



# Gum Creek Gold Project

## Free Milling Scoping Study

# Disclaimer

## Cautionary Statements

This presentation includes information extracted from Panoramic Resources Limited ASX announcement dated 18 March 2016 entitled “Gum Creek Gold Project – Free Milling Scoping Study”. The Scoping Study is based on low-level technical and economic assessments, and is insufficient to support the estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised.

There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

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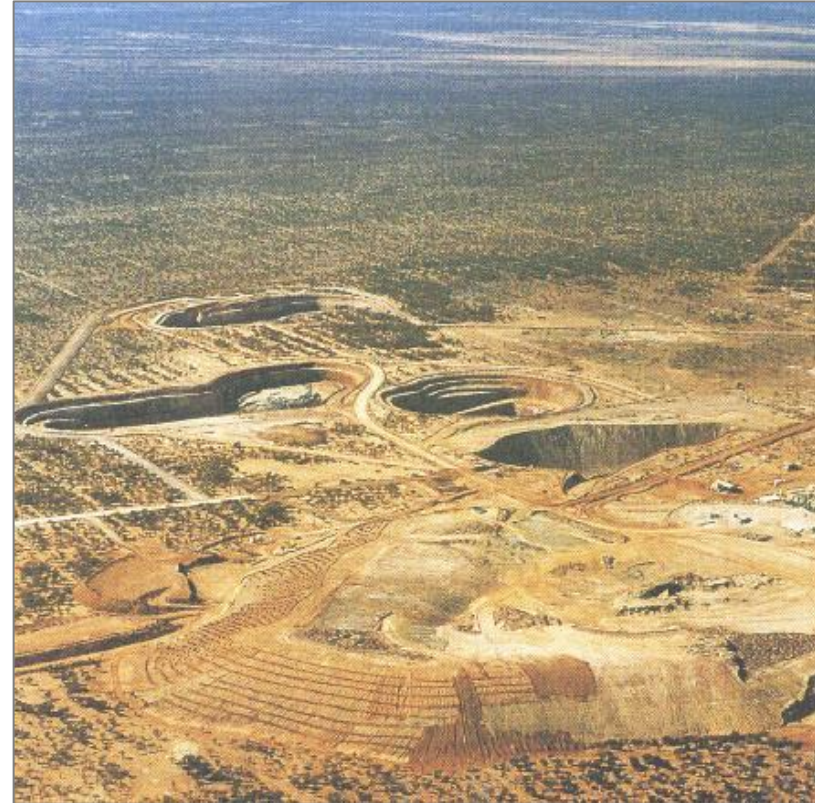
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*Aerial view of Gum Creek Gold open pits and tailings dam*

