



Great Northern Minerals

*“A golden opportunity”*

North Queensland Gold Projects





# Disclaimer

## Preparation

This Presentation has been prepared to provide prospective investors in Great Northern Minerals Limited, ACN 000 002 111, ("The Company" or "Great Northern Minerals"), with general information to assist them in deciding whether they wish to undertake their own investigation and/ or consider a possible investment in the Company or the Company's projects.

This Presentation has not been independently verified for reliability, completeness or accuracy. No representation is made that such information and materials are reliable, complete or accurate. This Presentation is not a prospectus and does not constitute an offer or invitation or recommendation to any person and has been prepared solely for use by persons who are deemed to be "sophisticated investors" as described in the Corporations Act.

## Projections and Assumptions

The projections and assumptions in this Presentation are indicative only and are not and should not be relied upon as representations as to future matters. The projections are based on assumptions that may or may not prove to be correct. The recipient must make their own independent assessment and investigation of those projections and assumptions. Investors will be required to undertake at their cost, any additional works needed for an investment decision.

## Disclaimer

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## No Offer, Invitation, Recommendation /Advice

The information set out in this Presentation does not constitute an offer or invitation to subscribe for securities in The Company or investment in the assets of the Company, or a recommendation by The Company to any person in respect of any matter.

## Competent Persons Statement

*The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Simon Coxhell (Exploration Results), the Technical Director of Great Northern Minerals, and Andrew Beaton (Mineral Resources) a part time consultant to Great Northern Minerals. Mr Coxhell and Mr Beaton are both members of the Australasian Institute of Mining and Metallurgy and have sufficient experience of relevance to the styles of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves." Mr Coxhell and Mr Beaton consent to the inclusion in this report of the matters based on their information in the form and context in which it appears.*

*Refer to previous ASX announcements on the 14 May 2019, 20 June 2019, 4 July 2019, 11 July 2019, 5 August 2019, 15 August 2019, 25 November 2019, 10 December 2019, 12 December 2019, 16 December 2019, 20 December 2019, 23 December 2019, 28 January 2020, 7 February 2020, 18 August 2020, 9 September 2020, 16 September 2020, 7 October 2020, 26 October 2020, 15 December 2020, 14 January 2021, 25 February 2021, and 17 May 2021 in respect of historic drilling intersections, exploration targets and mineral resources. Great Northern Minerals is not aware of any new information or data that materially affects the information included in the relevant market announcements listed.*



# Corporate Snapshot

## Board of Directors

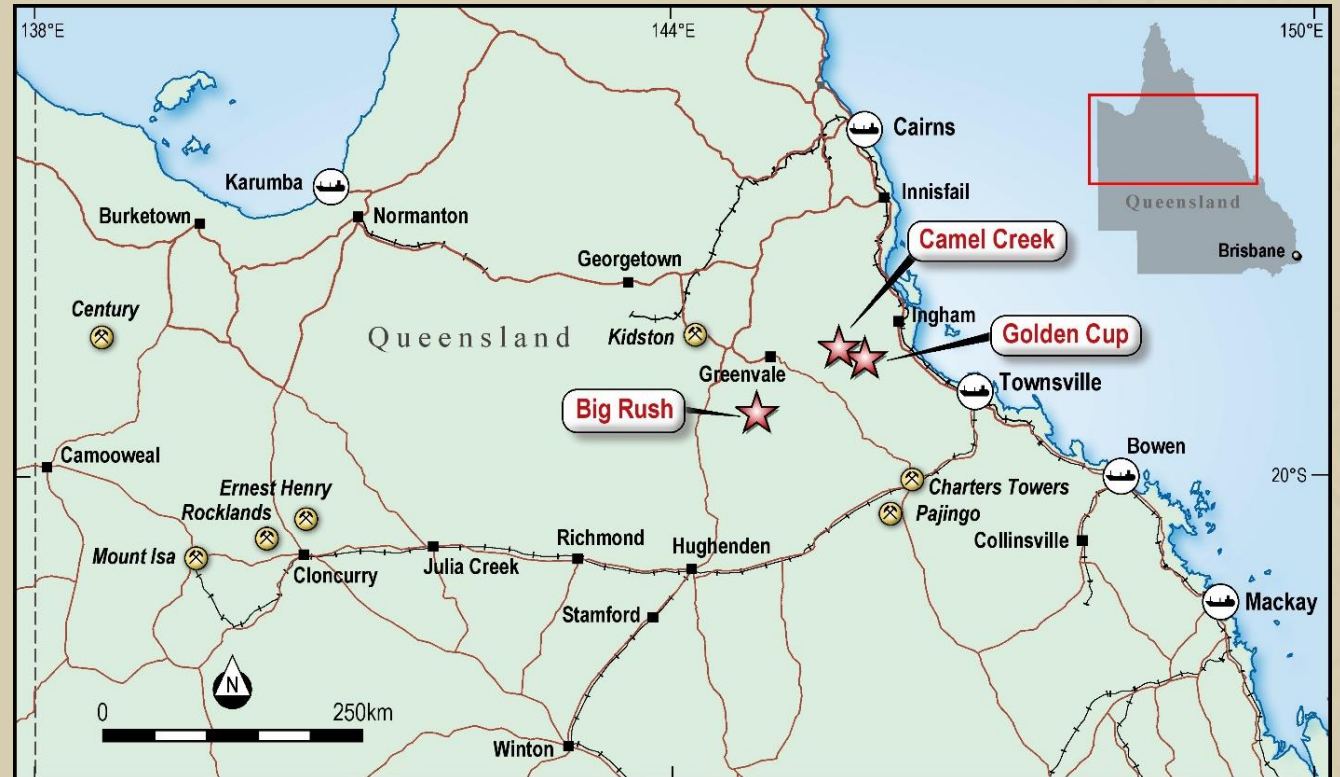
Chairman – Kim Robinson  
 Managing Director – Cameron McLean  
 Technical Director – Simon Coxhell  
 Non Executive Director - Simon Peters  
 Company Secretary – Aida Tabakovic

## Company Structure

Shares on Issue	1,209,050,976
Options on Issue	652,547,822
Market Capitalisation	\$19.3 million
Top 20 Holders	37%
Cash	~\$2.8 million



