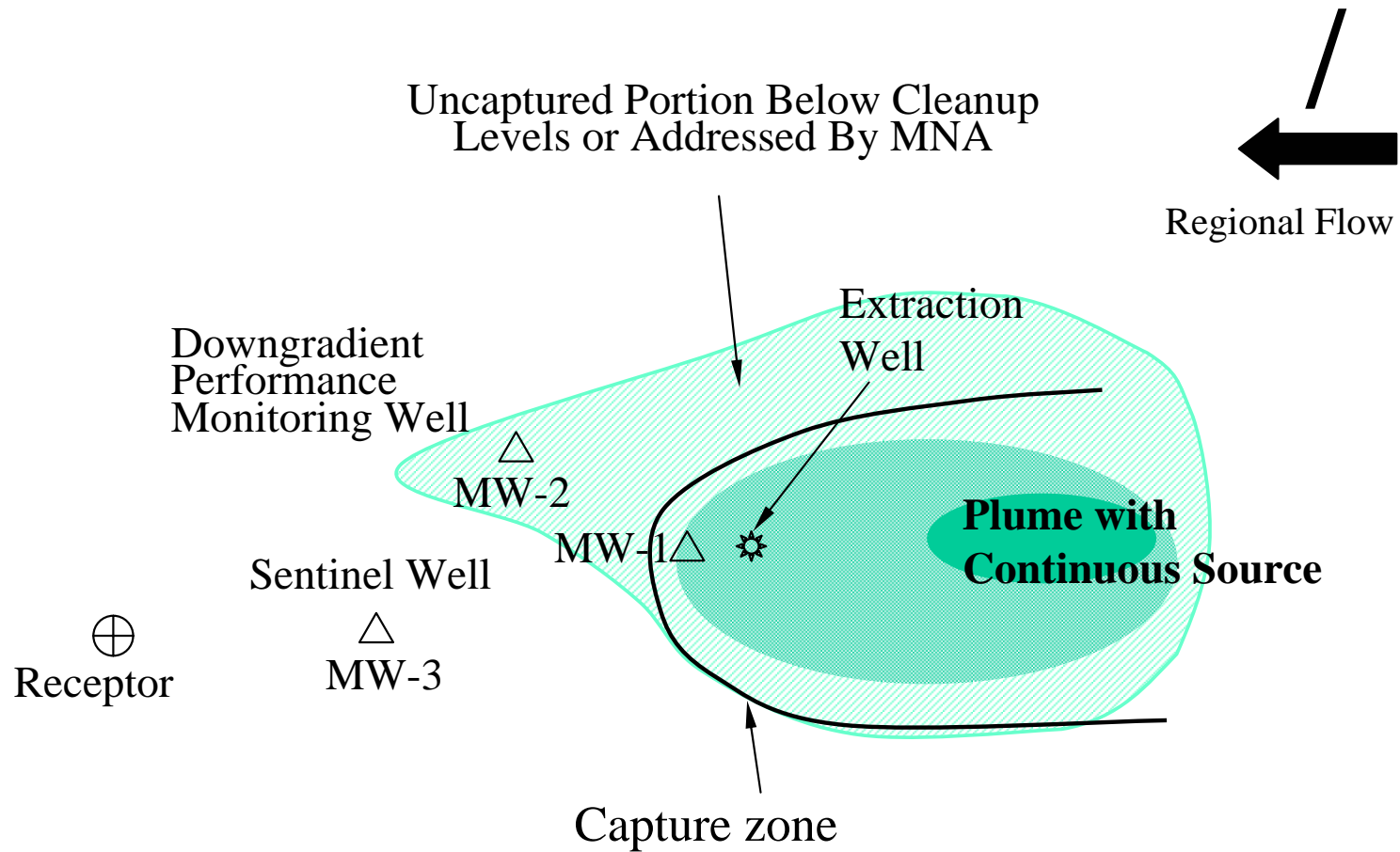


Vertical Capture Zone

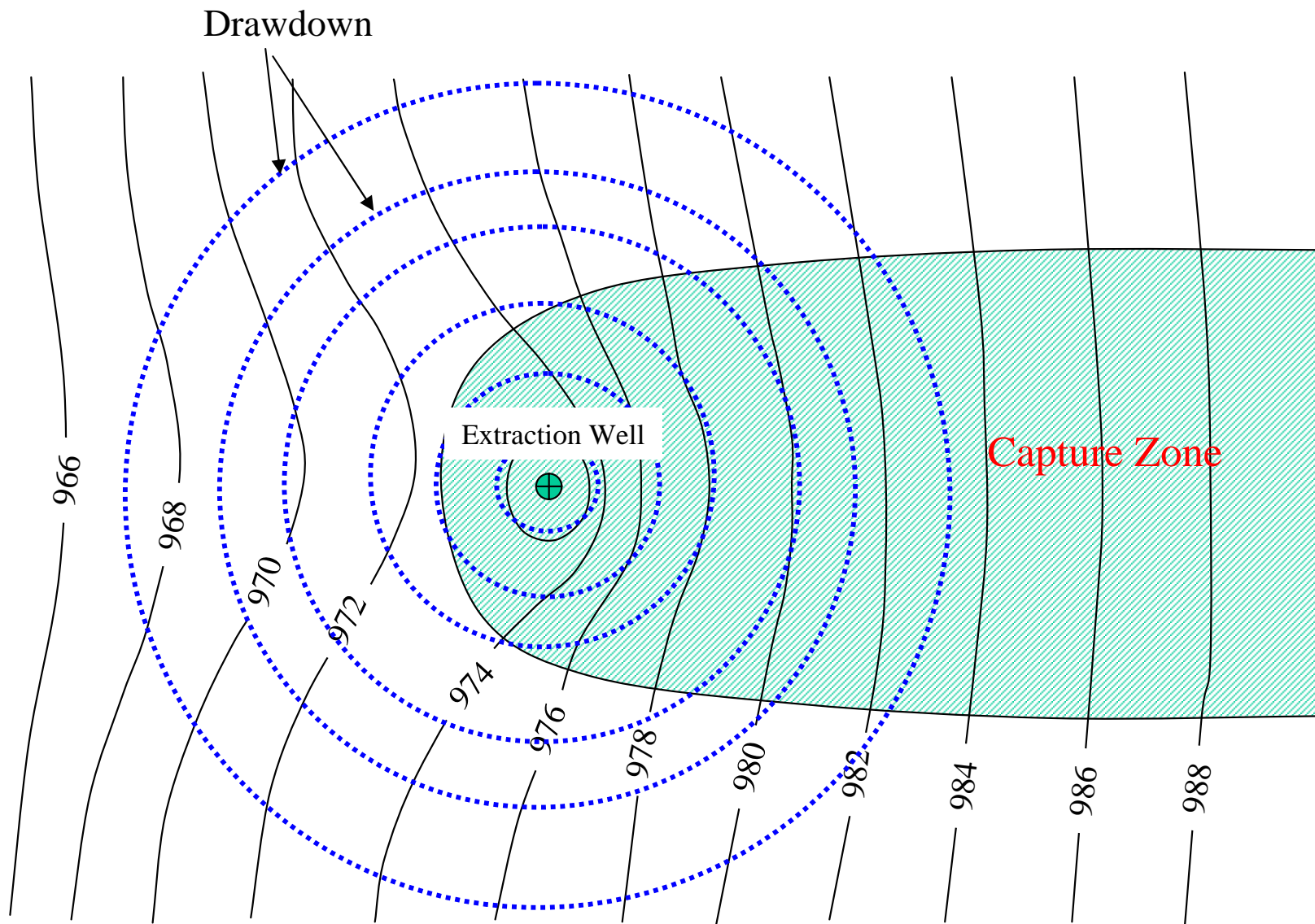


Vertical capture does not encompass the entire aquifer thickness for this partially penetrating well. The top figure does not