

NORTHERN STAR ANNUAL STRATEGY DAY

Northern Star Resources Limited (NST) is pleased to release its 2020 Annual Strategy Day presentation. This virtual presentation can be viewed at

https://webcast.boardroom.media/northern-star-resources-ltd/20200924/NaNnorthern-star-annual-strategy-day-september-2020

The presentation materials are attached to this announcement.

Presenters include:

Bill Beament, Executive Chair Hilary Macdonald, General Counsel & Company Secretary Stuart Tonkin, Chief Executive Officer Ryan Gurner, Chief Financial Officer Michael Mulroney, Chief Geological Officer Jim Coxon, GM Pogo Operations Tim McCambridge, GM Yandal Operations Bill Stirling, GM Kalgoorlie Operations Darren Stralow, Chief Development Officer Simon Tyrrell, GM Processing Luke Creagh, Chief Operating Officer

Northern Star invites all stakeholders to view the presentation prior to the Company's Question & Answer Session on Friday, 25 September 2020 at 6:30am AWST (8:30am AEST).

To listen to the Q&A Session, please click on the link below and register your details:

https://webcast.boardroom.media/northern-star-resources-ltd/20200824/NaN5f597facb839000019d4c087

Please note it is best to log on at least five minutes before the scheduled commencement time to ensure you are registered in time for the start of the call.

A recording of the call will be available on the same link approximately one hour after the conclusion of the webcast.

Authorised for release to ASX by Bill Beament, Executive Chair.

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An Australian gold miner - for global investors Annual Strategy Day – September 2020



Indigenous Peoples Statement

Northern Star would like to acknowledge and pay our respects to Traditional Owner groups whose land we are privileged to work on, and whose input and guidance we seek and value within the operation of our business.

We acknowledge their strong and special physical and cultural connections to their ancestral lands.

- Whadjuk Noongar
- The Wiluna Martu
- Kultju
- Tjiwarl
- Maduwongga
- Marlinyu Ghoorlie

- Tjurabalan
- Walpiri and Yapa
- Puutu Kunti Kurrama and Pinikura
- Jurruru, and
- Yinhawongka

We also acknowledge Doyon Limited, whose traditional lands surrounds our Pogo Operation in Alaska, USA.





Resources & Reserves and Forward Looking Statements

Mineral Resources and Ore Reserves

The Mineral Resources, Ore Reserves and exploration results information reported in accordance with the 2012 edition of the Joint Ore Reserves Committee's Australasian Code for Reporting of Mineral Resources and Ore Reserves ("JORC Code") in this announcement for all the Company's projects (excluding KCGM Operation) is extracted from the report entitled "Resources and Reserves, Production and Cost Guidance Update (ex-KCGM)" dated 13 August 2020, available at <u>www.nsrltd.com</u> and <u>www.asx.com</u>. For the purposes of ASX Listing Rule 5.23, Northern Star confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. Northern Star confirms that the form and context in which the Competent Person's findings are presented have not materially modified from the original market announcements.

The Mineral Resources, Ore Reserves and exploration results information reported in accordance with the 2012 edition of the Joint Ore Reserves Committee's Australasian Code for Reporting of Mineral Resources and Ore Reserves ("JORC Code") in this announcement for the KCGM Operation is extracted from the report entitled "KCGM Reserves, Resources and Guidance Update" dated 18 August 2020, available at <u>www.nsrltd.com</u> and <u>www.asc.com</u>. For the purposes of ASX Listing Rule 5.23, Northern Star confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Forward Looking Statements

Northern Star Resources Limited has prepared this announcement based on information available to it. No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions and conclusions contained in this announcement. To the maximum extent permitted by law, none of Northern Star Resources Limited, its directors, employees or agents, advisers, nor any other person accepts any liability, including, without limitation, any liability arising from fault or negligence on the part of any of them or any other person, for any loss arising from the use of this announcement or its contents or otherwise arising in connection with it.

This announcement is not an offer, invitation, solicitation or other recommendation with respect to the subscription for, purchase or sale of any security, and neither this announcement nor anything in it shall form the basis of any contract or commitment whatsoever. This announcement may contain forward looking statements that are subject to risk factors associated with gold exploration, mining and production businesses. It is believed that the expectations reflected in these statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including but not limited to price fluctuations, actual demand, currency fluctuations, drilling and production results, Resource and Reserve estimations, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory changes, economic and financial market conditions in various countries and regions, political risks, project delay or advancement, approvals and cost estimates.

* All currency conversions in this document unless otherwise stated, were converted at a spot conversion rate of AUD/USD of \$0.719.

Authorised for release to the ASX by Bill Beament, Executive Chair.

Annual Strategy Day Agenda



Agenda	Speaker		
Introduction	Bill Beament, Executive Chair Guy Singleton, Social Responsibility & External Relations Manager		
ESG	Hilary Macdonald, General Counsel & Company Secretary		
NST Strategy, Vision & Company Positioning	Bill Beament, Executive Chair		
Company Performance & Highlights	Stuart Tonkin, Chief Executive Officer		
Financial Strengths & Business Focus	Ryan Gurner, Chief Financial Officer		
Geology Update	Michael Mulroney, Chief Geological Officer		
Asset Overview	Jim Coxon, GM Pogo Operations Tim McCambridge, GM Yandal Operations Bill Stirling, GM Kalgoorlie Operations Darren Stralow, Chief Development Officer		
Organic Growth Summary	Simon Tyrrell, GM Processing Luke Creagh, Chief Operating Officer		
Exploration Update	Michael Mulroney, Chief Geological Officer		
Interactive Questions & Answers	Recorded webcast can be accessed via the following LINK		



Environmental, Social & Governance

Integrated Sustainability - Core business alignment

Our Sustainability Vision

"Delivering responsible environmental and social business practice that lead to both the creation of strong economic returns for our Shareholders, and shared value for our Stakeholders."

Our Sustainability Framework Ecosystem



Progressing to Stage Two of our TCFD Recommendation adoption in 2020

SUSTAINABLE GOALS



Aligning business actions with global sustainable development needs as defined by the United Nations



Strengthening our ESG disclosures by adopting the SASB materiality framework for CY2020 reporting

Stakeholder ESG Engagement

- Annual, board-level ESG investor roadshow and broader stakeholder engagement provides invaluable feedback on priority ESG areas
- Allows us to meaningfully shape our sustainability strategy and make informed decisions on how we evolve the business within this critical area

CY2020 Sustainability Highlights

- Zero significant environmental, heritage or regulator infringements since acquisition of current portfolio of operating assets
- Net freshwater production intensity per ounce reduced by 27%
- Energy consumption reduced by 10% per ounce
- Stage one TCFD climate change risks assessments completed
- All while successfully continuing value accretive growth





Governance





Nasdaq evaluated NST Board to be highly functional, responsive and engaged



ACSI rated NST as 'Leading' level of ESG Reporting of ASX200

Board Composition

Bill Beament Executive Chair Mining Engineer; Senior Executive Resources Place of residence: Western Australia

John Fitzgerald Lead Independent Director Project Finance Advisory; Chartered Accountant Place of residence: Western Australia

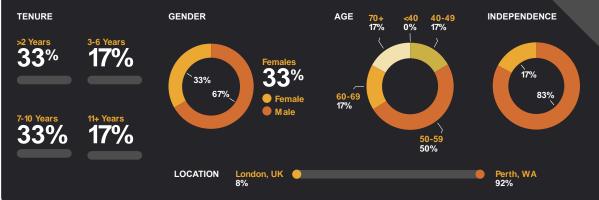
Peter O'Connor Non-Executive Director Legal background; Global Funds Management Place of residence: WA 50% & London UK 50%

Shirley In't Veld Non-Executive Director Legal background; Senior Executive Resources Place of residence: Western Australia

Mary Hackett Non-Executive Director Mechanical Engineer; Senior Executive Resources Place of residence: Western Australia

Nick Cernotta Non-Executive Director Mining Engineer; Senior Executive Resources Place of residence: Western Australia

Board Tenure & Diversity June 2020

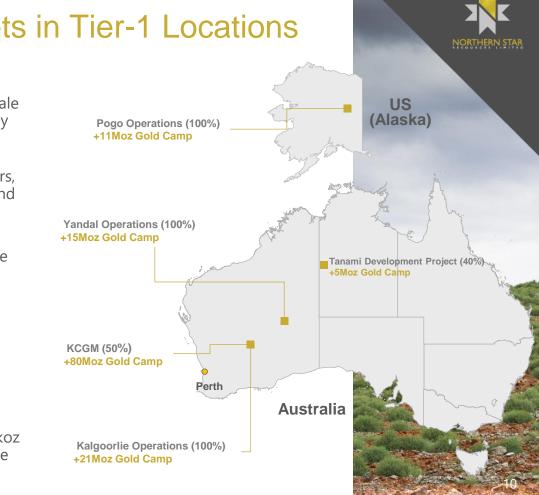


Board Confidence Report June 2020





NST Strategy, Vision and Company Positioning

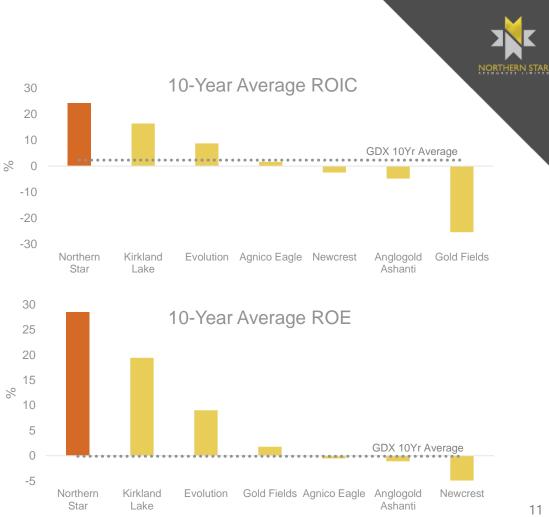


NST Business: Tier-1 Assets in Tier-1 Locations

- ASX listed; Top 15 Global Gold Producer
- NST manages a simplified business; with 4 large scale Tier-1 assets in Tier-1 locations; world class geology
- Sector leading ESG credentials
- Strong organic growth outlook over the next 3 years, annual production increasing 40% to 1.25Mozpa and costs falling by 10%
- This expansion delivers significant growth in production, cashflow and dividends; with one of the industry's lowest capital intensities
- Market cap is ~A\$11B with a robust balance sheet; net cash and equivalents of A\$70M
- Acquired 50% of ~500kozpa KCGM Operation in January 2020 for US\$775M
- FY20, record year financially for Company with underlying free cashflow ~A\$423M
- FY21 Group production guidance of 940koz-1,060koz providing significant leverage to the spot gold price ~A\$2,650/oz (US\$1,950/oz)

