Understanding Mineral Exploration

Minerals Exploration and Mining In South Australia

- Why is Mining Important
- PACE Program
- Mining Act Overview
Promoter/Regulator of SA’s Mineral Resources

• From 1 July 2014 – new name - Department of State Development
  – CEO – Don Russell

• The Mineral Resources Division is responsible for administering and regulating the minerals industry under the Mining Act 1971 and Regulations.

• Minerals belong to the crown (all South Australians).
Why is Exploration and Mining Important to SA
SA Mineral and Energy Resources Performance 2013

- **$512 million EXPLORATION EXPENDITURE**
  - Minerals ($144.7m) and Petroleum ($367.7m)

- **$1.6 billion new CAPITAL EXPENDITURE**
  - ~$30 billion of potential capital for Minerals and Energy projects in the Major Developments Directory

- **$7.0 billion resources PRODUCTION**
  - Minerals ($5.4 b) and Petroleum ($1.6 b) **RECORD HIGH**

- **$4.7 billion EXPORTS**
  - Minerals ($4.5 b) and Petroleum ($0.2 b) **RECORD HIGH**
  - 38% of South Australia’s total exports ($12.3 b)\(^1\)

- **$188.7 million ROYALTIES**

- **15,372 EMPLOYED**
  - more than double - 6,641 ten years ago **RECORD HIGH**
South Australian exports by sector 2001 - 2014

Total exports for 12 months to January 2014 $12 billion

- Minerals and Petroleum $4.5 billion – 38% of total
- Agriculture and Food $3 billion – 25% of total
- Wine $1.1 billion – 10% of total
- Other $2.5 billion – 21% of total
Social and Economic Benefits

May include the following:

• Jobs
• Infrastructure
  – Roads
  – Power
  – Water
  – Ports
  – Storage Facilities
  – Pipelines
• Health Services
• Training/Education
• Sponsorships
• Exports
• Growth in service businesses

Oz Minerals
Pre-employment Training Program

Sponsorship of Royal Flying Doctor Service

Oz Minerals
Investment in Local Community
– procurement of local goods and services
Role of Government

• **Promotion of Exploration and Mining**
  - South Australian Strategic Plan Targets
  - State Initiatives, *PACE 2020*

• **Leading Practice Regulator**
  - Legislation
  - Policy
  - Ministerial Council on Mineral and Petroleum Resources
  - Council of Australian Governments (COAG) principles
  - National Standards
Pathways to Discovery
- New statewide and regional datasets
- New geophysics and spectral data
- Multi-element reanalysis of historic calcrite samples

Pathways to Prospectivity
- Multidisciplinary mineral systems analysis
- Multidisciplinary approach with mineral systems focus

Discovery to Development
- Six-month target approvals for mining lease assessment
- Online tenement applications, tracking, management and reporting

Next Generation Policy
- World’s best practice in resources industry regulation and management
- Next generation suite of industry policies and guidelines

Innovation through Integration
- Unique and innovative products and data delivered through SARIG 2020
- 3D modelling of mineral systems and prospective terranes

PACE Partnerships
- PACETargeting – geophysical surveying
- PACE Discovery Drilling – exploration drilling
- PACE Geochronology – mineral systems dating

SA Geothermal
- Partnership with South Australian Centre for Geothermal Energy Research
- Precompetitive data, state prospectivity model and reservoir modelling
- Research into enhanced (engineered) geothermal systems (EGS) and hot sedimentary aquifers (HSA) systems

Unconventional Gas Resources
- Investigation of South Australia’s unconventional gas potential
- Research into factors affecting productivity in unconventional reservoirs

PACE exploration

PACE mining

PACE energy

PACE global

CO2CRC
- Support for the Cooperative Research Centre for Greenhouse Gas Technologies (CO2CRC), Australian School of Petroleum, University of Adelaide
- Research into carbon capture and storage methods and technologies

South Australian Resources Analysis
- Triple bottom line Minerals ScoreCard
- South Australian minerals industry annual review

