SMG CONSULTANTS

PRESENTATION 2024

NICKEL ORE CAPABILITY

https://smgc.co.id/

LEADER IN MINING SERVICE CONSULTANCY

SMGC is an international geological and mining consulting company with in-depth knowledge of **Nickel, Gold, Manganese, Copper, Tin, Lead, Zinc, Bauxite, Limestone, Iron Ore, Thermal Coal, Coking Coal and other minerals**.

SMGC works in accordance with the following codes: JORC, KCMI, NI 43-101, and VALMIN by staffing their consultancy with recognized **"Competent and Qualified Persons."**

SMGC excels in unlocking greenfield concessions and enhancing existing mining operations to maximize the value of a client's deposit regardless of commodity type.

Integrity and Honesty

We operate with unwavering honesty and integrity, ensuring trust and transparency in all dealings.

Effective Communication & Team Approach

Clear and open communication coupled with a collaborative team approach ensures alignment and optimal outcomes.

Reliability

Clients can count on us to deliver consistently excellent results, meeting deadlines and surpassing expectations.

Add Value

We continuously strive to enhance projects by identifying opportunities for improvement and maximizing returns for our clients.

Established in 1966, SMGC brings over 57 years of international consultancy experience, with a track record of success in numerous projects globally. Our team comprises highly experienced and competent professionals dedicated to delivering exceptional results.

TIMELINE

1966 ECS MINING CONSULTANTS FOUNDED

ECS Mining Consultants was founded as a part of ECS International. The core bussiness of ECS International is the delivery of technical and management solutions to the global mining industry.

JAN 2004

The consultancy division at The Surpac Minex Group seperated to form an independent consulting company. SMG Consultants Pty Ltd joined The Mineserve Group.

OCT 2002 SURPAC SOFTWARE MERGER

On 1st October 2002 Surpac Software International and ECS International concluded a merger of the two businesses.
The core businesses of both ECSI and Surpac are the delivery of technical and management solutions to the global mining industry.

MARCH 2006 SMG CONSULTANTS PTY LTD STANDALONE CUNSULTANTCY

SMG Consultants foucused on global bussiness and become a standalone consultancy.

JUNE 2009

AUSTRALIAN OPERATION SOLD TO GHD

JULY 2009 INDEPENDENT JAKARTA HEADQUARTERED CONSULTING GROUP

JULY 2010 SINGAPORE BRANCH CONSULTING

OCT 2011 HONG KONG BRANCH CONSULTING

Strategic Transformation: Enhancing Value and Sustainability in Mining Consultancy