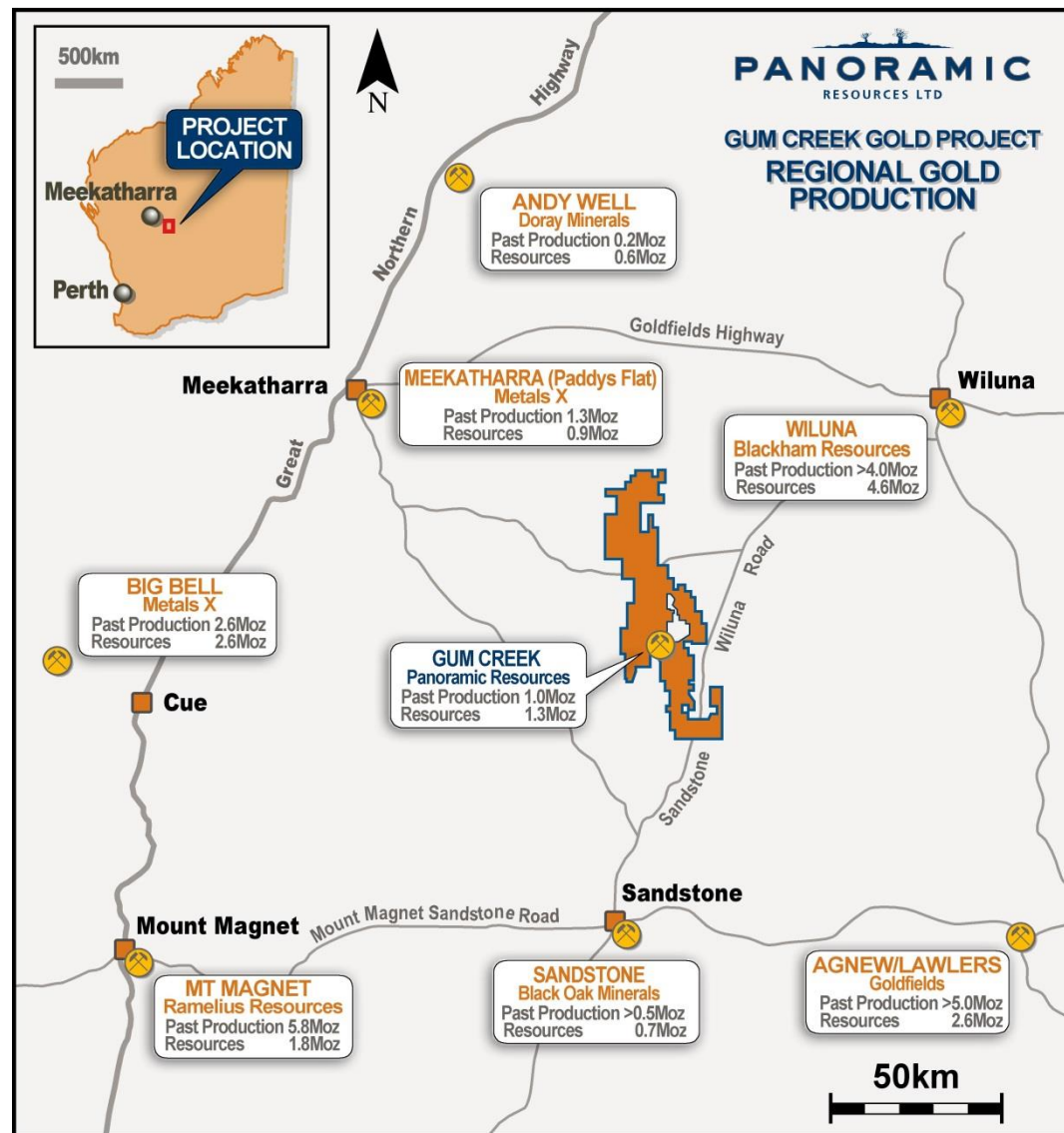
# Gum Creek Gold highlights

## General

- Located 120km west of Wiluna, Western Australia
- Large tenement package ~800km<sup>2</sup>
- Significant Resource 17.4Mt for 1.3Moz with an average grade of 2.3g/t Au<sup>1</sup>

## Free Milling Project key points:

- Total production 290,000oz<sup>2</sup>
- Annual production 60,000oz pa<sup>2</sup> (years 1-4)
- Initial project life of 6 years
- AISC A\$1,209/oz
- Pre-production capital of only A\$62M



Gum Creek Gold Project location and regional gold production

<sup>1</sup>Refer to page 27 Appendix 2 - Resources as at 30 June 2015

<sup>2</sup>Refer to page 2 Disclaimer - Cautionary Statements





# Free Milling Scoping Study Summary

# Key project statistics

Operating Metric	Assumption/Result
Gold Price and Exchange Rate	A\$1,700/oz (US\$1,275/oz and A\$1:US\$0.75)
Mining Inventory	4.9Mt @ 1.94g/t Au for 309,000oz contained gold
Mining Method	Open Pit
Project life (processing)	5.8 years
Life of Mine (“LOM”) production	290,000oz Au (average ~60,000oz for years 1-4)
Pre-production capital cost	A\$62M
Average LOM All-in sustaining costs (“AISC”)	A\$1,209/oz Au
LOM processing recovery	95%
LOM strip ratio	9.4:1
Pre-tax IRR	30%
LOM Revenue	A\$496M
LOM EBITDA	A\$149M
LOM Pre-tax cash flow	A\$82M
LOM Pre-tax NPV	A\$37M (11% real), A\$58M (5% real)
Construction period	~12 months

- Short lead time to cashflow ~12 months
- Modest pre-production capital ~A\$62M
- Low metallurgical risk due to previous production history
- Quick ramp up to 60,000ozpa production
- Attractive NPV and IRR

