

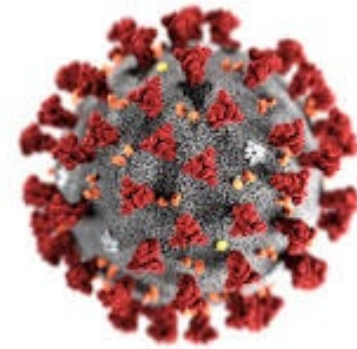
Highlights of mineral and petroleum exploration and development in 2020



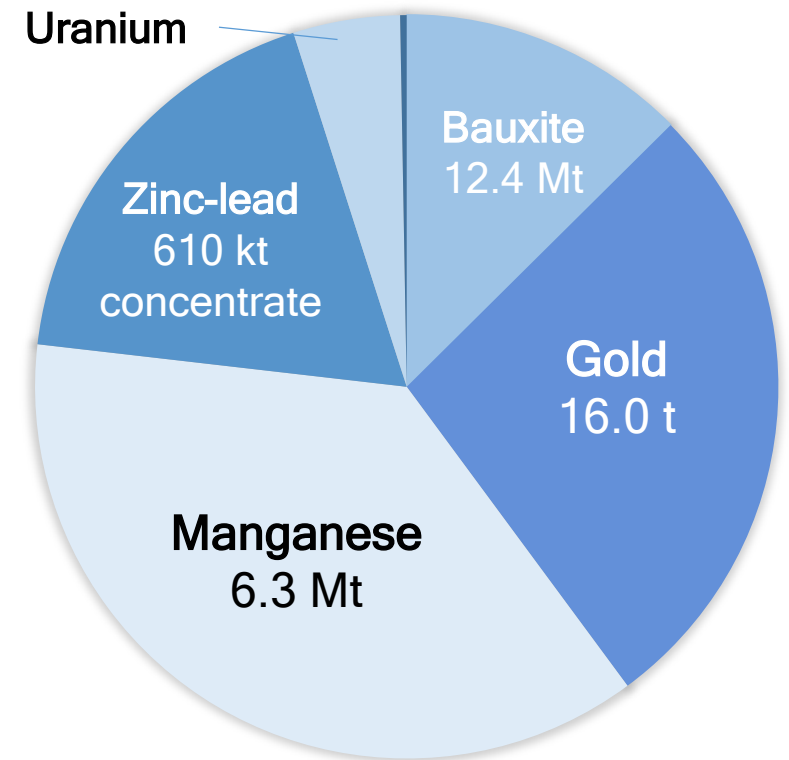
Ian Scrimgeour

2020: A year with no AGES 😞

- Mineral and petroleum exploration in the Northern Territory was heavily impacted by Covid-19
- On-ground exploration effectively on-hold due to biosecurity restrictions from March to June
- After June, border closures and tightened restrictions on access to ALRA land continued to impact exploration
- Challenges given the interstate location of most explorers and contractors
- Mining operations continued to operate successfully in a Covid-safe way, with \$4.4B of mining production in 2019/20
- Exploration recovered in late 2020, but field season was dramatically shortened
- Copper and gold have been the main commodities of interest for mineral exploration in the NT in 2020



