







Industrial Minerals

CSA Global draws on personnel with a wealth of experience within the industrial minerals industry. This wide experience enables CSA Global to provide clients with strategic, innovative, integrated, practical and cost efficient solutions; from exploration and evaluation, through mine design, materials handling and processing, operations management to marketing of final products.

Recent Projects

NATION	PROJECT	COMMODITY	WORK COMPLETED	
	Western Australia	Three Springs mine	Talc	Economic evaluation of ore schedules and external assistance with mine audits.
		Greenbushes mine	Tantalum, spodumene	Blast movement monitoring and mining evaluation.
		Meenthenas deposit	Fluorite	Mine feasibility and economic assessment of deposit.
		Gascoyne	Potash	Regional data review, exploration strategy and permitting.
		McLarty	Potash	Independent Geological Report and exploration management.
	Congo	Sintoukola	Potash	Exploration planning, review, data management plus resource estimation.
		Hinda	Phosphate	Project review and Mineral Resource estimation.
		Mongolia	Mongolian	Fluorite
	South Africa	Glenover	Phosphate, REE	Preliminary Economic Assessment, Pre-Feasibility Study and N143-101 Technical Report.
	Sri Lanka	Lanka Graphite	Graphite	Independent Geologist Report.
	Tanzania	Mahenge	Graphite	Mineral Resource estimation.
		Nachu	Graphite	Exploration geological review and appraisal.
		Tunisia	Sra Ouertane	Graphite
	Vietnam	Tam Bo	Bentonite	Expert geological review and exploration appraisal.
		Co Dinh	Chromite	Geology, resource, geotechnical, hydrology, dredging and tailings disposal components of Feasibility Study.

Industrial Minerals - Experience within CSA Global

PROJECT STAGE	PROCESS	HIGH LEVEL EXPERIENCE
Exploration	Exploration	<ul style="list-style-type: none"> Exploration strategy and drilling programme design. Exploration programme management. Specification and monitoring of sampling procedures. Resource modelling, characterisation and estimation.
	Conceptual	<ul style="list-style-type: none"> Independent project reviews and economic evaluations. Development of project concepts.
Evaluation	Feasibilities Studies	<ul style="list-style-type: none"> Engineering studies including scoping studies, PFS and BFS. Valuation of acquisition targets.
	Mining	<ul style="list-style-type: none"> Open pit optimisation studies. Mining (dredging, dry or combination) options studies. Cost estimates and scheduling.
	Processing	<ul style="list-style-type: none"> Testwork and flowsheet development and process design. Testwork supervision and results analysis. Equipment selection.
	Marketing	<ul style="list-style-type: none"> Independent marketing reviews. Product specification, marketability and price projections.
Operations	Mining	<ul style="list-style-type: none"> Mineral sands mining operations management. Dredging. Long term planning and scheduling.



Resource
Industry
Consultants

We draw on our collective experience to customise exploration and mining solutions to each client's requirements. Our advice and services are tailored to respond to the individual advantages and constraints of each geographical region. This approach helps us to provide a holistic approach to operating within the region we are involved in.

A sample of the range of our worldwide experience extends to diamonds, fluorite, mineral sands, synthetic rutile, pigment, talc, chromite and spodumene. This has involved working on various types of deposits and operations in Australia, Africa, Europe and Asia.

About CSA Global

We are a leading geological, mining and management consulting company with 30 years experience in the international mining industry. We cover all stages of the exploration and mining cycle, all mineral commodities, all extraction methods, across all regions:

EXPLORATION

- Mineral systems targeting & project generation
- Remote sensing & geophysics
- Geochemistry (traditional & non-destructive methods)
- Mapping & field investigations
- Drill program planning & supervision
- Exploration strategy & project management

MINING

- Mining & engineering studies (concept to feasibility)
- Reserve assessment reviews
- Mine optimisation, scheduling & design
- Ore Reserve estimation & reporting
- Grade control & reconciliation
- Productivity improvement & project management

CORPORATE

- Project reviews
- Due diligence
- Expert valuations
- Independent reports
- Geo-corporate advice
- Secure information hosting (Spring portals & data rooms)

RESOURCES

- Review of data collection techniques & QAQC of data
- Geological & geo-metallurgical modelling
- Geostatistical analysis & variography
- Mineral Resource estimation, validation & classification
- Resource reporting in accordance with international codes
- Resource audits & risk analysis

DATA

- Sourcing, capture, validation & QAQC of data
- Database design, setup, management & hosting
- Cartography, GIS & web-mapping
- Production databases & management tools
- Online information management systems (Spring portals & data rooms)
- IT support, systems administration & training

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