Kalgoorlie Operations
Welcome to Kundana
Resources & Reserves and Forward Looking Statements

Mineral Resources and Ore Reserves

The Mineral Resources and Ore Reserves information, and exploration results 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 presentation for all the Company’s projects is extracted from the reports entitled “Resource and Reserve Update” dated 1 August 2019 and “Kalgoorlie Operations Site Tour Presentation” dated 5 February 2019, available at www.nsrltd.com and www.asx.com. 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 announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement 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 been materially modified from the original market announcement.

The information in this announcement relating to the Pogo mine’s mineral resources for the period before 16 October 2018 is reported in accordance with the requirements applying to foreign estimates in the ASX Listing Rules and, as such, is not reported in accordance with the JORC Code. The information is extracted from the ASX announcement entitled “Northern Star acquires Pogo Gold Mine in Alaska” dated 30 August 2018. The Pogo resources mentioned in this announcement for the period before 16 October 2018 are estimated as at 31 December 2017 and according to the Canadian NI 43-101 standards, but are not fully compliant with those standards. A cautionary statement in respect of such resources appears in the Company’s ASX announcement dated 30 August 2018.

The information in this announcement relating to the Pogo mine’s reserves for the period before 1 August 2019 is reported in accordance with the requirements applying to foreign estimates in the ASX Listing Rules and, as such, is not reported in accordance with the JORC Code. The information is extracted from the ASX announcement entitled “Northern Star acquires Pogo Gold Mine in Alaska” dated 30 August 2018. The Pogo reserves mentioned in this announcement for the period before 1 August 2019 are estimated as at 31 December 2017 and according to the Canadian NI 43-101 standards, but are not fully compliant with those standards. A cautionary statement in respect of such reserves appears in the Company’s ASX announcement dated 30 August 2018.

Forward Looking Statements

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Northern Star Kalgoorlie Operations

- FY2020 continues organic production growth profile with guidance of 340,000oz – 380,000oz at AISC of A$1,260-A$1,370/oz
- 5 Operating UG Mines
  - Kanowna Belle
  - Millennium
  - HBJ
  - Raleigh (51% NST)
  - Rubicon-Hornet-Pegasus (RHP) (51% NST)
- 2 Processing Facilities – Total 3.2Mtpa
  - Kanowna Belle – 2Mtpa
  - Jubilee – 1.2Mtpa
  - Plus regional toll treating options
- Concentrated centre allows simplified management and leverage to synergies and gold price with organic growth options
Diggers & Dealers Site Visit - Agenda

- Purpose of the visit is to give exposure and insight into the workings of NST
- NST business model is a point of difference compared to its peers
- The use of an “internal contractor”, NSMS, and Technical Teams delivering robust geology models and mine plans enables us to focus on productivity and reduce costs across the business

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<tr>
<th>Time</th>
<th>Group 1</th>
<th>Group 2</th>
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<tr>
<td>13:35 - 14:00</td>
<td>Mining Presentation</td>
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<td>14:00 - 14:45</td>
<td>Geology Presentation</td>
<td>Underground</td>
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<td>14:45 - 15:05</td>
<td>Core Yard Visit</td>
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<td>15:05 - 15:30</td>
<td>Underground</td>
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<td>15:30 - 16:05</td>
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<td>Arrive Goldfields Arts Centre</td>
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The Kundana mining area has been in operation for over 30 years.

NST current operations stretch >8km along this exceptional geological corridor, with orebodies open at depth, laterally and along strike.

Ore bodies are typically narrow quartz vein style mineralisation (1m to 6m in width).

The current operational mines include:
- Kundana (100% NST) - Millennium, Pope John, Moonbeam
- East Kundana Joint Venture (51% NST) - Raleigh, RHP

Current physicals (100% basis):
- >2Mtpa ore production
- >20kmpa of lateral development
Kundana (100% NST)

- Kundana region continues to grow production and offers operational flexibility
- Reserves of 0.6Moz and Resources of 1.4Moz
- Orebodies remain open at depth as well as along strike
- In FY2020, Moonbeam underground will be established as production centre, continuing growth along the Kundana trend
- Low capital intensity of A$24M to bring Moonbeam into production
- Kundana is achieving industry leading mining physicals as demonstrated by consistently developing over 500m per month with one jumbo
Narrow Vein Orebodies

K2 Lode – Millennium, Pope John, Moonbeam

Strzelecki Lode – Strzelecki, Xmas
Development Cycle - Optimising Geological Control

3D Photogrammetry
Completed for all critical headings to optimise geological control and integrity
Sirovision a 3D image that the geologists use to map structures, rock types, veining etc.