Best-in-class Returns

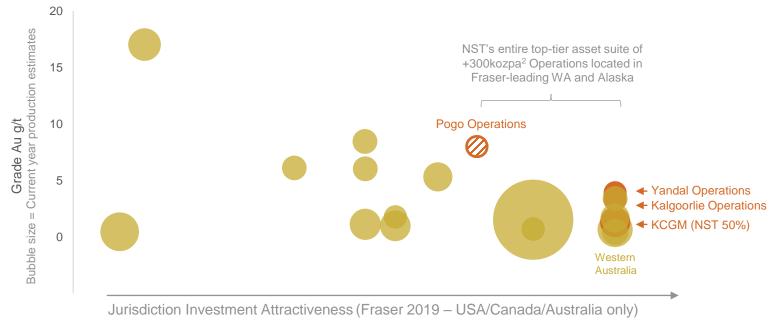
- NST operates by being a business first and a mining company second
- ROIC/ROE leader, despite multiple acquisitions (highly disciplined M&A)
- NST 10-Year average Return on Equity (ROE) +28%
- NST 10-Year average Return on Invested Capital (ROIC) +24%
- On both these financial measures we strongly outperform the GDX and our peers
- Best in class Total Shareholder Return over the past decade in-excess of +11,000%



Tier-1 Assets in Tier-1 Locations



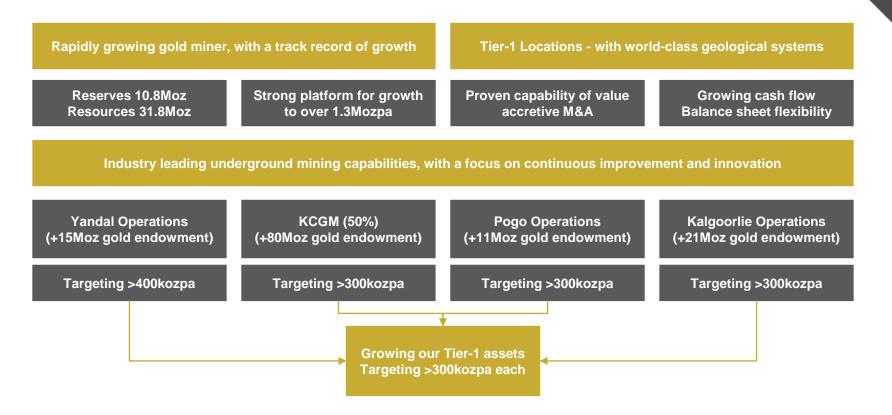
- NST's investment grade portfolio has been meticulously put together over the past decade
- Globally, there are only 18 mines producing +300kozpa in Tier-1 Jurisdictions¹
- NST has an interest in **17%** of these mines, with Pogo on track to join this list
- No other peer has 100% exposure in their portfolios to these scale mines in the Tier-1 locations





Growth Platform - Significant exposure to gold price

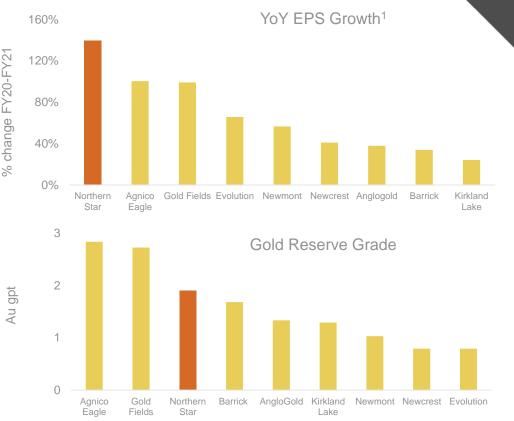
Northern Star growing to >1.3Mozpa across four Tier-1 assets all in Tier-1 locations



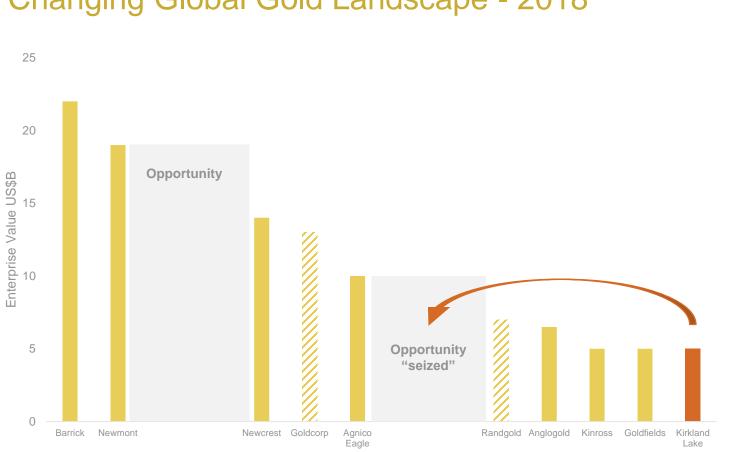


High quality assets deliver peer leading growth

- Annual production increasing 40% over the next 3 years to 1.25Mozpa, costs expected to fall by 10%
- FY21: Forecasting another standout growth year for production, cashflow and dividends; backed by one of the industry's lowest capital intensities
- High quality assets, underpinned by highgrade reserves and resources, provide protection through the cycle
- Being predominately an UG miner means we are more nimble than most and able to rapidly adjust our mine plans to the prevailing gold price
- Upwards revision of gold price increases the capital associated with extracting open pit reserves (cut-backs). Increasing production in UG mines, does not mean increasing capital expenditure



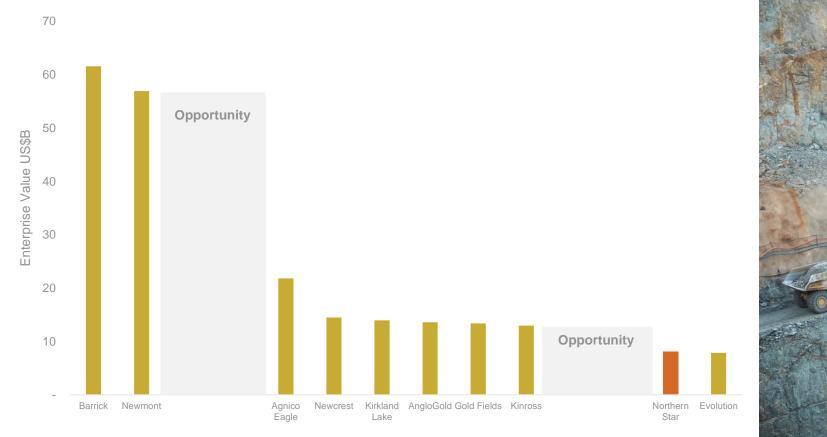
Source: S&P Market Intelligence / Company Filings / Bloomberg. (1) Bloomberg Consensus estimates – Last completed year (actual) vs 1yr forward (estimate).



Changing Global Gold Landscape - 2018

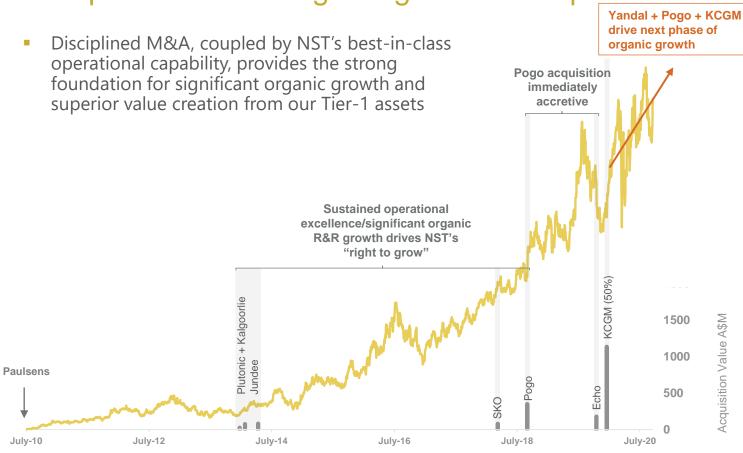
15

Global Gold Landscape - 2020; NST Opportunity



Source: Bloomberg, Company Filings

16



Disciplined M&A + Organic growth = Outperformance

Source: Bloomberg, Company Filings



NORTHERN STAF \$10,996 \$10,259

Market Cap (18/09/20)

Proven Value Generation

- NST's strategy of balancing organic growth with well executed M&A has generated over A\$10B of value for Shareholders since the first acquisition in 2010
- This strategy has been achieved through operational excellence, investing heavily into exploration, growing production, optimising assets, financially disciplined inorganic growth and returning capital back to our owners
- Being a complete mining business focused on financial returns is the why we have the highest Total Shareholder Return over the past decade

\$10

Starting Market Cap

(30/6/10)

\$1,263

Equity Issued

\$536

Dividend Paid/Declared

Value Add

A\$M

Dividends; increasing returns to Shareholders

- NST has consistently paid dividends since 2012
- 42% of all equity capital raised has been returned to Shareholders in fully franked dividends
- Dividend policy targeting approximately 6% of revenue
- FY20 payout up 100% to A27.0cps full franked (A\$200M)
- Dividends set to increase substantially with growing production and significantly higher realised gold price

46

2.5

1.0

FY14

25

2.5

1.0

FY13

11

2.5

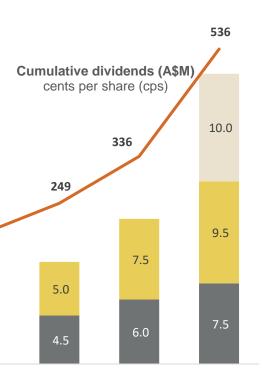
FY12

76

3.0

2.0

FY15



FY19

Cumulative Dividend

FY20

190

3.0

6.0

3.0

FY17

Final

FY18

Special —

118

4.0

3.0

FY16

Interim





Company Performance & Highlights

FY2020 Company Highlights



- Maintained sector leading Safety Performance with TRIFR 3.3 less than half industry benchmark
- Disclosure of **Sustainable Development Goals** and Task Force on Climate-Related Financial Disclosures
- Significant mine life with **Reserves up 102% to 10.8Moz** and Resources up 67% to 31.8Moz
- Pogo Operations modernised and positioned for growth, now contributing strong cashflow
- Rapid COVID-19 response to protect staff and community health and maintain business continuity
- Jundee **mining tonnage increased 38%** and Processing Plant Expansion ~30%
- Echo Resources On market takeover transaction to extend Yandal district scale and synergies
- World record development metres at Millennium and Kanowna Belle record annual mill throughput
- KCGM 50% acquisition to develop **fourth Tier-1 asset** with significant scale and life
- Financial **underlying free cashflow up 190% to A\$423M**, Balance sheet net cash A\$70M at June end
- Improved culture survey metrics with higher staff engagement and a high performing team culture

NST Safety Performance positive for the sector



Health, Safety & Social Responsibility for all Stakeholders remains a core value of the Northern Star business







Northern Star has maintained industry leading safety performance with injuries below half the sector averages improving the industry standard.

Leading investment into psychosocial health with Mental Health First Aid training of +300 staff and +100 local community residents achieved to date.