convey this, shows the need for 3-D analysis. The greater the vertical anisotropy ($K_x \gg K_z$), the shallower the vertical capture zone will be.

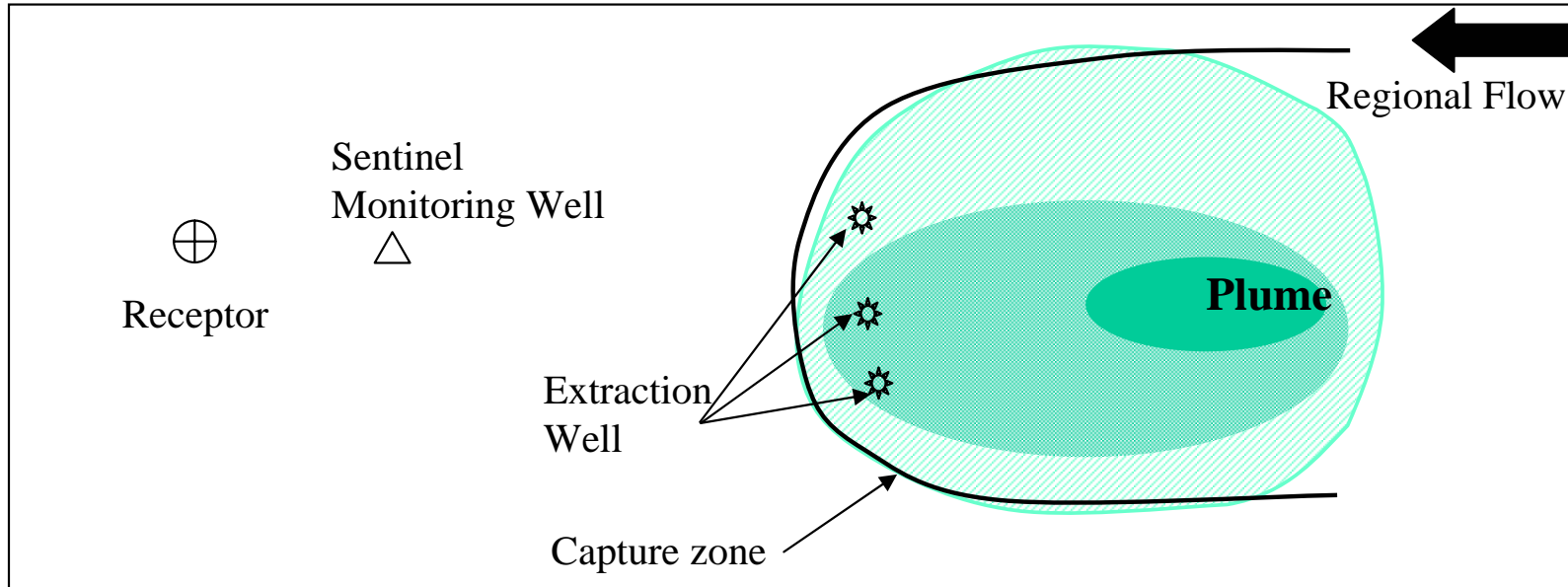
Monitoring Wells for Concentration Measurement