NT mineral production value 2019/20



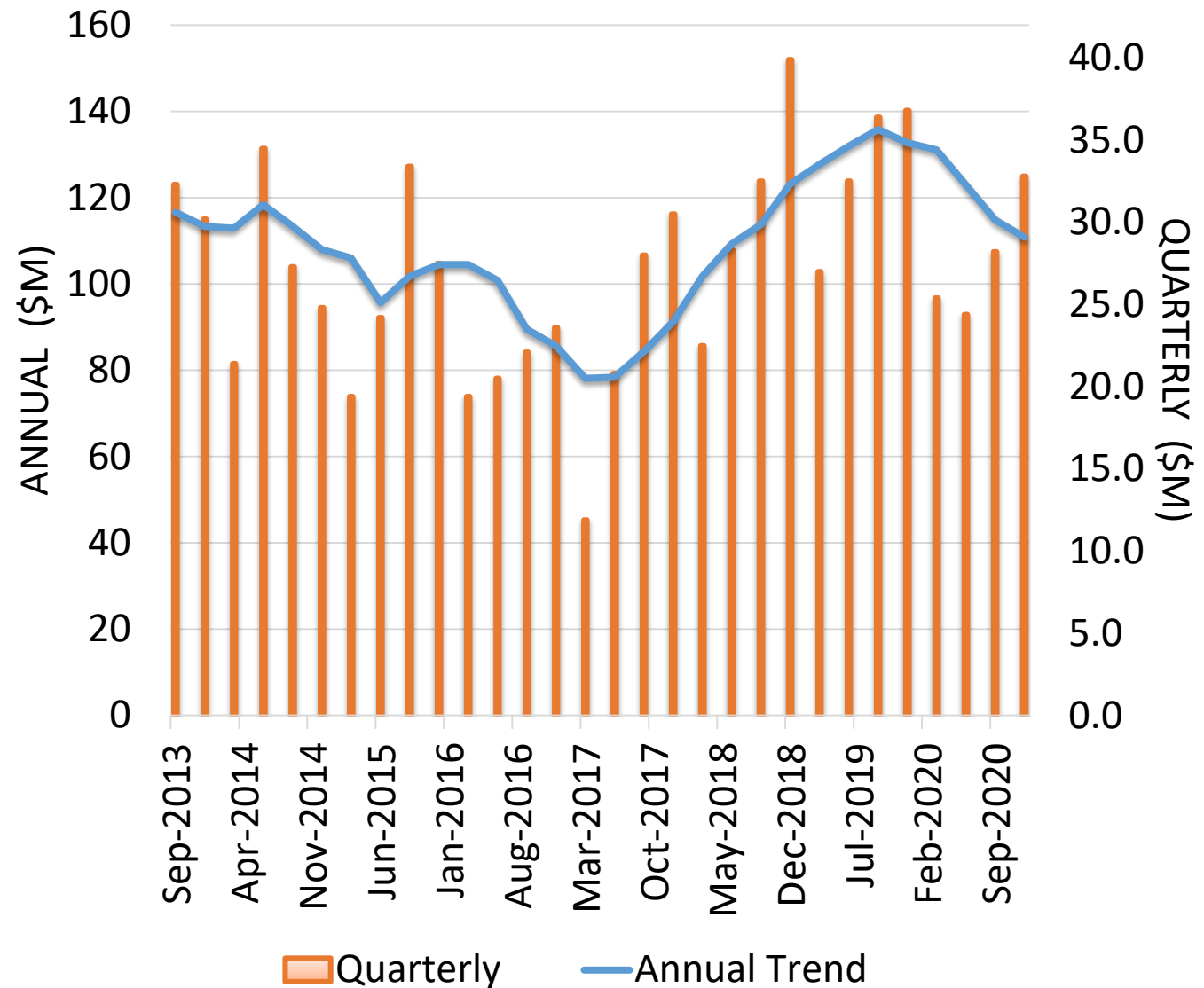
Mineral exploration statistics

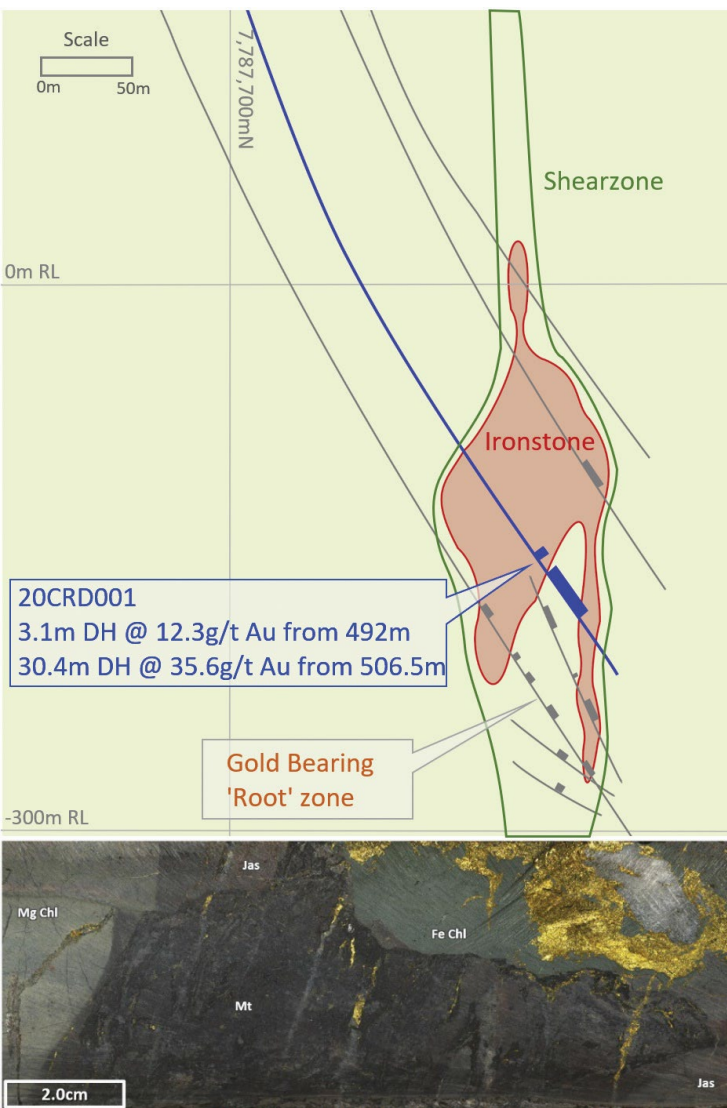
\$110 million mineral exploration expenditure in NT in 2020

16% fall in 2020 (compared with 7% rise in WA)

Definite signs of recovery in December 2020 quarter

Northern Territory mineral exploration expenditure





Tennant Creek and Rover mineral fields

Castile Resources - *Rover 1 Cu-Au-Co*

Drilling and feasibility studies in progress

First 2020 result: **30.4m @ 35.6g/t Au, 1.46% Cu, 0.18% Bi, 0.09% Co**

Emmerson Resources – *Tennant Creek*

Native Title and equity agreement with Marnturla Aboriginal Corporation over Jasper Hills/Golden Slipper

Strategic Alliance with TCMG over Northern Project Area

Mauretania : 8.8m @ 3.4 g/t Au; 12m @ 2.5% Cu, 0.3 g/t Au, 0.14% Co

Rio Tinto – commencing exploration west and north of Tennant Creek

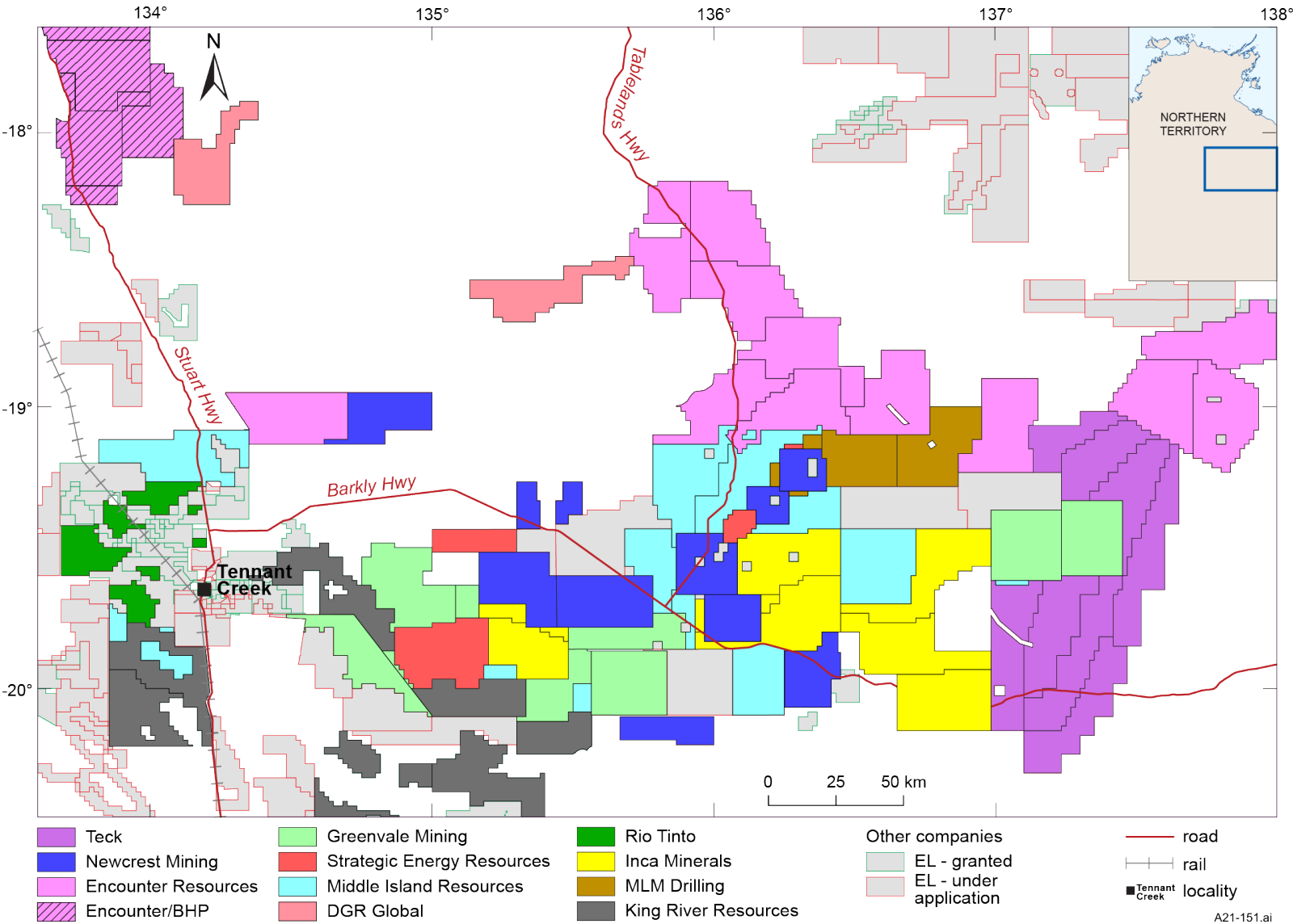
Blina Minerals – *Bluebird* : 15m @ 3.46% Cu, 0.61 g/t Au

King River Resources – 11 hole, 2376m campaign 35 km east of Tennant

ICA Mining – planning to process Peko tailings

Rover 1 (from Savage, AGES 2021)

Exploration boom in the Barkly Tableland



Large volume of new pre-competitive geoscience from Geoscience Australia and NTGS driving a major pick up of 50,000 km² of greenfields tenure by multiple companies

