



SURVEY REPORT

Scientific Approach to Water Detection for Boreholes

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Aquaview Technologies would like to thank you for the opportunity to work on your borehole drilling project. We assist in formalising a drilling strategy to determine the most sustainable and cost-effective site location to drill your borehole.

We used several methods to confirm that the drilling spot identified is the best location to drill a borehole. A desktop study is conducted prior to survey whereby an analysis is completed, and satellite imagery is utilized to gain an understanding of the geology and topography of the area.

This information is used on site when a survey is being conducted. Aquaview Technologies additionally utilizes advance global geological exploration technology to determine the depth and location of your underground water. This is a common technique which is actively used globally by geologists and hydrologists alike.

The profile provided by Aquaview Technologies does not guarantee the presence of water on the marked drill site, however we do minimise your drilling risk by 98% (Statistics based on history of water detection jobs completed : Hit rate per 100 surveys 1-2 dry holes) also bearing in mind that there is no way globally to determine your flow rate / yield of the of the borehole until a drill rod has been sunk into the pre-determined drill location. The yield will additionally determine the size of the booster pumps required. Once the yield is determined a lab test on the quality of the underground water needs to be conducted thus determining the filtration system required and cost thereof.

Colour Key:

 Blue moisture content (90-100%)	 Yellow – moisture content (50-60%)
 Green moisture content (80%)	 Red – moisture content (10%)
	 Orange equates to Red

Colour Key Scale Description:

The colour grid, with red indicating the hardest rock, allows us to determine the different types of rock ie: Granite, Dolerite, Quartzite. The drill location site is determined by identifying the contrast between hard and soft rock formation, with underground water being present in the softer formations called ingenious intrusions or weathered rock formations ie: Shale, Sandstone, Mudstone or sedimentary rock.

Please see findings and recommendations below:

A thorough investigation was conducted to locate the most cost effective and sustainable drilling site.

For your attention, please ensure that no sewer lines, electrical cables, and municipal pipes are present at marked drill site locations. Please refer to SDP prior to drilling as the machine is unable to detect this.

Please see findings in the report below:

Satellite Image of property:

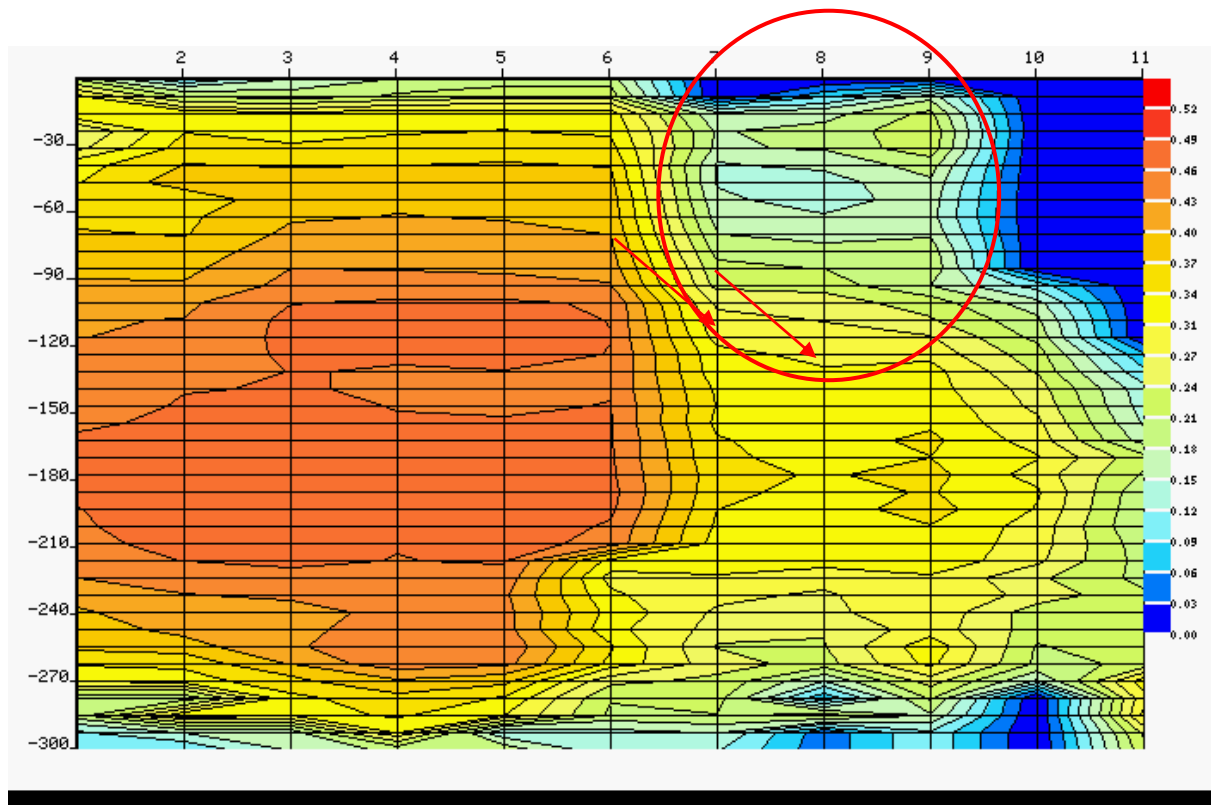
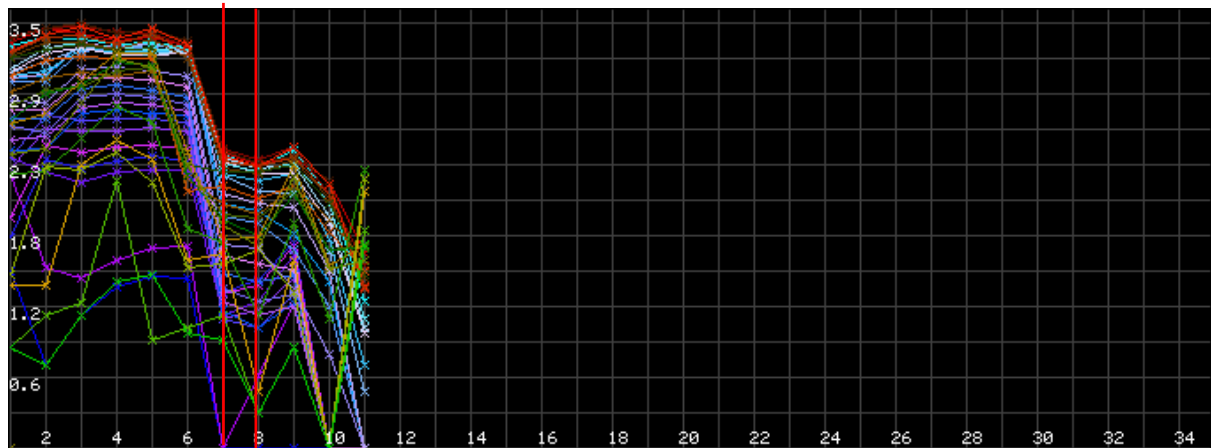
In order to do an exact cross section measurement of the rock formation, this satellite imagery, in conjunction with a field map study application, is utilised to determine direction of the underground water flow in relation to gradient of the land. Additionally, the rock instructions are evaluated from a satellite view to determine where the best possible drilling site is on your property. Below is a satellite image determining the view of the area surveyed. They are measured at the exact same gradients.



Survey 1 – L667 – 300 Meter Reading

Survey 1 - Scanned Original Format – Curve graph reflecting the topography – rock formation. Below is an image provided by magnetic and resistivity determine the best possible drill location on the site. Scanned at 300-meter depth.

The below underground photograph / curve graph of the rock formation confirming possible drilling site locations.