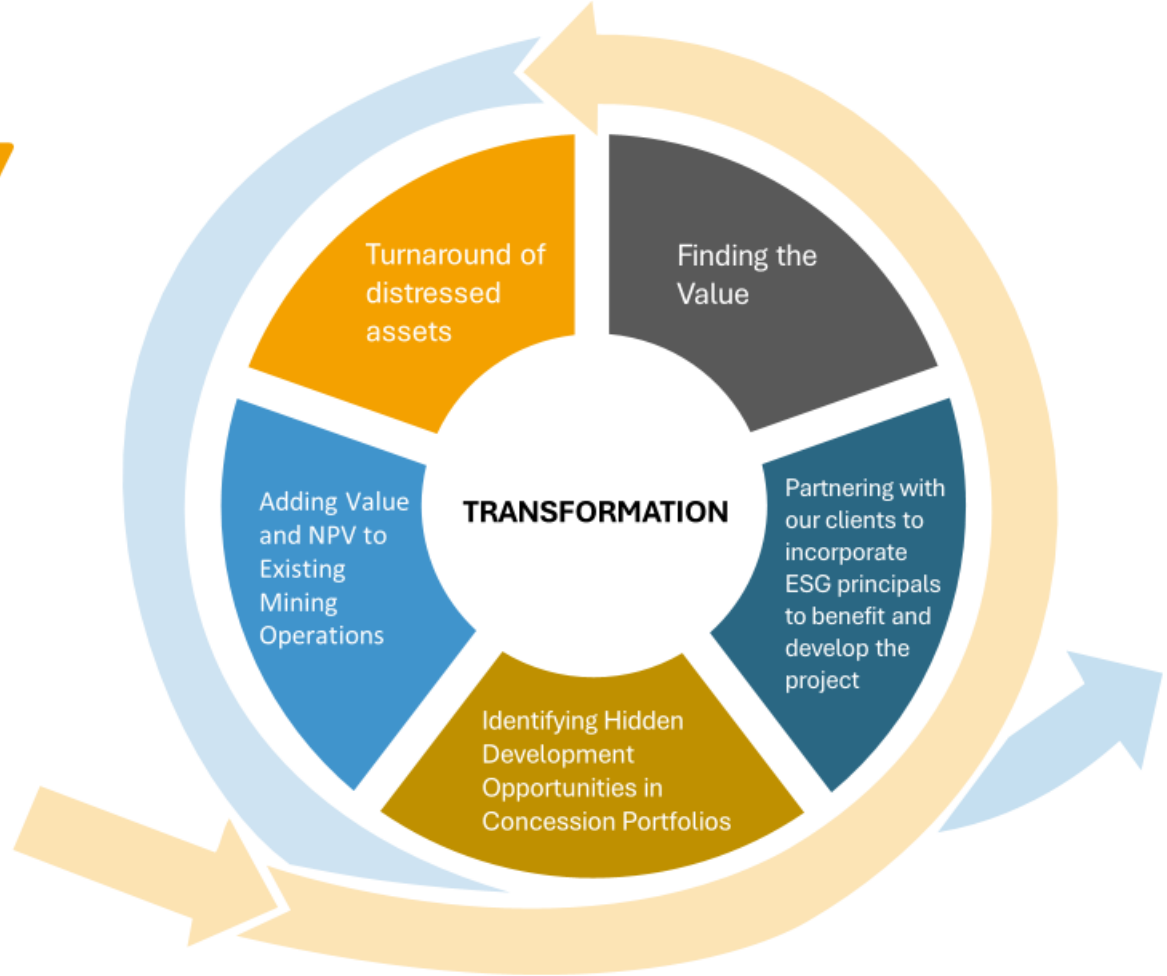
General consultancy service

Limited insight

Traditional advisory services

Practical advice

Results delivery



Client-focused

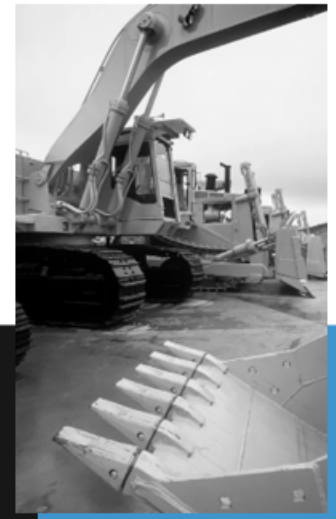
Revitalization

Business enhancement

Stakeholder Trust

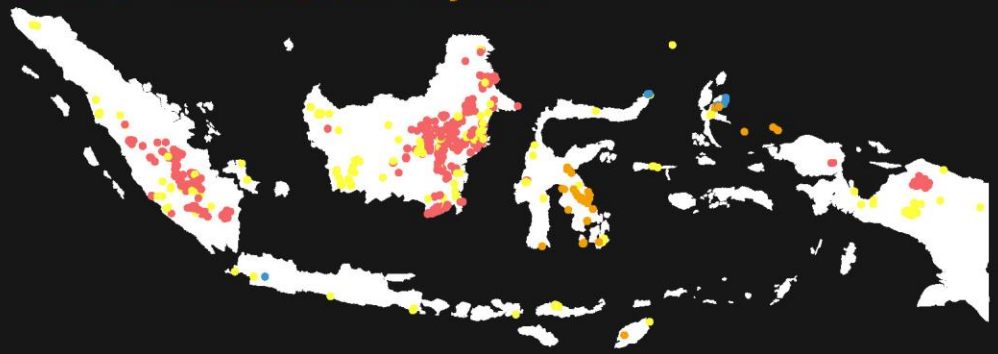
Maximized returns

Sustainability



SMGC – Global Projects

SMGC –Indonesia Projects



SMGC – Nickel Projects

Coal Gold/Silver Nickel Other Metals

SMGC PROJECT PORTOFOLIO

+4

decades of global experience working with Lateritic Nickel deposits

1970's

dating back to first Nickel Project in Sulawesi, Indonesia

+7

countries across 4 continents working on Nickel Projects throughout the world

+69

nickel Project locations across Sulawesi, Halmahera and Papua

SMGC NICKEL - MAIN SERVICES

"Comprehensive Mining Solutions Across the Spectrum"

- Mapping & Field Survey
- Exploration and Geotechnical Services
- JORC and KCMI Codes
- Process Plant Technical Support
- Site Based Planning & Operational Supervision
- ESG – Environmental Studies
- Technical Studies

SMGC Service Output

General Review Study

- Desktop Study Reviews.
- Geological Potential Reviews.
- Geographical Information System (GIS) Studies.
- Due Diligence.
- Environmental and Geotechnical Studies.
- Standard Operating Procedure for QA/QC Review.
- Technical Report Reviews.