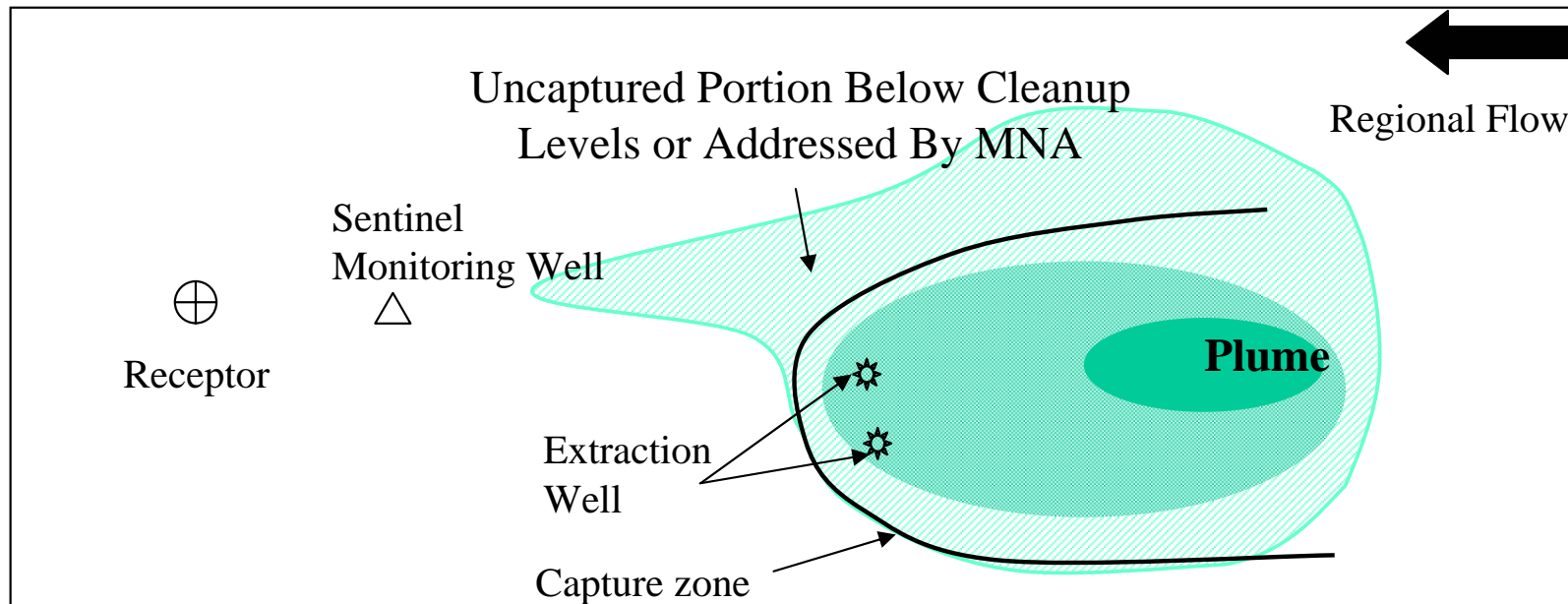
Drawdown and Capture Are Not The Same Thing



