



COMPANY PROFILE





WE ARE PROVIDING
BEST SOLUTION
FOR INTEGRATED
EXPLORATION AND
MINING SERVICES



ABOUT COMPANY

AKA Geosains Consulting is an Indonesian-based geological and mining consultant. We have expertise and are experienced across all commodities and mining methods.

We provide advisory consulting and professional development solutions to the mining industry. We are proud of our capabilities in providing the best solution for integrated mining services.

Our capabilities are including Exploration Services, Geographical Information System, Geological Data Management, Resource Modeling & Evaluation, Quality Assurance Quality Control Services, Geophysical Surveys, Due Diligence, and International Standard Reporting (JORC, NI 43-101, and KCMI).

OUR MISSION

Our consultants work with you to optimize your human, organization and technology systems.

OUR GOAL

Our goal is to provide innovative business and scientific solutions that will lead to the discovery of the next generation of economic mineral deposits at lower cost and within shorter time frames



AKGC EXPERTS

ADE KADARUSMAN, PhD, MAusiMM (GEOLOGY)

PRESIDENT DIRECTOR & PRINCIPAL CONSULTANT GEOLOGIST

He graduated from Dept. of Geological Engineering of ITB in 1992, and has a MSc and PhD in Earth Sciences from Tokyo Institute of Technology, Japan with 24 years of experiences as geologist. He started from academic career turn to industrial experiences with mineral exploration expertise. He published more than 40 scientific papers nationally and internationally. Specialization in mineral exploration and geological evaluation, resource estimation, mineral resources reporting under NI 43-101, JORC 2012 and KCMI 2011 codes, project generation and feasibility studies. Experienced in exploration of lateritic Nickel, Iron ores, base metals, epithermal gold, bauxite, diamond and industrial minerals, and also short involvement oil & gas and geothermal exploration. He has a strong knowledge of regional geology/tectonic, geochemistry, assay QAQC and mineralogy including sampling methods and various analytical instruments.

AFFILIATIONS: MAusiMM #303680 & CPI #088.



ALAMSYAH ANAS, B.ENG, MAusiMM (GEOLOGY)

SENIOR CONSULTANT GEOLOGIST / OPERATIONAL DIRECTOR

Alamsyah graduated in geological engineering from the University of Hasanuddin, Makassar. He has more than 15 years experiences in nickel and other minerals exploration from green field to mining for around 30 projects in Indonesia mostly in Sulawesi and Papua. He also experienced and capable to supervise any project as superintendent and KTT.

AFFILIATIONS: MAusiMM #335150





ASMARIYADI, B.ENG, MAusiMM (GEOLOGY)

SENIOR CONSULTANT GEOLOGIST / TECHNICAL DIRECTOR

Asmariyadi graduated in geological engineering from the University of Hasanuddin, Makassar. He is an Independent Geology Consultant based in Jakarta, Indonesia. He has worked as a professional geologist with more than 9 years' experience in the mineral exploration and mining industry with a focus on nickel laterite commodity. Involved in various reconnaissance, due diligence, exploration programs, mining, production, and mine development project. Asmar has gained significant experience in various technical and managerial aspects of both exploration and mining including geology and mineralogy, exploration programs, field design and management, data compilation, targeting, evaluation and verification of database (geological, geochemical, and geophysical), geological modeling, resource estimates, mine management, and QAQC, and reporting according to international standards.

AFFILIATIONS: MAusiMM #334745



KAHARUDDIN HAWING, B.ENG, MAusiMM (GEOLOGY)

SENIOR CONSULTANT GEOLOGIST / GENERAL MANAGER

Kaharuddin graduated in geological engineering from the University of Hasanuddin, Makassar. He is a professional geologist with about 18 years of experience in the area of mineral resources, higher education, and geographic information system (GIS). Areas of expertise include coal, laterite nickel, and gold geology. Having extensive experience in greenfield & brownfield exploration project development, drilling operation, database validation & evaluation, resource modeling and estimation, pit design and optimization, mine scheduling, higher education systems, and training, implementation & integration of GIS. Possess strong analytical, managerial, and organizational skills. Mentors and trains junior staff. Has a good understanding of QA/QC data and the implementation of Public Report Code such as KCMi and JORC.