## Location Plan





## Investment Highlights

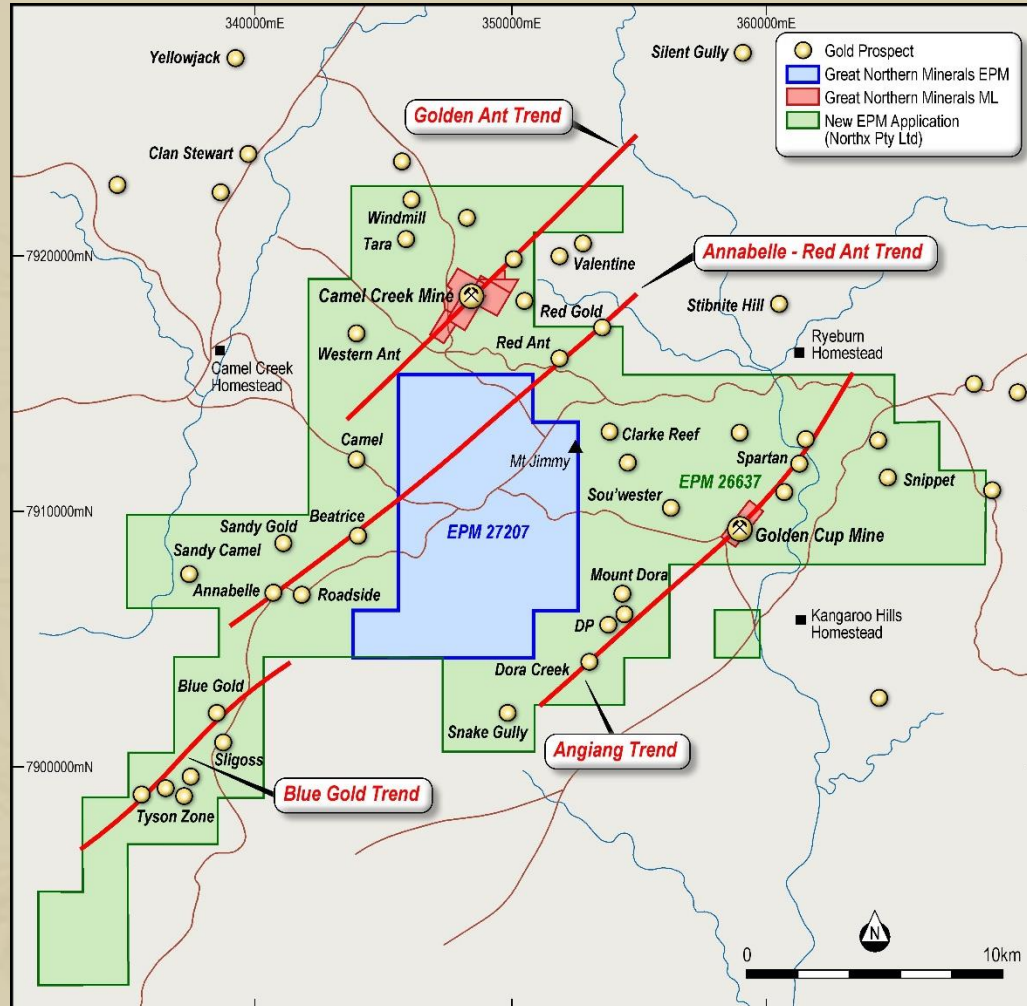
- Highly active explorer in a goldfield with **million ounce** potential (tenure covers 695 km<sup>2</sup>) 100% owned
- Gold resource of **30,000 ounces** estimated at Golden Cup in December 2019
- Gold resource of **154,000 ounces** estimated at Big Rush in February 2021
- Excellent exploration upside supported by:
  - Previous mining to only shallow depths (<30 m)
  - Limited modern or systematic exploration
  - High-grade drill intersections beneath open pits &
  - Significant Exploration Targets defined
- Gold resources located on granted Mining Leases

**Historic recorded gold production data – Golden Ant Project**

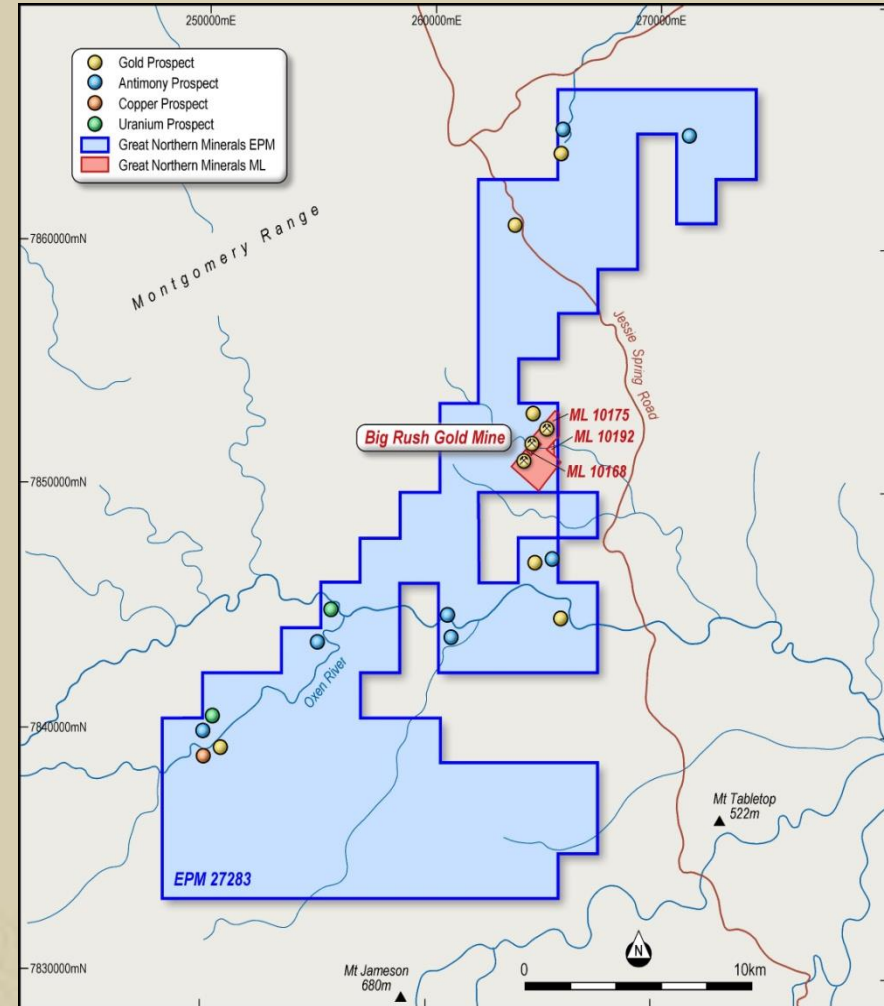
Historic Mine	Ore Mined (tonnes)	Grade (g/t Au)	Ounces Mined
Camel Creek	1,059,696	1.68	57,238
Camel Creek Satellites	188,876	2.29	13,906
Golden Cup	201,081	2.83	18,296
Golden Cup Satellites	94,548	1.92	5,836
Big Rush Heap Leach	950,000	1.9	58,039
Big Rush CIL	33,000	11	10,000
<b>TOTAL</b>	<b>2,494,201</b>	<b>1.91</b>	<b>163,315</b>



# TENURE POSITION: Potential Extensions Secured



Golden Cup & Camel Creek Projects  
(325 square kilometres)



Big Rush Project  
(300 square kilometres)



# A Re-discovered Under-explored Goldfield

- In 2019 the goldfield was secured:
  - Camel Creek, Golden Cup & Big Rush Mines purchased
  - Exploration permit applications made &
  - Joint Venture executed with North X Pty Ltd
- Project covers 695km<sup>2</sup> across 11 granted Mining Leases, two 100% owned exploration permits and one joint ventured exploration permit
- Combined previous open pit gold mined in excess of **160,000 ounces at 1.91 g/t Au**
- Previous gold production via heap leaching