Our Safety Values were demonstrated through our A\$10M COVID-19 Fund protecting lives and livelihoods in the communities where we operate, including:

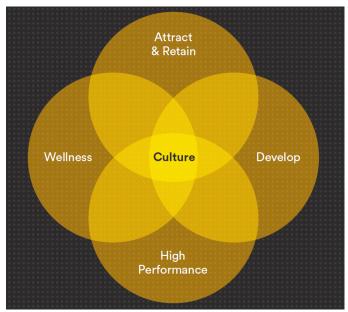
- Medical PPE to Alaskan health professionals
- WA's first regionally deployable Labs Without Walls
- Goldfields Small Business grants KBCCI
- Coolgardie Meals on Wheels to elderly residents
- Goldfields Foodbank donation support

Culture and Capability - People drive Performance

- Northern Star employs over 3,000 staff and contractors who operate by our STARR Core Values
- People work for people and we continually invest in the Team to develop and incentivise the highest performance in line with our Core Values
- Our Company's continued growth enables skills development and promotion and results in an engaged and supported high performing team

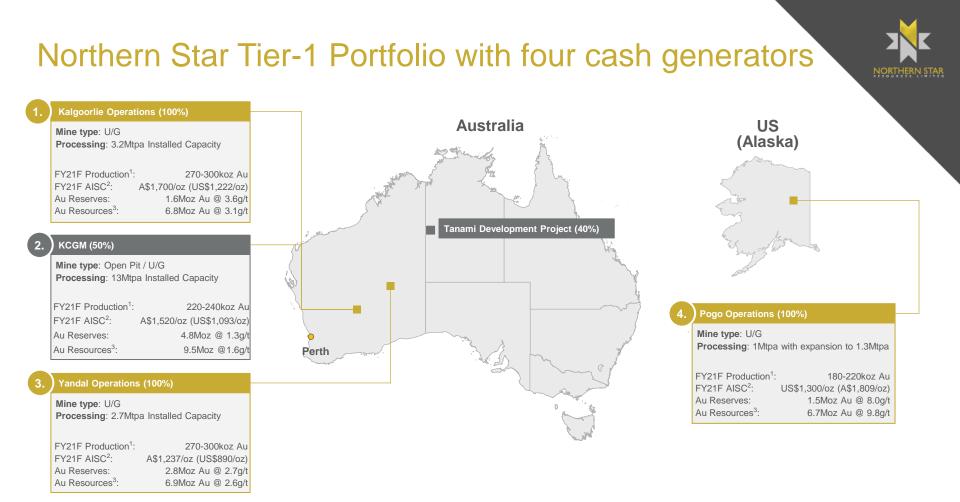


It's what we stand for.









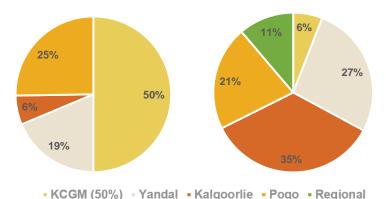
FY21 Guidance ~1Moz Producer, Growth & Discovery

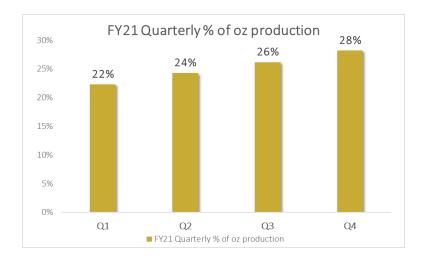


FY21 Guidance	Production (koz)	AISC (A\$/oz)	Growth Capex (A\$M)
Yandal Operations	270 - 300	1,200 - 1,275	37
Kalgoorlie Operations	270 - 300	1,650 - 1,750	12
KCGM (50%)	220 - 240	1,470 - 1,570	99
Australian Operations	760 - 840	1,440 - 1,540	148
Pogo Operations (US)	180 - 220	US\$1,200 - 1,400	US\$35

FY21 Growth Capex (A\$198M)



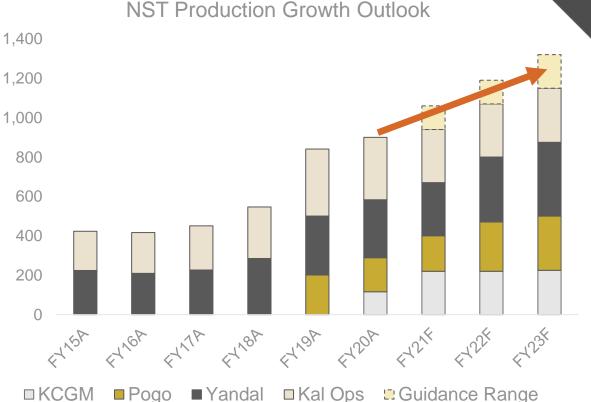




Strong Near Term Production Growth Outlook

Gold Produced (koz

- Northern Star has a strong track record of profitable production growth following Resource and Reserve Growth
- Key near term production growth at high margin operations of Yandal and Pogo
- Low capital intensity levering existing infrastructure, with scale of Tier-1 assets providing greater leverage to gold price
- Growth in production enables growth in cashflows and superior financial returns for Shareholders





Financial Strength & Business Focus

FY20 Financial Highlights



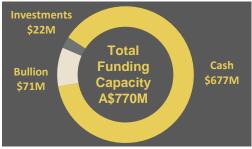
Underlying FCF of A\$423M

After investing ~A\$206M in growth capital & exploration

FY20 Underlying NPAT increases 69% to A\$291M Final dividend increases 27% to 9.5¢ps Special 10¢ps dividend

Ore Reserves +102% to 10.8Moz Mineral Resources +67% to 31.8Moz

Consistent, industry leading returns FY20 ROE of 21%

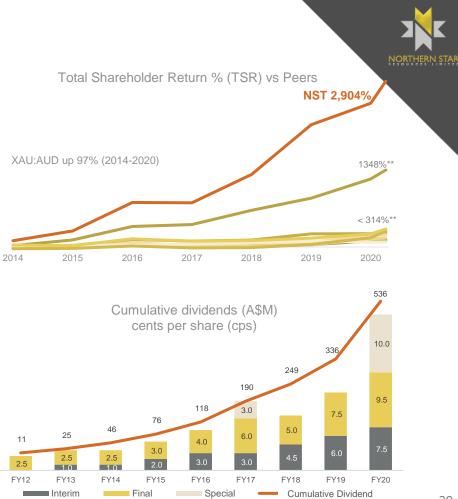


Liquidity at 30 June 2020

Capital Management

- Disciplined capital management underwrites strategy
- Commitment to Balance Sheet strength enables growth and protects the business
- Strong support from debt and equity markets to fund opportunities
- Leveraged to spot prices ~15% of production hedged over next 3 years
- Flexible asset portfolio that generate significant cash flow
- Near term organic growth from low cost production centres
- Superior returns delivered to Shareholders, 7-year TSR of 2,904%^{**}
- Consistent dividend payments highlight financial discipline

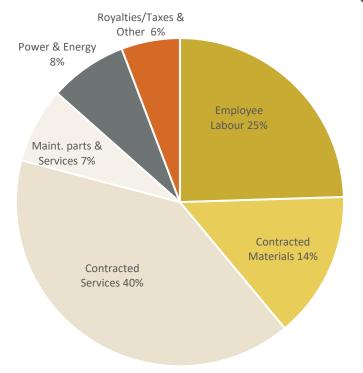
** TSR measurement period 1 July 2013-17 Sept 2020. Comparator group includes: VanEck Vectors Gold Miners ETF, S&P/ASX 100 Index & Peer group: NCM, ABX, NEM, GFI, AEM, EVN. Source: Bloomberg



Cost focused business with competitive advantages

- Proactively manage operational costs
- Direct employee labour & benefits comprise ~25% of cost structure
- Operational employee pay model directly aligned to safety and productivity metrics
- NST has developed long term favourable supplier relationships for services and materials which comprise ~60% of Group cost profile
- Last 5 years have realised A\$158M (A\$46M in FY20) of cost efficiencies on contracted services & materials
- Targeting A\$30M of cost reductions in FY21 across operations
- ~A\$250M of total Australian operations spend is from suppliers in regional areas; ~45% of spend at Pogo originates in Alaska
- Diesel comprises less than 2% of total operating cost profile
- No significant cost inflation projected across portfolio

Group Cost Structure¹

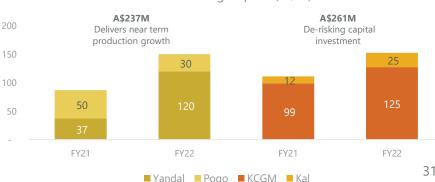




Low capital investment for near-term returns

- Superior near term growth profile against large cap peers
- Low cost, low risk production growth is coming from lowest cost operations (Yandal and Pogo)
- FY21 growth capital A\$198M:
 - A\$50M predominantly for processing infrastructure to lift capacity to 1.3Mtpa at Pogo
 - A\$37M at Yandal; surface infrastructure upgrades and underground development
 - A\$12M at Kalgoorlie Operations for capital works
 - A\$99M at KCGM (50%) associated with cutbacks of the pit to provide multiple mining fronts
- FY22 growth capital ~A\$300M:
 - A\$120M advancing the Yandal Operation to 400kozpa
 - Development/pit expenditure at KCGM (50%) (~A\$125M)
 - Development and infrastructure at Pogo (A\$30M) and Kalgoorlie Operations (A\$25M)





(23) ■ AISC/oz change (FY20A-FY23) Growth Cap



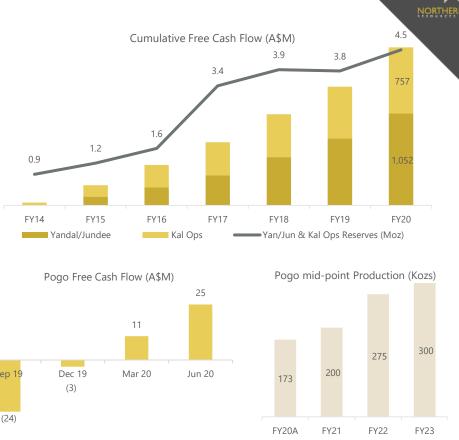


^{**}NST/EVN: 3 year mid-point production, AISC outlook & growth capital sourced from company filings, NCM: FY21 mid-point production, AISC outlook & growth capital sourced from Company filings; FY22/FY23 sourced from Broker consensus published on Bloomberg. FX rate used AUD:USD 0.70.

