



# Strong quarter shows Northern Star meeting its growth targets across the board

Australian mines both running at Tier-1 levels of ~300,000ozpa; Early operational progress at Pogo puts it on track to hit FY2019 guidance

## ASX ANNOUNCEMENT 25 October 2018

Australian Securities  
Exchange Code: NST

### Board of Directors

Mr Bill Beament  
Executive Chairman

Mr John Fitzgerald  
Lead Independent Director

Mr Chris Rowe  
Non-Executive Director

Mr Peter O'Connor  
Non-Executive Director

Ms Shirley In't Veld  
Non-Executive Director

### Issued Capital

Shares 639.45M

Performance Rights 10.38M

Current Share Price A\$9.43

Market Capitalisation  
A\$6 billion

Cash and Cash Equivalents  
30 Sep 2018 - A\$277 million

### Projects

Jundee Operations  
Kalgoorlie Operations  
Pogo Mine  
Paulsens Mine  
Central Tanami (40% of JV)  
Western Tanami

[www.nsrld.com](http://www.nsrld.com)

ABN: 43 092 832 892

## KEY POINTS

- ▶ Northern Star on track to meet FY2019 guidance of 850,000-900,000oz at an all-in sustaining cost (AISC) of A\$1,050-1,150/oz (US\$777-851/oz)\*
- ▶ Gold sold in the September quarter of 212,682oz at an AISC of A\$1,226/oz (US\$907/oz)\*
  - Australian operations sold 153,115oz at an AISC of A\$1,122/oz (US\$830/oz)\*
  - US operations sold 59,567oz at an AISC of A\$1,493/oz (US\$1,105/oz)\*, with a further 9,860oz of gold dore in transit; not sold in the quarter
- ▶ Cash and equivalents at 30 September of A\$277M (A\$512M at June 30) after paying A\$350M for the Pogo mine, raised A\$175 million through a share placement; A\$20M to exercise the Tanami JV option and A\$32M in dividends; Northern Star has no bank debt
- ▶ September quarter production:
  - Jundee Gold Operations:
    - 84,399oz mined and 73,018oz sold at an AISC A\$908/oz
  - Kalgoorlie Gold Operations:
    - 94,190oz mined and 80,097oz sold at an AISC A\$1,318/oz
  - Pogo Gold Operations:
    - 66,364oz mined and 59,567oz sold at an AISC A\$1,493/oz\*
- ▶ Gold in stockpiles, circuits and in transit increased by 25,418oz to 133,119oz
- ▶ Reserves at Australian operations increased 0.5Moz to 4.0Moz (after depletion of 0.6Moz); Resources increased 5.7Moz to 15.9Moz; Measured and Indicated Resources increased 55% to 9.8Moz\*\*, underpinning 10-year mine life visibility
- ▶ Northern Star assumed management control of the Pogo operation on 28 September 2018
- ▶ Pogo was mine-constrained in the quarter, with the mill running at ~70% capacity; Operational changes already generating substantial increase in mined tonnes, with the mill set to be fully-utilised by the June quarter 2019
- ▶ Scheduled increase in tonnages and mill utilisation puts Pogo on track to meet FY2019 guidance of 250,000-260,000oz at US\$880/oz (A\$1,189/oz)\*
- ▶ Subsequent to end of the quarter, Northern Star declared a Maiden JORC Resource at Pogo of 4.15Moz at 14.7gpt; taking group Resources to 20.5Moz at 3.4gpt\*\*\*
- ▶ The Pogo JORC estimate included a 24% increase in the in-mine Resource; It did not include an additional 765,000oz in non-JORC resources contained in satellite deposits
- ▶ Northern Star is targeting organic growth across its operations in FY2019, with a record exploration/drilling budget of A\$75-A\$80M and a further A\$74M in expansionary capital
- ▶ Northern Star will host a quarterly conference call today at 11:00am AEDT (8:00am AWST), Thursday, 25 October 2018. The call can be accessed at <http://webcasting.brrmedia.com/broadcast/5bc3c251b7b1cf2eab18a7b7>

Northern Star Resources Limited (ASX: NST) is pleased to announce that it has made a strong start to the new financial year and is on track to meet its annual production growth and cost targets.

Total gold sales in the September quarter were 212,682oz, which is in line with the Company's FY2019 production guidance of 850,000-900,000oz.

Northern Star's Jundee and Kalgoorlie operations both produced in line with their Tier-1 status as defined by annual production of ~300,000oz.

The AISC for the Australian operations of A\$1,122/oz was in line with the Company's overall FY2019 guidance of A\$1,050-1,150/oz. Kalgoorlie operation AISC for the quarter was higher than yearly guidance but well in line with budget. This was due to the increase of 9,105oz in gold inventories across all sites and the decline development expense at the South Kalgoorlie operations. The AISC are expected to trend lower for the remainder of the financial year.

At the Pogo mine in Alaska, where Northern Star took financial benefit from July 1 but did not take management control until September 28, gold sales totalled 59,567oz and gold mined was 66,364oz. A further 9,860oz of gold dore was in transit and therefore unable to be sold before the end of the quarter.

Pogo's performance was restricted by insufficient mined tonnages to the mill, which operated at less than 70 per cent capacity. This, coupled with gold unsold, resulted in an AISC of A\$1,493/oz (US\$1,105/oz)\*, which in turn led to the group AISC of A\$1,226/oz (US\$907/oz)\*. (Further information on the outlook for Pogo is below).

Since taking management control at Pogo, Northern Star has implemented a range of effective operational changes, many of which involve increasing the scale of mining activity and the number of work areas.

As a result, mill utilisation rates are forecast to rise to ~90 per cent this quarter and 100 per cent in the June quarter.

These increases alone, without allowing for additional efficiency gains, are expected to see Pogo meet its FY2019 production guidance of 250,000-260,000oz at an AISC of US\$880/oz (A\$1,189/oz)\*. AISC costs are expected to fall significantly during the March 2019 quarter as the benefits of the changes flow through.

