



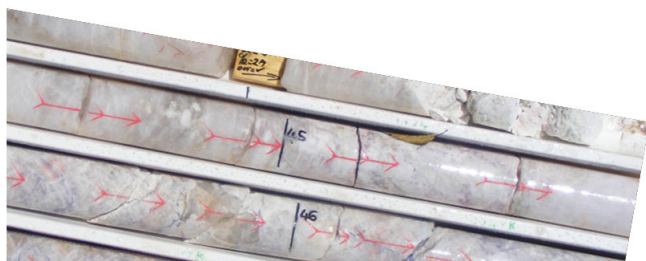
Unearthing Australia's First Caesium Deposit (and other things)

David Crook, Managing Director

121 Mining Investment

Hong Kong 2018

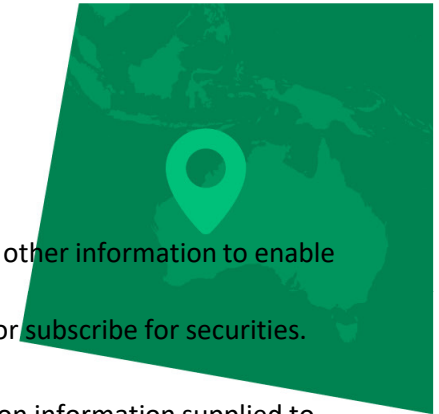
BOOTH 16



27	Co
55	Cs
3	Li
28	Ni
73	Ta



Disclaimer and Competent Person's Statement



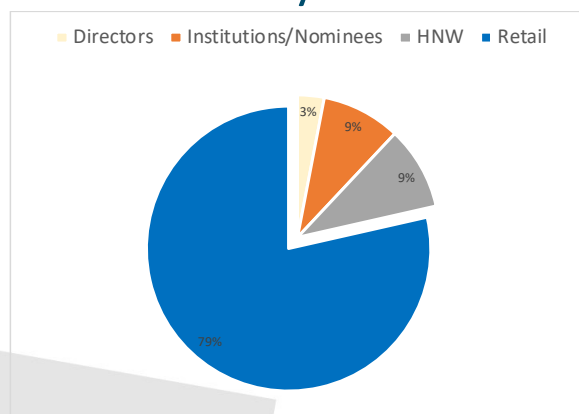
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- The information in this report paraphrases material that is in the public domain including exploration results is based on information supplied to and compiled by Mr David Crook. Mr Crook is a full time employee of Pioneer Resources Limited. Mr Crook is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientist and has sufficient experience which is relevant to the exploration processes undertaken to qualify as a Competent Person as defined in the 2012 Editions of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.
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- This document may contain forward looking statements concerning the projects owned by the Company. Statements concerning mining reserves and resources may also be deemed to be forward looking statements in that they involve estimates based on specific assumptions.
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Corporate Overview

Capital Structure

Share Price	\$0.025
Shares Outstanding (m)	1,430
Market Capitalisation	\$35.0
Cash (\$m) (31/03/2018)	\$3.6
Debt (\$m)	0.0
Options Outstanding (listed/unlisted(m))	44/16

