An Australian gold miner - for global investors

Pogo Site Visit - September 2019

NORTHERN STAR
RESOURCES LIMITED

Resources & Reserves and Forward Looking Statements

Mineral Resources and Ore Reserves

The Mineral Resources and Ore Reserves 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 presentation for all the Company's projects is extracted from the reports entitled "Resource and Reserve Update" dated 1 August 2019, and "Pogo Plant Expansion and Goodpaster Exploration" dated 16 September 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 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 been materially modified from the original market announcements.

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

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 were converted at a spot conversion rate of USD:AUD of 0.70

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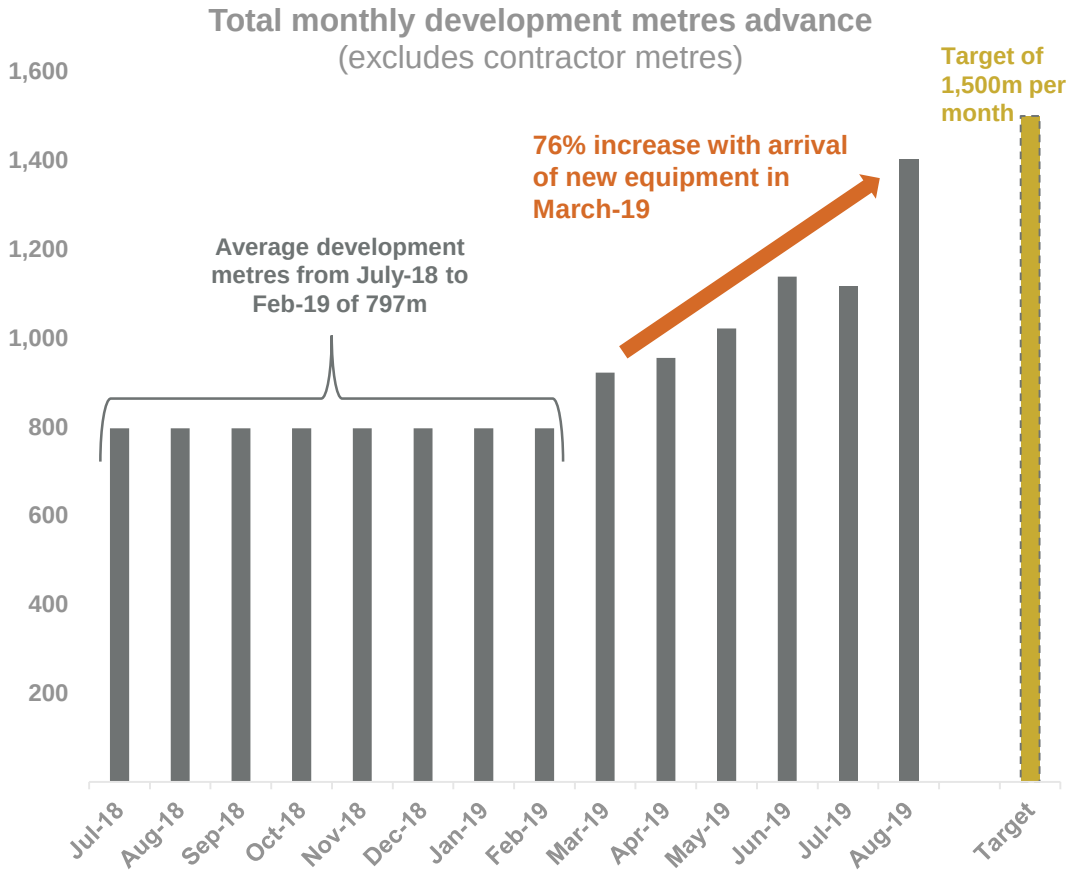
Pogo Mining Presentation

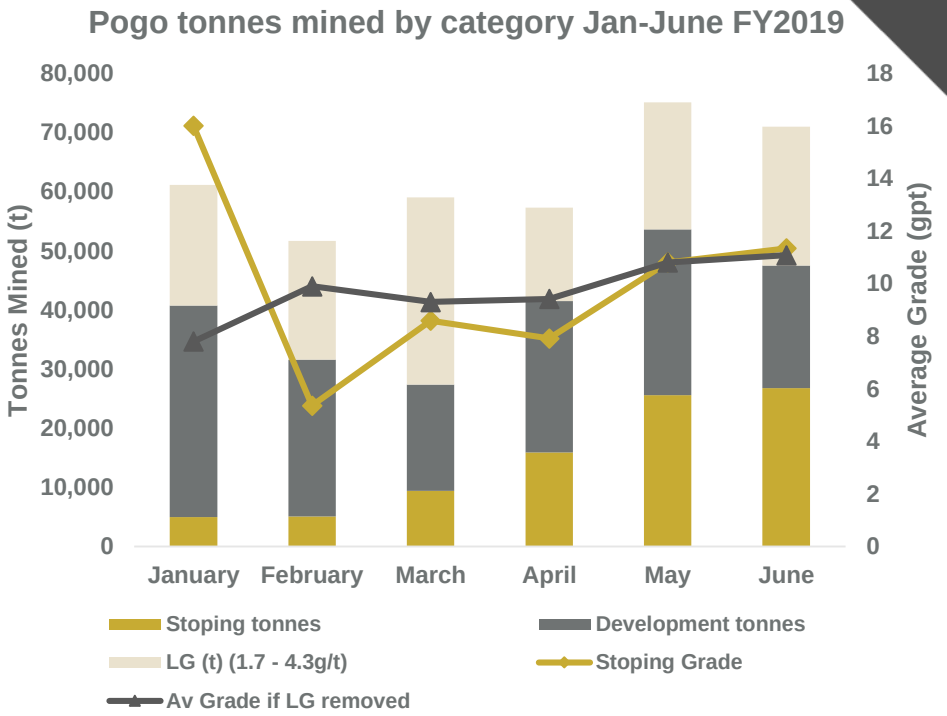
Pogo – Fundamentals strong, transition on track



- A$37M growth capital in FY20 committed for developing & establishing new areas
- Development rates continue to improve with bolting & meshing with jumbos; local workforce embracing new methods and delivering improved productivities
- Development advance to establish new production areas is targeted at ~1,500m per month (800m ore and 700m waste) and will enable us to achieve ~1.3Mtpa of ore production
- In August 2019 achieved over 1,400m of advance, a 76% increase from average since implementation of new development method

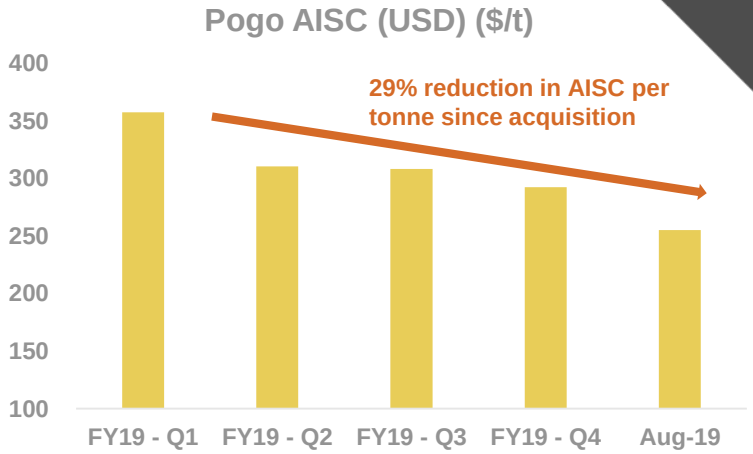
Pogo – Month on month improvement

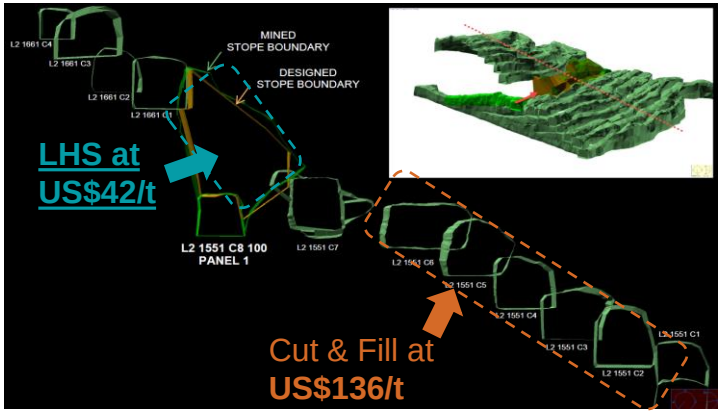
- Pogo is currently mining constrained until new stoping areas come on line which is part of the 18 month transition plan announced at acquisition
- Processing shortfall is currently being supplemented by economic low grade "LG" ore above 1.7gpt, which previously would have been placed on the waste dump and sterilised
- As we increase mining rates to +1.0Mtpa this LG material will be removed from the feed blend
- Past 6 months the average total mined grade has been 7.6gpt, of which the stoping grade is 10.2gpt
- If we remove the LG ore, average grade for the past 6 months would be ~28% higher at 9.7gpt
- The main mining target for Pogo is for 60% of total processing tonnes to come from stoping, which in turn will significantly increase gold production and reduce the AISC



Pogo – Proven business model increasing production and delivering cost improvement

- Since acquisition, all-in sustaining cost (AISC) per tonne has reduced by 29%; this will reduce further as more areas are established and productivity rates improve further
- Transition to longhole stoping (LHS) is a key driver to the success at Pogo and is on track to transition to 60% of ore tonnes from longhole stoping in 2020
- Previous method of cut & fill costs ~US$136/t mined compared to LHS at ~US$42/t mined; this equates to a saving of ~US$94/t mine, realising a 69% lower cost per stoping tonne
- New mining fleet now on site with leading-edge technologies, resulting in significantly improved productivities & substantially lower maintenance costs
- Current fleet has capacity to mine at 1.3Mtpa run-rate in 2020 as new mining areas are established and level layouts are modified to support LHS and high productivities