Northern Star finished the quarter with cash and equivalents of A\$277 million compared with A\$512 million at June 30. During the quarter, the Company paid A\$350 million in cash for Pogo, raised A\$175 million through a share placement, exercised the Tanami joint venture first option for A\$20 million, taking its ownership to 40%, and A\$32 million in dividends.

Northern Star Executive Chairman Bill Beament said it was a pivotal quarter which launched Northern Star to the next level of production and free cashflow without detracting from its superior financial returns.

"Growth was the overwhelming theme of the September quarter," Mr Beament said. "There was a great balance of organic and acquisition-led growth marked by strong increases in our Reserves, Resources, production and free cashflow.

"And importantly, this growth will ensure we maintain our industry-leading financial returns.

"Our Australian operations are now genuine members of the exclusive global Tier-1 club, which is characterised by annual production of 300,000oz in Tier-1 jurisdictions. And based on what we are already seeing at Pogo, we have every reason to believe this mine will join them as we invest in exploration, development and efficiency gains."

### **Pogo Update and Early Views:**

- On track to meet mid-point of annual production guidance; Cost reductions expected to flow through from the March quarter 2019
- On 28 September, the Pogo operation seamlessly transferred ownership to NST with 325 personnel joining Northern Star with additional support from approximately 130 contractors
- The NST operating model has been well-received by all personnel and we are starting to see improvements at the operation in the December quarter in both production and costs
- In October, all small development (3mx3m) has been converted to 4.5mx4.5m with limited impact to mined grade but generating an increase of more than 30% in productivities and reduced operating costs per tonne
- Increasing the ore heading size has also allowed 17 pieces of mobile equipment to be parked-up out of 55, a 31% reduction. Significant manpower and maintenance savings will be yielded from this
- Number of available ore headings has been doubled with over 20 new work areas identified. Many of these headings are in areas where the capital infrastructure is already in place and therefore costs are low to access and timeframe to production is minimal
- Mining method changes are in progress to bring in a much large percentage of longhole stoping which will lower costs and enable a higher percentage of ore extraction

# QUARTERLY ACTIVITIES REPORT

## For the Quarter ended 30 September 2018



- The operation is currently mine constrained (not mill constrained) but by the end of FY2019 mining rates will be more in line with current mill capacity
- The processing facility operated at less than 70% capacity in the September quarter; This is expected to increase to ~90% this quarter and approach 100% in the June quarter
- Support from Northern Star's Australian operations will continue to reduce Pogo's reliance on higher-cost external consultants and contractors. Approximately 20 personnel are committed to support the site
- Legacy operational contracts are under review; This process is expected to be largely completed by early 2019
- The operation is well advanced on re-evaluating gold resources to add significantly to the mine reserves for mid-2019 reporting
- Significant progress in formulating the FY2020 mine plan has already been made and is demonstrating that Pogo has the potential to return to a 300,000oz per annum operation

Northern Star	Units	Dec-17 Qtr	Mar-18 Qtr	Jun-18 Qtr	Sep-18 Qtr <sup>^</sup>	FYT <sup>^</sup>
Ore Hoisted	Tonnes	947,946	900,724	1,013,112	1,425,006	1,425,006
Mined Grade	gpt Au	4.6	4.6	5.6	5.3	5.3
Gold in Ore Hoisted	Oz	139,564	134,421	183,843	244,953	244,953
Milled Tonnes	Tonnes	986,139	929,342	1,243,682	1,410,585	1,410,585
Head Grade	gpt Au	4.6	4.6	5.0	5.1	5.1
Ounces Produced	Oz	144,258	136,547	200,322	229,136	229,136
Recovery	%	89	91	92	91	91
<b>Gold Recovered</b>	<b>Oz</b>	<b>128,836</b>	<b>123,913</b>	<b>183,949</b>	<b>207,600</b>	<b>207,600</b>
<b>Ounces Sold</b>	<b>Oz</b>	<b>128,819</b>	<b>119,976</b>	<b>182,856</b>	<b>212,682</b>	<b>212,682</b>
<b>Cash Operating Cost</b>	<b>A\$/oz</b>	<b>838</b>	<b>820</b>	<b>788</b>	<b>999</b>	<b>999</b>
<b>All-in Sustaining Cost</b>	<b>A\$/oz</b>	<b>1,067</b>	<b>1,075</b>	<b>982</b>	<b>1,226</b>	<b>1,226</b>
Total Stockpiles Contained Gold	Oz	73,652	70,579	78,787	88,512	88,512
Gold in Circuit (GIC)	Oz	17,279	24,577	27,523	33,572#	33,572#
Gold in transit (oz)	Oz	3,782	-	1,391	11,035#	11,035#

<sup>^</sup>Physical metrics, cash operating costs and all-in-sustaining costs are inclusive of Pogo operations for September quarter.

#Includes Pogo inventory of 5,447ozs GIC; 9,860ozs Gold in transit at September 2018.

Northern Star	Units	Dec-17 Qtr	Mar-18 Qtr	Jun-18 Qtr	Sep-18 Qtr <sup>^</sup>	FYT <sup>^</sup>
Revenue	A\$M	208.4	190.3	316.5	258.9	258.9
Average Gold Price	A\$/oz	1,693	1,720	1,731	1,691	1,691

<sup>^</sup>Revenue excludes Pogo operations as it was acquired on 28 September 2018.