Shareholder Analysis



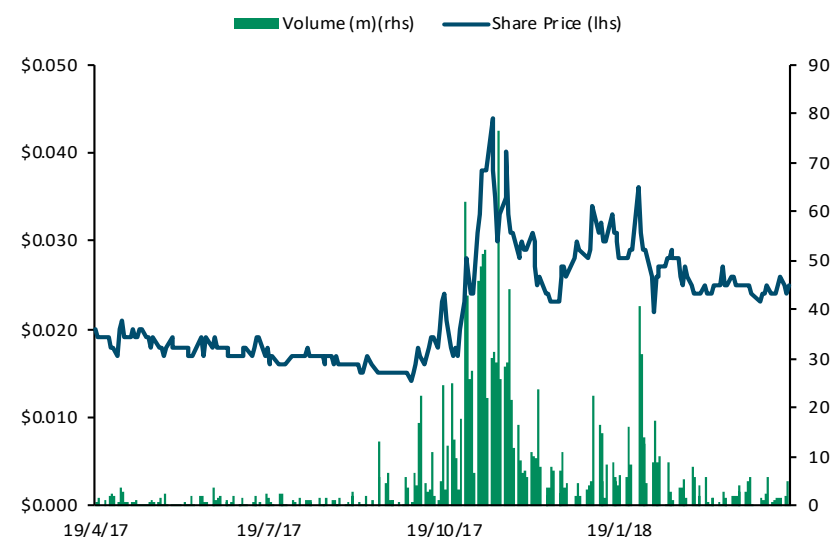
Top 20 Ownership: 21%



Board & Management

Craig McGown	Non-Executive Chairman
David Crook	Managing Director
Allan Trench	Non-Executive Director
Wayne Spilsbury	Non-Executive Director
Timothy Spencer	CFO & Company Secretary

