



# LandTrack Systems

Improve mining compliance performance, profit and productivity with our specialised training, tools and support

## Advanced Tenement Management Participant Notes

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## Course Outcomes

Slide 3

- Describe the restrictions and requirements of exploring and mining on various underlying land categories
- Using various tools to do the monitoring and exploration of tenure in WA
- Understanding the PoW process and strategic applications
- Strategically apply for and hold tenure while complying with WA legislation
- Understand the development of resource law in WA and the effect of managing tenure
- Be able to view, understand and audit tenure information
- Describe the framework of environmental compliance in the context of tenement management in WA
- Understand the meaning of Expenditure in WA
- Success strategies for tenement compliance

## Johari Window

Slide 4



## Sessions

Slide 5

[Session 1] Introduction and Monitoring  
[Session 2] Strategically Acquiring Tenure  
[Session 3] Exploration - PoW  
[Session 4] Expenditure and Development in Resource Law

### Session Times

1 – 9.00 to 10.30  
2 – 10.40 to 12.10  
3 – 12.50 to 2.50  
4 – 3.00 to 4.30

## Sessions

Slide 6

[Session 5] Environmental Management: Mining Proposal  
[Session 6] Environmental Legacy  
[Session 7] Risk and Tenement Management  
[Session 8] Risk and Tenement Management

## Housekeeping

Slide 7

Phones  
Discussion and Disagreement  
Muting your microphone  
Video on or off  
Expectations  
Exercise: Challenging assumptions



Roberto Goizueta

## Resources

Slide 8

*Hunt on Mining Law of Western Australia* Fifth Edition  
*Mining Acts* 1978  
*Mining Regulations* 1984  
Proposed Amendments to the *Mining Act*  
Warden's Court Rulings  
Tenement Management Wiki, LandTracker Maps, Tenement Safety Net  
Tengraph Web, Mineral Titles Online, Gazette  
WAMEX and GeoVIEW  
Google and Google Earth

## Recent Developments in Judicial Review of Administration Decisions in the Resources Sector

- [Carnegie Gold Pty Ltd v Maughan \[2018\] WASC 366](#)
- [Paterson v The Minister for Mines and Petroleum \[2018\] WASC 200](#)
- [Forrest & Forrest Pty Ltd v The Honourable William Richard Marmion, Minister for Mines and Petroleum \[2018\] WASCA 32](#)
- [Bond v Maughan \[2018\] WASC 162](#)
- [Forrest & Forrest Pty Ltd v Wilson \[2017\] HCA 30](#)
- [Brewer v John Francis O'Sullivan, Warden at Kalgoorlie \[No 2\] \[2017\] WASC 269](#)

- [Golden Pig Enterprises Pty Ltd v O’Sullivan \[2021\] WASC 396](#)
- [True Fella Pty Ltd v Pantoro South Pty Ltd \[2022\] WAMW 19](#)

## LIST OF ACRONYMS

AACR	Annual Audit Compliance Report
AER	Annual Environmental Report
DMIRS	Department of Mines, Industry Regulation and Safety
DAWE	Department of Agriculture, Water and the Environment
DWER	Department of Water and Environment Resources
EARS	Environmental Assessment and Regulatory System
EIA	Environmental Impact Assessment
EP Act	Environmental Protection Act
EPA	Environmental Protection Authority
EPBC Act	Environmental Protection and Biodiversity Conservation Act
ESA	Environmentally Sensitive Areas
MCP	Mine Closure Plan
MNES	Matters of National Environmental Significance
MRF	Mine Rehabilitation Fund
NGERS	National Greenhouse Gas Emissions Reporting Scheme
PoW	Programme of Work
PoW-P	Programme of Work (hardcopy form submission)
PoW-S	Programme of Work (Spatial or online submission)
RIWI Act	Rights in Water and Irrigation Act
SER(A)	Society for Ecological Restoration (Australia)
TSF	Tailings Storage Facility



The main global uses of lithium.

In addition to the human body, the mineral has multiple and varied applications, with the element sought for use in the nuclear sector as well as in heat-resistant glass and ceramics, greases and polymers, air treatments, industrial powders, steel and aluminium.

However, what the mineral has become renowned for in recent years is its critical inclusion in the lithium-ion battery, which now accounts for almost half of global consumption.



<https://smallcaps.com.au/lithium-stocks-asx-ultimate-guide/>

Viable lithium Resource has to be:

- 2% Li for Hardrock
- 2200 ppm for brine

### Tools for Locating Prospective Areas

Slide 12

- Google:
  - The most expensive mineral (products that are easy to process)
    - Companies that mine lithium
      - Brines – lower
      - Hardrock – Spodumene – Lepidolite
      - Clay/Shale deposits
    - 78 companies in Australia hold lithium tenure
    - Look at the web sites
      - For trends
      - Locations
      - View share prices and financials
      - Take over potential?
- Mindex
- Geoview
- Wamex

### Mindex - Locating Prospective Areas

Slide 13

<http://www.dmp.wa.gov.au/Geological-Survey/Mines-and-Mineral-Deposits-1407.aspx>



## Mines and mineral deposits (MINEDEX)

[Online Systems](#)

[Home](#) [Geological Survey of Western Australia \(GSWA\)](#) [Mineral exploration](#) [Mines and mineral deposits \(MINEDEX\)](#)

MINEDEX is a spatial and textual database providing comprehensive data on mining and exploration sites and projects in WA. MINEDEX is maintained by the department's Geological Survey of Western Australia (GSWA). MINEDEX is free to use without registration.

Mines and Mineral Deposits (MINEDEX)

[ACCESS MINEDEX](#)

MINEDEX provides data on:

- Location and geology of mineralized sites
- Commodities
- Project structure, status, ownership and history
- Mineral resource estimates
- Mineral production data
- Environmental registrations
- Site operators
- Inventory of Abandoned Mine Sites

MINEDEX allows comprehensive searching of the textual database. Spatial searching can be done using [GeoView.WA](#), our free interactive online mapping (GIS-based) system. Custom reports and bulk downloads of MINEDEX data are also available in multiple file formats.

Spatial data from MINEDEX can also be downloaded from the [Data and Software Centre](#) (under "Mineral Information") in the following formats:

The screenshot shows a grid of online systems. Each entry includes an icon, a title, a brief description, and 'ABOUT' and 'ACCESS' buttons. A yellow arrow points to the 'Mines and mineral deposits (MINEDEX)' entry.

System Name	Description
Environmental Assessment and Regulatory System 2 (EARS2)	EARS2 allows online lodgement and tracking of Mineral and Petroleum Environmental Applications.
Environmental Assessment and Regulatory System 2 (EARS2) Reports	EARS2 allows online lodgement and tracking of Mineral Environmental Compliance Reports.
Geochemistry (GeoChem Extract)	Access to geochemical data generated from samples collected during Geological Survey of Western Australia (GSWA) mapping and mineralisation programs.
Historical Mining Tenement Maps	Before TENGRAPH, hard copy maps were maintained. Access historical maps showing the location of mining tenements within Western Australia.
Library catalogue	Search the department's Mineral House Library for publications on Western Australian geology, mining, petroleum and environmental subjects.
Mineral Titles Online (MTO)	Title details of mineral exploration and mining tenements throughout Western Australia.
Mining Notices (including application advertising)	Displays mining tenement applications that have been lodged and also notification of the lodgement and finalisation of surrenders and withdrawals.
Petroleum Geothermal Register (PGR)	Access to information relating to petroleum and geothermal titles.
Safety Regulation System (SRS)	Access to electronic lodgement of documents and data, including approvals, compliance, levy assessment, licensing and certification management.
Geoscience Thesaurus (GEMPeT)	Provides geoscience professionals with a standardised terminology with which to index information assets such as reports, maps and digital datasets.
Interactive geological map (GeoVIEW.WA)	An interactive, GIS-based mapping system. Construct your own geological map and incorporate other mineral and petroleum exploration datasets including mines and mineral deposits, petroleum wells, active leases, and much more.
Mineral exploration reports (WAMEX)	Exploration reports and data for public download.
Mineral Systems Atlas	An evolving platform where GSWA uses the Mineral Systems Analysis approach to deliver tailored derived data layers relevant to mineral deposits in Western Australia in an interactive GIS-based platform.
Mines and mineral deposits (MINEDEX)	A comprehensive database of mines, mineral deposits and prospects including operating status, location, mineral resource estimates, mineral production and ownership.
Petroleum and Geothermal Information (WAPIMS)	Petroleum exploration database containing non-confidential data on wells, geophysical survey titles and other related exploration and production data.
Royalties Online	System for Western Australian mineral and petroleum producers to electronically prepare, lodge and view royalty returns and production reports.
TENGRAPH	A spatial enquiry and mapping system displaying the position of Western Australian mining tenements and petroleum titles in relation to other land information.

 Mines and Mineral Deposits (MINEDEX) under maintenance from 4:30 PM on Monday, 23rd November 2020 to 5:00 PM on Monday, 23rd November 2020

MINEDEX is a spatial and textual database providing comprehensive data on mining and exploration sites and projects in WA. MINEDEX is maintained by the department's Geological Survey of Western Australia (GSWA). MINEDEX is free to use without registration.

Mines and Mineral Deposits (MINEDEX)  [ACCESS MINEDEX](#)

MINEDEX provides data on:

- Location and geology of mineralized sites
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- Project structure, status, ownership and history
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Spatial data from MINEDEX can also be downloaded from the [Data and Software Centre](#) (under "Mineral Information") in the following formats:

- CSV
- ESRI Shape File
- ESRI File Geodatabase
- Google Earth KMZ File (ZIP)
- MapInfo TAB

Sites from MINEDEX are also displayed in other DMIRS spatial systems including [TENGRAPH](#), [Royalties online](#), and [Safety Regulation System](#)

<http://www.dmp.wa.gov.au/Mines-and-mineral-deposits-1502.aspx>

## Mines and Mineral Deposits (MINEDEX)

Search for information on **mines, mineral deposits** and **prospects**.

Search for... | Search all 

### MINEDEX provides information on

- |  |  |   |                                    |
|--|--|---|------------------------------------|
| <a href="#">Sites &gt;</a>   | <a href="#">Site Operators &gt;</a>              | <a href="#">Commodity Groups &gt;</a>         | <a href="#">Reports &gt;</a>       |
| <a href="#">Projects &gt;</a>  | <a href="#">Project Owners &gt;</a>              | <a href="#">Commodities and Minerals &gt;</a> | <a href="#">Data Extracts &gt;</a> |
| <a href="#">Tenements &gt;</a>   | <a href="#">Environmental Registrations &gt;</a> | <a href="#">Products &gt;</a>                 |                                    |
|  <a href="#">Resource Estimates &gt;</a> | <a href="#">Abandoned Mine Features &gt;</a>     |   |                                    |
| <a href="#">Production &gt;</a>  |  |   |                                    |

## Search Resource Estimates

Search by using a combination of any of the fields below:

▶ [Help with Resource Estimates search](#)

**Resource Commodity**

Lithium oxide



**Quantity** (million tonnes)

=  <  >

**Grade** (percent)

=  <  >

**Contained Commodity** (tonnes)

=  <  >

**Cutoff Grade**

(percent)

=  <  >

**Site Name**

**Site Code**

**Project Name**

**Project Code**

**Start Date From**

Type the date...



**Start Date To**

Type the date...



Expand Advanced Search ▼

Search



Limit the search results to:

**Include Resource Estimates**

Current  End Dated

Both

## Search Resource Estimates

Showing 800 records found



Export Results

Start Date ↓	End Date	Site Name	Site Code	Quantity (million tonnes)
09 October 2020		Kathleen Valley Lithium Resource Group	S0236960	3.9
09 October 2020		Kathleen Valley Lithium Resource Group	S0236960	3.9
09 October 2020		Kathleen Valley Lithium Resource Group	S0236960	37.6
09 October 2020		Kathleen Valley Lithium Resource Group	S0236960	37.6
09 October 2020		Kathleen Valley Lithium Resource Group	S0236960	11.7
09 October 2020		Kathleen Valley Lithium Resource Group	S0236960	11.7
09 October 2020		Kathleen Valley Lithium Resource Group	S0236960	17.6
09 October 2020		Kathleen Valley Lithium Resource Group	S0236960	17.6
29 September 2020		Heller	S0238045	0.7
29 September 2020		Heller	S0238045	0.7

1 2 3 4 5 ... 10 items per page  
1 - 10 of 800 records

This PC > Documents

Search Documents

Organize New folder

Name	Date modified	Type
Sites 18-11-2020.xlsx	18/11/2020 4:24 PM	Microsoft Excel Worksheet
Purchase Price Gibbo Park.xlsx	2/10/2020 3:30 PM	Microsoft Excel Worksheet
NTTExpidited.xlsx	15/09/2020 2:57 PM	Microsoft Excel Worksheet
QATestingTens.xlsx	21/08/2020 9:40 AM	Microsoft Excel Worksheet
R1576556-Holdings-2020-08-20.Super.xlsx	20/08/2020 10:59 ...	Microsoft Excel Worksheet
ContactsBrief.xlsx	17/06/2020 2:29 PM	Microsoft Excel Worksheet
Richmond.xlsx	6/05/2020 2:51 PM	Microsoft Excel Worksheet
Chattels_List.xlsx	19/03/2020 10:53 ...	Microsoft Excel Worksheet
Maximus.xlsx	18/11/2019 10:24 ...	Microsoft Excel Worksheet
Trees For Carbon offset.xlsx	10/09/2019 9:19 AM	Microsoft Excel Worksheet
ExpenditureEs.xlsx	22/01/2019 11:59 ...	Microsoft Excel Worksheet
Snowy2.xlsx	20/12/2018 3:23 PM	Microsoft Excel Worksheet
Soil Tests.xlsx	18/12/2018 8:48 AM	Microsoft Excel Worksheet

File name: ResourceEstimates 19-11-2020.xlsx

Save as type: Microsoft Excel Worksheet (\*.xlsx)

Save Cancel

ResourceEstimates 19-11-2020.xlsx - Excel Peter Brammall

File Home Insert Page Layout Formulas Data Review View Add-ins Help Tell me what you want to do

A1 MINEDEX Resource Code

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
MINEDEX	Site / Groi	Site / Groi	Site / Groi	Start Date	End Date	Resource	Resource	Calculatio	In Total R	Reporting	Reporting	Quantity (	Heavy Mh	Grade	Grade M
2	100080	Kathleen	S0236960	Kathleen	#####	Reserve	Proven	Reserves	Yes	2012 JORC	UNDEROU	3.9		0.013	percent
3	100081	Kathleen	S0236960	Kathleen	#####	Reserve	Proven	Reserves	Yes	2012 JORC	UNDEROU	3.9		1.4	percent
4	100085	Kathleen	S0236960	Kathleen	#####	Reserve	Probable	Reserves	Yes	2012 JORC	UNDERGR	37.6		0.012	percent
5	100086	Kathleen	S0236960	Kathleen	#####	Reserve	Probable	Reserves	Yes	2012 JORC	UNDERGR	37.6		1.5	percent
6	100089	Kathleen	S0236960	Kathleen	#####	Reserve	Proven	Reserves	Yes	2012 JORC	OPEN PIT	11.7		0.014	percent
7	100090	Kathleen	S0236960	Kathleen	#####	Reserve	Proven	Reserves	Yes	2012 JORC	OPEN PIT	11.7		1.2	percent
8	100091	Kathleen	S0236960	Kathleen	#####	Reserve	Probable	Reserves	Yes	2012 JORC	OPEN PIT	17.6		0.013	percent
9	100092	Kathleen	S0236960	Kathleen	#####	Reserve	Probable	Reserves	Yes	2012 JORC	OPEN PIT	17.6		1.2	percent
10	100050	Cade	S0238043	Cade	#####	Resource	Inferred	Resources	Yes	2012 JORC	(Australia	2.8		1.18	percent
11	100051	Cade	S0238043	Cade	#####	Resource	Inferred	Resources	Yes	2012 JORC	(Australia	2.8		0.0033	percent
12	100052	Cade	S0238043	Cade	#####	Resource	Inferred	Resources	Yes	2012 JORC	(Australia	2.8		0.63	percent
13	100053	Cade	S0238043	Cade	#####	Resource	Indicated	Resources	Yes	2012 JORC	(Australia	5.4		1.3	percent
14	100054	Cade	S0238043	Cade	#####	Resource	Indicated	Resources	Yes	2012 JORC	(Australia	5.4		0.0033	percent
15	100055	Cade	S0238043	Cade	#####	Resource	Indicated	Resources	Yes	2012 JORC	(Australia	5.4		0.55	percent
16	100056	Davy	S0238051	Davy	#####	Resource	Inferred	Resources	Yes	2012 JORC	(Australia	2.3		1.13	percent
17	100057	Davy	S0238051	Davy	#####	Resource	Inferred	Resources	Yes	2012 JORC	(Australia	2.3		0.0053	percent
18	100058	Davy	S0238051	Davy	#####	Resource	Inferred	Resources	Yes	2012 JORC	(Australia	2.3		0.68	percent
19	100059	Heller	S0238045	Heller	#####	Resource	Inferred	Resources	Yes	2012 JORC	(Australia	0.7		1.02	percent

ResourceEstimates

ResourceEstimates 19-11-2020.xlsx - Excel Peter Brammall

File Home Insert Page Layout Formulas Data Review View Add-ins Help Tell me what you want to do

Insert: PivotTable, Recommended PivotTables, Tables, Illustrations, Add-ins, Recommended Charts, Charts, PivotChart, 3D Map, Tours, Sparklines, Filters, Slicer, Column, Win/Loss, Timeline, Link, Text, Symbols

A1 MINEDEX Resource Code

B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
EX	Site / Groi	Site / Groi	Site / Groi	Start Date	End Date	Resource	Resource	Calculatio	In Total R	Reporting	Reporting	Quantity (	Heavy Mh	Grade	Grade M
2	080	Kathleen	S0236960	Kathleen	#####	Reserve	Proven	Reserves	Yes	2012 JORC	UNDEROU	3.9		0.013	perce
3	081	Kathleen	S0236960	Kathleen	#####	Reser						3.9		1.4	perce
4	085	Kathleen	S0236960	Kathleen	#####	Reser						7.6		0.012	perce
5	086	Kathleen	S0236960	Kathleen	#####	Reser						7.6		1.5	perce
6	089	Kathleen	S0236960	Kathleen	#####	Reser						11.7		0.014	perce
7	090	Kathleen	S0236960	Kathleen	#####	Reser						11.7		1.2	perce
8	091	Kathleen	S0236960	Kathleen	#####	Reser						7.6		0.013	perce
9	092	Kathleen	S0236960	Kathleen	#####	Reser						7.6		1.2	perce
10	100050	Cade	S0238043	Cade	#####	Resou						2.8		1.18	perce
11	100051	Cade	S0238043	Cade	#####	Resou						2.8		0.0033	perce
12	100052	Cade	S0238043	Cade	#####	Resou						2.8		0.63	perce
13	100053	Cade	S0238043	Cade	#####	Resou						5.4		1.3	perce
14	100054	Cade	S0238043	Cade	#####	Resou						5.4		0.0033	perce
15	100055	Cade	S0238043	Cade	#####	Resou						5.4		0.55	perce
16	100056	Davy	S0238051	Davy	#####	Resou						2.3		1.13	perce
17	100057	Davy	S0238051	Davy	#####	Resou						2.3		0.0053	perce
18	100058	Davy	S0238051	Davy	#####	Resou						2.3		0.68	perce
19	100059	Heller	S0238045	Heller	#####	Resou						0.7		1.02	perce
20	100060	Heller	S0238045	Heller	#####	Resource	Inferred	Resources	Yes	2012 JORC	(Australia	0.7		0.0076	perce
21	100061	Heller	S0238045	Heller	#####	Resource	Inferred	Resources	Yes	2012 JORC	(Australia	0.7		0.72	perce
22	100485	Pilgangoon	S0233301	Resources	#####	Resource	Measured	Resources	Yes	2012 JORC	(Australia	18.3		0.45	perce
23	100486	Pilgangoon	S0233301	Resources	#####	Resource	Measured	Resources	Yes	2012 JORC	(Australia	18.3		0.0151	perce

ResourceEstimates

Create PivotTable dialog box: Table/Range: ResourceEstimates!\$A\$1:\$AC\$801, Location: New Worksheet, Location: [blank]

The screenshot shows an Excel PivotTable with 'Row Labels' and 'Sum of Grade'. The PivotTable Fields task pane on the right has 'Site / Group Site Name' checked under 'Choose fields to add to report:'. A yellow arrow points to this checkbox.

