2017 – the year the industry turned around

NT mineral exploration expenditure since 2000
Annual exploration calculated quarterly

- 2011 - $228.4M
- 2003 - $41.5M
- 2016 - $78.1M
- $91.2M
Greenfields exploration in the NT has doubled since 2014

NT now has ~10% of Australian greenfields exploration

Exploration entering a new cycle

Proportion of exploration classified greenfields by ABS is well above Australian average

‘Brownfields’ – exploration delineating or proving up an existing deposit (Inferred Resource or higher)
Gold (Pine Creek)

Kirkland Lake Gold - *Cosmo*
Suspension of mining at Cosmo Deeps
High-grade results at *Lantern:*
- 0.3m @ 4750 g/t Au
- 4.5m @ 119 g/t Au
- 18.7m @ 40.8 g/t Au

Primary Gold – *Mount Bundey*
Substantial increase in resource: 54.1 Mt at 1.03g/t Au

Ark Mines
Plans for 450 ktpa gold plant at *Union Extended*

Vista Gold – *Mount Todd*
Revised PFS released; environmental assessment complete
Gold (Tanami-Arunta)

Newmont Tanami Operations:
• Now a 14 million ounce deposit
• $150 million expansion opened in 2017
• Approvals commenced for 439 km gas pipeline from Amadeus pipeline to Dead Bullock Soak

Northern Star Resources:
• Continuing to expand footprint in the Tanami
• Major mag-rad geophysical survey in 2017
• Drilling programs planned for 2018

ABM Resources: Aggressive exploration at **Suplejack** project and at **Bluebush**
Upgraded resource for Suplejack
Regional aircore drilling at Bluebush in 2017 to be followed up in 2019
Gold-copper (Tennant Ck)

Emmerson Resources
Small-scale gold mining commenced at **Edna Beryl**
Further small-scale developments being progressed at **Black Snake** and **Chariot**

Emmerson-Evolution JV restructured:
- Evolution 100% owners of Cu-rich deposits in **Gecko-Goanna** corridor (drilling in 2017: 6m @ 4.0% Cu)
- Emmerson regain 100% of remaining 94% of area containing gold-dominant deposits

**Chalice Gold Mines** – **Parakeet** (West Warrego)
- 8m @ 1.74% Cu, 0.42 g/t Au

Opening of Edna Beryl mine, July 2017
Copper (± Au, Ag, Zn)

**Pacifico Minerals – Lorella**
Exploration Target of 5-10 Mt @ 0.8-1.1% Cu

**Todd River Resources – Mount Hardy**
- 7m @ 1.77% Cu, 0.43% Zn, 17.7 g/t Ag
- 10.5m @ 1.10% Cu, 4.15% Zn, 0.65% Pb

**KGL Resources – Jervois**
High grade copper orebodies in magnetite-garnet host
**Reward:**
- 8.16m @ 5.03% Cu, 3.35 g/t Au, 35.9 g/t Ag
- 11.63m @ 4.2% Cu, 0.81% Pb, 1.07% Zn, 86 g/t Ag, 0.65 g/t Au

**Rockface:**
- 8.24m @ 9.21% Cu, 38.1 g/t Ag, 0.29 g/t Au

**DevEx Resources** – new focus on copper, gold and base metals in western Arnhem land (eg U40)
**Zinc** (McArthur Basin-Lawn Hill)

**Teck**
- Further drilling at *Teena*
- Co-funded drilling at Yalco with NTGS

**MMG**
- Continued to expand footprint in greater McArthur Basin
- Significant drilling in 2017
- New JV with Red Metal at Mallapunyah

*Teena*
58 Mt at 11.1% Zn, 1.6% Pb
Polymetallic

PNX Metals - *Hayes Creek project*
4.1 Mt @ 4.35% Zn, 1.81 g/t Au, 124 g/t Ag, 0.91% Pb, and 0.25% Cu
• Pre-feasibility study completed