Exploration boom in the Barkly Tableland

BHP – Option to invest \$22 million in Encounter Resources' Elliott project

Encounter Resources – large areas of titles for sediment-hosted copper

Newcrest Mining

Early mover in East Tennant – exploration to commence early 2021

Rio Tinto Exploration

– Greenfields tenure in Tennant Creek field

Strategic Energy Resources

– mag-rad survey co-funded by NTGS

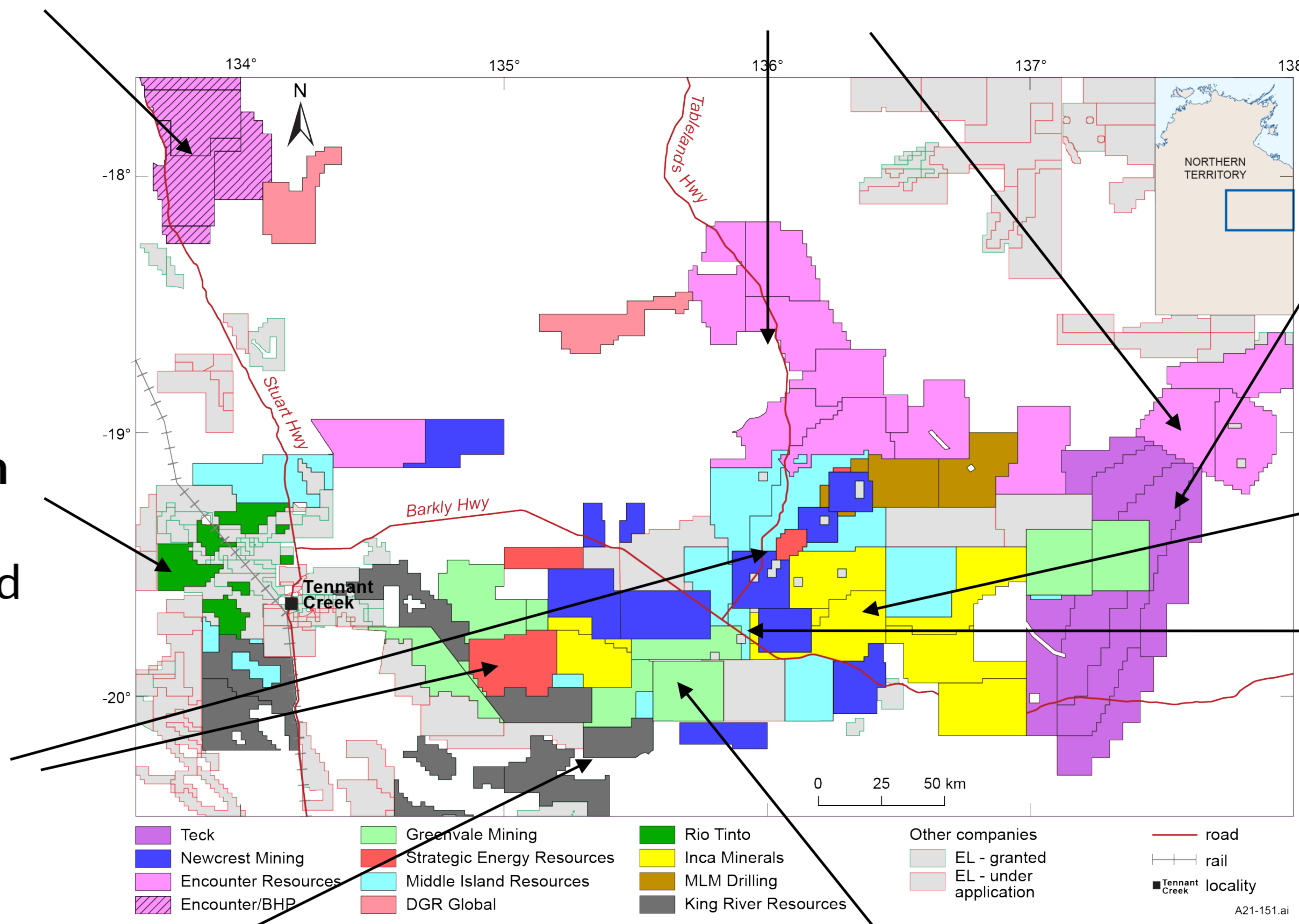
Teck Resources – large area of new applications covering undercover South Nicholson/Lawn Hill basins

Inca Minerals – 50m-spaced mag-rad survey co-funded by NTGS

Middle Island Resources – Discovery of surface copper mineralisation

King River Resources – 500m-1 km gravity co-funded by NTGS

Greenvale Mining – 15,300 line km of airborne mag-rad



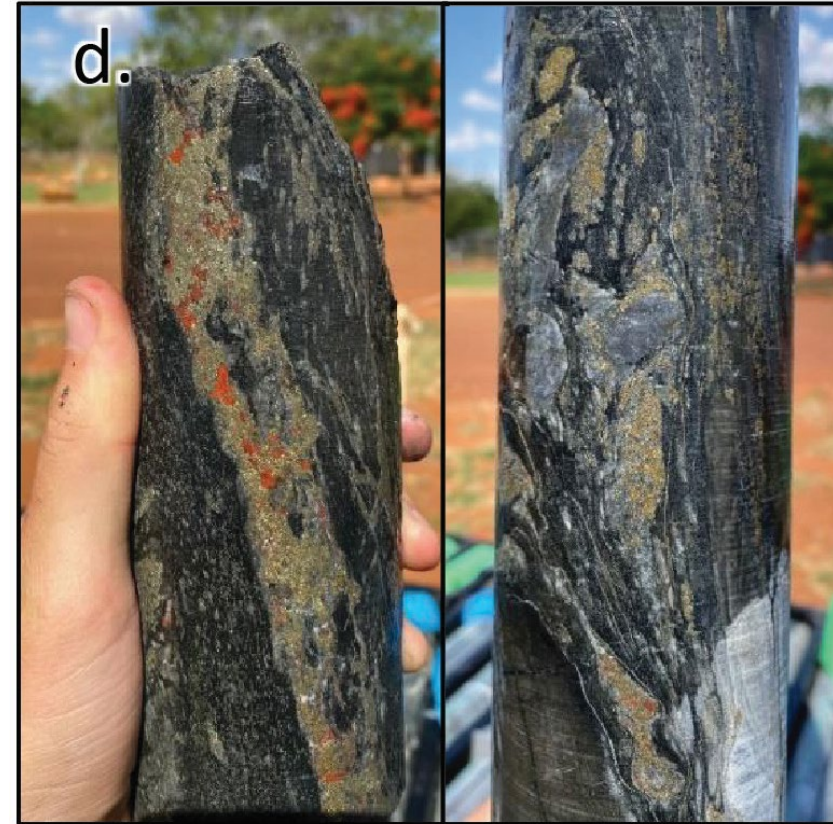
There is copper out there...



Surface copper at Crosswinds (Middle Island Resources)



Copper in water bore at Jessica project (Encounter Resources)



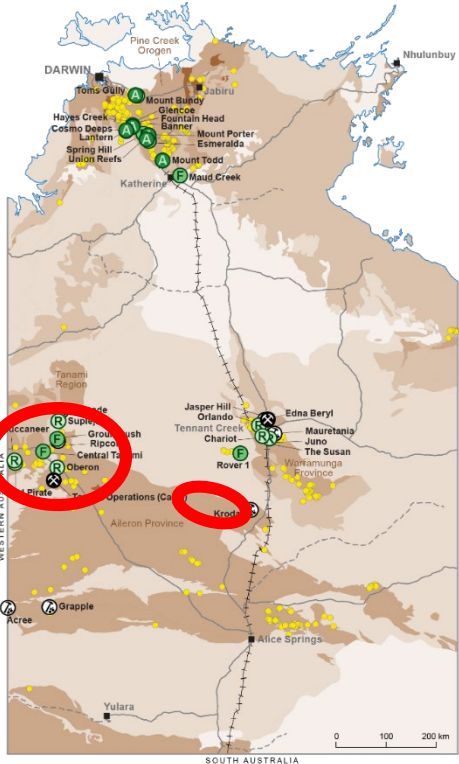
Copper in MinEx CRC drillhole NDIBK04 (from Clark et al, AGES 2021)

Gold in the Tanami

A challenging year for greenfields exploration in the Tanami

Newmont – *Tanami Operations*

- >10 Moz production, over 9 Moz resources and reserve
- Substantial ongoing resource growth
- Current Ore Reserves: **36.2 Mt @ 5.05 g/t Au**
- 1400m shaft development in progress
- Mining Lease application at **Oberon**



Prodigy Gold – 2020 drilling at North Arunta and Tanami Projects

- **Tulsa**: 28 aircore holes for 1,551m
- **Bonanza West**: 110 aircore holes for 9,288m at 3 targets
- **Bluehart**: 57 aircore holes for 1,869m at 3 targets

