



Apex Geoscience Australia Pty Ltd

Magnetic Susceptibility Measurements

Procedure Number: APEX 015

Approvals

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Approved by		Date:	Signature	

Revisions

Rev. No	Date	Section	Page	Revision Description	Reviewed By
1		All	All	Read through and edited/ updated.	
2	05/10/2020	All		Reviewed and edited	Rachel Milligan
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1 POLICY

The safety and health of all employees and contractors working for Apex Geoscience Australia Pty Ltd (APEX) is of primary concern to management. It is the policy of this company to emphasise to its employees and contractors the need to follow safe working practices and safety rules. It also emphasises the need to employ, where necessary, safety devices to ensure that no employee or contractor is unnecessarily exposed to a safety hazard that could cause personal injury or damage to company property. Of equal importance is the fact that every supervisor must strive to develop, in each employee under his or her supervision, awareness of the need to work safely, and as such in this endeavour, to lead by example.

2 PURPOSE

The purpose of this document is to provide geology staff with the necessary information to undertake magnetic susceptibility measurements using a KT-10 Magnetic Susceptibility meter in a safe and efficient manner.

3 SCOPE

This procedure outlines the duties associated with taking magnetic susceptibility measurements.

4 AUDIENCE

This SWP is intended for all personnel taking magnetic susceptibility measurements using a KT-10 Magnetic Susceptibility meter.

5 DEFINITIONS

PPE= Personal protective equipment.

6 RESPONSIBILITIES

All employees operating under the Geology department have the responsibilities to themselves and fellow employees to work in a safe manner following all safety rules and procedures (Duty of Care).

7 PROCEDURE

Magnetic susceptibility readings are commonly required in the field on diamond drill core and RC sample bags. The KT-10 magnetic susceptibility meter is most often used for these tasks. While the instrument manual provides detailed notes on the operation and functions of the KT-10, the following procedures are recommended to ensure consistent and accurate measurements.

POWER

To switch on: press the top button once.

To switch off: navigate to the Shutdown option in the main menu and long-press the top button.

To make selections in the menus, navigate using short presses on the up and down arrows. To make a selection, use a long press on the up arrow.

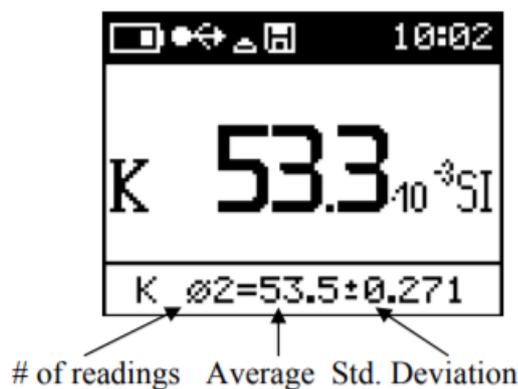
To navigate back to the main menu, use long-presses on the down button

For all measurements, on core as well as RC, the KT-10 needs to be set on the “No Pin” mode. To verify this, go to *Setup* > *Pin* and select the “No Pin” option.

MEASURING

To take a magnetic susceptibility measurement, go to *Measure*.

- Beginning the measurement, short-press the top button while the instrument is held at least 30 cm away from any magnetic source or your sample to be measured. This “zeros” the device and takes a baseline measurement of the non-magnetic surroundings.
- Once you hear a beep from the device indicating the baseline has been taken, hold the instrument flat against your sample to be measured (core, sample bag, green bag etc.) and short-press the top button again.
- When you hear a second beep indicating the reading of the sample has been taken, move the instrument back into the open air.
- When the measurement is complete, a third beep will sound and the measurement will be displayed on the screen, as seen below. It is important that the sensor is not in contact with the sample at the third beep, as this will yield a useless reading.
- Record the displayed number on an appropriate tracking sheet. Ensure that the units are accurately represented (should be $\times 10^{-3}$ SI, if the units are expressed as S/m, the instrument is in conductivity measurement mode instead of susceptibility).
- The next reading can be taken immediately once the previous is recorded, by repeating the above steps.



7.3 CONCLUSION

Magnetic susceptibility measurements are important data that must be collected properly. This procedure is only for the stated equipment and if a different device is used a new procedure will need to be completed.

8 PROCEDURE REVIEW

The procedure will be reviewed annually.

9 RECORDS MANAGEMENT

There will be a copy in the computer directory and a hard copy in the SWP Folder.

ACKNOWLEDGEMENT FORM

Apex's Safety Training procedure requires this form is to be completed by all participants (All employees including staff) and returned to the Safety Training Department to enable accurate training records to be maintained.

I here by acknowledge that I have received a copy of procedure **APEX 015 MAGNETIC SUSCEPTIBILITY MEASUREMENTS**

My signature verifies that I have read and understand the contents within the procedure and therefore agree to abide by the contents within the procedure.

Full Name: _____
Print Name

Signature: _____

Date: _____

Once completed this form will be placed on the individual's training file.