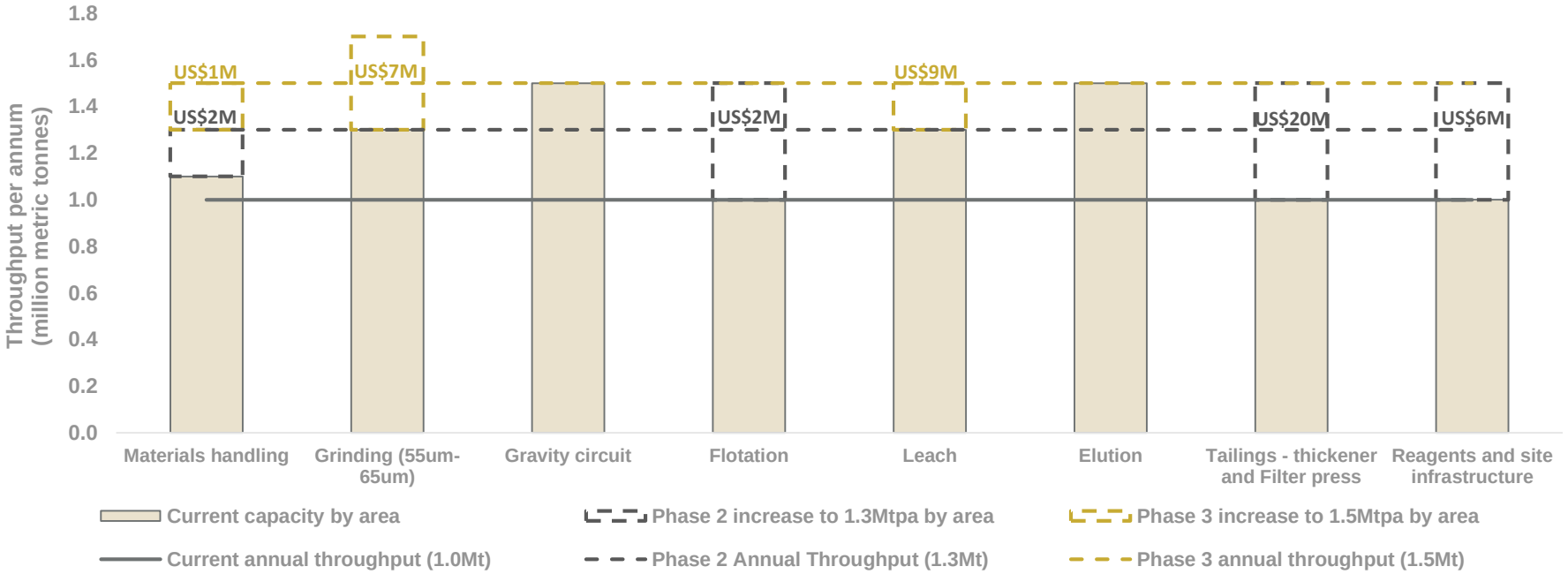


Pogo Plant 30% upgrade – Confidence to expand

- Focus is now on optimising current throughput
- Current capacity of processing plant is ~1Mtpa
- Plant expansion to 1.3Mtpa to be delivered by early CY2021 at a capital cost of ~US$30M (US$10M spend in FY2020)
- Potential to further expand to 1.5Mtpa for an additional ~US$17M
- Key piece of infrastructure to unlock district with a replacement value of over US$250M

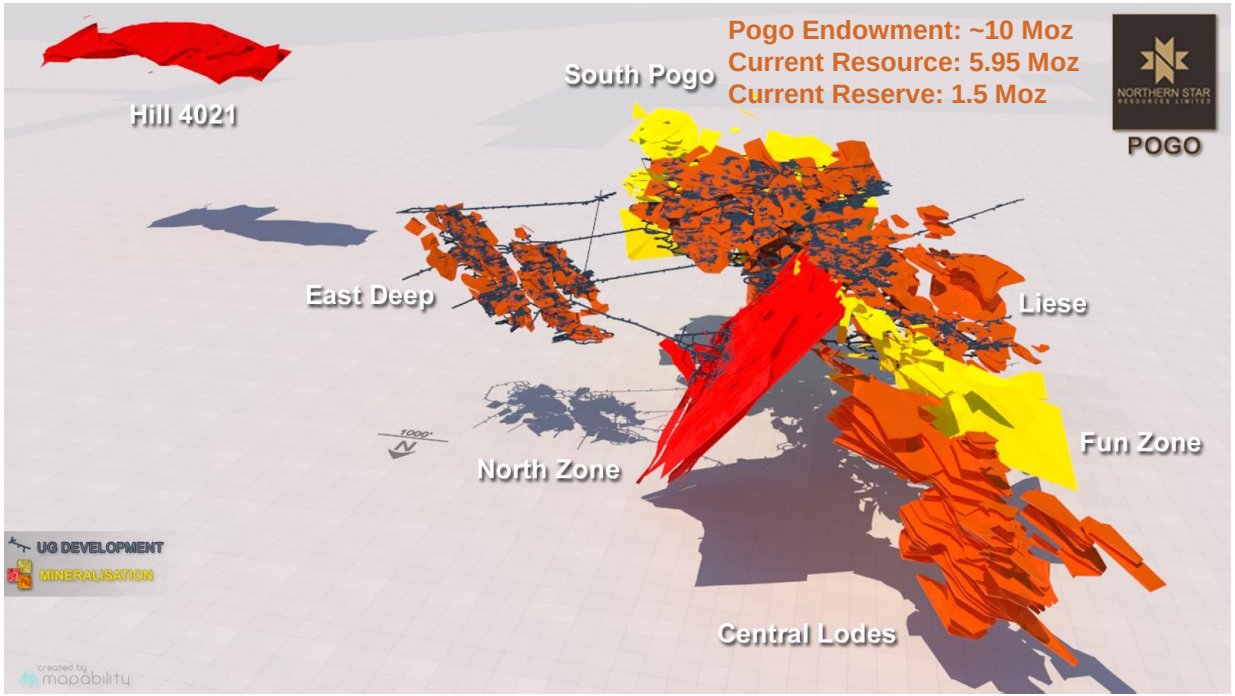
Pogo – Processing upgrades to match production

- Current capacity of processing plant is 1.0Mtpa; only plant for over 200km
- Phase 2 expansion targets 1.3Mtpa run-rate by January 2021 with capital of ~US$30M
- Order of Magnitude cost estimate for Phase 3 expansion to 1.5Mtpa for an additional ~US$17M
- Cost per tonne reduction of ~25% with increased throughput
- Key piece of infrastructure to unlock district with a replacement value of over US$250M



Pogo – Enacting the business model

- Pogo is a world-class 10Moz gold endowment that has produced ~4Moz at an average grade of ~13gpt over the past 13 years at an average of ~300,000ozpa
- Pogo has a JORC Resource of 5.95Moz at 9.6gpt and a maiden JORC Reserve of 1.5Moz at 7.5gpt
- FY20 guidance of 200,000oz-240,000oz at an AISC US$850-US$925/oz (A$1,210-A$1,320/oz) (1H: 80,000-100,000oz; 2H: 120,000-140,000oz)
- NST's proven business model of increasing production and delivering cost improvements is well underway
- Since acquisition, all-in sustaining cost per tonne has reduced by 29%; will reduce further as productivities improve
- Transition to longhole stoping is a key driver to the success and is on track to account for 60% of ore tonnes from 2020 onwards
- New mining fleet is on site resulting in significantly improved productivities & substantially lower maintenance costs
- Current fleet has capacity to mine 1.3Mtpa of ore as new mining areas are established and level layouts are modified to support long hole stoping



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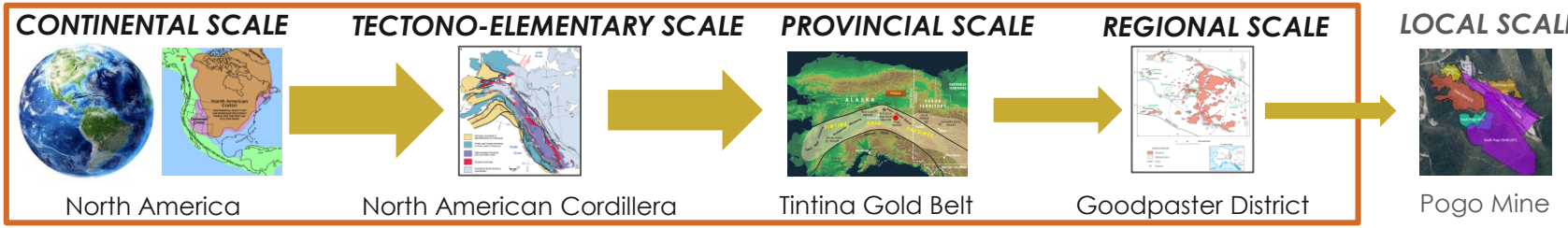
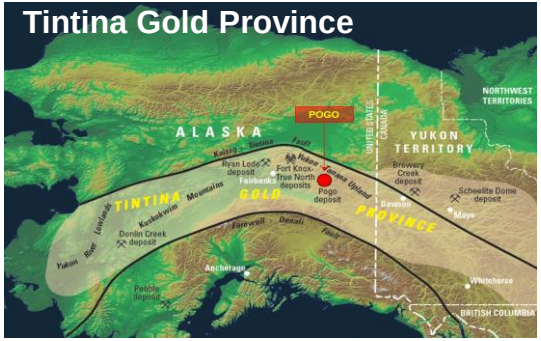
Pogo Geological Presentation

