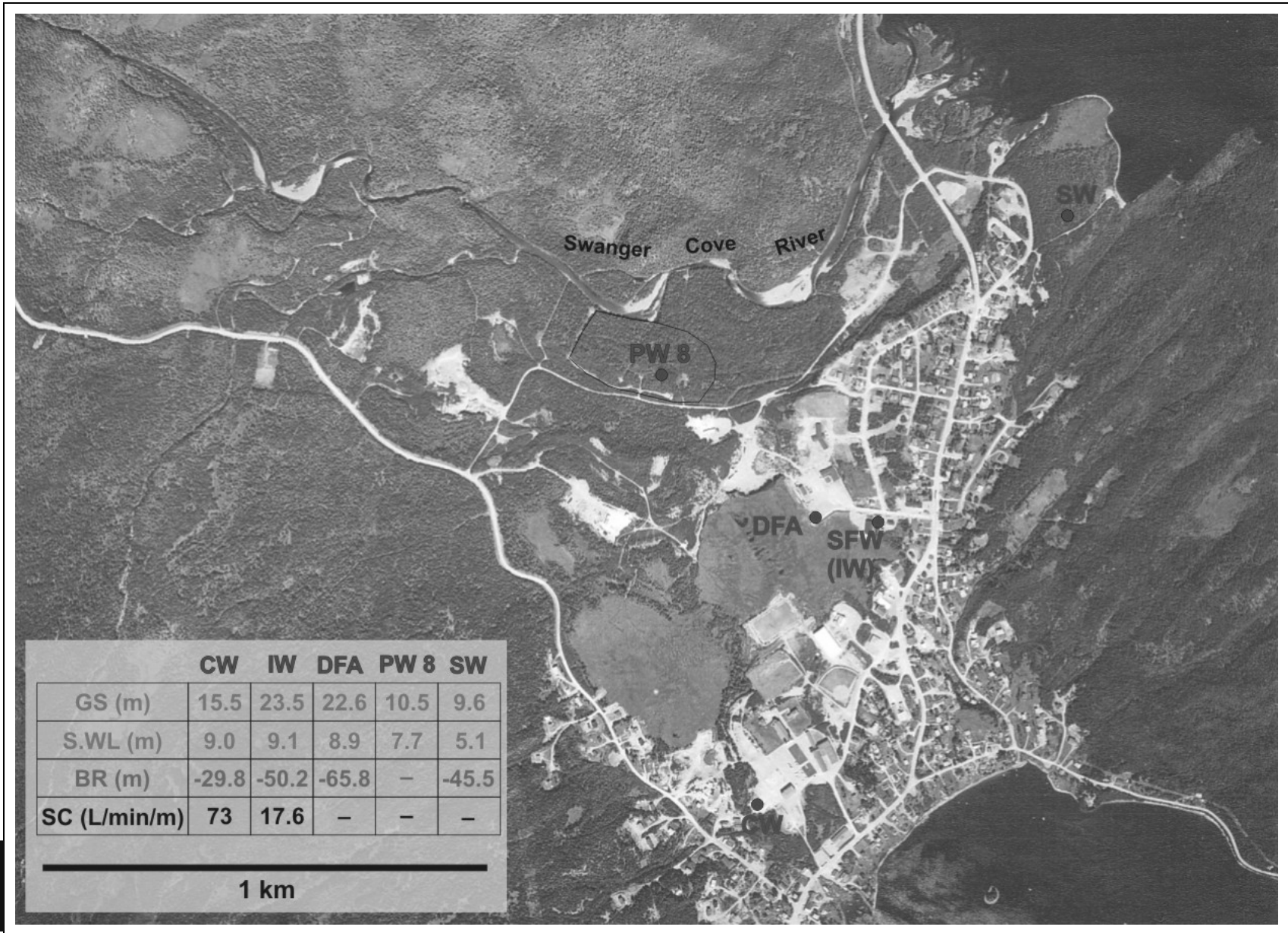


St. Alban's

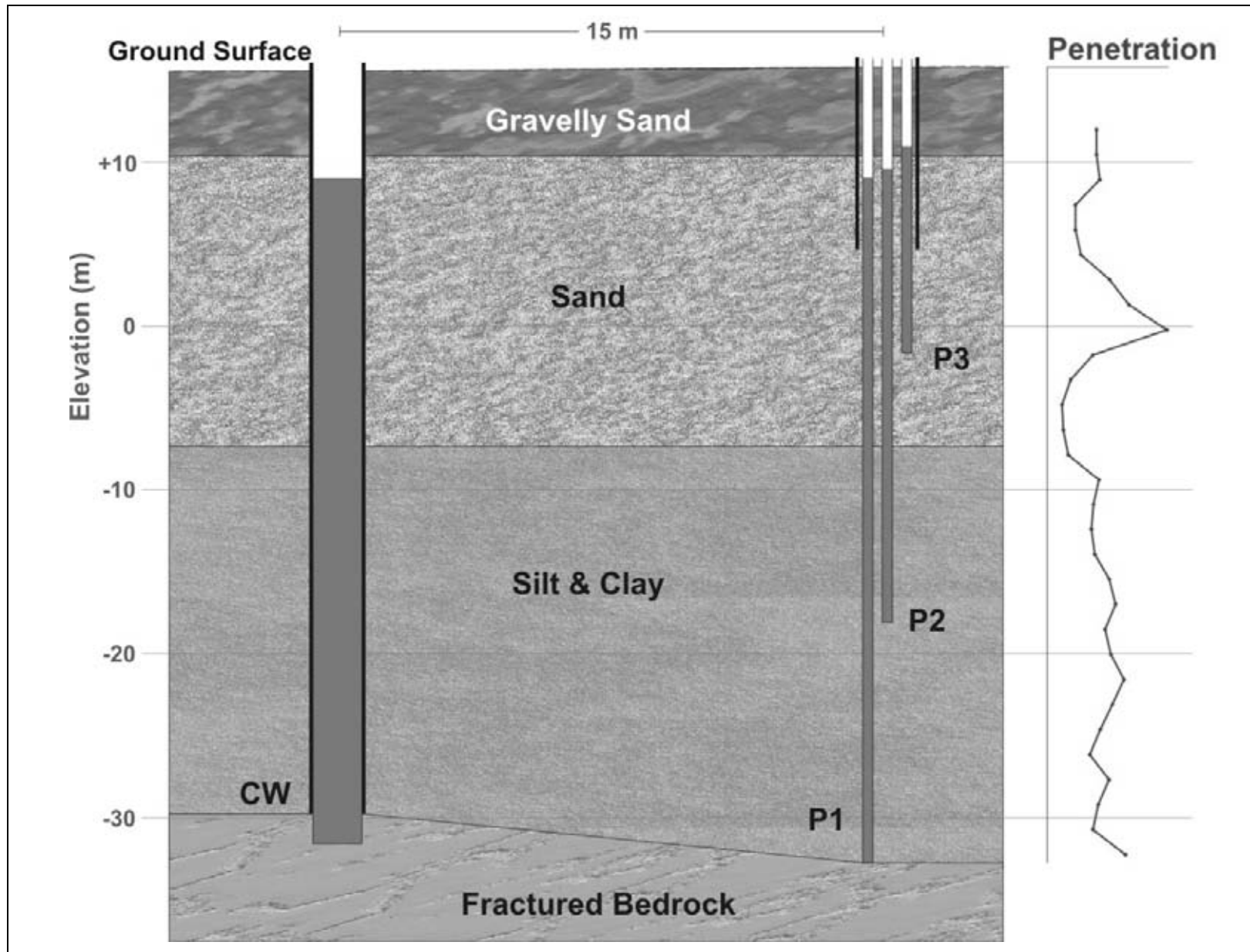
August 2009



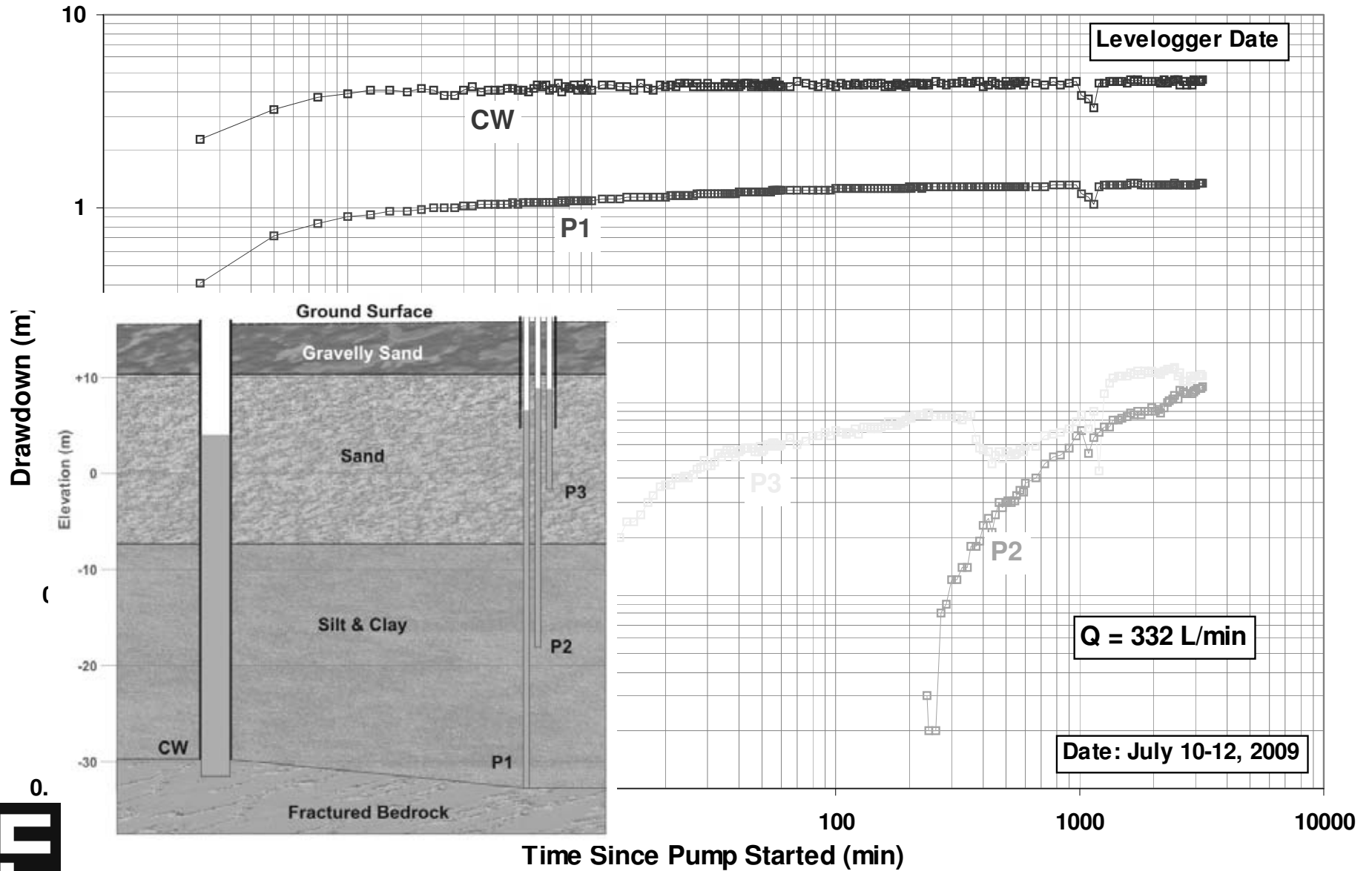
St. Alban's



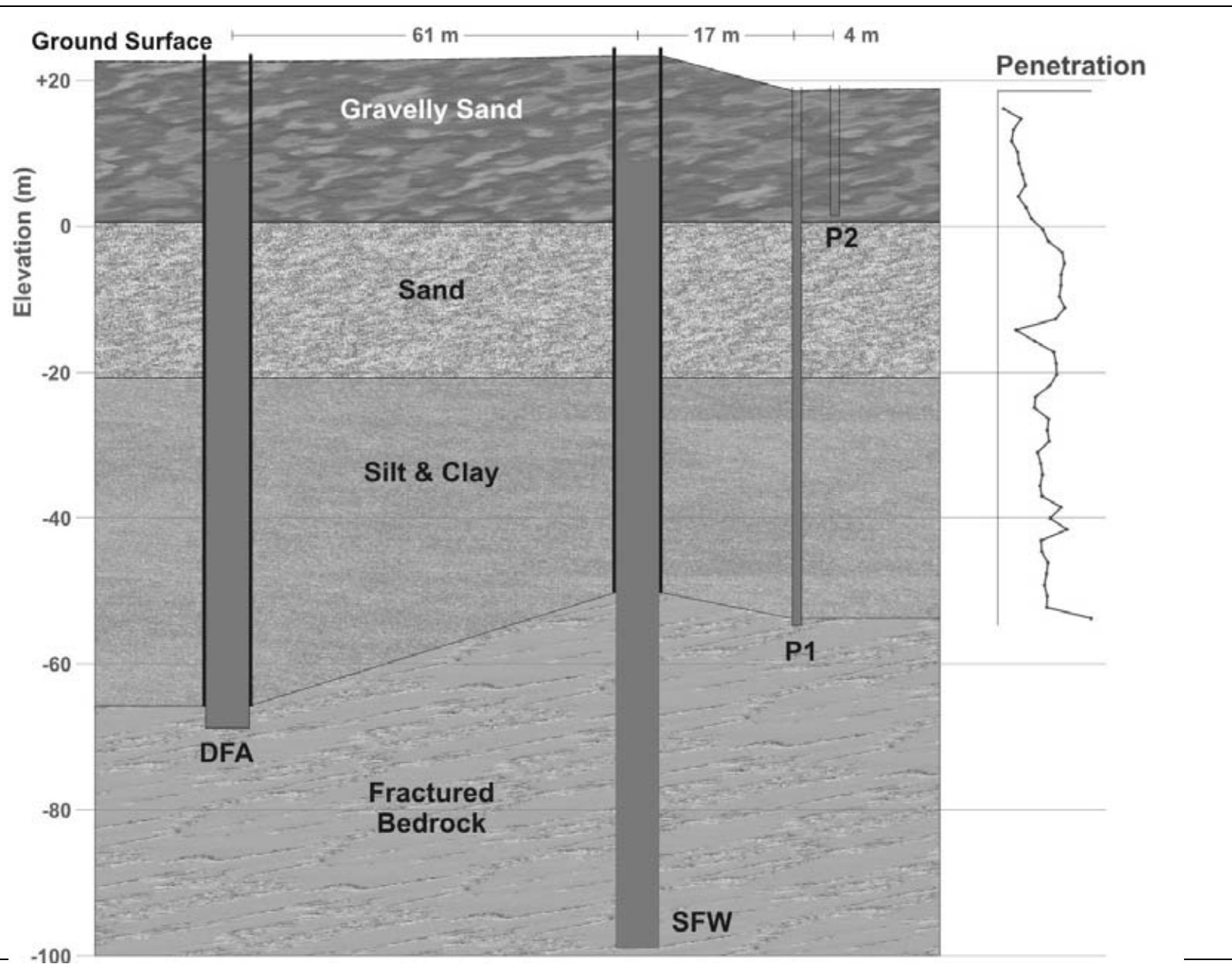
Static Water Level – Church Well



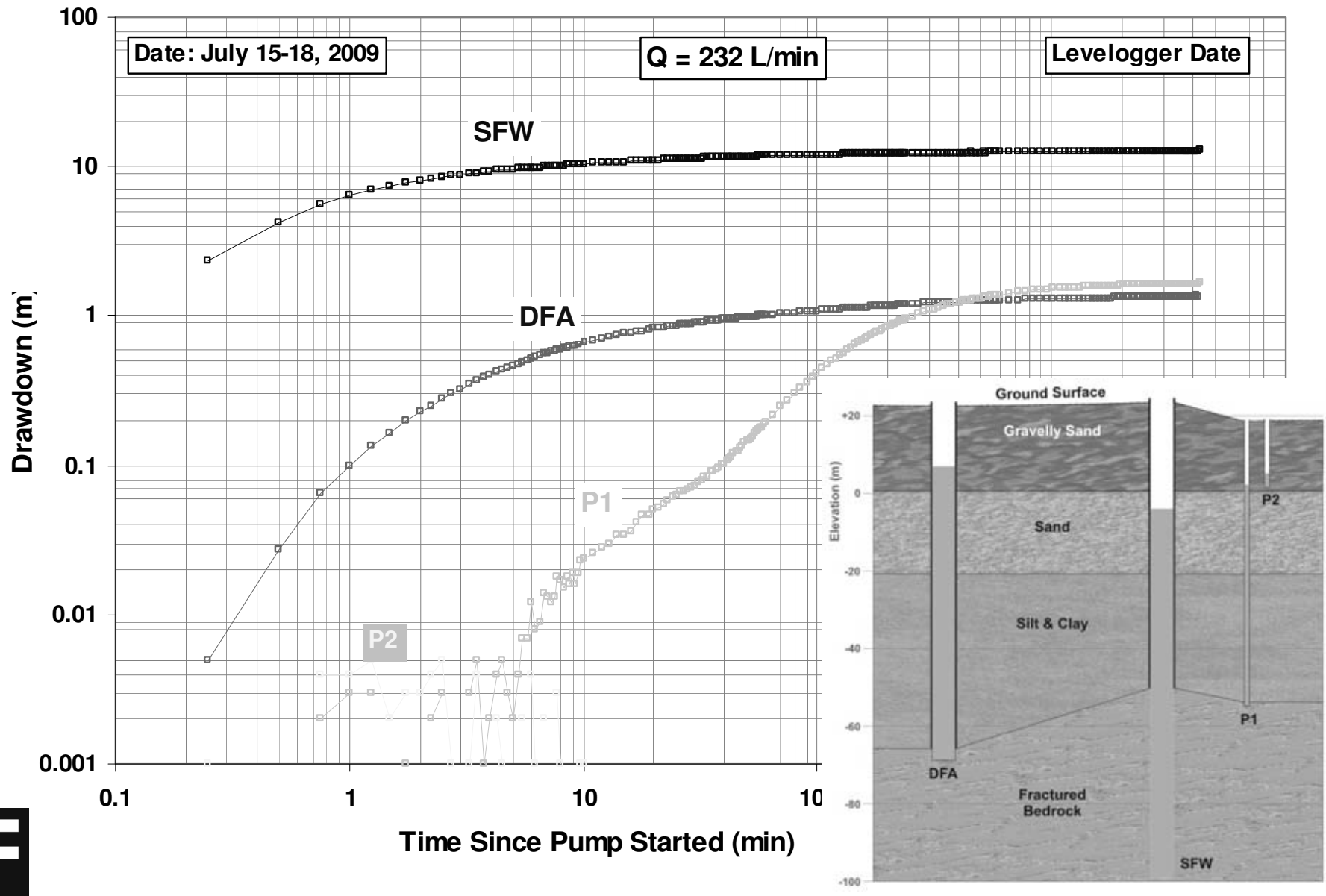
53 hr Aquifer Test – Church Well