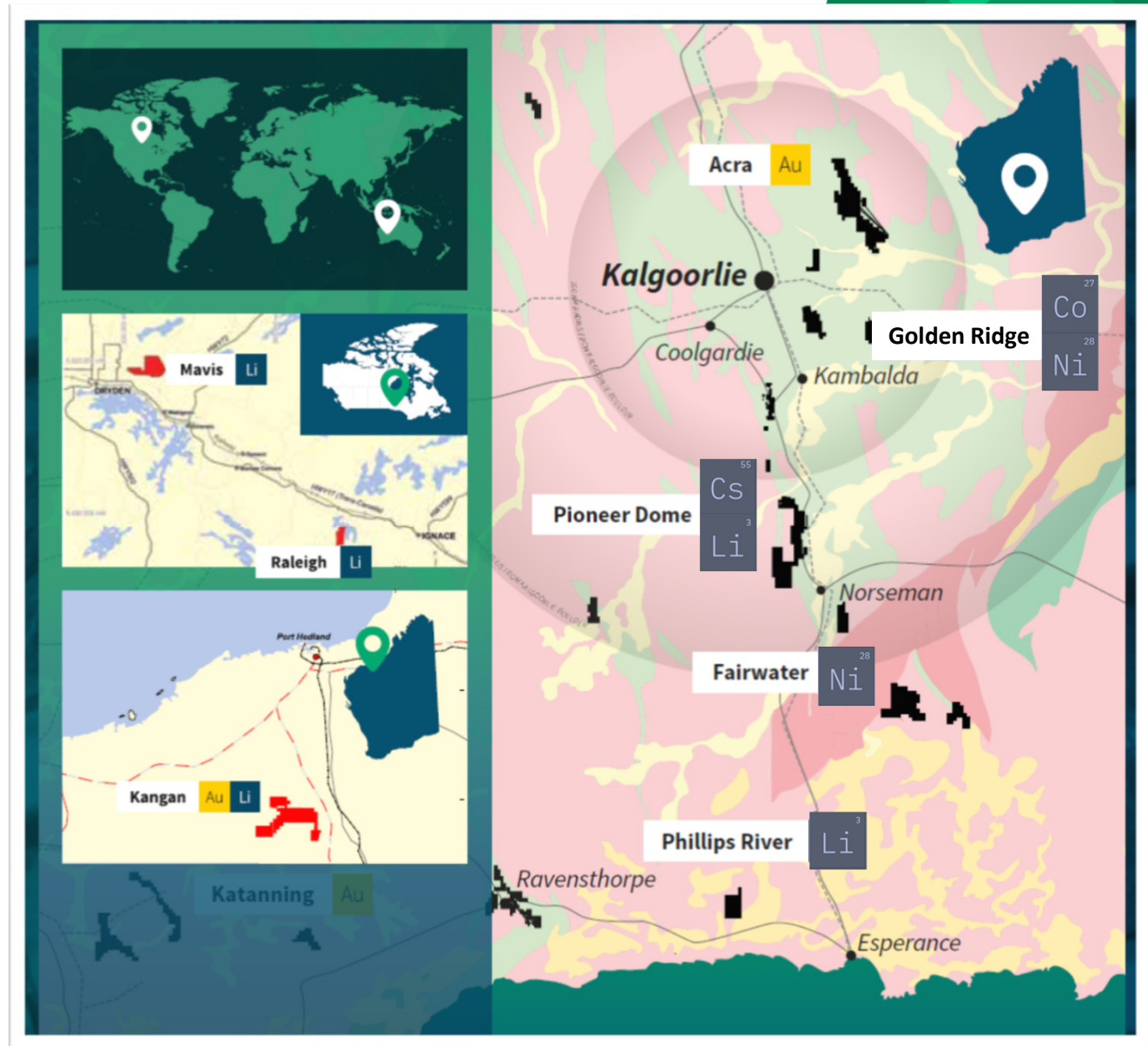
12 Month Share Price chart



Key Assets Along Infrastructure Corridors in WA and Ontario

Pioneer Dome
Incl. Sinclair Caesium deposit
Golden Ridge
Mavis Lake
Kangan

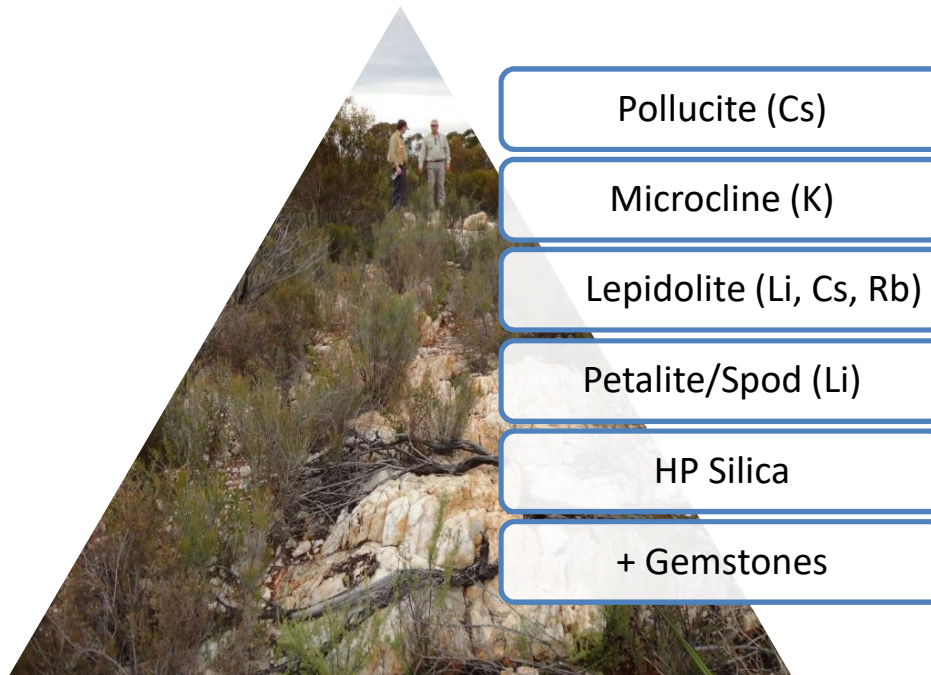
Norseman
Kalgoorlie
Ontario
Pilbara



Sinclair Zone Caesium Deposit Advancing Towards Production



This gives us a list of Saleable Products



Pioneer
RESOURCES LIMITED

☐ **Timetable – Aiming for startup July 2018:**

- ☒ Mining Lease and Miscellaneous Licence: Granted
- ☒ Project, Safety, Community System: Advanced
- ☒ Detailed heritage surveys: Completed
- ☒ Detailed resource drilling finished:
 - ☐ Drilling results awaited
 - Final Mine Design
 - Finalise Offtake
 - Final Approvals from DMIRS (Mines Department)
 - Commence Mining

