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Council for Geoscience

MEDIA RELEASE

FOR IMMEDIATE RELEASE

02 February 2024

To: All Media

MEDIA RELEASE OF GEOCHEMICAL SYNTHESIS REPORTS

The Council for Geoscience (CGS) has been carrying out regional and national geochemical stream sediment and soil sampling programmes since 1973. The prime objective of these programmes is to generate a geochemical data layer of the existing erosional surface tailored for use in various industry sectors such as geology, exploration, mining, environment, building, engineering, agriculture, health and others.

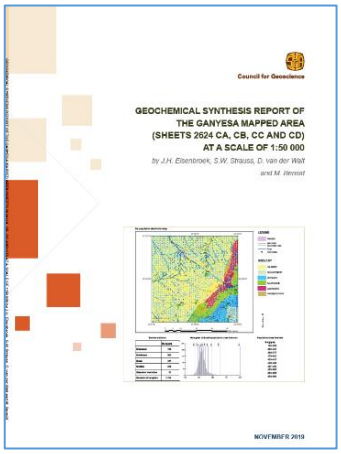
To summarise the results of geochemical studies conducted as part of the CGS 10 - year mapping programme that begun in 2013, seven (7) comprehensive Geochemical Synthesis Reports were released in FY23/24. The reports provide in-depth analysis of the soil samples collected, along with interpretations and conclusions concerning the geochemical characteristics of the studied environments.

The analytical technique used is simultaneous quantitative X-ray fluorescence spectrometry (XRF). All the Geochemical Synthesis Reports display the geochemical distribution patterns for 21 elements. Jenks population distribution maps were used to display the predominant geological controls. Anomalous distribution maps were based on the mean + 2 x standard deviation and mean + 3 x standard deviation classes to display the most important single-element anomalies in the mapped area.

Please visit our data portal on https://maps.geoscience.org.za to download the reports. Alternatively, please contact the Public Information Office on data@geoscience.org.za or info@geoscience.org.za to request the reports.

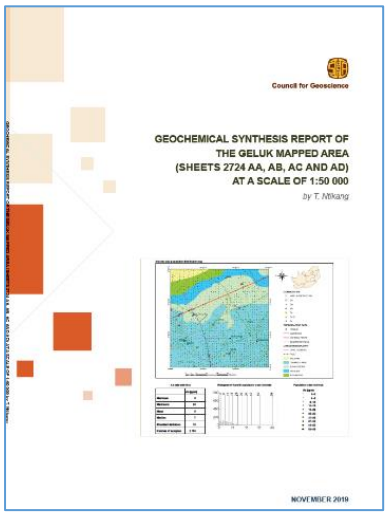
BELOW IS A SUMMARY OF THE REPORTS RELEASED:

1. Ganyesa mapped area (Sheets 2624 CA, CB, CC and CD)



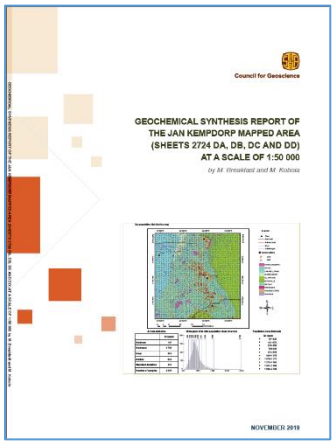
The Geochemical Synthesis Report of the Ganyesa area displayed an excellent representation of the present erosional surface which mainly comprises of the Kalahari Group sediments in the northwestern part of the area. In the southeastern corner of the mapped area, outcrops of the rocks of the Schmidtsdrif Formation, Vryburg Formation, Allanridge Formation and the Kameeldoorns Formation are present. The predominant geological units in the mapped area were mapped by a multi-element technique delineating the individual geological units in the Geochemical Synthesis Report area.

2. Geluk mapped area (Sheets 2724 AA, AB, AC and AD)



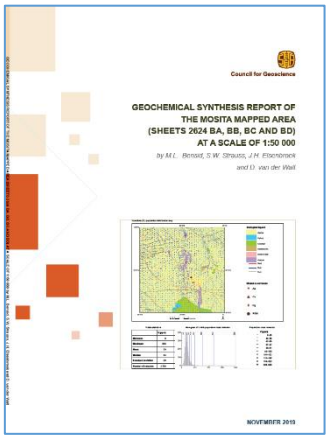
The Geluk mapped area is located in the North West Province and is characterised by hot and persistently dry conditions, described as dry savanna to semi-arid with erratic rainfall. The majority of the Geluk mapped area is dominated by dolomitic rocks of the Transvaal Supergroup which account for more than half of the mapped area, with mafic aggregates of the Ventersdorp Supergroup and clastic-sedimentary rocks of the Vryburg Formation towards the north. The Kalahari covers a small portion of the study area towards the far northwest. In terms of known mineralisation and new target zones for mineralisation, three geochemical indices characterise the target zones for mineralisation.