Row Labels	Sum of Grade
Anna	1.9387
Bald Hill Group	15.3829
Cade	5.5516
Cassiterite	995.473
Cassiterite North East Node	460.089
Central - Far East	25.8688
Davy	1.8153
Earl Grey Pegmatite	16.25
Eastern Pegmatites - Pilgangoora	23.2287
Greenbrushes Central Lode Spodumene Resources Group	70.26
Greenbrushes C3 Spodumene	52.3
Heller	1.7476
Kathleen Valley Lithium Resource Group	26.25
Lynas Find Main Pegmatite	18.1868
Lynas Find Track Pegmatite	6.867
Monster	15.3423
Mt Cattlin - Dowling Openpit	56.8409
Mt Marion Area 4 Pegmatite	19.23
Mt Marion Area 5 Pegmatite	18
Mt Marion North Pit 1 (N01)	20.35
Mt Marion North Pit 2	21.7
Mt Marion North Pit 4 (2 West)	19.85
Mt Marion Pit C01	15.78
Mt Marion Resources Group	19.51
Pilgangoora C1 Area	2.64
Pilgangoora E1 Area	2.62

The screenshot shows the Excel ribbon and a PivotTable with 'Row Labels' and 'Sum of Grade'. The PivotTable Fields task pane on the right has 'Resource Status' checked under 'Choose fields to add to report:'. A yellow arrow points to this checkbox. The PivotTable columns are 'Indicated', 'Inferred', 'Measured', 'Probable', 'Proven', and 'Grand Total'. A second yellow arrow points to the 'Resource Status' dropdown in the Columns area of the task pane.

Row Labels	Indicated	Inferred	Measured	Probable	Proven	Grand Total
Anna	0.9845	0.9542				1.9387
Bald Hill Group	6.2227	5.7795		3.3807		15.3829
Cade	1.8533	3.6983				5.5516
Cassiterite	453.539	451.904		90.03		995.473
Cassiterite North East Node	93.45	366.639				460.089
Central - Far East	9.6126	10.8418	5.4144			25.8688
Davy		1.8153				1.8153
Earl Grey Pegmatite	4.05	3.74	2.76	2.9	2.8	16.25
Eastern Pegmatites - Pilgangoora	8.495	8.9093	5.8244			23.2287
Greenbrushes Central Lode Spodumene Resources Group	15.78	11.53	13.95	14.94	14.06	70.26
Greenbrushes C3 Spodumene	13.6		10.5	12.6	15.6	52.3
Heller		1.7476				1.7476
Kathleen Valley Lithium Resource Group	6.869	6.365	5.264	3.925	3.827	26.25
Lynas Find Main Pegmatite	8.6758	9.511				18.1868
Lynas Find Track Pegmatite	3.179	3.688				6.867
Monster	5.7924	5.8817	3.6682			15.3423
Mt Cattlin - Dowling Openpit	14.7889	11.9236	14.341	8.6914	7.096	56.8409
Mt Marion Area 4 Pegmatite	7.48	9.05	2.7			19.23
Mt Marion Area 5 Pegmatite	5.1	12.9				18



Browse ▾

Search by map



[Home](#) > [Search Sites](#)

## Search Sites

Search by using a combination of any of the fields below:

Site Name

Site Code

Project Name

Project Code

Site Stage

Commodities associated with the Site

Expand Advanced Search ▾

Limit the search results to:

**Include Site Names**

- Current Names Only
- Current, Previous and Alternative Names

**Include Sites and Groups Sites**

- All Sites and Group Sites
- Sites Only
- Group Sites Only

**Abandoned Mine Features**

- Yes
- No

► [What are Abandoned Mine Features?](#)

Showing 16 records found

Site Name ↑	Site Code	Project Name	Project Code	Name 1
<a href="#">Anna</a>	S0236121	Buldania Lithium	J05283	Current

Government of Western Australia  
Mines, Industry Regulation and Safety

# GeoVIEW.WA

Getting Around Identify Tools Drawing & Measurement Maps & Data Sources Search Printing Help & Feedback

Simple search Advanced Filter Refine Data GSWA Catalogue WAMEX Drillholes Geochemistry MINEDEX by region GSWA Geochronology Historical Tenement Maps Tenements by holder Global Search Clear Selection Results

**I want to...**

Layers

Mines and Mineral Deposits (MINEDEX)

Filter Layers...

- Minerals
  - Abandoned Mines Inventory
  - Mines and Mineral Deposits (MINEDEX)
- Historical Exploration Activities
  - Mineral Exploration Reports (WAMEX)
  - Major Resource Projects
  - Operating Mines
- Drillholes
- Tenements
- Native Title
- Special Category Lands
- Geochronology
- Geochemistry
- Geophysical Surveys
- Petroleum
- Indexes
- Administration Boundaries

Getting Around Identify Tools Drawing & Measurement Maps & Data Sources Search Printing Help & Feedback

Simple search Advanced Filter Refine Data GSWA Catalogue WAMEX Drillholes Geochemistry MINEDEX by region GSWA Geochronology Historical Tenement Maps Tenements by holder Global Search Clear Selection Results

**I want to...**

Filter

Data Source:  
Mines and Mineral Deposits (MINEDEX)

Map Area:  
All

Find results in Mines and Mineral Deposits (MINEDEX) where:

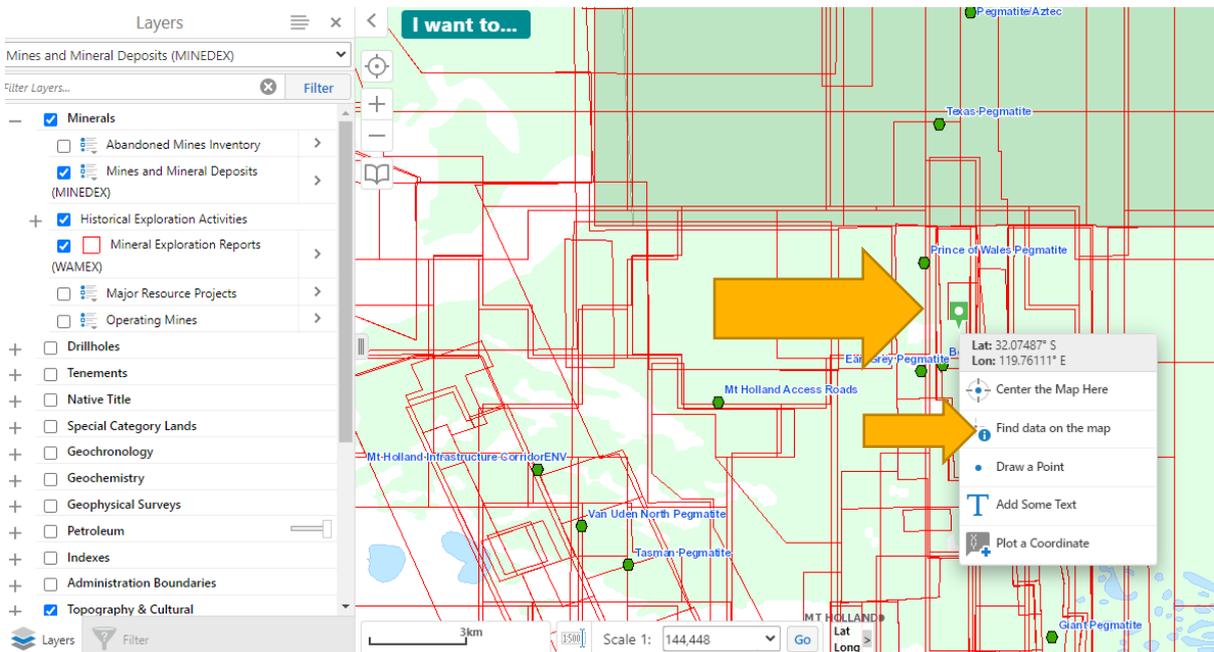
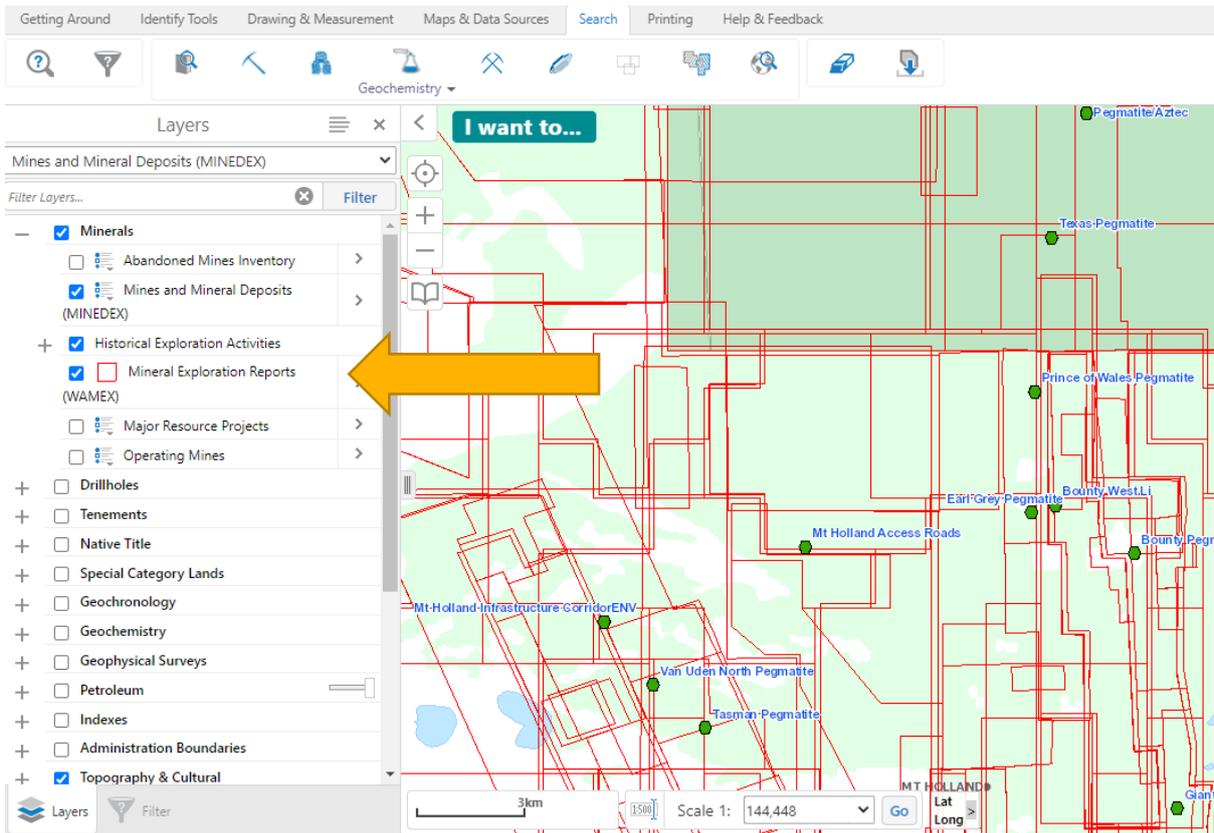
All of the following must be true  
 At least one of the following must be true

SITE COMM contains Li

[Add Condition](#) [Add Subclause](#)

Clear Filter Cancel





Government of Western Australia  
Department of Mines, Industry Regulation and Safety

GeoVIEW.WA

Getting Around Identify Tools Drawing & Measurement Maps & Data Sources Search Printing Help & Feedback

Geochemistry

Mineral Exploration Report - 89104

**I want to...**

Mineral Exploration Report - 29756

☆ Mineral Exploration Report - 29756

East Quest E77/88 Project Report 01/11/87 - 31/03/89 Report  
No:212016; (R Report)

View abstract  
View report

[View Additional Details](#) | [Run a Report](#) | [Remove from Results](#)

Scale 1: 577,791

Lat Long

Identify Results (37)

ANUMBER	TITLE	REPORT YEAR	AUTHOR NAME	AUTHOR COMPANY
69384	Annual Report, Mount H...	2004	STOTT C L	
56334	Combined mineral explo...	1998	HUTTON D J	
104027	Forrestania Project Annu...	2014	WOODHOUSE M	
18473	Lake Cronin (E77/22) An...	1986		METALS EXPLORATION LTD
89104	Forrestania Project Mt H...	2010	ROBINSON S	

Description  
Forrestania Project Mt Holland Annual Exploration Report for the year ending 31st August 2010 Combined Reporting Group C35/2010  
[View abstract](#)  
[View report](#)

Hyperlinks

Abstract

Report

Details  
ANUMBER  
89104  
TITLE  
Forrestania Project Mt Holland Annual Exploration Report for the year ending 31st August 2010 Combined Reporting Group C35/2010  
REPORT YEAR  
2010  
AUTHOR NAME  
ROBINSON S  
AUTHOR COMPANY  
N/A

## File list

Mineral Exploration Reports  
Filter: A89104

Title	Author	Category	Released d...	Size
<a href="#">A089104_appendix_11392363.ZIP</a>		Mineral Exploration Reports		20.34 MB
<a href="#">A089104_C35_2010_2010A AnnualReport_16477410.PDF</a>		Mineral Exploration Reports		885.16 kB
<a href="#">A089104_Drilling_16590657.ZIP</a>		Mineral Exploration Reports		495.07 kB
<a href="#">A089104_resource_model_11377963.ZIP</a>		Mineral Exploration Reports		2.38 MB
<a href="#">A089104_SurfaceGeochem_16608517.ZIP</a>		Mineral Exploration Reports		16.95 kB
<a href="#">A89104_a89104_a089104_c35_2010_2010a annualreport_16477410_(OCR).pdf</a>		Mineral Exploration Reports		1.62 MB

## Tools for Monitoring

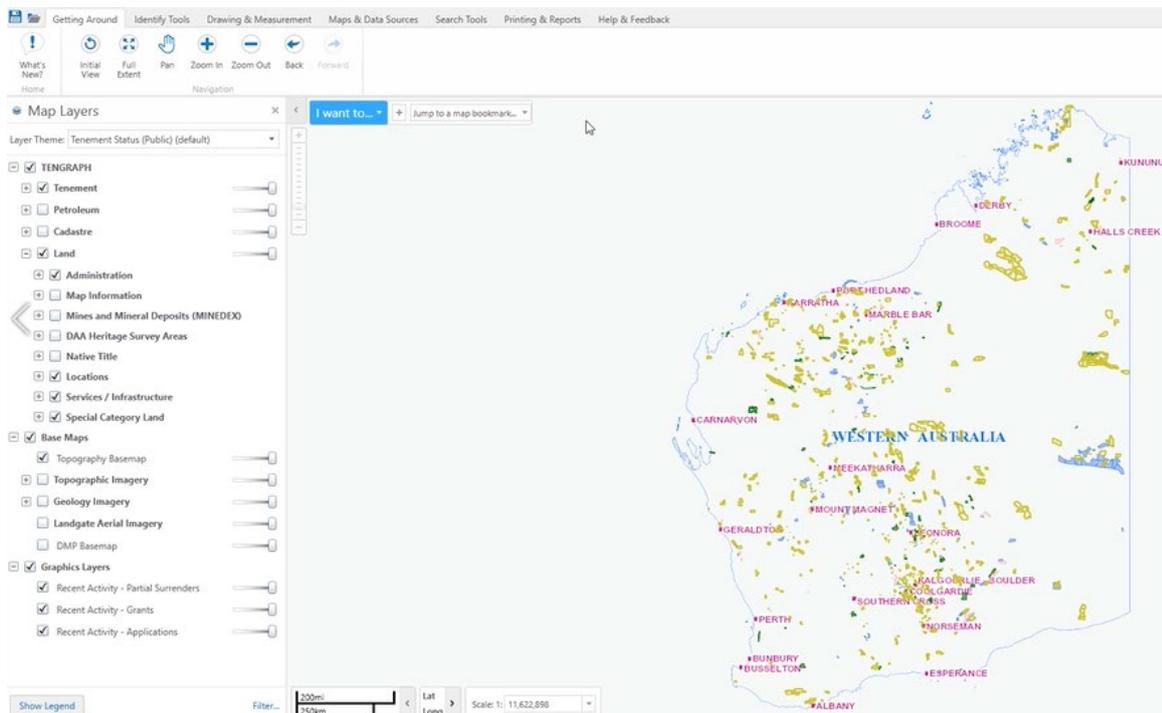
Slide 14

- Geoview
- MTO
  - Status Search
  - Dealing search
- Tengraph Web

## Tengraph Monitoring

Slide 15

### Tengraph Web



## Understanding Mineral Titles Online

Slide 16

### DMIRS Policy of updating MTO data

- Tenement surrenders and withdrawals are “registered” in the dealings tab of MTO when received then marked as finalised when the various checks are completed
- These type of dealings are not made public until 4:30 in the afternoon
- A search will show these dealings
- If you want to be first in line for an application you need to access the dealings

- Voluntary Surrender does not have a moratorium period (the words “voluntary surrender” must be written on the surrender document).
- A Compulsory Surrender goes into a moratorium period
- <https://emits.dmp.wa.gov.au/emits/advert/index.xhtml>

Government of Western Australia  
Department of Mines, Industry Regulation and Safety

Mining Tenement Application Advertising | General Notifications

**Surrender and Withdrawal Notifications** . Select for further information.  
**Disclaimer:** The data supplied through this feed is for information purposes only. When establishing ground a mapping system.