## Gold Resources - Golden Ant Project

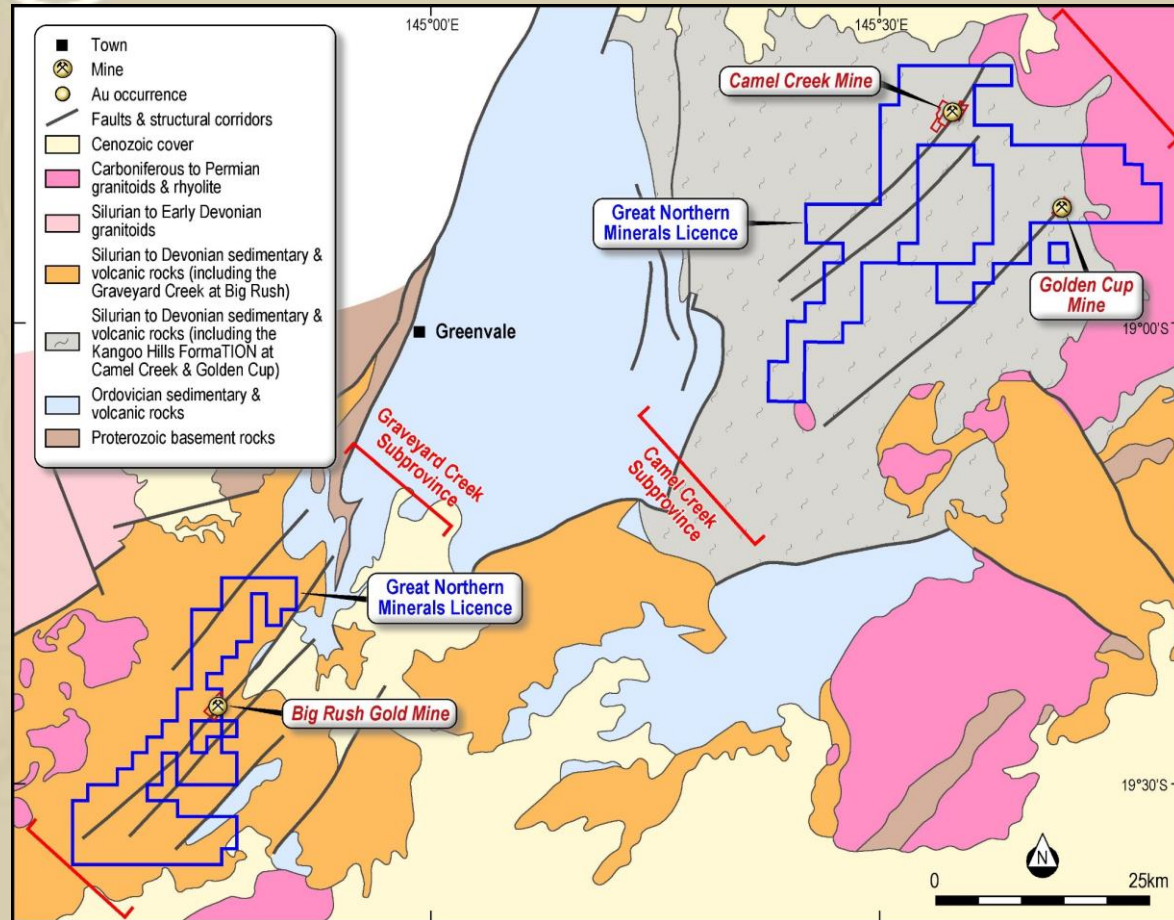
Project	Tonnes	Grade (g/t Au)	Ounces (Gold)
Golden Cup	256,504	3.6	29,721
Big Rush	3,531,000	1.36	154,000
<b>TOTAL</b>	<b>3,787,504</b>	<b>1.51</b>	<b>183,721</b>

## Exploration Targets to 100m depth- Golden Ant Project

Project	Tonnes		Grade (g/t Au)		Ounces (Gold)	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
Golden Cup	450,000	750,000	3.5	5.5	50,643	132,637
Camel Creek	500,000	1,000,000	2.0	3.5	32,154	112,540
Big Rush	1,800,000	3,600,000	2.0	3.0	115,756	347,267
<b>TOTAL</b>	<b>2,750,000</b>	<b>5,350,000</b>	<b>2.3</b>	<b>3.4</b>	<b>200,000</b>	<b>590,000</b>

# Broken River Province Geology and Orogenic-style Gold Deposits

(from: I. M. A. VOS, F. P. BIERLEIN and G. S. TEALE, 2005)



**Camel Creek and Golden Cup deposits** hosted by sequence of highly deformed interbedded sandstone and variably carbonaceous siltstone and shale of Silurian-Devonian aged rocks. Gold associated with sulphide development and multi-phase quartz veining along NE-trending structural corridors

**Big Rush deposit** hosted by Devonian-age rocks. Host rocks comprise highly deformed interbedded sandstone, and variably carbonaceous siltstone and shale, similar to the Camel Creek and Golden Cup host rocks. Gold mineralisation is associated with multi-phase quartz veining along a discrete NE-trending brittle structure that cuts the highly deformed host sediments



## GNM Exploration Activities: Past 18 months

- Purchased a 100% interest in all mining leases (no royalties)
- Secured Surrounding tenure

### **Extensive Drilling**

- Golden Cup: 8 RC holes for 639 metres
- Big Rush: 30 RC holes for 4676 metres
- Big Rush: 4 HQ Diamond holes for 1040 metres
- Camel Creek: 48 RC Holes for 5,986 metres
- JORC Resource for Golden Cup: 256,000 t @ 3.6 g/t Au for 30,000 ounces
- JORC Resource for Big Rush: 3.53 million tonnes at 1.36 g/t Au for 154,000 ounces
- *Most recent drilling at Camel Creek has highlighted excellent potential to define a substantial gold resource*





## CAMEL CREEK INTRODUCTION VIDEO



Great Northern Minerals





## Camel Creek : A Re-discovered Under-explored Goldfield Past History

- Mid 1980's significant gold mineralisation was discovered in the Amanda Bell Goldfield (Camel Creek and Golden Cup) by prospectors Wally Saul and Peter English
- Purchased by Mr John Lynch and his Lynch Group of Companies in mid to late 1980s
- 1989-1991 Mining and heap processing conducted centred at the Camel Creek and Golden Cup mines with auxiliary ore hauled from satellite deposits at Red Gold, Black Bull, Beatrice, Dora Creek, Mt Dora, Dead Horse, Spartan and AP Gold numerous shallow open pits with gold extraction via heap leach cyanidation of oxide gold  $\pm$  arsenic  $\pm$  antimony ore
- The Lynch Group of companies inclusive of Werrie Gold Pty Ltd (Werrie), were subsequently purchased by the Curtain Group of Companies (CBROS) in 2008
- Great Northern Minerals purchased the mining leases hosting the Camel Creek and Golden Cup mines in 2020 from Q-Generate, who had purchased the mining leases from the executors of Sir Michael Curtin



## Significant Drill Intersections Camel Creek

- 24m @ 3.55 g/t Au (CCRC12) from 58 metres
- 8m @ 4.63 g/t Au (CCRC17) from 85 metres
- 9m @ 4.99 g/t Au (CCRC15) from 109 metres
- 8m @ 3.27 g/t Au (CCRC07) from 147 metres
- 4m @ 5.41 g/t Au (CCRC05) from 63 metres
- 4m @ 5.85 g/t Au (CCRC06) from 88 metres
- 10m @ 6.63 g/t Au (CCAC10) including 5m @ 12.20 g/t Au from 59 metres
- 5m @ 5.29 g/t Au (CCAC11) from 47 metres
- 9m @ 4.93 g/t Au (CCAC12) from 49 metres
- 11m @ 2.94 g/t Au (CCAC13) from 46 metres
- 5m @ 3.12 g/t Au (CCAC15) from 74 metres
- 56m @ 4.14 g/t Au (CCRC50) from 152 including 20m @ 10.87 g/t Au
- 40m @ 2.31 g/t Au (CCRC51) from 160 metres
- 36m @ 2.15 g/t Au (CCRC52) from 128 metres
- 24m @ 5.94 g/t Au (CCRC54) from 152 including 8m @ 14.79
- 8m @ 3.29 g/t Au (CCRC47) from 112 metres



