Comments on Geoscience Act Regulations March 2021
Geological Society of South Africa
(April 13, 2021)

The proposed Regulations ("The Regulations") for the Geoscience Act ("The Act") have been gazetted as notice 84 of March 4, 2021 (No. 44228) for public comment by April 19, 2021, to be returned to the Department of Mineral Resources and Energy (DMRE). The Geological Society of South Africa ("GSSA"), as the Professional Society that represents the majority of earth and geo-scientists in South Africa employed in industry, academia and government, wishes to comment on a number of issues and regulations in the document.

The GSSA believes that the intention of these Regulations is to improve access to available data and information to the entire geoscience community and to avoid unnecessary duplication of expensive exploration programmes. However, the GSSA also believes that considerable improvement and clarification is needed before the proposed regulations are workable.

In summary, the regulations are highly flawed in at least three aspects; capacity, over-reach and access.

- The Council for Geoscience ("CGS") does not have the capacity to manage the information and borehole core that it has now, much less being able to deal with the enormous amount of information required by the proposed regulations. Capacity at the CGS to manage data, information and core archives is hugely under-resourced, and effective implementation of the regulations will be impossible.
- Over-reach is apparent in several sections, ranging from the flawed definition of Competent Persons, to control of research and development outside the mandate of the CGS.
- A key issue not addressed is what the availability and financial cost will be to industry and academia. The cost of compliance to the regulations as drafted will be enormous, and the right of access to the information once under CGS control is unclear. Requirements for annual reporting are too onerous for even the largest companies, and reporting requirements do not recognize the need for commercial sensitivity in ongoing projects. If legal agreements are to be entered into between the CGS and owners of data, this will again increase the costs, especially for the junior exploration companies.

The proposed regulations are poorly drafted, and will have unintended consequences if enacted in their current form. The intent of the regulations is not clear in many sections, leading to misunderstanding and confusion. The regulations as drafted are impossible to comply with, and will lead to even greater disinvestment in South Africa than is currently the case.

Section 1 (Definitions)

Competent person – the requirement in Annexure A to submit Mineral Resource and Reserve estimation data (7), geotechnical and engineering data (11) and environmental geoscience data (18) requires that the definition of Competent person above must be in line with the definition of Competent Person and Technical Specialist as already defined in the SAMREC Code (the definition below is internationally accepted for anyone who signs off on, and takes responsibility for, Public Documents and has been accepted in South Africa by the SAMCODES Standards Committee, the JSE, the DMRE, the Council for Geoscience, the Minerals Council of SA, and all of the related professional and statutory bodies). To introduce a different definition for Competent person for this specific application will confuse and lead to abuse.

The term "Competent Person" should be redefined as "*A 'Competent Person' is a person who is registered with SACNASP, ECSA or SAGC, or is a Member or Fellow of the SAIMM, the GSSA, IMSSA or a Recognised Professional Organisation (RPO). The Competent Person must comply with the provisions of the relevant promulgated Acts. A Competent Person must have a minimum of five*

years relevant experience in the style of mineralisation or type of deposit under consideration and in the activity which that person is undertaking."

Dolomite – current definition should be modified to read "*means a calcium-magnesium carbonate rock type ……"*

Geology – the definition in this document is non-sensical and should be replaced by *"Geology is an Earth science concerned with the solid Earth, the rocks of which it is composed, and the processes by which they change over time. It significantly overlaps other Earth sciences, including hydrology, geophysics, environmental and atmospheric sciences."*

Geoscience Data and Geoscience Information – In both of the clauses the term 'natural environment, especially associated with the Earth's lithosphere' is confusing. The term 'natural environment' is far too broad, and can be taken to include a host of non-geological fields. The term 'especially associated with the Earth's lithosphere' can be taken very narrowly to define sub-crustal rocks. These are not good definitions, and given that the regulations are focused on the collection, archiving, dispensing and management of geoscience data and information, they need to be tightened considerably. As drafted, there are numerous unintended consequences.

Section 2 (Submission of Geoscience Data and Information)

Section 2 – Lodgement of information and data:

The heading for Section 2.1 refers to Geoscience Data and Information in Respect of Prospecting and Reconnaissance Studies, but is the only indication that the regulations as proposed are limited to these specific activities. This needs clarification in the definitions as well as a lead paragraph or clause to Section 2 explaining exactly what these regulations cover and do not cover. As drafted, the regulations can be interpreted to extend to activities well beyond the scope implied in the heading. In addition, there needs to be clear definitions of exploration activities. It is not clear whether the regulations apply to greenfields exploration, brownfields exploration, trial mining, mine expansion or all of these.

While it is standard practice in most countries for geological progress reports to be lodged with the local or national geological surveys, the degree of reporting as well as the degree of compliance varies enormously. The regulations as proposed seem to demand a high level of detail, with three major questions arising immediately. First, does the CGS have the capacity and budget to archive and manage in perpetuity? We suspect not (see below as regards core storage). Second, the requirements do not differentiate between major development projects (mines) or rapid reconnaissance exploration, or desktop targeting studies. The latter tend to be small scale and fast, and quite likely junior companies will not be able to comply with the detail required. This will discourage exploration investment. Third, what is the intent for legacy data, information, and physical samples? If interpreted literally it would mean that any historical data or information even remotely linked to the resource sector would need to be turned over or copied to the CGS. This would, for example, effectively transfer ownership of museum, university or private sector research collections to the CGS. For many types of documents, this contravenes internationally recognized copyright agreements and intellectual property ownership principles.

