



# **Competent Persons' Reports or Technical Reports** for Exploration, Exploration Target Definition and **Mineral Resource Estimates**

VBKOM has extensive experience in the generation of compliant Competent Persons' Reports or CPRs (SAMREC & JORC) and Technical Reports (NI 43-101 & S-K 1300) for clients of various sizes and across commodities along the full Exploration to Mining Value Curve – from discovery to mining operation Mineral Resource estimates. We are well versed in all major Mineral Reporting Codes and understand their subtle differences.

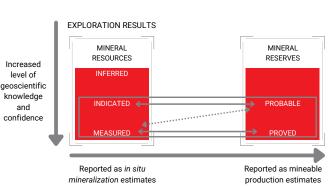
We also have a full understanding of the listing requirements and obligations for the major Stock Exchanges (JSE, ASX, TSX and NYSE) and will be able to guide and advise you in terms of Reporting Codes for your reporting purposes, or their application in generating a suitable document for presentation to potential investors.

# **Our Approach to Mineral Resource Estimation**

and

> Exploration management and data generation:

Where а project is exploration phase, VBKOM can actively advise, plan, implement and manage the exploration program and database.



#### Site visit and data collection:

The Competent Person or Qualified Person for Mineral Resources is required to conduct a site visit to either the exploration property or mine site as requiredby all the relevant Reporting Codes.





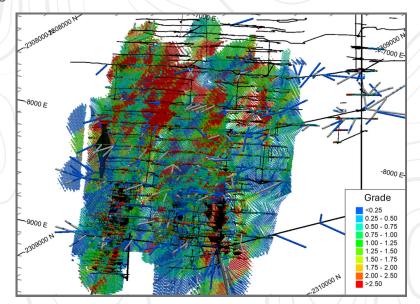
#### Mineral Resources Estimation:

#### **Exploration:**

The Competent/Qualified Person for Mineral Resources will review the latest available report and related geological exploration data, as well as other pertinent information required for the compilation of a CPR/Technical Report for those properties where exploration activities have been conducted. The Competent/Qualified Person will review the provided data and assess whether the exploration program is at a suitable stage to declare an Exploration Target, or to generate suitable geological models and conduct a Mineral Resource estimate. The Mineral Resource Statement will be generated (updated if relevant) and signed-off after ensuring that the Mineral Resources have been correctly updated and reported in accordance with the requirements as stipulated within the relevant Reporting Code. The relevant signed-off CPR/Technical Report will be provided to the Client, which in turn will make the Exploration Review, Exploration Target or Mineral Resources to be Code-Compliant.

#### **Mining Operations:**

It is assumed that Mining Operations already have Mineral Resources in place, regardless of whether these might be Code-Compliant or not. The Competent/Qualified Person for Mineral Resources will review the latest available CPR/Technical Report and related geological and infill/brownfields exploration data, as well as other pertinent information required for the compilation of a Competent Persons Report/Technical Report for the operation. The Competent/Qualified Person will review existing modeling and Mineral Resource evaluation methods and estimates and assess their validity. Where required, the Mineral Resources for existing mining areas will be depleted and reconciled relative to the preceding Mineral Resource statement. The Competent/Qualified Person will also assess whether brownfields exploration is suitable for upgrading new potential mining areas. The Mineral Resource Statement will be generated (updated if relevant) and signed-off after ensuring that the Mineral Resource have been correctly updated and reported in accordance with the requirements as stipulated within the relevant Reporting Code.



Project Management and -Support



### **Reporting Codes**

The Reporting Codes are professional codes of practice that set minimum standards for public reporting of Exploration Results, Mineral Resources and Mineral Reserves. The SAMREC Code serves the South African listed market, while JORC serves Australia, NI 43-101 Canada and S-K 1300 the United States. Complimentary codes and guidelines are published for the valuation of Mineral Assets. The VBKOM team of professionals are well-versed in all of these reporting standards.

VBKOM has geological team members who have previously served or are currently serving, on the SAMCODES Committees, giving VBKOM a prime understanding of reporting requirements and developments in the SAMREC & SAMVAL Codes and international Mineral Reporting Codes spaces.

