

2016 Rover Annual Report: Additional Information

To : Russell Copley
From : Robert Burke
CC :
Date : 12/9/2016
Re : **2016 Rover Annual Report: Additional Information**

Density/Specific Gravity

- Can you please provide a summary on the methodology used to take the density measurements?

The density measurements are taken with full core (predominantly NQ² size). The field assistant selects a piece of competent core approximately 10cm long from every metre through the cut zones with the exact location recorded. At our Tennant Creek operations we have fabricated a two tier shelf comprising of cement (shelves) and steel (Frame) in order to collect the accurate recordings. The top shelf has a hole in the middle in order for a cradle to the suspending that is connected to a scale (top shelf). This cradle is submersed in a bucket of water sitting on the lower shelf. A laptop is connected to the scale.

The field technician first weighs and records the dry piece of core (making sure the scales stabilized prior to recording). They then place the piece of core on the cradle in the bucket of water below, making sure the core is fully submersed in the water and scale stabilized prior to recording the weight.

The density is calculated from these two weights and the process is repeated for every metre.

- Were the measurements based on the submerged mass/Archimedes' method?

Yes

- How much (if any) time was allowed for the water to soak in during the submerged weighing?

Enough time in order for the scale to stabilize. Usually approximately 20-30 seconds.

- Were the samples evacuated prior to immersing in the water?

The samples were free of any debris prior to measurements

- The "To" and "From" depths span whole meters. Were the measurements taken on a whole meter of core, or are they from shorter lengths from somewhere within the To and From depths? Were more precise to and from depths recorded?

The sample was taken of a 10cm piece from within that metre and the central measurement of each piece was recorded.

- Was there any requirement for samples to have a minimum or maximum weight?

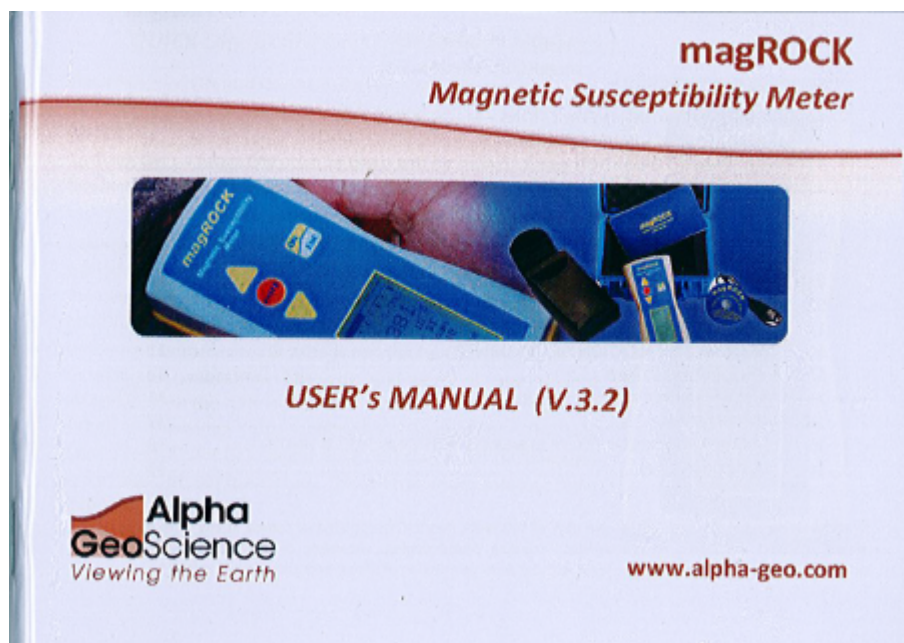
No, as long as it is 10cm in length.

- What is the resolution of the scales? Weights are reported to 0.01 g which is very precise for scales that can weigh over 2 kg

We have a proper calibration set from 1g to 1kg. The scales are properly calibrated every measuring day. The scale is a PB3002-S/FACT Mettler Toledo Classic Plus scientific scale and very precise.

- Are the reported weights the original measured weights or have corrections been made? If so can the original measurements and the formulae be provided?
- There are columns for "Correction" and "Adjusted_Volume". Were any of these corrections/adjustments made?
- Were any density measurements made of the MXCURD drillholes?