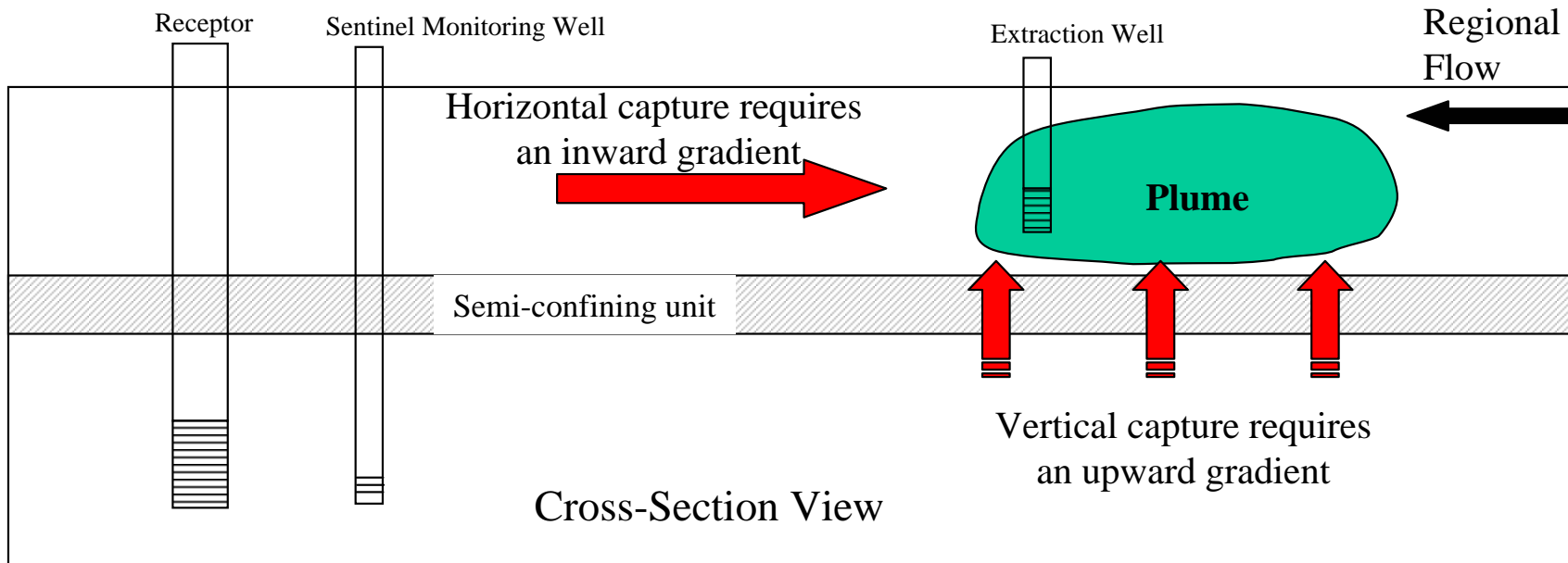
Capture for Entire Plume Extent



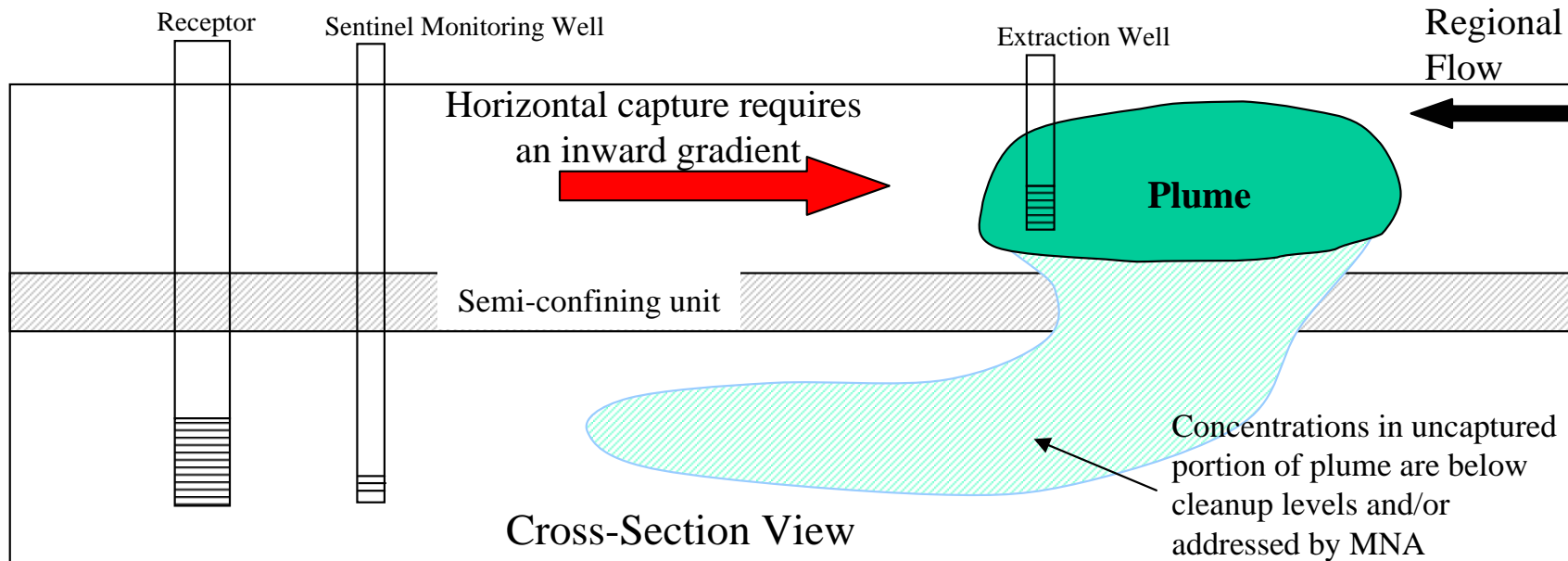