AFFILIATIONS: MAusiMM #3002244

NICO F. SINAGA, B.ENG, MAusIMM (GEOLOGY)

PRINCIPAL CONSULTANT GEOLOGIST



Nico is an experienced geologist who has been working in the nickel exploration over 10 years. He used to work for nickel and other minerals exploration from green field to mining for around 50 projects in Sulawesi and Halmahera in more than 5 years.

AFFILIATIONS: MAusIMM #314481 & CPI #052

PRASTOWO, B.ENG, MAusIMM (MINING)

RESOURCES ESTIMATOR / SENIOR MINING CONSULTANT



Prastowo graduated in mining engineering of the University of UPN, Yogyakarta. He has more than 6 years experiences in mine planning and involved in resources estimation of nickel laterite and limestone. He has capability in statistical and geostatistical analysis of the drilling data using Surpac software including database validation, geological modeling, grade estimation and resources classification. Pit optimization and mine scheduling for long term and short-term planning are also his expertise. He can also perform geotechnical calculations of slope stability analysis to identify potential hazards zones and slope stability of excavation pit.

AFFILIATIONS: MAusIMM #320552



DZIKRIL HAKIM, S.T, M.T, MAusiMM (MINING)

PRINCIPAL MINE ENGINEER / MANAGER OPERATION

Dzikril Hakim graduated with a bachelor degree in Mining Engineering from Bandung Institute of Science and Technology (ITSB), he also got a Master's degree in Mine Engineering from Bandung Institute of Technology (ITB). He has worked as a mine engineer for a total 14 years, considerable experience in long-term and short-term mine planning, contribution to estimating ore reserve and evaluating mining project and mining operation in achieving production targets.

AFFILIATIONS: MAusiMM #3053421



BEST SERVICES





- EXPLORATION SERVICES
- TECHNICAL DUE DILIGENCE
- QUALITY ASSURANCE / QUALITY CONTROL SERVICES
- REPORTING
- TRAINING
- SURVEY SERVICES
- MINING SERVICES

EXPLORATION SERVICES

Geological Mapping

We see good geology as one of the most critical ingredients in the success of any exploration and mining project. Effective mineral exploration requires an in-depth understanding of the lithological and structural controls of mineralization. These insights must be gained through geological mapping at the early stages of the exploration program. A good geological map not only provides focus to an exploration program but it also clearly communicates the economic potential of a project to stakeholders.

Drilling & Supervision Services

With expertise and experience in mineral exploration Nickel laterite, iron ores, gold, coal and other commodities, AKGC has capability in operating the drilling machines. AKGC operating rigs of Jacro 175 & Jacro 200 series and also supported by the existence of Dozer for drill pad preparation and rig mobilization. We have professional mechanics to check rig engine regularly to ensure the timeframe during drilling production.

AKGC provides the small and easy moving rigs with the Max-Drill Type to support fast track production and low cost. AKGC guarantees quality of samples and maintains core recovery properly in the mineralization zone, and deliver the competitive rates with the good quality of work. We offer various drilling purpose:

- Regional or Scout Drilling
- Drilling spacing: 400x400, 200x200, 100x100, 50x50, 25x25 meter
- Twin Hole Drilling for Confirmation Drilling Data
- Geostatistic Drilling

In addition to drilling contractor services, AKGC provide service of drilling supervision as follow:

- Managing drilling strategic,
- Set up comprehensive drilling plan,
- Daily drilling activity supervision
- Set up sample preparation and assaying at drilling site
- Manage drilling data base

Data Validation and Geo Evaluation

Our capabilities not only verify and build a valid database from raw data (assay, collar, survey, geology & mineralogy, density, moisture content, geotechnical, core recovery, etc.) and making it suitable and appropriate for resource estimation, and also we can also provide geological evaluation and ore type classifications.

Our services including:

- Drilling Data Validation
- Technical Report of Exploration, Drilling and Data Validation

Resource and Reserve Estimations

AKGC has prominent resources modelling and estimation expertise in nickel laterite deposit, however we has capability also for coal and other mineral commodities such as gold, Iron ores, manganese, limestone, tin etc.