Sinclair Zoned Pegmatite more akin to Tanco



Microcline
 $(K,Na)[AlSi_3O_4]$



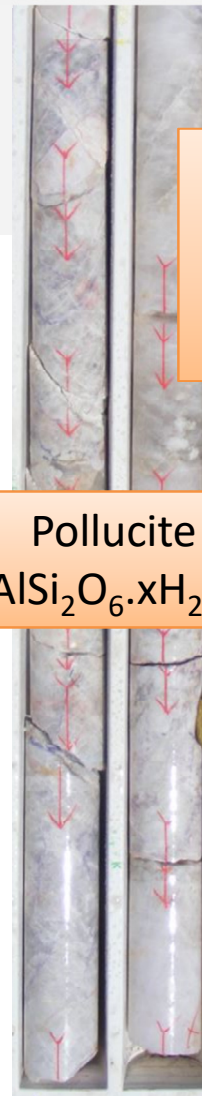
Perthite
Albite
Clevelandite



Petalite
 $Li[AlSi_4O_{10}]$



Silica
 Si_2O_3



Pollucite
 $CsAlSi_2O_6.xH_2O$



Lepidolite
 $K_2(Li,Al)_{5-6}[Si_{6-7}Al_2O_{20}](OH,F)_4$

GP2:

GP4:

GP6:

GP5:

GP7:

GP8:

GP9:

Caesium Is Used to Make Formate For Deep Sea Drilling



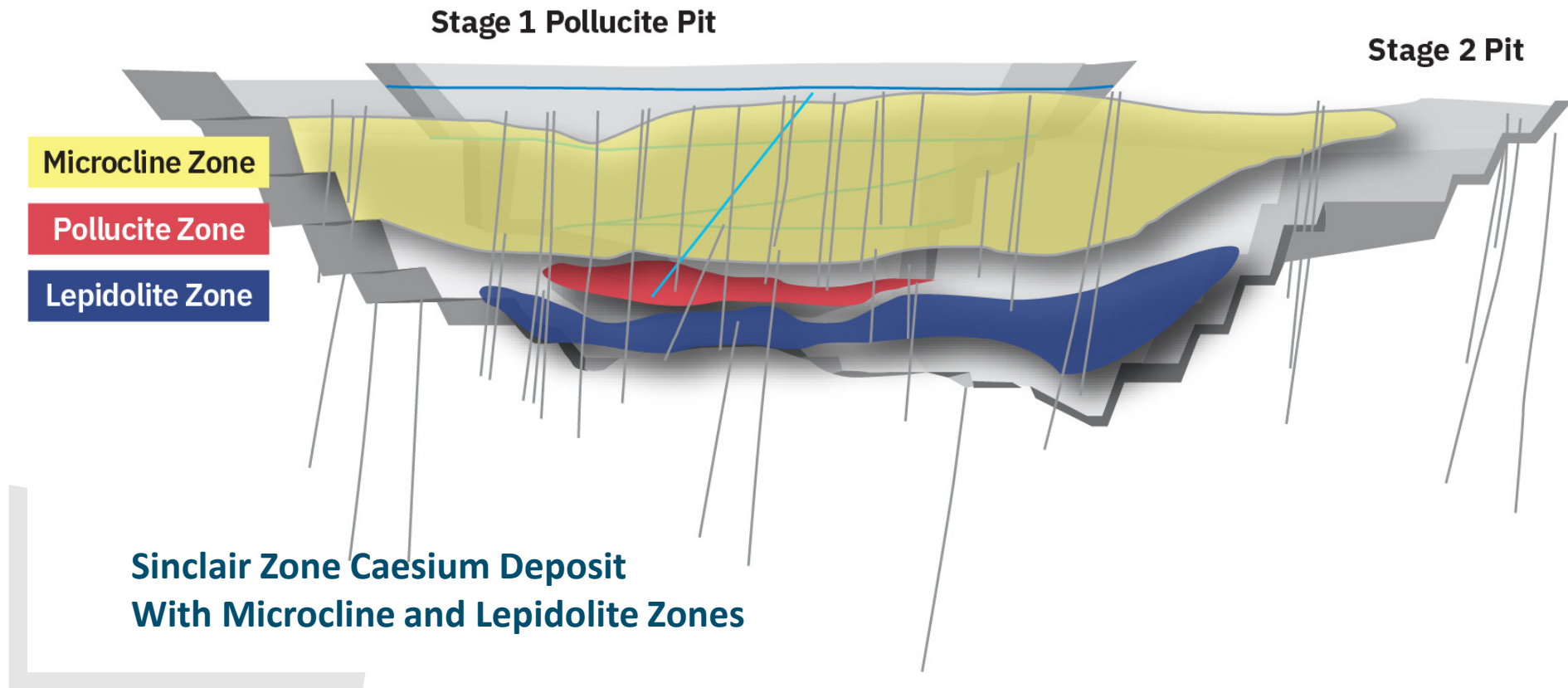
- The Caesium mineral “pollucite” is very rare
- The two main producers are:
 - TANCO in Canada,
 - Bikita in Zimbabwe
- Used to make lubricant in high temperature/high pressure oil and gas drilling