Clause 2.1.1

Oil and gas prospecting, both onshore and offshore, has traditionally been overseen by the Petroleum Agency of South Africa (PASA), which is better geared to manage offshore data than the CGS. What is the role of PASA in the process?

Clause 2.1.3

Requiring all data as outlined by the 'work program' is vague and possibly unworkable. Work programs change all the time for all sorts of reasons, particularly in long term mining projects, and measuring compliance against putative work plans that may be outdated is unrealistic and will limit innovation.

Clause 2.1.3(d)

Lodging of physical borehole core or chips is problematic, particularly in conjunction with clause 2.4 (historical or legacy data). In many cases, especially with respect to small-medium scale prospecting operations, drill chips are not collected or saved (and if forced to do so, the additional costs will force small companies out of business). The CGS may have the capacity to manage core archives from smaller projects going forward, but most certainly does not have the capacity or budget to store and manage hundreds of kms of legacy core, in particular from decades old deep drilling programs in the Wits Basin and the Bushveld Complex. The GSSA is aware of several of these core facilities currently managed by the companies involved. A long-term management plan is required for these facilities, and re-location to Pretoria is not a realistic option. Even if there were sufficient storage space, the transport cost alone would be prohibitive to whoever is deemed responsible.

Clause 2.1.3(h)

The requirement to lodge resource and reserve estimations may conflict with stock exchange regulations for listed companies, depending on the frequency and timing of required reporting. There could also be conflict with international reporting codes guidelines.

Clause 2.1.3(m)

This clause is so vague as to be basically meaningless. It gives the CGS carte blanche to require any information it wants, no matter how tenuous the connection with a project. This does not exclude the request for personal information or stakeholder databases, which (as one example) would be in direct conflict with the POPI act. Delete this clause; it will lead to abuse.

This clause also refers to the mandate of the CGS – this mandate needs to be defined in terms of what the CGS can reasonably and realistically expect to accomplish, with details on how it will accomplish this mandate and accompanying time-lines. The mandate as stated in the prelude to the Act itself is vague.

Clause 2.1.4

Submission of data must surely be a requirement at relinquishment or closure, and not every twelve months. An annual progress report that need not include commercially sensitive or confidential data is reasonable. An annual ‘data dump’ will not only result in excessive administration costs for rights holders, but also in many cases give public access to commercially sensitive decision making. Further – demanding the data and information be lodged within 30 days of closure is completely unrealistic. For a typical drilling program, this would require an army of people to meet a 30-day compliance deadline.

Clause 2.2

The entire clause is very problematic, to the point that it is not clear what is required. The title itself states that this concerns all ‘geoscience data not related to reconnaissance and prospecting’. This could mean anything and is extremely capricious; see comment above on clause 2.3.1(m). Clause 2.1 deals with economic resource related data and information. Clause 2.2 covers everything else, and clearly exceeds any reasonable mandate.

Clauses 2.2.1 and 2.2.2 are concerned with ‘non-rights holders’; Clause 2.2.1 means anybody or anything other than the rights holders. So, by way of example, if one owns a few shares of company X, one would have to submit regular reports on company X despite having no more knowledge than any other shareholder. This is unreasonable.

Clause 2.2.2 is nothing short of diabolical. It seems to be an attempt by the CGS to control who does research on what aspects of geoscience, irrespective of relevance to the MPRDA. University research groups would not only have to win funding from the various funding sources, but must now notify the CGS of all projects they embark on. As one example, it would be impossible to offer honours programs in their current form because the research component would have to be dropped to be replaced by course work. This is in direct conflict with SACNASP registration requirements. Another casualty will be international scientific research programs, which South African geoscientists have participated in or led for decades. This is in direct conflict with the NRF mandate;

see https://www.nrf.ac.za/spp/about. Last year, the recipient of the Jubilee Award of the GSSA honouring the best paper published in the South African Journal of Geology was by a German team of researchers doing fieldwork in the Barberton Greenstone Belt. The South African researchers are well aware of the contributions this team is making; relationships are well established. There are many international programs in SA and abroad that are successful and achieving much; importantly they provide valuable experience and international exposure to South African postgraduates. Clause 2.2.2 effectively passes control of all those programs to the CGS, and will close them. It will also isolate South African researchers.

The clause requires researchers to lodge data, information and documents with the CGS before they publish in international journals. In effect, it will curtail the independence of R&D practitioners, which will in turn suppress innovation.

The entire clause should be deleted. It covers activities outside the CGS mandate, is poorly drafted, and conflicts with intellectual property rights and the mandates of other government departments.