Find notification by type: Surrender - Conditional, Surrender - Outright, Partial Surrender - Compulsory, Partial Surrender - Conditional, Partial Surrender - Voluntary, Withdrawal of Tenement

Affecting Tenements Types: E - Exploration Licence, G - General Purpose Lease, M - Mining Lease, L - Miscellaneous Licence, P - Prospecting Licence, R - Retention Licence

in: District, Any

Posted Between: 06/05/2019, 20/05/2019

**Search Results**

		Notifications
<b>Partial Surrender - Voluntary 553880</b>		
Posted:	16/05/2019 16:30:00	
Affected Tenement:	<a href="#">Exploration Licence 09/2100</a>	
Lodged:	16/05/2019 14:36:32	
Status:	Pending	
<b>Partial Surrender - Compulsory - Section 65 (3) 553857</b>		
Posted:	16/05/2019 16:30:00	
Affected Tenement:	<a href="#">Exploration Licence 45/3574</a>	
Lodged:	16/05/2019 12:41:08	
Status:	Pending	
<b>Partial Surrender - Compulsory - Section 65 (3) 553856</b>		
Posted:	16/05/2019 16:30:00	
Affected Tenement:	<a href="#">Exploration Licence 45/3575</a>	
Lodged:	16/05/2019 12:41:08	
Status:	Pending	
<b>Partial Surrender - Compulsory - Section 65 (3) 553855</b>		
Posted:	16/05/2019 16:30:00	
Affected Tenement:	<a href="#">Exploration Licence 45/3576</a>	
Lodged:	16/05/2019 12:41:08	
Status:	Pending	
<b>Partial Surrender - Compulsory - Section 65 (3) 553854</b>		
Posted:	16/05/2019 16:30:00	
Affected Tenement:	<a href="#">Exploration Licence 45/3577</a>	
Lodged:	16/05/2019 12:41:08	
Status:	Pending	

First < 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 2

- Approximately 30% of the “Status” field (e.g. live and expired) are released on the same day.
- Login on to MTO and do a status search
- Enquiry>Tenement General
- Status “Dead”
- Select “Refine”

**Enquiry: Tenement General**

**Search Criteria:**

Find tenements with status **Dead** and type **E - Exploration Licence**  
 held by Anyone **Change Holder Selection**  
 in **District** **Any**  
 Refine... ( Searching with Refinement )

**Search Results** Close

Date Range **Death** Date Between **12/05/2019** **20/05/2019**  
 Death Reason **Any**  
 Special Indicator **Any** Status **All**

	Tenement	Status						
<input type="checkbox"/>	E 52/3690	Dead	07/0					
<input type="checkbox"/>	E 77/2582	Dead	18/01/2019 12:56:21				17/05/2019 15:20:00	Withdrawn
<input type="checkbox"/>	E 46/1217	Dead	25/10/2017 08:30:00				17/05/2019 12:41:20	Withdrawn
<input type="checkbox"/>	E 46/1218	Dead	25/10/2017 08:30:00				17/05/2019 12:41:20	Withdrawn
<input type="checkbox"/>	E 53/2064	Dead	05/02/2019 08:30:00				17/05/2019 10:08:01	Withdrawn
<input type="checkbox"/>	E 45/5357	Dead	12/10/2018 14:26:58				17/05/2019 10:05:47	Withdrawn
<input type="checkbox"/>	E 53/2070	Dead	05/04/2019 08:56:02				15/05/2019 23:59:59	Invalid
<input type="checkbox"/>	E 46/1221	Dead	27/10/2017 14:01:45				15/05/2019 15:34:21	Withdrawn
<input type="checkbox"/>	E 45/5306	Dead	19/07/2018 13:56:23				15/05/2019 15:31:05	Withdrawn
<input type="checkbox"/>	E 47/4011	Dead	16/05/2018 08:33:35				15/05/2019 15:31:05	Withdrawn

Options Total of 18 results.

## Paid Extract – Activity

Slide 19

Tenement Search

<https://emits.dmp.wa.gov.au/emits/enquiry/home2.xhtml>

## Forfeiture & Expiring Tenure

Slide 20

- Prospecting licences expire after 8 years
- Forfeiture notices in the Government Gazette
- Google: WA government Gazette
- <https://www.wa.gov.au/government/publications/government-gazette>

MINING ACT 1978  
 Application for an Order for Forfeiture  
 Department of Mines and Petroleum, Kalgoorlie WA 6430.

In accordance with Regulation 49(2)(c) of the *Mining Regulations 1961*, notice is hereby given that the following licences are liable to forfeiture under the provision of Section 96(1)(a) of the *Mining Act 1978* for breach of covenant, being failure to comply with the prescribed expenditure conditions and/or non-compliance with the reporting provisions.

A. HILLS-WRIGHT, Warden.

To be heard by the Warden at Kalgoorlie on 9 March 2018.

**EAST COOLGARDIE MINERAL FIELD**  
 Prospecting Licences

P 25/2071 Northern Mining Ltd  
 P 25/2161 The Food Revolution Group Ltd  
 P 25/2162 The Food Revolution Group Ltd  
 P 25/2163 The Food Revolution Group Ltd  
 P 25/2164 The Food Revolution Group Ltd  
 P 26/3705 Northern Mining Ltd  
 P 26/3706 Northern Mining Ltd  
 P 26/3707 Northern Mining Ltd  
 P 26/3708 Northern Mining Ltd  
 P 26/3709 Northern Mining Ltd  
 P 26/3710 Northern Mining Ltd

**NORTH COOLGARDIE MINERAL FIELD**  
 Prospecting Licences

F 31/2068 Saturn Metals Limited  
 F 31/2070 Saturn Metals Limited  
 F 31/2071 Saturn Metals Limited  
 F 31/2072 Saturn Metals Limited  
 F 31/2073 Saturn Metals Limited

## Data Sites

Slide 21

- <https://dasc.dmp.wa.gov.au/dasc/>
- DMIRS Data Site contains ESRI, Mapinfo files and KMZ files
- Among other files the following are available
  - Under Minerals
    - Mindex
    - Wamex
    - Historical Exploration Activity
    - Other info such as Mines and Mineral deposits
  - Under the Tenements
    - Current tenements
    - Pending releases, which is important for monitoring ground and is updated daily
- Files are updated overnight; this is too late for acquiring tenure

## Tenement Consultants

Slide 22

What are tenement consultants doing?

- MacMahons state on their website that they have a couple of bespoke systems to monitor tenements.
- Austwide state that they have the best ground monitoring service in WA.

## Blue Sky Mining

Slide 23

Given the previous information what strategy is Blue Sky Mining going to adopt to monitor ground for a tenement application?

## Activity – 8 Year Prospecting Licences

Slide 24

- Wiki: 8 Year Prospecting Licences
- Quick Appraisals
- Tenement Schedule and Due Diligence
- Paid Extracts
- Tengraph Web
- Search MTO
  
- Is there anything anomalous about these tenements?
- Is there anything advantageous about these tenements and their upcoming expiries?
- Thinking – Acquisition!

## **Outcomes for Monitoring**

**Slide 25**

Describe the methods of monitoring tenure  
Be aware of all the tools available for monitoring tenure  
Have an understanding of the strategies and methods of monitoring tenure  
The ability to assess tenure data and identify potential problems

## **Acquiring Tenure -Session 2**

### **Session 2 Outcomes**

**Slide 2**

Sessions

[Session 1] Introduction and Monitoring

**[Session 2] Strategically Acquiring Tenure**

[Session 3] Exploration - PoW

[Session 4] Expenditure and Development in Resource Law

[Session 5] Environmental Management: Mining Proposal

[Session 6] Environmental Legacy

[Session 7] Management of Tenure Difficulties

[Session 8] Management of Tenure Difficulties

### **Session 2 Outcomes**

**Slide 3**

- Pre-Application Considerations
- Post Application Considerations
- Due Diligence
- Suspending tenure applications
- Finding problems with tenure in a due diligence
- Mitigating problems uncovered in a due diligence
- Identifying Post Application considerations.

### **Acquiring Tenure - Pre-Application Scenario**

**Slide 4**

Blue Sky Mining has now selected an area based on new geological concept. What does it need to consider before it makes an application considering it is short of money because last month the MD and CFO attended a lithium conference in Paris, splurging on French wine etc.

The capital raising has been delayed hence the funding for exploration so you need to warehouse Blue Sky's tenements until the money is raised. Though when the money does arrive you need them granted quickly. Entering into the JV Agreements and managing the tenure.

## Outcome

We learnt how to make Exploration and Prospecting Licence applications in the “Practical Tenement Management” course, so we want to look at the strategies for securing ground, within the framework of the *Mining Act* and DMIRs policies and the *Corporation Law* and ASX listing rules.

## Pre-Application Considerations

Slide 5

Question

What needs to be considered before making a tenement application?

- 1
- 2
- 3
- 4

## Separate Companies

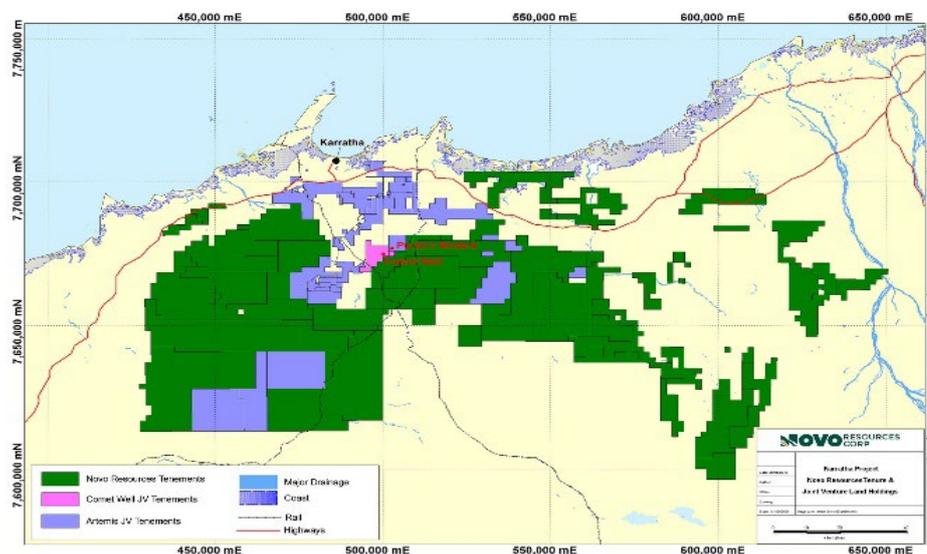
Slide 6

- In what company name should the application be made?
- Why?
- What about JV partners in our application?

## Multiple Applications Simultaneously

Slide 7

- Can the geological concept be applied elsewhere and all applications made at once?
- Does Blue Sky Mining need to apply for all the ground it possibly can before it is public knowledge?
- Example: Nova Resources’ multiple applications in the Pilbara over the conglomerate that contained watermelon seeds of gold. They applied for 20 -30 exploration licences in the space of 24 hours.



## Continuous Disclosure Rules

Slide 8

- Reporting any Listing Rule 3.1 “Immediate notice of material information provides: “Once an entity is or becomes aware of any information concerning it that a reasonable person would expect to have a material effect on the price or value of the entity's securities, the entity must immediately tell ASX that information.”
- Listing Rule 3.1 give the following examples of the type of information that could be market sensitive:
  - a transaction that will lead to a significant change in the nature or scale of the entity’s activities;
  - a material mineral or hydrocarbon discovery;
  - a material acquisition or disposal;
  - the granting or withdrawal of a material licence;
  - the entry into, variation or termination of a material agreement;
  - becoming a plaintiff or defendant in a material law suit;
  - the fact that the entity’s earnings will be materially different from market expectations;

## Continuous Disclosure Rules (continued)

Slide 9

- the appointment of a liquidator, administrator or receiver;
- the commission of an event of default under, or other event entitling a financier to terminate, a material financing facility;
- under subscriptions or over subscriptions to an issue of securities (a proposed issue of securities is separately notifiable to ASX under Listing Rule 3.10.3);
- giving or receiving a notice of intention to make a takeover; and
- any rating applied by a rating agency to an entity or its securities and any change to such a rating.

<https://www.asx.com.au/documents/about/abridged-continuous-disclosure-guide-clean-copy.pdf>

## Underlying Title

Slide 10

- Are there any areas that may be affected?
- Do you want to exclude the tenure from the application or have a separate application to cover the underlying tenure.
  - Areas of influence
  - Native title
  - Land tenure underlying the application
    - Freehold
    - Pastoral lease
    - Diversification Lease
    - VCL
    - Reserves
    - Aboriginal reserves



- Other tenements effected e.g. Ls

### **S58(1) Statement to Accompany the Application**

**Slide 11**

Exploration Statement with the Blue-Sky Mining lacking sufficient funds?

An application for an exploration licence must be accompanied by a statement specifying:

- i. The proposed method of exploration of the area in respect of which the licence is sought.
- ii. The details of the program of work proposed to be carried out on the area of land applied for.
- iii. The estimated amount of money proposed to be expended on the exploration.
- iv. The technical and financial resources available to the applicant.

[http://www.dmp.wa.gov.au/Documents/Minerals/Minerals\\_Sect58\(1\)\(b\)\\_Statement.pdf](http://www.dmp.wa.gov.au/Documents/Minerals/Minerals_Sect58(1)(b)_Statement.pdf)

Recent decision of True Fella v Pantoro South Pty Ltd

Requires 5 year exploration programme

<https://landtrack.com.au/truefella/>

### **Financial Resources**

**Slide 12**

DMP Guidelines:

Use one or more of:

- the most recent financial statement (ASX rules);
- line of credit from a recognised financial institution;
- a current Bank statement;
- a current financial statement prepared by a Certified Practising Accountant or Chartered Accountant.



### **Why Companies Delay Tenements Grant**

**Slide 13**

Why postpone tenement's grant?

- Not pay rent
- Not pay rates
- Not committed to exploration
- Commitment doesn't escalate
- Delays the period of 40% partial surrender.
- Raise funds for exploration

Can we access to the ground in the current environment?

## How do Companies Delay a Tenements Grant

Slide 14

Blue Sky Mining may want to suspend the tenure as applications until such time they have JV funding? How are they going to do this?

- Competing tenure
- Objections
- ~~Overlapping tenure~~
- Native Title negotiations
- Overlapping into national parks or nature reserves
- Repeat applications

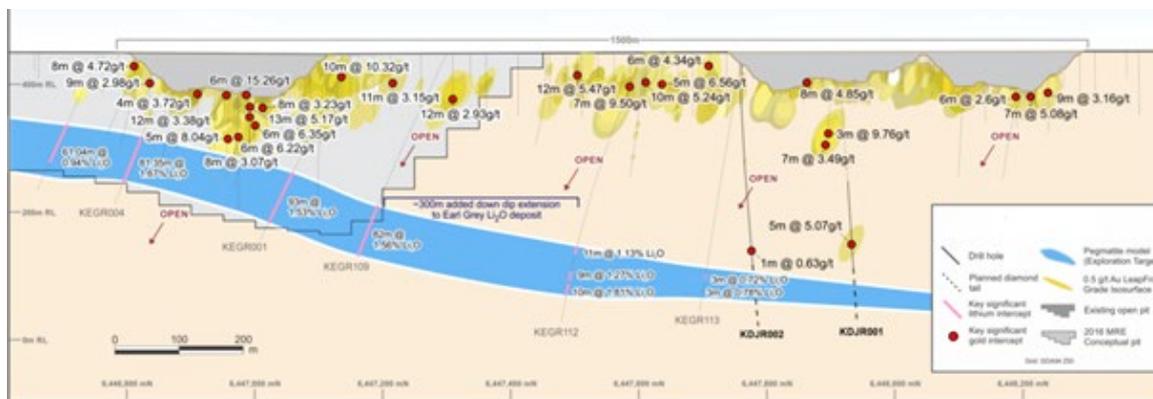
## Acquiring Tenure by JV

Slide 15

Scenario

Blue Sky Mining has identified spodumene in pegmatite veins on Ora Banda Mining (OBM) formerly Eastern Goldfields Limited's (EGS) now known as tenements and wish to enter and explore the area. Specifically, the first 5 tenements in Eastern Goldfield's Prospectus.

Note: OBM subsidiary companies are Siberia Mining, Carnegie Gold Pty Ltd. Using 5 tenements from 2019 Annual Report (page 89- in the Wiki)) or the 2013 (online), identify any issues arising. M24/39, M24/960, M30/103, M30/255 and M30/256



## Due Diligence

Slide 16

Due Diligence Considerations

- Ownership Arrangements, e.g. Administrators, registered holders, beneficial holders, mortgagee
- Tenure in good standing, expenditure, rents, rates, exemptions, complaints, group reporting, partial surrenders, reporting lodged, MRF, disturbance.
- Native Title agreements
- Landholder agreements – pastoralists
- Related tenure agreements
- Heritage searches
- Royalties
- M's surveys done

- Outstanding Stamp Duty
- Friendly Forfeiture Applications
- Use MTO, Quick Appraisal Reports, Tengraph Web, Prospectus
- Also see Orabanda Mining Annual Report  
<https://www.orabandamining.com.au/investor-centre/>

Question: How will we mitigate the issue identified?

**Due Diligence M24/39** **Slide 17**

**Due Diligence M24/960** **Slide 18**

**Due Diligence M30/103** **Slide 19**

**Due Diligence M30/255** **Slide 20**

**Due Diligence M30/256** **Slide 21**

**Post Application Considerations** **Slide 22**

Blue Sky Mining has just had the tenure granted, what are the things to consider?

- Shareholder notifications
- Land Tenure notifications
- Meeting first year commitments or reason for exemptions
- Get the tenement into a group report
- Organise Heritage Surveys
- Budgeting for exploration

**Summary** **Slide 23**

Summary of the issues covered are:

- Pre-Application Considerations
- Post Application Considerations
- Due Diligence
- Suspending tenure applications
- Identifying problems with tenure in a due diligence
- Mitigating problems in a due diligence
- Identifying Post Application considerations.