Exploration Data Acquisition

- Geophysical survey plans & targeting.
- Soil sampling, trenching & geological mapping.
- Drilling & logging Reviews

Database Management

- Cloud-based real-time databases.
- Database audit procedures.

Data Analysis

- Statistical and Geostatistical analyses.
- Data Visualization.
- Exploratory data analysis.
- Machine learning data clustering.
- Statistical and geostatistical analysis.

Geological Modelling

- Exploration sampling and QA/QC review.
- Explicit and implicit geological, structure, and mineralization models.
- Conditional Simulation.
- Resource estimation and classification.
- Grade control and production reconciliations.

Mine Planning

- Mine optimizations and mine designs.
- Mine scheduling.
- Geotechnical characterization.
- Equipment selection.
- Engineering studies.
- Risk analysis and management of issues.
- Operational review and assistance.
- Financial evaluations.
- Mine planning support.

Technical Report

- Due Diligence
- KCMI Code
- JORC Code
- NI 43 - 101
- VALMIN Reporting
- Feasibility Studies
- Government compliance reports.

Advanced Database Management

Real-time core logging.

Secure core photo management.

Dynamic Cut-off Strategy

Enhanced blending for quality and efficiency.

Promoting sustainability through reduced waste and environmental impact.

Efficient Grade Control

Digital assay data leverage for precision grading.

Efficient grade control for accurate assessments.

Exploratory Data Analysis with Machine Learning

Advanced machine learning techniques.

Extracting valuable insights and patterns from complex datasets.

Complex Geological Modeling

Advanced geological modeling techniques.

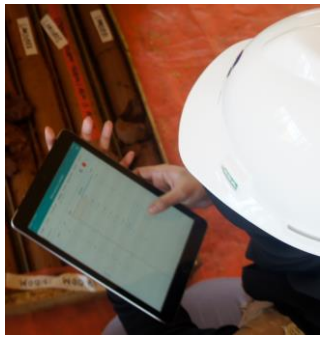
Capturing geological complexity beyond convention.

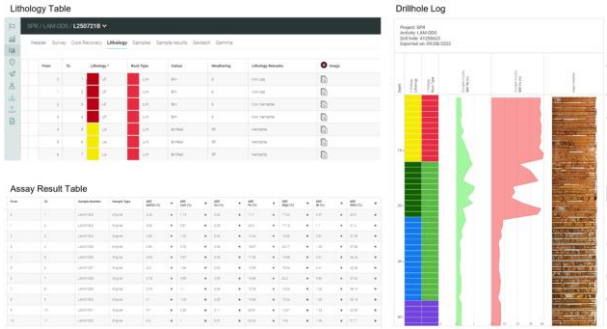
EMPHASIZING EXPERTISE

ADVANCED DATABASE MANAGEMENT

Implementing real-time logging of core data directly into a cloud-based database.

We execute the real-time logging of core data by directly integrating it into a cloud-based database. This streamlined approach ensures instantaneous data accessibility and facilitates efficient management and analysis processes.





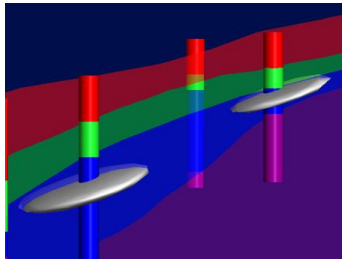
Expertise in managing core photos through a secure and advanced database software

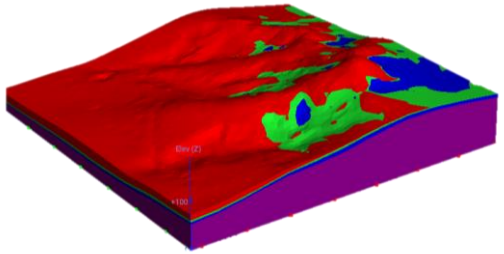
Demonstrating proficiency, we adeptly manage core photos using secure and advanced database software. This expertise ensures the organized storage, retrieval, and analysis of core imagery, enhancing overall data management capabilities.