NORTHERN STAR

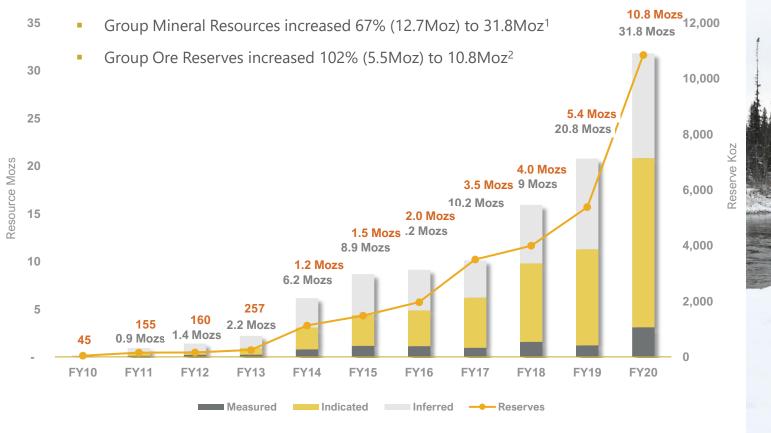
Strong cash flow outlook

- Consistent strategy execution has produced significant free cash flow
- Record FY20 Group underlying free cash flow of A\$423M
- Solid free cash flow contribution from KCGM of A\$91M from first 6-months of ownership
- Pathway to realise the significant value from KCGM underway
- 18-month investment phase at Pogo complete and is now growing free cash flow
- NST significant Reserves and Resources supports continued production growth and cash generation
- Cash flows to Shareholders are anticipated to increase in FY21 with production growth and a favourable gold price environment





Consistent Resource and Reserve Growth





¹ After depletion and acquisitions of Bronzewing and KCGM Projects. ²After depletion and acquisitions of Bronzewing and KCGM Projects.

Group Resource and Reserve Update



Growth is net after 985,000oz mining depletion

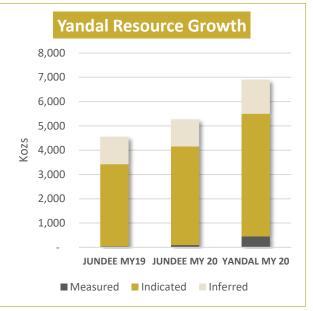
- Strong organic resource growth at Yandal, Pogo, Kanowna and Carbine
- Resource position includes acquisition of KCGM, Bronzewing, sale of Ashburton
- Organic Reserve growth at Yandal and Pogo continue to underwrite core operations
- Newly acquired inventory at Bronzewing being optimised with major drill campaigns
- KCGM result is the first step of a long term program to realise the full potential of the system

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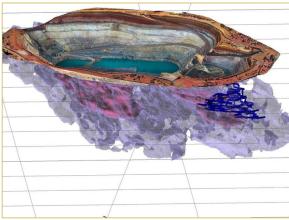
Yandal Growth

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- Near term production growth from addition of open pit opportunities within expanded Yandal Operations area
- Julius and Orelia deposits undergoing optimisation



ABOVE: 3D image showing the Orelia open pit resource shapes

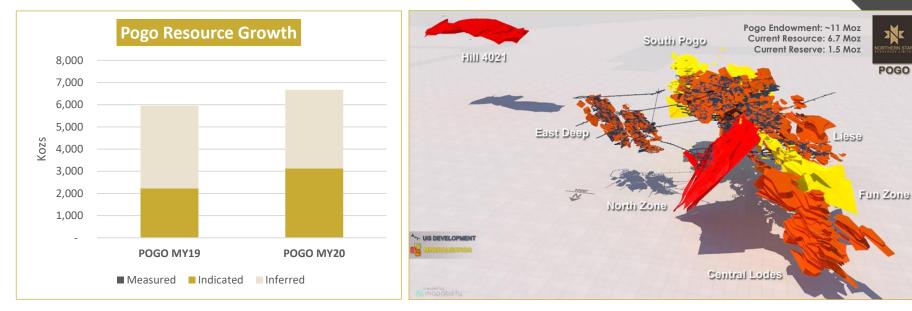
ORE RESERVES AND MI	NERAL RESOURCES AS AT 30 JUNE 2020 ¹
Ore Reserves	32.8Mt @ 2.7gpt for 2.8Mozs
Mineral Resources	81.6Mt @ 2.6gpt for 6.9Mozs

1. Mineral Resources are inclusive of Ore Reserves; 2. Rounding may result in apparent summation differences between tonnes, grade and contained metal content

Ramone Julius kilomet

Pogo Growth





ORE RESERVES AND MINERAL RESOURCES AS AT 30 JUNE 2020¹

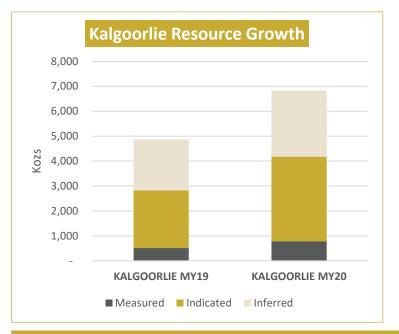
Ore Reserves	5.9Mt @ 8.0gpt for 1.5Mozs
Mineral Resources	21.3Mt @ 9.8gpt for 6.7Mozs

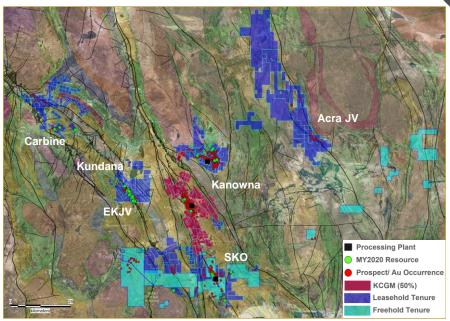
1. Mineral Resources are inclusive of Ore Reserves; 2. Rounding may result in apparent summation differences between tonnes, grade and contained metal content

- Resource Growth within five main areas
- Each geological zone remains open in all directions
- MY20 growth achieved with only limited drilling (62% of budgeted drilling due to COVID-19) 37

Kalgoorlie Growth







ORE RESERVES AND MINERAL RESOURCES AS AT 30 JUNE 2020¹

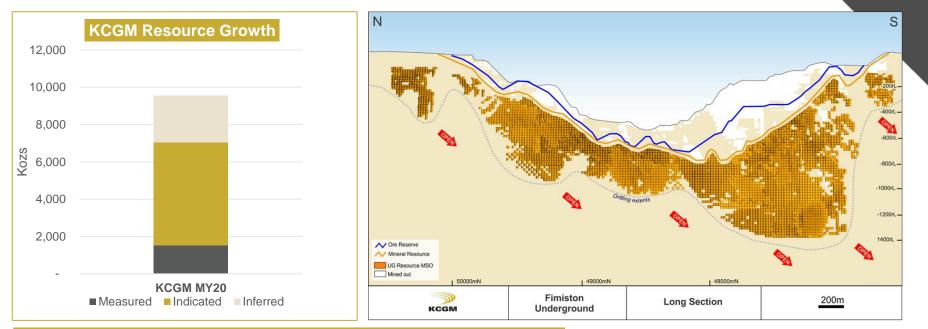
Ore Reserves	15.0Mt @ 3.3gpt for 1.6Mozs (NST attributable)
Mineral Resources	65.4Mt @ 3.2gpt for 6.8Mozs (NST attributable)

- Carbine area emerging as new production centre with development of Paradigm pit
- Carbine and Ant Hill in resource definition phase
- Development opportunities across South Kalgoorlie

1. Mineral Resources are inclusive of Ore Reserves; 2. Rounding may result in apparent summation differences between tonnes, grade and contained metal content

KCGM Growth - First Steps





ORE RESERVES AND MINERAL RESOURCES AS AT 30 JUNE 2020¹

Ore Reserves	119.7Mt @ 1.3gpt for 4.8Mozs (NST attributable)
Mineral Resources	189.6Mt @ 1.6gpt for 9.6Mozs (NST attributable)

- A maiden JORC (2012) Resource and Reserve presented demonstrates a long life operation
- Long term growth profile will evolve from the redevelopment of multiple underground mining areas

1. Mineral Resources are inclusive of Ore Reserves; 2. Rounding may result in apparent summation differences between tonnes, grade and contained metal content



Pogo - transition to NST Business Model complete

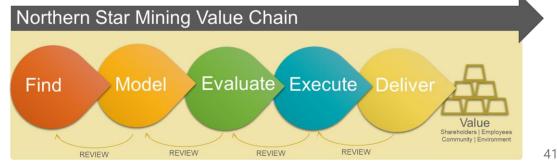
The current mining plan centres on annual production of 1.3Mtpa @ 8gpt and 90% recovery for ~300koz produced to be delivered by FY2023

Plan involves mining method change and the establishment of new mining areas, with success looking like:

- Increase underground diamond drill rigs from 4 to 8
- 1,500m/month total development advance (50% ore & 50% waste)
- 750m/month development ore or ~45kt/month (4.5m x 4.5m heading sizes in ore)
- Introduce long hole stoping to contribute 65kt ore/month (60% total ore tonnes)
- Total of ~110kt per month of ore or 1.3Mtpa of ore at 8gpt
- Increase processing capacity by 30% from 1.0Mtpa to 1.3Mtpa

The transition at Pogo required implementation of systems and processes in the whole value chain to support the NST business model

As at end of FY20 we have finished the transition and we are now in the production growth phase to achieve 1.3Mtpa @ 8gpt for 300koz produced

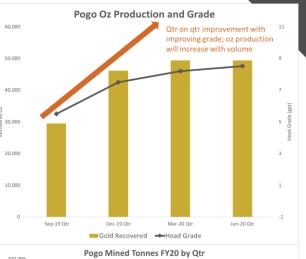


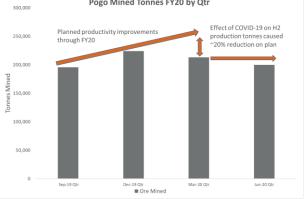


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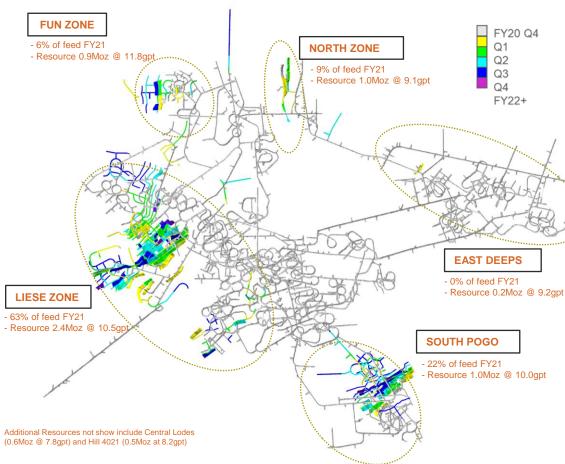
Pogo - FY20 performance & effects of COVID-19

- FY20 performance was 836kt mined @ 7.5gpt; with 834kt processed at 7.5gpt and 87% recovery for 174koz produced
- FY20 delivered quarter-on-quarter improvements throughout the year
- Grade increased as new mining areas were accessed in South Pogo, Fun Zone and the Liese ore zones and the transition to long-hole stoping was completed
- The head grade in the June quarter was 8.5gpt and the ounce production grew by ~70% through the year
- The effects of COVID-19 reduced mining volumes in the second half by ~20% from plan
- Recovery improvements delivered recovery of 91.5% YTD in FY21
- Operational improvements continued with blast re-entry times reduced by 60% and haulage productivities increasing ~22% throughout the year
- Procurement savings of over US\$12M per year identified and implemented in June quarter