## Exploration and PoWs -Session 3

### Session 3

### Slide 2

[Session 1] Introduction and Monitoring

[Session 2] Strategically Acquiring Tenure

**[Session 3] Exploration - PoW**

[Session 4] Expenditure and Development in Resource Law

[Session 5] Environmental Management: Mining Proposal

[Session 6] Environmental Legacy

[Session 7] Management of Tenure Difficulties

[Session 8] Management of Tenure Difficulties

### Session 3 Outcomes

### Slide 3

Participants will be able to understand the requirements before commencing exploration in WA including:

- PoW requirements
- PoW lodgement
- Strategic analysis PoW requirements
- Strategic analysis of exploration requirements
- Reaching the desired outcomes

### Exploration and PoW

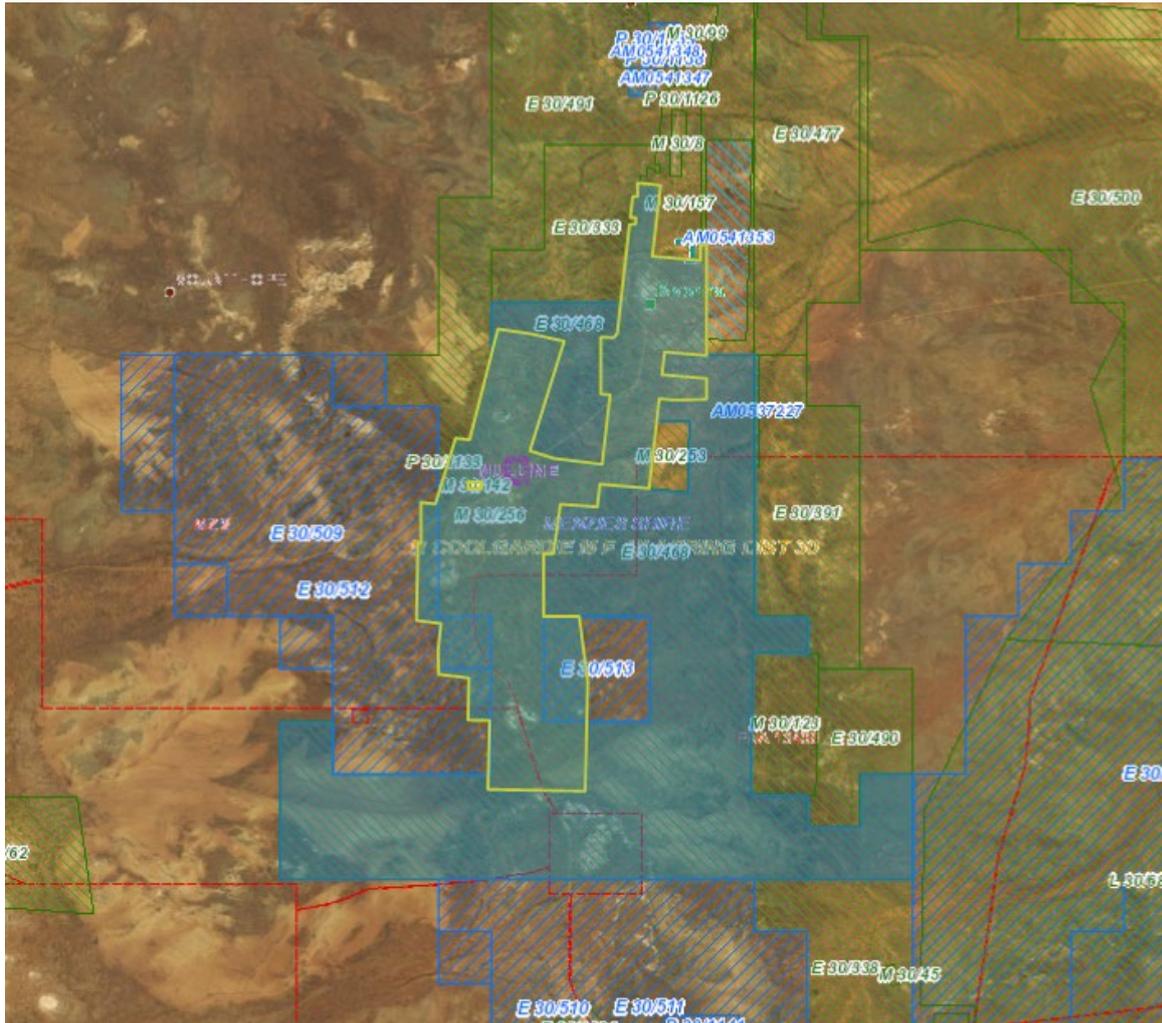
### Slide 4

Scenario

- Blue Sky Mining now signed a JV to explore E30/468 and M30/256 and now is required to undertake exploration on the ground. The capital raising has been delayed hence the funding for exploration. But now you need your ducks in a row for when the money does eventually arrive to get on the ground and start drilling.

Outcome

- Plan a strategy for undertaking exploration on the Exploration Licence and Mining Lease considering the various legislative requirements in particular lodging a PoW.



**Overarching philosophy of the Mining Act 1978 (W.A)**

*'...ground should be explored, mined and otherwise kept in good condition. If not, the grant of a tenement over that ground should be revoked.'*

Hunt, Michael --- "Legal Aspects of Mining Tenement Management in WA" [1987]; 6(1) *Australian Mining and Petroleum Law Bulletin* 33

## Programme of Work Applications or EMA

## Slide 7

- Proponents are required to obtain approval from DEMIRS before undertaking any ground disturbing activity on a tenement granted under the *Mining Act 1978* this includes Exploration activities.
- Exploration activities are authorised via the EMA or PoW process.
- EMA is automated authorisation for eligible activities
- Eligible activities are listed in Regulations
- EMA is for machinery causing minimal disturbance
- Excluded lands from the EMA will be gazetted



## Programme of Work Applications

## Slide 8

### PoW-S

- Use P 70/1738 for the purposes of this exercise, working over a JV area
- Online application process.
- Intersects proposed activities with environmental and culturally significant data layers and highlights all potential impacts.
- Proponents can then make adjustments to their proposed activities to avoid impacting sensitive areas.
- Environmental concerns have to be identified before submission. Once submitted, they cannot be amended.
- **Incomplete applications will be rejected**

## Environmental information required

## Slide 9

Description of existing landforms, environment and vegetation:

- Do activities require the clearing of native vegetation?
- Do activities occur in Environmentally Sensitive Areas (ESA)?
- Do activities occur on isolated hills/ranges in the MidWest or Yilgarn (Banded Iron Formations)? E.g. Helena and Aurora Range (Bungalbin)

## Environmental information required (cont'd)

## Slide 10

- Description of disturbance to the beds and/or banks of a watercourse
- Safety procedures for fibrous minerals, e.g. asbestos
- Radiation Management Plan — in the event that radioactive material is inadvertently found
- Consideration of Rights in Water and Irrigation (RIWI) Act 1914

## Environmentally Sensitive Areas (ESA)

Slide 11

- Environmentally Sensitive Areas are defined in Regulation 6 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*. Some examples of ESAs are World Heritage property; wetlands; Bush Forever Sites; areas listed on the Register of National Estate for natural values; areas within 50 m of Declared Rare Flora; and areas covered by a Threatened Ecological Community.
- Clearing for exploration purposes is exempt from requiring a clearing permit, provided it is not within an Environmentally Sensitive Area (ESA), and is conducted under an authority granted under the Mining Act 1978 (e.g. an approved Programme of Work).
- Proposals taking place in an ESA requires Native Vegetation Clearing Permit (Clearing Permit).
- Clearing Permit system administered by Department of Water and Environmental Regulation (DWER) not DMIRS.

## Environmentally Sensitive Areas (ESA) cont'd

Slide 12

Application for proposed mining activities will need to include:

- Type of ESA
- Clearing Permit submission number and lodgement date

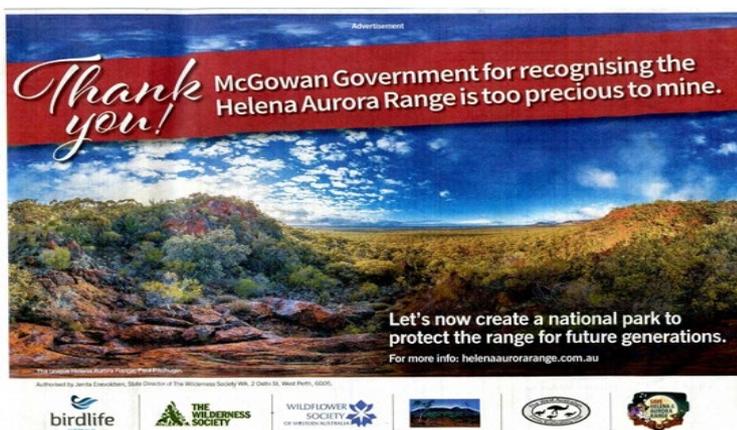
Note: If your proposed activities involve the clearing of Native Vegetation within an ESA, and no Clearing Permit has yet been lodged with DWER Native Vegetation Assessment Branch, you will be unable to proceed with the lodgement process any further.

The Clearing Permit System Map can assist those intending to clear to determine whether an area is an ESA and its type

<https://www.rameliusresources.com.au/wp-content/uploads/bsk-pdf-manager/2019/05/15.05.19-Greenfinch-Project-Update.pdf>

## Environmentally Sensitive Areas (ESA) cont'd

Slide 13



## What does Best Practice mean to you?

Slide 14

Discussion Q:

Outcomes:

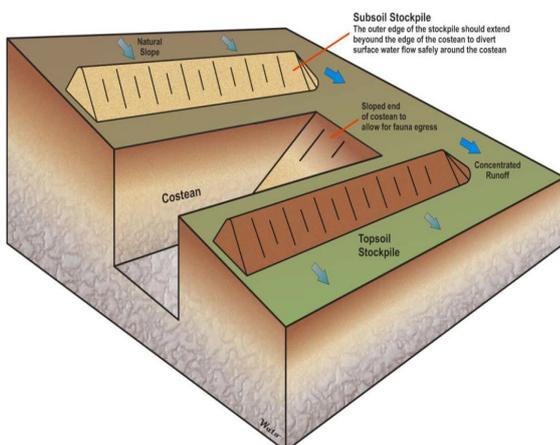
## Minimising disturbance - best practice environmental management

Slide 15

Raised blade during clearing

Use of existing tracks

Excavations (sumps, costeans, etc.) appropriately ramped to allow fauna egress



## Minimising disturbance - best practice environmental management

Slide 16

- Avoiding significant vegetation (large trees and dense patches of vegetation).
- Leaving stands of vegetation or corridors within areas of clearing.
- Topsoil and vegetation stockpiled separately for use in rehabilitation.
- Use of liners and drip trays under rigs to minimise risk of hydrocarbon spillage.
- Appropriate storage of hydrocarbons (if being used on site).
- Use of sumps of appropriate size to contain all water and sediment encountered during drilling (sump to be located away from significant vegetation and water courses).
- Use of machinery to minimise impacts (e.g. excavator instead of bulldozer, wheeled machinery instead of tracked, specialist drill rig etc.).
- Vehicle hygiene maintained to prevent the spread of plant pathogens (e.g. *Phytophthora* sp.) and/or invasive species where required.

If you have to take just one thing away...

**Contact DMIRS (and DWER) prior to application: They are there to facilitate (within the law), not to block and resist applications.**

Early contact:

- builds relationships
- clarifies requirements for applications
- saves time (and money) in the long run.

## PoW Application -1

For the logon use: ex12284

Password: ..sth..r1 this will be available until next Monday.

Select 'Access Ears Online'

<http://www.dmp.wa.gov.au/Environmental-Assessment-and-1471.aspx>

Government of Western Australia  
Department of Mines, Industry Regulation and Safety

Type your search  
Go to whole of WA Government search

Minerals & Mining | Petroleum | Dangerous Goods | Geological Survey | Environment | Safety | Investor Information | Community & Education | About Us & Careers

### Environmental Assessment and Regulatory System (EARS)

Home [Online Systems](#) Environmental Assessment and Regulatory System (EARS)

EARS Online and EARS 2 are online systems for submitting and tracking environmental applications and compliance reporting. Users must be registered against a company in order to access either system. Only applications lodged by the company you are registered for will be displayed.

#### EARS Online

EARS Online allows online lodgement and tracking of the following Minerals and Petroleum Environmental Applications:

- Programme of Work (PoW)
- Mining Proposal (MP)
- Mining Proposal with Mine Closure Plan (MPMCP)
- Environment Plan (EP)
- Oil Spill Contingency Plan (OSCP)

Access to Environmental Assessment and Regulatory System (EARS Online)

**ACCESS EARS ONLINE**

## PoW Application - 2

Slide 19

Select "ONLINE LODGEMENTS" on the top line 'Programme of Work Spatial' then select 'No' and then "Start Application"

Government of Western Australia  
Department of Mines, Industry Regulation and Safety

Environmental Assessment

Welcome Peter Brammall (SAGELAND PTY LTD) [Logout](#)

APPROVALS TRACKING ONLINE LODGEMENTS ADMINISTRATION

### > ONLINE LODGEMENTS

Apply Online

Programme of Work - Spatial

This is a lodgement system for Programmes of Work, where proposed exploration and prospecting activities are entered directly into the map-based system or uploaded via TAB files or Shapefiles. Questions are generated based on the types of activities entered and their geographical location.

The Programme of Work - Spatial system replaces the Programme of Work - Exploration application form and is an alternative to the Programme of Work - Prospecting PDF hard copy form.

Do you want to use the data from an existing spatial application as your starting point for this application?:

\*  Yes  No

#### Current Application Lodgements

**Please note: Online applications that have not been submitted within three months from the commencement date of the application will be automatically deleted.**

**Not Submitted - Drafts (1)**

Application Id	Type	Category	Created Date	Lodgement Date	Actions
79766	Exploration	Programme of Work - Spatial	26/04/2019		<a href="#">Complete</a> <a href="#">Delete</a>

Fill in your reference and add the new person if needed

Registration: 79768 Operator: SAGELAND Pty Ltd

**References** ↓

DMIRS Reference: 79768

Your Reference: Mammoth Li Project

**Contact Details** ↓

Submitter: BRAMMALL, Peter (ex72451)  
peter@landtrack.com.au, +61 451 077 191

Applicant: SAGELAND Pty Ltd  
8 Melrose Street, ROSSMOYNE WA AUSTRALIA 6148

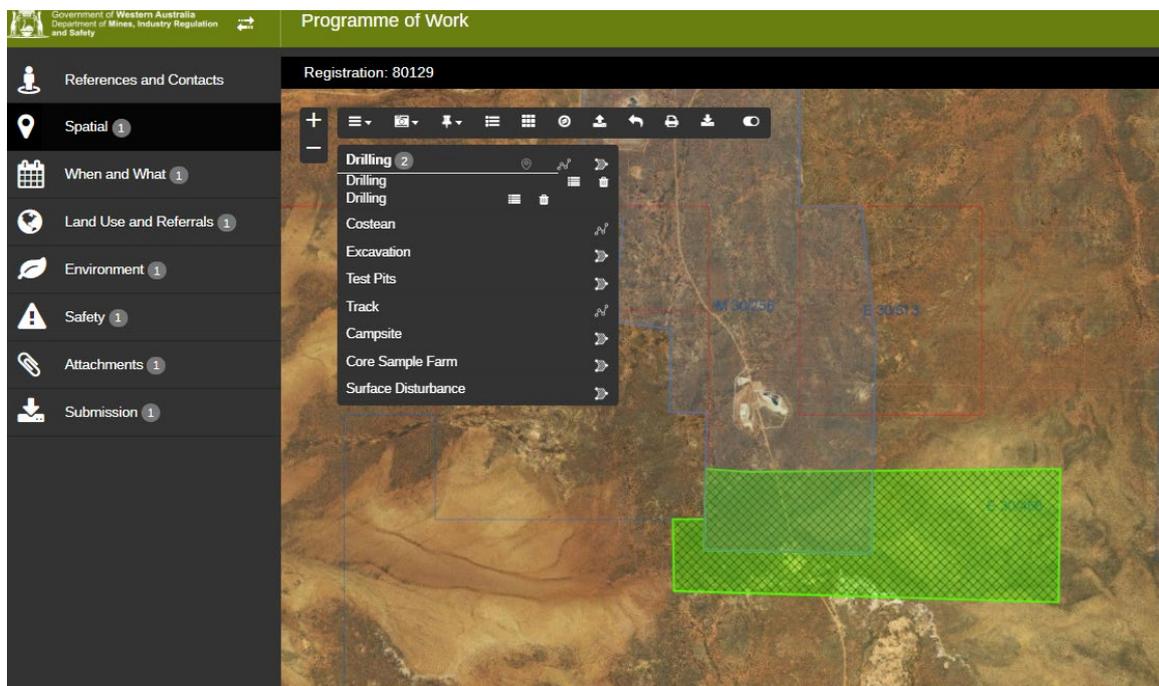
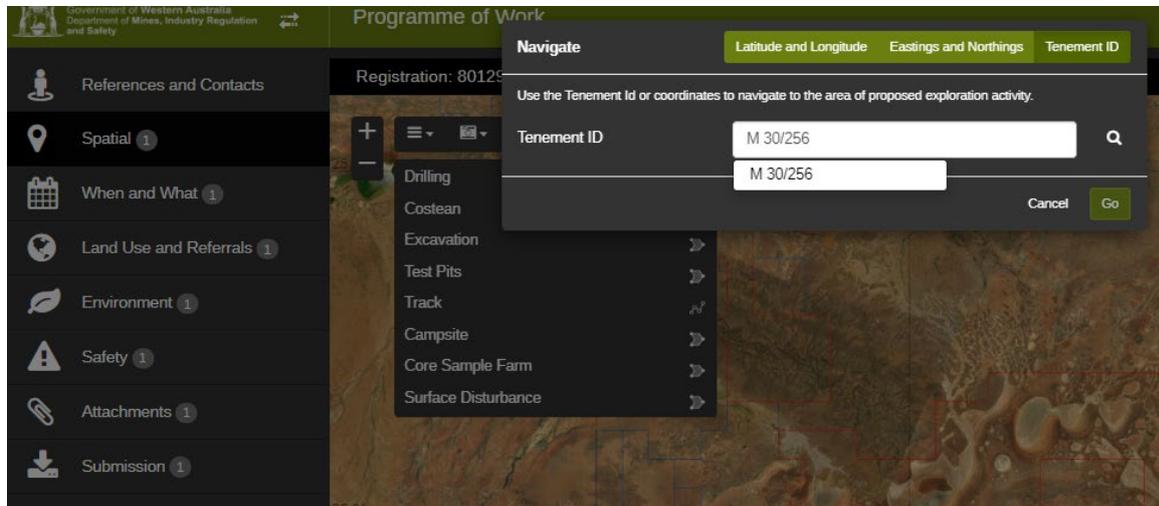
Primary Contact: BRAMMALL, Peter (ex72451) ▼ Use Submitter Add New  
peter@landtrack.com.au, +61 451 077 191

**Add New Person**

<b>First Name*</b>	<b>Last Name*</b>
<input type="text"/>	<input type="text"/>
<b>Email*</b>	<b>Position*</b>
<input type="text"/>	<input type="text"/>
* You must enter either a Telephone number or a Mobile number	
<b>Telephone</b>	<b>Mobile</b>
<input type="text"/>	<input type="text"/>
<b>Fax</b>	

Complete the tenement number and select Go and then select "Drilling" and draw a polygon.