Table 1: Key Group Performance Figures (Quarterly)

Northern Star	Units	Dec-17 Qtr	Mar-18 Qtr	Jun-18 Qtr	Sep-18 Qtr	FYTD
Mining	A\$/oz	556	549	452	611	611
Processing	A\$/oz	211	176	199	295	295
Site Services	A\$/oz	59	55	38	76	76
Ore Stock & GIC Movements	A\$/oz	(27)	1	58	(6)	(6)
Royalties	A\$/oz	41	42	44	25	25
By Product Credits	A\$/oz	(3)	(4)	(3)	(3)	(3)
Rehabilitation-Accretion & Amortisation	A\$/oz	3	4	3	6	6
Corporate Overheads	A\$/oz	57	58	51	37	37
Mine Development/Sustaining CAPEX	A\$/oz	151	145	110	163	163
Mine Exploration	A\$/oz	19	49	30	22	22
<b>All-in Sustaining Costs</b>	<b>A\$/oz</b>	<b>1,067</b>	<b>1,075</b>	<b>982</b>	<b>1,226</b>	<b>1,226</b>
Depreciation & Amortisation	A\$/oz	351	193	201	304	304

Table 2: Key Group Cost per Ounce Measures

Production KPIs September Quarter	Units	Kalgoorlie Operations	Jundee	Pogo	Total
Total Ore Hoisted	Tonnes	712,122	528,628	184,256	1,425,006
Mine Grade	gpt Au	4.1	5.0	11.2	5.3
Gold in Ore Hoisted	Oz	94,190	84,399	66,364	244,953
Milled Tonnes	Tonnes	651,015	588,356	171,213	1,410,585
Head Grade	gpt Au	4.0	4.6	10.9	5.1
Recovery	%	92	89	91	91
Gold Recovered	Oz	76,524	76,602	54,474	207,600
Gold Sold	Oz	80,097	73,018	59,567	212,682
<b>Cash Operating Costs</b>	<b>A\$/oz</b>	<b>972</b>	<b>778</b>	<b>1,304</b>	<b>999</b>
<b>All-In Sustaining Costs</b>	<b>A\$/oz</b>	<b>1,318</b>	<b>908</b>	<b>1,493</b>	<b>1,226</b>
Depreciation & Amortisation	A\$/oz	419	146	336	304

Table 3: Key Quarterly Mine Production Performance

# QUARTERLY ACTIVITIES REPORT

## For the Quarter ended 30 September 2018

### FINANCE

The following is a table of the cash, bullion and investments held at the end of each quarter:

		Dec-17 Qtr	Mar-18 Qtr	Jun-18 Qtr	Sep-18 Qtr
Cash at bank	A\$M	\$368.0	\$367.6	\$443.0	\$217.8
Bullion awaiting settlement <sup>(1)</sup>	A\$M	\$1.5	\$10.6	\$11.4	\$15.1
Equity Investments	A\$M	\$63.6	\$60.9	\$57.5	\$43.7
<b>Total</b>	<b>A\$M</b>	<b>\$433.1</b>	<b>\$439.1</b>	<b>\$511.9</b>	<b>\$276.6</b>

<sup>(1)</sup> Bullion awaiting settlement is dore which has been received by the refiner in the quarter and is awaiting settlement.

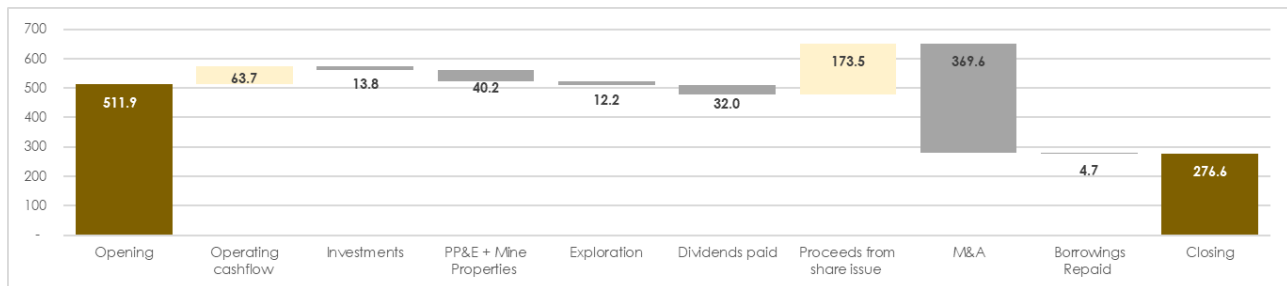
Table 4: Cash, Bullion and equity investments

The below table sets out the total of surface gold inventories:

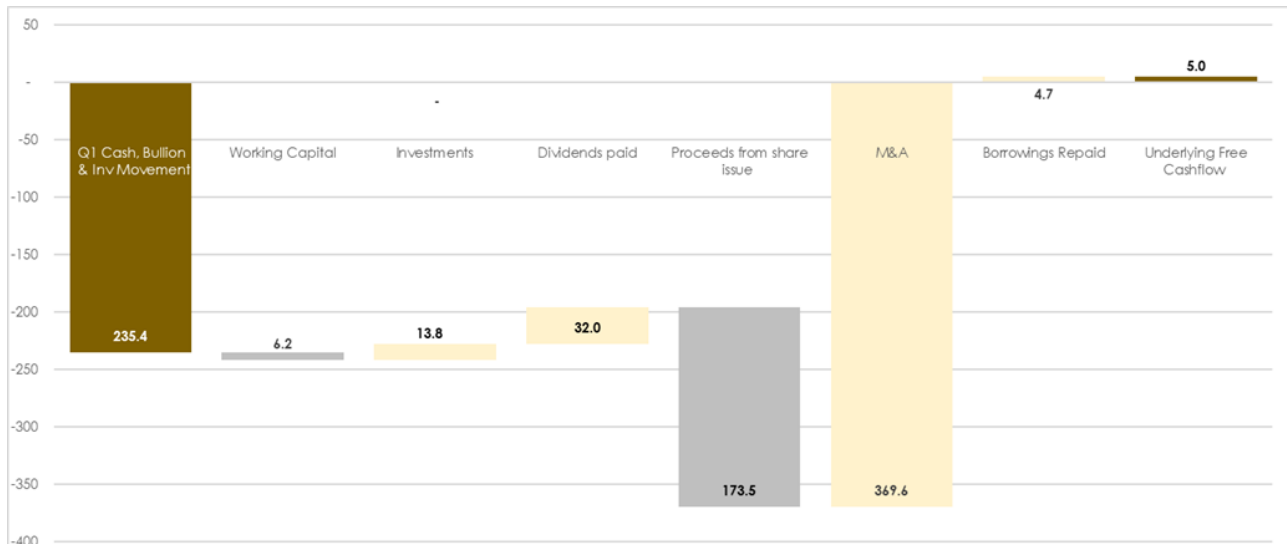
Gold Inventories	Dec-17 Qtr	Mar-18 Qtr	Jun-18 Qtr	Sep-18 Qtr
Stockpiles contained gold (oz)	73,652	70,579	78,787	88,512
Gold in circuit (oz)	17,279	24,577	27,523	33,572
Gold in transit (oz)	3,782	-	1,391	11,035
<b>Total Gold Inventories (oz)</b>	<b>94,713</b>	<b>95,156</b>	<b>107,701</b>	<b>133,119</b>