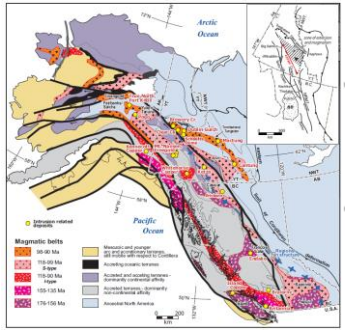
Geological Setting of the Pogo Deposit

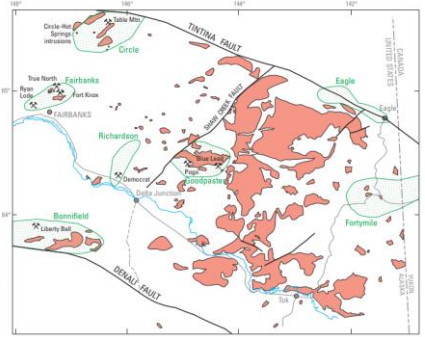
An Intrusion Related Gold Deposit in a World-Class District

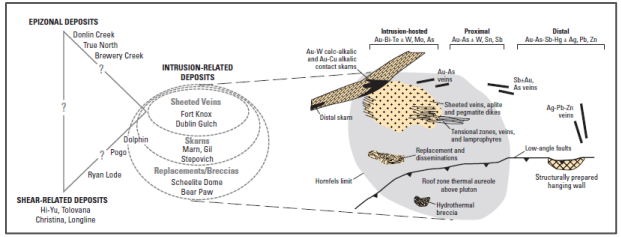


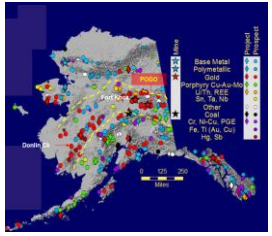


- The Tintina Gold Province (TGP) is an arcuate zone broadly defined by the Kaltag-Tintina fault to the north and the Denali-Farewell fault to the south (~200km x ~1,200km)
- The TGP has a total gold endowment exceeding 70Moz of gold. Notable deposits include Donlin Creek (Barrick / Novagold, >45Moz), Fork Knox (Kinross, ~10Moz), Pogo (NST, ~10Moz) and Dublin Gulch (Victoria Gold Corp., >3Moz)
- A series of at least 25 Early to Mid-Cretaceous (145Ma to 90Ma) plutons were emplaced across the northern North American Cordillera (Hart, 2004). These were likely related to subduction and extension resulting from terrane collision
- The Pogo gold deposit is one of several Intrusion Related Gold Systems (IRGS) in the central northern Cordillera spatially and temporally associated with the early to mid-Cretaceous magmatic belts and intrusive complexes



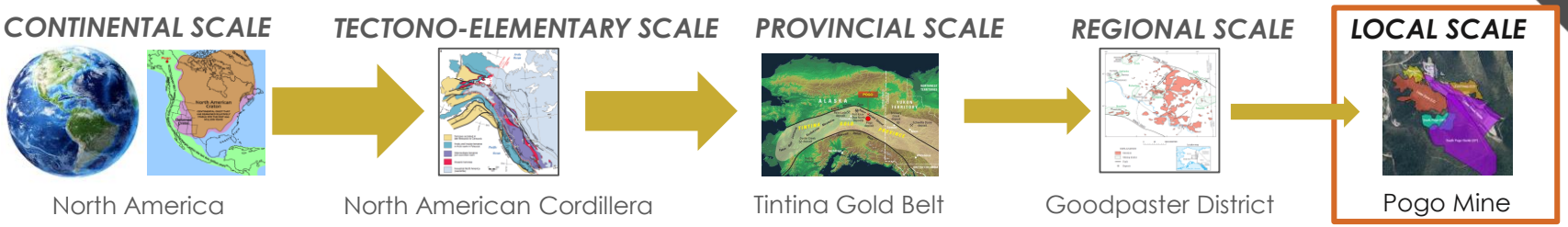




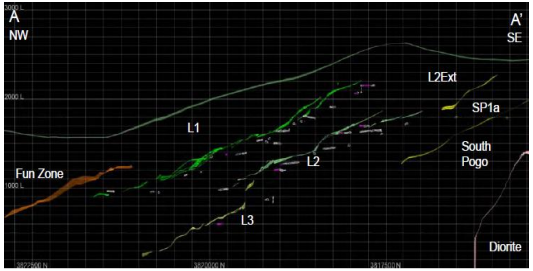


Pogo Deposit Scale Geology

A High-Grade Structurally-Controlled Stacked Vein System

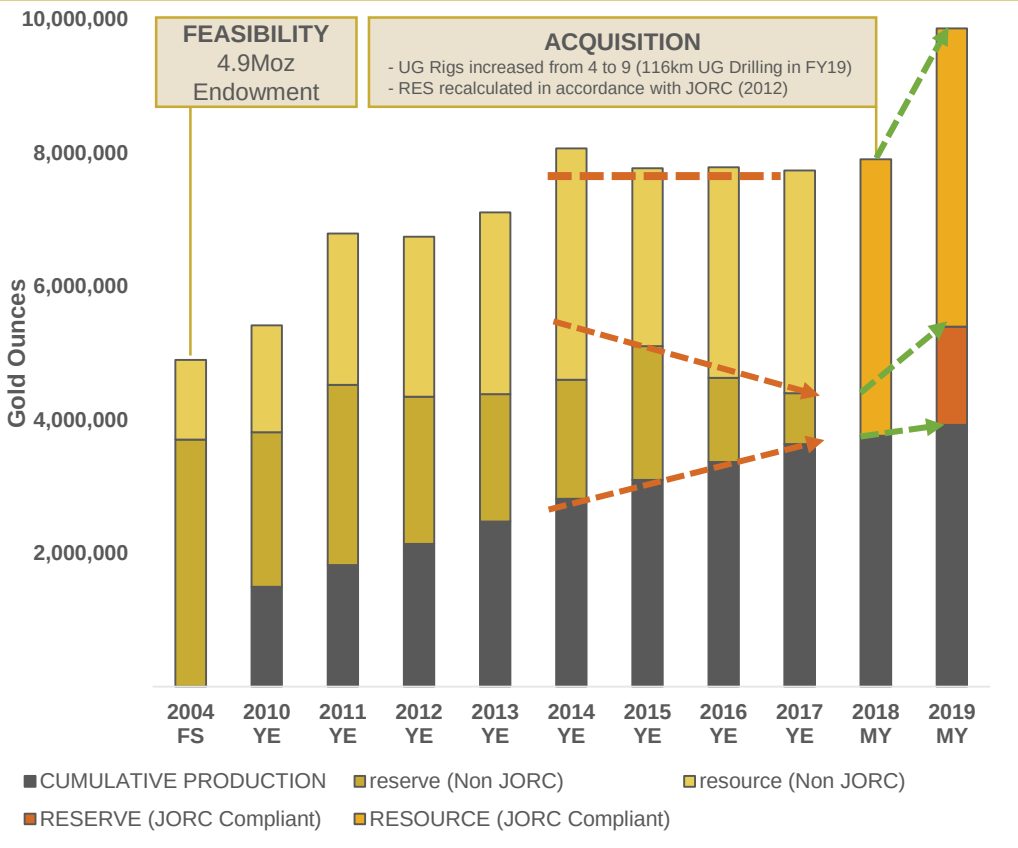


DEPOSIT CLASSIFICATION	Mesothermal quartz vein hosted intrusion related structurally-controlled gold deposit; Related to mid-cretaceous intrusive complex; Mineralisation dated at ~104M years
HOST ROCKS	Sillimanite-bearing paragneiss or orthogneiss that ranges in age from Proterozoic (>541Ma) to mid-Palaeozoic (Siluro-Devonian, ~375Ma); Proximal to Mid- Cretaceous granitoids and other associated intrusive rocks
MINERALISATION	(1) Quartz hosted stacked vein systems (Liese, Fun Zone, South Pogo, East Deeps); Flat to moderately dipping (25-45°) laminated to massive veins dipping towards the NW; Average grade of the deposit mined to date is 13.6gpt. Vein width varies from <0.5m to >10m (average ~3m) (2) Steeply east-dipping veins (~60-70°) within late stage north-striking fault zone (North Zone) (3) Sulphide associated gold as disseminated sulphides or in sulphide veinlets
SULPHIDE ASSEMBLAGES	Low sulphide content (<3%); Main sulphide species include pyrite, arsenopyrite, pyrrhotite and chalcopyrite. Mineralised zones may include trace amounts of loellingite, bismuth-tellurium sulphides, molybdenite, and galena. Occurs as fracture fill, disseminations, stringers, coarse blebs or on sheared surfaces
STRUCTURE	Multi-phase early stage brittle-ductile structures offset by late stage brittle faults with common dextral displacement. The Liese mineralised structures are parallel to low-angle regional shear, and exhibit laminations adjacent to the FW contacts. Late stage north to north east trending
ALTERATION	Multi-phase variable alteration assemblages. Common alteration minerals include biotite, silica, sericite, dolomite and chlorite