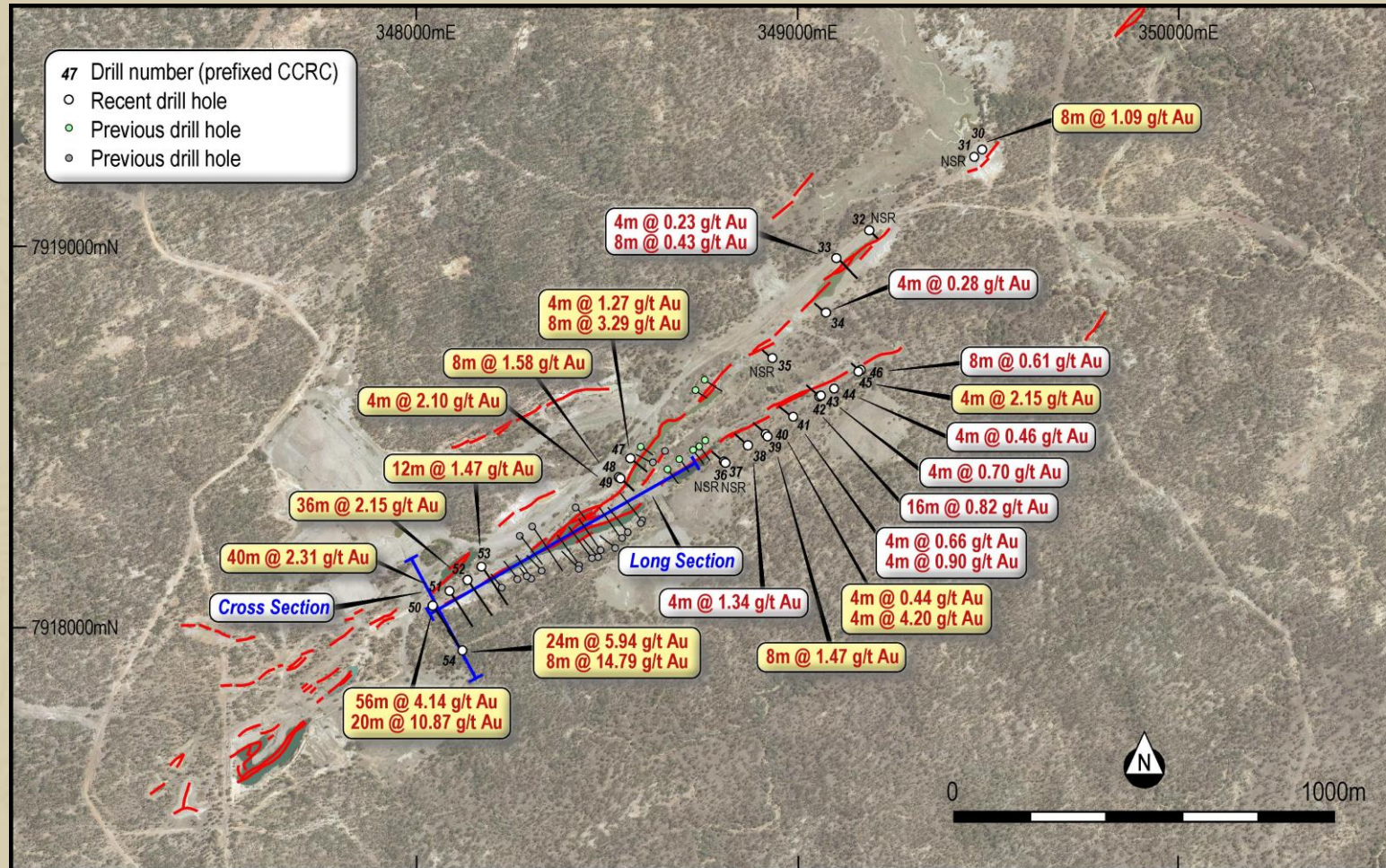
## Camel Creek: High Grade Ore Zone (Gregg Morrison 2021)

- Mineralisation in the Camel Creek Province is most likely Early Carboniferous age and related to shear-reactivation of mid-Devonian (D2) structures during a regional crustal heating event
- The distribution of hard vs soft rocks within the shear zones, especially refraction of syn-mineral shears around hard blocks is a common control on ore in this environment
- Overall the post-D2 shear zones are the major fluid channel way; the alteration, dikes and As anomaly identify the lode; and hard host rocks like quartz veins are a preferred host for gold ore especially where they are brecciated, oriented across the dominant shear orientation and have base metal anomalies
- The gold mineralisation is related to stylolites with carbonaceous matter and sulfides that require an acid reduced fluid capable of dissolving quartz. The mineralisation overprints deformed, altered, quartz veined sedimentary rocks as well as mafic and felsic dikes
- Evidence suggests the mineralised As (Au) lodes form mainly by reduction of hydrothermal fluid by reaction with carbonaceous material in the lode. Whereas the more base metal-rich gold ore forms by decompression of the hydrothermal fluid in open space in brecciated relatively brittle rocks such as silicified sediments and buck quartz veins

### **GOLD ASSOCIATIONS**

- *High T (>280 °C) association arsenopyrite + stibnite*
- *Some free grains in quartz and shears and oxide → gravity if coarse enough*

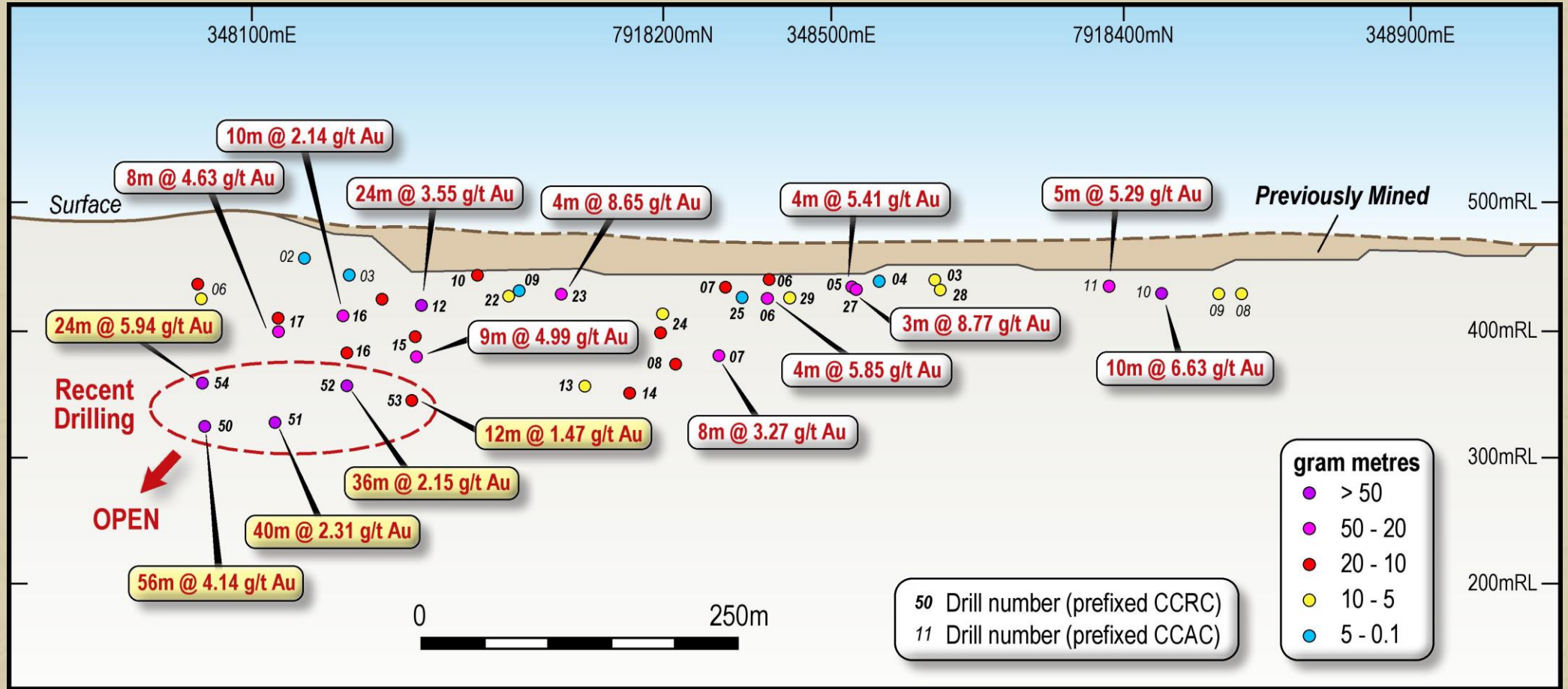
# Camel Creek – Recent Drill Results (May2021): Mineralised Structures



Camel Creek is the largest gold system controlled by GNM and consists of 3.6 km of continuous workings, comprising about 30 individual pits which vary from 12 to 35m deep.