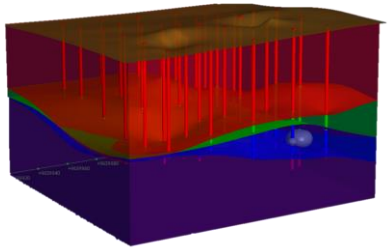
COMPLEX GEOLOGICAL MODELLING

Building complex geological models using state-of-the-art implicit and explicit techniques

This advanced approach ensures a comprehensive representation of geological features, facilitating accurate analyses and informed decision-making in various applications.

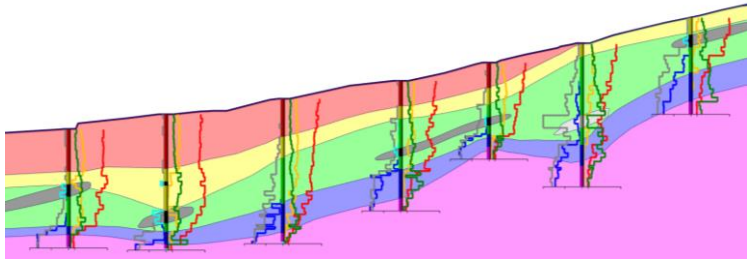


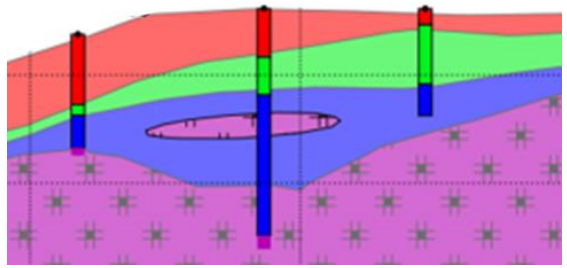




Going beyond conventional approaches to capture the complexity of geological structures

We delve into unconventional approaches to capture the intricacy of geological structures. This innovative strategy enhances our understanding and modeling of geological complexities for more accurate analyses.

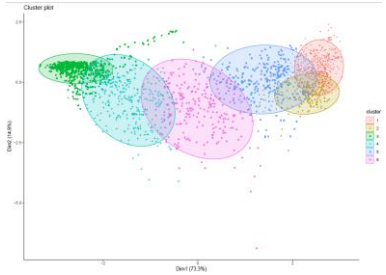


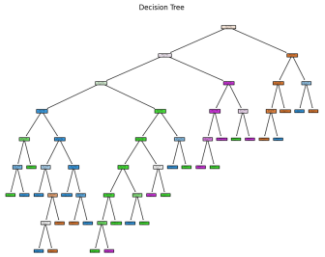


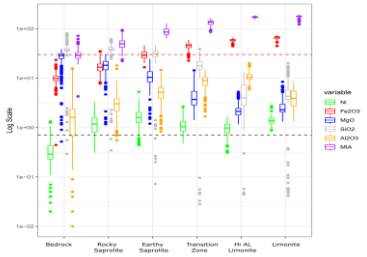
DATA ANALYSIS USING MACHINE LEARNING

Utilizing advanced machine learning techniques for exploratory data analysis

We employ exploratory data analysis to enhance mineral resources modeling, ensuring a comprehensive understanding of geological data through cutting-edge computational techniques and algorithms.

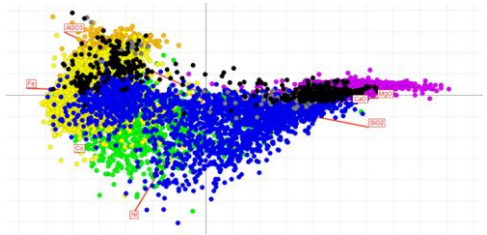


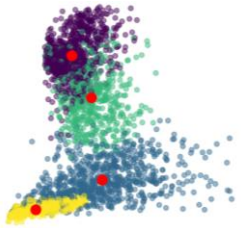


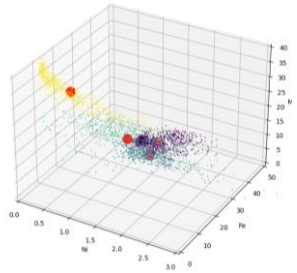


Extracting valuable insights and patterns from complex datasets

We extract valuable insights and identify patterns within intricate datasets. This process involves utilizing advanced computational techniques to reveal meaningful information and drive informed decision-making.