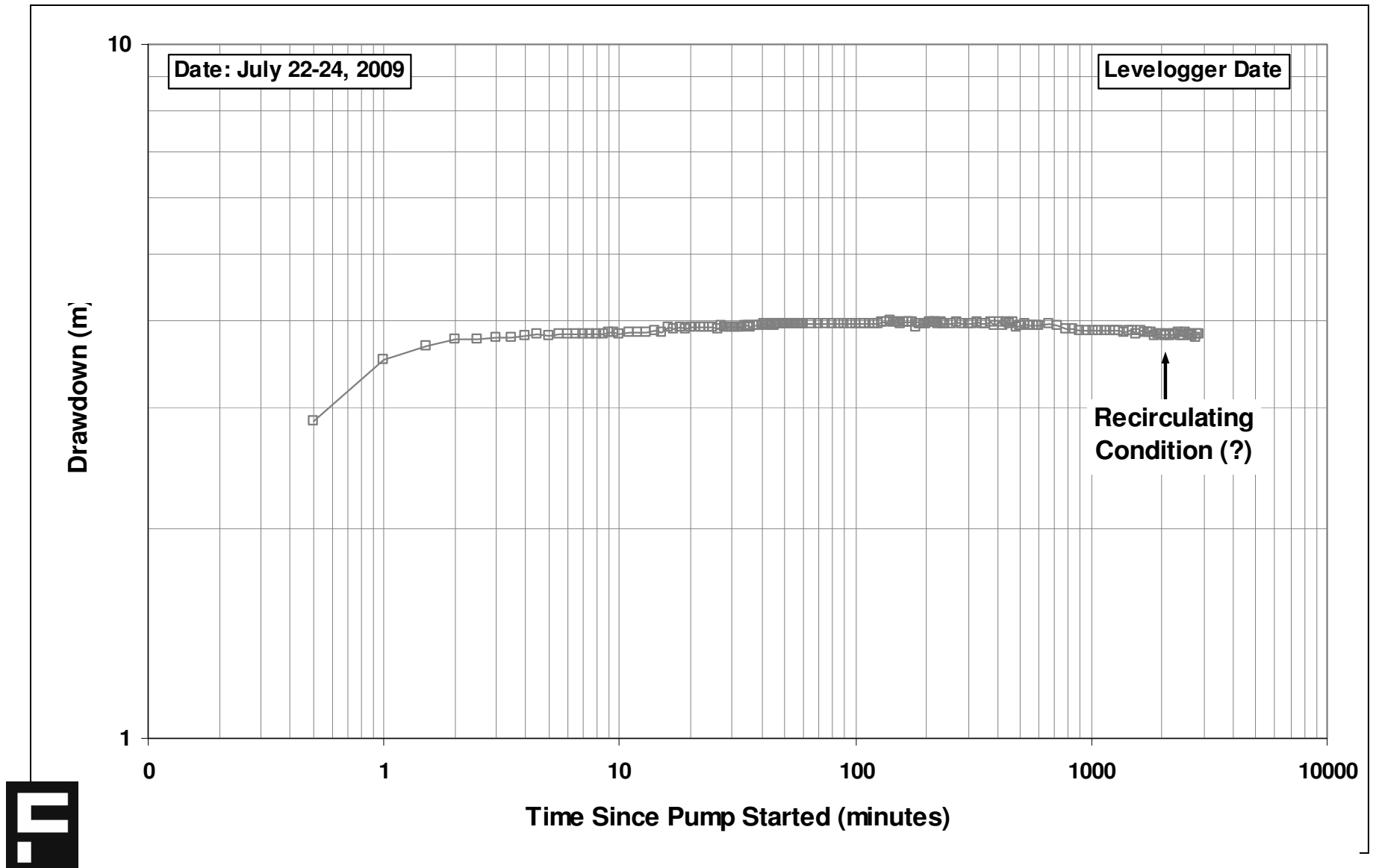
Static Water Level – Sea Farm Well



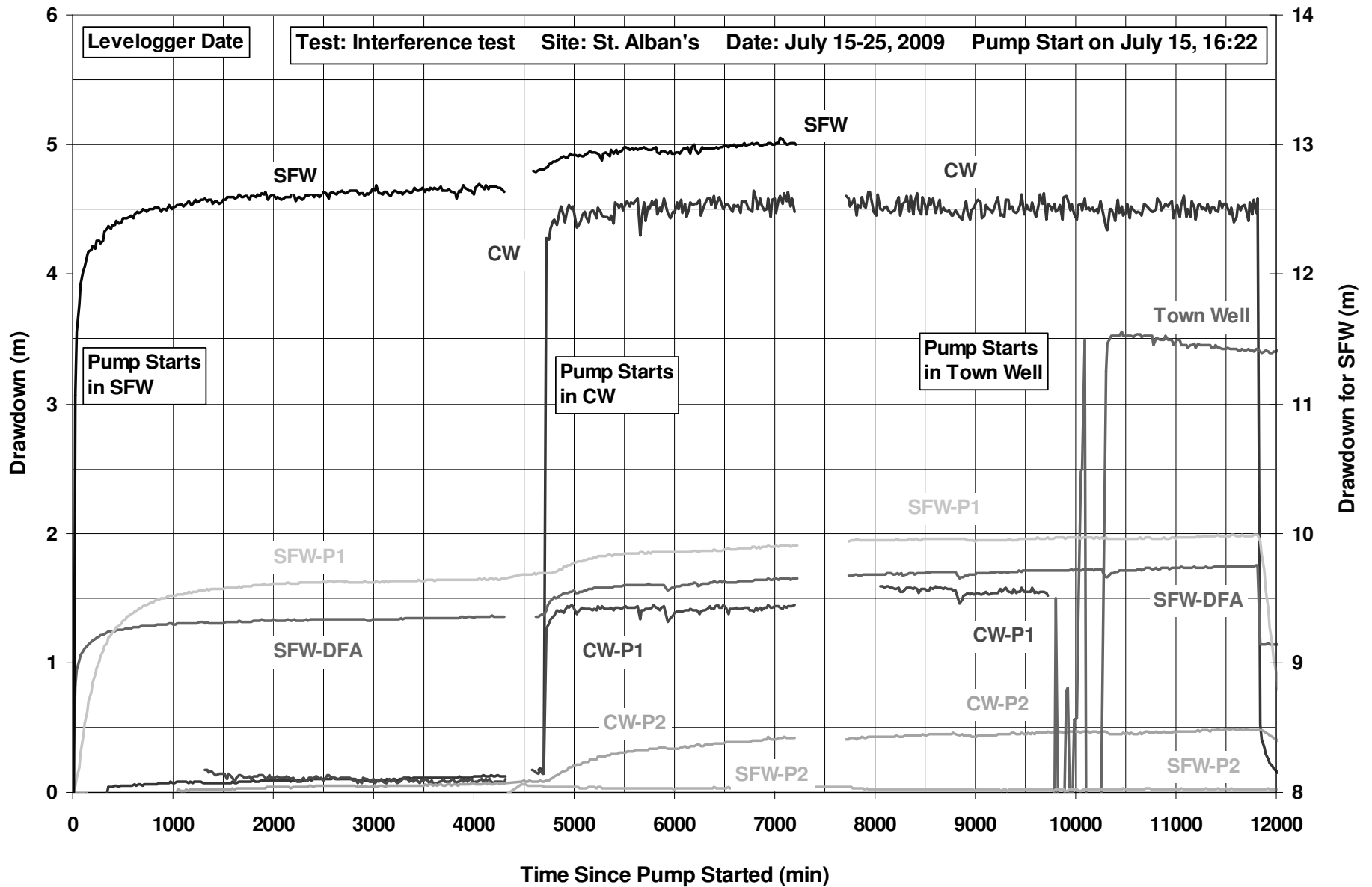
72 hr Aquifer Test – Sea Farm Well



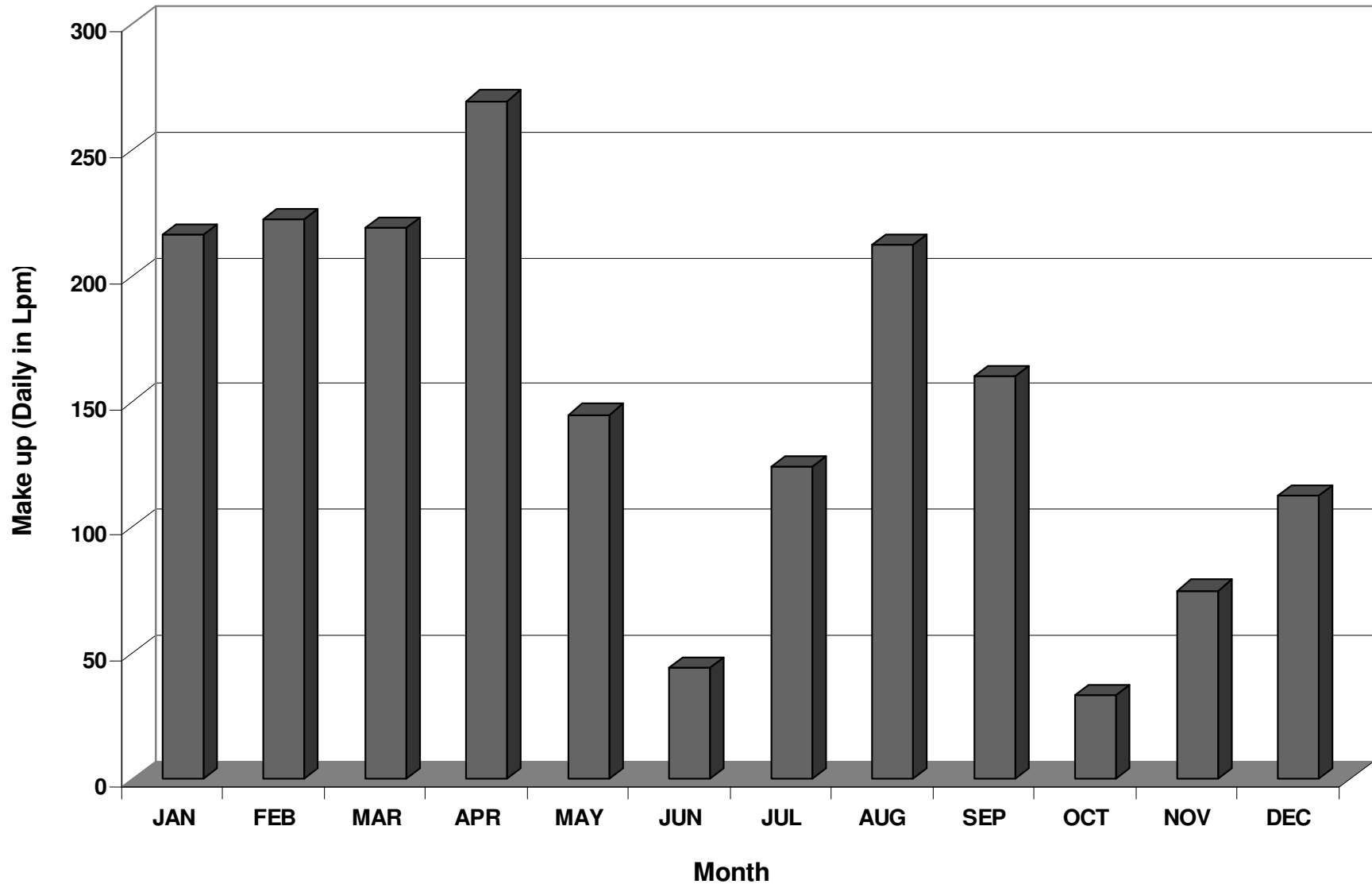
48 hr Aquifer Test – Town Well #8



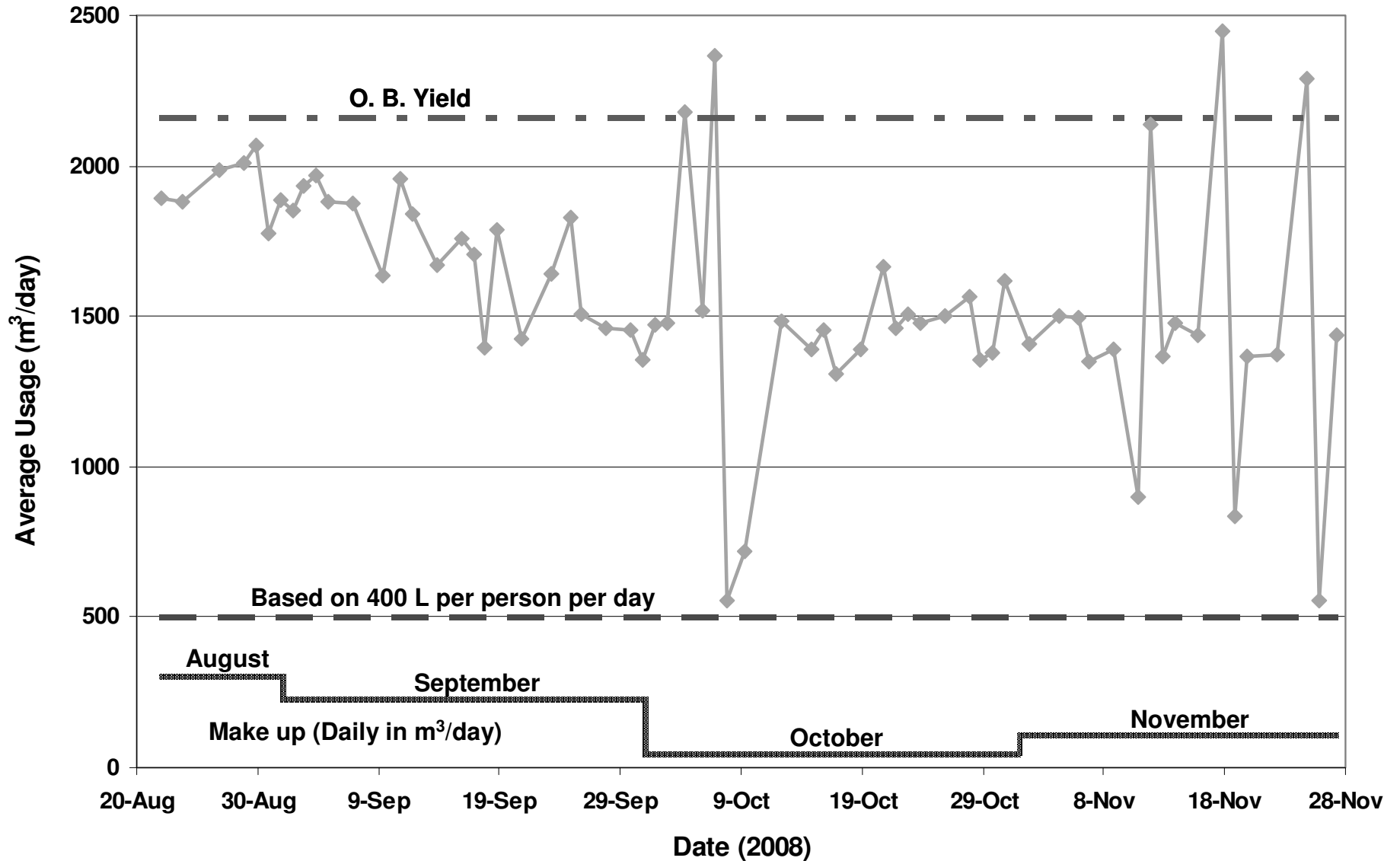
Interference Test