Table 5: Gold Inventories

The below waterfall chart highlights the September quarter's operating cash flow together with movements in cash, bullion and investments (A\$M):



The below waterfall chart highlights the underlying free cash flow for the September quarter (A\$M):



### Banking Facilities

Northern Star has in place undrawn debt facilities with a self-arranged syndicate of Banks.

### Hedging

The below table outlines the Company's current hedging position:

Term	Dec-18 Qtr	Jun-19 Half	Dec-19 Half	Jun-20 Half	Total
Australian Ounces	72,050	74,000	50,000	30,000	226,050
Gold Price	A\$1,718	A\$1,736	A\$1,739	A\$1,799	A\$1,739
US Ounces	5,000	20,000	15,000	-	40,000
Gold Price	US\$1,205	US\$1,221	US\$1,231	-	US\$1,222

Table 6: Hedging commitments

During the quarter, 9,000oz of hedging was added for delivery in Dec-18 quarter at an average of A\$1,680/oz and 40,000oz of hedging was added at an average of US\$1,222/oz.

# QUARTERLY ACTIVITIES REPORT

## For the Quarter ended 30 September 2018



### OPERATIONS

#### Jundee Gold Operations

Production Summary Jundee		Dec-17 Qtr	Mar-18 Qtr	Jun-18 Qtr	Sep-18 Qtr	FYTD
Ore Mined	Tonnes	407,022	391,083	472,679	528,628	528,628
Mined Grade	gpt Au	5.1	5.4	6.1	5.0	5.0
Ounces Mined	Oz	66,673	67,505	91,923	84,399	84,399
Milled Tonnes	Tonnes	440,172	458,794	532,240	588,356	588,356
Head Grade	gpt Au	5.0	5.1	5.4	4.6	4.6
Recovery	%	89	88	90	89	89
<b>Gold Recovered</b>	<b>Oz</b>	<b>62,915</b>	<b>65,844</b>	<b>82,058</b>	<b>76,602</b>	<b>76,602</b>
<b>Gold Sold</b>	<b>Oz</b>	<b>61,965</b>	<b>63,175</b>	<b>84,474</b>	<b>73,018</b>	<b>73,018</b>
<b>Cost per Ounce</b>						
Mining	A\$/oz	495	444	410	562	562
Processing	A\$/oz	175	175	157	182	182
Site Services	A\$/oz	44	41	33	45	45
Ore Stock Movements	A\$/oz	(15)	53	11	(48)	(48)
Royalties	A\$/oz	41	44	43	40	40
By Product Credits	A\$/oz	(3)	(3)	(3)	(3)	(3)
<b>Cash Operating Costs</b>	<b>A\$/oz</b>	<b>737</b>	<b>754</b>	<b>651</b>	<b>778</b>	<b>778</b>
Rehabilitation - Accretion & Amortisation	A\$/oz	3	3	2	3	3
Corporate Overheads	A\$/oz	56	56	51	50	50
Mine Development / Sustaining CAPEX	A\$/oz	125	108	66	61	61
Jundee Mine Exploration	A\$/oz	25	42	43	16	16
<b>All-in Sustaining Costs</b>	<b>A\$/oz</b>	<b>946</b>	<b>963</b>	<b>813</b>	<b>908</b>	<b>908</b>
Depreciation & Amortisation	A\$/oz	132	137	137	146	146

Table 7: Summary Details – Jundee

#### Kalgoorlie Gold Operations

Production Summary Kalgoorlie Operations		Dec-17 Qtr	Mar-18 Qtr	Jun-18 Qtr	Sep-18 Qtr	FYTD
Ore Mined	Tonnes	465,312	509,641	540,433	712,122	712,122
Mined Grade	gpt Au	4.1	4.1	5.3	4.1	4.1
Ounces Mined	Oz	61,289	66,916	91,920	94,190	94,190
Milled Tonnes	Tonnes	430,376	470,548	711,441	651,015	651,015
Head Grade	gpt Au	4.3	4.1	4.8	4.0	4.0
Recovery	%	93	94	94	92	92
<b>Gold Recovered</b>	<b>Oz</b>	<b>55,113</b>	<b>58,069</b>	<b>101,891</b>	<b>76,524</b>	<b>76,524</b>
<b>Gold Sold</b>	<b>Oz</b>	<b>54,923</b>	<b>56,236</b>	<b>98,382</b>	<b>80,097</b>	<b>80,097</b>
<b>Cost per Ounce</b>						
Mining	A\$/oz	648	697	488	669	669
Processing	A\$/oz	221	179	236	252	252
Site Services	A\$/oz	64	75	42	71	71
Ore Stock Movements	A\$/oz	(60)	(68)	98	(47)	(47)
Royalties	A\$/oz	42	42	44	31	31
By Product Credits	A\$/oz	(4)	(6)	(3)	(4)	(4)
<b>Cash Operating Costs</b>	<b>A\$/oz</b>	<b>911</b>	<b>919</b>	<b>905</b>	<b>972</b>	<b>972</b>
Rehabilitation - Accretion & Amortisation	A\$/oz	2	4	3	5	5
Corporate Overheads	A\$/oz	57	61	52	50	50
Mine Development / Sustaining CAPEX	A\$/oz	207	195	147	246	246
Kalgoorlie Operations Mine Exploration	A\$/oz	18	60	20	44	44
<b>All-in Sustaining Costs</b>	<b>A\$/oz</b>	<b>1,195</b>	<b>1,239</b>	<b>1,127</b>	<b>1,318</b>	<b>1,318</b>
Depreciation & Amortisation	A\$/oz	260	269	256	419	419