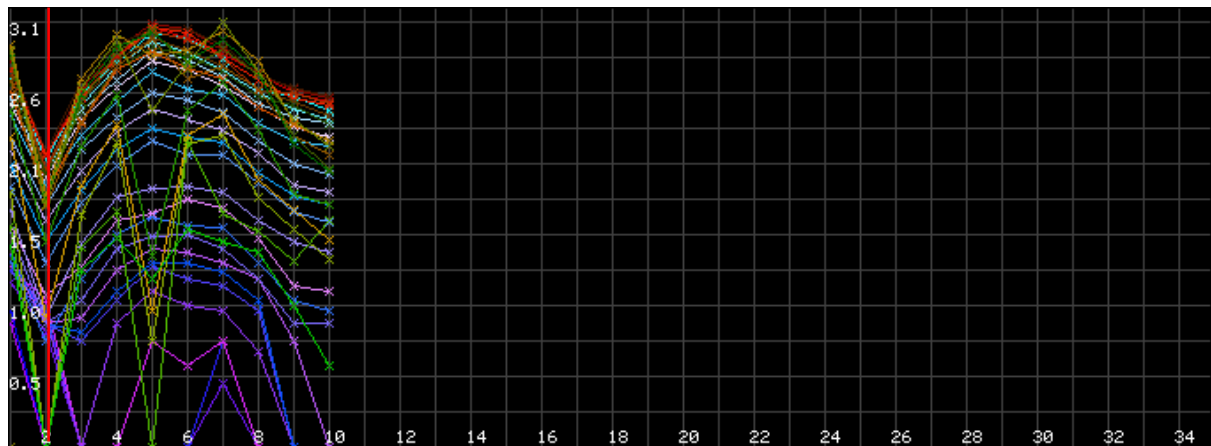


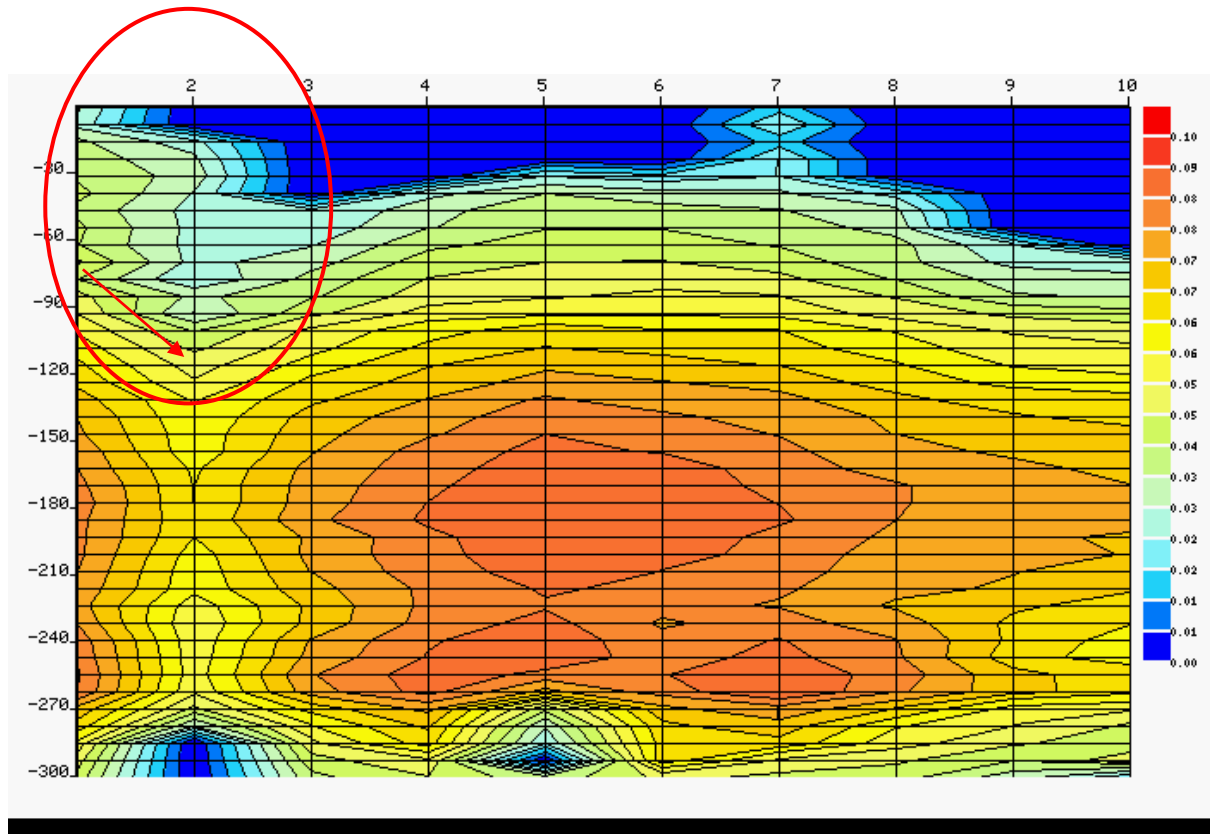
The above underground photograph / curve graph of the rock formation confirming that at point 7 & 8 (*Marked as Point A and B on site*) there is a fracture present. The fracture (Represented as a V like formation in the rock) is a weathered intrusions ie: Sandstone, Mudstone, Shale – ancient rock formation where water is present. There is ample top water to feed this fracture. The water catchment area is 10 meters wide and 3 meters deep. You should hit water as early as 30 meters the maximum drilling depth is 130 meters. Please do not drill these points due to size of water catchment area.