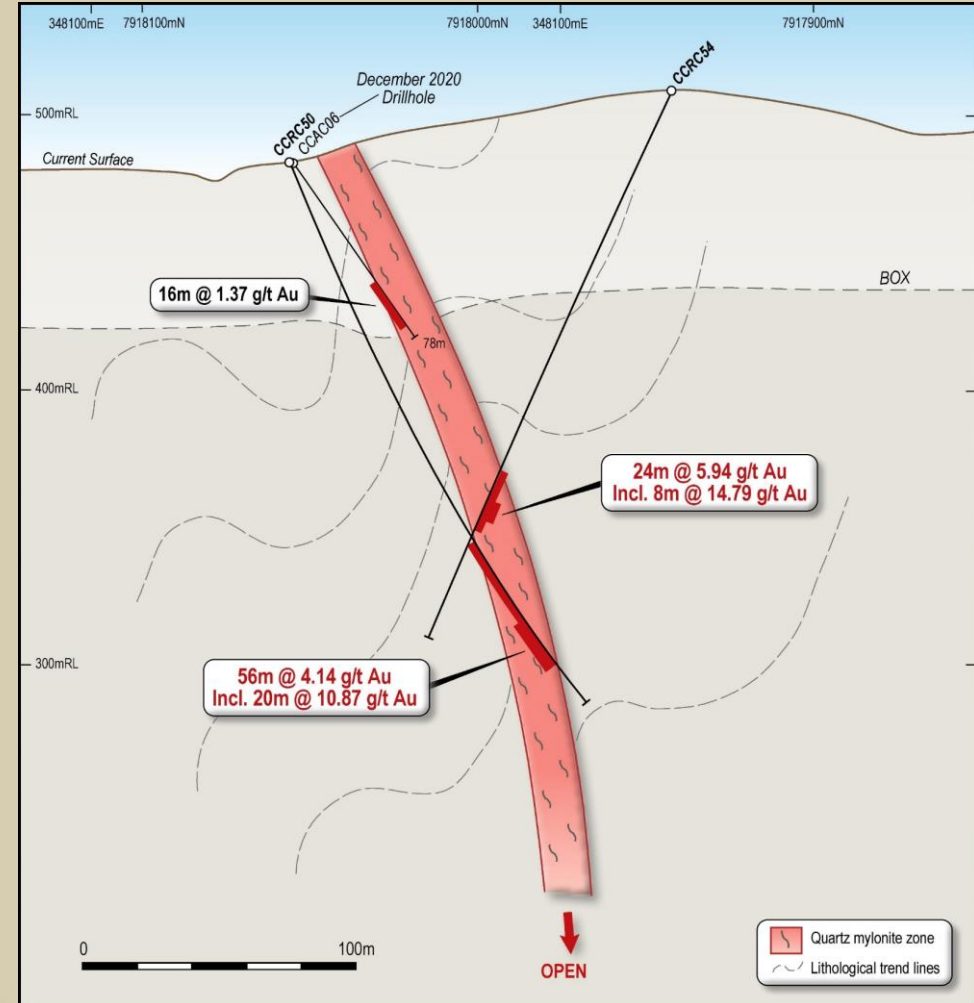
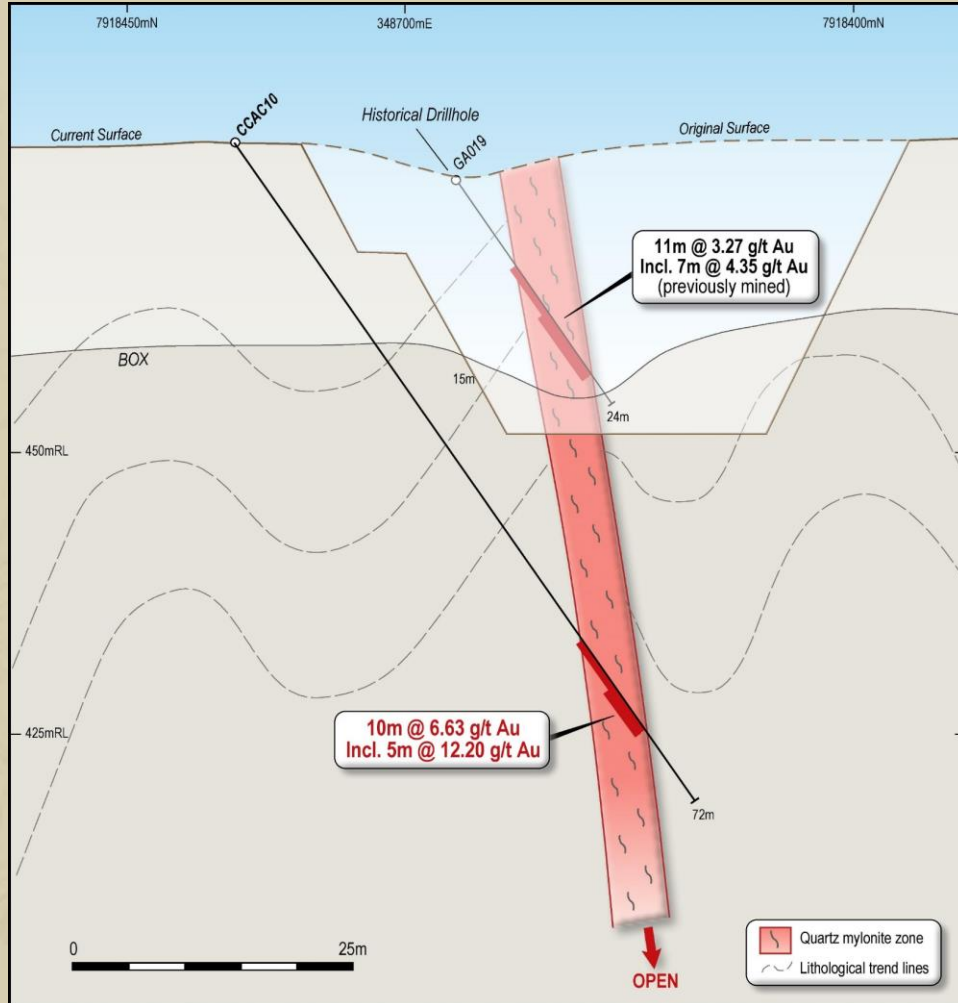
Minimal Previous drilling >40 metres below surface.

# Camel Creek Long Section (May2021)





# Camel Creek Cross Sections



## Camel Creek: The rocks



Tertiary cover blankets portions of bedrock    Consistent Mineralised shears    Blow outs on contacts