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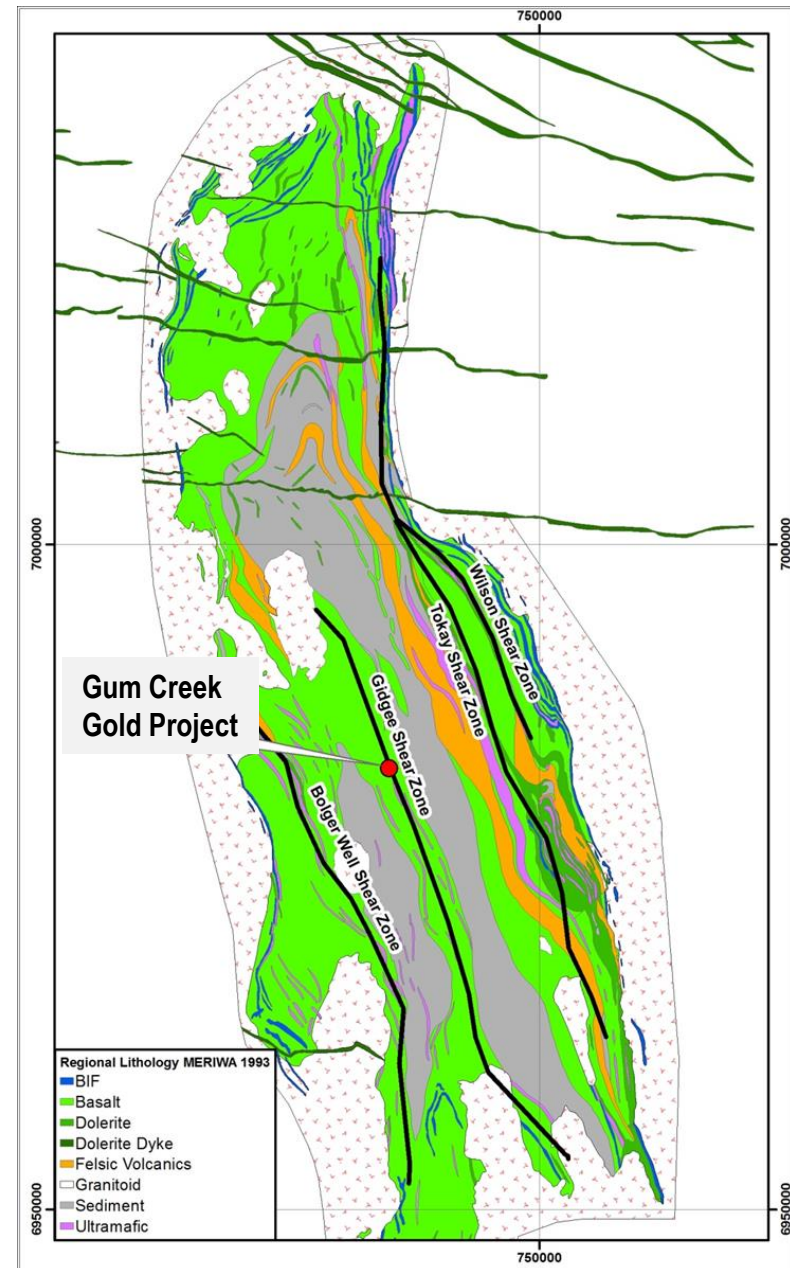
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# Geology & Mineralisation

# Geology

- Situated within the East Murchison Province of the Western Australian Archaean Yilgarn Craton which has a history of significant gold production
- The Project area covers ~800km<sup>2</sup> of the Gum Creek Greenstone Belt (GCGB), an Archean sequence dominated by volcanic and sedimentary rocks
- The GCGB is 110kms long and up to 24kms wide
- Surrounded by intrusive granitoids
- Margins of the belt are typically dominated by contact-metamorphosed basalts and banded iron formations





# Styles of mineralisation

## Quartz-Carbonate ( $\pm$ pyrite, arsenopyrite, galena & sphalerite) veins

- Developed in brittle dilational openings about major N-S shears within competent mafic host
- Locally very high grade > 20g/t Au
- Often overlain by extensive supergene enriched zones
- Type examples - Swan, Swift & Kingfisher

## Refractory – ductile shear hosted mineralisation

- Very fine grained gold associated with sulphide poor, intense biotite-sericite altered shear zones
- Grade typically 5 – 10g/t Au
- Sulphides dominated by arsenopyrite, pyrrhotite
- Type example - Wilsons