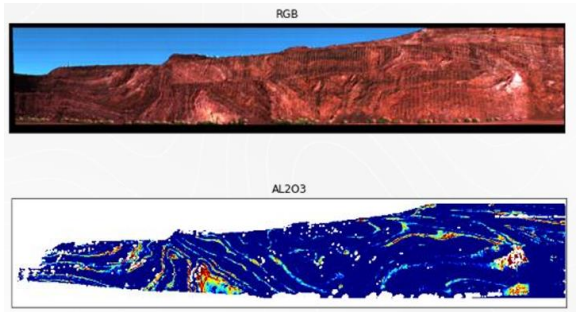




EFFICIENT GRADE CONTROL

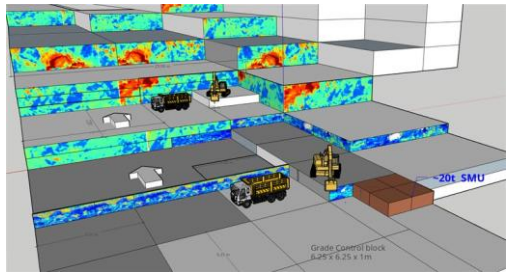
Leveraging digital assay data to ensure precision in grade control processes

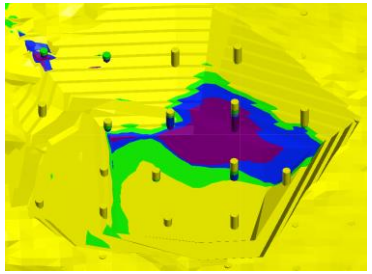
By leveraging advanced computational techniques, we enhance the accuracy and efficiency of evaluating and categorizing materials, ensuring reliable results.

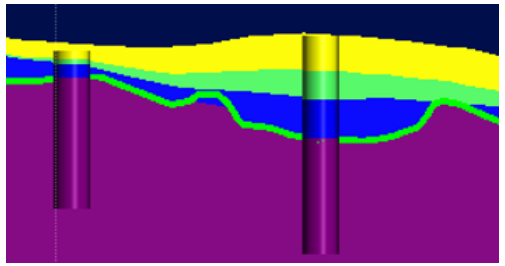


Implementing simulation for efficient and accurate grade control assessments

This efficient approach ensures accurate evaluations of material quality, enhancing overall reliability and effectiveness in the operation.







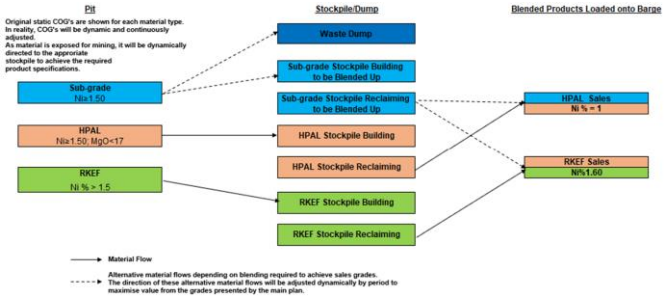
PLOTLOGIC

DEEPLIME

DYNAMIC CUT-OFF STRATEGY

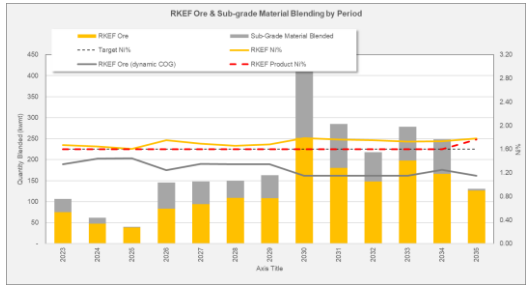
Enhances blending for maximum product quality and yield efficiency.

A dynamic cut-off strategy adapts to ore variations, enabling optimal mixing of high and low-grade materials, ensuring top-quality products and efficient yields.

