

We service the industry sectors required for global growth



Mine Planning



Specialist Design



Geological Services



Studies and Assessments



Governance Reporting



Mine Closure



EXGEN  
POWERED BY XENITH

## Exploration and Generative Studies

Our Exploration and Generative studies team (ExGen) provides industry best practice support and advice across the full value chain from initial concept through to project execution and statutory reporting.

Our team of Geologists, Archeologists, Environment, Land and Tenure specialists provide a turnkey solution ensuring strategy and risk are balanced across the life of a project.



## Building on Xenith's Expertise

We leverage the depth and breadth of Xenith's technical core to deliver the best solution to our client's complex problems.



Technical Mining Consulting



Exploration and Generative Studies



Due Diligence



Advisory  
(Operational/Technical/Corporate)



Land Access and Cultural Heritage



Environment and Approvals



ESG Solutions

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We have expertise to assist your project in:

### Prospectivity Studies

- Legacy data mining
- Reprocessing and interpretation of geophysics
- Regional concept models
- Satellite data interpretation
- Target identification
- Due Diligence studies

### Exploration Strategy

- Geophysical surveys
- Surface survey design
- Drill program design
- Project derisking
- Budgets and tendering

### Project Execution

- Life of project exploration management and site geology.
- Drilling, sample, lab and QAQC management
- Project optimisation strategy
- Technical optimisation strategy
- Database solutions

### Resource Modelling

- Geological modelling and Resources estimation
- Geostatistics
- RPEEE assessment
- JORC, Ni43-101, SAMREC reporting
- Market/media releases

### Land Access, Native Title and Heritage

- Native Title search, negotiations
- Heritage survey and reporting
- Archeological services
- Access and compensation agreements
- Tenure and landholder searches
- Land acquisition and access

### Environment and Approvals

- Environmental Impact Statement and referrals
- Environmental Constraints
- Planning approvals and development applications
- Social Impact Assessments
- Modification reports
- Public environment reports
- Permitting and Licensing

# Our Expertise

Driving global excellence in sustainable resource management

## Prospectivity Studies and Exploration Strategy

### Kirrama Resources-Madagascar

Xenith provides ongoing services to Kirrama Resources in Madagascar:

- » Assessment of 300 km<sup>2</sup> tenement package
- » Sentinel and ALOS satellite interpretation
- » Airbourne electromagnetics survey reprocessing and sharpening
- » Open-source data acquisition
- » Site based mapping, sampling and ground truthing of targets
- » Site based training and development of local staff
- » Development of regional exploration model and supporting databases
- » Forward strategy for further derisking of potential targets for drilling
- » Addition of previously unknown commodities for further review.

## Land Access and Cultural Heritage

### SCAPX Pty Ltd – Maywin Park

Xenith provided the full land access strategy to support an integrated approach with exploration activities:

- » Constraints analysis and optimal site selection, including preliminary cultural heritage review and title searches
- » Life of project positive landholder liaison, including Notice of Entry package
- » Negotiation and execution of the CCA
- » Cultural heritage assessment in line with the ACHA 2003 Duty of Care
- » Baseline weed assessment and reporting
- » Exploration project execution
- » Closure planning, scheduling and rehabilitation plan
- » Site rehabilitation to ensure compliance with environmental approvals.

## Exploration Concept Models

### Various Clients and Commodities

Xenith provides regional concept model development using leading industry software:

- » Open source and legacy data mining, data cleansing, processing and analysis
  - Sentinel 1, 2 3 & 5, ALOS, Aster, Landsat
  - State Government "Sunset Clause" databases
  - Federal government regional Geophysics databases.
  - Internal legacy databases
  - Historic mine plans and mapping
- » Integration of datasets into regional exploration models.
  - Airborne/surface geophysical surveys
  - Geochemical surveys
  - Regional geology and geophysics
  - Underground and surface mapping.

## Exploration Strategy and Execution

### Hunter Valley Operations (HVO)

Xenith provided the following long term site support to Hunter Valley Operations.

- » Resource planning, scheduling and onsite exploration support for the Hunter Valley Operations expansion Project.
- » Provision of personnel to assist HVO with daily operational project management and technical delivery of exploration services.
- » Implementation of best practice core processing and logging procedures

Xenith are a trusted embedded service provider to HVO, operating in a project management capacity since 2019.

## Exploration Strategy and Execution

### Huntore Australia – Mt Garnet Tin

Xenith provided long term site support to Huntore Australia at its Mt Garnet Tin project:

- » Resource planning, scheduling and onsite exploration support for two phases of diamond drill activities at the Dalcouth and Gillian prospects
- » Provision of personnel to assist Huntore with daily operational geology services during site drilling campaigns
- » Implementation of best practice core processing and logging procedures
- » Following the successful drilling campaign at Dalcouth, Xenith updated the geology model and JORC Mineral Resource Estimate.

Xenith have become a trusted partner and advisor to Huntore in exploration program planning, strategy and execution across various commodities in North Queensland.

## Exploration Strategy and Execution

### Whitehaven Coal - Blackwater Mine

Xenith provided the following long term site support to Whitehaven's Blackwater Mine:

- » Resource planning, scheduling and onsite exploration support for Blackwater Mine
- » Provision of technical and operational supervisory personnel to assist Whitehaven with the delivery of annual exploration programs
- » Implementation of custom developed optimisation and reporting systems to manage multiyear large scale exploration projects
- » Delivery of technical scope in relation to coal quality, fugitive emissions and structure drilling
- » Delivery of operational scope in relation to access, permitting, site clearances, earthworks and rehabilitation.