Our strength are gotten from the combination of solid exploration and mining based practical experiences, and strong technical qualifications in geostatistic, resource estimation and mining reserve estimation. Our services including:

- An assessment of the quantity and quality of the data available including database management and verification
- The creation of 2D and/or 3D geological and mineralisation models for the deposit
- Statistical and geostatistical analyses of the data and the determination of the most appropriate grade and density interpolation methods
- Classification and reporting according to accepted and internationally recognised guidelin



TECHNICAL DUE DILIGENCE

Is your company looking to invest in a mining or exploration project? Let AKGC carry out important technical due diligence to flush out any fatal flaws or other technical issues with the project.

We usually do this in various stages to make sure you stay in control of expenditure and have the best information available to make the quickest decisions and move on. A fatal-flaw analysis may be completed in a few hours to a few days, depending on the size of the project. We focus on basic risk factors such as geological, environmental, markets, socio-political, and data (sampling through to modelling and estimation). Second and third level technical due diligence may involve a more in depth look at some of these factors and may include check modelling of the resource, validation of critical data, review of reconciliation data, etc.

We understand that opportunities come and go quickly so we will always endeavor to act quickly and carry out these reviews with urgency.





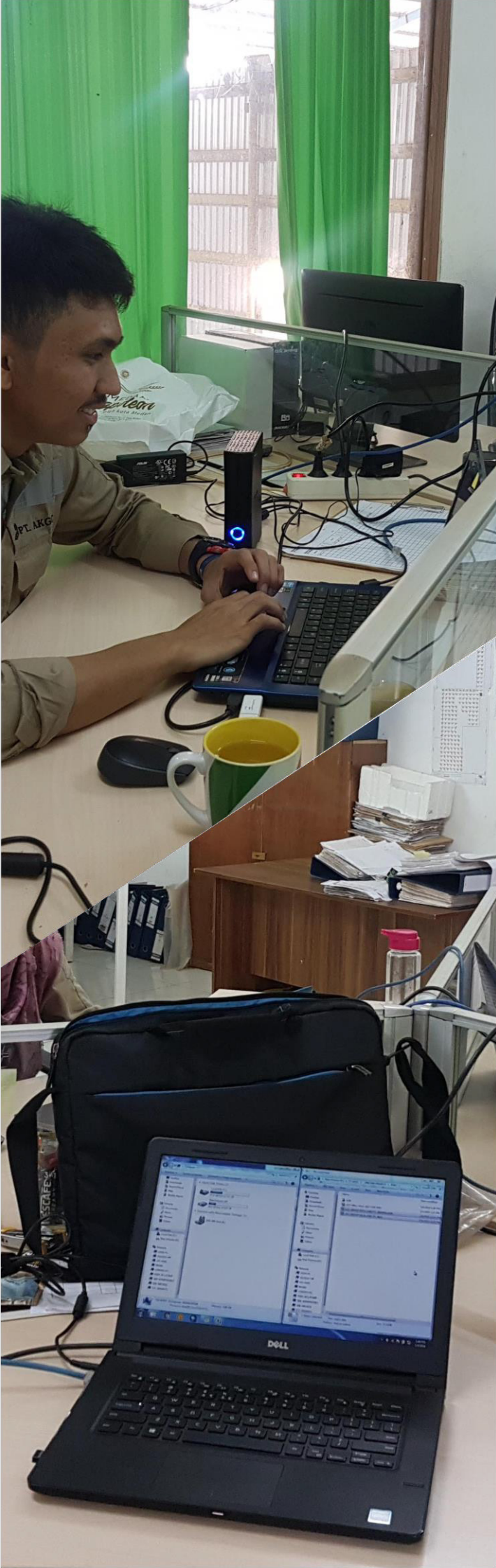
QUALITY ASSURANCE / QUALITY CONTROL SERVICES

Appropriate Sampling and Quality Assurance/Quality Control (QA/QC) procedures are essential in all aspects of the mineral deposit evaluation process to ensure the best possible confidence in resultant mineral resource and reserve estimates are achieved; the quality of an estimate is dependent on the quality of the data used.

AKGC set up the professional team and apply excellent sampling protocol and QAQC program start from samples taken out from inner tube core drilling, ROM pile, outcrops and others type of samples, through assaying at laboratory, until exploration database.