Gold in the Pine Creek Orogen

Kirkland Lake Gold – Pine Creek Operations

- Development operations at Cosmo Deeps suspended in March 2020

Union Reefs U/G: NT EPA Assessment Report completed June 2020

PNX Metals – *Fountain Head*

2.58Mt @ 1.7 g/t Au

- EIS in preparation
- Acquisition of Glencoe deposit

Mandrake Resources – *Berinka*

Maiden drill program

3m @ 1.8 g/t Au, 2.1% Cu, 32 g/t Ag

Bacchus Resources - Woolwonga

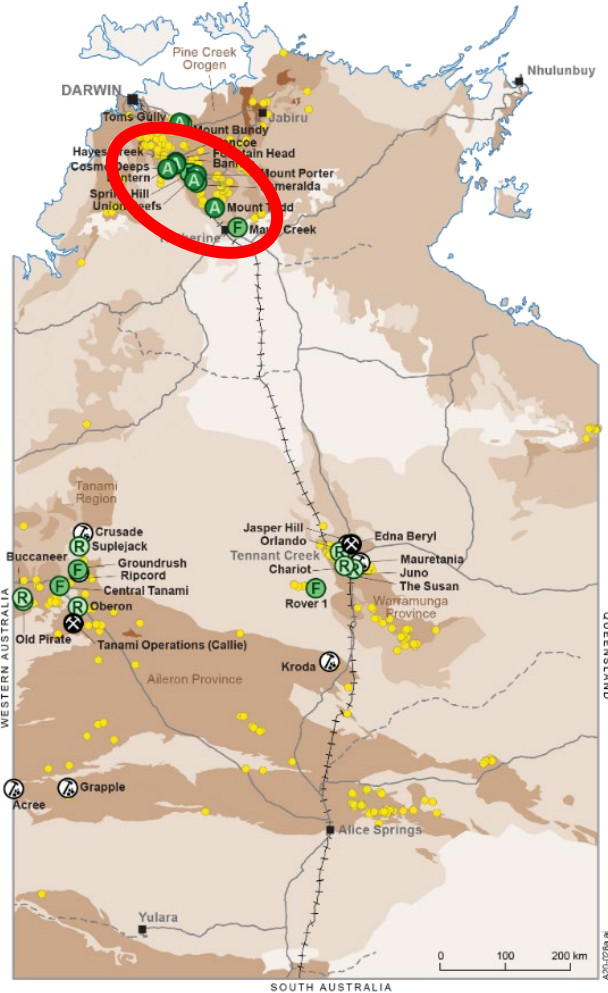
52m @ 3.0 g/t Au incl. 7m @ 15.6 g/t Au

10m @ 10.4 g/t Au

- Acquisition of Brocks Creek completed

China Hanking Pty Ltd – Toms Gully

- EPA Assessment Report for Toms Gully completed in Feb 2020; MMP submitted
- Environmental process for Rustlers Roost and Quest 29 underway



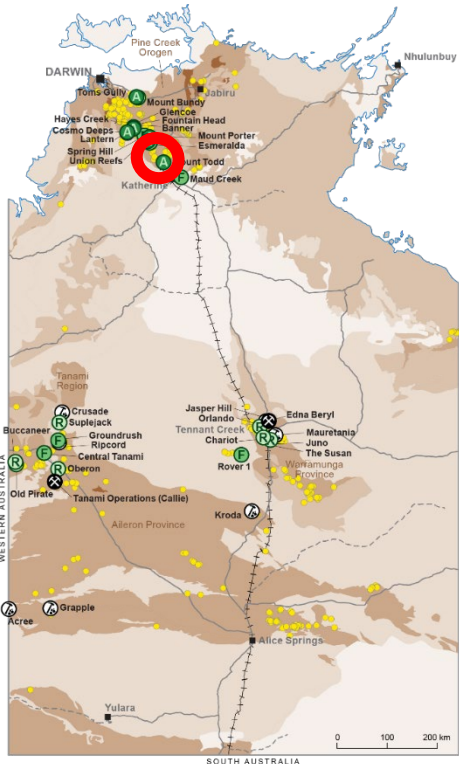
Gold in the Pine Creek Orogen

Vista Gold – Mount Todd

Drilling for extensions of mineralisation north and east of Batman pit, extending to the Gold-Tollis/Penguin targets

VB21-002: 30m @ 1.32 g/t Au (500m N of Batman)

VB21-003: 74m @ 0.87 g/t Au



Batman pit, April 2021



Diamond rig, Mt Todd, April 2021



Mineralised vein

Bynoe area - lithium, gold



Core Lithium – *Finniss Li*

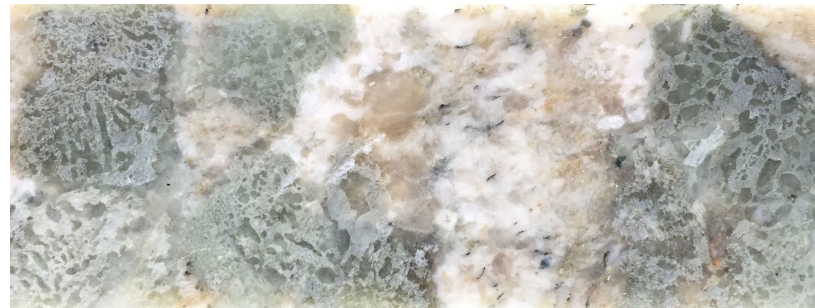
Multiple pegmatite-hosted spodumene resources

Upgraded total resource: **14.7 Mt @ 1.3% Li_2O_3**

4000-5000m resource expansion drilling underway

Grants: All approvals in place

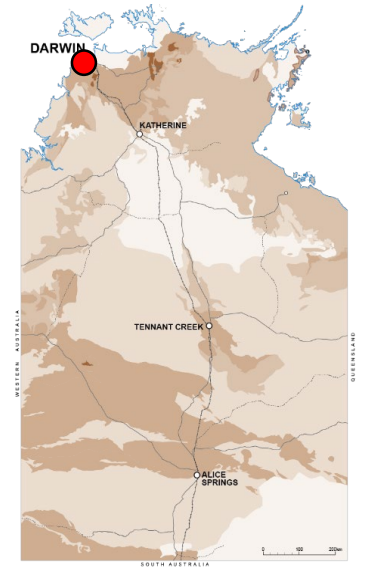
BP33: Supplementary Environmental Report in prep;
107m @ 1.70% Li_2O_3