## Non refractory – ductile shear hosted mineralisation

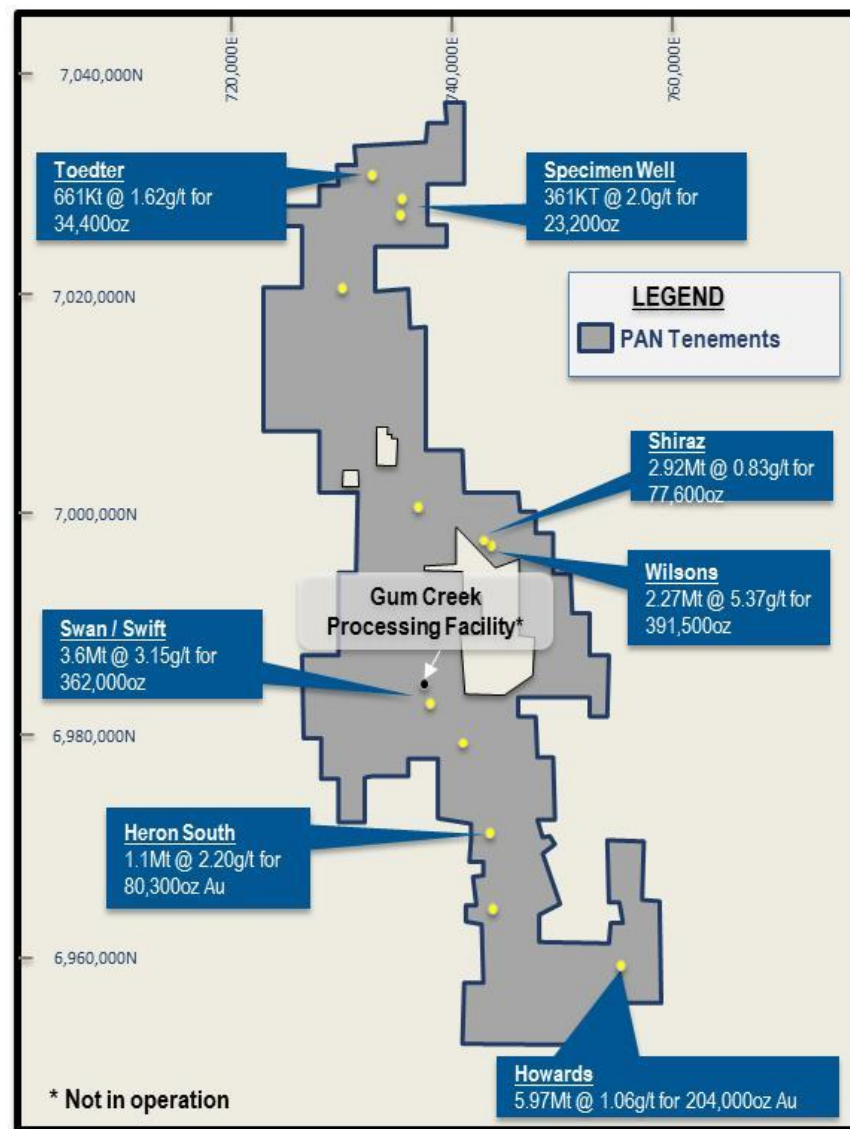
- Very fine grained gold associated with sulphide poor, weak biotite altered shear zones
- Grade typically 1 – 2g/t Au
- Sulphides dominated by pyrite
- Type example – Howards

## BIF hosted mineralisation

- Quartz- pyrrhotite-gold replacement of magnetite layers
- Grade 1 – 10g/t Au
- Preferentially developed about fractures and fold hinges
- Type examples – Omega, Psi

## Quartz Veins

- Sheeted to anastomosing quartz veins and lenses developed in shears straddling granodiorite contact
- Generally sulphide poor with grade 1 – 5g/t Au
- Type examples – Montague deposits



Gum Creek Gold tenements and main Resources\*



# Mining and Processing

# Mining Inventory\*

Resource	Indicated			Inferred			Total			% Inferred (by Tonnes)
	Mined Tonnes (t)	Grade (g/t Au)	Contained Metal (Oz Au)	Mined Tonnes (t)	Grade (g/t Au)	Contained Metal (Oz Au)	Mined Tonnes (t)	Grade (g/t Au)	Contained Metal (Oz Au)	
Swan	1,252,153	2.41	97,127	622,589	2.04	40,908	1,874,742	2.29	138,035	33%
Swift	877,384	2.40	67,825	290,498	2.54	23,757	1,167,882	2.44	91,582	25%
Howards	1,809,920	1.30	75,818	83,730	1.20	3,220	1,893,650	1.30	79,038	4%
Total	3,939,457	1.90	240,770	996,817	2.12	67,885	4,936,274	1.94	308,655	20%