Our Services Including:

- Independent review and practical advice on sampling protocols to ensure compliance with international reporting codes
- Recommendations on QA/QC procedures from drilling to sampling to assay and data management
- Independent review of QA/QC procedures and databases to ensure compliance with international reporting codes
- Verification of exploration drilling programs
- Review of sample preparation and laboratory facilities



REPORTING

International Acceptance Report

AKGC is fully familiar with minimum standard in the reporting requirements under the terms of JORC, NI 43-101 and KCMI. This report requires the materiality, transparency, and competency in the information to investors in a Technical Report for mineral resource and reserve estimate including a preliminary prospectus, preliminary short form prospectus, and exploration target.

The reporting codes require a Component Person who is a member of a relevant professional organization (for example KCMI) to supervise the classification of the resource estimate and compilation of the supporting documentation. In recent time, AKGC has Four Component Persons in Geology, Exploration, and Resource and Reserve Estimations.

Scoping, Pre-Feasibility & Feasibility Studies

We offer the best confidence to optimize your projects with appropriate analysis and interpretation to make your project valuable and minimize the project risk. We combine the consultancy approach with experiences based on practical expertise, in a scope of works from geology, resource and reserve, through infrastructure and engineering design, to permitting and mine closure. We apply an innovative application combined with our best knowledge to adapt with recent technology and meets with global banking & investment. We also cooperate with a consultant to help us in observing hydrogeology, geotechnical, mining, metallurgical, mine closure, also environmental and social skill in order to link with the actual situation and challenges of your projects.

TRAINING

The expertise of AKGC not only provide services to the clients and partners, but also giving knowledge and sharing experiences through training and supervision. Training can instill new vocational skills and improve the capability, productivity and performance of an individual or team in key competencies needed for exploration. Several training programs as follow:

Exploration Program Management

Mineral exploration at the strategic scale – the roles of Greenfields and brownfields exploration in development and implementation of corporate operating and growth strategies

Resources and Reserves Estimation Training

AKGC provides a course for those who want to be (or have to be) practitioners in applied resources estimation. The course will give a real case material with the concept of practical approach, and is designed to enhance the mining professional's capabilities in geological modelling, statistics investigation, linear variogram, local estimates using Kriging technique, and resource estimation and classification.

The participants will be assisted in using SURPAC software and verify their own estimation results to deal with the resource estimation rule of thumb. In addition to resource estimation training, AKGC provides also reserves estimation training with invite prominent practitioners in reserves estimation.

Quality Assurance & Quality Control

Quality Assurance refers to all planned and systematic actions necessary to provide adequate confidence that a product or service will satisfy given requirements for quality. Quality Control refers to practical steps and statistical tools to ensure

the systems are in control. The QAQC training is designed to enhance the mining professional's ability to demonstrate and maintain good accuracy and precision of ore-grade samples.

QAQC programs are designed to monitor precision (reproducibility), quantify of possible biases (accuracy). Objectives of the QAQC Training:

- Review the key or basic statistical terms and tools.
- Understand the principles of QAQC,
- Apply selected QC procedures in case studies,
- Prepare QAQC review and reporting.

SURVEY SERVICES

The expertise of AKGC not only provide services to the client and partners, but also giving

In order to update exploration data, it is important for companies to carry out survey activities. AKGC provides surface survey services.

Topographic Survey

We offer all surveying solutions for exploration, mining, and civil purposes. With our expertise in this field and conducted with the help of the latest technology and advanced equipment, we are able to offer total solutions for all topographic survey requirements to be delivered of our clients with accurate and precise information.

Our highly dedicated experts and experienced staff can accurately determine the 3D space positions and compiling all the data from the datasets. We have 4 sets of SOKKIA Total Stations that capable to conduct:

- Installing BM
- Stake-Out Drilling Holes
- Grid Polygon

Reconnaissance Survey

Prospecting Survey





MINING SERVICES

AKGC provides more services to your company to conduct mining activities of coal and ore minerals. Our staff who are competent in the mining sector supported by sophisticated equipment and technology will maximize our services. The scope of mining services, including:

- Mining Consultation
- Mine Design
- Mining Operations & Grade Control Management

Mining Consultation

AKGC is able to provide and guarantee the quality and quantity of material during mining production.

Mine Design

AKGC mine design service encompasses the life of mine starting from long term (or entire pit design) to short term pit design for short period production report or production progress.