Survey 2 – L668 – 300 Meter Reading

Survey 2 - Scanned Original Format – Curve graph reflecting the topography – rock formation. Below is an image provided by magnetic and resistivity determine the best possible drill location on the site. Scanned at 300-meter depth.

The below underground photograph / curve graph of the rock formation confirming possible drilling site locations.





At point 2 (Marked as Point C on site) there is a fracture present. There is ample top water to feed the fracture. The water catchment area is 2 meters wide and 20 meters deep. You should hit water as early as 30 meters with a maximum drilling 130 meters. This is the first choice drill site location. [Please drill point C.](#)

Rock Formation Macros via Satellite

Geologic map

via providers, Macrostrat ^

Name: Vlakfontein Subsuite of Rustenburg Layered Suite of Bushveld Complex

Age: Vaalian
2500_{Ma} - 2050_{Ma}

Stratigraphic name(s): Vlakfontein Subsuite

Description: Pyroxenite, harzburgite, norite

Source: Council for Geoscience, 2016, [Geologic map of South Africa, 1:1M](#): National Science Councils of South Africa. 41 / 2227040

Macrostrat-linked data

via Macrostrat ^

Siderian
2500_{Ma} - 2300_{Ma}

Rhyacian
2300_{Ma} - 2050_{Ma}

Based on geologic map description.

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Rig Access

There are rig access issues. A tree needs to be re located to drill Point C.

Point A and B.

Point C



Co-ordinates

Point A <https://share.fams.app/v3/2025-02-24/6eb24f08-bb83-4bb7-8ab7-fabb89ed4bbb>

Point B <https://share.fams.app/v3/2025-02-24/2f3964cc-f052-44b7-bfdf-393ea230d010>

Point C <https://share.fams.app/v3/2025-02-24/998d8404-d6fe-4d9d-8190-c5a4cd827c9d>

In Closing:

Aquaview Technologies would recommend Drilling Strategy:

First Choice : At point 2 (Marked as Point C on site). You should hit water as early as 30 meters with a maximum drilling 130 meters.

***Please ensure driller drills with a stabilising rod and levels the rig out every few meters.**

*** Please ensure that the sewer line and municipal lines do not cross this drill site location on the Site Development Plan prior to drilling.**

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The profile provided by Aquaview Technologies of the rock formation, scanned above, serves as a recommendation. The risk of a dry borehole is a possibility. Please note that this survey cannot predict the water yield available at drill location identified. The risk of a dry hole however, is reduced by 97% based on the surveys and work conducted by Aquaview Technologies. The images provided by magnetic and resistivity determine the best possible drill location on the site.

*Please make an additional provision of 10 meters for the sump.

I trust you have found this report informative. Please do not hesitate to contact me should you require any further information.

Many Thanks,
Carmen Sale
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