Resource & Reserve Trends

Resource Reserve Update Demonstrates Strong Growth



POGO MID YEAR 2019 RESERVE & RESOURCE UPDATE

ORE RESERVES
As at 30 June 2019

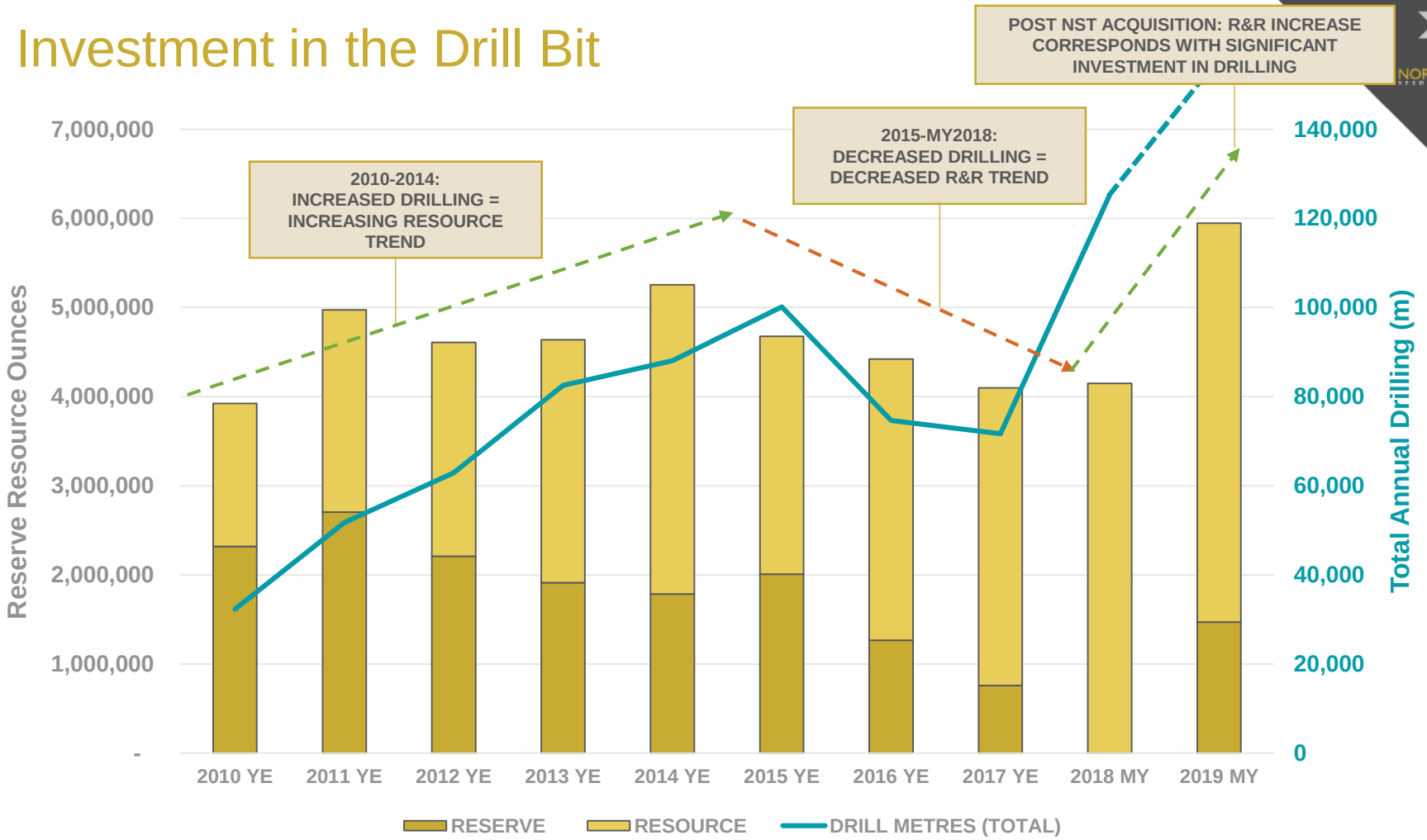
CATEGORY	Tonnes ('000)	Grade (gpt)	Contained Au ('000oz)
Proved	-	-	3*
Probable	6,103	7.5	1,469
TOTAL	**6,103**	**7.5**	**1,472**

MINERAL RESOURCES
As at 30 June 2019 Inclusive of Reserve

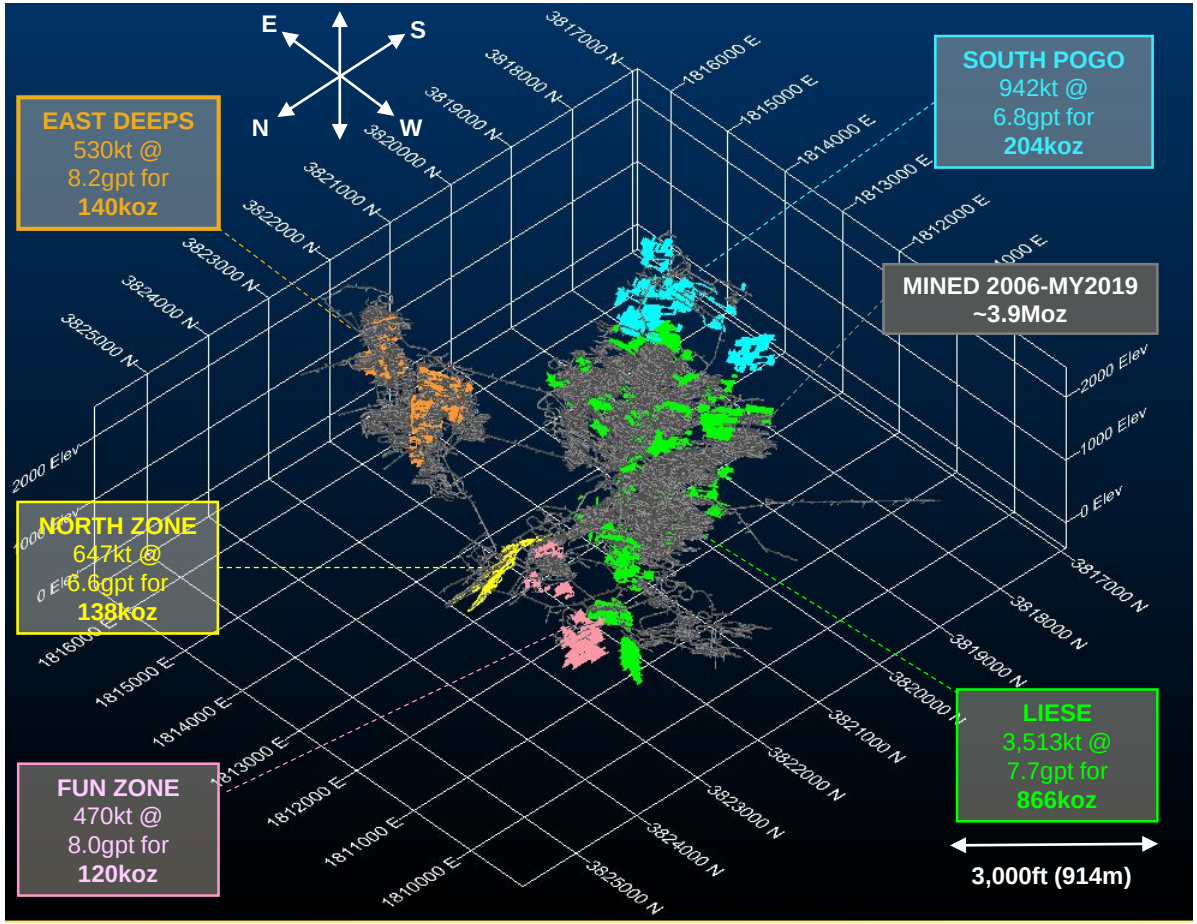
CATEGORY	Tonnes ('000t)	Grade (gpt)	Contained Au ('000oz)
Measured	-	-	3*
Indicated	7,200	9.6	2,226
Inferred	12,128	9.5	3,720
TOTAL	**19,328**	**9.6**	**5,949**

* Gold In Circuit

Investment in the Drill Bit



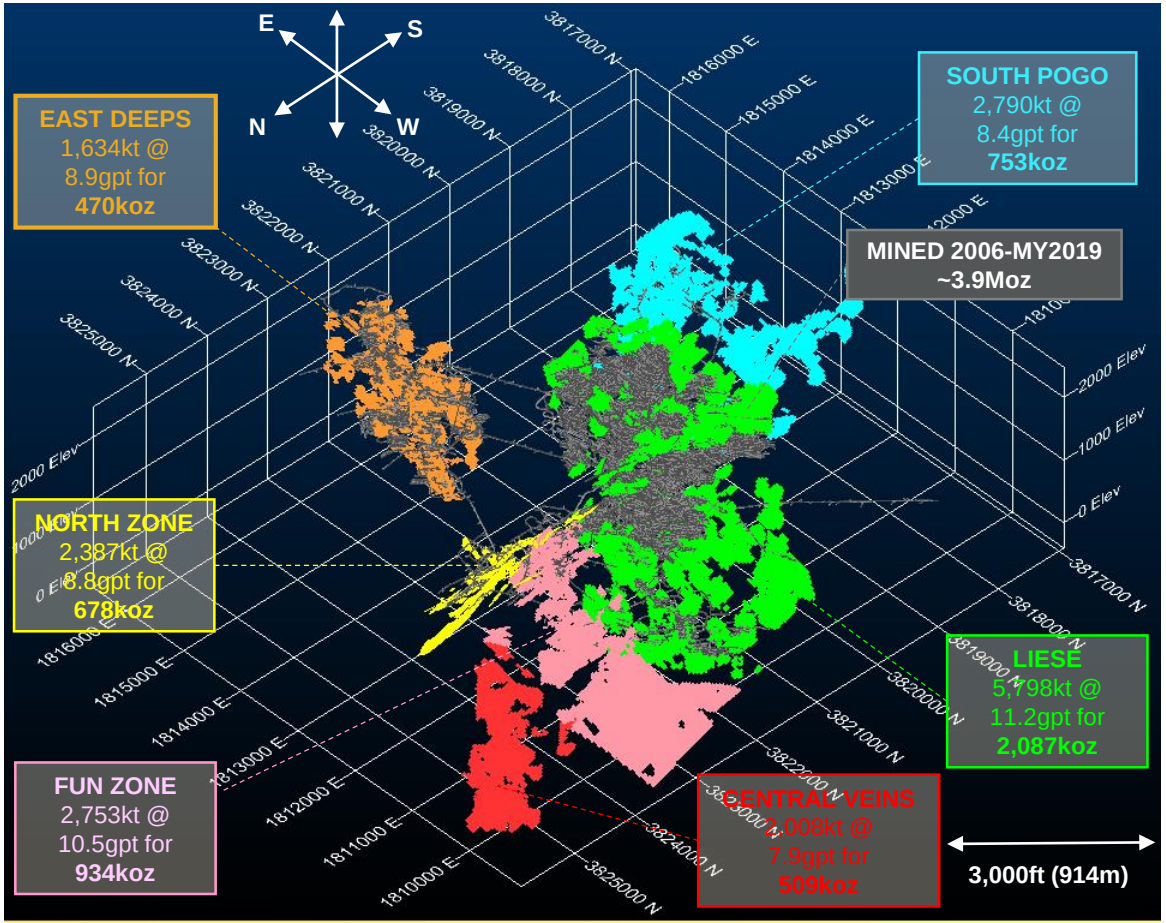
Pogo MY2019 Ore Reserves



MY19 P&P ORE RESERVES			
CATEGORY	Tonnes ('000)	Grade (gpt)	Au ('000oz)
East Deeps	530	8.2	140
Fun Zone	470	8.0	120
Liese	3,513	7.7	866
South Pogo	942	6.8	205
North Zone	647	6.7	138
GIC	-	-	3
TOTAL	**6,103**	**7.5**	**1,472**