Table 8: Summary Details – Kalgoorlie Operations

## Pogo Gold Operations

<b>Production Summary</b>		<b>Sep-18 Qtr</b>	<b>FYTD</b>
<b>Pogo</b>			
Ore Mined	Tonnes	184,256	184,256
Mined Grade	gpt Au	11.2	11.2
Ounces Mined	Oz	66,364	66,364
Milled Tonnes	Tonnes	171,213	171,213
Head Grade	gpt Au	10.9	10.9
Recovery	%	91	91
<b>Gold Recovered</b>	<b>Oz</b>	<b>54,474</b>	<b>54,474</b>
<b>Gold Sold</b>	<b>Oz</b>	<b>59,567</b>	<b>59,567</b>
<b>Cost per Ounce</b>			
Mining	A\$/oz	595	595
Processing	A\$/oz	492	492
Site Services	A\$/oz	121	121
Ore Stock Movements	A\$/oz	98	98
Royalties	A\$/oz	-	-
By Product Credits	A\$/oz	(2)	(2)
<b>Cash Operating Costs</b>	<b>A\$/oz</b>	<b>1,304</b>	<b>1,304</b>
Rehabilitation - Accretion & Amortisation	A\$/oz	10	10
Corporate Overheads	A\$/oz	5	5
Mine Development / Sustaining CAPEX	A\$/oz	174	174
<b>All-in Sustaining Costs</b>	<b>A\$/oz</b>	<b>1,493</b>	<b>1,493</b>
Depreciation & Amortisation	A\$/oz	336	336

Table 9: Summary Details - Pogo Operations

Additional information on the individual Operations can be found in Appendix 1.

## EXPLORATION AND DEVELOPMENT - OPERATIONS

The Group's in-mine drilling activity increased continued at all sites with the strong focus on resource conversion and extension programs.

### Jundee

At Jundee, the underground fleet of 10 diamond drill rigs were focussed on in-mine resource infill and extension drilling targets across all mining areas at Jundee including the Armada and Revelation trends in-mine.

In-mine resource development and extensional drilling programs were focused into the Cardassian, Deakin, Nexus, Barton, Gateway, Clovis and Invicta areas seeking extensions to known systems.

At Zodiac, surface diamond drilling recommenced with a program of four wedge holes designed off parent hole NSRJRD10447.

### Kanowna Belle

Underground diamond drilling continued with four underground diamond drill rigs operating within the Kanowna Belle mine on grade control, resource extension and exploration programs.

Great progress was achieved with programs completed at Velvet Central, Lowes C Block (West), Lowes D Block (East), Lowes E Block (East, Far East and West) and SIMS (C and D Block) with excellent results recorded outside the existing resource blocks in all areas.

Exploration drilling from the 9245DDR platform into the Lowes Extension and Porphyry Xenoliths targets continued during the quarter whilst exploration drilling into Lower Velvet from the 9460 DDR midway between Velvet and Lowes D Block West provided further support for a link between the two main ore trends.

### Kundana (NST 100%)

One underground diamond drill rig focussed on infill and definition drilling at Millennium and Pope John on the K2 structure in the quarter.

Underground resource definition drilling targeted the southern portion of Millennium K2 between Millennium and Centenary historic workings. Exploration drilling targeted the K2A, K2E and Strzelecki positions in the hanging wall of Millennium. Visual results show minor mineralisation within the IVT unit in the approximate K2A and "Falcon" positions.

Underground resource definition commenced at Pope John with better than expected results returned from the southern portion of the K2 structure in the upper levels.

Level development in the new Pope John deposit continued at the top, together with infill grade control diamond drilling.

### EKJV (NST 51%)

Four drill rigs continued underground exploration and resource definition diamond drilling programs across the Rubicon-Hornet-Pegasus and Raleigh South mining complexes during the quarter.

At Pegasus, drilling focussed on defining down plunge extensions to the K2 and Pode structures at the northern end of the Pegasus system.

Resource definition drilling at Rubicon focussed on hanging wall positions to the Rubicon K2 with good success. An exploration hole targeted the Raleigh structure to the west of Rubicon successfully intersecting the target at depth beneath the Golden Hind area.

Two drill rigs focussed on resource definition drilling from the Raleigh South drill drive during the quarter targeting the southern extensions of the Raleigh Main Vein. All drill holes completed to date have successfully intersected the Raleigh structure with varying degrees of mineralisation including visible gold.

### South Kalgoorlie

Resource definition and grade control drilling programs were completed at Jubilee and Central ore zones during the quarter and confirmed future mining blocks. Grade control and extension drilling at the North Ore Zone continued through the quarter with early results showing significantly better widths and grades than anticipated.

### Pogo

Underground drilling accelerated with four underground diamond drilling rigs focussed on resource definition drilling across the mine including Leise veins (L2, L3, Fun Zone), North Zone and X-Vein together with extensional drilling down dip on the L3 veins.