This is what the Sinclair Mine Could Look Like



- *Discovery in October 2016,*
- Measured Mineral Resource of **10,500t pollucite grading 17.1% Cs_2O**
- **The World's 3rd largest known pollucite deposit (pre depletion of others)**



What's Next: Golden Ridge – Cobalt/Nickel

Pre-2017 Drilling

GOR0388: 12m at 0.14% Co from 36m
 GOR0392: 10m at 0.14% Co from 32m
 GOR0396: 6m at 0.25% Co from 38m
 GOR0404: 30m at 0.15% Co from 36m
 GOR0405: 10m at 0.17% Co from 40m
 GOR0409: 6m at 0.28% Co from 18m
 GOR0413: 6m at 0.31% Co from 18m
 GOR0413: 8m at 0.19% Co from 42m
 GOR0414: 12m at 0.16% Co from 40m
 GOR0418: 18m at 0.19% Co from 42m
 GOR0451: 10m at 0.26% Co from 48m
 GOR0460: 16m at 0.15% Co from 16m
 GOR0461: 12m at 0.15% Co from 42m
 GOR0474: 12m at 0.16% Co from 44m
 GOR1107: 8m at 0.2% Co from 48m
 GOR1118: 2m at 0.42% Co from 52m
 GRA0227: 8m at 0.18% Co from 45m
 GRA0233: 10m at 0.15% Co from 38m
 GRA0275: 11m at 0.12% Co from 56m

BLD053: 12m at 0.27% Co from 106m
 GRA0010: 9m at 0.37% Co from 20m
 GRA0010: 11m at 0.10% Co from 35m
 GRAC906: 10m at 0.26% Co from 34m
 GRAC949: 14m at 0.21% Co from 43m

Golden Ridge Cobalt Project

2017 Drilling

Leo's Dam

GRRC27: 22m at 0.18% Co from 38m
 GRRC33: 19m at 0.22% Co from 34m

Anomaly 14

GRRC13: 6m at 0.11% Co from 42m
 GRRC14: 6m at 0.11% Co from 42m
 GRRC16: 7m at 0.14% Co from 32m
 GRRC18: 8m at 0.17% Co from 34m
 GRRC19: 17m at 0.11% Co from 34m
 GRRC24: 11m at 0.21% Co from 35m