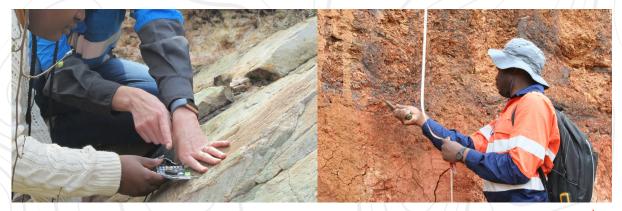
Refer to: <a href="https://www.samcode.co.za/samcode-ssc/">https://www.jorc.org/</a> and <a href="https://mrmr.cim.org/media/1017/national-instrument-43-101.pdf">https://mrmr.cim.org/media/1017/national-instrument-43-101.pdf</a> for more information.



# What is a Competent or Qualified Person?

According to SAMREC, a 'Competent Person' (CP) 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) and has 5 years relevant experience in a commodity, deposit type or activity they are undertaking, such as exploration, resource estimation, or reserve estimation. A Competent Valuator (CV) is a person who possesses the necessary qualifications, ability, and sufficient relevant experience in the valuation of minerals assets. A person being called upon to sign as a CP should be clearly satisfied in their own mind that they are able to pass the scrutiny of their peers and demonstrate competence in the valuation undertaken." In the instances of NI 43-101 and S-K 1300, the Competent Person is referred to as the Oualified Person.

VBKOM has various Competent Persons, some of who are highlighted below for their specific competence in bulk commodities and precious metals.



Mineral Resource Estimation | Exploration and Geological Services | Mining Engineering | Metallurgical Engineering | Industrial Engineering | Project Management and -Support



# **Chantelle Obermeyer**



- Is Principal Geology consultant at VBKOM (Pty) Ltd.
- Graduated with a Master of Science Degree in Geology from the University of the Witwatersrand in 2021, registered with SACNASP as Registered Professional Natural Scientist.
- Chantelle has 26 years of experience in the mining industry. She has gained extensive experience in the fields of sedimentology, stratigraphy, exploration, QA/QC, Mineral Resource estimation and Competent Person's Reports and has been involved in projects and has been involved in projects with commodities

such as gold, platinum, coal, bauxite, industrial minerals and base metal projects. She was a geologist in an underground gold mine for 9 years and Chief Geologist on one of South Africa's most complex gold mines for 4 years. She has worked in a production environment for 13 years, as well as in exploration.

Chantelle has 12 years of experience in consulting, including greenstone and shear-hosted gold and other related commodities (projects located all over western, eastern and southern Africa) and is qualified as a Competent Person for most commodities and has signed off on numerous projects in the capacity of a Competent Person. Chantelle has an excellent understanding of the international Reporting Codes and is highly experienced in conducting Mineral Resource technical due diligences and audits on exploration projects as well as operating mines for most commodities.

# Mike Carney

- Is an associate of VBKOM (Pty) Ltd.
- Graduated with a BSc Honours Degree in Geology from the University of Natal in 1994, registered with SACNASP as Registered Professional Natural Scientist.
- Is a member of the Geological Society of South Africa.
- He is a Competent person for SAMREC compliant Resource and Reserve estimates, Northern Cape iron ore deposits.

Has worked as a geologist for Anglo American Kumba Iron Ore, and has 20 years of open cast, hard rock mining experience, specifically within the geoscience – mine planning – mining engineering arena.





## **George Olivier**

- Is a director of VBKOM (Pty) Ltd.
- Graduated with a BEng Mining degree from the University of Pretoria in 1999. He obtained his Mine Manager's Certificate of Competency in 2004 and became recognized as a professional engineer by the Engineering Council of South Africa in 2012. He thereafter completed his MBA from GIBS which is the Business School of the University of Pretoria.
- Is a member of the South African Institute of Mining and Metallurgy



### **Manie Kriel**



- Is a director of VBKOM (Pty) Ltd.
- He holds a Mining Engineering degree from the University of Pretoria which he obtained in 1994 and a Master's Degree in Business Leadership from UNISA, 2001. He is currently a Ph.D. Mining Candidate at the University of Pretoria.
- His career started as a Mining Engineer with Anglo Gold at Vaal Reefs in 1995. In 1999 he moved to Germany where he worked on a large mechanised openpit mine with a network of bucket wheel excavators. In Germany he received project management training, and returned to South Africa to manage the

commissioning of a new processing facility in Delmas, Mpumalanga.