Search for M 30/256

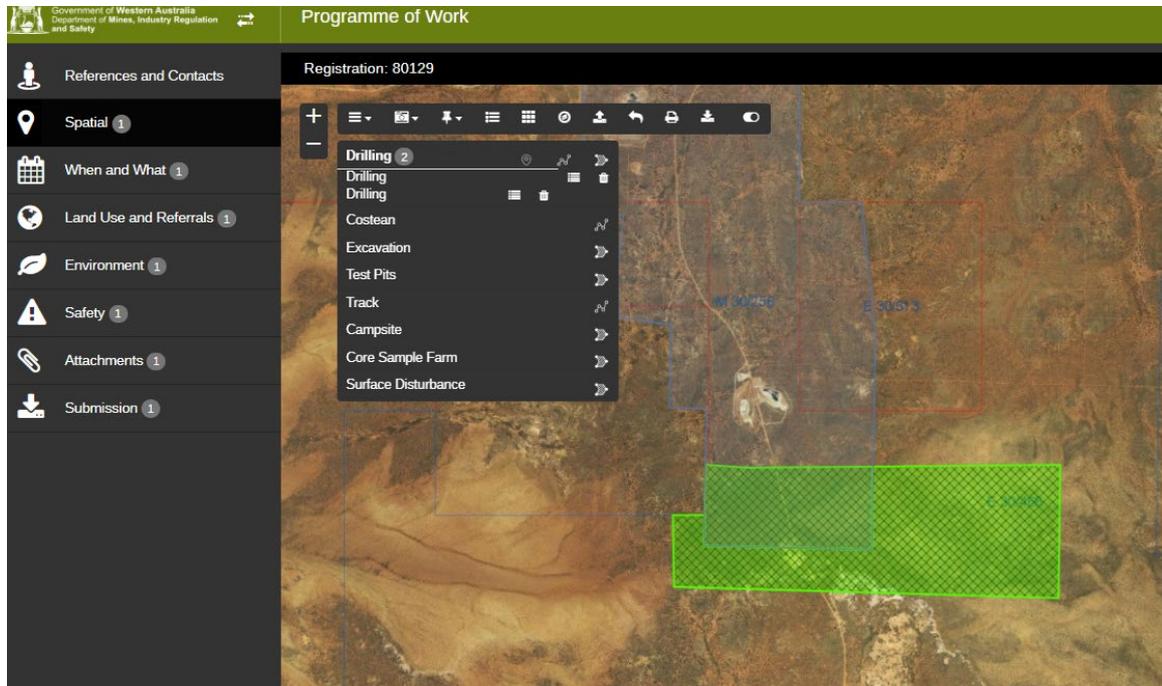


## PoW Application - 6

## Slide 23

Fill out the form and do a drop down of the calculations and the tonnage disturbed then select save

Do 100 x 200m deep holes

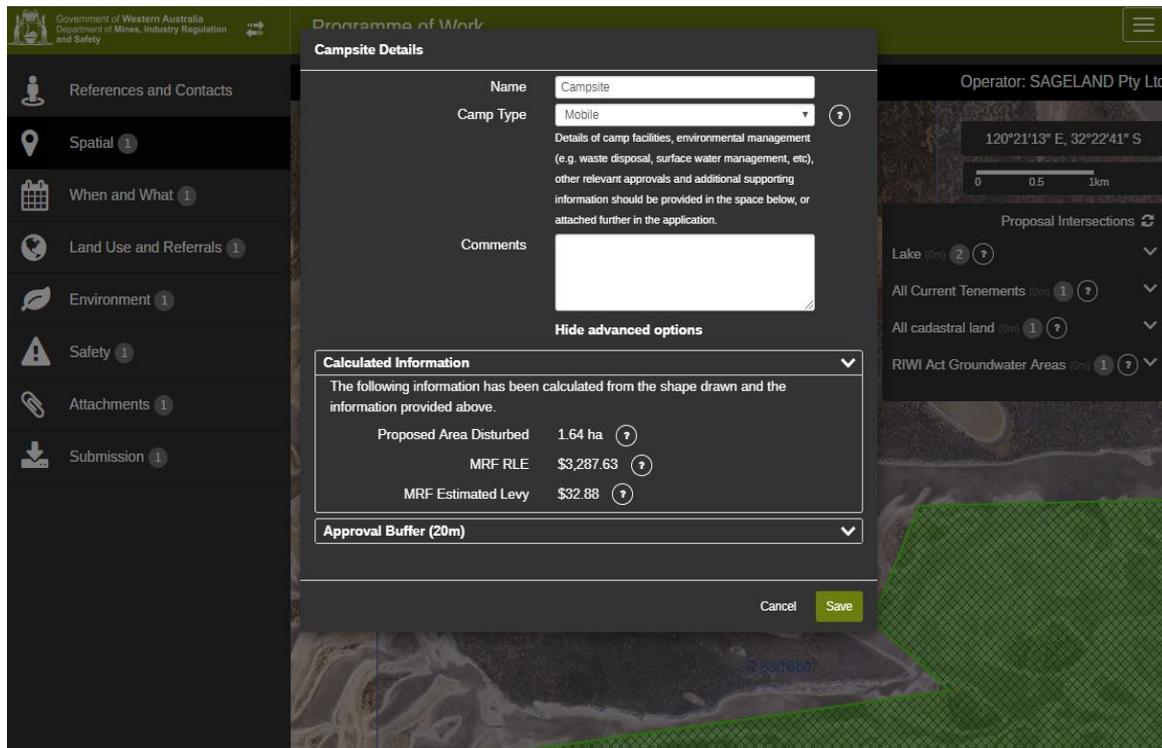


## PoW Application - 7

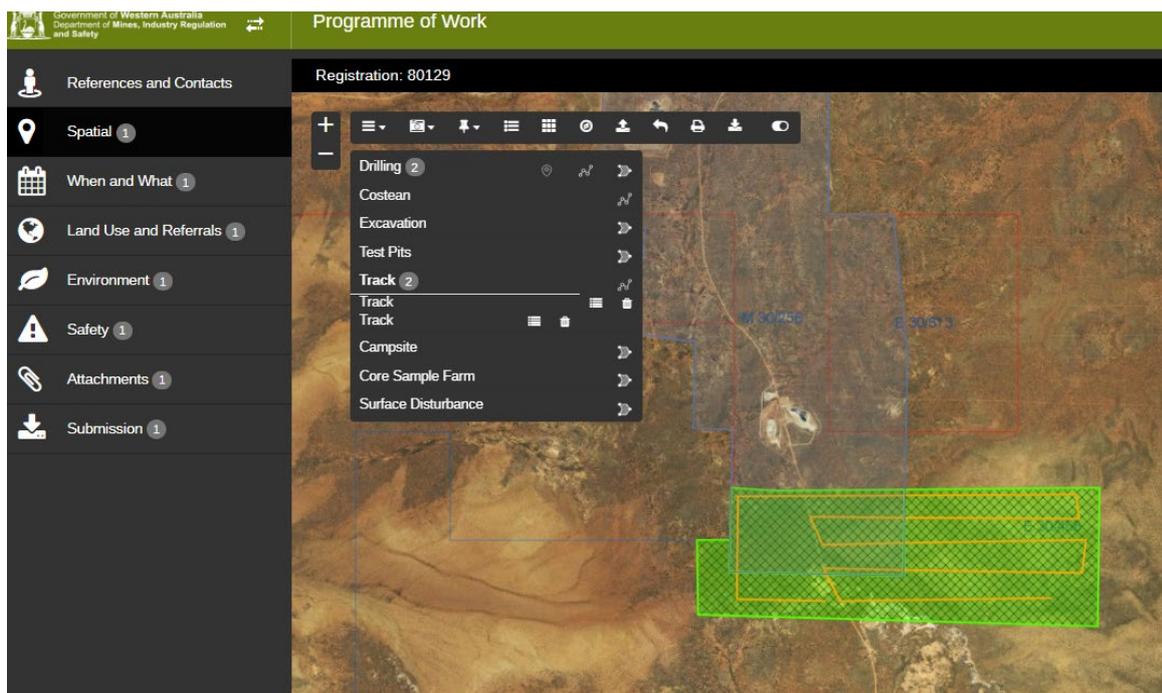
## Slide 24

- There are limits to the mass that can be excavated, extracted or removed from a tenement.
- That limit is 1000 tonnes per Exploration Licence or Retention Licence, and 500 tonnes per Prospecting Licence or Special Prospecting Licence.
- All limits are for the life of the Licence. Any additional tonnes must be approved by the Department

Add a camp site and select "Save" do tracks as well.



Tracks need to be on the PoW:  
To join drill holes  
Where ever ground is driven across



Proposed Activity Dates



Exploration Approvals are valid for a maximum of 4 years irrespective of the dates entered here. These dates help to determine audit plans and any specific environmental or safety guidance.

Proposed Activity Date Range

From

To

Mineral Targets



Select Mineral Targets

Disturbance Table Summary



This table summarises the data entered in the spatial section. To update please modify the earlier map.

Export to Excel

Drag a column header and drop it here to group by that column

Tenement	Activity Name	Activity Type	Proposed Area Disturbed	Proposed Mass Disturbed	MRF RLE	MRF Est. Levy
M 30/256	Drilling	Drilling Area (RC)	0.03	0.00	\$53.40	\$0.53
E 30/468	Drilling	Drilling Area (RC)	0.07	0.00	\$130.60	\$1.31
M 30/256	Track	Track (9.12km)	1.82	0.00	\$3,649.60	\$36.50
E 30/468	Track	Track (19.07km)	3.81	0.00	\$7,626.04	\$76.26
			<b>Total Disturbance = 5.73 ha</b>	<b>Total Disturbance = 0.00 tonnes</b>	<b>Total MRF RLE = \$11,459.63</b>	<b>Total MRF Levy = \$114.60</b>

Tenement Holders ↓

Please note that the following tenement holders will be notified by email that this proposal has been submitted. It is essential that you liaise with and obtain consent from the tenement holder before commencing operations:

Tenement Holder	Consent Granted?
WODGINA LITHIUM PTY LTD TENEMENT ADMINISTRATOR C/- TENEMENT DEPARTMENT PO BOX 1095, CANNING BRIDGE APPLECROSS E 63/1880	No No

Crown Land ↓

Please note, under section 20(5) of the *Mining Act 1978* the holder is not entitled to prospect or fossick on, explore, or mine on or under, or otherwise interfere with, any Crown Land that is:

- for the time being under crop (or within 100 m of that crop);
- used or situated within 100 m of a yard, stockyard, garden, cultivated field, orchard, vineyard, plantation, airstrip or airfield;
- situated within 100 m of any land that is in actual occupation and on which a house or other substantial building is erected;
- the site of or situated within 100 m of any cemetery or burial ground.

without the prior written consent of the occupier.

Environmental Protection Authority ↓ ?

Has the area of proposed activity been referred or is it currently being assessed by the Environmental Protection Authority under Part IV of the *Environmental Protection Act 1986*?  Yes  No

Has the area of proposed activity ever previously been assessed by the Environmental Protection Authority under Part IV of the *Environmental Protection Act 1986*?  Yes  No

Waterways ↓ ?

Does the proposed activity involve disturbing the beds and/or banks of a watercourse?  Yes  No

Is the interference related to the taking, or accessing of water?  Yes  No

Will you minimise impact on water flow and resources and prevent blockages?  Yes  No

Explain why?

Does your proposal involve the clearing of native vegetation?  Yes  No

Isolated Hills and Ranges in the Midwest/Yilgarn    
Do the proposed activities occur on any isolated hills or ranges, such as Banded Iron Formations?  Yes  No

Environmental Management

Please select your environmental management techniques and methods of minimising disturbance:

All groundwater intercepted during drilling and/or drilling water appropriately stored and contained (e.g. within sumps or tanks)  Yes  No

Excavations (sumps, costeans etc.) appropriately ramped to allow fauna egress  Yes  No

Avoiding significant vegetation (e.g. large trees and dense patches of vegetation)  Yes  No

Topsoil and vegetation stockpiled appropriately for use in rehabilitation  Yes  No

Management measures implemented to minimise risk of hydrocarbon spillage (e.g. use of liners and drip trays under drill rigs)  Yes  No

Vehicle hygiene maintained to prevent the spread of weeds  Yes  No

Rehabilitation Practices    
Please select your rehabilitation practices and timing

Surface holes drilled for the purpose of exploration are to be capped, filled or otherwise made safe immediately after completion  Yes  No

Drill holes securely plugged below ground in a manner that prevents long-term slumping or subsidence, within 6 months of drilling.  Yes  No

Drill sample piles rehabilitated or buried  Yes  No

Excavations (sumps, costeans, etc) backfilled or appropriately made safe  Yes  No

Blocking access to rehabilitated tracks  Yes  No

Compacted areas such as access tracks, core farms, camp sites, etc, rehabilitated in an appropriate manner (e.g. deep ripped, scarified).  Yes  No

Appropriate erosion control implemented in rehabilitation (contour ripping, managing runoff, etc.)  Yes  No

All ground disturbing activities undertaken for the purposes of exploration/prospecting rehabilitated within 6 months of the activity  Yes  No

All sample bags, rubbish and temporary infrastructure removed from site at the end of the program  Yes  No

Previous

Next

Registration: 79768
Operator: SAGELAND Pty Ltd

↓ ?

Is your exploration programme likely to encounter fibrous materials such as asbestos?  Yes  No

---

↓ ?

Is your exploration program likely to encounter Radioactive Material?  Yes  No

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↓

Exploration Operation Notification

In accordance with the *Mines Safety and Inspections Act 1994*, an Exploration Operation Notification form must be submitted to Mines Safety Division of DMIRS prior to any exploration activities taking place.

[http://www.dmp.wa.gov.au/Documents/Safety/MSH\\_F\\_ExplorationNotification.pdf](http://www.dmp.wa.gov.au/Documents/Safety/MSH_F_ExplorationNotification.pdf)

Previous
Next

Registration: 79768
Operator: SAGELAND Pty Ltd

↓

Additional Comments

Please add any additional comments that you feel are relevant, but are not covered by existing questions.

↓

Additional Attachments

Please add any supporting documents below. Appropriate supporting documents include:

- Flora & Fauna Surveys
- Stakeholder Engagement & Consultation
- Governmental Approvals & details of correspondence

Select files...

↓

Attachments Summary

Here is the summary of all the files attached to questions in this application.

File Name	File Size	Date Attached	Section	Action
<i>There are no documents attached to questions in this application.</i>				

Previous
Next

Registration: 79768

Operator: SAGELAND Pty Ltd

**Submission Issues** ⌵

We have analysed your submission and identified a number of items that are not quite right. Can you please review and update your responses?

Issues Summary

Section	Subsection & Details	Issue
Land Use and Referrals	WODGINA LITHIUM PTY LTD TENEMENT ADMINISTRATOR C/- TENEMENT DEPARTMENT PO BOX 1095, CANNING BRIDGE APPLECROSS E 63/1880	The application cannot be submitted if consent has not been obtained from a Tenement Holder.

**Tenement Conditions** ⌵ ?

Additional tenement conditions may be imposed as part of the assessment of this application. Current tenement conditions that apply to the tenements selected in this application are:

**Group by Tenement** Conditions Endorsements

Conditions	Tenements
All disturbances to the surface of the land made as a result of exploration, including costeans, drill pads, grid lines and access tracks, being backfilled and rehabilitated to the satisfaction of the Environmental Officer, DMIRS. Backfilling and rehabilitation being required no later than 6 months after excavation unless otherwise approved in writing by the Environmental Officer, DMIRS.	E 63/1880
All waste materials, rubbish, plastic sample bags, abandoned equipment and temporary buildings being removed from the mining tenement prior to or at the termination of exploration program.	E 63/1880
Unless the written approval of the Environmental Officer, DMIRS is first obtained, the use of drilling rigs, scrapers, graders, bulldozers, backhoes or other mechanised equipment for surface disturbance or the excavation of costeans is prohibited. Following approval, all topsoil being removed ahead of mining operations and separately stockpiled for replacement after backfilling and/or completion of operations.	E 63/1880

Please be reminded that the tenement holder is responsible for identifying and complying with legal obligations that are applicable to the activities conducted on their tenement. Authorisation under the *Mining Act 1978* does not preclude the requirement for approvals under other relevant legislation.

This programme, if approved, does not supersede any other applicable provisions of the following regulations

☑ Mining Regulations 1981

Regulations governing onshore mining tenements, mining royalties and the environmental management of mining.

☑ Mining Rehabilitation Fund Regulations 2013

Regulations that provide a framework for declaring abandoned sites and enabling the Mining Rehabilitation Fund to receive levy contributions made by Western Australian mining operations for the rehabilitation of abandoned mines.

☑ Mines Safety and Inspection Regulations 1995

Regulations defining the standards of occupational safety and health for Western Australian mining operations.

☑ Mines Safety and Inspection Levy Regulations 2010

Regulations describing the Mines Safety and Inspection Levy scheme that covers the costs of administering the *Mines Safety and Inspection Act 1994*.

Export Spatial Data



Once you submit this Programme of Work application, you will no longer have access to the spatial files for your proposed activities. You are therefore encouraged to download a shapefile of your proposed activities below or from the download icon on the Spatial screen prior to submission.



Submission & Acceptance



Legal Acceptance

I am authorised to submit this application on behalf of all tenement holders. To the best of my knowledge and belief, all statements made and information given in this application are true and correct. I acknowledge that this application will be rejected if sufficient information is not supplied.



How are PoW applications handled in your company (re: environmental management)? How can it be done more efficiently and effectively?

- Strategic PoW lodgement
- Strategic Exploration Planning
- How do we mitigate issues identified
- EMA identification

Think P.R.O.C.E.S.S

Think **PROCESS**

- Personnel — Who is involved?
- Resources — What factors are in place to accomplish task?
- Obstacles — Any barriers, blockers and problems (define)?
- Communication — Interpersonal, interdepartmental or regulatory information consistently shared to required parties?
- Efficiency — Is what is to be achieved in alignment with resources expended?
- Systemised — Is the process documented and standardised?
- Successful — Does it work? Why does(n't) it work? Improvements?