Core Lithium – *Bynoe Au*

Rock chips up to 106 g/t Au

Significant gold-in-soil anomalies



Southwestern Aileron Province – polymetallic discoveries

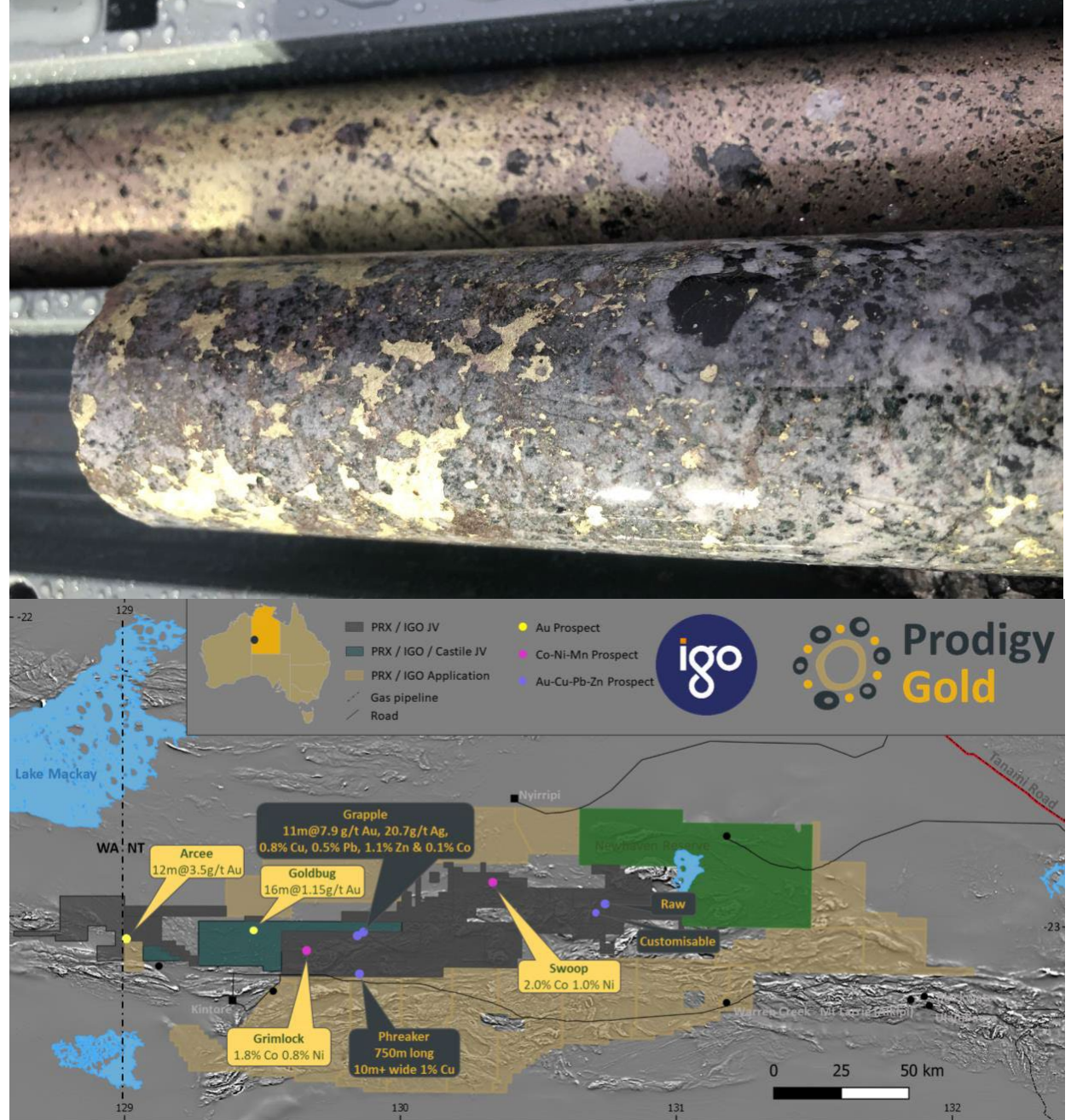
IGO/Prodigy Gold – *Lake Mackay*

65 holes for 1,944m across 6 targets - Grimlock and Swoop (Ni-Co), Goldbug (Au) and Grapple, Cluster and Raw (Cu-Au)

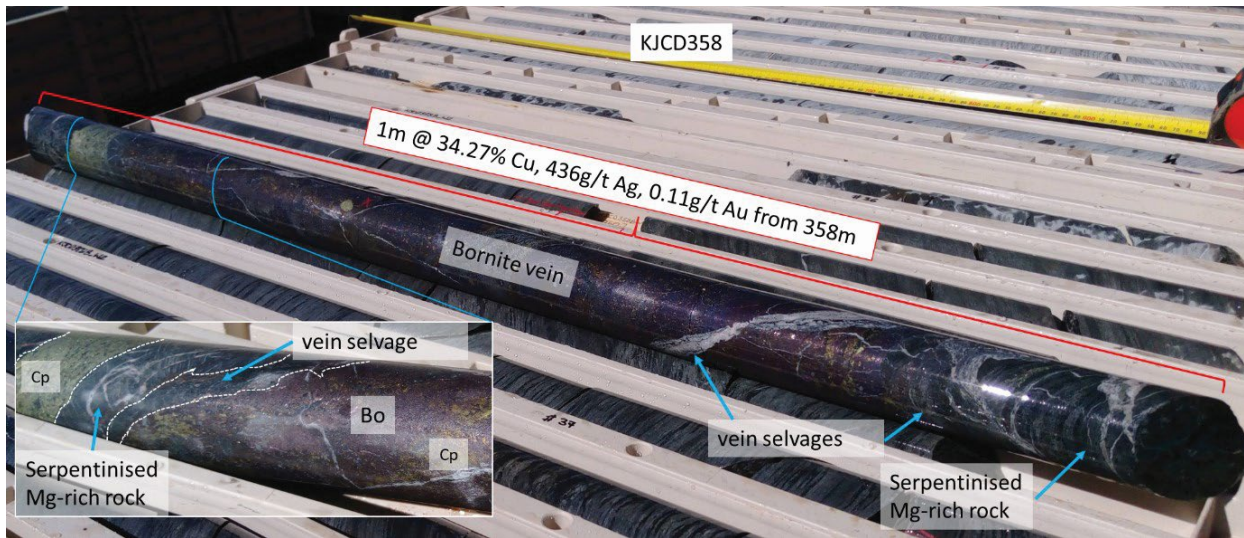
Goldbug: 16m at 1.15 g/t Au

Phreaker: drilling intersected 44.4m interval of semi-massive, stringer and disseminated sulphides including pyrrhotite, chalcopyrite, sphalerite and arsenopyrite; assays pending

Swoop & Grimlock: nickel-cobalt enrichment over weathered ultramafic



Eastern Aileron Province – growing copper-gold province



KGL Resources – *Jervois Cu-Ag-Au*

21.0 Mt @ 2.03% Cu, 31.9 g/t Ag

- Higher-grade resource through improved geological model
- All environmental approvals and mining approvals in place

Thor Mining – *Molyhil W-Mo*

- Updated resource estimate

New explorers in eastern Aileron and Irindina Provinces

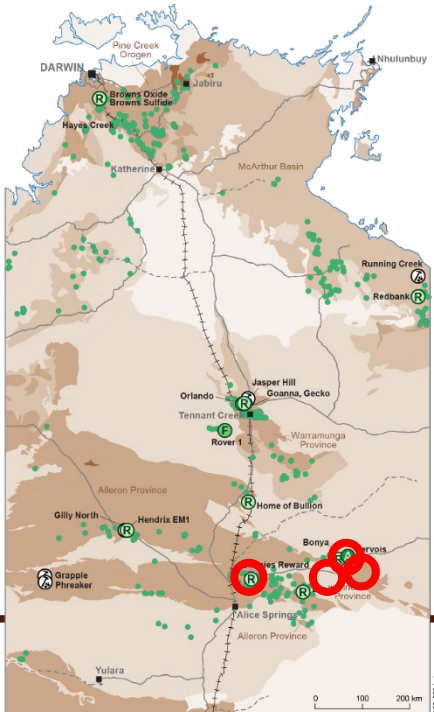
Inca Minerals – *Lorna May and Jean Elson Cu-Au projects*

- Multiple greenfields Cu-Au targets

Shree Minerals – *Bruce's Au-Cu*

- New Cu and Au bearing veins identified

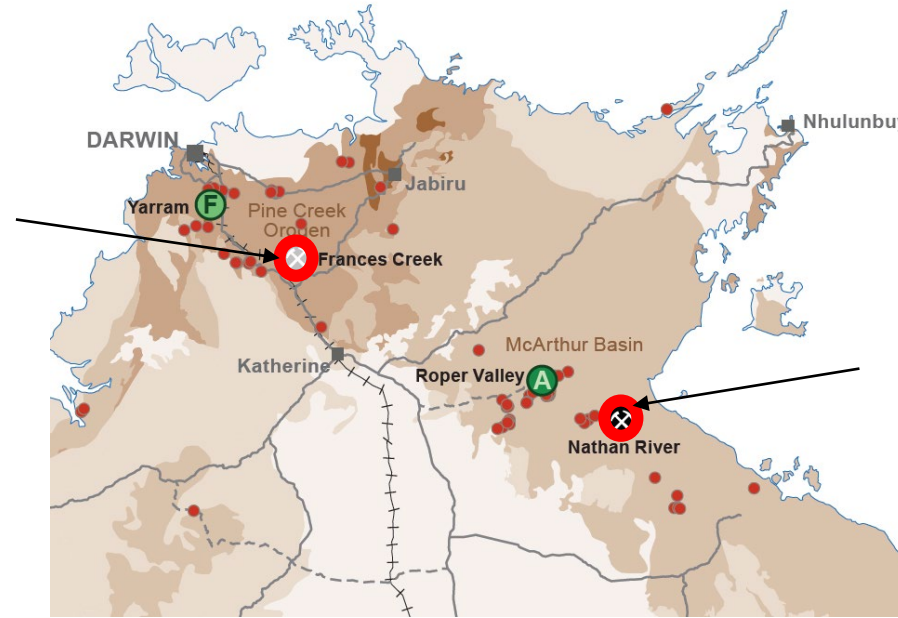
Aureus Resources – *Johnnies Reward Au-Cu*