Clause 2.3

The clause title is about infrastructure and development; Annexure B is about geotechnical reporting: Clauses are incorrectly numbered. This clause seems to deal with dolomitic land; it should be labelled as such in the title. Arguably, this should be drafted as a second regulation because it has little to do with exploration or mining. Comment needs to be solicited from engineering geology professionals and the SAIEG.

Clause 2.3.1

The clause seems to be limited to 'State authorities'. What happens to regulation of development on dolomitic ground by everyone else? Clauses (a) through (d) are simplistic as well as unclear. Clause (d) requires a completion report before obtaining written opinion of the National Advisory Authority (NAA). Is the completion report a feasibility study or risk analysis as opposed to a completion report? What is the National Advisory Authority (NAA, or NAAD as it seems to be referred to in some places)? It is not in the definitions section. Is this a body controlled by the CGS?

Clause 2.3.1 (second one!)

This comes under Clause 2.3.3! Are RMP's required on an annual basis once the project is completed?

Clause 2.4

This clause is confusing because historical data and legacy data are not well defined, other than material older than 15 years. This seems to be an effort to transfer company managed archives to the CGS – which does not have the capacity to manage the material. Does this cover databases as well? Many of not most of the larger companies have archival databases which are both valuable and global. Many are beginning to apply Big Data analysis, and arguably this is commercially sensitive. What about companies no longer in existence or no longer present in South Africa? This is also a direct attack on consultancies that do this sort of work for clients, which has led to new mines.

Clause 2.4.3

The clause is unworkable and unenforceable; it should be removed. Foreign governments are not subject to the wishes or mandate of the CGS or the DMRE. Universities do not fall within the mandate of the DMRE or the CGS. As regards private citizens, it is not at all clear what is required. Field notes? Photograph collections? Geoheritage? Private libraries? This clause is also meant to apply to 'individuals', and it would be nearly impossible to practice as a geologist without being in breach of these regulations.

Clause 2.5

Pricing of basic geological data is too high in South Africa compared to other countries, and this is a complaint the GSSA hears frequently. This clause is short on detail of what is on offer and what the basis for pricing is.

A key issue not covered in the document is who has access to archived data and core at what cost. If a company wants access to archived core, for example, is that a right or a privilege? If the latter, it is capricious.

Is clause 5.3.2 supposed to be 2.5.2? And who defines substandard service?

Section 4 (National Advisory Function in Terms of Geohazards

Geohazard is not defined in the definition section.

Clauses 4 and 2.3

These two clauses should be dealt with under one heading.

Section 5 (Authorizations and Sanctions)

This section is poorly formatted.

Clause 5.2.1

Does CGS have the authority to impose these sanctions, assuming a conviction is obtained?

Unresolved Issues from Comments on 2010 Geoscience Amendment Bill and Regulations

In 2010/2011, the GSSA commented of Geoscience Amendment Bill and Regulations, and highlighted many of the same issues then, apparently to no avail.

- At that time the DMR (as it was then) and the CGS agreed that the CGS had neither the skills or the budget to ensure expertise and capacity to deal with their proposed role as a repository of geological and geotechnical information. A budget was to be submitted to Cabinet and Treasury to increase the CGS capacity. However, in the decade following, the capacity has not increased to the point where the CGS is able to deal with the information, data and physical drill holes that it is now requesting. This remains as problematic now as it was then.
- The DMR noted that the CGS was to take on a 'watchdog' role because the applicable statutory bodies of SACNASP and ECSA as well as the SAMREC-SAMVAL Committee (SSC, as it was then) were not perceived as giving sufficient guidance to the authorities on standards and technical reporting. Over the last ten years SACNASP and the SSC have made significant strides in these fields, to the extent that both the CGS and the DMRE have active participants on the SSC committee. In fact, presentations have been made by senior members of the SSC to both the CGS and DMRE on more than one occasion, and there is a standing invitation to present to the Ministry of Mines and Energy at their convenience. Perhaps it is timeous for the DMRE and the CGS to institute closer ties with these bodies – possibly inviting representatives onto the CGS Board or senior committees.
- A major concern at the time was that some of the wording of the Act seems to allow or even encourage the expansion of CGS activities into private sector activities, beyond provision of professional services. This is even more in question at the present time.
- Equally worrying was that the amendment specifically excluded representation of professional and academic geological expertise in South Africa by dropping the right of the GSSA to nominate a candidate from the profession to a seat of the CGS Board. The GSSA still feels that this is a fundamental oversight as the GSSA represents the majority of earth and geo-science professionals employed in industry, academia, and statutory institutions, and as such can provide much insight to the CGS on the workings and needs of such organizations.

The Role of National Geological Surveys

The role of geological surveys worldwide (those in Namibia and Botswana are good examples) has always been (inter alia) to store, catalogue, and conserve data provided by companies post

relinquishment of rights, and then to provide access to all available data and information, either on open source at no cost or minimal cost, to all interested parties.

It would be prudent for the CGS and the DMRE to review their relationship and mandates in an attempt at being a provider of geological information and data rather than being perceived as an unfair competitor in the exploration arena. The two roles are incompatible. This is an opportunity to refine and clarify the role that the CGS is expected to play, noting that currently the mandate is open-ended and non-specific.

Management Committee of the Geological Society of South Africa
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