Capture for Portion of Plume



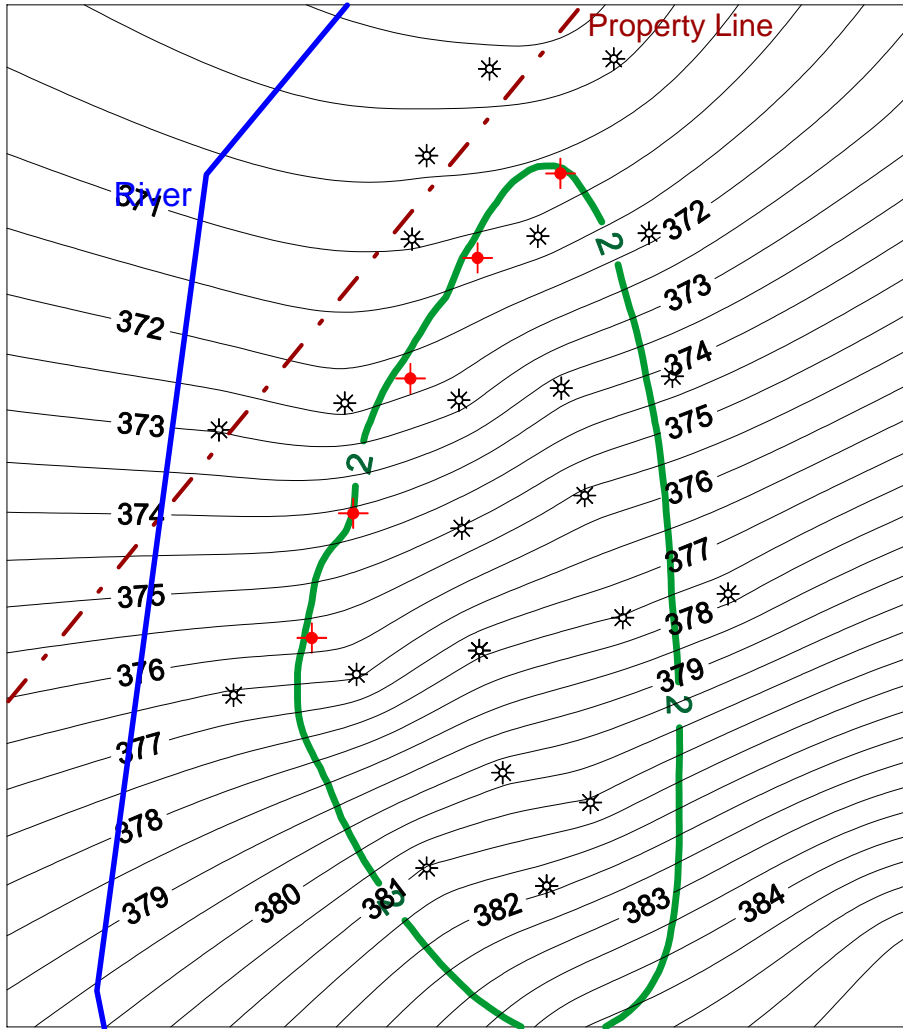
Complete Horizontal and Vertical Capture