We can control the production progress in line with the ore distribution comply with mining operational, economic, and environmental aspects supported by mining software engine for mine design, in-pit resource computation, initial mine planning, and conceptual pit design with 3D visualization. This output will give the client or mining contractor an idea to prepare the most appropriate equipment selection and fleet

controlled by the production target, cumulative stripping ratio, and hauling road distance.

We combine an experience gained through evaluation to complete these jobs satisfy, not just displayed as a mathematical model or excellent picture but it will be applicable in the field as nature.

Mining Operation & Grade Control Management

The mining operation highly requires precise and careful planning, performance feedback, and integration across multiple aspects of production. Leading mining companies realize that they must maximize returns from existing resources through more effective operations management if they are to obtain desired growth.

AKGC Consultancy provides assistance for open-cut mining operations to providing both long-term planning and operations management assistance. Detailed activity allowing the planning team to conduct what-if analysis on proposed design with high qualified geologists and engineers to ensure and enhance day-to-day mining production operations, providing a tool for short term design objectives and performance improvement.

AKGC provide Mining Operation management solutions including:

1. Mining Sequence of operations

Model operations from existing software designs, safety benches, model shafts, drifts, ramps, mine haul roads, pit roads, pocket ponds, land preparation for a rehabilitation program. The services include:

- Stripping, Loading and Removal of Overburden
- Delivery / Demolition of Soil / Overburden
- Transportation of Overburden, Coal and Mineral Ores
- Mineral Excavation (Mineral Getting)
- Coal Excavation (Coal Getting)

2. Efficient what-if analysis

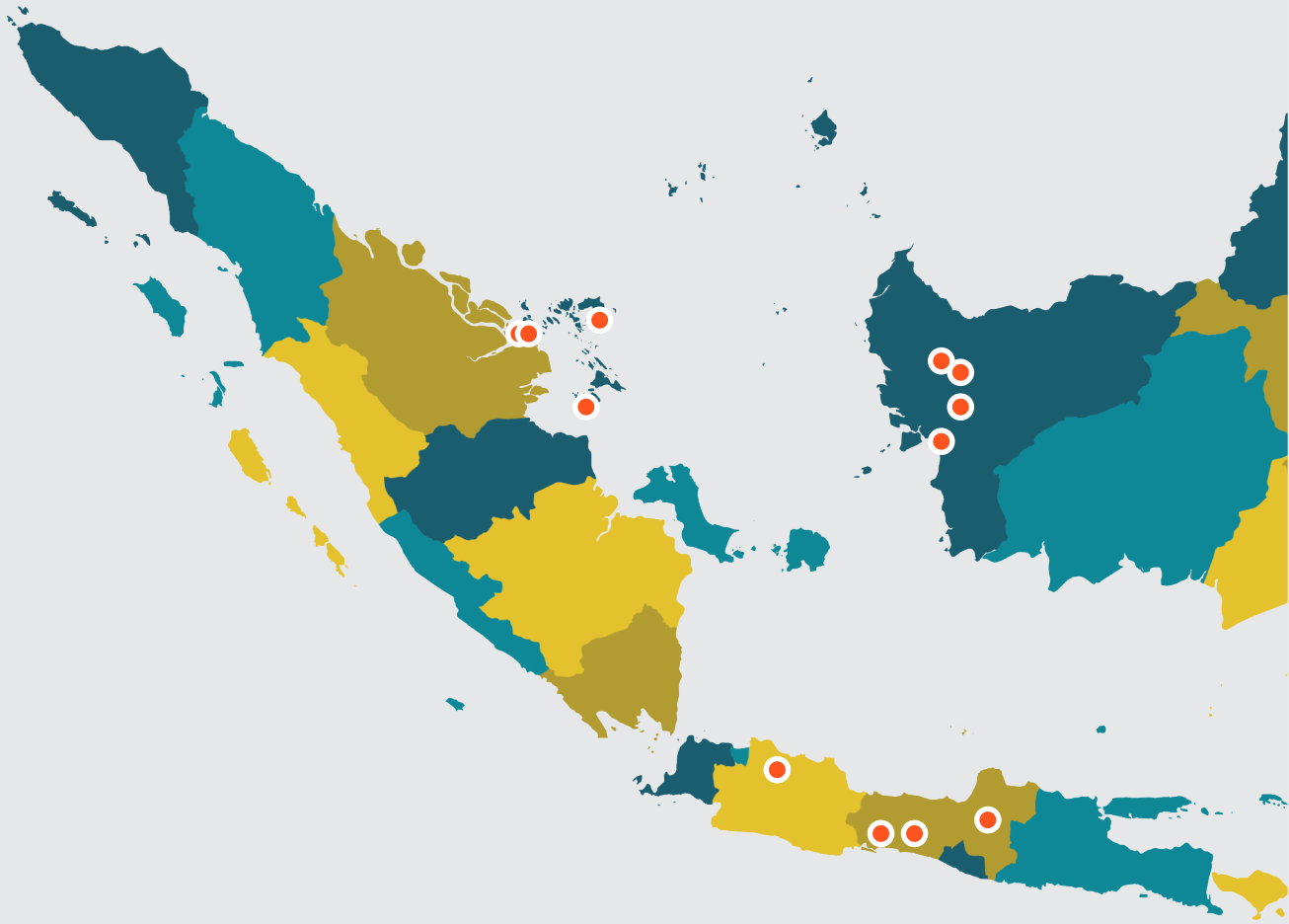
Test a range of layout and production alternatives, analyze their performance, all in risk can delay mine operations.