- Ore Reserves were calculated at a US$1,150 gold price and 4.3gpt cut off grade
- All Reserves reported are within close proximity to existing underground infrastructure

Pogo MY2019 Mineral Resources

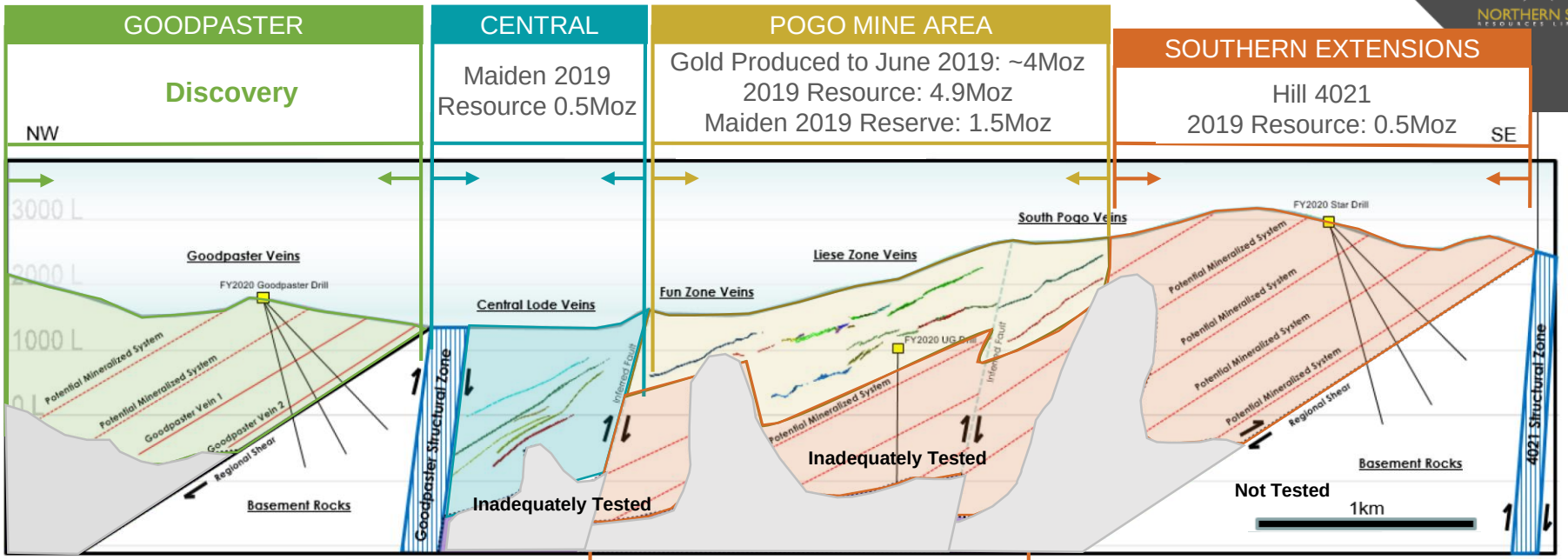


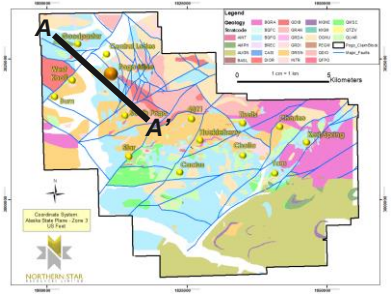
* Calculated at US$1,300 and COG of 3.8gpt. Resources are inclusive of Reserves.

MY19 MINERAL RESOURCES

CATEGORY	Tonnes ('000)	Grade (gpt)	Au ('000oz)
Central Veins	2,008	7.9	509
M&I	-	-	-
Inferred	2,008	7.9	509
East Deeps	1,634	8.9	470
M&I	515	7.5	124
Inferred	1,120	9.6	346
Fun Zone	2,753	10.5	934
M&I	398	12.8	164
Inferred	2,354	10.2	770
Hill 4021	1,958	8.2	516
M&I	-	-	-
Inferred	1,958	8.2	516
Liese	5,798	11.2	2,087
M&I	3,436	10.6	1,172
Inferred	2,362	12.0	915
South Pogo	2,790	8.4	753
M&I	1,408	8.2	370
Inferred	1,382	8.6	382
North Zone	2,387	8.8	678
M&I	1443	8.5	397
Inferred	944	9.3	282
GIC	-	-	3
TOTAL	**19,328**	**9.6**	**5,947**
M&I	7,200	9.6	2,229
Inferred	12,128	9.5	3,720

Pogo – an emerging camp scale system





Stacked
Vein System

LOWER LIESE

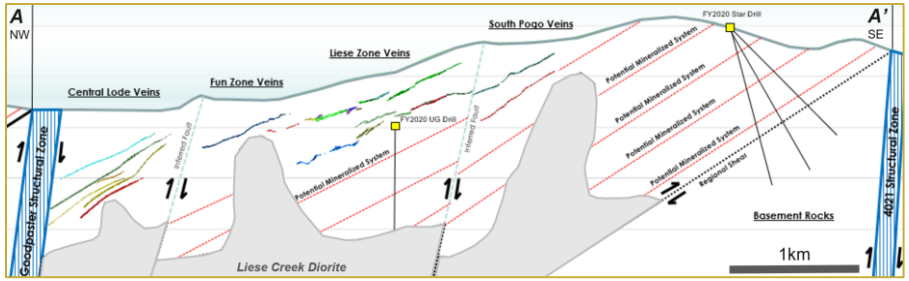
Discovery Potential

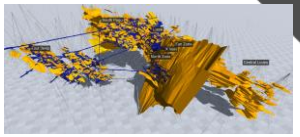
- Pogo is developing into a CAMP SCALE rather than a DEPOSIT

Pogo Deposit Scale Geology

Scale of the System

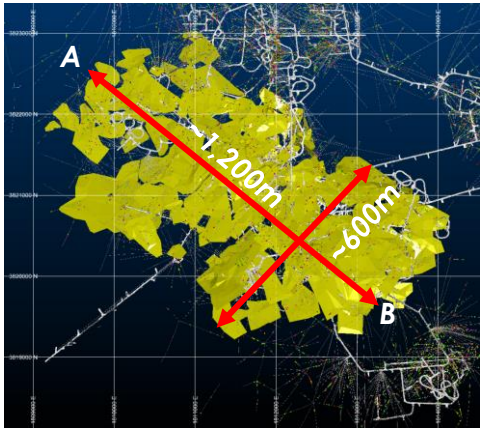
- Mineralised structures poorly drilled at margins
- Mineralisation remains open

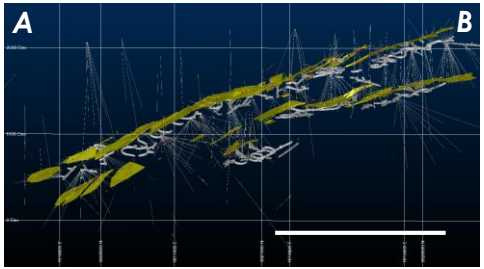




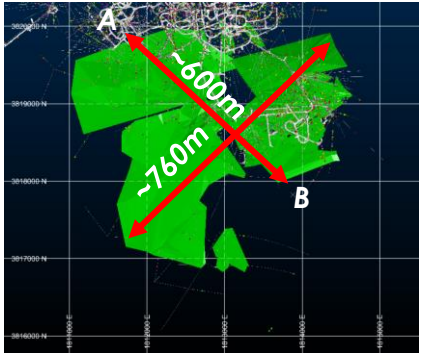
POGO 3D MODEL
https://inventum3d.com/c/nsrltd/pogo