Recommencement of iron ore mining in the NT

Linecrest Pty Ltd (NT Bullion) – Frances Creek

- Marketing agreement signed with Anglo American
- 300,000t of stockpiled ore, beneficiated through ore-sorting
- First beneficiated ore transported to Darwin Port



Nathan River Resources – Nathan River (Roper Bar)

Reserve – 5.6 Mt at 60% Fe
Resource – 446 Mt at 40% Fe

- Commenced loading first shipment of stockpiles (56,000t) in late October
- Offtake through Glencore
- Equity from Amur Minerals



Other activity

Winchelsea Mining– *Winchelsea Island Mn*

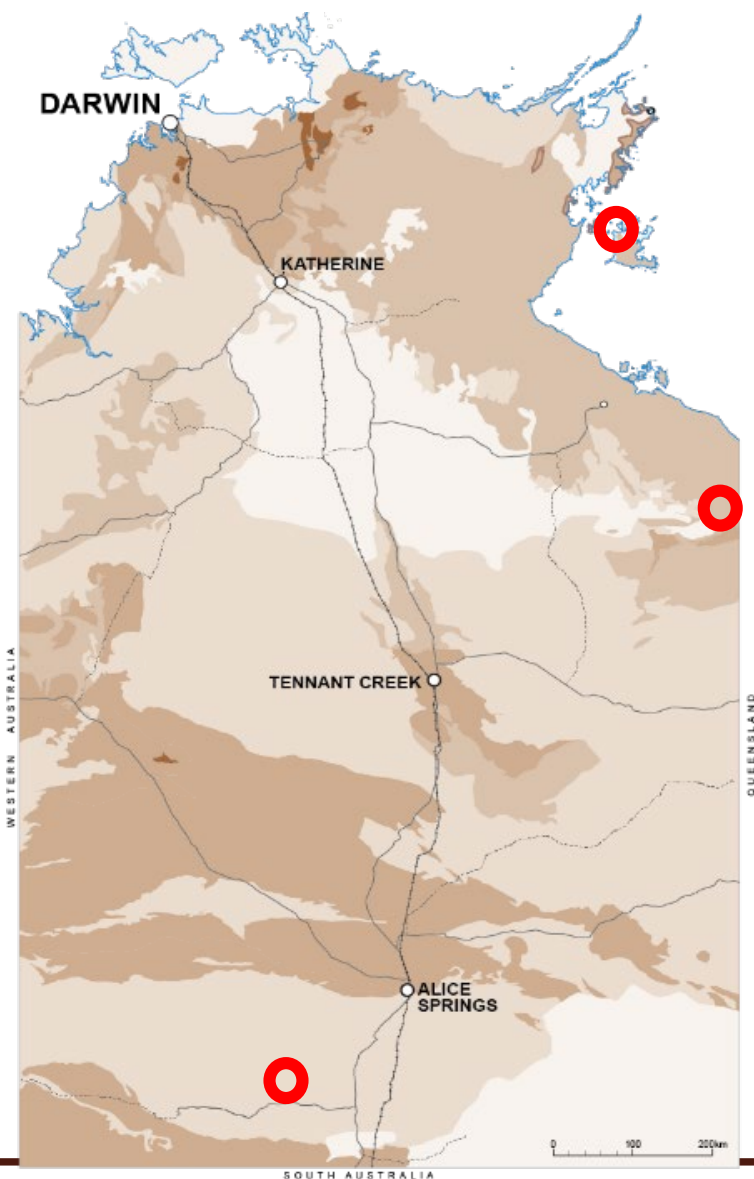
- 779 drillholes and 110 costeans defining shallow 1 x 2 km manganese resource

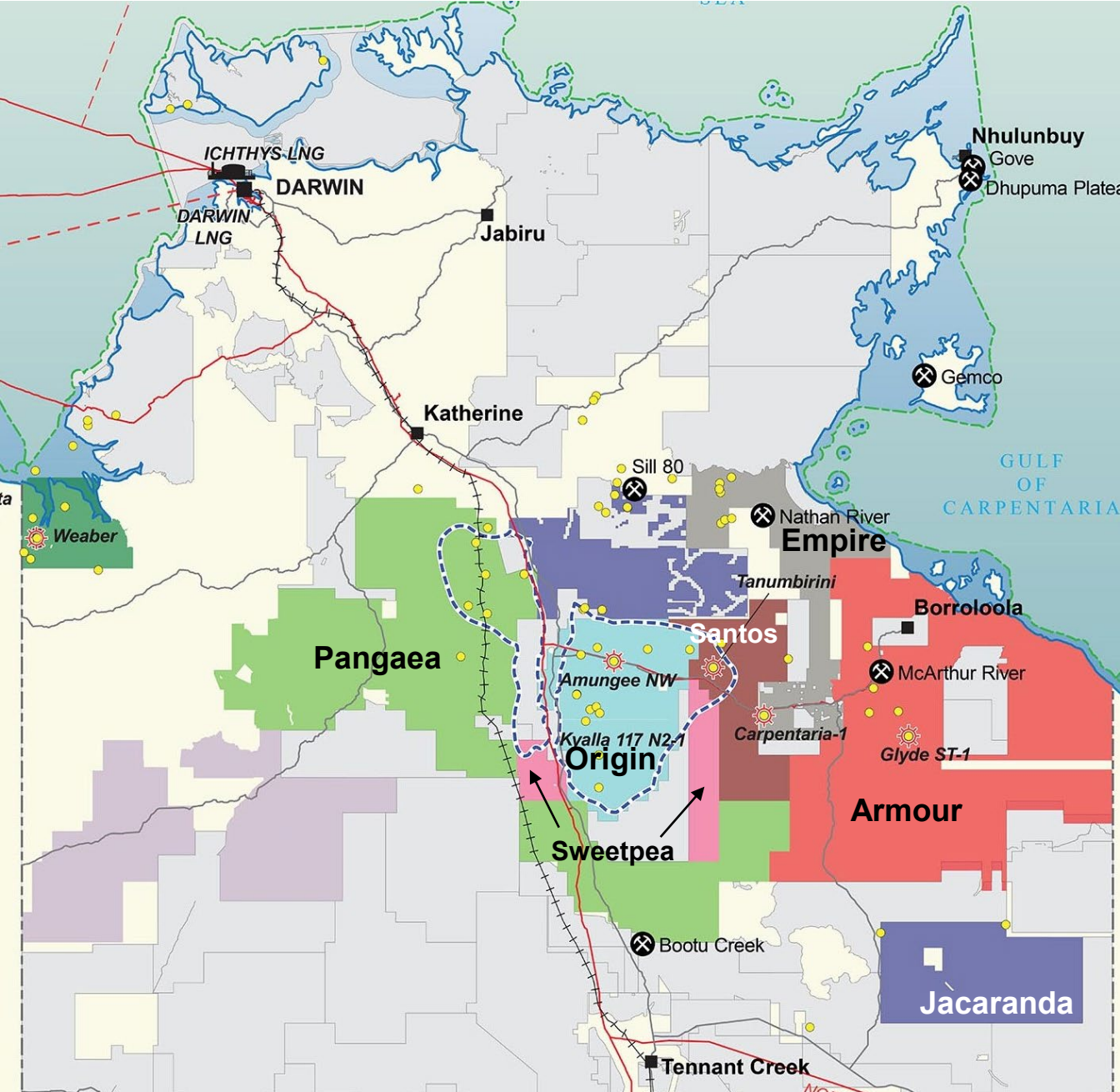
Redbank Copper – *southern McArthur Basin*

- 302 hole drill program in Sandy Flat tailings; regional soil sampling and mapping
- Large area of new exploration titles extending to McArthur River

Parkway Minerals/Verdant Resources – *Karinga Lakes potash*

- PFS released, based on potash resources in brine solutions within eight lakes
- 20 year initial mine life with annual production of 40,000 tonnes per annum SOP (sulfate of potash)