3. Integrate

Combine mine design with operational scheduling to create the ultimate planning environment, leave nothing to chance.

4. Good mining practice

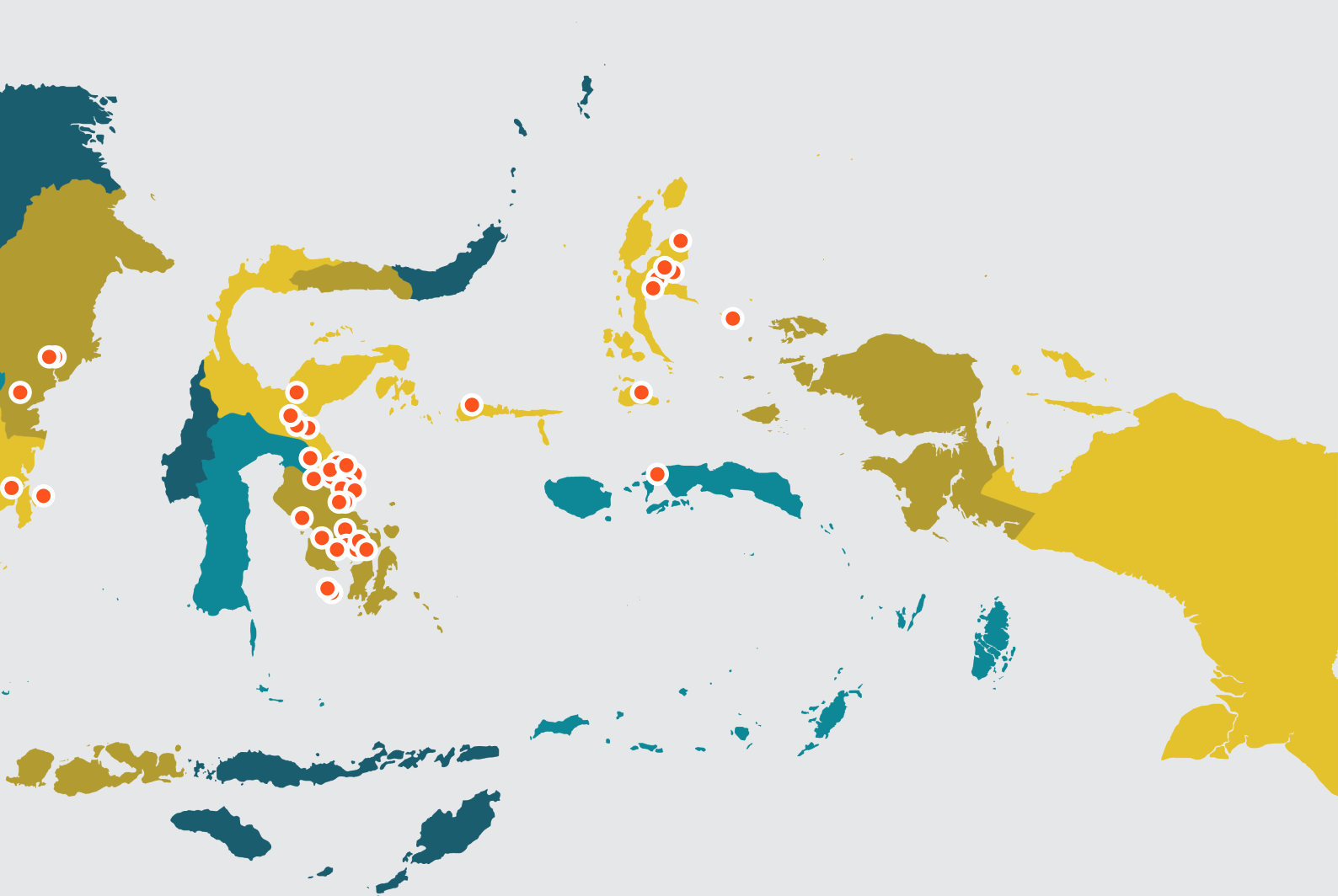
Implementation step by step good mining AKGC provides consultation and planning in the mining sector