Magnetic Susceptibility



- Can you please provide a summary on the methodology used to take the mag sus measurements?

The geologist selects a region to be measured, usually within 100m from the ironstone mineralisation to the EOH. If the holes are pure exploration, then the entire basement geology is measured.

The field technician scans each metre in three locations; the start of the metre, half way through and the end of the metre. These recordings are averaged out for a reading per metre.

- What model of meter was used? What mode was it used in (continuous scan, point measurements, pin mode etc)?

Three point measurements that were averaged per metre.

- Were corrections made for drill core diameter?

Yes

- Were corrections made for half core vs full core (if applicable)?

Yes

- The “To” and “From” depths span whole meters. Are the measurements derived from a scan over the 1 m length, or are they point measurements at specific locations within the To and From depths? If so, was there a requirement for samples to meet a minimum length?

See above

- The data has lots of “0” values - are these measurements that returned values below detection limits or do they represent measurements which were not taken?

Below detection

- The values reported are typically in the order of “0.00048” with a unit code of “MS_103”. Can you please confirm how this should be interpreted? A value of 0.00048×10^{-3} SI seems to be very low and would probably be below the detection limits of most mag sus meters. Some values have a lot of significant figures e.g. “1.23154”. This seems to be more significant figures than most mag sus meters are capable of recording. Are these numbers a product of some formula in excels? If so, can we have the original raw values and the formulae used for the conversion?

15. SUSCEPTIBILITIES OF ROCKS MINERALS (RATIONALISED SI UNITS)

Rock Mineral Common Rock	Magnetic Susceptibility		
Salt	0.0	to	0.001
Slate	0.0	to	0.002
Limestone	0.00001	to	0.0001
Granulite	0.0001	to	0.05
Rhyolite	0.00025	to	0.01
Greenstone	0.0005	to	0.001
Basalt	0.001	to	0.1
Gabbro	0.001	to	0.1
Dolerite	0.01	to	0.15
Ores			
Pyrite	0.0001	to	0.005
Haematite	0.0001	to	0.001
Pyrrhotite	0.001	to	1.0
Chromite	0.0075	to	1.5
Magnetite	0.1	to	20.0

Extract from 'Field Geophysics', Second Edition by John Milson, University College, London, UK, published by John Wiley & Sons.

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16. SPECIFICATIONS

16.1 Analog Digital Display

- 128 x 64 pixel LCD Graphics Display;
- Displays both the digital and analog magnetic susceptibility readings and other menu item functions;
- Digital readout updates approx. once per second, analogue graphics readout updates approx. 10 times per second;
- Displays results in either SI Units or CGS Units.

16.2 Technical Specifications

Sensitivity:	1×10^{-5} SI units
Resolution:	1×10^{-5} SI Units
Signal Frequency:	760 Hz
Sampling Rate:	10 Hz
Power Source:	Three Alkaline Type 1.5 Volt “AA” Batteries
Battery Life:	Better than ten (10) hours continuous use
Temperature Range:	Operating 0°C to 50°C storage -40°C to 60°C
Humidity:	10 – 90 % relative

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- Were any mag sus measurements made of the MXCURD drillholes?

Yes we do, for MXCURD001, 2 and 4 they are attached.

Drilling Logs/Stratigraphy

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- Drillholes WGR1D060-1, WGR1D060-2 and WGR1D060-3 don't have lithological logs for their lower intervals. Is this because they were all side-track holes commenced from within the original WGR1D060 hole?

Correct

Are the intervals logged as "WISO" still thought to all belong to the Hanson River Beds? Are you able to subdivide them further?

Correct and will try and correct this for future logging

- Are the intervals logged as "WARRAMUNGA" still thought to be the Warramunga Formation? Are you able to subdivide them further?

Correct, and unfortunately due to the cover sequence and limited drilling in the area, we are not confident in further sub-dividing this at this stage. Do not want to supply miss-leading information

- Are the intervals logged as "OORADIDGEE" thought to belong to the Undivided Ooradidgee Group? Are you able to subdivide them further?

Same as above