**\*In relation to the use of the term “Mining Inventory”, the Company advises:**

- the Mining Inventory includes Inferred Resources and is not an Ore Reserve and will not be classified as such until such time as a pre-feasibility study has been undertaken; and
- the term has been used in the ASX Announcement dated 18 March 2016 and this presentation to refer to Mineral Resources to which reasonable assumptions relating to Modifying Factors in mining of the Swan, Swift and Howards open pit Resources, (as detailed in Appendix 1) have been applied.

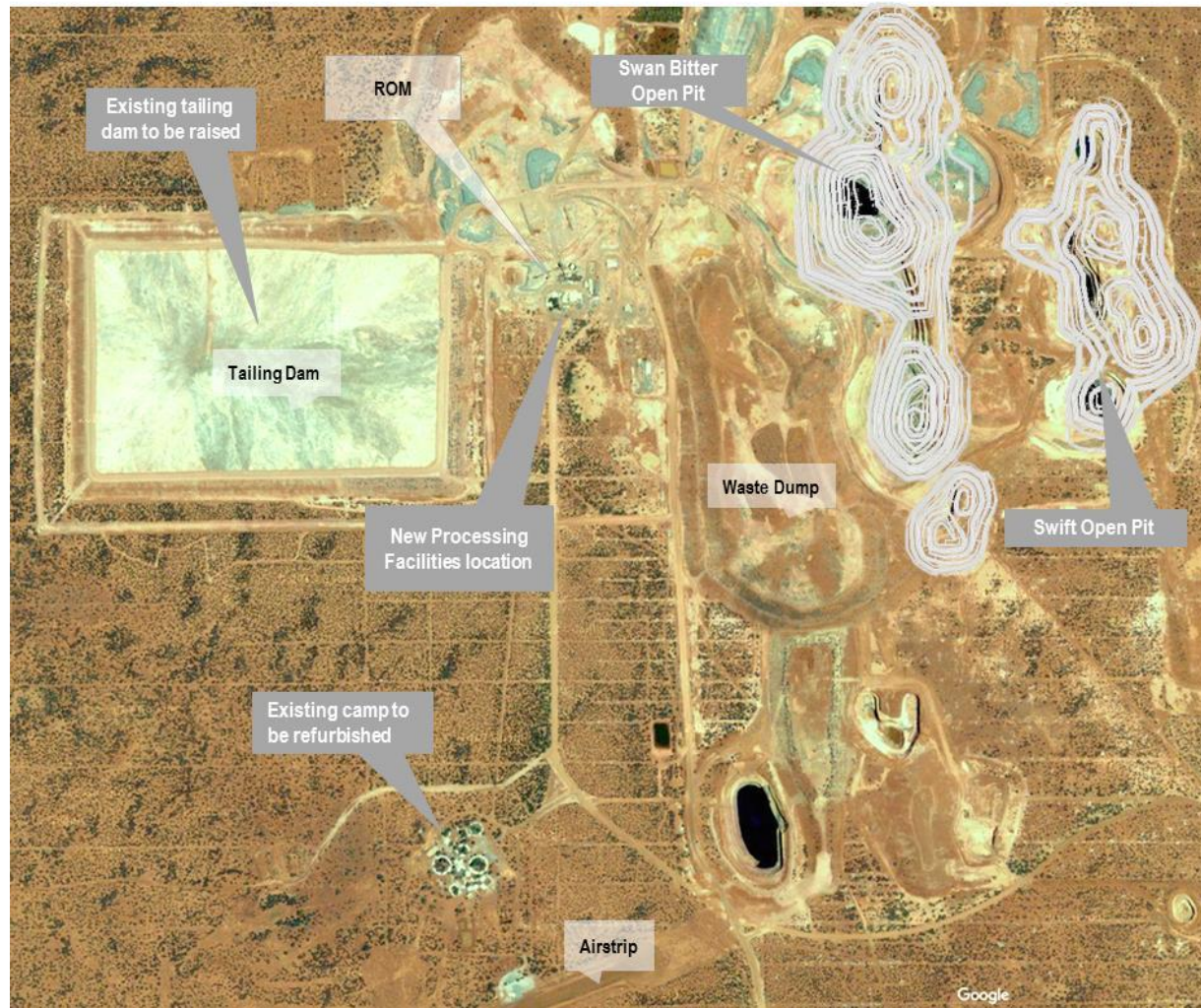
# Infrastructure

## ■ Existing Infrastructure

- Airstrip
- Tailings dam
- Accommodation village\*
- Waste dump
- Water
- Roads

## ■ New Infrastructure

- Process plant