Requires
- Full face bogged out
- Cuts washed down completely
- Control points surveyed to ensure 3D image can be processed and interpreted in ‘real space’

Face Sampling
Completed for all ore headings, or where potential mineralisation is identified
Samples are broken up into several ‘domains’ which are used in our grade models to predict future development and stope grades

Requires
- Full ground support to standard
- Clean up after bolt-mesh to avoid trip hazards
- Face washed after bolt-mesh to avoid grade contamination

Other Uses For Sirovision
- Dilution monitoring
- Geotechnical mapping and structural modelling
- Geological modelling
- Ore domaining prior to resource estimation
- Identify and extrapolate structures known to be responsible for high grade zones, and target areas for further drill testing
Mining Method - Longhole Open Stoping
Structure - Set up for Success

Our Underground Mining Services Division (NSMS) is implemented and operating at Kundana

Best of both worlds

- Geology, mine design & scheduling structured to allow for operational success
- Contractor-style productivity focus – get the most out of people & assets
- Fundamental alignment of business objectives for NST

Equipment at Kundana

- 2 x Sandvik DD421 (Twin booms)
- 3 x Simba ME7-C (production drills)
- 3 x Sandvik 517 Loader - 17t bucket, semi-autonomous remote capable
- 4 x Sandvik TH551i Truck, 50t payload, automation ready
Industry leading mining productivities delivered from “In House” Mining contractor model

Jumbo development achieving 500m/jumbo/month; 67% above industry average of 300m/jumbo/month

Production drilling achieving 10,000m/drill/month; 33% above industry average of 7,500m/drill/month

High productivity is a key driver of project value
- Reduces fixed costs (reduced $/t)
- Accelerated access to ore = Higher NPV & FCF
- Increased annual production rate = Higher NPV & FCF
Maximising Quality of Ore - Split Firing

Increases quality of ore by removing waste material from development heading as part of the mining cycle

No impact to advance rates; Kundana achieving and maintaining industry leading physicals

Direct savings realised by not hauling and processing waste

Additional value creation by increasing mill head-grade and converting low grade to ore above cut-off
Maximising Quality of Ore - Reducing Stope Dilution

Reduction in mining dilution through
- More efficient drill design (zipper vs dice-5), optimised blasting design
- Drilling Accuracy (Minnovare Azi-Aligner)
- Better support of hanging wall, improved hanging wall protection

Impact of reducing stope width by 0.5m
- Remove ~80kt of waste material per year from hauling and processing
- Increases stoping production rates – bring forward 80,000t of higher grade
- Opportunity +A$20M revenue

More Resource converts to Reserve and extends mine life
NST Operational Capability Delivers Superior Returns

Moonbeam established as an additional production centre in FY2020

Development and production profile with NST performance at 500m per month per Jumbo

Comparable development and production profile at 300m per month per Jumbo

Development and Production difference
- +4km Development
- +170kt of Ore (development and stoping)

This scenario would carry the same fixed costs
Kalgoorlie Operations
Kundana Geology Overview
Kundana Regional Overview

- The Kundana mining complex was officially opened 10 December 1988
- Northern Star has drilled over 150,000m (underground and surface) FY2019 across Kundana and EKJV
- Focus areas are the Falcon, Pode, Hera, K2 and all HW lodes associated with gold mineralisation
- FY2019 mining fronts have been the K2 Main Vein, Pode and Hera (HW lodes) and Strzelecki on EKJV and 100% Kundana
- Recent underground exploration drilling has highlighted potential for significant hanging wall mineralisation and strike extension across the Kundana region
Kundana - Narrow Vein Main Lodes