SOME OF OUR CLIENTS

AKA Geosains Consulting has worked with companies of all sizes from junior miners to the world's largest multi-national mining organizations. Some of our happy clients listed below.

- PT. Putra Mekongga Sejahtera
- PT. Position
- PT. Cita Mineral Investindo Tbk (Harita Group)
- PT. Ifishdeco
- PT. Sambas Mineral Mining
- PT. Macika Mada Madana
- PT. Kalbar Bumi Perkasa
- PT. Fajar Bhakti Lintas Nusantara
- PT. Integra Mining Nusantara
- PT. Trinusa Aneka Tambang
- PT. Modern Cahaya Makmur
- PT. Bima Cakra Perkasa Mineralindo
- PT. Ceria Nugraha Indotama
- PT. Sarana Mineralindo Perkasa
- PT. BNI Sekuritas (PT Sinar Tambang Arthalestari)
- PT. BNI Sekuritas (PT Bima Indo Perkasa)
- PT. Sebuku Iron Lateric Ores
- PT. Banjar Asri
- PT. Trias Jaya Agung
- PT. Bhumi Karya Utama



- PT. Sulawesi Cahaya Mineral
- PT. J Resources Nusantara
- PT. Sumbawa Timur Mining / PT. Vale Eksplorasi Indonesia
- PT. Vale Indonesia, Tbk
- PT. Hermina Jaya
- PT. Tanjung Air Berani
- PT. Tunas Jaya Tamamas
- PT. Laman Mining
- PT. Halmahera Sukses Mineral (PT. Yakin Sukses Makmur)
- PT. Indoberkah Jaya Mandiri
- PT. Tristaco Prima Makmur
- PT. Wijaya Inti Nusantara
- PT. Manusela Prima Mining
- PT. Wana Kencana Mineral
- PT. Sinar Mas (The Capitol)
- PT. Royalti Mineral Bumi
- PT. Quantus Consulting Indonesia (PT Dinamika Sejahtera Mandiri)
- PT. Duta Kota Laut
- PT. Sinar Jaya Sultra Utama
- PT. Satanger Mineral Energy
- PT. Rohul Energi Indonesia
- PT. Tonia Mitra Sejahtera
- PT. Indrabakti Mustika
- PT. Indonesia Tsingshan Stainless Steel
- PT. Kendilo Coal Indonesia
- PT. Graha Istika Utama
- PT. Halmahera Persada Lygend
- PT. Laeya Cipta Guna
- PT. Sumber Permata Selaras
- PT. Zhong Hai Rare Metal Mining Indonesia
- PT. Intergra Technology Nusantara
- PT. Bintani Megah Indah
- PT. Aneka Tambang Tbk.
- PT. Weda Bay Nickel
- PT. PAM Mineral, Tbk.
- PT. Fortuna Jaya Makmur
- PT. Trimegah Bangun Persada (Harita Group)
- PT. Gane Permai Sentosa (Harita Group)
- PT. Beri Mineral Utama
- PT. LG Indonesia
- PT. Marina Bara Lestari
- PT. AMC Consultant
- PT. Bersinar Bintang Mineral
- PT. Andalan Karunia Persada
- PT. Pulau Rusa Tamita
- PT. Batulicin Enam Sembilan Pertambangan
- PT. Makmur Lestari Primatama
- PT. Ikatrio Sentosa



PT AKA GEOSAINS Consulting

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