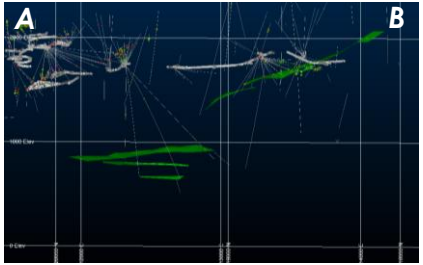
LIESE ZONE VEINS



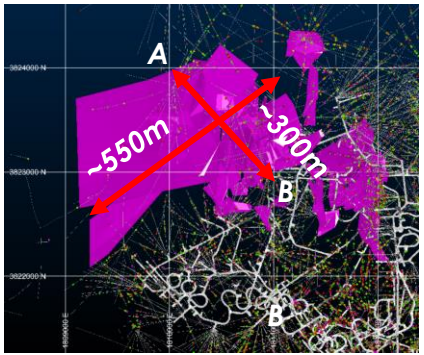


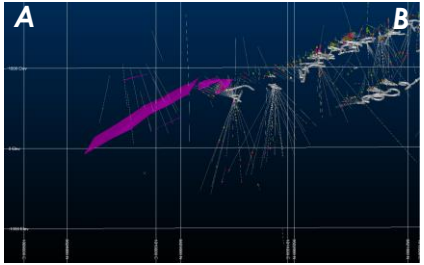
SOUTH POGO



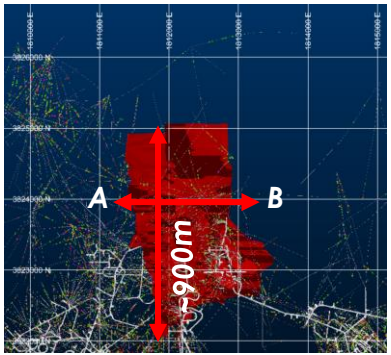


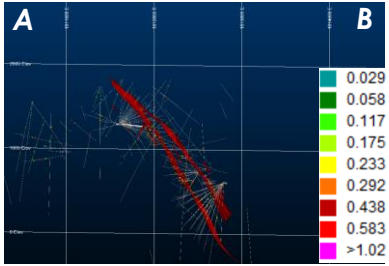
FUN ZONE





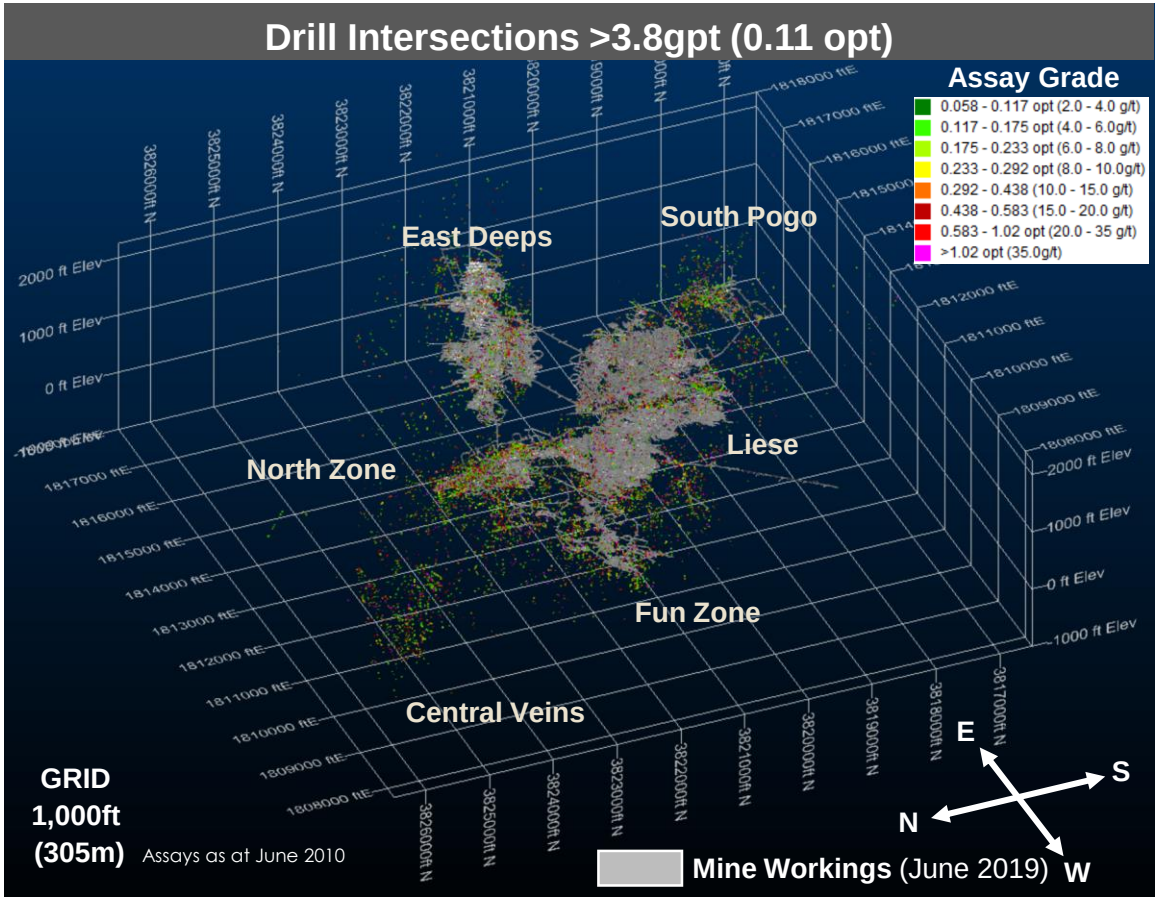
NORTH ZONE

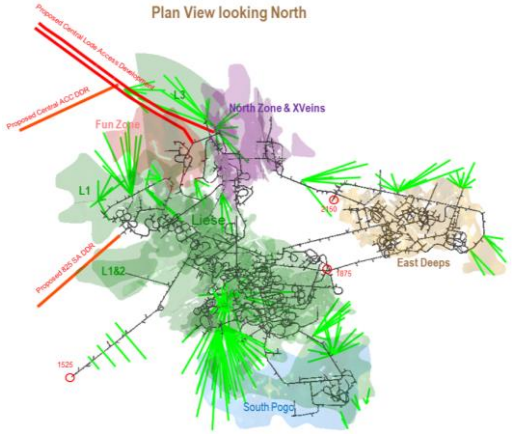




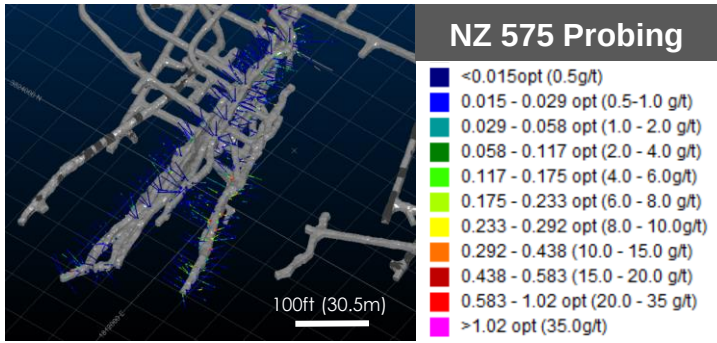
Pogo In-Mine & Near Mine Potential

A$20M FY2020 Exploration Budget





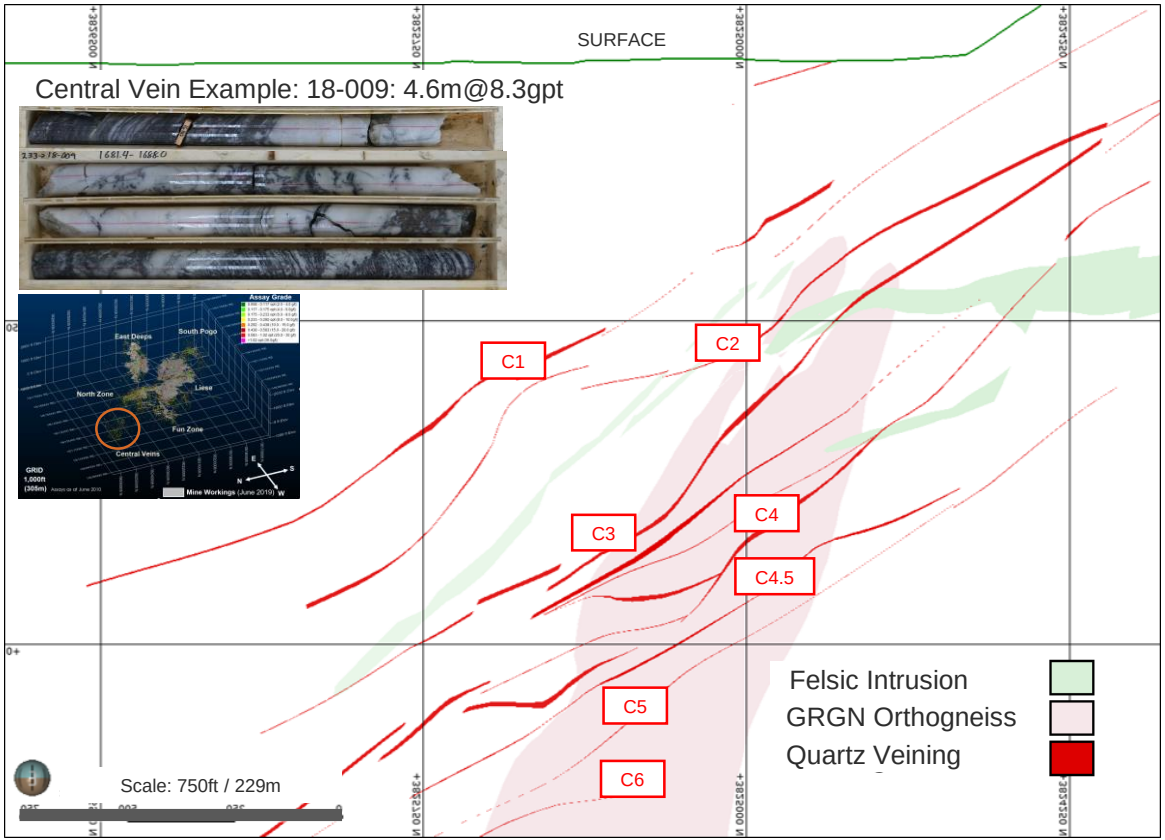
- Continued Extension of vein systems (open in all directions)
- Conversion of Inferred Resources:
  - 12.2Mt @ 9.5gpt for 3.7Moz in Inferred Resource
- Remnant Mining Potential