Strzelecki

K2
Kundana - Hanging Wall Lodes

Pode

Hera
Kundana - EKJV Overview (NST 51%)
Pode - A Growing Success Story

PEGGC18325 2.6 m @ 13 g/t

PEGRT18387 3.2 m @ 6 g/t

PEGGC18319 1.9 m @ 35 g/t
Falcon - Maiden Resource Is Just The Beginning

- Just over 34,000m of Falcon exploration drilling in FY2019
- Forecast A$2.8M (NST share) FY2020 Budget
- Major focus to bring Falcon trend to Feasibility status
RALRT18301 0.7 m @ 20 g/t
RALRT18302 0.2 m @ 36 g/t
RALRT18305 0.7 m @ 23 g/t
RALRSD180680 0.7 m @ 136 g/t
RDDD18003 0.8 m @ 57 g/t
Overview Kundana (NST 100%)
Millennium/Pope John - Continuing Current Production

- MILLGC18130 4.35m @ 9.2g/t
- MILLGC18135 5.8m @ 12.2g/t
- MILLRSD18045 1.31m @ 11.1g/t
- PJRSD18051 1.8m @ 16.2g/t
Moonbeam - Next Production Centre

- Moonbeam will be accessed from the existing drill drive extending from Pope John and includes the Xmas trend on the Strzelecki lode
- To date all UG Moonbeam and Xmas drilling has been conducted from this location
- In FY2019, 10,000m of UG drilling was completed
Looking Forward - Xmas, Strzelecki & Moonbeam Extensions

CHDD18004 0.4m @ 146g/t
CHDD18013 0.81m @ 42.4g/t
CHDD18020 0.32m @ 34.2g/t
CHDD18021 1.79m @ 17.0g/t
MBDD18008 1.1m @ 69.0g/t
CHDD18003 0.3m @ 177g/t
CHDD18020 0.3m @ 177g/t

FY1920 Growth Areas
Looking Forward - Potential Outside Main Structures

- There has not been a significant amount of exploration outside of the Strzelecki and K2 Structures on the 100% ground.
- West of the Strzelecki structure we have seen evidence of HW mineralisation.
- Geological learnings from EKJV proves potential for growth and this area is a prospective exploration target for FY2020.
Regional Geology
FY2019 Exploration Spend

SUMMARY

- Group FY2019 exploration expenditure totalled A$66.3M
- A$60M Group Exploration budget reallocated and accelerated post Pogo acquisition
A$76M Global Investment in Future Growth

- A$76M exploration and drilling commitment for FY2020 is a record commitment
- Pogo will continue to be a major focus with outstanding in-mine and near mine opportunities
- Strong commitment to Jundee growth with major investment in-mine
- Regional exploration at South Kalgoorlie is generating considerable success across a 1,000km² portfolio
- Efficient funds allocation 77% in-ground expenditure
Kanowna Belle

Forecast A$10.5M spend

In-Mine

- Focus on higher grade A-D Block HW (Troy-Sims) resource conversion
- Expand Velvet HW, Velvet Gap (Reed)
- Test for eastern extensions to Lowes (B-C Block)

Near Mine

- Progress evaluation of large scale targets
- Nemesis, Red Hill, BLC systems
Kundana (100% NST)

Moonbeam Development

- A$2.5M forecast for incremental extension targets
- Pope John, Xmas, Moonbeam systems at depth
- Extending Strzelecki trend south
EKJV (NST 51%)

Falcon is the Focus

- Forecast A$2.8M (NST share) budget
- Major focus to bring Falcon trend to feasibility status
- K2 HW extensions northward from Pegasus
- Extensional drilling into RHP hanging wall positions (Hera)
South Kalgoorlie

In-Mine

- Forecast A$2.2M spend on HBJ extensions, early success evident from NOZ extensions to extend mine life
SKO - Exploring in the heart of the Goldfields

- Over 1,000km² of exploration and freehold tenure
- Extensive production history
- Contains strike continuation of Boulder-Lefroy fault system – key to the Golden Mile
- Plus all the major structural corridors of the Coolgardie-Kalgoorlie terrane - host to ~120Mozs
Current Exploration Activity - Carbine & Carnage

Carbine Trend
Targeted drilling outlining parallel trends in an emerging camp

Thunderstruck
Regional drilling of the Kundana equivalent stratigraphy proximal to the Zuleika Shear Zone
Northern Star Resources Limited
ASX Code: NST

An Australian mid cap gold miner – for global investors

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