Pogo - improvement phase in FY21



- FY21 guidance is 180,000oz to 220,000oz at AISC of US\$1,200-US\$1,400/oz
- Liese zone is closest to existing infrastructure & as such forms the largest portion of the FY21 feed
- As we access and expand new areas, they will add to production and not displace other feeds; we are not yet mining out of the East Deeps lode
- High grade Resource of 6.7Moz at 9.8gpt that is substantially under drilled to provide growth and mine life extension
- Resource volumes are proportionate to amount of drilling; all lodes remain open at depth & laterally
- Mid-year 2020 Reserve at 1.5Moz at 8.0gpt

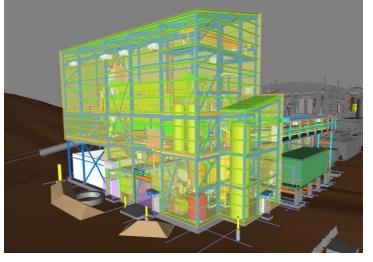


Capital and efficiency improvements planned in FY21



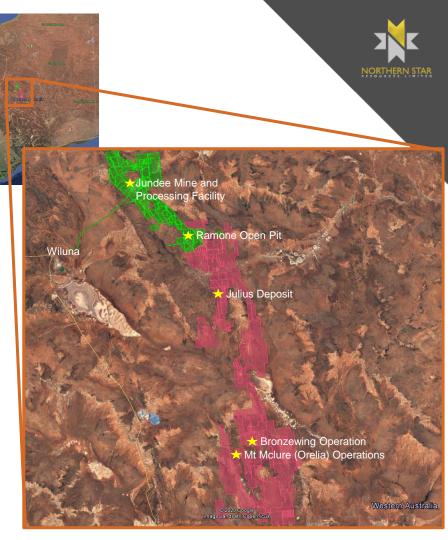
- Numerous operational and infrastructure improvements to be completed in FY21 to increase mining volumes
- US\$35M of growth capital has been committed, with US\$30M attributed to improving processing & support infrastructure to capacity of 1.3Mtpa
- US\$5M has been allocated for underground development for drill drives & to access new areas
- Other improvement projects to unlock further productivity and volume increases in FY21including
 - 5,000 ST Ore pass to increase ore storage UG
 - 1231 Pump Station and Clean Water System to complete
 - Increased Waste Storage at 1525 and 1875 portals
 - UG Magazine & Emulsion Storage
 - Complete Core Shed Expansion Project and Commission
 - Increase truck productivity 33% with Grizzly Improvements & optimised haulage routes
- UG Diamond Drilling budget to drill over 50% more diamond drill metres in FY21 at ~271km





Yandal Operations Overview

- Yandal Operations incorporate the Jundee and Bronzewing mining and processing centres
- Current base load operations at Jundee
 - 50km from Wiluna town centre
 - ~700 strong work force
 - 2.7Mt processing capability
 - Three underground and one open pit operation currently active
 - Service and infrastructure well established and allow for continued operations as well as growth including 750 bed accommodation, 32MW gas/diesel fired power station and 2km airstrip
- Jundee Operations guidance
 - Seven year sustained operations at 2.7Mt and 270-300koz produced
 - Underpinned by MY20 Reserve and Resource growth to 2.0Moz and 5.3Moz respectively
- FY21 guidance
 - 270–300koz produced
 - AISC of A\$1,200-A\$,1,275/oz





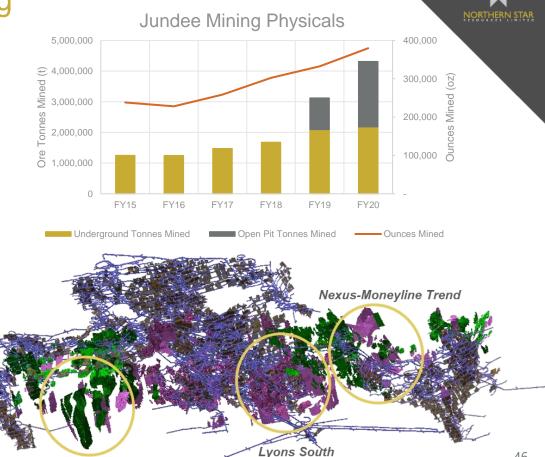
Yandal Operations - Mining

Jundee Underground

- Jundee Operation is a low-cost, Tier-1 asset mining over 300koz in FY20 and at an AISC of A\$1,095/oz
- Jundee system is an endowment of over 13Moz and has delivered 5 years of Resource and Reserve growth with consistent conversion
- This system is open in all directions; the Invicta Gap is an emerging area that will contribute significantly to production for many years
- Current mining rate ~2.2Mpta, average Reserve grade of 4.3 gpt

Open Pits

- Ramone Open Pit commenced April 2019, the first open pit owned and operated by NST and used as supplementary feed to the Jundee underground
- This contribution has added significant value to the project, with many other known sources close to the Jundee plant
- Pre-production set up of Julius and Menzies open pits has commenced with production in FY22
- End of FY20 closing stockpiles of 56koz



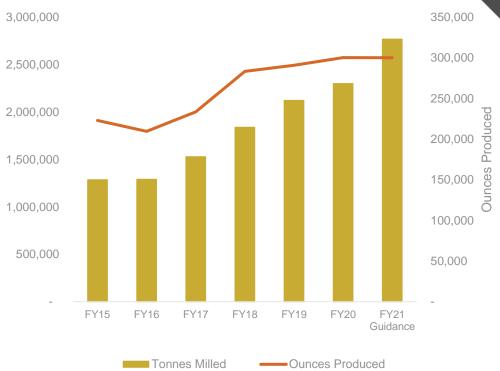
Yandal Operations - Processing

- Mill throughput increase from 1.4Mtpa to 2.7Mtpa under NST tenure
- Capital infrastructure upgraded across the journey to support increased activity including power station, tailings facility and water supply upgrades
- Jundee Expansion Project 2 (JEP2) delivered a 4.5MW ball mill installation commissioned in May 2020
 - A\$23M Capex under budget, project executed in a 9-month schedule
 - Replace 1.8MW with 4.5MW ball mill stage, in-house crushing throughput increases and cyclone cluster upgrade

Tonnes Milled

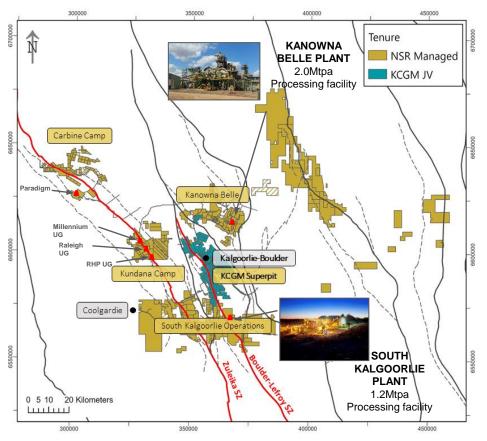
- FY21 mill throughput rates achieved exceeding 3.0Mt annualised production -40 t/h above design and FY21 guidance
- Recovery increase of 1-2% with increased throughput rates and finer grind size
- Operating cost per tonne reductions of 25%
- Bronzewing plant is located 120km south of Jundee plant and has capacity of 1.8Mtpa; requires refurbishment

Jundee Production History Under NST Tenure

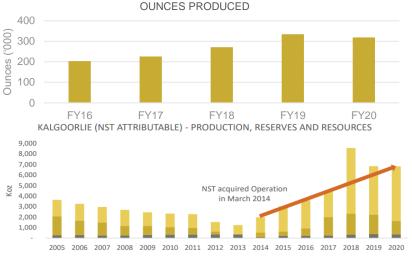




Kalgoorlie Operations - Regional Centre



- Concentrated regional centre allows simplified management and leverage to synergies and gold price with organic growth opportunities
- Organic growth FY14-FY20 with FY21-FY22 guidance of 270-300koz, production maintained ~300koz FY23-FY27
- Total Resources of 6.8Moz and Reserves of 1.6Moz
- 4 production centres Kanowna Belle, South Kalgoorlie, Kundana and East Kundana Joint Venture (51% NST)
- A\$35M in exploration and A\$12M in capital for FY21



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Kalgoorlie Operations Mining - World Class

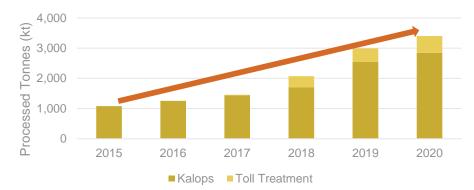
- Ore tonnes mined from the operations have more than doubled in the past 5 years to >3Mtpa run rate from the 4 operating underground operations
- NST in-house contractor Northern Star Mining Services (NSMS) undertakes mining across the region
 - Allows technical teams to focus on mine life, mine design & scheduling
 - Allows NSMS to focus on operational execution: optimising people and equipment
 - Simplifies running the overall business. Flexibility to transfer resources between sites or deploy as required
- NSMS methodology drives performance such as the Millennium world record single jumbo development achieved in March 2020 of 1,033.4 metres





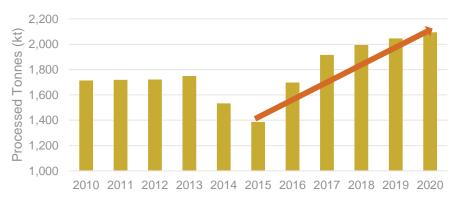
Kalgoorlie Operations Processing - Continual Improvement





KALGOORLIE OPERATIONS - TOTAL PROCESSING

KANOWNA BELLE - TOTAL PROCESSING



- 3.2Mtpa processing capacity in the region currently with studies completed and opportunity to expand
- Kanowna Belle world class infrastructure 2.0Mtpa milling capacity, along with >50ktpa concentrate processing capability
- Record tonnes Kanowna Belle FY20 2.1Mt milled, a significant increase from 1.38Mt in 2015
- South Kalgoorlie Operation acquired 2018, 1.2Mtpa capacity added to the region
- Year on year improvement in total milled tonnes in the Kalgoorlie Region – all through incremental gains in efficiencies and operating strategy and fundamentals



KCGM - a world class gold asset and geological system



	KCGM OPERATION OVERVIEW	
Location	 Approximately 600km east of Perth, Western Australia Mt Percy 	
Historic Production & System Endowment	 +65Moz historic Production (1893 – Present) ~85Moz Endowment @ MY 2020 Mt Charlotte 	KC
Current Operatorship	 50/50 Joint Venture between Northern Star and Saracen 	
Geology	 Fimiston: Orogenic structurally controlled lode style mineralisation Charlotte: Gold in sheeted to stockwork vein arrays with minor mineralisation in the alteration halo 	
Open Pit Mining	 Open pit: Conventional truck and loader operation moving up to ~70-80 Mtpa (ore plus waste) 	
Underground Mining	 Underground: Mechanised longhole retreat mining producing ~1.5Mtpa (ore) 	
Processing	 Capacity: ~13Mtpa Crush, ultra-fine grind, flotation CIL circuits 	