Proposed Water Usage New Facility St Albans



Average Town Daily Water Usage



Assessment and Background

- M B & A Ltd Report – Total Yield of Overburden Aquifer – 2,160 m³/day.
- Town Usage – 550 to 2,020 m³/day.
- Town needs – 1,250 people at 400 litres per person per day – 500 m³/day.
- Fish Plant – estimated at 300 to 600 m³/day .
- Total Town needs – app. 1,100 m³/day.
- Fire flows from storage and well capacity



Conclusions – Water Availability

- $(2,160 - 1,100 \text{ m}^3/\text{day}) = 1,060 \text{ m}^3/\text{day}$.
- Bedrock aquifer not included in MB&A Ltd report.
- Bedrock wells can produce in excess of 600 litres/minute in the short term.
- Bedrock aquifer is a leaky confined aquifer.
- Possible long term yield from bedrock wells ranging from 100 to 600 m^3/day .
- Swanger Cove estimated to yield about 15 to 50 m^3/day of fresh to brackish water.
- Fish Hatchery Demand peaks in April



Points for Discussion

- Stakeholders

 - Town, including the Fish Plant

 - DFA – research/service site

 - DMA and DOEC – Water Supply

 - Fish Hatchery

 - DFO – Swanger Cove River low flow

 - Future Industrial Developments

- Water needs are much less than water usage due to leaks in Town's pipelines

- Fix the leaks – free up over 1,000 m³/day



Points for Discussion

- COS collected data on the bedrock aquifer that is needed to calibrate a future 3D flow model.
- Consider fixing major leaks in the Town's water distribution network.
- Leak fix will free up water for future Town and Industry growth.
- Town wells need to be rehabilitated and specific capacity restored.



Conclusion

- Water needed for the fish hatchery exists in the overburden aquifer through bedrock wells.
- Additional water is available from the bedrock aquifer and Swanger Cove area.
- Consider fixing the major leaks in the Town's water distribution network.