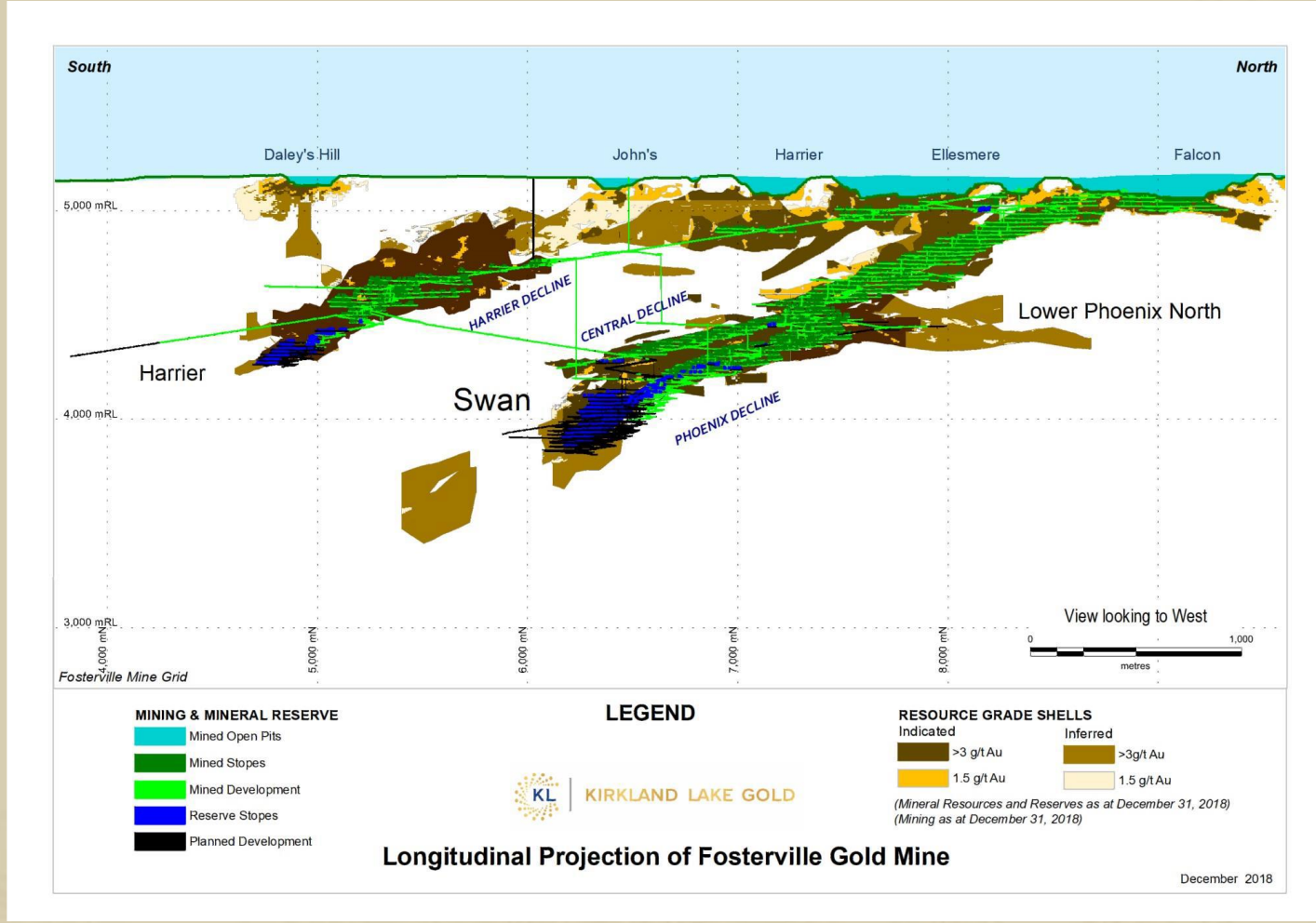
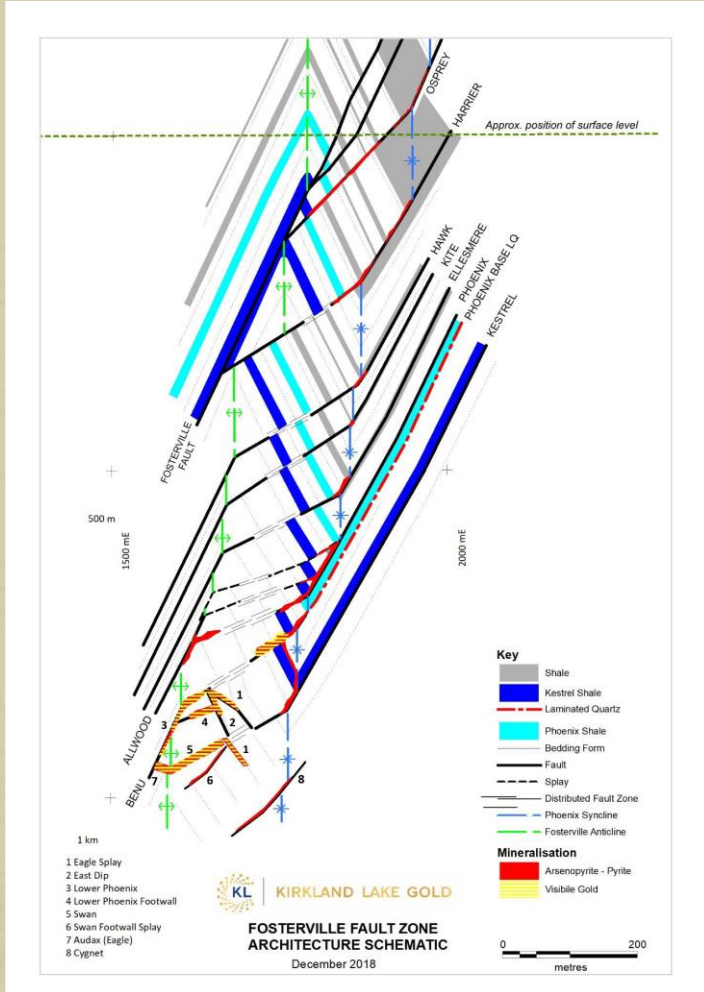