Anomaly 13

GRRC30: 16m at 0.17% Co from 42m
 GRRC32: 16m at 0.08% ppm Co from 34m

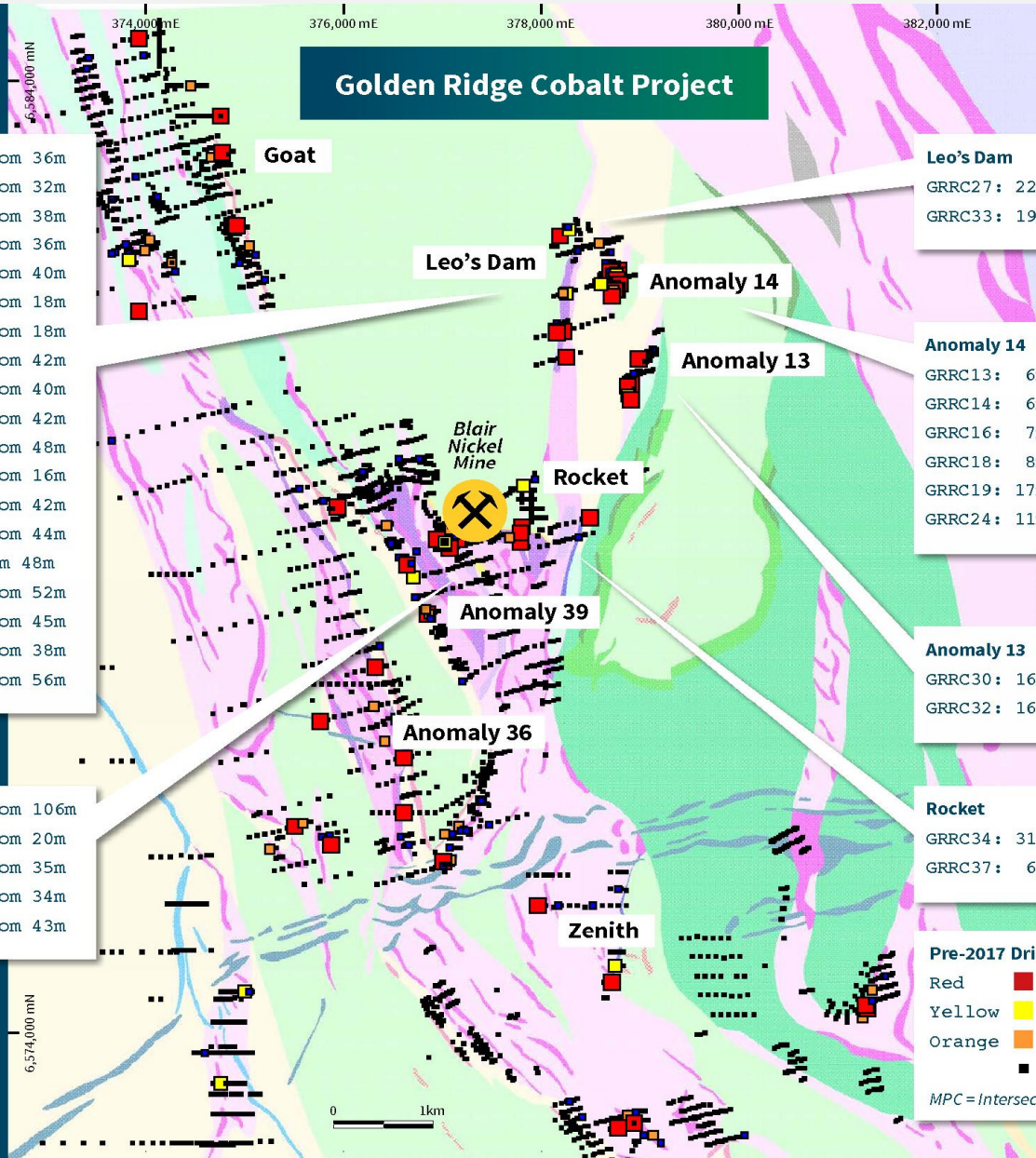
Rocket

GRRC34: 31m at 0.15% Co from 43m
 GRRC37: 6m at 0.57% Co from 22m

Pre-2017 Drilling Legend

Red >1.00 MPC
 Yellow 0.75-1.00 MPC
 Orange 0.50-0.75 MPC
 ■ other drill hole

MPC = Intersection(m) x Co% (>0.05% Co)