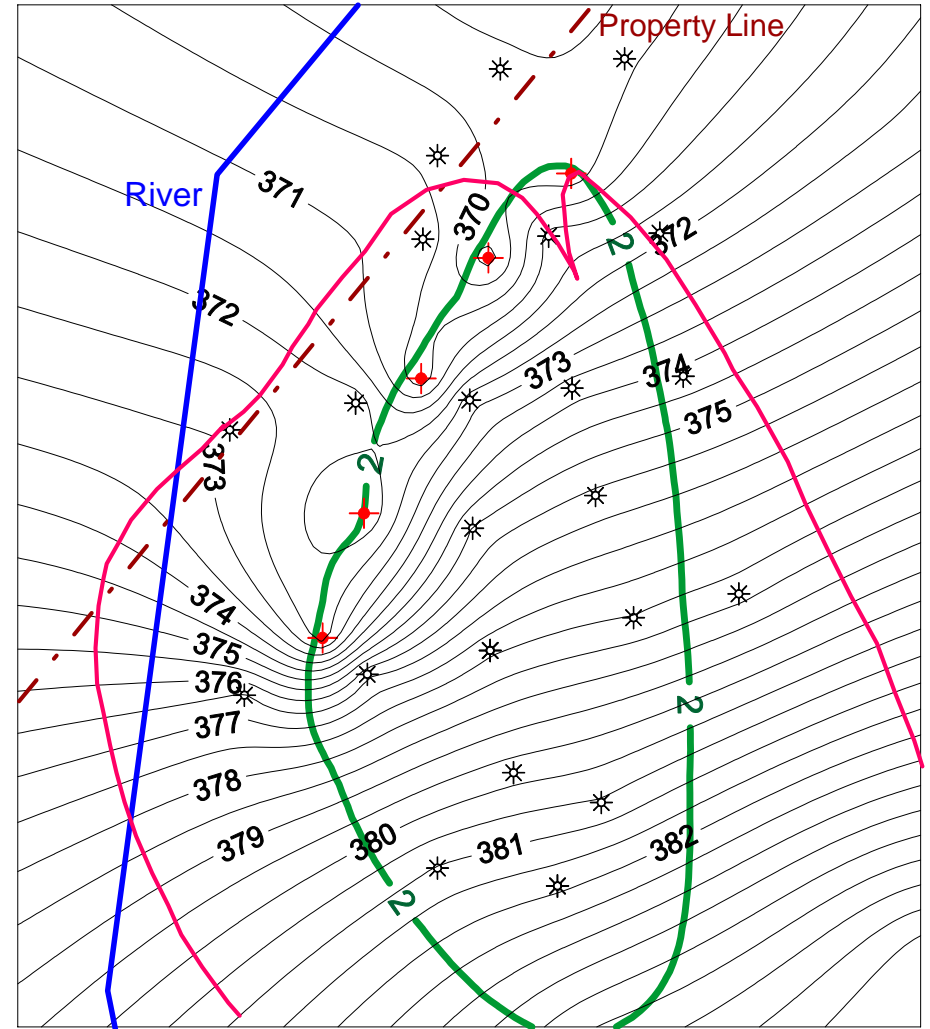
Complete Horizontal Capture Only



Observations Points Without Water Level Estimates at Pumping Wells

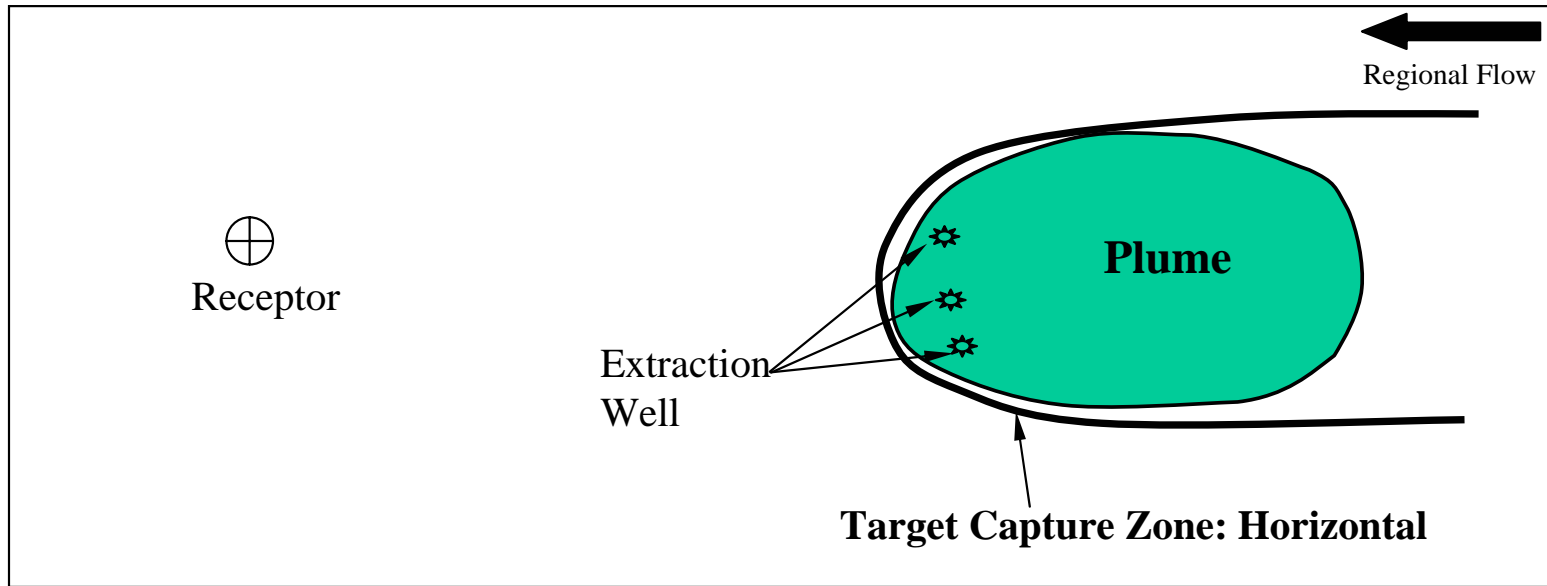


Observations Points With Water Level Estimates at Pumping Wells

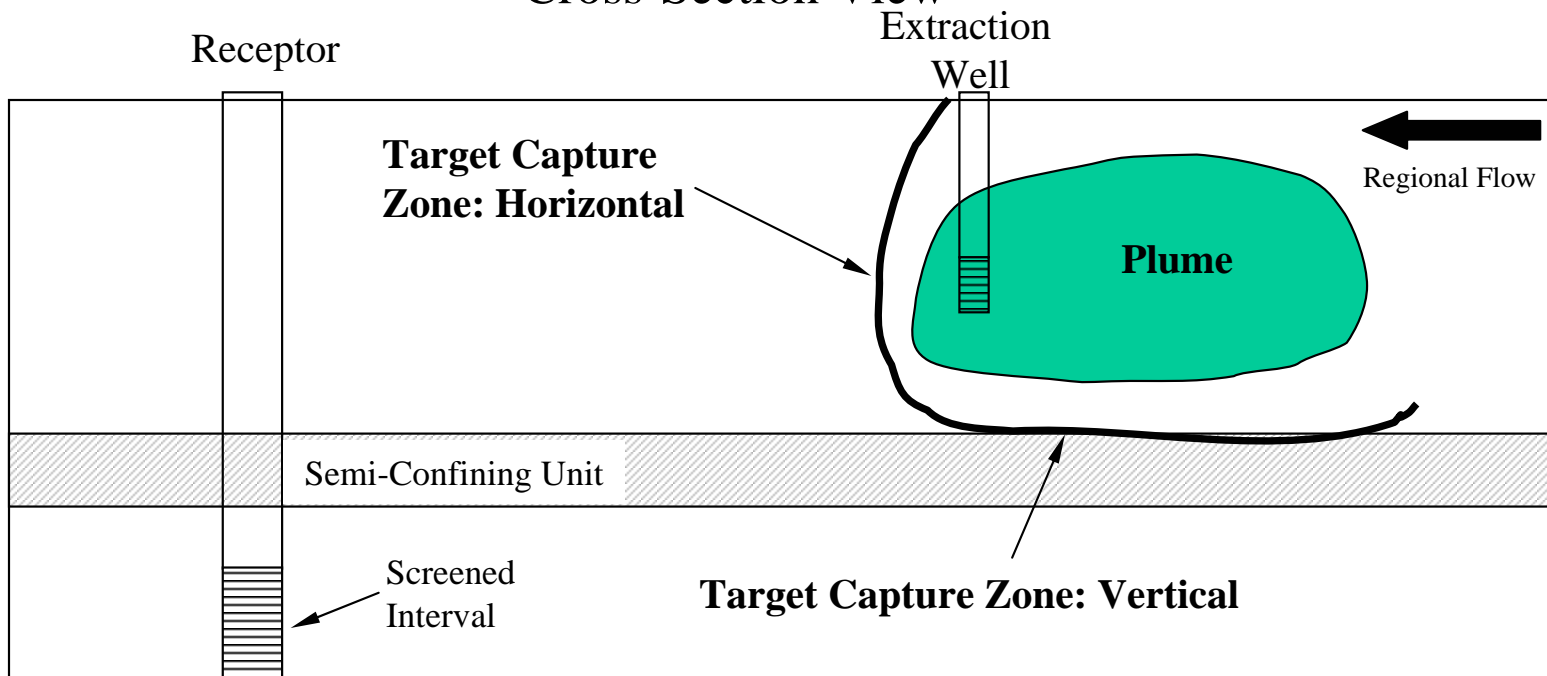