## REGIONAL EXPLORATION

Regional exploration maintained a high level of activity across all sites including the Tanami, South Kalgoorlie and Pogo areas.

### Jundee

Regional exploration focused on the Deep Well region, located 35 kilometres south east of the Jundee mill.

Further RC drilling programs were completed at Ramone and Marley prospects targeting extensions to the previously defined mineralisation. Regional aircore drilling results have defined two distinct mineralised trends over the Marley, Ziggy and Mosely prospects while infill aircore drilling of geochemical anomalies at the Tosh prospect located mineralisation beneath a 20m-30m thick zone of depletion.

### Kanowna

Kanowna regional exploration activity continued during the quarter with near mine RC and diamond drilling programs completed at Red Hill, BLC and Ariel prospects together with RC and diamond drilling programs at the regional Red Eye prospect.

At Red Hill and BLC, additional diamond drill holes were completed to extend the host porphyry body(s) and associated sheeted vein systems down-plunge. Assay results are pending.

At Ariel, south-east of Kanowna Belle, diamond and RC drilling of a historic trend intersected a series of altered felsic intrusions near the contact between the Panglo and Gold Valley sedimentary sequences. Assay results are pending.

Further north at Red Eye, further RC and diamond drilling program were completed to determine the geometry of mineralised structures intersected in previous drilling. The drilling has defined two trends of quartz veining and intense alteration associated with porphyry contacts. Assay results are pending.

### Kundana (NST 100%)

Additional resource definition drilling is in progress at Moonbeam targeting depth extensions to the K2 structure south of the Lucifer Fault. All holes to date have successfully intersected the target K2/K2E structures with assay results in line with expectations.

A short diamond drilling program has commenced at Beverly Hills to test an area of mineralised stockwork veining identified in historical drilling east of the Barkers structure. Assay results are pending.

### EKJV (NST 51%)

Surface diamond drill programs continued across the EKJV during the quarter with a major focus on Raleigh South and Drake prospects.

At Raleigh South, surface resource definition diamond drilling targeted the Raleigh Main Vein up-dip above proposed underground development to extend the defined mineralisation envelope. All holes intersected the Raleigh structure with varying amounts of mineralised quartz vein material, often with visible gold, on the target structure.

Further south, an initial surface diamond drilling program at the Sir Walter prospect, targeted extensions of the Raleigh Main Vein approximately 300-500m south of the Raleigh South area. The program was highly successful with all holes intersecting vein material on the Raleigh structure, with three intersections containing visible gold. Assay results are pending.

At the Drake prospect, situated midway between the Pegasus and Moonbeam deposits, surface diamond drilling is in progress targeting the K2 structure north from Pegasus. Initial intersections on the primary K2 structure have been modest however, significant "Pode style" mineralisation has been intersected in the hanging wall outlining a significant new mineralised surface.

### Carbine

Exploration activity increased with aircore, RC and diamond drilling programs completed during the quarter.

Recent exploration has identified a parallel structure located in a hangingwall position to the Carbine Thrust, named the Ol'Rowley Thrust. Two diamond drill holes were completed to test these hangingwall structures and Carbine Thrust at depth. The drilling was successful with each drill hole intersecting multiple hanging wall structures together with strong alteration and quartz veining (with visible gold) at the Carbine lode position.

Diamond drilling beneath the historic Phantom pit, located 1.5 kms NE along strike from the Carbine open pit, intersected the folded hanging wall sequence of the Carbine Thrust with extensive zones of quartz-carbonate-sulphide veining with visible gold. Assay results are pending.

In addition, surface RC drilling programs were completed at three prospects along strike to the north west of the Phantom pit.

At Comic Court, RC drilling testing a series of historic anomalies in the Phantom hangingwall stratigraphy, intersected a new mineralised zone associated with quartz-sulphide-fuchsite veining in saprolite and fine-grained sedimentary rocks.

At Rainbird, RC drilling successfully extended mineralised zones delineated by historical drill results.

At Hi Jinx, RC drilling targeting significant near-surface drill results and a coincident SAM geophysical anomaly intersected further quartz-sulphide veining above the Carbine Thrust. Assay results are pending for all programs.

### Carnage

A Sub-Audio Magnetic (SAM) geophysical survey was carried out over the John West prospect, located NW of the Theil Well deposit.

### South Kalgoorlie

An RC resource definition drilling program was completed at the Bakers Flat paleochannel deposit over the projected eastern extension of the deposit. Resource estimation and optimisation studies are in progress.

RC drilling programs at November, Echo and Tango prospects on Location 41 returned intervals of quartz veining and mineralisation in altered granite. Similarly, RC drilling at Stockyard Dam targeting historic gold anomalies encountered quartz veining and disseminated pyrite mineralisation. Assay results are pending.

Diamond drilling at the Tornado prospect intersected a laminated vein structure with a significant alteration halo within the interpreted position of the Zuleika Shear Zone. Assay results are pending.

### Pogo

Surface drilling programs with four diamond drill rigs continued through the quarter at Pogo.

A single Heli-supported rig focused on the Goodpaster prospect, located west of the mine area, testing for potential continuation of the Pogo mineralisation across an interpreted fault offset. The final holes of the Goodpaster program cut several notable intersections of quartz and/or mineralised material. Assays are pending.



Three surface drill rigs were in operation around the airstrip initially exploring for potential extensions to the Fun Zone mineralisation. Early results indicate the presence of a new stacked vein system located well above the basal shear zone adjacent to, but separate from, the Fun Zone area (Strip Veins). With close of the helicopter season onsite, all four rigs are currently operating in the airstrip area evaluating the extent of the new system.

### Central Tanami Project (NST 40%)

Exploration activities continued within the joint venture area during the quarter.

Regional aircore drilling returned modest anomalies at Jim's Return prospect in the south while RC drilling programs at Jims North and Jims West and Carmen prospects also returned anomalous results. Still in the Jims area, results for the 4-hole diamond drilling program beneath the previously mined open pit have been delayed. Initial results for the first hole indicate the presence of a well mineralised structure present some 150 metres below the pit floor.