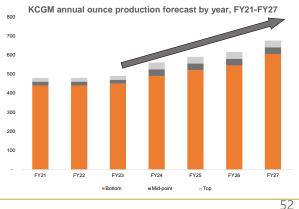
1. Mineral Resources are inclusive of Ore Reserves; 2. Exploration and Resource Evaluation does not include grade control activities 3. Rounding may result in apparent summation differences between tonnes, grade and contained metal content

Strong platform set for growth, with 15-year mine life visibility based on Reserves, with production set to ramp up to +675koz per annum by FY28

ORE RESERVES AND MINERAL RESOURCES AT 30 JUNE 2020

Ore Reserves	240Mt @ 1.3gpt for 9.7Moz ¹ (120Mt @ 1.3gpt for 4.8Moz NST Attributable)
Mineral Resources	380Mt @ 1.6gpt for 19.0Moz (190Mt @ 1.6gpt for 9.5Moz NST Attributable)

- Successful transition to new JV ownership
- Maiden JORC (2012) Reserves & **Resources** delivered
- Capital investment to deliver sustained long-term growth





RECAST				
oduction Guidance	FY21: 440-480koz (220-240koz NST Attributable)		3old produced (koz)	
SC	FY21: A\$1,470-1,570/oz			
owth & De-risking pital Expenditure	FY21: A\$198M (A\$99M NST Attributable)	FY22: A\$240-270M (A\$120-135M NST Attributable)	ß	
ploration / source Evaluation ²	FY21: A\$12M (A\$6M NST Attributable)			

KCGM Highlights

FO

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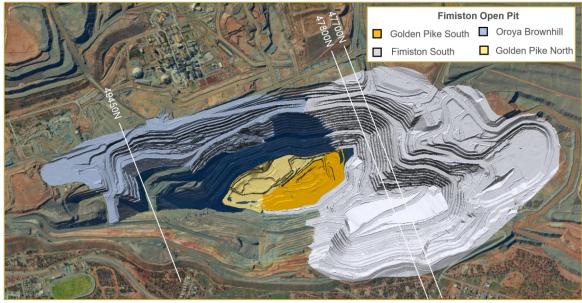
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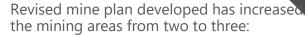
KCGM Fimiston Super Pit



ABOVE: Image showing the planned Fimiston cutback locations BELOW: Forecast production source by financial year (FY21-FY34)

KCGM	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
Oroya Brownhill														
Fimiston South Stage 1														
Golden Pike South														
Fimiston South Stage 2														
Golden Pike North														
Underground														
Mount Charlotte														
Marginal														
Sub-grade														

Long-life robust mine plan that delivers beyond FY2034 based on current Ore Reserves of 9.7Moz (100%)



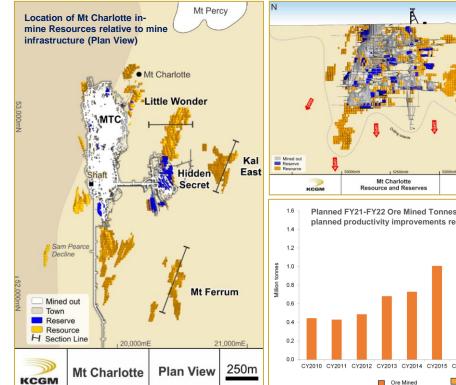
- Golden Pike
- Morrison
- Oroya Brownhill (OBH)
- A fourth area (Fimiston South) is scheduled to be online in the 2H FY2021
- The OBH cutback addresses remediation of the East wall failure that occurred in May 2018
- New cutbacks will:
 - Boost mining productivities
 - Improve costs
 - Deliver higher grades to the mill by displacing lower grade stockpile feed
- Significant productivity and cost improvement initiatives are planned at KCGM, with total movement forecast to be restored to 70-80Mtpa
- A maiden Reserve for the Fimiston South of 3.9Moz, provides the baseload of future pit production 53





Mt Charlotte Underground

More than 5.5Moz has been produced from Mt Charlotte to July 2020. Additional drilling and review of historical data has resulted in JORC (2012) Compliant Reserves of 510koz at 2.1gpt and Mineral Resources of 1.9Moz at 2.1gpt



- Mt Charlotte Long Section with drilling data extents shown Long Section 200m
 - Planned FY21-FY22 Ore Mined Tonnes from MTC, demonstrating planned productivity improvements relative to recent years
 - CV2013 CV2014 CV2015 CV2016 CV2017 CV2018 CV2019 Ore Mined (forecast)

- The Mt Charlotte underground infrastructure is utilised to access multiple ore sources (Mt Charlotte main, Hidden Secret)
- The development has provided a platform for exploration, with numerous Resources such as Mt Ferrum, Kal East and Little Wonder discovered in recent years
- FY2020 has seen the upgrading of critical infrastructure to support long-term growth and sustained production activities at Mt Charlotte (e.g. power, ventilation, pumping, ground support in Sam Pearce)
- Utilising the skill set of the KCGM JV partners, ore mined at Mt Charlotte is expected to reach 1.5Mt in FY21, which is a substantial increase on previous years



Organic Growth Summary

Pogo Processing Expansion

- US\$30M committed to increasing plant capacity to 1.3Mtpa
 - Expansion within existing plant boundary
 - Commissioning on schedule for mid CY2021
 - 60% complete, construction ongoing through COVID-19 restrictions
- Dry tailings storage facility expansion preliminary engineering commenced, currently 3 years of permitted capacity existing
- Recovery improvement projects have increased recovery from 87% to 91.5% YTD



Major Equipment

- Jameson cell
- Thickener
- Filter
- Pumps
- Control system upgrades



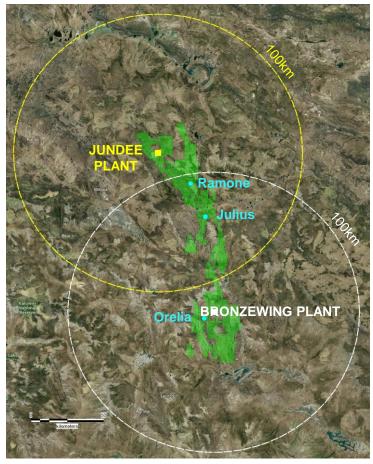
RIA





New Tailing Thickener construction

Yandal Processing Study



- Existing processing capacity:
 - Jundee 2.7Mtpa
 - Bronzewing 1.8Mtpa
- Additional ore sources via Jundee regional pits and Echo acquisition pits
- Optionality:

- Upgrade Jundee to 5Mtpa
- Refurbish Bronzewing and increase to 2.2Mtpa
- Dedicated Yandal Project Team appointed
- Engineering trade-off studies commenced
- Existing infrastructure is amenable to expansion (power / water / tailing storage facilities / roads)



NST Organic Growth & Continued Value Creation

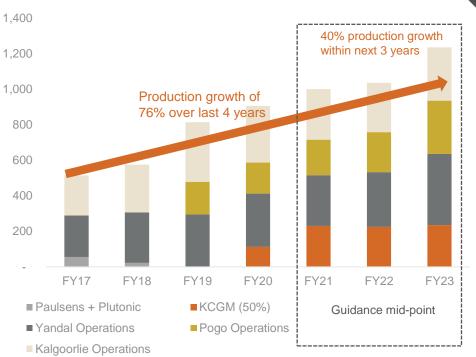
The NST Team has a proven track record of delivering production growth, with a 76% increase over the last four years

The platform that NST has built is outstanding on many fronts:

- Culture of high performance and "can-do" attitude
- Industry leading safety and ESG performance
- Tier-1 assets with world class geological systems and Tier-1 locations
- Long mine lives, year-on-year Reserve & Resource increase and conversion
- Industry leading productivities and a commitment to keep improving
- Continuous investment in our people, technology and innovation

It is this platform that will deliver continued organic growth with production set to increase 40% within three years and costs to fall 10%

Oz Production by Centre + Guidance mid point for next three years







Yandal - Base lode of Jundee & Bronzewing open pits

Yandal to 400kozpa

Current mining performance delivers 300kozpa produced from Jundee underground and identified open pits

Installed infrastructure easily supports exiting operations with:

- 2.7Mtpa processing capability
- 280koz from Jundee underground (2.2Mtpa @ 4.3gpt & 92% recovery)
- 25koz from Regional Yandal Open Pits (0.5Mtpa @ 1.6gpt & 93% recovery)

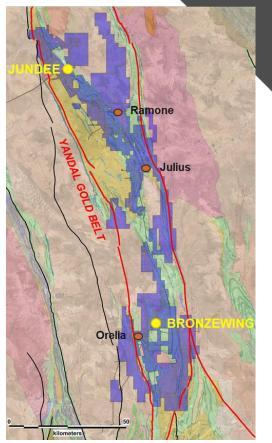
Growth in the region delivered from the Yandal pits (including Orelia) with 0.8Moz in Reserves that will produce at 100kozpa (2.1Mt @ 1.6gpt & 93% recovery)

A\$157M growth capital over next two years to commence Orelia & Julius; and increase processing capacity to $\sim\!5.0Mtpa$

Numerous other Resources and potential production sources within trucking distance of both Jundee and Bronzewing









Pogo - on its way & with further growth opportunity

Pogo to 300kozpa

Pogo is well underway to reach production of 1.3Mtpa @ 8gpt and 90% recovery for 300koz produced

Equipment and personnel resources on site to achieve these targets, productivities continue to improve as new mining areas are accessed and extended

Mid-year 2020 Reserve at 1.5Moz @ 8.0gpt & Resource of 6.7Moz @ 9.8gpt; (and only 62% of DD metres drilled due to COVID-19)

In-mine growth opportunity is certain, additional exploration success is not required in the medium term to maintain 1.3Mtpa

Pogo should be considered as a regional centre as mineral endowment is substantial and expectation is that investment in the Pogo district will unlock the area for >15 years

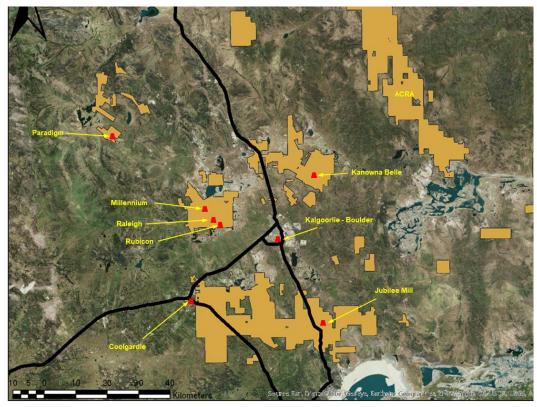
Key gateways to continued economic expansion above current plan

- Increase mining rates from existing mining areas
- Goodpaster define minable area and bring into production
- Open Pit & regional potential (e.g. Hill 4021, Resource 0.5Moz at 8.2gpt)
- Leveraging of existing infrastructure including additional processing expansion





