

# Agri-Minerals

As global population grows so too does the demand for food sources. Crop production will likely have to double by 2050 to fulfil the needs of a growing and increasingly affluent population.

The world needs to turn its attention to increasing yields on less productive farmlands especially in Africa, Latin America and Eastern Europe. Application of fertilisers is a key part of the strategy, therefore demand for agri-minerals which are the base ingredients for fertiliser products will continue to grow.

CSA Global are experts in the assessment of agri-minerals including potash, phosphate, magnesite, gypsum, lime sand and peat. Our experience is global and covers all aspects of the mining cycle from target generation and exploration planning to resource evaluation, development and mining operations.

## Recent Projects

NATION	PROJECT	COMMODITY	WORK COMPLETED	
	Regional	Gypsum, Lime Sand	Regional review of the gypsum and lime sand deposits and potential of Western Australia.	
	Dandaragan	Phosphate	Site visit and regional review of phosphate deposits and potential in the Dandaragan Trough.	
	Canning / McLarty	Potash	Project review and independent geologist report. Geological interpretation, targeting study and exploration planning.	
	Gascoyne	Potash	Project review, assessment of potential and exploration planning.	
	Various	Phosphate	Regional reviews, assessment of potential, exploration management on various projects e.g. Barkley, Barrow Creek, Daly, Larrimah, Wiso, etc.	
	Huondat	Magnesite	Historical data capture, geological modelling, targeting study, exploration planning, database management, geo-metallurgical sampling, concept study and preliminary economic analysis.	
	Brazil	Confidential	Potash	Review of potash mine, exploration licenses and assessment of regional potential.
	Canada	Saskatoon	Potash	Mine visit to review mineralisation style, mining and processing methods.
	Gabon	Confidential	Potash	High-level project review and initial assessment of potential.
	Germany	Regional	Potash	Geological assessment of the potash deposits and mines of Germany.
	South Harz	Potash	Independent technical assessment and valuation.	
	Jordan	Regional	Phosphate	Regional review of the phosphate deposits and potential of Jordan.
	Morocco	Regional	Phosphate	Regional review of the phosphate deposits and potential of the Mesetian domain.
	Laos	Sino Lao	Potash	Technical Report.
	Norway	Kodal	Phosphorous, Iron, Titanium	Project review and Competent Persons Report.
	Republic of Congo	Sintoukola	Potash	Historical data capture, geological concept, targeting study, exploration planning, database management, QAQC, geological modelling, Mineral Resource estimation and corporate advice. Geological, geotechnical, hydrological, resource, mining and environmental studies as part of a Preliminary Economic Analysis. Part of PFS and BFS study team.
	Lac Dinga, Lac Tchibenda	Potash	Historical data capture, geological modelling, targeting study, exploration planning and database management.	
	Hinda	Phosphate	Independent review of exploration, estimation of Mineral Resources and Ore Reserves.	
	South Africa	Glenover	Phosphorous, REE	Geological, geotechnical, hydrological, resource, mining and environmental studies as part of a Scoping Study.
	Spain	El Perdon	Potash	Historical data capture and project review.
	Thailand	Regional	Potash	Desk-top review of the potash deposits and potential of the Khorat and Sakon Nakhon Basins.
	Tunisia	Sra Ouertane	Phosphate	Site visit, project review to assess potential and technical report.
	United States of America	Michigan	Potash	Desk-top review of the potash deposits and potential of the Michigan Basin.



**Mining  
Industry  
Consultants**

CSA Global's ability to approach any new challenge stems from years of experience and customising exploration and mining processes to suit each clients' requirements. Our advice and services are tailored to respond to the individual advantages and constraints of each geographical region.

We work with all sizes of companies from small businesses to international majors, governments and NGO's. We make it our business to get to know and understand each region's cultural diversity, political background, sovereign risk, workforce and technical capability. We identify with the region's approach to sustainability and its level of support for our industry.

## About CSA Global

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

### CORPORATE

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

### 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

### 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

### 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

### TECHNOLOGY

- Data management (capture, data warehousing & QAQC of data)
- Data visualisation, analytics & cartography
- GIS plans, sections & 3D plots
- IT Management (health reporting, auditing, cyber security advice)
- Project design & management (Cloud systems design, infrastructure design & implementation)
- Mining specialist IT Helpdesk

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