3. Jan Kempdorp mapped area (Sheets 2724 DA, DB, DC and DD)



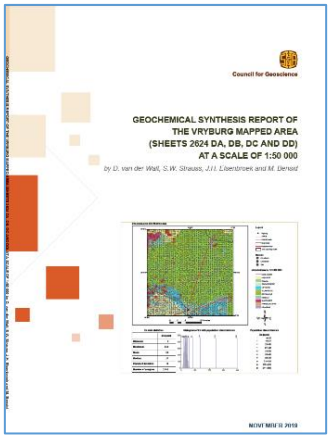
The Jan Kempdorp mapped area is mostly covered by the Allanridge and Bothaville Formations which are, in turn, covered by the Kalahari Group sands, making it difficult to map the geochemical signatures of the subcropping geology and mineralisation. The geochemical synthesis of the multi-element maps displayed possible targets for Ni-Cu-Co and U-As-Sr and some small anomalies of Zn-Pb deposits which are possibly related to VHMS, evaporitic deposits and Mississippi Valley-type deposits respectively.

4. Mosita mapped area (Sheets 2624 BA, BB, BC and BD)



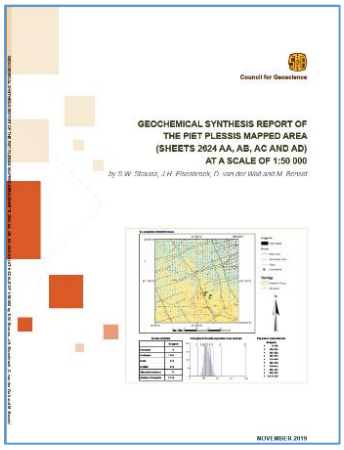
Mosita mapped area is situated in the North West Province of South Africa. A large part of the area is marked by a thick sedimentary cover consisting of the Kalahari Group sands and gravels. While the single-element maps display the signatures of these sediments, they do not display the geochemical signatures of the sub outcropping rocks. The areas where the older lithologies outcrops yield better geochemical results and highlight a few mineral targets, especially in the rocks of the Kraaipan Group and of the Allanridge Formation.

5. Vryburg mapped area (Sheets 2624 DA, DB, DC and DD)



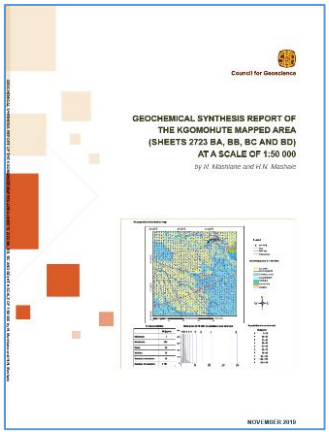
The Vryburg mapped area displays a relatively flat and undulating terrain and is predominantly characterised by the Allanridge Formation which outcrops in the centre of the area. The Dwyka Group, Schmidtsdrif Subgroup and Vryburg Formation outcrops in the southern part of the area. The Rietgat and Makwassie Formations are present in the northwestern corner of the mapped area. The Bothaville Formation and Kraaipan Group only cover a small portion of the mapped area. The report listed the most important economic anomalies occurring in the mapped area.

6. Piet Plessis mapped area (Sheets 2624 AA, AB, AC and AD)



The Geological Synthesis Report of the Piet Plessis mapped area highlights the distribution of possible sub outcropping Ventersdorp lavas, evaporites and aeolian deposits. The economic synthesis highlights possible Ni-Co (VHMS), Pb-Zn (epithermal), Sr (U) and Zr-dominated aeolian deposit target areas. Recommendations for further work include a study to determine the best sample medium to map the sub outcropping hard rock geology in the area more accurately. A follow-up study and further investigations are recommended to establish the source of the Cu-Ba anomaly in the area.

7. Kgomohute mapped area (Sheets 2723 BA, BB, BC and BD)



The Kgomohute mapped area is largely dominated by the sediments of the Kalahari Group with suboutcropping lithological units. The region is also characterised by a developed channelised drainage system, and a mountainous area to the east of the town of Bothithong. Although there are no recorded occurrences in this area, several methods were applied to delineate possible target areas for various mineralisation styles.

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