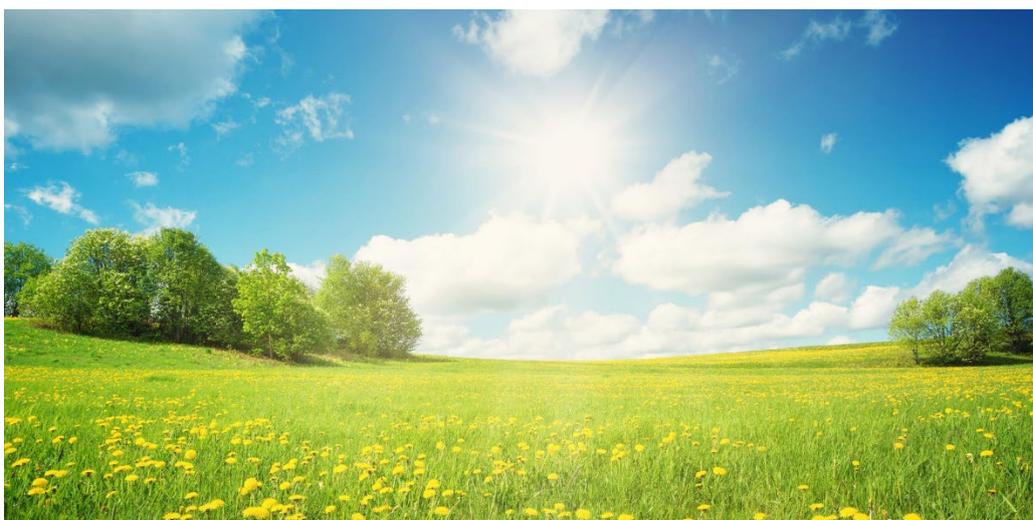
**Summary**

Participants will be able to understand the requirements before commencing exploration in WA including:

- PoW requirements
- PoW lodgement
- Strategic analysis PoW requirements
- Strategic analysis of exploration requirements
- Reaching the desired outcomes

**The End**

"Tell me and I forget. Teach me and I remember. Involve me and I learn."  
Benjamin Franklin



# Understanding Tenement Expenditure Session 4

## Session

Slide 2

[Session 1] Introduction and Monitoring

[Session 2] Strategically Acquiring Tenure

[Session 3] Exploration - PoW

**[Session 4] Expenditure and Development in Resource Law**

[Session 5] Environmental Management: Mining Proposal

[Session 6] Environmental Legacy

[Session 7] Management of Tenure Difficulties

[Session 8] Management of Tenure Difficulties

## Session 4 Outcomes

Slide 3

Participants will be able to understand the expenditure reporting requirements of tenements in WA with respect to:

- Combined Reporting Groups
- Mineral Exploration Reporting
- Expenditure Reporting
- Rent
- Administration Reporting
- What is classed as Expenditure
- What is not Expenditure

## Expenditure Commitments

Slide 4

E, P, M and R require exploration reporting

All due within 60 days of anniversary or surrender

Prospecting Licence — \$40.00 per ha; \$2000 minimum

Mining Lease — \$100 per ha; \$5000 minimum if 5ha or less; otherwise \$10,000

Exploration Licence:

Year	Per Block	Min for 1 block	Min for 2 – 5 block	Min for 6 -20 block
1–3	\$1000 per block	\$10,000	\$15,000	\$20,000
4–5	\$1500	10,000	\$20,000	\$30,000
6–7	\$2000	\$15,000	\$30,000	\$50,000 6 to 25 blocks
8 onwards	\$3000	\$20,000	\$50,000	\$70,000 6- 23 blocks

## Expenditure Reporting

Slide 5

A Form 5 is required to be lodged 60 days after anniversary  
Extensions can be requested

<https://www.dmp.wa.gov.au/Minerals-Mining-16304.aspx>

## Expenditure Categories

Slide 6

Holder required to meet expenditure commitment

An exemption allows the holder not to meet the expenditure commitment

An exemption can only be requested for specific reasons under s102

### **A. MINERAL EXPLORATION ACTIVITIES**

**Geological activities:** geological mapping, sampling, drilling supervision, core logging, non-core drill-sample logging, geological data processing and interpretation, petrology, planning of exploration programs, report preparation; where appropriate, general prospecting can be added here.

**Geochemical activities:** geochemical sampling, analysis of surface geochemical samples or subsurface drilling samples, geochemical data processing and interpretation. ALSO show number of samples collected.

**Geophysical activities (surface/subsurface):** ground geophysical surveys, downhole logging, geophysical data processing and interpretation.

**Airborne geophysical activities:** aerial survey costs, geophysical data processing and interpretation.

**Remote sensing activities:** aerial photography, remote sensing images, photo interpretation, image processing and interpretation.

**Mineralogical activities (exploration for diamonds, heavy mineral sands, etc.):** bulk sampling, mineral separation, mineralogy and analysis of diamond indicator minerals or other minerals.

**Surveying activities:** gridding, line clearing, grid tie-in, tenement boundaries, etc.

**Core drilling:** diamond drilling costs (including pre-collar open-hole non-core drilling), access road and drill-site preparation; ALSO show metres drilled and number of holes completed.

**Non-core drilling:** drilling costs, access road preparation; ALSO show metres drilled and number of holes completed. Costs for deep geochemical sampling by auger or air-core drilling can also be shown here.

(N.B. Specify drilling for groundwater supply.)

**Costeaming:** plant and equipment hire for trenching and bulk sampling.

**Field supplies:** exploration equipment, consumables and supplies, plant and equipment hire, fuel, oil, etc., depreciation of direct exploration equipment, wages for non-professional field personnel.

**Drafting activities:** drafting equipment, consumables and supplies, salaries for drafting personnel.

**Travel:** travel costs directly associated with mineral exploration activities conducted on the tenement.

**Field camp activities:** establishment and maintenance of exploration base camps, food and accommodation, vehicle costs, contractor helicopter support.

**Environmental:** environmental studies.

**Feasibility study activities:**

**Rehabilitation activities:**

### **B. MINING ACTIVITIES (DEVELOPMENT AND PRODUCTION)**

Mine planning, open-cut mining, underground mining, shaft sinking, decline construction, underground drilling, pre-blast bench drilling, ore treatment, construction and maintenance of ore stockpiles, waste dumps, tailings dams and dumps, etc. ALSO show tonnes mined or treated. Any costs associated with care and maintenance on an idle mining operation can also be shown here.

### **C. ABORIGINAL HERITAGE SURVEYS**

Evidence that a survey has been conducted must be provided to the Department.

### **D. ANNUAL TENEMENT RENT AND RATES**

Rental and local government rates, paid in connection with the mining tenement each year.

### **E. ADMINISTRATION AND OVERHEADS**

All non-field activities such as head office costs, accounting, mining tenement management, administration, research, literature studies, training, etc.

### **F. LAND ACCESS/NATIVE TITLE**

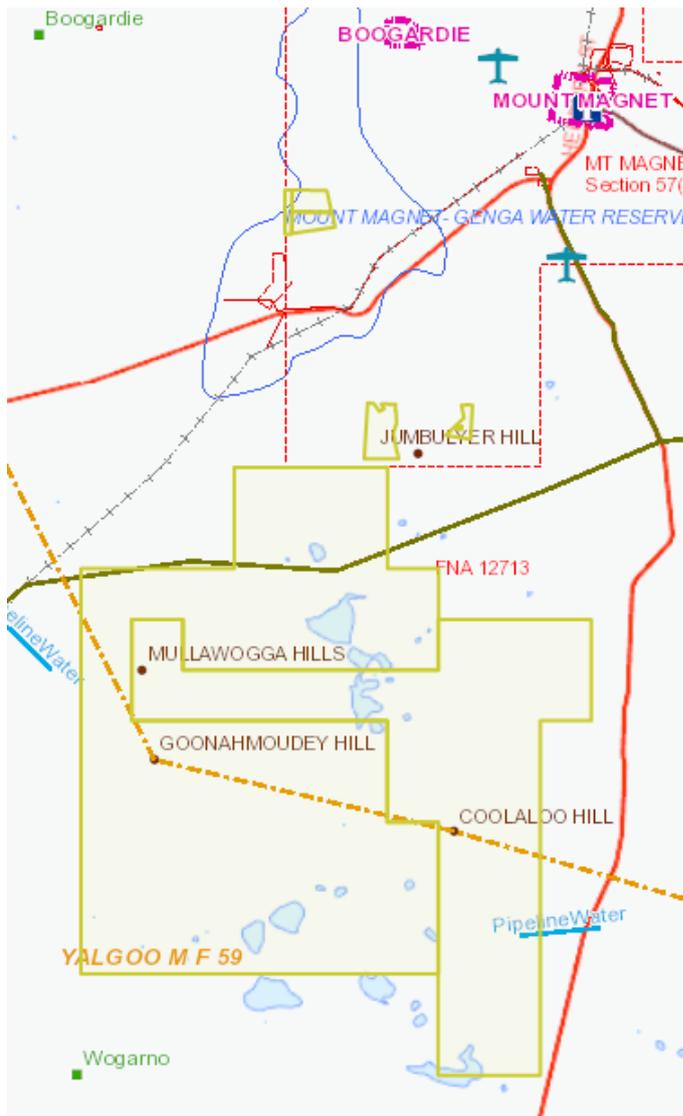
All other native title and land access costs including private land access costs but excluding payments for compensation.

**N.B.** The amount allowed under E and F not to exceed 20% of the minimum expenditure commitment or the total expenditure incurred on activities, whichever is the greater.

## Combined Reporting Groups

Slide 7

- Allows annual reporting on a group of tenements
- Allow for exemption from expenditure on a group of tenements
- Application Requirements
  - Common geology
  - Contiguous tenure
  - Same holder
  - Max. size 300sqkm



## Exemption Combined Reporting Groups

Slide 8

s102(2)(h) *Mining Act 1978*

*The tenement is comprised within a project involving more than one tenement and that expenditure on a tenement or tenements in that project would have been such as to satisfy the expenditure requirements in relation to the tenement concerned had that aggregate expenditure been apportioned in respect of the various tenements comprised in this project.*

## DMIRS Policy Guidelines

Slide 9

For the purpose of an exemption from expenditure:

- "aggregate exploration expenditure" was total expenditures for all the tenements in the group.
- EXCLUDING 'Mining Activities' in the Form 5s. Note the content of Mining Activities and the "etc"
- Meaning All expenditure recorded in items A and C, D, E and F in each Form 5 in the Group.

## Exclusion of Expenditure Items

Slide 10

Initially the Warden in *Blackfin Pty Ltd v Mineralogy Pty Ltd* [2013] WAMW 19

And later in *GMK Exploration* concluded that all expenditure was to be excluded from the calculation Except "A. Mineral Exploration Activities" Contrary to the DMP guidelines.

## Brewer v O'Sullivan

Slide 11

*Brewer v John Francis O'Sullivan, Warden at Kalgoorlie* [No 2] [2017] WASC 269.

- This case supported DMIRS Policy Guidelines in that "aggregate exploration expenditure" includes items A and C, D, E and F in each Form 5
- No appeal lodged
- The meaning of "aggregate exploration expenditure" is settled
- [https://www.dmp.wa.gov.au/Documents/Minerals/Guide\\_ExemptExpenditure2020\\_revised.pdf](https://www.dmp.wa.gov.au/Documents/Minerals/Guide_ExemptExpenditure2020_revised.pdf)

## Options for Explorers

Slide 12

Discussion: What should we do?

Follow DMIRS policy

OR

Use the conservative approach of only using Item A – expenditure.

## What is Administration Expenditure?

Slide 13

s96(3) Mining Act 1978

Administration and land access costs relating to land which is the subject of a mining tenement may be used in the calculation of expenditure expended on, or in connection with, mining on the mining tenement, but only up to 20% of the minimum commitment, or 20% of the total expenditure on the mining tenement, whichever is the greater amount.

## Warden Caulder on Admin Expenditure

Slide 14

- *Mawson West Ltd & Anor v Saruman Holdings Pty Ltd.*
- Warden Caulder takes us through the steps of determining how to calculate admin expenditure.
- Regulation 90 says that the Forms prescribed in the regulations are to be completed in accordance with the directions specified in the form.
- Form 5 — under 'Instructions For Completion of a Form 5' instruction 3
- Administration/overheads/land access/native title costs are not to exceed 20% of the minimum expenditure commitment, or the total of expenditure incurred on activities, whichever is the greater (see D and E below for the costs that can be claimed).
- E — Administration Overheads

**All non-field activities such as head office costs, accounting, mining tenement management, administration, research, literature studies, training, etc.**

## Warden Caulder continued

Slide 15

- If there is no expenditure which can be directly or indirectly attributed to a tenement, then no Administration or Overheads [section E] may be claimed
- If the actual amount of any such expenditure is less than 20 percent of the aggregate amount of any such expenditure on other activities, then 20 percent of that other expenditure may not be claimed for administration or overheads.
- The holder may only claim actual expenditure.

Warden Caulder went on to state:

*"[the administration expenditure]... was not based upon any acceptable formula for the making of a reasonable calculation in the absence of a capacity within the holders administrative system to accurately attribute or otherwise calculate actual expenditure on a particular tenement."*

## Expenditure Year

Slide 16

s31(1a) Mining Act 1978 (multiple references in the Regulations)

Expenditure incurred under subregulation (1) during the month in which the anniversary date of the commencement of the term of the lease occurs may be treated by the holder as expenditure incurred in either the year immediately preceding that anniversary date or the year starting from such date.

## Rent

Slide 17

- *Bond v Maughan* [2018] WASC 162 see para 80
- Look at this case regarding double claiming rent twice for the same year
- r96C(2a) allows rent to be included in expenditure calculation
- r31 allows expenditure incurred during the anniversary month to be included in either year
- *“properly construed, it is clear that only a particular year’s rent may be included in the particular year’s expenditure calculation”* Warden
- However, the case does indicate if the evidence can be presented that 2 year’ rent is paid in the same year both years’ rent can be claimed in the same year.

## Payment Across Years

Slide 18

- Incurring the liability is sufficient to constitute expenditure  
*Bakarra PtyLtd v Juler Pty Ltd*
- Payments in one year can be claimed in that year for work done in next year  
*Brosnan v Meridian Mining Ltd*
- Though the expenditure incurred must be claimed in the year it occurred  
*Kennedy v Reif*

## What is Expenditure

Slide 19

s96 of the legislation states

- Aboriginal heritage surveys even while the tenement is an application.
- Rehabilitation in connection with a tenement.
- Annual rent and rates.
- Cutting and polishing minerals
- Aerial surveys
- s118A: A person's expenditure where the person has been authorised in writing to carry out mining by the tenement holder.
- r90 “says that the Forms prescribed in the regulations are to be completed in accordance with the directions specified in the form” Warden Caulder in *Mawson West Ltd & Anor v Saruman Holdings Pty Ltd*

On the Form 5 “Mineral Exploration Activities” is described

## What is not Expenditure under Legislation

Slide 20

Legislation excluded Expenditure  
r96C states

- Marking out a mining tenement
- Costs associated with the sale of mining tenement
- Research not related to a specific tenement
- Compensation payments

## What is not Expenditure

Slide 21

The courts have deemed that the following is not expenditure

- Depreciation of plant and equipment — *Craig v Spargos Exploration NL*
- Caretakers expenses; though where a caretaker was undertaking mining related activities (environmental monitoring) it was deemed allowable
- Loss on sale of fixed assets — *Craig v Spargos*
- Research by the holder — *Roberts v Richmond*
- An optionee conducting research on whether to exercise the option. Also applied for a due diligence by a prospective purchaser — *Bakarra PtyLtd v Juler Pty Ltd*
- Food and accommodation that are normal living expenses unrelated to mining — *Nunn v Carnicelle*
- Cooking and associated housework — *Newt v Lavery*
- Share of gold paid to a tributer — *Roberts v Richmond*
- Expenses relating to use of the mineral after production, eg marketing and freight
- Hire of one's own vehicle — *Roberts v Richmond*
- Expenses related to use of mineral after production — *Jones v Black Swan*

## What is not Expenditure

Slide 23

What accounting categories are set up for Electronic Form 5?

<https://wiki.landtrack.com.au/wiki/147/mandatory-online-submissions-of-operations-reports>

See this session's wiki for an excel version

## Recent Court Decisions

Slide 24

The following decisions are worth reading to come up to speed with resource law:

- *Carnegie Gold Pty Ltd v Maughan* [2018] WASC 366
  - "Bet both ways"
  - This allows the lodging of exemptions against the whole commitment even if expenditure commitment was met.
- *Bond v Maughan* [2018] WASC 162
  - The decision addresses

- the claiming of rent
- Receipts for claiming expenditure
- The money is actually expended by the lease holder

### Recent Court Decisions

Slide 25

- *Brewer v John Francis O'Sullivan, Warden at Kalgoorlie* [No 2] [2017] WASC 269
  - Determines the meaning of "aggregate exploration expenditure" for combined reporting tenements under section 102(2)(h)
- *Focus Minerals v Brosnan and Ors*
  - Tenement Managers must be prepared to prove their expenditure has been legitimately allocated
  - Administration expenditure is very difficult to determine, allocate and prove – even on expenditure > \$100 Million

Addendum to the story. <https://landtrack.com.au/focus-7m-mistake/>

### Recent Court Decisions

Slide 26

*Brosnan v O'Sullivan* [2022] WASC 414,

- The Supreme Court determined that the requirement for written authorization in section 118A of the Mining Act 1978 (WA) applied only to work completed on the physical land of a tenement and did not apply broadly to all work done in relation to a tenement.
- In this case, the requirement for written authorization did not apply to work performed remotely by a Queensland geologist for Mr Brosnan pursuant to an oral contract.

### Recent Court Decisions

Slide 27

*Regis Resources Limited v Richmond* [2023] WAMW 5,

- The Warden held that the factors to be considered in determining whether an exemption from expenditure conditions should be granted are not limited to those set out in section 102(4) of the Mining Act 1978 (WA).
- Therefore, the Minister could consider policy considerations, such as whether the applicant was "**warehousing**" tenements (where tenements are strategically retained in a way that avoids having to mine the land and comply with expenditure requirements).

*Aria Projects Pty Ltd v Australia Stone Group Pty Ltd* [2023] WAMW 7,

- Warden McPhee recommended forfeiture of a Pilbara exploration licence after finding the Form 5 relied on by the tenement-holder provided insufficient detail of the expenditure and therefore,
- in the absence of other evidence from the tenement-holder and competing evidence from the applicant for forfeiture, a case for non-compliance, and therefore forfeiture, was made out.
- Miners are required to provide more than a bare Form 5 to resist a forfeiture application where there is evidence of no work on the ground.

On the 3rd of April the Government gazetted the following Ministerial Statement of Opinion by Minister of Mines:

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## MINERALS AND PETROLEUM

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MP401

### MINING ACT 1978

#### MINISTERIAL STATEMENT OF OPINION

##### Exemption from Expenditure Conditions for Exploration Licences

This Statement recognises the impacts of current and future mitigation risk measures required to protect Western Australia against the spread of the COVID-19 pandemic.