How Does Golden Ridge Compare



ROCKET

- **GRRRC34:** 31m at 0.15% Co from 43m
- **GRRRC37:** 6m at 0.57% Co from 22m

LEO'S DAM

- **GRRRC27:** 22m at 0.18% Co from 38m
- **GRRRC33:** 19m at 0.22% Co from 34m

ANOMALY 13

- **GRRRC30:** 16m at 0.17% Co from 42m

ANOMALY 14

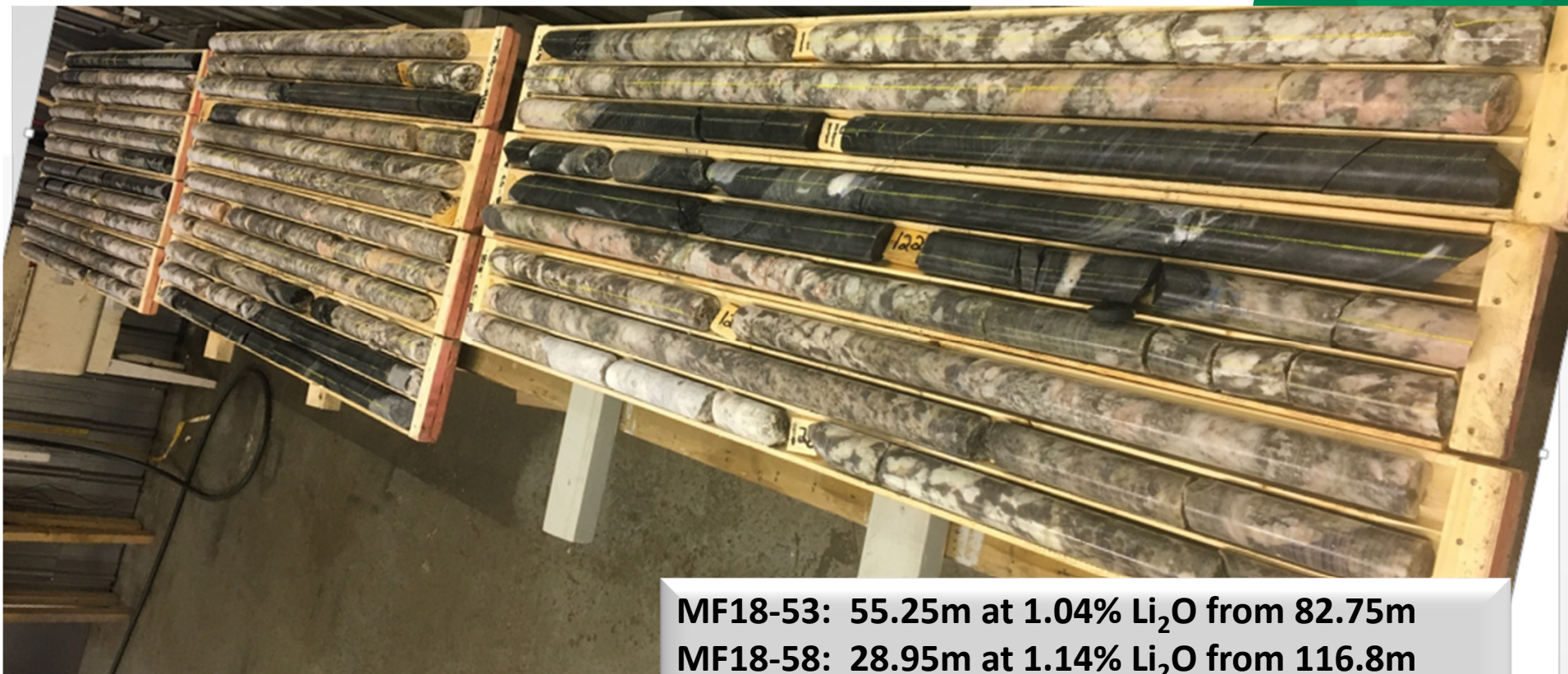
- **GRRRC18:** 8m at 0.17% Co from 34m
- **GRRRC19:** 17m at 0.11% Co from 34m
- **GRRRC24:** 11m at 0.21% Co from 35m

