

Boreholes and Bottled water .



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Boreholes and Bottled water.



We have heard about borehole design, test pumping, level and flow measurement.

However as well as these procedures our industry has to use additional monitoring procedures which provide (in part) further insight into the performance of our boreholes.

Because of the following.....

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The boreholes that are used for the production of Bottled water , have some distinct differences from those used in heavy industry, these are mainly the following:

- We abstract water, and then transport it away from our catchment area.
- We have to serve several masters at the same time, these being the Environmental Agency, the FSA\Defra, the local Environmental Health department, and sometimes the retailer,
- Finally, the water we abstract from our boreholes that will be consumed (largely untreated) as a food product with all the associated potential risks that that may bring.

So what does that mean to us?

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Simply put, within the Bottled water industry the borehole is literally the source of our business and the first step in our food chain to the final product, do we regard it with the importance it deserves. Sometimes we do, other times.....?

**How do we control this vital part of our
business?.....**

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I think you have to accept that we are not experts when it comes to matters relating to boreholes, so our guiding principles were in the past;

- The borehole is out of site , and therefore out of mind.
- And if it ain't broke don't fix it.

However we have progressed from humble beginnings in our control procedures:

In the early days:

- Not a lot of time was devoted to our boreholes
- Then we began to dip the source and monitor the flow (and record the data)
- Then we installed data loggers with remote monitoring and finally we arrived at where we are today.
- **But there is more.....**

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Our industry continuously measures and records

- The microbiological condition of the abstracted water
- The chemistry of the source
- and the rainfall

These areas of measurement give us further insight into how a borehole is performing especially when coupled to the data that we heard about earlier.

What is future.....

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Firstly develop greater expertise to interpret the data that we are obtaining, understand what it tells us , and what to do with it.

Then move to:

- Periodic planned servicing of the borehole using rehabilitation procedures such as
- Chemical cleaning
- Physical cleaning
- Or others
- And lastly continuously monitor and record the efficiency of the borehole (maximum output v minimum drawdown) to determine when the above procedures are needed.
- **Thankyou**