RC drilling programs completed within the CTP mill site area returned a range of intersections down-plunge from the southern end of the existing Hurricane-Repulse system situated beneath the existing CTP milling infrastructure. Results for the diamond drill hole in this area are still pending.

### Tanami Regional Project (100% NST)

The extensive regional aircore drilling in the Supernova area, located approximately 60 kilometres north west of the CTP camp, was completed with isolated spot anomalies defined.

Regional ground gravity geophysical surveys were completed at Supernova with the Stubbins survey commenced late in the quarter.

### Western Tanami

The regional gravity geophysical program was completed over an extended area in the Pebbles area, south of the main Coyote camp area.

### Pilbara

The new Paulsens 3D seismic data set was received during the quarter and preliminary interpretation of the data has commenced.

## CORPORATE

- Northern Star completed its acquisition of the Pogo Operations in Alaska from Sumitomo Metal Mining Co., Ltd. and Sumitomo Corporation on 28 September 2018.
- Northern Star increased its equity ownership in the Central Tanami Project (CTP) from 25% to 40% as a result of Tanami Gold NL giving Northern Star the First Put Option Exercise Notice on 31 July 2018 and Northern Star paying Tanami Gold NL A\$20 million on 14 September 2018.

- A fully franked final dividend of five cents per share was declared with a record date of 7 September 2018. Payment of the dividend occurred on 28 September 2018.

- During the quarter, Northern Star appointed Ryan Gurner as Chief Financial Officer. Mr Gurner joined Northern Star as General Manager - Finance in January 2015.

He is a chartered accountant with extensive mining experience in Australia, Asia and Europe. He has filled numerous roles including Chief Financial Officer, Company Secretary, General Manager of Finance and Financial Controller of ASX and TSX listed companies.

Mr Gurner holds a Bachelor of Science Degree with Honours from Edith Cowan University and a Bachelor of Commerce Degree (Accounting and Finance) from Curtin University.

Mr Gurner replaces Shaun Day, who has resigned from Northern Star to pursue other interests.

Mr Beament thanked Mr Day for his contribution to Northern Star during what had been a period of significant growth for the Company and wished him all the best with his new endeavours.

- A revised Mineral Resources Statement for the year ended 30 June 2018 was released on 16 October 2018 including the Pogo Operations Mineral Resources reported under JORC 2012.
- The Company's 2018 Annual Report (incorporating the 2018 Sustainability Report) and its Corporate Governance Statement were released on 23 August 2018.
- The Company's Notice of Annual General Meeting was released on 17 October 2018 convening the 2018 Annual General Meeting on Thursday, 15 November 2018 at 2:00pm AWST.
- The Company published its 2018 Tax Governance Statement on its website as part of its commitment to tax transparency.

# QUARTERLY ACTIVITIES REPORT

## For the Quarter ended 30 September 2018



- During the quarter, Northern Star conducted a Non-deal Roadshow to analysts and investors in Sydney, conducted a site tour for investors, analysts and members of the media at its Jundee operations, presented at the Annual Diggers and Dealers Forum in Kalgoorlie and an institutional roadshow in Sydney associated with the Pogo acquisition. The Company maintains a proactive presentation calendar to stockbroking firms, institutional and retail investors to promote the Company and its activities.
- The following changes occurred to the issued capital of the Company after the release of the June 2018 Quarterly Report:
  - 1,168,348 ordinary fully paid shares were released from voluntary escrow on 31 July 2018 in accordance with the Company's 2011 and 2017 Employee Share Plans.
  - 26,119,402 fully paid ordinary shares were issued on 6 September 2018 pursuant to the institutional placement announced on 30 August 2018.
  - 1,716 ordinary fully paid shares were issued pursuant to NST's June 2017 Employee Share Plan on 6 September 2018.
  - 6,821 ordinary fully paid shares were released from voluntary escrow on 10 October 2018 in accordance with the Company's 2011 and 2017 Employee Share Plans.

The issued capital of the Company at the date of this report is:

Class of Securities	Issued capital
Fully Paid Ordinary Shares	639,454,848
Unlisted Performance Rights	10,379,990

Table 10: Issued Capital

Yours faithfully

**BILL BEAMENT**  
**Executive Chairman**  
**Northern Star Resources Limited**

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**Forward Looking Statements**

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\*All currency conversions in this announcement have been converted at a currency of A\$/US\$ conversion rate of A\$0.74

\*\* Listing Rule 5.23 Disclosure: the information is extracted from the report entitled "Pogo JORC Resource" dated 16 October 2018 available at www.nsr ltd.com and www.asx.com. 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, in the case of Mineral Resources or Ore Reserves, 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.

\*\*\* Listing Rule 5.23 Disclosure: the information is extracted from the report entitled "Northern Star Embarks on Next Round of Growth with Strategy to Drive Major Increase in Reserves in 2019" dated 2 August 2018 available at www.nsr ltd.com and www.asx.com. 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, in the case of Mineral Resources or Ore Reserves, 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.

## APPENDIX 1 – ADDITIONAL INFORMATION - OPERATIONS

### Kalgoorlie Gold Operations

#### ► Introduction

Kalgoorlie Gold Operations consist of the Millennium, EKJV (NST 51%), Kanowna Belle and HBJ (South Kalgoorlie) deposits.

#### ► Safety

There were zero (0) Lost Time Injuries (LTI) during the quarter.