In relation to section 102(3) of the Mining Act 1978 (the Act)<sup>1</sup>, I am of the opinion that until 31 March 2021 a reason for granting of an exemption from expenditure conditions for the holder of a Mining Tenement under section 102 of the Mining Act can be that the holder was unable to meet the expenditure requirements relating to the tenement as the direct result of COVID-19 or restrictions imposed by governments in response to the COVID-19 pandemic.

Applicants should therefore provide a statement demonstrating that exploration expenditure conditions have not been met because of a direct result of the effects of COVID-19 and/or the restrictions imposed by governments in response to the COVID-19 pandemic; which will then be considered in determining the application.

Hon BILL JOHNSTON MLA, Minister for Mines and Petroleum.

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<sup>1</sup> ... exemption may also be granted for any other reason which may be prescribed or which in the opinion of the Minister is sufficient to justify such exemption.

Participants will be able to understand the expenditure reporting requirements of tenements in WA with respect to:

Combined Reporting Groups  
Mineral Exploration Reporting

Expenditure Reporting  
Rent  
Administration Reporting  
What is classed as Expenditure  
What is not Expenditure

**The End**

**Slide 31**

Success is walking from failure to failure with no loss of enthusiasm.  
Winston Churchill



# Rehabilitation, MRF and AER Submissions -Session 5

## Session Outcomes

Slide 2

To understand:

- 1) Environmental expectations of the tenement holder
- 2) What successful rehabilitation might look like
- 3) Why is rehabilitation important?
- 4) Mine Rehabilitation Fund (MRF) and Reporting
- 5) Annual Environmental Report (AER)

## Environmental expectations of the tenement holder

Slide 3

- **Surface water**

No surface water contaminated as a result of mining operations leaves the land.

- **Groundwater Outcome**

Ensure that there is no adverse impact to the quality and quantity of ground water caused by mining operations to existing users and water dependent ecosystems.

- **Groundwater Strategy**

No mining is undertaken within 3 metres of the highest seasonal groundwater table level.

- **Native Vegetation**

Ensure no loss of abundance or diversity of on or off the land through clearance, dust/contaminant deposition, fire, reduction in water supply, or other damage.

## Environmental expectations of the tenement holder (cont'd)

Slide 4

- **Fauna**

No native fauna injuries or deaths due to mining operations that could reasonably have been prevented.

- **Weeds, Pests and Pathogens**

No introduction of new species of weeds, plant pathogens or pests (including feral animals), nor sustained increase in abundance of existing weed or pest species in the land compared to adjoining land.

- **Visual Amenity Outcomes**

Effectively screen mining operations from residences and public roads.

- **Aboriginal and European Heritage Outcome**

During construction and operation of the Mining Tenement, ensure that there is no disturbance to Aboriginal or European heritage sites, objects or remains unless prior approval under the relevant legislation is obtained.

**Environmental expectations of the tenement holder  
(cont'd)**

**Slide 5**

- **Traffic Outcome**

Ensure that there are no traffic accidents involving the public at mine access points that could have been reasonably prevented by the Tenement Holder.

- **Third Party Property Outcome**

No adverse impacts to third party land use on property adjacent to and on the Land as a result of mining operations (other than those agreed between the Tenement Holder and the affected user).

- **Public Safety Outcome (post mining)**

The risks to the health and safety of the public so far as it may be affected by operations on the tenement are as low as reasonably practicable.

**Environmental expectations of the tenement holder  
(cont'd)**

**Slide 6**

- **Post Mine Completion**

Ensure that the form, contrasting aspects and reflective aspects of mining operations are visually softened to blend in with the surrounding landscape.

- **Mine Closure and Rehabilitation Outcome**

Mine closure outcomes such as mine waste materials remaining onsite are to be left chemically and physically stable.

<https://www.dmp.wa.gov.au/Documents/Environment/ENV-admin-118.pdf>

**Rehabilitation – a definition**

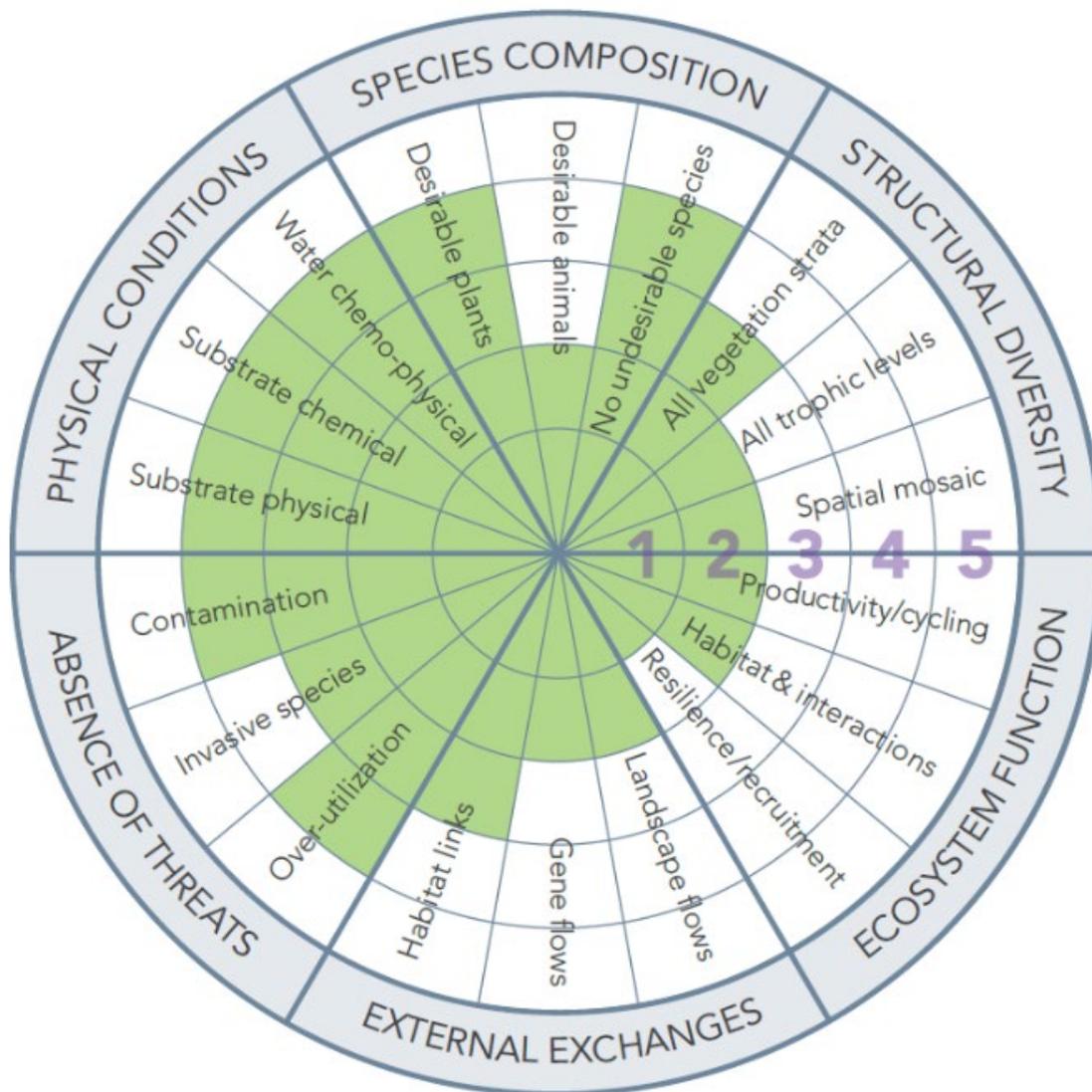
**Slide 7**

The Society for Ecological Restoration (SER) says that rehabilitation is:

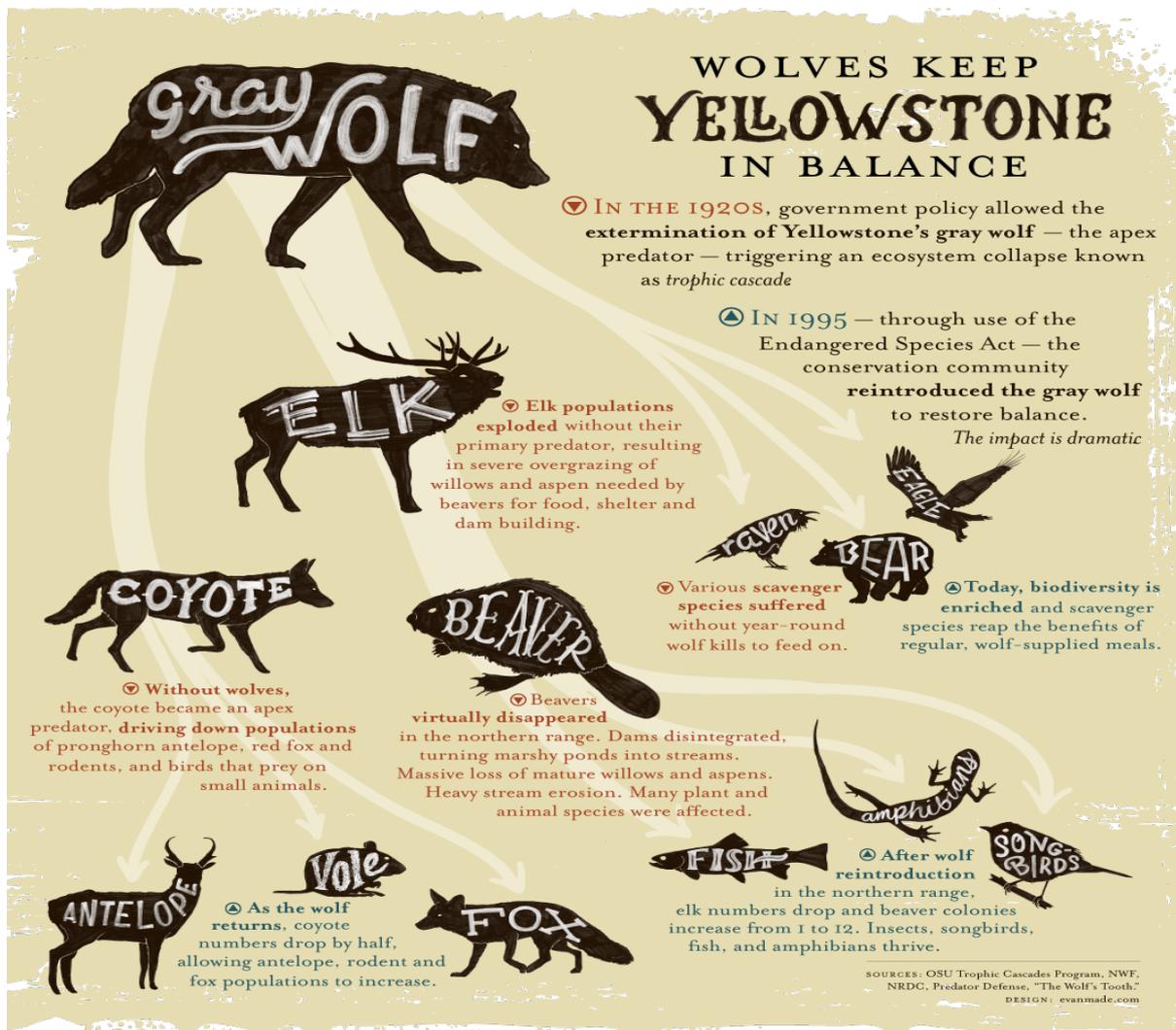
*'...the process of assisting the recovery of an ecosystem that has been damaged, degraded or destroyed.'*

*'...creation of a self-supporting ecosystem that is resilient...'*

Specific indicators are selected to help evaluate whether these targets, goals and objectives are being met as a result of the interventions.



- Common indicators only
- Scoring based on informal or formal monitoring indicators for the project
- Indicators should be identified at the outset of the project to provide ecologically meaningful information attributes being evaluated.



**Successful Rehabilitation**

The SER recommends the use of nine ecosystem attributes for measuring rehabilitation success:

1. Similar ecosystem diversity and community structure to those of reference sites
2. Presence of indigenous species
3. Presence of functional groups necessary for long-term stability
4. Capacity of the physical environment to sustain reproducing populations
5. Normal functioning
6. Integration within the landscape
7. The elimination of potential threats
8. Resilience to natural disturbances
9. Self-sustainability

## Successful Rehabilitation Examples

Slide 11



**CROPPING** Coal & Allied are rehabilitating land for crop production, producing a hybrid of wheat and rye. After three years of production, hay yields are now above the district average.



**CONSERVATION** Bluestone Mines and CSIRO have revealed a way to create a cap to exclude oxygen and neutralise water. Once implemented, water quality rapidly improved and environmental standards met.



**GRAZING** Glencore land is now used as a grazing pasture with cattle growing faster and averaging an extra 79 kgs over neighbouring pasture cattle. This returned a 25% price increase at the abattoir.



**NATIVE RESTORATION** Cristal Mining have re-established a semi-arid vegetation ecosystem with native flora species and native lizard and bird species now resettled in the area.

## Prospecting and Exploration Rehabilitation

Slide 12

- Prospecting and exploration activities approved under a Programme of Work (PoW) must be rehabilitated within six months of completion of ground disturbance or following an approved extension.
- Rehabilitation reports should be submitted to DMIRS and include both before and after photographs (including a significant landmark) with captions detailing location, date and a brief description of the content of the photograph.

## Mining Lease Rehabilitation

Slide 13

Poor rehabilitation performance of the industry to date:

- Complex design life and durability standards pertaining to mine waste landforms such as tailings storage facilities and waste rock dumps against which performance can be assessed.
- Unique and diverse array of sites and material available for landform construction creates complex issues — no one size fits all scenarios.
- A highly informed and sceptical public may no longer accept assurances that structures will be forever risk free.

**Industry and the regulator therefore must present realistic expectations, be clear about, and have *mechanisms* in place to manage possible residual risks.**

**BOX 1. Example conditions that experts considered well-defined**

*“Remove all infrastructure”* → Not open to interpretation and clearly achievable.

*“Reflecting the surrounding natural ecosystem”* → Implies that ecosystems need to be consistent with the surrounding landscape, but don't necessarily need to be the same. A contrasting example that would not be achievable is *“restoration as closely as practicable (to) the pre-disturbance biodiversity and ecosystem functional values”*.

*“The dominant species, species composition, percentage cover and community structure in rehabilitated areas”* → Ticks off on variety of relevant richness aspects instead of just a percentage cover and diversity.

*“Undertake trials”* or *“Conduct laboratory and field scale research”* → Such targets are clearly achievable. However, they should be linked to delivering an outcome. Doing research for the sake of research is not necessarily useful.

**Group Discussion – Rehabilitation Experiences**

- How are rehabilitation conditions on tenements viewed within your company?
- Are there any examples of successful rehabilitation outcomes in your company?
- Are there any examples of unsuccessful rehabilitation outcomes in your company?
- How is rehabilitation success typically measured in your company?
- What were the issues contributing to rehabilitation success or lack thereof?
- What might be the typical problems and common issues faced by WA mining companies with regard rehabilitation requirements?

Why is rehabilitation important?

- **Social Licence to Operate**

One of the greatest compliance risks is a company losing its social license to operate (the acceptance of a company's business practices and operating procedures by its employees, stakeholders and the general public), thus limiting its future access to resources.

- **Financial liability**

Effective and early planning helps minimise rehabilitation costs as engagement, monitoring and collaboration with regulatory bodies can be improved. Failure to plan and manage these can see financial liabilities sky-rocket.

- **Compliance and approvals risk**

Companies failing to meet regulatory requirements and expectations run the risk of increased scrutiny, additional restrictions and higher compliance and legal costs. Mine rehabilitation efforts are now seen as a key performance indicator and a competitive advantage.

- **Legacy issues**

Poorly rehabilitated mines leave significant legacy problems and risks for all elements of society — governments, communities and companies

## Why is rehabilitation important?

Slide 17

Vale TSF Wall Collapse

<https://www.youtube.com/watch?v=sKZUZQytads>

The world's biggest miner, **BHP (ASX: BHP)**, has been hit with the UK's biggest damages claim of \$7.2 billion for its part in the 2015 Fundao tailings dam failure in Brazil.

The failure of the dam killed 19 people and sent about 40 million cubic metres of toxic sludge through various communities on the Rio Doce river, before eventually spilling into the Atlantic Ocean 650km away and polluting beaches.

While the more recent January collapse of a Vale-operated tailings dam in the town of Brumadinho in Brazil killed an estimated 300 people, the Fundao dam collapse is still regarded as being the biggest environmental disaster in Brazil and has led to massive compensation and remediation work by BHP and its Samarco joint venture partner, Brazil's Vale.

## Mine Rehabilitation Fund

Slide 18

- Fund created to enhance the State's capacity to manage and rehabilitate abandoned mines to lead to better environmental and community safety outcomes.
- Money in the fund is available to rehabilitate abandoned mines across the State in circumstances where the tenement holder/operator has failed to meet rehabilitation obligations and efforts to recover funds from the holder/operator have been unsuccessful.
- Just over \$32M in contributions for 2018/19 - Fund now totals \$150M
- The MRF Act allows for monies owed for rehabilitation work on abandoned sites to be recovered through the Courts from those responsible.
- All tenement holders operating on Mining Act 1978 (Mining Act) tenure are required to report disturbance data and contribute annually to the fund.
- The Rehabilitation Liability Estimate (RLE) Calculator assists tenement holders to estimate their rehabilitation liability and the associated MRF levy under a variety of scenarios.

### Appendix 1: Rehabilitation Liability Categories and Unit Rates

The following tables have been reproduced from Schedule 1 of the MRF Regulations.