Shale gas – greater McArthur Basin

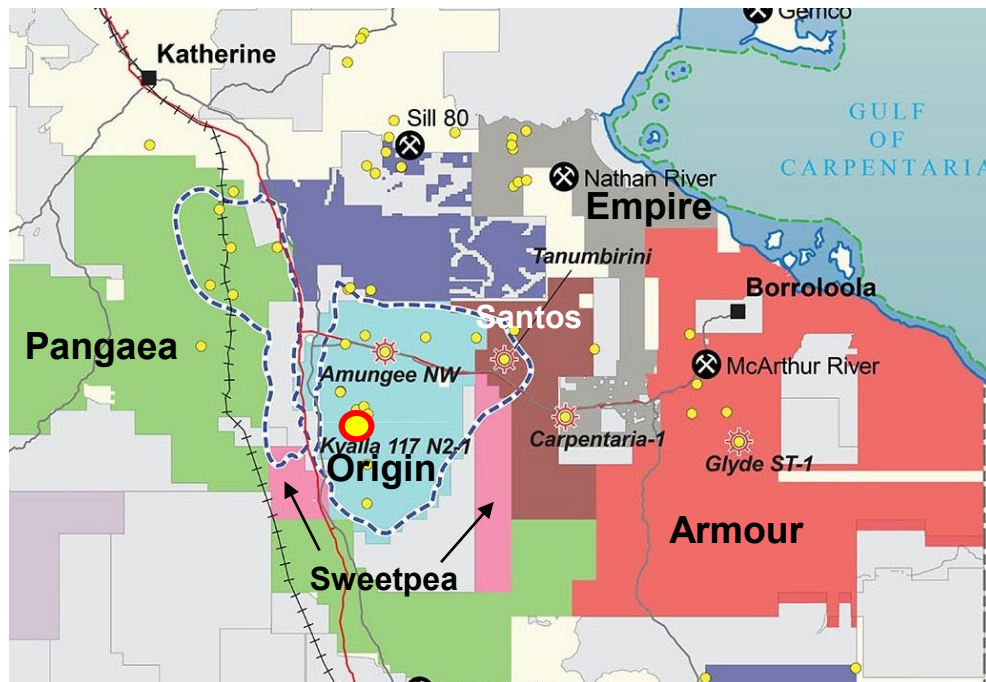
- Two liquids-rich gas discoveries in two separate plays in Beetaloo Sub-basin

Corporate developments:

- Tamboran Resources acquisition of Sweetpea Petroleum
- Empire Energy acquiring Pangaea Resources
- Santos completed acquisition of Armour Energy tenements in Sth Nicholson/Lawn Hill including EPA 172 and 177 in NT

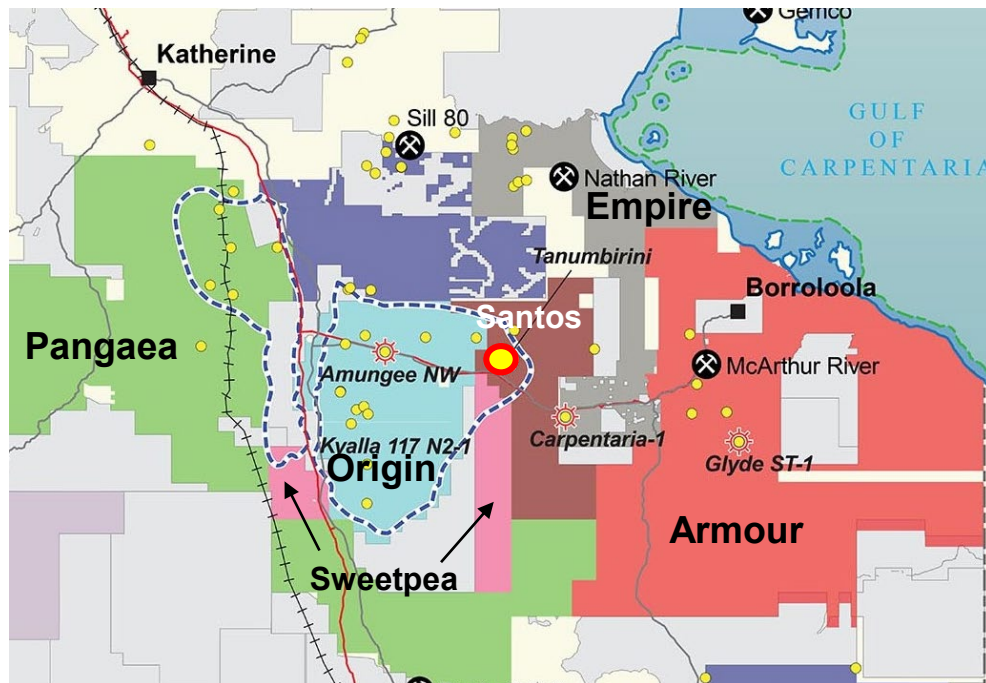
Beetaloo Sub-basin: Origin Energy – Falcon Oil and Gas

- Kyalla 117 N2-1 spudded in Nov 2019: 1895m vertical section
- Intersected 3 source rock reservoirs within Kyalla Formation – combined thickness 900m
- 1579m lateral section (Kyalla 117 N2-1H-ST2) completed February 2020
- 11 hydraulic stimulation stages in September 2020; following introduction of nitrogen to lift the fluids well flowed unassisted for 17 hours and 0.4-0.6 million cubic feet per day
- Initial gas composition: 65% methane, 18.8% ethane, 14.4% C3+, <0.9% CO2