#### ► Underground Production

Mine Development:

	Dec-17 Qtr	Mar-18 Qtr	Jun-18 Qtr	Sep-18 Qtr
Decline	860	398	711	855
Level	2,998	2,774	2,975	4,841
Strike driving <sup>(1)</sup>	3,275	4,009	4,061	3,554
<b>Total (metres)</b>	<b>7,133</b>	<b>7,180</b>	<b>7,753</b>	<b>9,250</b>

Note (1) includes development through paste-fill

Table 1: Underground Production – Mine Development

Decline and access development continues to be a high priority across all Kalgoorlie mines in order to establish production areas and provide drill platforms for resource and reserve extensions. The advance of the Velvet decline at Kanowna Belle and the NOZ decline at HBJ remains a priority to access higher grade mining areas. At Millennium, the Pope John ventilation upgrade has allowed for higher mining rates.

	Dec-17 Qtr	Mar-18 Qtr	Jun-18 Qtr	Sep-18 Qtr
Development ore (t)	109,070	141,002	202,804	174,517
Development grade (gpt)	3.4	3.5	3.6	3.2
Stope ore (t)	356,242	368,638	449,376	537,606
Stope grade (gpt)	4.3	4.3	5.5	4.4
Total ore (t)	465,312	509,640	652,180	712,122
Total grade (gpt)	4.1	4.1	4.9	4.1
<b>Contained gold (oz)</b>	<b>61,289</b>	<b>66,916</b>	<b>101,996</b>	<b>94,190</b>

t=tonnes, gpt=grams per tonne, oz=ounces

Table 2: Underground Production – Ore Production (physicals represent Northern Star's share of JV ore)

A focus on increasing productivity across all Kalgoorlie mines has resulted in strong production physicals. The ramp up at Millennium and integration of South Kalgoorlie has contributed to higher tonnes. EKJV continued strong mining performance utilising internal mining services provider NSMS.

#### ► Gold Production

A total of 651,015 tonnes of ore was milled in the September quarter at 4.0gpt and 92.0% recovery for 76,524oz produced utilising the Northern Star owned Kanowna Belle and Jubilee processing plants, and additional contracted third-party facilities.

Ore stocks at the end of the quarter totalled 61,719oz of gold.

#### ► Gold Sales

80,097oz were sold.

### Jundee Gold Operations

#### ► Safety

There were zero (0) Lost Time Injuries (LTI) during the quarter.

#### ► Underground Production

Mine Development:

	Dec-17 Qtr	Mar-18 Qtr	Jun-18 Qtr	Sep-18 Qtr
Decline	553m	501m	350m	401m
Level	1,040m	1,462m	1,363m	1,514m
Operating	2,770m	2,126m	3,055m	3,575m
<b>Total (metres)</b>	<b>4,362m</b>	<b>4,089m</b>	<b>4,769m</b>	<b>5,491m</b>

Table 7: Underground Production – Mine Development

Decline development continued across multiple mining fronts during the September quarter, including lower Gateway, Upper Gringotts, Armada, Nexus, Deakin and Upper Wilson. Drill drive development was undertaken for Zodiac, Revelation and Armada trends.

# QUARTERLY ACTIVITIES REPORT

## For the Quarter ended 30 September 2018



Level capital and operating development remained consistent with previous quarters and undertaken across all mining areas.

Total of 3,575m operating metres were completed, yielding 167,950 tonnes at an average grade of 3.7gpt.

	Dec-17 Qtr	Mar-18 Qtr	Jun-18 Qtr	Sep-18 Qtr
Development ore (t)	127,257	83,720	117,821	167,950
Development grade (gpt)	4.1	2.9	3.7	3.7
Stope ore (t)	279,765	307,364	354,858	360,678
Stope grade (gpt)	5.6	6.0	6.8	5.6
Total ore (t)	407,022	391,083	472,679	528,628
Total grade (gpt)	5.1	5.4	6.1	5.0
<b>Contained gold (oz)</b>	<b>66,673</b>	<b>67,505</b>	<b>91,923</b>	<b>84,399</b>

t=tonnes, gpt=grams per tonne, oz=ounces

Table 8: Underground Production – Ore production

Stoping ore during the June quarter was sourced from high grade, narrow vein stoping panels at a consistent rate of ~120,000 tonnes per month.

### ► Gold Production

Jundee ore milled in the September quarter was 588,356 tonnes at 4.6gpt and 89% recovery for 76,602oz.

Excellent milling rates have continued from previous quarter, with throughput of 291tph for the September quarter above budget and forecast, highlighted by an average of 305tph in July. Continued improvements were undertaken in crushing, grinding and classification circuits, which has resulted in now sustained throughput above 280tph.

Ore stocks at the end of the quarter totalled 26,793oz of gold.

### ► Gold Sales

73,018oz were sold.

## Pogo Operations

### ► Introduction

Northern Star completed the purchase of Pogo Operations from Sumitomo Metal Mining Co. Ltd. (SMM) and Sumitomo Corporation on 28 September 2018. SMM continued to operate the mine until purchase completion, however Northern Star had full financial benefit of the operation from 1 July 2018.

### ► Safety

There were zero (0) Lost Time Injuries (LTI) during the quarter.

### ► Underground Production

Mine Development:

	Dec-17 Qtr	Mar-18 Qtr	Jun-18 Qtr	Sep-18 Qtr
Decline				597m
Level				339m
Operating				894m
<b>Total (metres)</b>				<b>1,830m</b>

Table 7: Underground Production – Mine Development

	Dec-17 Qtr	Mar-18 Qtr	Jun-18 Qtr	Sep-18 Qtr
Total ore (t)				184,256
Total grade (gpt)				11.2
<b>Contained gold (oz)</b>				<b>66,364</b>

t=tonnes, gpt=grams per tonne, oz=ounces

Table 8: Underground Production – Ore production

Ore during the June quarter was sourced primarily from cut and fill mining methods, with some long hole stoping. Ore was sourced from the Liese, East Deep, North and Fun zones.

### ► Gold Production

Pogo ore milled in the September quarter was 171,213 tonnes at 10.9gpt and 91.1% recovery for 54,474oz.

### ► Gold Sales

59,567 oz were sold.