## Camel Creek: High Grade Ore Zone





# Camel Creek: Fosterville Analogy





## Significant Drill Intersections Golden Cup and Big Rush

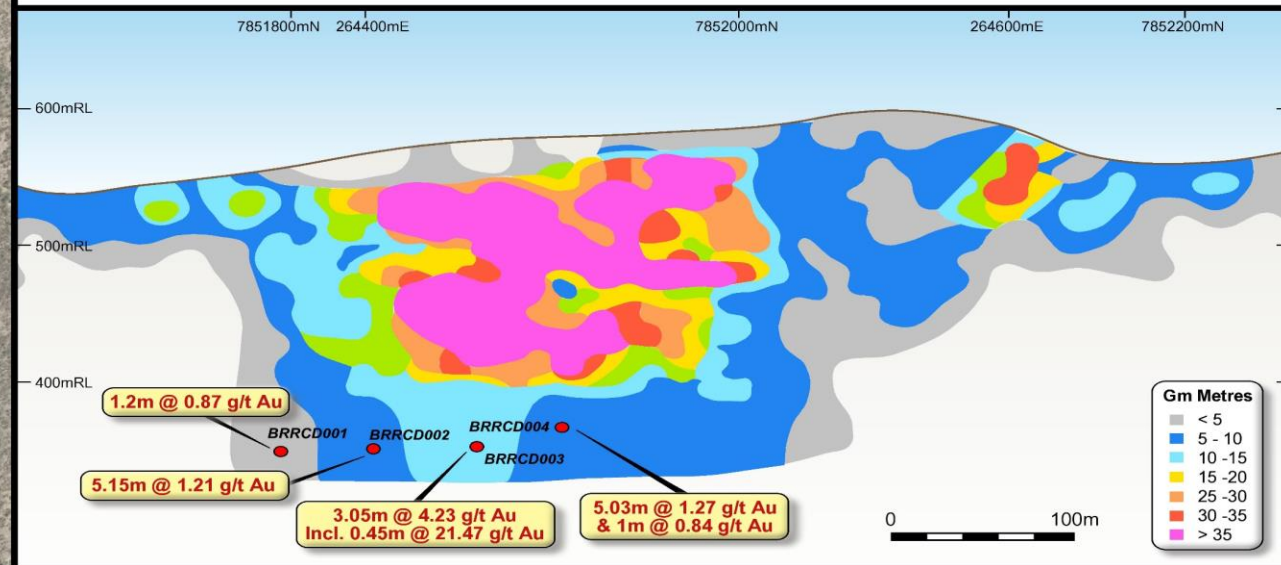
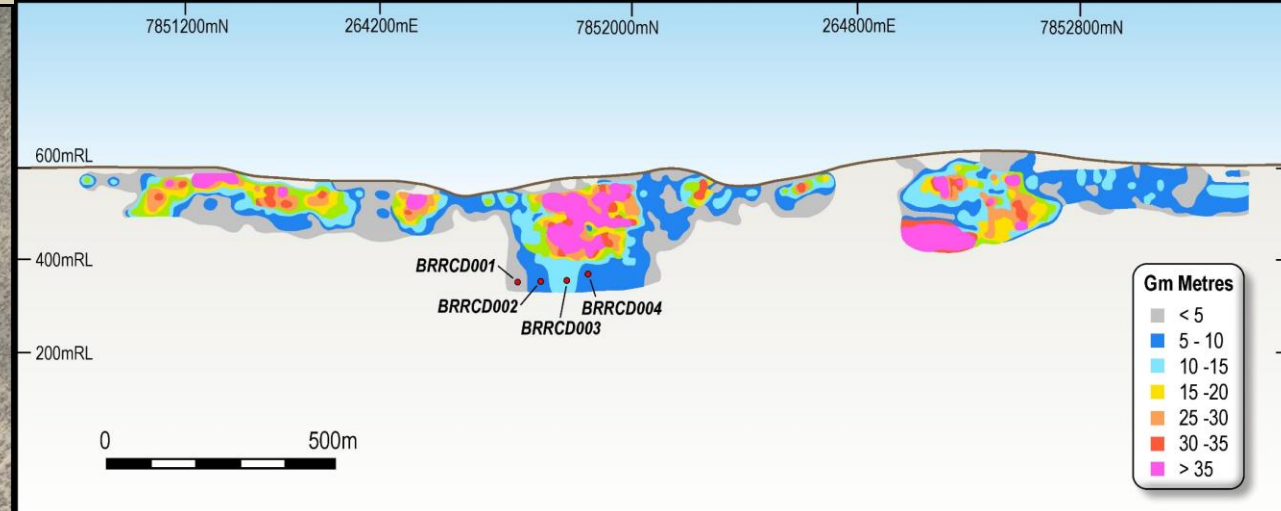
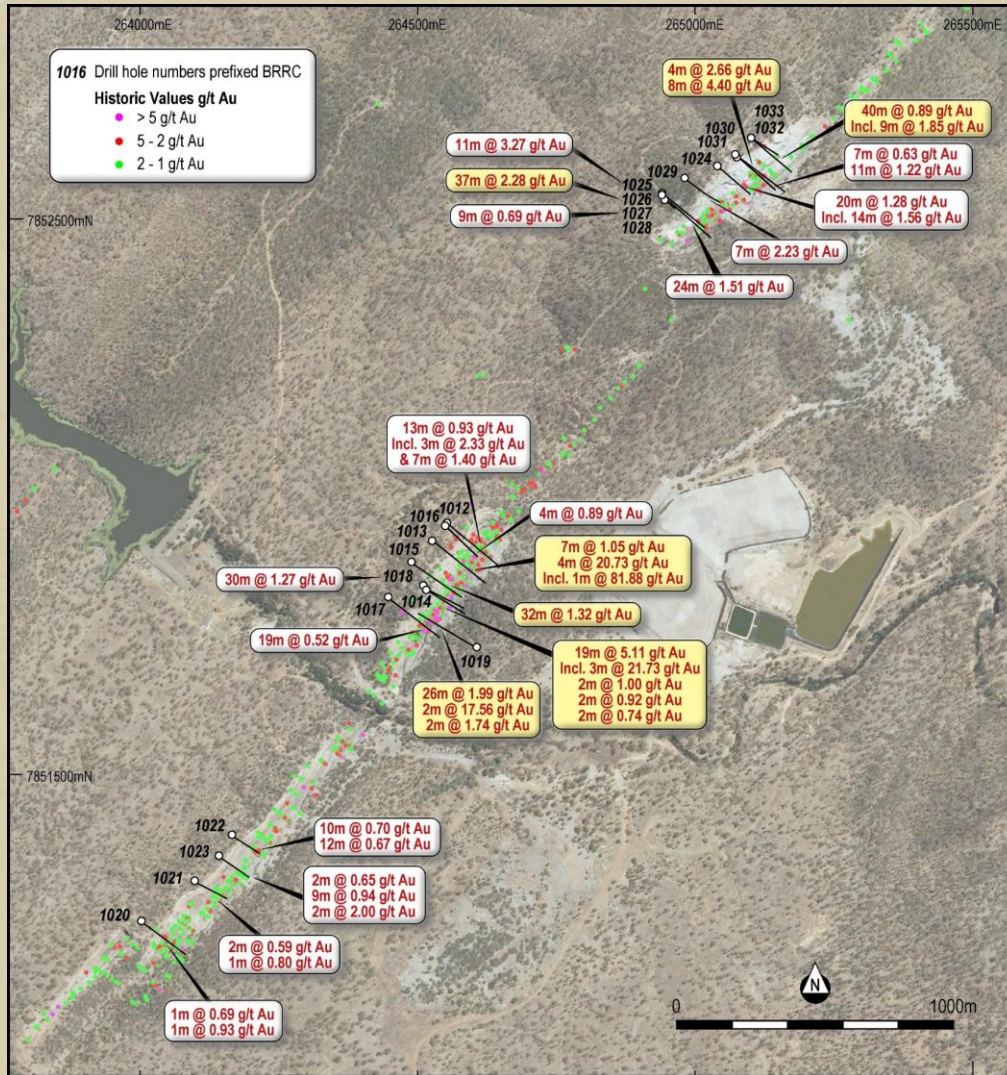
- **7m @ 7.49 g/t Au** (GCRC074) from 38 metres
- **9m @ 4.72 g/t Au** (GCRC078) from 35 metres
- **5m @ 12.60 g/t Au** (BRRC1004) from 92m
- **15m @ 2.40 g/t Au** (BRRC1006) from 84m
- **28m @ 2.5 g/t Au**(BRRC1007) from 83m inc **15m @ 3.3 g/t Au** from 83m
- **3m @ 14.52 g/t Au** (BRRC 1008) from 118m
- **24m @ 4.04 g/t Au** (BRRC1009) from 97m and **2m @ 35.2 g/t Au** from 113m
- **7m @ 2.45 g/t Au** (BRRC1010) from 88m
- **19m @ 5.11 g/t Au** (BRRC1014) including **3m @ 21.73 g/t Au** from 77 metres
- **32m @ 1.32 g/t Au** (BRRC1015) from 132 metres
- **28m @ 1.27 g/t Au** (BRRC1018) from 91 metres
- **26m @ 1.99 g/t Au** (BRRC1019) including **2m @ 17.56 g/t Au** from 119 metres
- **20m @ 1.28 g/t Au** (BRRC1024) from 106 metres
- **11m @ 3.27 g/t Au** (BRRC1025) from 144 metres
- **37m @ 2.28 g/t Au** (BRRC1026) from 148 metres
- **8m @ 4.40 g/t Au** (BRRC1030) from 155 metres



## BIG RUSH

- RC Drilling in December 2019 and September 2020 returned high grade gold intercepts beneath the Central and Northern Pit including:
  - **28m @ 2.51 g/t Au from 83m (BRRC1007) &**
  - **24m @ 3.99 g/t Au from 73m (BRRC1009)**
  - **24m @ 3.90 g/t Au, including 8m @ 10.57 g/t Au from 140 metres (BRRC1013)**
  - **32m @ 3.89 g/t Au, including 4m @ 18.97 g/t Au from 76 metres (BRRC1014)**
  - **28m @ 1.71 g/t Au from 148m (BRRC1026)**
- **Maiden gold resource of 154,000 ounces announced in February 2021 (558,322 tonnes @ 2.62 g/t Au)**
- Historic heap leach operation processed 950,000t @ 1.9g/t Au
- Mining conducted from 1994-1997
- 4 open pits over a 2.2km strike length.
- The Central, Northern and Southern Pits have been recently drilled with highly encouraging results. To date 1 kilometre out of 2.4 kilometre systematically assessed with excellent potential for the delineation of a substantial gold resource