Beetaloo Sub-basin: Santos – Tamboran

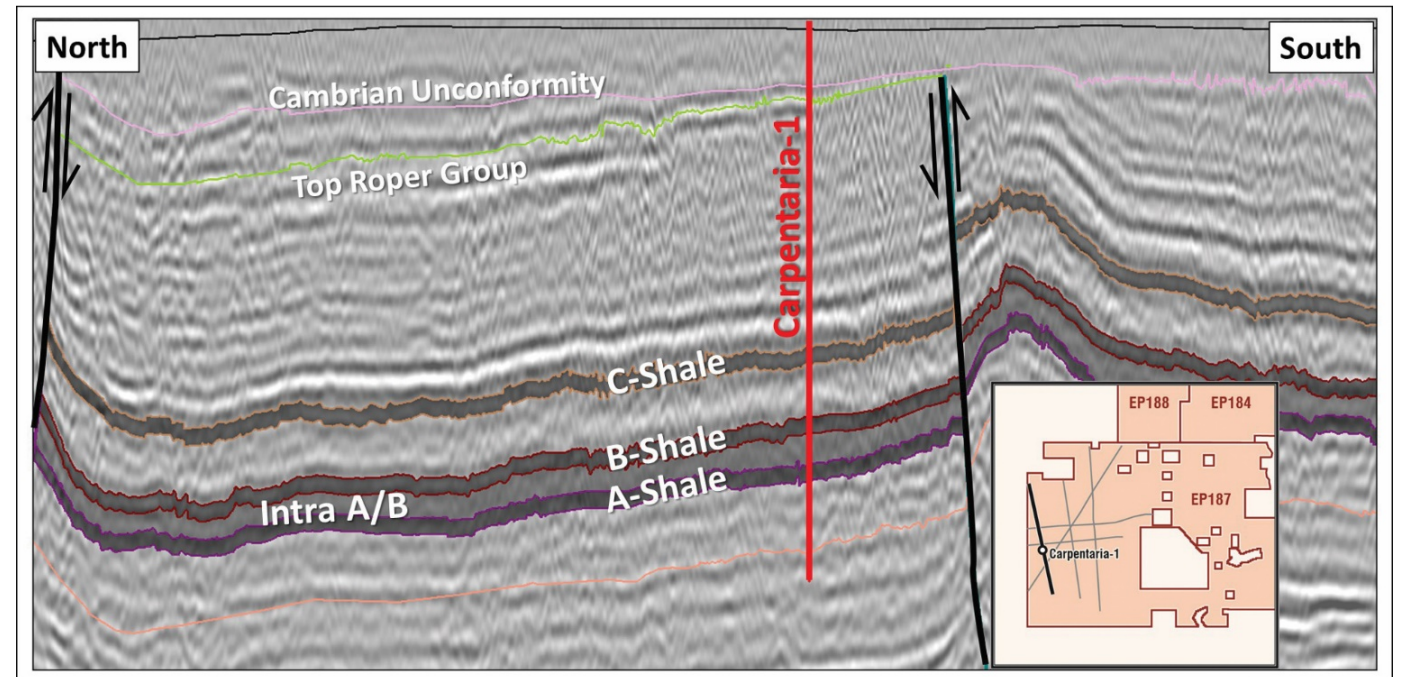
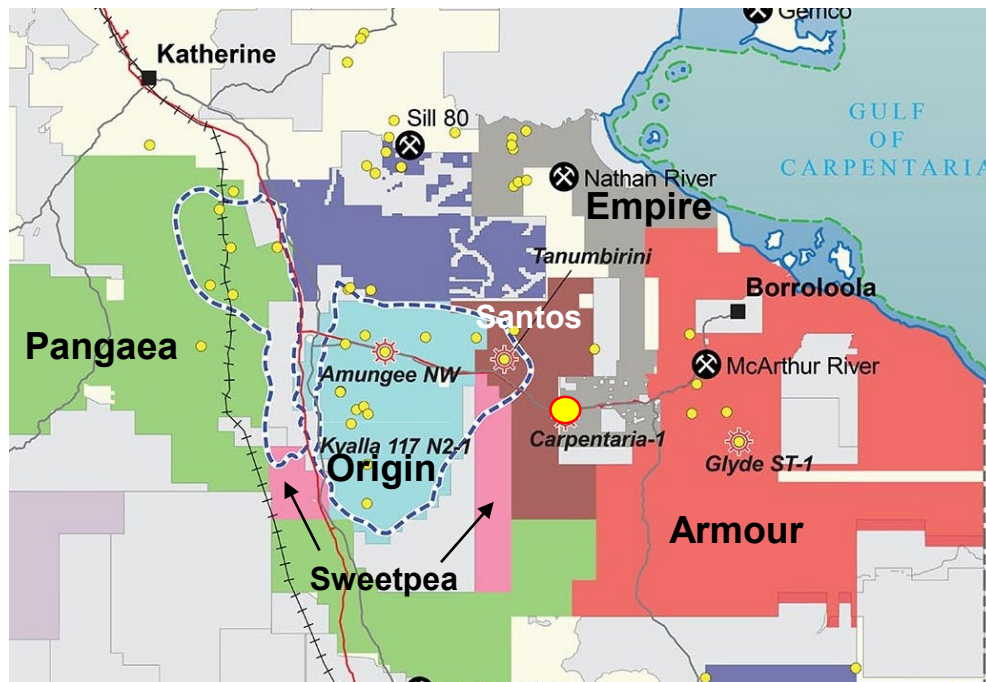
- 130 day flow test following stimulation of Tanumbrini-1 well (vertical)
- Gas flow rates of rates over 1.2 million cubic feet per day of gas reported, settling at 0.4 mmscf/d with minimal decline
- Gas composition >91% methane, 3% ethane, <5% inert
- After 160 day COVID shutdown well was reopened and flowed an average of 2.3 mmscf/d for first 90 hours.



Beetaloo Sub-basin: Empire Energy

Carpentaria-1 well:

- Spudded September 2020 and drilled to a total depth of 1916m
- Intersected extensive intervals of liquids-rich gas within Velkerri Formation shales
- Velkerri Formation intersected from 833-1831m depth
- Hydraulic stimulation and flow-testing planned for 2021



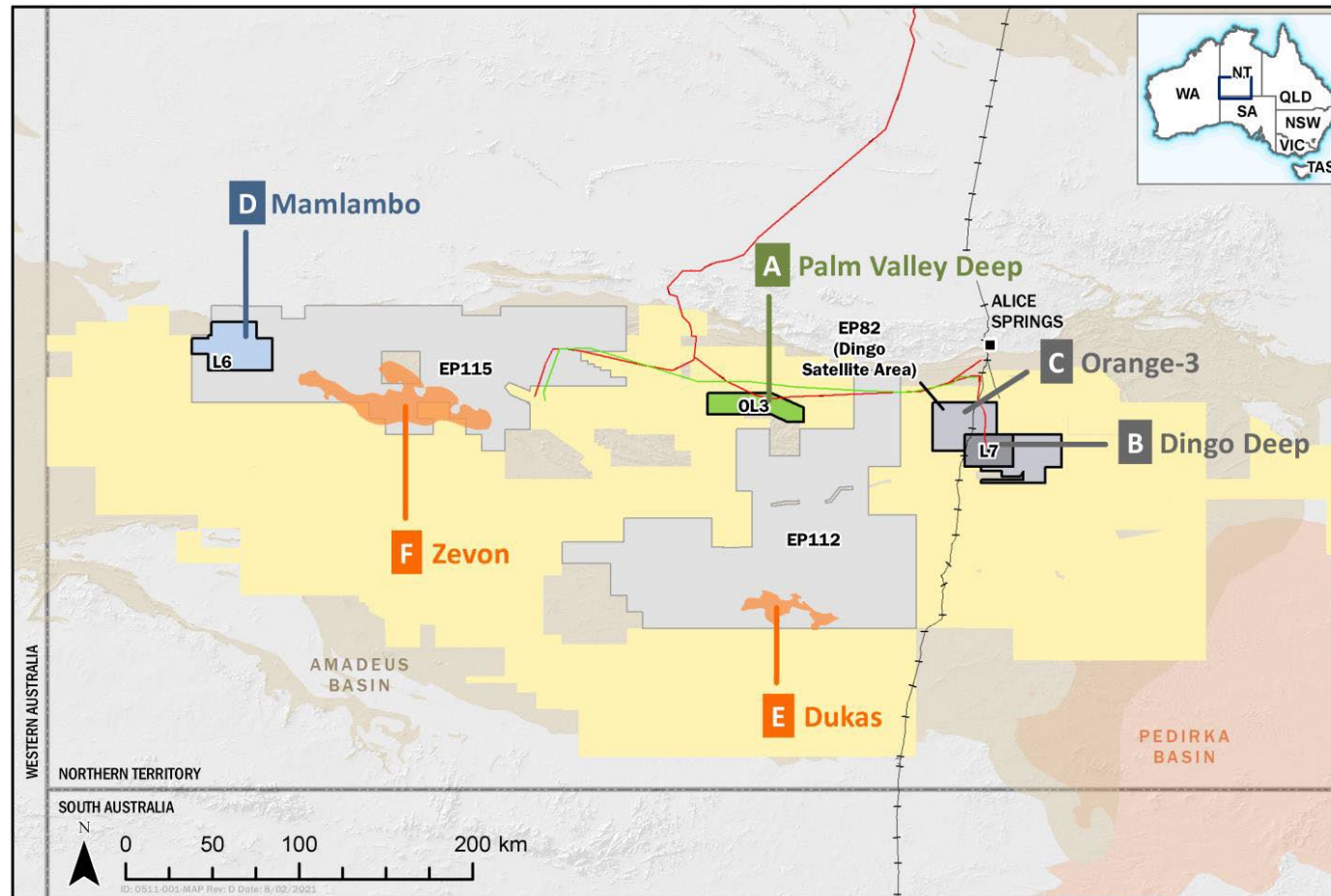
Amadeus Basin: Santos-Central Petroleum

- **Central Petroleum** - gas production from Mereenie, Palm Valley and Dingo fields of 13.7 billion cubic feet gas and 157,000 barrels of oil.
- Planning two new production wells and four exploration wells in 2021

Mamlambo – targeting large structure 8km from Surprise gas field

Palm Valley Deep – targeting deeper reservoir at Palm Valley

Zevon –targeting sub-salt play similar to Dukas



Orange 3 – targeting gas at Arumbera level plus deeper targets

Dingo Deep – targeting deeper reservoir at Dingo

Dukas (Santos JV)– new well targeting Dukas sub-salt play planned for 2022

AGES 2021 Sponsors