Comparable Cobalt Projects

Reported Lateritic Cobalt Deposit Size

Company	Tonnes	Grade*	Location
	(mt)	Co	
Ardea (\$103m)	805	0.05 %	Kalgoorlie, WA
includes	64	0.13 %	
CleanTeq (\$727m)	109	0.10 %	Syerston, NSW
GME (\$64m)	108	0.06 %	Leonora, WA
Conico/Barra	32	0.12 %	Norseman, WA
Platina	9	0.15 %	Owendale, NSW
Augur	16	0.05 %	Homeville, NSW
Cougar	10	0.07 %	Leonora, WA
Australian (\$233m)	89	0.11 %	Sconi, QLD

Mavis Lake – Lithium (Spodumene)



MF18-53

MF18-53: 55.25m at 1.04% Li₂O from 82.75m

MF18-58: 28.95m at 1.14% Li₂O from 116.8m

MF18-51: 23.30m at 1.09% Li₂O from 76.8m

MF18-52: 13.45m at 1.17% Li₂O from 149.95m

**MF18-54: 18.20m at 1.27% Li₂O from 94.8m and
6.10m at 2.33% Li₂O from 139.25m**

MF18-55: 12.35m at 1.41% Li₂O from 135.14m

Pioneer's Timetable and Value Proposition



- ❑ ***Mining Sinclair Zone Pollucite (Caesium) Deposit - 2018***
- ❑ ***Commercialise Co-Products (Lithium, Potassium (Microcline))***
- ❑ ***Drill for further Pioneer Dome Discoveries***
 - ❑ Lithium Targets – Vector for Smaller Caesium Targets
- ❑ ***Then.....***
 - ❑ Golden Ridge: - Cobalt, Nickel Sulphide
 - ❑ Mavis Lake, Raleigh, Canada

References



- **References**

- **Projects**

- Golden Ridge/Blair Dome: Refer Company's announcements to ASX dated 18 November 2013 (Blair Resource Estimate), May 2014, 27 January 2015, 18 May 2015, 20 July 2015, 13 April 2017, 23 January 2018, 25 January 2018.
- Mavis Lake and Raleigh: Refer Company's announcements to ASX dated 15 March 2016, 20 April 2016, 13 July 2016, 26 July 2016, 12 October 2016, 7 February 2017, 8 February 2017, 10 March 2017, 11 April 2017, 23 January 2018.
- Pioneer Dome: Refer Company's announcements to ASX 19 May 2016, 27 July 2016, 28 August 2016, 1 September 2016, 4 October 2016, 17 October 2016, 14 November 2016, 2 December 2016, 13 December 2016, 13 January 2017, 24 January 2017, 23 February 2017, 20 March 2017, 22 March 2017 (Sinclair Measured Resource Statement), 20 June 2017, 22 August 2017, 9 October 2017, 17 January 2018, 21 February 2018
- Kangan: WAMEX A No, 26936, 79608, 81531, Note 1. The Continent of Ur and the Beginning of the Crustal Gold Cycle—Hennigh, Q.T., IGC35, September 1, 2016, Note 2. Company announcement to ASX dated 6 October 2017, 24 October 2017.
- Internal documents by Brand N. W. of Geochemical Services Pty Ltd
- Plus Company quarterly reports.

- **Pegmatites**

- London, D. (2008): Pegmatites. *The Canadian Mineralogist Special Publication 10*.


- **Microcline**

- Charles River Associates (May 10, 2013). Potassium Feldspar Study: Market Assessment Report to I-Minerals, May 10, 2013

The Company it is not aware of any new information or data that materially affects the information included in this Report

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