Independence Group, ABM Resources - *Grapple*
2016: 9 m @ 1.8g/t Au, 3.26% Cu, 49.1g/t Ag, 3.63% Zn, 1.09% Pb and 0.26% Co
2017: 11.4m @ 7.9 g/t Au, 20.7 g/t Ag, 0.8% Cu, 1.1% Zn, 0.5% Pb and 0.1% Co
Tungsten

GWR Group – Hatches Creek W-Cu-Au
- Historic Hatches Creek tungsten field
- 33 holes drilled for 3,388m in September 2017
- Maiden Resource to be prepared early 2018
  - 69 m at 0.23% WO₃, 0.34% Cu
  - 9m at 2.03% WO₃, 0.18% Cu, 0.05% Mo

Thor Mining – Molyhil W-Mo
- Upgraded Ore Reserve
- Proposed mine life extended to 7 years
Cobalt

Significant cobalt as a potential by-product at **Browns**

**Northern Cobalt – Wollogorang project**
- Sediment hosted siegenite in McArthur Basin
- 137 holes drilled for 11,836m in late 2017
- Individual metre grades of >2% Co
- 20m @ 0.31% Co

Stanton resource (prior to drilling)
- 500,000t @ 0.17% Co, 0.09% Ni, 0.11% Cu
Lithium

Core Exploration – Finniss project
Grants - Maiden Resource 1.8 Mt @ 1.5% Li$_2$O
Notice of Intent Submitted
BP33 - Resource drilling campaign
54m @ 1.42% Li$_2$O
Carlton - 10m @ 1.6% Li$_2$O
Hang Gong - 5.5m @ 2.13% Li$_2$O
Booths - 3m @ 1.6% Li$_2$O
Sandras - 7m @ 2.13% Li$_2$O

Kingston Resources – Lei
9m @ 1.69% Li$_2$O

Lithium potential of Arunta Region:
Kingston Resources – Delmore and Spotted Wonder
Todd River Resources – Bismark (Anningie Tin Field)
Core Exploration – Barrow Creek and Anningie fields
Uranium

**Vimy Resources** - purchase of Cameco’s Alligator Rivers tenements

- Resource estimation to commence at *Angularli*, plus further drilling
- Drilling planned at *Such Wow* prospect
- Rio Tinto retain 25% of JV
- Cameco retain conditional buyback option

**Energy Metals** – maiden resource for *Malawiri*

421,000t @ 0.13% U₃O₈

Sandstone-hosted mineralisation similar to Bigrlyi
Other minerals

Bauxite – Gulkula Mining Co. mine and training centre opened at Dhupuma Plateau near Gove – ramping up to 500ktpa

Iron ore – Britmar authorised to recommence activities at Roper Bar, including shipping of stockpiles

Diamonds – small scale production underway at Merlin

Phosphate – Verdant Minerals drilling at Rockhole prospect: 6m @ 35.6% P2O5

Progress through environmental approvals process for Tellus (Chandler salt), TNG (Mount Peake vanadium-titanium-iron) and Arafura (Nolans rare earths)
Petroleum

Exploration in **Beetaloo Sub-basin** on hold while moratorium is in place

Northern Gas Pipeline opening up new markets for central Australian gas

**Central Petroleum**
- $12M upgrade of Mereenie gas processing plant
- Increase gas sales from 15TJ/d to 58TJ/d
- Drilling planned at tripling reserves
- Drilling at Ooraminna, restart of production at Palm Valley in 2018

**Santos (-Central)**
- 932 km of 2D seismic completed
- Follow-up seismic in 2018
- Drill testing in 2019

From Menpes et al, AGES 2018
Looking ahead

Every reason to expect a strong year for exploration in 2018

Outlook is very positive for gold, base metals and battery metals in the NT

A number of large projects approaching FID

Release of Draft Report of Hydraulic Fracturing Inquiry in late March

Unprecedented levels of new geoscience being released – we have only scratched the surface of the Territory’s potential
AGES 2018 Sponsors

Origin

MMG

Core Exploration Ltd

Tellus

Titeline Drilling Pty Ltd