Kalgoorlie - concentrated centre, great infrastructure and significant leverage to the gold price

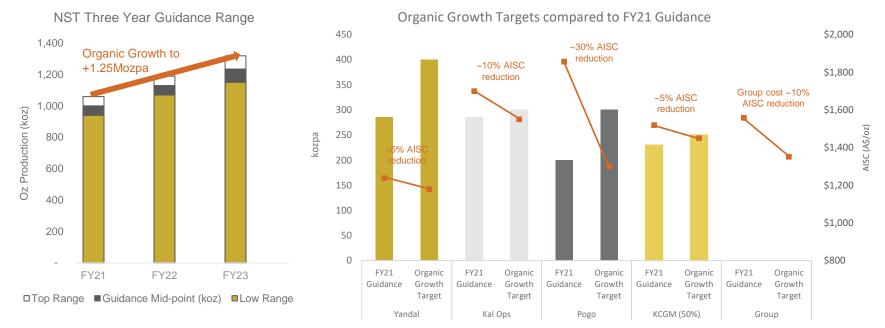


Kalgoorlie to 300kozpa

- Continued production at 300kozpa from existing operations (3.2Mtpa @ 3.2gpt and 92% recovery)
- Currently processing capacity of 3.2Mtpa processing capability over two plants; ability to upgrade to increase capacity if required
- Large Resource base across multiple regions provides significant leverage to gold price with growth and extensions identified with regional open pits
- Paradigm & Carbine area is an emerging production centre with Resources of 0.5Moz

NST Organic Growth - What does success look like

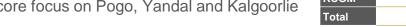
- Growth is key to our value creation but it is not ounces for ounces sake; protecting margins and reducing costs also critical
- We have the required Resources & Reserves, investment, unique culture and capability to continue to deliver organic growth
- Overall low capital intensity with spend at A\$198M in FY21 and A\$300M in FY22 to achieve organic growth by 40% to 1.25Moz
- Strict cost management, disciplined investment & effective capital use will drive down group AISC by ~10%



NORTHERN STAR



Exploration Update

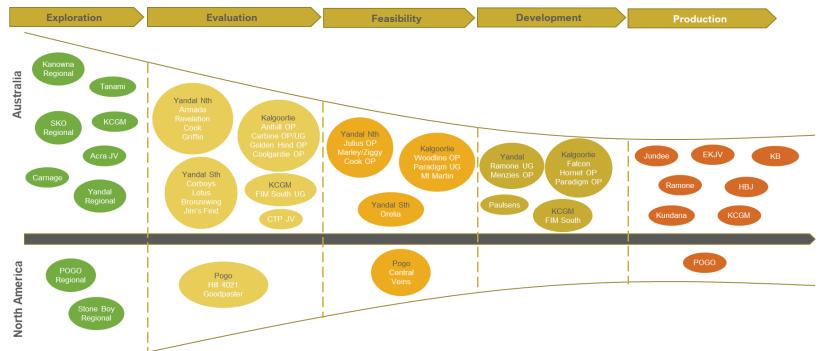




- A\$101M exploration commitment for FY21
- Reflects FY20 discovery metrics of A\$30/Resource oz and A\$98/Reserve oz
- Extensive exploration pipeline with core focus on Pogo, Yandal and Kalgoorlie



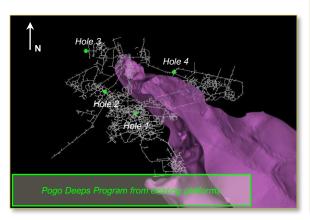


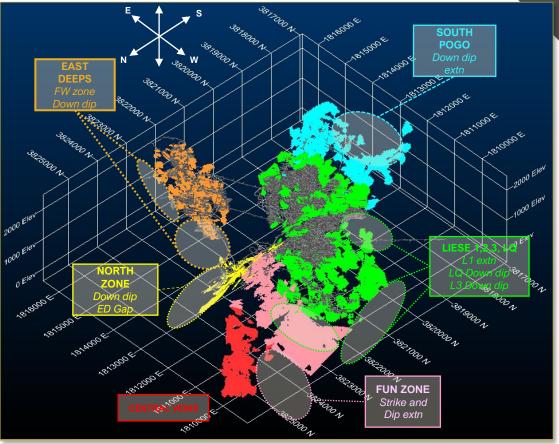




Pogo Exploration

- Five main producing systems all open along strike and at depth
- Nine underground rigs
- Pogo Deeps program testing for repeated stacked vein systems below center of gravity of all main areas







Goodpaster Exploration

- The Goodpaster discovery has been outlined extends over 2.3km along strike and remains open in every direction
- Series of stacked flat-dipping (Liese-type) and steeply dipping (North Zone-type) vein structures
- Initial surface diamond drilling previously outlined Liese-type vein structures on ~160m x 160m centres

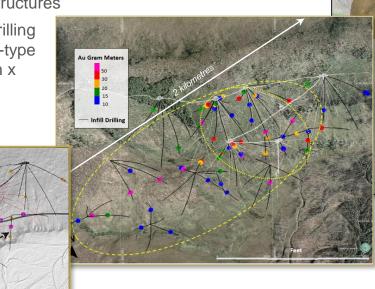
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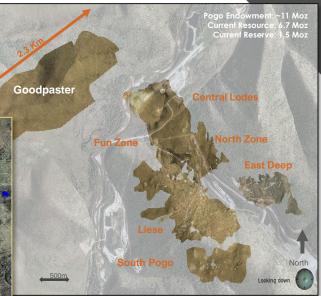
Meters

Drilling Existing

Infill

Roads Existing A





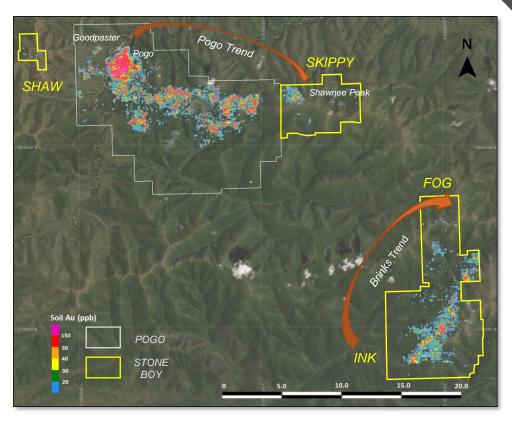
- Significant surface infill drilling program has just commenced on the north eastern end of the trend
- Targeting a maiden Mineral Resource by mid-year 2021



Regional Potential - District-scale gold camp

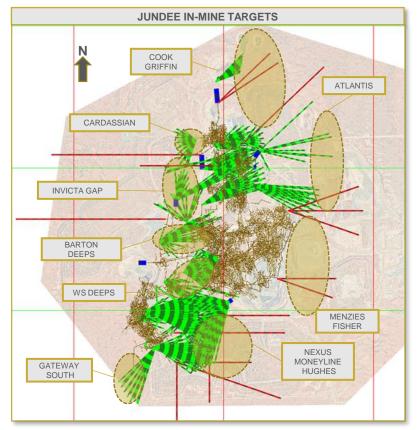
Exploration portfolio expanded with Stone Boy Project acquisition

- Acquired Stone Boy Project for a total consideration of US\$1.2M
- Significant exploration tenure added close to the Pogo Project
- Extensive anomalous geochemical trends identified across the Ink and Fog blocks
- Prior drilling has intersected wide zones of sheeted and stockwork veining
- Data compilation, digitalisation and integration in progress



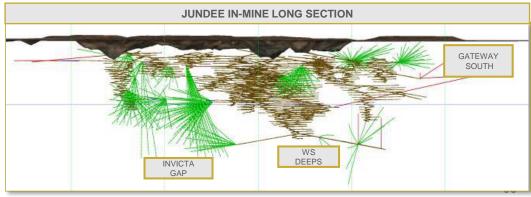
Yandal Exploration





Jundee Mine

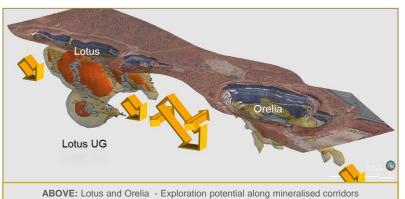
- Second year of major in-mine exploration investment into major targets, 15 rigs operating underground
- Strong focus on advancing "gap" areas and drilling geological targets adjacent to key corridors
- Key new targets include Northern Extension (Cook-Griffin), Invicta Gap, Atlantis and Nexus/Revelation/Moneyline
- Early visual results show strong structures at Menzies/Fisher, Cook/Griffin, Invicta Gap with visible gold intersected

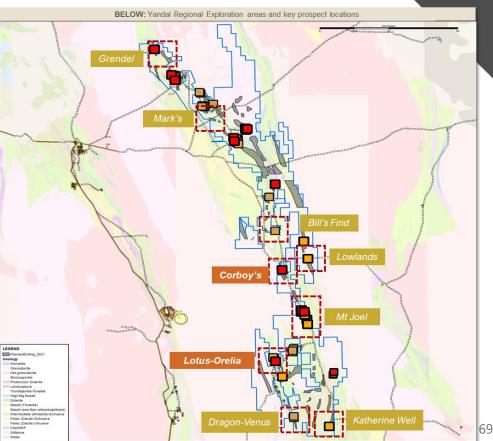




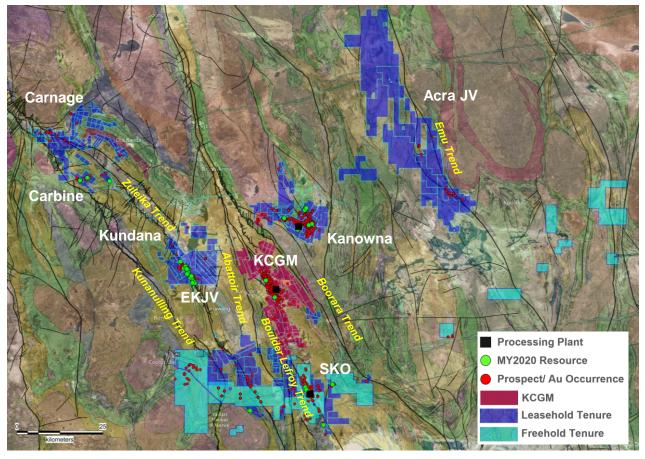
Yandal Regional Exploration

- Acquisition of Echo Resources tripled the Yandal regional exploration footprint to 3,100km²
- Start of a multi-year regional program to deliver excellent exploration results and discoveries
- Major regional aircore programs to build revised geological models
- Resource definition programs at Corboys, Orelia, Lotus, Dragon-Venus open pit targets





Consolidated Kalgoorlie Footprint

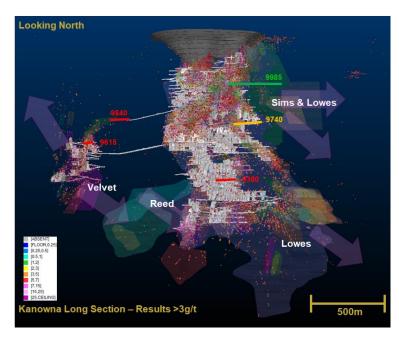




- Northern Star has accumulated an unprecedented exposure to the world-class Kalgoorlie mineral district, which has produced +100Moz of gold since the late 1800's
- World class infrastructure
 - Large-scale open pit
 - Well established underground mining operations
 - Access to multiple (+16Mtpa) processing facilities
- Significant tenure provides exciting organic growth opportunities for NST

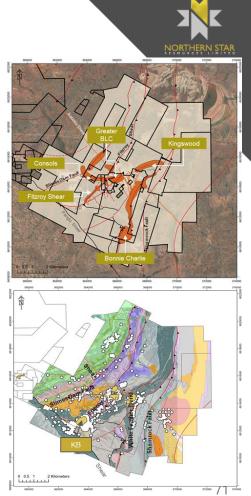
KB Exploration

- Geological framework defined, targeting further expansion of Sims, Troy hanging wall positions (A-D Block)
- Staged drill programs with early focus on higher A-D Block for resource conversion
- Lowes eastern extension, Velvet merge area with main Lowes trend



Near Mine Exploration

- Combined UG and surface exploration focus on immediate mine corridors
- Work in progress on Red Hill, Duke and Fitzroy Chasers targets
- Focus shifting to the northern Friday Shear, Consols-BLC areas
- Minimal deeper testing of the intersections of deep structures and fertile intrusive systems



White buffers show a 100m radius around drill hole collars exceeding 200m depth.