# Big Rush Aerial Imagery Overview and Recent 2020 Drilling





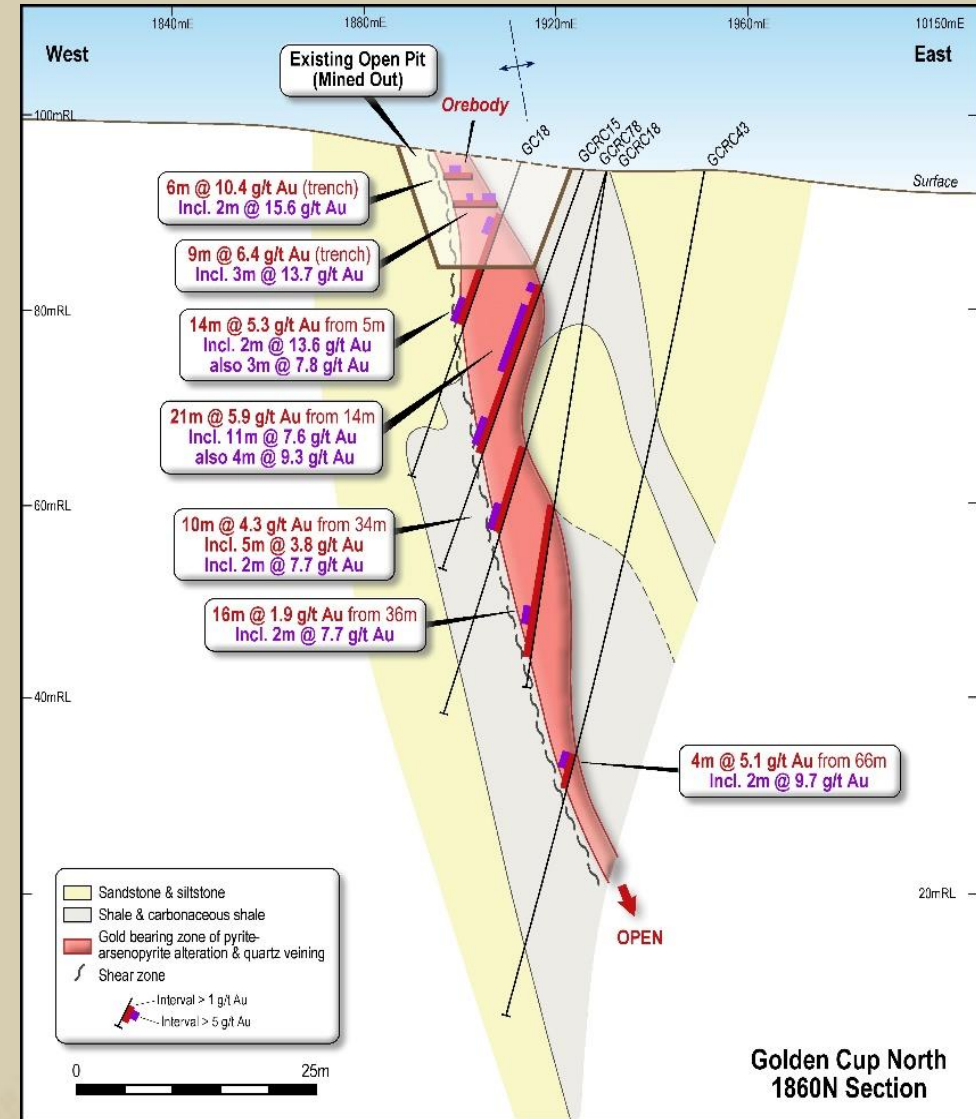
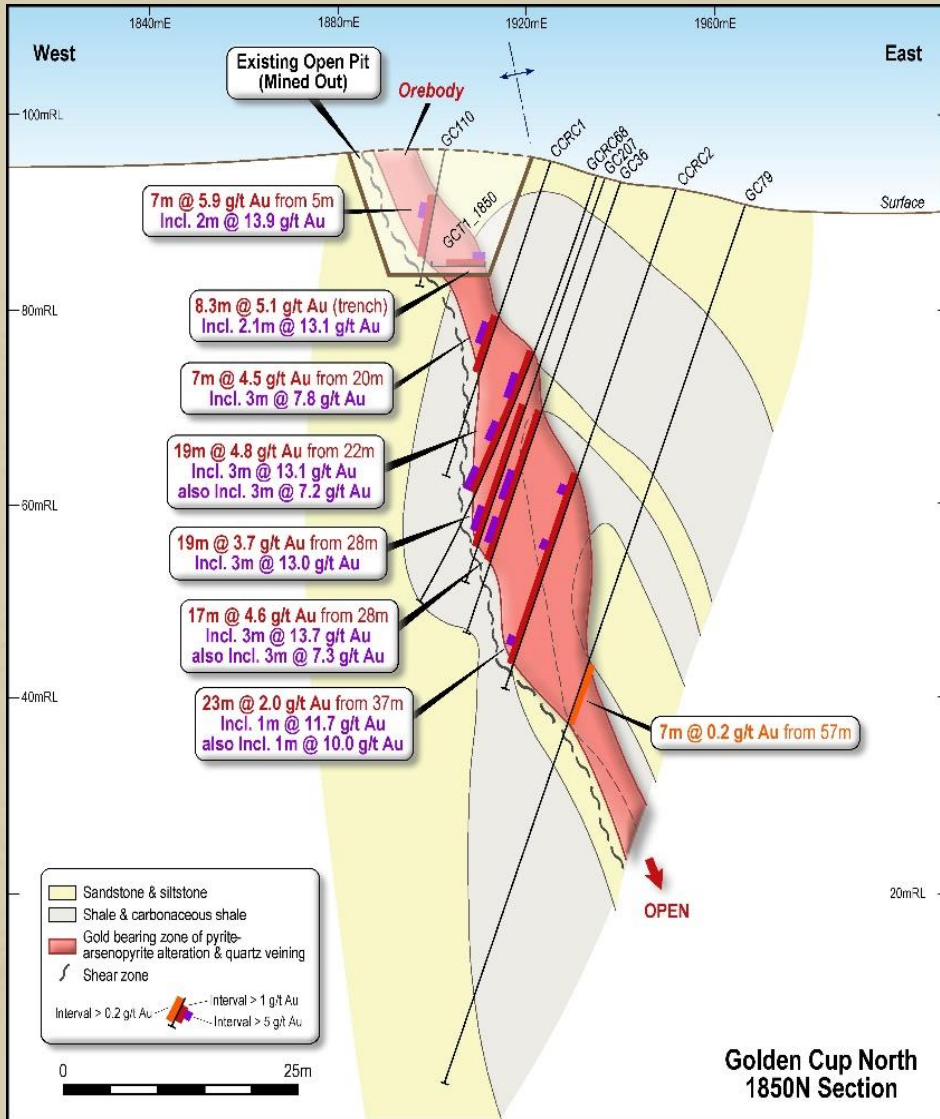
## GOLDEN CUP

- RC Drilling in December 2019 returned high grade gold intercepts including:
  - **7m @ 7.49 g/t Au from 32m (GCRC074) &**
  - **9m @ 4.72 g/t Au from 42m (GCRC078)**
- Maiden JORC-compliant gold resource of **30,000 ounces** announced in December 2019 (256,504 tonnes @ 3.60 g/t Au)
- Historically heap leaching processed approximately 200,000t @ 2.8 g/t Au for 18,000 ounces with production finishing in 1993
- Ore extracted from 9 pits over a 1.5km strike length with an average pit depth of less than 15m
- 90% of drilling was less than 50m deep and mineralisation remains open at depth and along strike



Golden Cup Open Pit

# GOLDEN CUP: Cross Sections





## Executing the strategy

### 2021

- Big Rush resource upgrade to 154,000 ounces (3.53 million tonnes at 1.36 g/t Au)
- Successful capital raising of \$3M
- High grade results RC drilling at Camel Creek
- Follow up drill program at Camel Creek (Q2-Q3)
- First JORC resource estimate for Camel Creek (Q4)

### 2022

- Release of Scoping Study for Camel Creek (Q2)
- Further RC drilling at all projects with anticipated resource upgrades.





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