Water for Mining
- Partnerships with key agencies and industry to address water issues
- Mapping the state’s groundwater systems

Communities
- Community engagement strategy and toolkits for industry
- Continuing support for regional and remote communities

Data Pathways
- Launch and expansion of SARIG 2020
- National Virtual Core Library online
- Digitising of historic company reporting

Building Awareness
- Linking investors with explorers
- Fostering greater awareness of the resources sector
- South Australian Minerals and Petroleum Expert Group (SAMPEG) ambassadors
Overview of the Act and its Purpose
Purpose of the *Mining Act 1971*

**Mining Act 1971**

*Regulation & Compliance*

- Environmental Excellence
- Social License
- Economic Growth
DMITRE Regulatory Policy

Regulatory Principles

• Effective and Efficient – streamlined, fit for purpose, clear outcomes

• Accountability – transparent and understood by the minerals sector and the community

• Enforcement – ensuring approved outcomes are achieved

• Engagement – informed, involved communities and other stakeholders
Landowner Interaction in the Minerals Value Chain

Exploration
- Ongoing Communication
- Notice of Entry
- Declared Equipment
- Worlds Best Information
- Best Practice Exploration Regulation
- Discovery to Development
- Best Practice Mining Regulation
- Social & Economic Benefits
- Consultation on Project Development
- Land Ownership
- Formal Consultation on Mining Proposal
- GEOLOGICAL SURVEY OF SOUTH AUSTRALIA
- RESOURCE INFORMATION
- MINERAL TENEMENTS & EXPLORATION REGULATION
- MINING PROJECT FACILITATION & MINING
- MINING REGULATION
- RESOURCE LAND ACCESS STRATEGY
- DMITRE
- JOBS
- ROADS
- POWER
- WATER
- INFRASTRUCTURE
- HEALTH SERVICES
- SERVICE BUSINESSES
- COMMUNITY SUPPORT
- TRAINING/EDUCATION
- EXPORTS

Supporting Documents
- MINERAL TENEMENTS & EXPLORATION REGULATION
- MINING PROJECT FACILITATION & MINING
- MINING REGULATION
- RESOURCE LAND ACCESS STRATEGY
- DMITRE
Exploration – Geological Survey/Resource Industry
New map interface - Full screen map with automatic refresh that now supports multiple browsers (Google Chrome / Firefox / Internet Explorer / Safari etc.) and Google-style mouse navigation.
Exploration Licences

36.4% of the State is covered by mineral exploration licences
Process to Mine Development

If a Discovery is made:
- Exploration
- Further Exploration
- Feasibility & Scientific Studies
- If Risks can be managed:
  - Mining Proposal
  - Assessment
    - If Approved:
      - Government Conditions, Licensing and Bond
      - Mining Operations
      - Mine Rehabilitation & Closure

Communication and Access Arrangements between Explorers & Landowners

Ongoing & Transparent Engagement with Stakeholders by the Company
- Landowners
- Community Interest Groups
- State & Local Government

Exploration Regulation

Formal Consultation by Government

Mining Regulation

Resource Land Access Strategy

Mineral Project Facilitation & Mining Assessments

Discovery to Development
0.24% of South Australia is covered by mining tenements

- Extractive Mineral Lease
- Mineral Lease
- Retention Lease
- Private Mine
- Mineral Claim
- Olympic Dam
- Miscellaneous Purposes Licence
- Leigh Creek Coalfield

The map illustrates the distribution of mining tenements across South Australia, with various types of mining tenements identified, including Extractive Mineral Lease, Mineral Lease, Retention Lease, Private Mine, Mineral Claim, Olympic Dam, Miscellaneous Purposes Licence, and Leigh Creek Coalfield. The map also shows the land use classification, with different land uses such as arable land, natural environments, and other land uses indicated.
Regulation - Compliance and Enforcement Program

Risk Based Inspection
& Audit Schedule
Company Compliance
Reporting – 21 operations