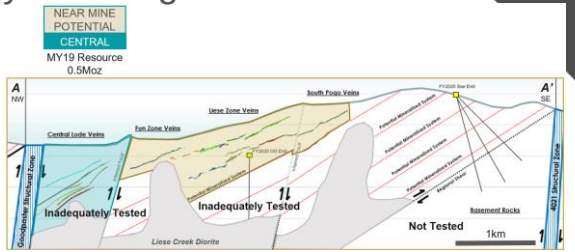


Near Mine Exploration: Central Veins

Discovery of a New Stacked Vein System within 600m of the Existing Underground

- The Central Veins are interpreted to be an offset fault block of Liese-style veining & mineralisation





- FY2019 surface drilling focused on definition of the Central Vein system
- The maiden JORC (2012) Resource of 509koz @ 7.9gpt formed part of the MY19 estimate
- Interpretation shows an array of at least 6 stacked coherent mineralised veins, in addition to multiple structural offsets
- Orientation and location of mineralised veins (and potential linking structures) is influenced by pre-mineral felsic intrusions, with the main granitic gneiss (GRGN) body observed in the core of the Central Veins system
- Conceptual development to define and access the Central Veins has been designed

Goodpaster Discovery

NORTHERN STAR
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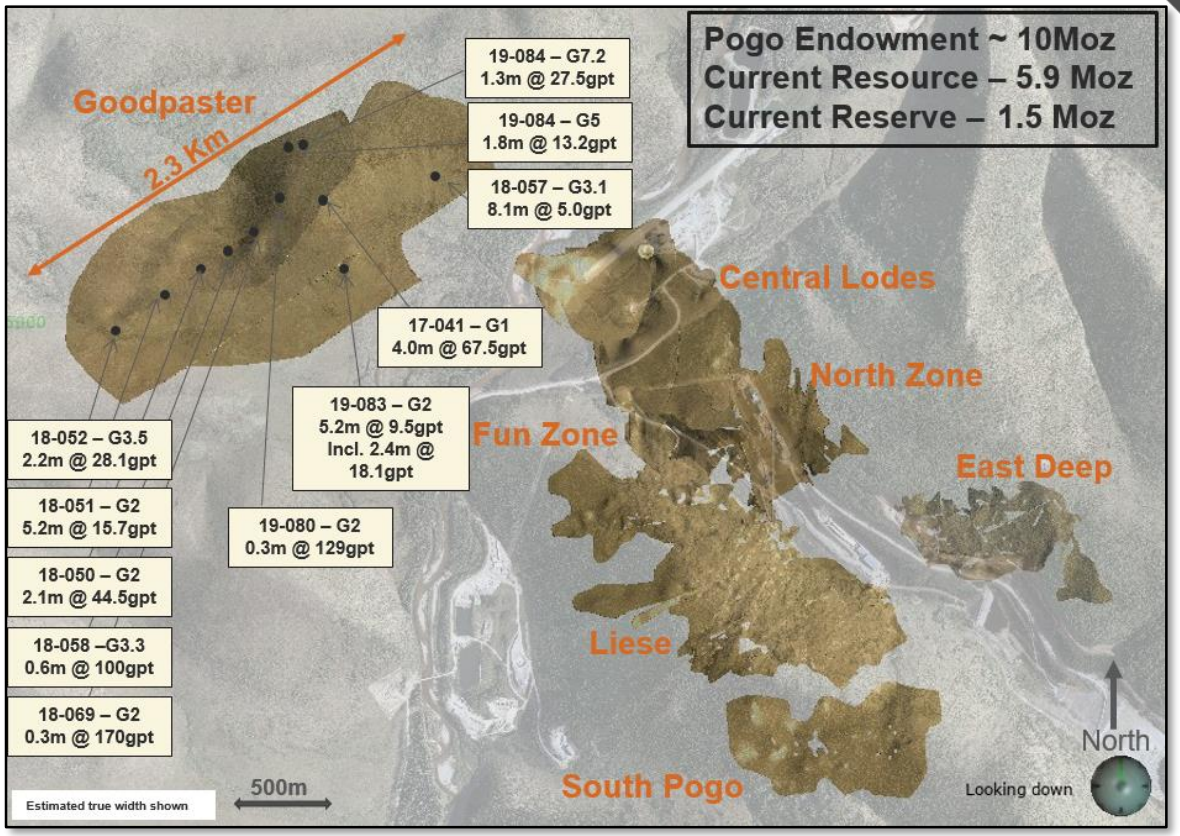
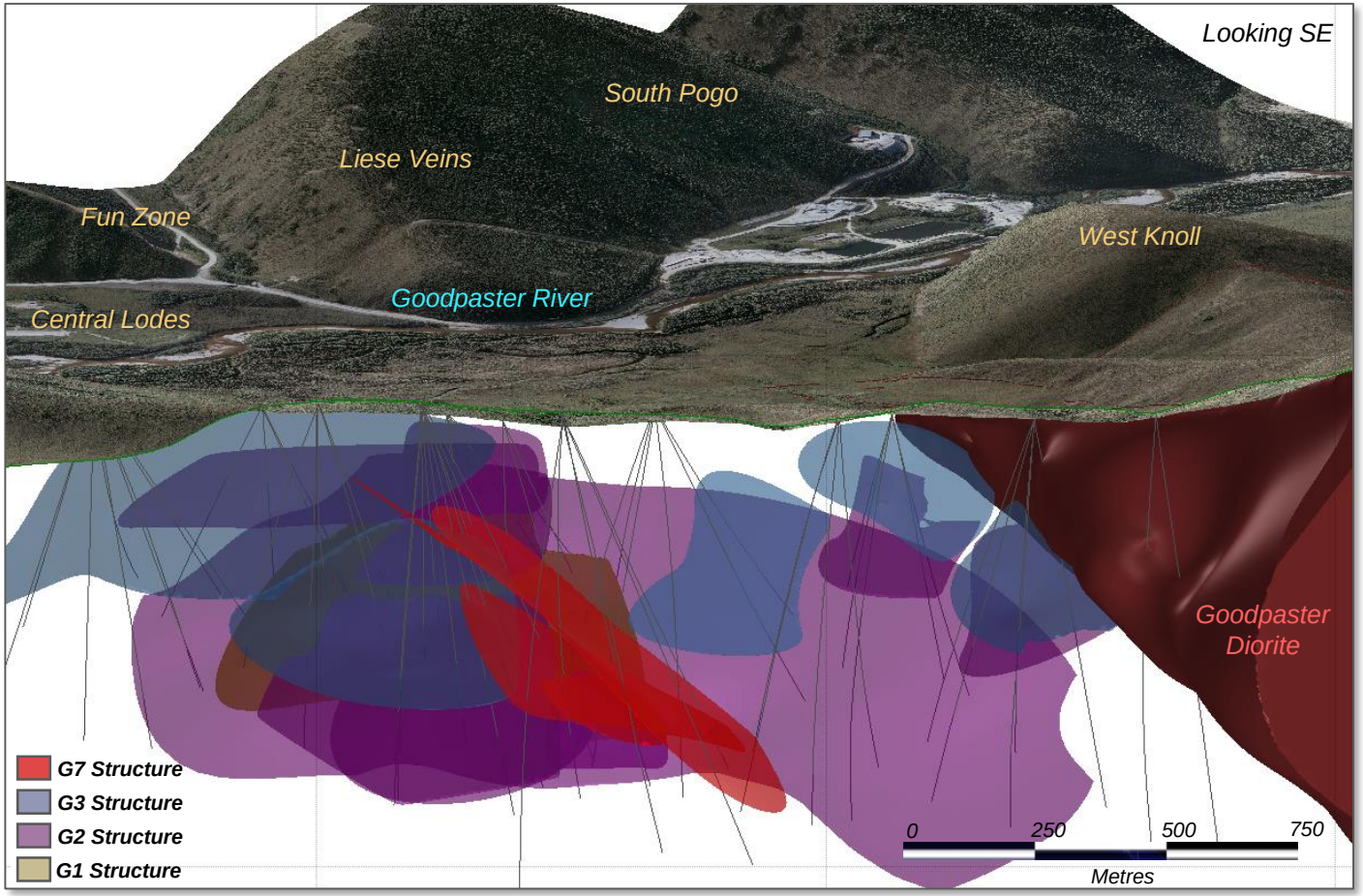
Goodpaster Discovery

- The Goodpaster discovery 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
- Surface diamond drilling program targeting Liese-type vein structures on ~160m x 160m centres
- 57 holes for 35,900m drilled to date