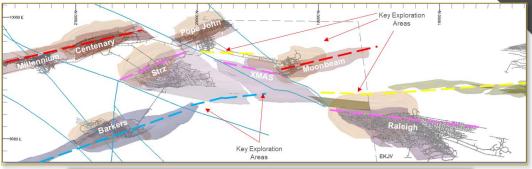
Kalgoorlie Exploration - Kundana (100%)

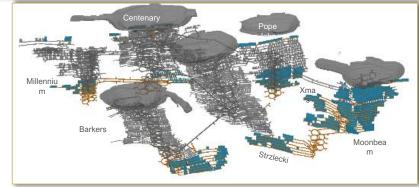


In-Mine Exploration

- Key priority is Pope John, Xmas, Moonbeam systems at depth
- Accelerate exploration of Millennium Falcon trend
 - Staged program to expand inferred Resource inventory
- Initial exploration for new positions
 - Repetitions in hanging wall of Xmas at depth
 - Southern extensions to Barkers Vein
 - Initial test of K2 foot wall area (IVT, Startrek trends)

BELOW: Plan view of Kundana mining centres with key in-mine exploration areas

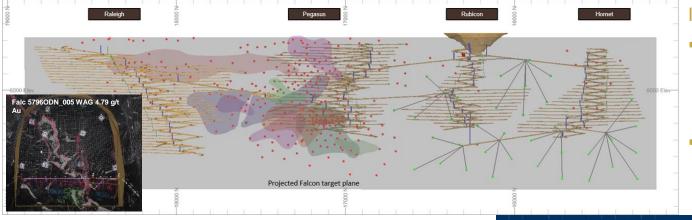




ABOVE: 3D oblique view of Kundana mining centres with resource outlines

Kalgoorlie Exploration - EKJV (51%)



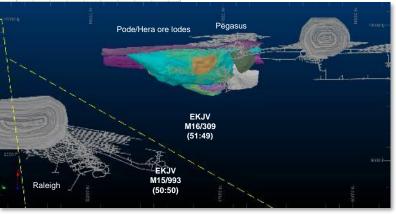


BELOW: Long Section across EKJV mining centres showing projected Falcon mineralisation INSET: Falcon development face

- Incremental extensions of Pode northwards (Typhoon) and Hera southwards (Pegasus HW)
- Incremental extensions of Hornet HW positions (Pode analogues)
- Expanded drilling focus into K2 footwall areas
- Open pit potential at Hornet

In-Mine Exploration

- Major focus to bring Falcon trend to production status
- Exploration focus to extend Falcon trend south



ABOVE: Plan view across EKJV mining centres showing projected Pode/Hera mineralisation

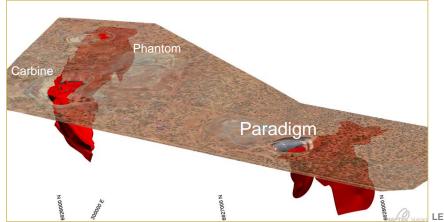
Kalgoorlie Exploration - Carbine



Development

- Development of Paradigm open pit
- Definition drilling to advance open pit targets to Feasibility status
 - Phantom
 - Ant Hill
 - Carbine Pit





Regional Exploration

- Evaluate Carbine and Paradigm underground potential
- Extension to Carbine-Phantom trend Comic Court and Hi Jinx
- Ant Hill surrounds
- Zuleika trend exploration targets

South Kalgoorlie Exploration

In-Mine Exploration

- Core exploration focus on NOZ and Mutooroo northwards and down plunge
- Potential in parallel adjacent surfaces to SOZ-COZ-NOZ corridor
 - Jubilee "tiger porphyry"
 - HBJ hanging wall corridor
 - Parallel trends in NOZ footwall

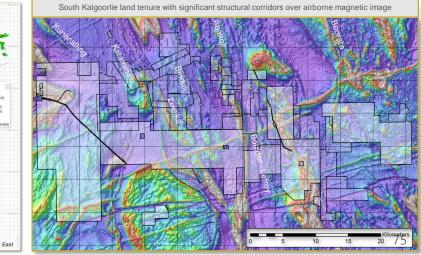
BELOW: HBJ Mine long section with resource outlines and key exploration focus areas

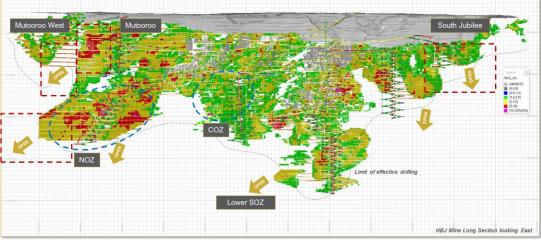
Regional Exploration

- Regional exploration centred on all major structural corridors and historical production centres
- Developing open pit opportunities at SBS and Mt Martin mining centres

NORTHERN STAP

 Exploring "Mt Charlotte style" stockworks in GMD equivalent stratigraphy





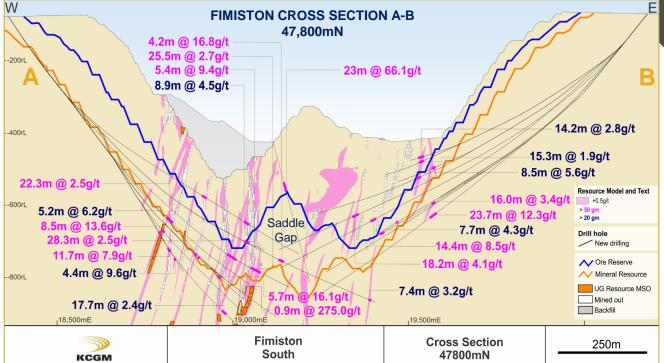
Fimiston Open Pit Growth Potential

 Historical drilling and drilling completed since the new JV ownership demonstrates significant upside potential both within and outside of the current Resource optimisation



ABOVE: Plan view of Fimiston cutback stages with the location of the 47,800mN cross section shown

- Recent infill drilling completed at Fimiston has identified additional lode material both within and proximal to the Ore Reserve design (A\$1,750) and Resource optimisation (A\$2,250)
- The highlight was 23m @ 66.1gpt (down hole width) intersection at the top of the pit design 'saddle'
- Numerous mineralised intersections to further follow up on
- Resource averages a globally leading 45,000oz per vertical metre

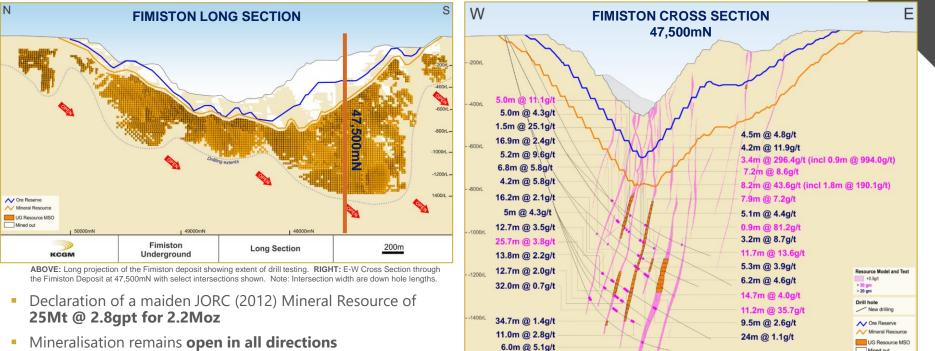


47,800mN E-W cross section through the Finiston deposit, with select intersections shown. Note that intersection widths shown are down hole lengths.

NORTHERN STAR

Fimiston Underground

 Deep drilling beneath the June 2020 Open Pit Resource demonstrates the continuity of Fimiston mineralisation at depth, providing future underground targets



18 500m

KCGM

19.000m

Fimiston

Underground

19,500mE

Cross Section

47500mN

NORTHERN STAR

Mined out
Backfill

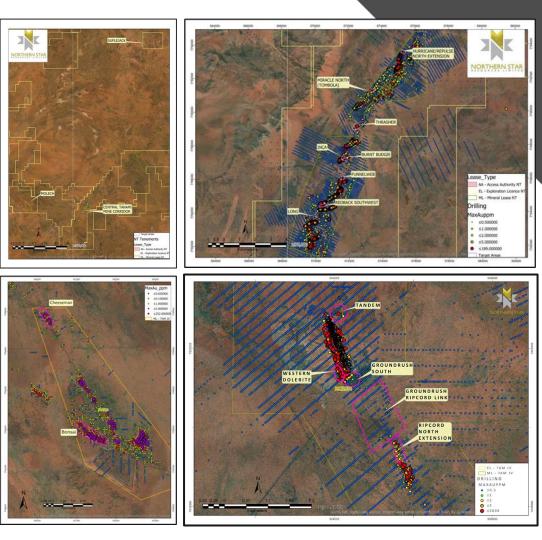
250m

• **A\$10M** has been allocated in the FY21 budget to re-establish underground accesses to Fimiston via in-pit portals, with the primary objective to provide drill platforms

Tanami Project Exploration

Central Tanami Project

- Re-focus in historical mine corridor trends
- Build resource inventory from discovery potential
- Groundrush
 - Groundrush extensions
 - Ripcord
 - Ripcord-Groundrush Gap
 - Jims depth extension
- CTP Mine corridor resource extensions
 - Funnelback, Burnt Budgie, Long, Thrasher, Redback Southwest, Hurricane/Repulse North, Tombola
- Molech
 - Cheeseman



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