Target Capture Zone: Should Be 3-Dimensional

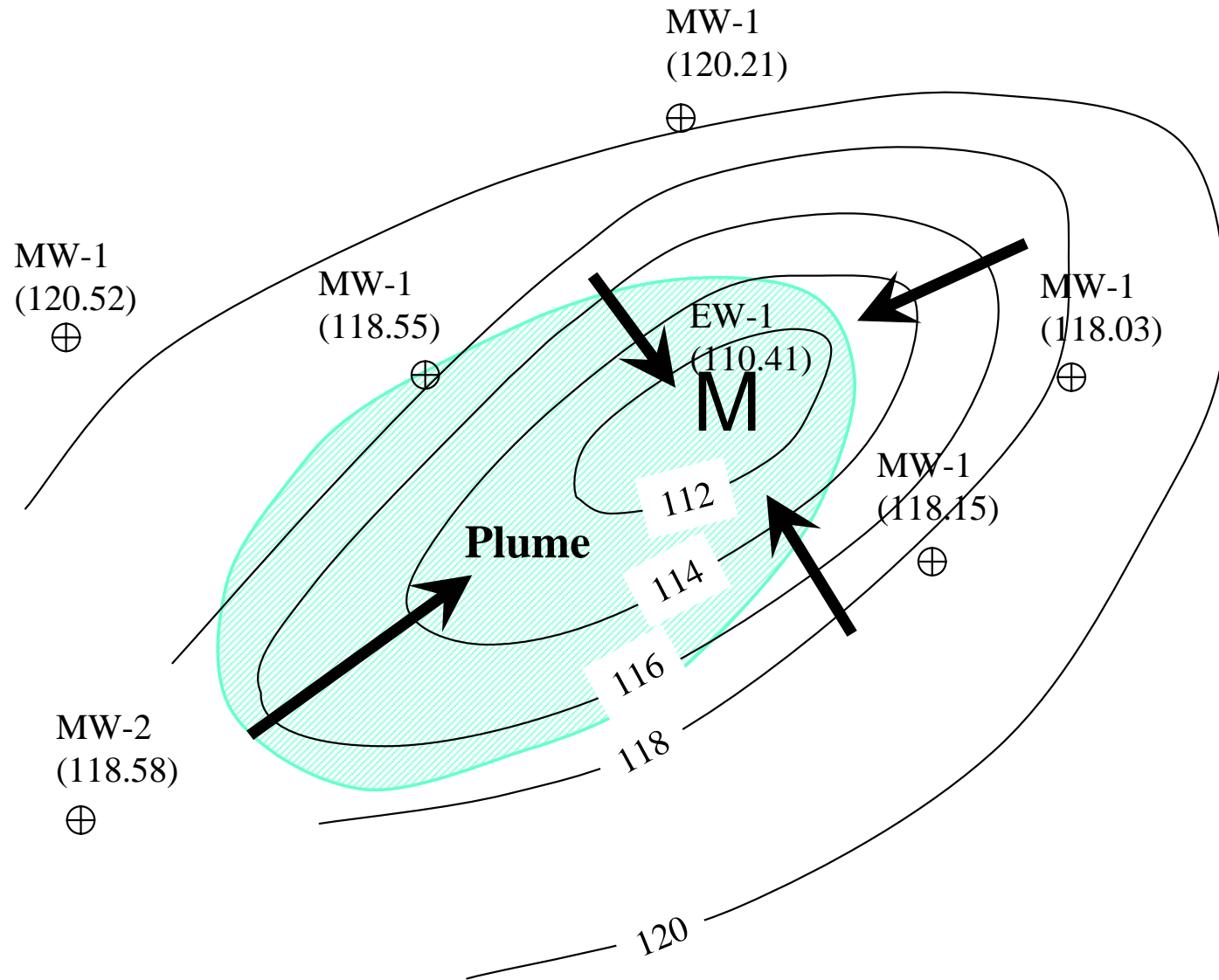
Map View



Cross-Section View

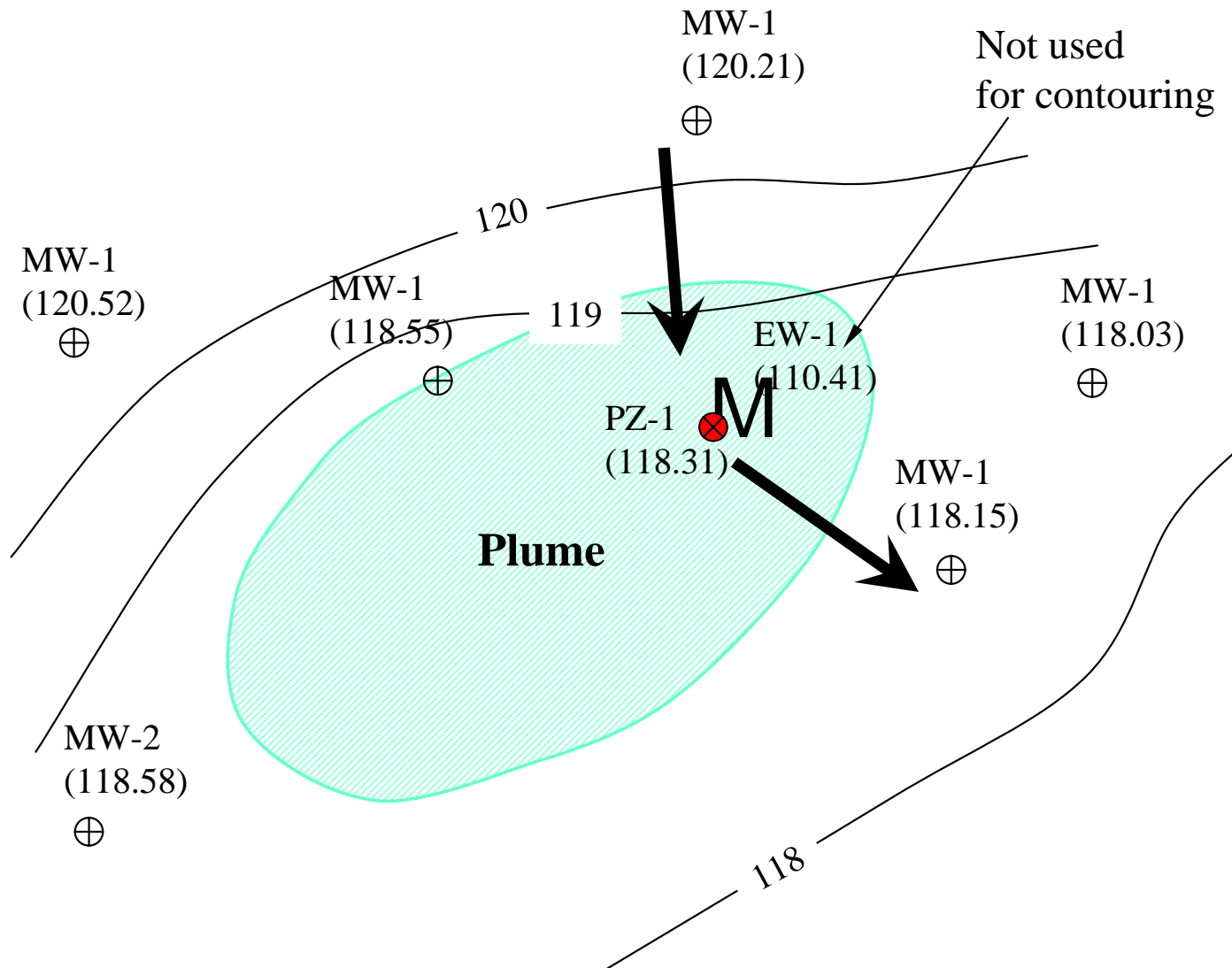


Water Level Interpretation Using Measurement from Extraction Well



Using water level at the extraction well for developing contours biases interpretation to indicate extensive capture...

Water Level Interpretation Using Measurement at Piezometer near Extraction Well



With piezometer data to indicate actual water level in aquifer near the extraction well, no clear-cut capture zone is apparent...