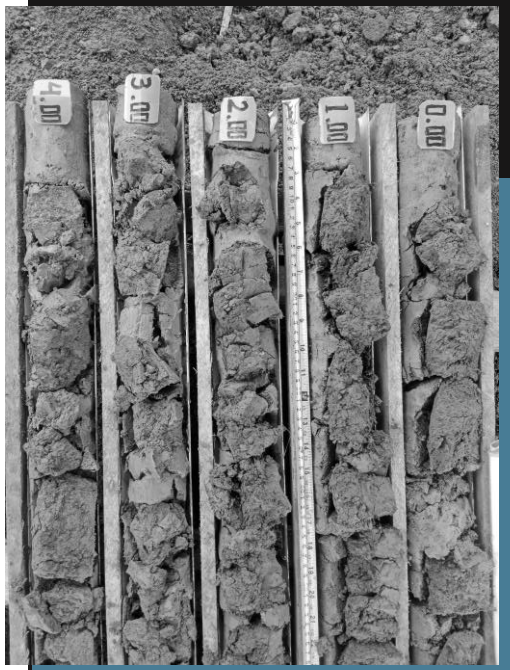


Promotes sustainability by minimizing waste mining and environmental impact.

Considering market conditions and production costs, this strategy curtails waste extraction, reducing environmental repercussions and fostering long-term operational sustainability.



GEOVIA Surpac 2020 x64



RECENT NICKEL ORE PROJECTS

ASPIRE stargate
Our pure and renewable journey together

PT. CENTRAL OMEGA RESOURCES, TBK

VALE

PAMA
member of ASTRA

solway
investment group | asia pacific

AKP
NICKEL MINING

TRAFIGURA
MINING GROUP

napan persada

KONIAMBO
NICKEL SAS

MODERN INTERNASIONAL

weda bay nickel

PT. Asia Nickel Resources

MEET OUR TEAM

Keith Whitchurch,
B.Eng. (Mining-Hons), M.EngSc, FAusIMM (CP), CP (Min), RPEQ, PERHAPI, CPI, IPU., ASEAN Eng., APEC Eng.
President Director
Principal Mining Engineer (JORC/KCMI)

Joyanta Chakraborty,
B.Eng. (Mining), MAusIMM, CPI.
Principal Mining Engineer (JORC/KCMI)

Chris Chapman,
Mechanical Engineer
Senior Consultant)

Nick Stamedes,
B. Eng. (Mining-Hon.). FAusIMM.
Project Manager

Tri Ratna Arum,
B.Eng. (Mining), MAusIMM, CPI.
Senior Mining Engineer

Debdutta Ganguly,
B.Eng. (Mining), M. Tech (Open Cut Mining), MAusIMM, CPI.
Senior Mining Engineer

Andrew Keith,
B.Eng. (Mining-Hons), M.EngSc, M.Phil.
Principal Mining Engineer (JORC)

MEET OUR TEAM

Abdullah Dahlan,
B.Eng. (Geology), MAusIMM, CPI.
Principal Geologist (JORC/KCMI)

Wahyudi Adhiutomo,
B.Eng. (Geology), MAusIMM, CPI.
Principal Geologist (JORC/KCMI)

Muhammad Luthfi,
B.Eng. (Mining Exploration)
Geologist (Nickel)

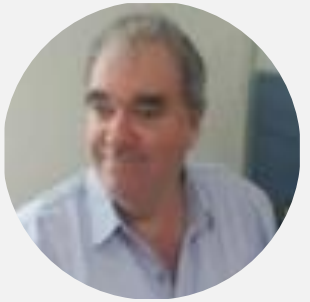
Fidian Riadi Atmaja,
B.Eng. (Civil Engineering).
Civil Engineer, Estimator

Martina Setowati,
B.Eng. (Mining).
Senior Mining Engineer

Dirga Daniel,
B.Geographic and Environmental Science.
Geographic Information System (GIS) Specialist

Muhammad Burhanudin,
B.Eng. (Geological Engineering)
Geologist
(Base Metal, Nickel, Gold, Bauxite)

Silvia Dwi Indrianti,
B.Eng. (Geodetic Engineering)
Cartographer and Illustrator



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B.Eng. (Chemical-Hons), MBA (Technology Management), Phd. Doctor of Philosophy in Chemical Engineering
Mineral Processing Principal Engineer

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“We Place Total Value In Our Clients and Employees, and Strive Towards Our Goal of Technical Excellence.”