Description of infrastructure or land	Category	Unit rate
Tailings or residue storage facility (class 1) Waste dump or overburden stockpile (class 1) Heap or vat leach facility Evaporation pond Dam – saline water or process liquor	A	\$50,000
Tailings or residue storage facility (class 2) Waste dump or overburden stockpile (class 2) Low-grade ore stockpile (class 1) Plant site Fuel storage facility Workshop Mining void (with a depth of at least 5 metres) — below ground water level Landfill site Diversion channel or drain Dam — fresh water	B	\$30,000
Low-grade ore stockpile (class 2) Sewage pond Run-of-mine pad Building (other than workshop) or camp site Transport or service infrastructure corridor Airstrip Mining void (with a depth of at least 5 metres) — above ground water level Laydown or hardstand area Core yard Borrow pit or shallow surface excavation (with a depth of less than 5 metres) Borefield Processing equipment or stockpile associated with <i>Basic Raw Material</i> extraction Land (other than land under rehabilitation or rehabilitated land) that is cleared of vegetation and is not otherwise described in this Table	C	\$18,000
Land (other than land under rehabilitation or rehabilitated land) that has been disturbed by exploration operations	D	\$2,000
Land under rehabilitation (other than land that has been disturbed by exploration operations) Topsoil stockpile	E	\$2,000
Exploration operations: land under rehabilitation, rehabilitated land	No rate applicable	

Note a unit is a hectare

**MRF COMPLIANCE 2019 year**

**Slide 20**

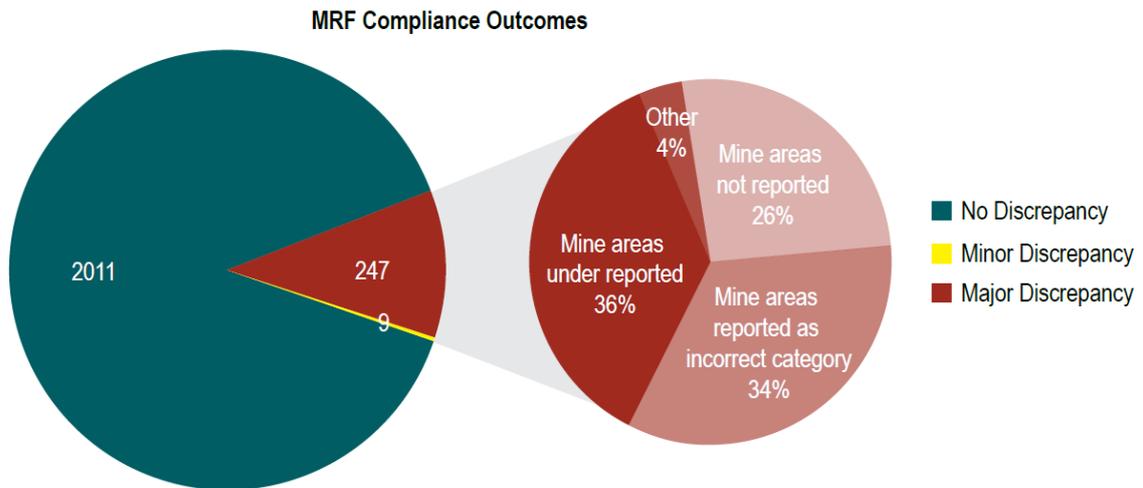
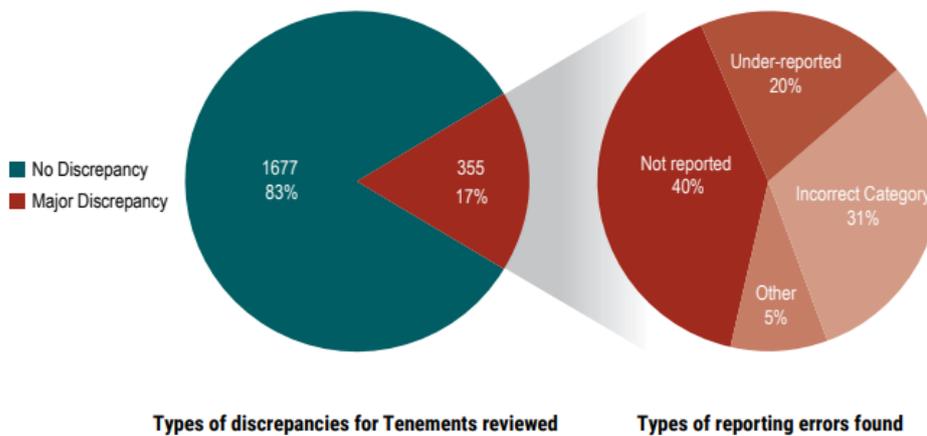


Figure 4 - 2018-19 Compliance Findings

**MRF COMPLIANCE 2022 year**

**Slide 21**

**MRF Compliance Outcomes**



**Figure 4 – Discrepancies found for tenements reviewed**

MRF Compliance Outcomes

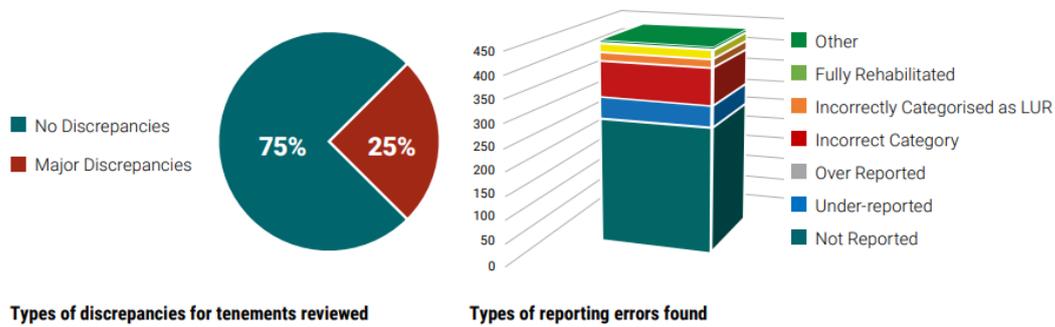


Figure 4 – Discrepancies found for tenements reviewed

What is your experience of MRF reporting and contributions?



Common Issues in MRF Reporting

Exploration and Prospecting Activities

- Each report must account for all of the work that you have done so far under the Programme of Work (PoW).
- If you have approval to do exploration or prospecting (meaning, a Programme of Work has been approved) but you haven't yet started work, you will still need to lodge an MRF report.
- Work that does not involve disturbing the ground (like detecting) does not count as an 'activity'.

## Common Issues in MRF Reporting (cont'd)

Slide 25

### Reporting Period

Required to report any disturbance on the surface of the tenement, whether or not you have undertaken any activity during the current reporting period. This means that, if you have not done any work during this reporting period, but have disturbed the land previously, you would normally report the same as you did in the previous period (except for exploration and prospective activity as mentioned previously).

Ultimately, you report the footprint of the activity as it exists on the day that you assessed it.

## Common Issues in MRF Reporting (cont'd)

Slide 26

- A mining activity cannot be considered as 'rehabilitated' unless all of the closure obligations in the mining proposal have been met and signed off by an appropriate officer within the Environmental Compliance Branch.
- A mining activity cannot be considered as 'land under rehabilitation' until all required earthworks have been completed in accordance with closure obligations and you have commenced work toward revegetation and monitoring.

## Common Issues in MRF Reporting (cont'd)

Slide 27

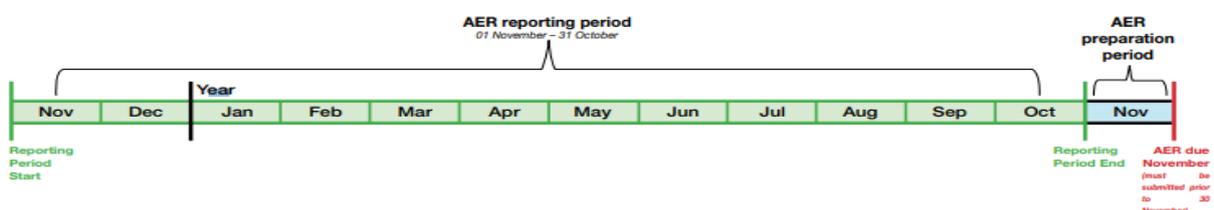
### 'Historical' or 'Legacy' mining activities or infrastructure

- When you purchase a tenement from another party, you effectively inherit all of their rights and obligations as if you, yourself, had held that tenement from the time it was granted.
- If a disturbance pre-dates the grant of the tenement (for example, old workings, roads or infrastructure), you would not normally need to include them in your report unless you have disturbed them or used them yourself.

## Annual Environmental Report

Slide 28

- A condition requiring the submission of an AER is imposed on the tenement following the approval of a mining proposal.
- Online AER submission currently requires all activity on mining tenure to be reported, including exploration.
- This satisfies the reporting requirements under the PoW and a separate report is not required.
- Document the activities which have occurred over the reporting period specific to the tenement or group site.
- The hardcopy submission of AERs is no longer accepted by DMP.



## **Annual Environmental Report (cont'd)**

**Slide 29**

### Objectives

- To concisely document the major mining activities for the reporting year and proposed activities for the following year.
- To enable the Department to understand operator environmental management and rehabilitation activities for the reporting year and proposed activities and developments in the following year.
- To encourage operators to conduct an environmental analysis of the project.
- To assist operators in self regulation
- Encourage operators to be prepared for mine closure
- To provide basic information to the Department about the extent of mining operations in the State and the standard of environmental management and mine closure planning being achieved.

## **Annual Environmental Report (cont'd)**

**Slide 30**

### Report Content

- Report Details — name, site details, reporting period, contact person.
- Review Tenements — will auto-populate based on tenement groupings
- Environmental Group Site — the individual tenements for the purposes of further distinguishing the operations which make up a particular Project. Includes: site summary, materials balance, closure plan, site plan, etc.
- Mining Activities — exploration activity, ore processed, waste moved, operational status.
- Area of activity — per tenement voids, dump, haul road workshop etc., survey method e.g. GPS.
- Compliance — compliance with env. approvals, document env. Incidents.
- Rehabilitation and Closure Planning.
- Future work — description of the mining activities, env. management and rehabilitation proposed for the following year.

## Penalties in Lieu of Forfeiture (4th QTR 2018)

Slide 31

Penalty	Nature of Breach	Learnings for Industry	Detection By	Minister's Decision Date	No. of Tenements	Individual or Company
\$41,533	Failure to comply with tenement conditions and failure to rehabilitate.	Ensure operations and closure planning is carried out in accordance with legislative requirements.	Inspection	3/12/2018	3	Company
\$19,200	Alteration or expansion of operations without approval.	Ensure all approvals have been received before undertaking works and operations.	Inspection	27/11/2018	3	Company
\$40,000	Not managing dust.	Ensure operations are undertaken in accordance with approvals.	Inspection	29/08/2018	1	Company
Forfeiture	Under expenditure and poor expenditure history.	Ensure that all expenditure obligations are met and that reporting is robust and verifiable.	Application for forfeiture of Exploration Licence by other party	28/02/2019 Warden recommended that the Minister grant the Application for Forfeiture	1	Company

## Session Outcomes

Slide 32

To understand:

- 1) Environmental expectations of the tenement holder
- 2) What successful rehabilitation might look like
- 3) Why is rehabilitation important?
- 4) Mine Rehabilitation Fund (MRF) and Reporting
- 5) Annual Environmental Report (AER)

## Morning Tea Break

Slide 33



# Environmental Legacy - Session 6

## Environmental Legacy

Slide 34

## Parallel Thinking using Six Hats (E. DeBono,1985)

Slide 35

 <p><b>The White Hat:</b> calls for information known or needed. "The facts, just the facts."</p>	 <p><b>The Yellow Hat:</b> symbolizes brightness and optimism. You can explore the positives and probe for value and benefit</p>	 <p><b>The Black Hat:</b> signifies caution and critical thinking - do not overuse! Why something may not work</p>
 <p><b>The Green Hat:</b> focuses on creativity, possibilities, alternatives and new ideas. It is an opportunity to express new concepts and new perceptions - lateral thinking could be used here</p>	 <p><b>The Blue Hat:</b> is used to manage the thinking process. It ensures that the 'Six Thinking Hats' guidelines are observed.</p>	 <p><b>The Red Hat:</b> signifies feelings, hunches and intuition - the place where emotions are placed without explanation</p>

## Hypothetical Scenario

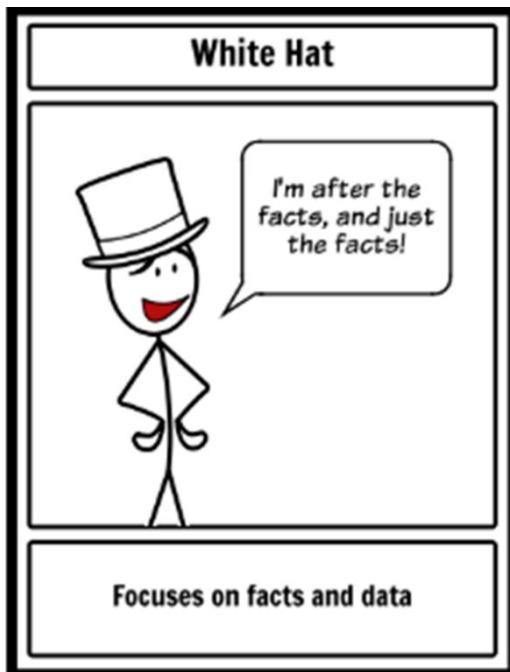
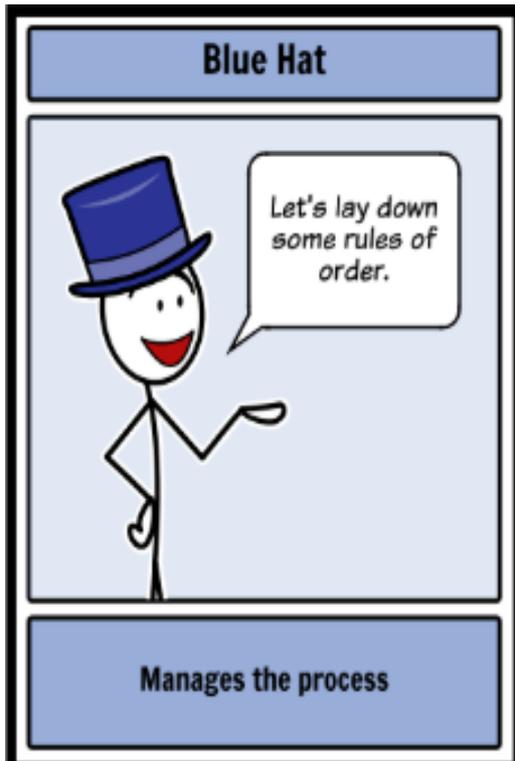
Slide 36

Blue Sky Mining would like to purchase a gold mine that has been in operation since 1977. The current owner of the gold mine wants to sell.

## Environmental Legacy

Slide 37

HYPOTHETICAL SCENARIO	
<ul style="list-style-type: none"> <li>• Gold mine in operation from 1977</li> <li>• Currently in care and maintenance since 2012</li> </ul> <p>Company statement to shareholders reads: <i>"The process plant and mine has been placed on care and maintenance since April 2012 and has been maintained to a high standard and in an operational ready condition."</i></p>	<ul style="list-style-type: none"> <li>• Site requires rehabilitation</li> <li>• Cost of rehab makes sale prohibitive</li> <li>• Rehabilitation liability estimate for the entire site is estimated at \$36,854,280.</li> <li>• Owner wants to be relinquished from any further environmental obligations.</li> </ul>
<ul style="list-style-type: none"> <li>• Series of company hand overs since the mine began operation</li> <li>• No break in tenure</li> </ul>	<ul style="list-style-type: none"> <li>• Failed tailings facility resulting in cyanide contamination to nearby tenements and pastoral lease with accommodation and tourism income to a radius of 2 km<sup>2</sup>.</li> <li>• Water users located further downstream may also face a risk of cyanide poisoning in future.</li> </ul>
<ul style="list-style-type: none"> <li>• Owner wants to sell</li> <li>• Owner has declared bankruptcy in the past.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of adequate fencing and secure bunds at of main pit causing cattle deaths (drowning and suspected poisoning)</li> </ul>
<ul style="list-style-type: none"> <li>• Ongoing and growing costs affiliated with holding the lease</li> </ul>	<ul style="list-style-type: none"> <li>• Evidence of erosion and high salinity groundwater</li> </ul>
<ul style="list-style-type: none"> <li>• Remains a corporate responsibility rather than a liability of the State as per WA Contaminated Sites Regulations 2006</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of adequate fencing and secure bunds at of main pit causing cattle deaths (drowning and suspected poisoning)</li> </ul>
<ul style="list-style-type: none"> <li>• The buyer would like indemnification of long-term environmental impacts and a deed of settlement re: contractual obligations of rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>• No decisive action to date and owner continues to deliberate on a rehabilitation plan. Buyer also wants reimbursement for monitoring costs</li> </ul>



**Red Hat**



That's exciting but makes me anxious!

**Considers feelings, both positive and negative**

**Green Hat**



What's something we haven't tried yet?

**Looks for alternatives, new solutions, and creative ideas**



## Risk and Tenement Management – Session 7 & 8

### Outcomes

### Slide 2

- Demonstrate the ability to identify risks that are inherent to tenement management
- Demonstrate the ability to identify risks that affect tenement management
- Develop options and recommendations based on risk management processes
- 

### Johari Window

### Slide 3

	Known to Me	Not Known to Me
Known to Others	Open Area (Known knows)	Blind Area (Known unknowns)
Not Known to Others	Hidden Area (Unknown knows)	Unknown Area (Unknown unknowns)

### Risk Process

### Slide 4

“I have minimal tenement management risk strategies in place. My tenement manager knows their job and they have a wealth of industry experience.”

1. Identify the threats
2. Assess the vulnerability of critical assets to specific threats
3. Determine the risk (i.e. the expected likelihood and consequences of specific types of attacks on specific assets)
4. Identify ways to reduce those risks
5. Prioritize risk reduction measures

### Separating Risk

### Slide 5

- Risks inherent to tenement management:
  - Does this risk originate in Tenement Management?
  - Is this risk external to, but affects Tenement Management?
- Why do we care about the difference?
  - Control

## Features of effective Risk Management

Slide 6

- Create value – resources expended to mitigate risk should be less than the consequence of inaction
- Be an integral part of organizational processes
- Be part of decision-making process
- Explicitly address uncertainty and assumptions
- Be a systematic and structured process
- Be based on the best available information
- Be tailorable

## Features of effective Risk Management

Slide 7

- Take human factors into account – blame free, role focus not individual personalities focus
- Be transparent and inclusive
- Be dynamic, iterative and responsive to change
- Be capable of continual improvement and enhancement
- Be continually or periodically re-assessed

		Impact <span style="font-size: 1.2em;">→</span>				
		Negligible	Minor	Moderate	Significant	Severe
Likelihood	Very Likely	Low Med	Medium	Med Hi	High	High
	Likely	Low	Low Med	Medium	Med Hi	High
	Possible	Low	Low Med	Medium	Med Hi	Med Hi
	Unlikely	Low	Low Med	Low Med	Medium	Med Hi
	Very Unlikely	Low	Low	Low Med	Medium	Medium

**Exercise**

**Slide 9**

- What are some of the scenarios that represent a risk to tenure?
- Discuss the events – where do they belong on the risk framework?
- What can be done to reduce the likelihood or impact?
- What can we plan in response?

**Thinking outside of the box**

**Slide 10**

<b>Company Areas</b>	<b>Viewed From Role</b>
Tenement	CEO
Environmental	Exploration Manager
Heritage	Tenement Manager
Native Title	Accountant

**Outcomes**

**Slide 11**

- Demonstrate the ability to identify risks that are inherent to tenement management
- Demonstrate the ability to identify risks that affect tenement management
- Develop options and recommendations based on risk management processes