Number of Formal Directions
(since July 2011):
• Environment Directions – 17
• Compliance Directions – 8
• Show Cause Letters – 9

The majority of South Australian operators adhere to and meet Regulatory requirements

Enforcement Pyramid

Punitive tools
Licence or lease cancellation
Bond forfeiture
Prosecution
Administrative Penalty
Compulsive tools
Compliance Direction
Environmental/Rehabilitation Direction
“ShowCause”
Formal warning
Informal warning
Persuasive tools
Monitoring compliance (field/desktop inspections)
Requirement to review program
Lodgement of Bond
Education & support
Preventive tools
Capability assessment
Notice of Entry / Land Access Agreements

- **Notice of Entry**
  
  Notice (21 days) must be served on:
  
  - Landowner – who can be ...
  - Native Title Land – Native Title Holders or Claimants & SANTS
  - Petroleum Act Licencees.

- **Information must include:**
  
  - Reasonable description of activities
  - Process of informing
  - Rights of objection through Warden’s Court
  - Rights of compensation

- **Produce appropriate identification upon request.**
Negotiation of Waiver of Exempt Land

Exempt Land

- Step 1: Giving Notice
- Step 2: Written Agreement
  * Include: conditions, timelines, cooling-off rights
  * Cooling Off Rights – five (5) business days
- ERD Court process where parties can not agree
- Legal Costs up to $500
Declared Equipment

- Declared Equipment includes machinery such as earthmoving and drilling equipment.
- Company must notify (21 days) of any intention to use declared equipment:
  - Landowner
  - Native Title Land – Native Title Holders or Claimants & SANTS
  - Petroleum Act Licencees.
Negotiation of Compensation

- Landowner is entitled to receive compensation for any economic loss, hardship and inconvenience suffered as a consequence of exploration and/or mining.

- When determining the compensation payable you may take into consideration:
  - Any damage caused to the land by the person carrying out the exploration and/or mining.
  - Any loss of productivity or profits as a result of the exploration and/or mining.
  - Any other relevant matters.

- Compensation may include an additional component to cover reasonable costs incurred by the landowner in relation to:
  - The company gaining access to the land; or
  - The activities to be carried out on the land; or
  - The general compensation to be paid.
Consultation During Development of Proposal

- Companies must provide evidence in their Mining Lease Proposals that they have respectfully consulted with all stakeholders and addressed all issues raised.

- Department of State Development must provide a copy of the Mining Lease Application (including proposal) to landowners and council for comment.
Acquisition of Land

• Does not apply in relation to an exploration licence.
• If mining activities substantially impair the owner’s use and enjoyment of the land, the owner may apply to the Land and Valuation Court for an order to transfer the owner’s land to the holder of the mining lease.
• Request compensation for:
  - An amount equivalent to the market value of the land
  - For disturbance
• The Court may consider any compensation that has already been paid.
Rental

• Miners pay annual rental to the government, the annual rental rate is set by the government each year.

• 95% of the annual rental collected by the government is refunded to the freehold landowner.

• This does not form part of a compensation agreement with the mining company.
LAND ACCESS COMMUNITY ENGAGEMENT PROGRAM

• Resources & Energy Group Stakeholder Engagement Framework
• Community Landholder Workshops
• Field Days
• Premier’s Community Excellence Awards in Mining and Energy
• Local Government workshops
• DMITRE Booklet “Understanding Protected Areas”
Key Take-away Points/Summary

- Department of State Development is committed to providing information and assistance to landowners.
- Department of State Development is committed to quality legislation, regulation and compliance.
- Department of State Development undertakes thorough assessment processes.
- Landowners should expect ongoing transparent, respectful communication from explorers and miners throughout a project.
- Companies are obliged to undertake quality engagement as a project takes shape – understanding stakeholder perspectives and risks.
- Government supports the National multiple land use framework.
Any Questions?

Melissa Muller
Principal Policy Advisor