Goodpaster Discovery



Regional Potential

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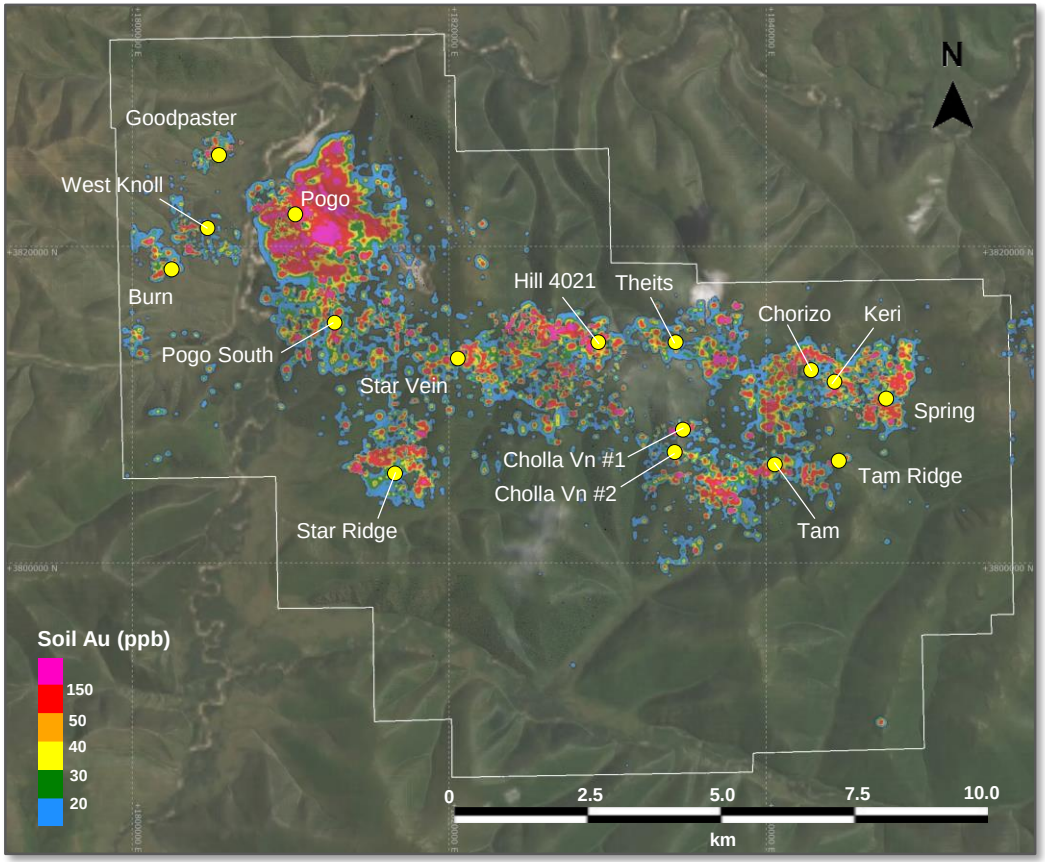
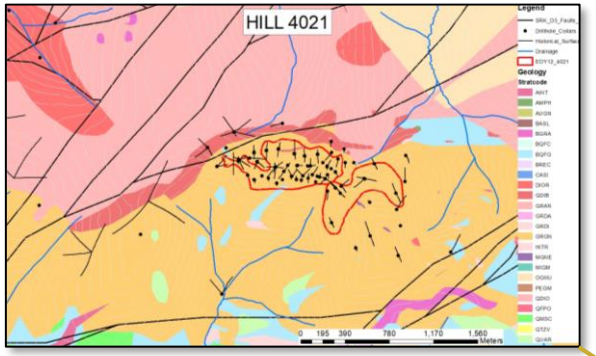
Regional Potential – Emerging gold camp

High quality exploration portfolio of early stage prospects on the Pogo claim block

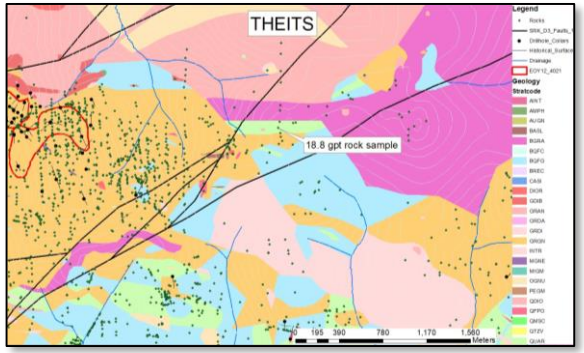
- Key prospects: Burn, Hill 4021, Theits, Keri, Spring, Tam, Cholla and Star
- Pogo-style veins exposed at surface and intersected in limited historical drilling
- Hill 4021 maiden Inferred Resource 0.5Mozs @ 8.2gpt Au
- NST committed to a multi-year exploration program, investing A$20M across the tenement package in FY2020



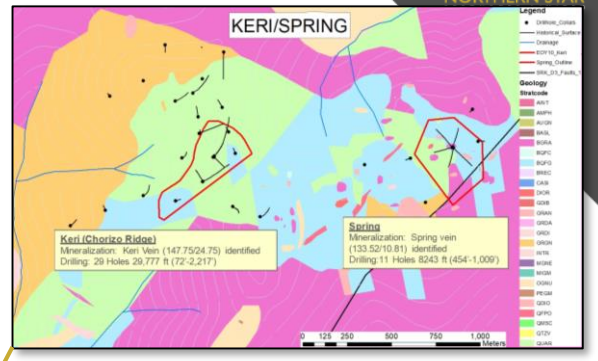
Regional Potential



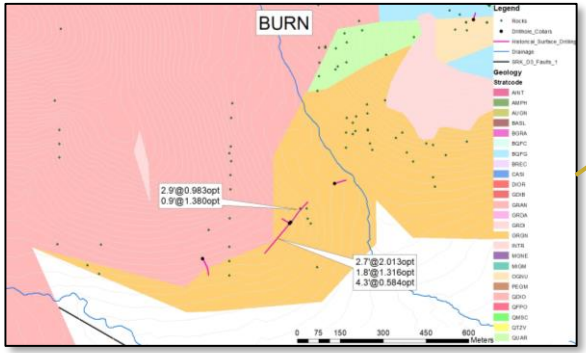
JORC 2012 Resource 0.5Mozs @ 8.2 gpt Au



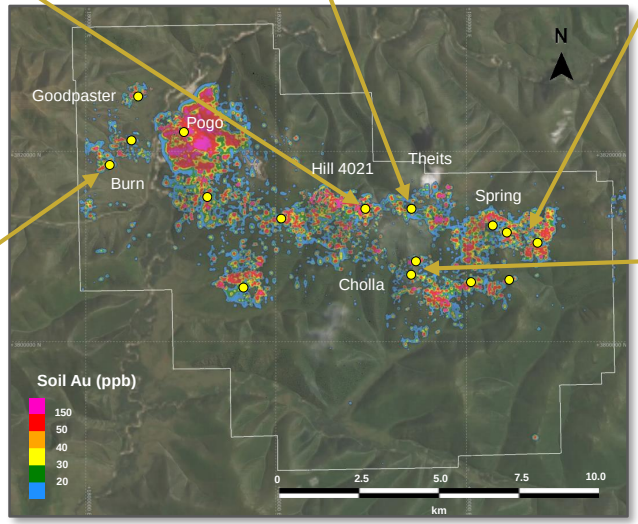
Historical rock chip sampling up to 18.8gpt Au*, no drill testing

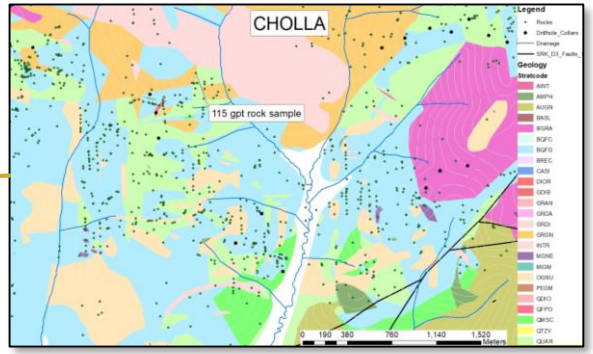


Historical drilling returned 2.9m @ 21.6 gpt Au*



Historical drill intercept of 1.3m @ 20 gpt Au*, exploration drilling in progress





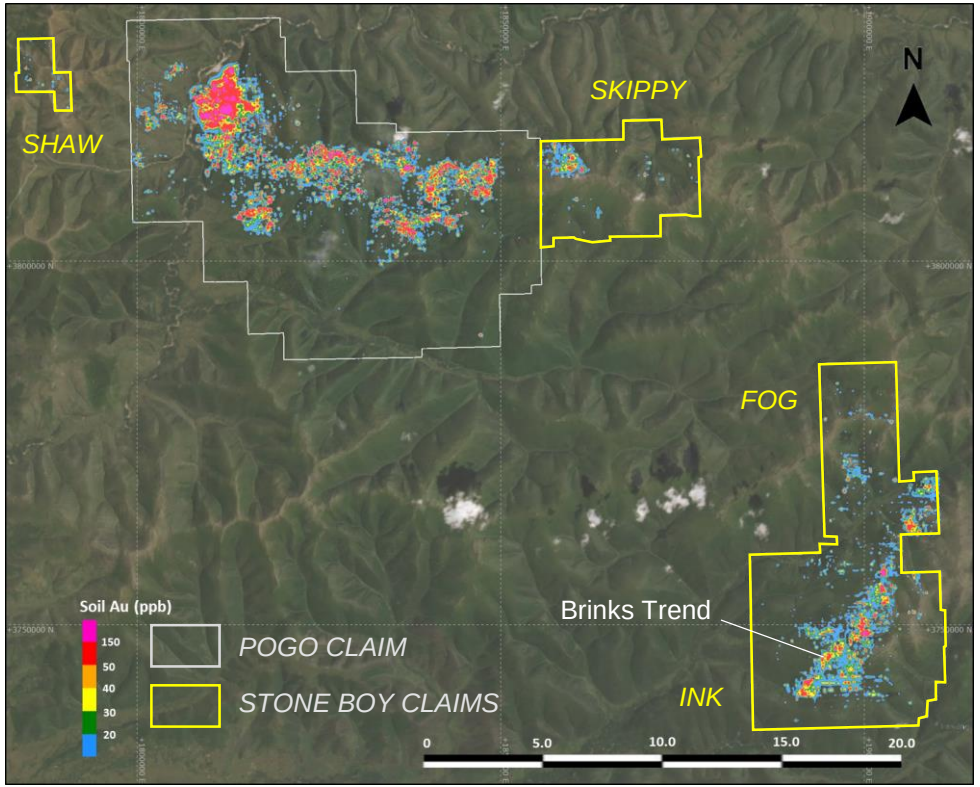
Historical rock chip sampling up to 115 gpt Au*

*Pre NST Data

Regional Potential – District-scale gold camp

Exploration portfolio expanded with Stone Boy Project acquisition

- Recently acquired Stone Boy Project for a total consideration of US$1.2M
- Significant exploration tenure added close to the Pogo Project
- Data compilation, digitalisation and integration in progress



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