- Is a member of the following professional associations:
  - South African Institute of Mining and Metallurgy Fellow
  - South African Institute of Quarrying Fellow
  - Engineering Council of South Africa Pr.Eng (Mining)

His career progressed to operational- and production management, and he was appointed as General Mine Manager at the age of 35, responsible for four alluvial diamond mines, seven beneficiation plants, and two mining towns in the Northern Cape Province.

In 2006 he left production and steered his career into mining consultancy. He has a total of 28 years of experience in various commodities, such as aggregates, iron ore, manganese, coal, copper, gold, diamonds and gemstones, heavy mineral sands, bauxite, chrome and phosphate.



# **VBKOM's Industry Experience**

Our footprint stretches across the African continent, and we have an extensive track record of numerous projects where Mineral Resource, Mineral Reserve estimations or CPRs were delivered. Below is a list of some of the projects that we have successfully delivered:

Commodity	Clientt	Project Description	Year
Bauxite	Guinea Alumina Corporation	JORC Compliant R&R Reporting	2023
Heavy Mineral Sands	Sierra Rutile Ltd	JORC Compliant R&R Reporting	2023
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Heavy Mineral Sands	Sierra Rutile Ltd	JORC Compliant R&R Reporting	2022
Phosphate	ARME	SAMREC CPR and Mineral Resource Estimation	2022
Iron Ore	AMSA	Motjoli Resources Due Diligence	2021
Iron Ore	Afrimat	Resource Review	2021
Gold	Pan African Resources Plc	Mineral Resources Audit 2021	2021
Cobalt	Worley	ERG m- RTR Competent Persons Report	2020
Iron Ore	Afrimat	Resource Review	2020
Iron Ore	AMSA	Resource Verification	2018
Manganese	Aswan/Havilah	Gabon Libaye CPR	2018
Manganese	Tshipi e Ntle	Reserve Estimation 2016	2017
Phosphate	ARME	Mineral Resource Estimation and CPR	2017
Copper	ENRC	ERG - Dec 2016 Resource and Reserve Update	2017
Iron Ore	Afrimat	Geological Modelling and Mineral Resource Estimate	2017
Vanadium	Vametco	Resource and Reserve Report	2016
Copper	ENRC	Annual Copper and Cobalt Reserve Reporting	2016
Copper	ENRC	RTR Updated CPR 2016	2016
Iron Ore	Diro Resources	Mining Engineering & Geological Services	2014
Iron Ore	AMSA	Coza Mining - Cost Model Estimate	2014
Manganese	Sebilo Resources	Sebilo LOM Plan	2014
Iron Ore	Diro Resources	R&V Demaneng Geological Model Update	2014



### **Our Value Proposition**

VBKOM is a provider of innovative business and technical consulting services and solutions for the mining and capital-intensive industries. We challenge ourselves to apply fresh thinking and to utilise our experience and technology in pioneering ways to deliver forward-thinking solutions.

We offer complete multi-disciplinary economic studies for blue-chip mining houses, junior miners and financial institutions across the full range of mineral commodities. Due to VBKOM's diverse pool of expertise, we can offer our clients specialised skills within a one-stop-shop culture. Our engineering, risk, and project management capabilities as well as simulation and decision support expertise, make us an ideal partner to the mining, petrochemical, agricultural, and construction industries.

Our focus on long-term client relationships combined with our technical skills ensures that our clients can fully optimise their value chain.

At VBKOM the quality of our work is guided by a simple philosophy - our success is driven only by the success of our clients and the achievement of our professionals. By using cutting-edge technology and the most advanced computer modelling systems on the market our technical expertise comes unrivalled. Our capacity and continuity have earned us the trust of some of the world's most prestigious mineral resource companies. By staying true to our core values; by utilizing our vast project-specific experience and qualifications; along with applying proven world-class methodologies and processes the VBKOM team is a dynamic, flexible and innovative team with a track record standing as solid proof of our competitive edge in our field.

VBKOM has been successful in providing solutions of an independent nature to a range of clients in the mining industry. Our consultants have developed a good understanding of the needs and opportunities of both open pit and underground studies and operations and we look forward to adding value to your company. We believe that independent consultants can provide optimal solutions to the Client without any risk of providing a solution with an inherent conflict of interest. The VBKOM strategy is to form part of the owner's team to define and protect the owner's interest within our area of influence and control. VBKOM is committed to adding value to each client through innovative, practical, and trustworthy engineering solutions.

Visit VBKOM website and social media for more information:









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