- Expanded camp
- BOOT power station



Gum Creek Gold central infrastructure area

\*Relocation of some accommodation and facilities from other Panoramic sites



# Processing

## ■ Processing Plant

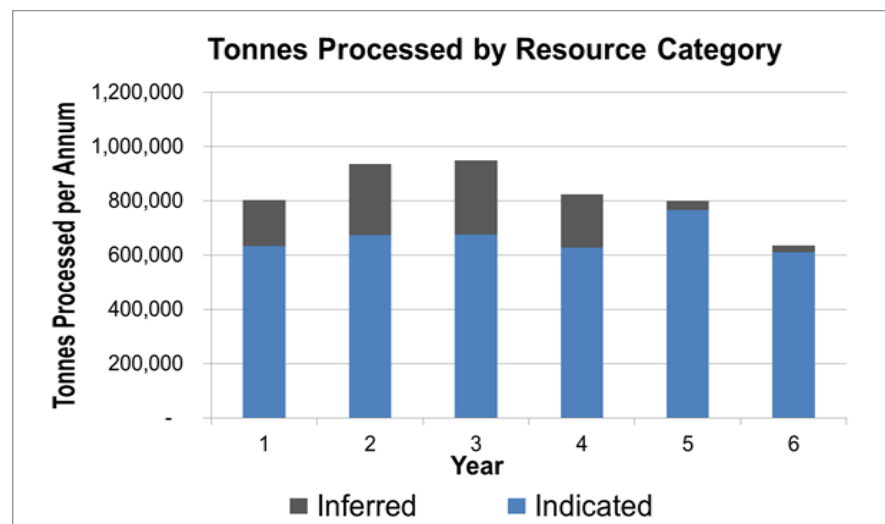
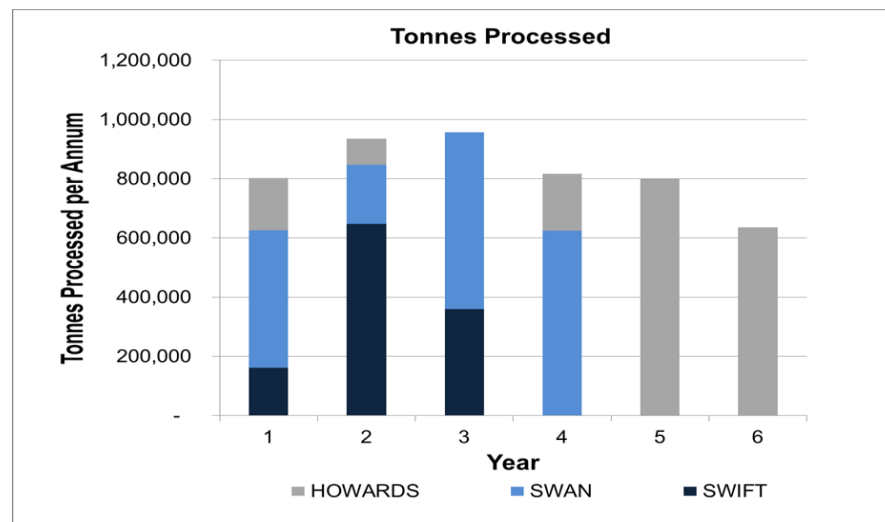
- Three stage crushing, single ball mill, gravity circuit, cyanide leach, elution circuit and gold room
- Throughput rates
  - fresh material - 800ktpa
  - oxide/transitional material - 1Mtpa

## ■ Metallurgy

- Historic metallurgical recoveries on Swan and Swift ore range between 97-99%
- Testwork on Swan and Swift Resources confirmed these recoveries
- Testwork on Howards mineralisation returned average recoveries of 91%
- **Recoveries used in study** - average of 95% over LOM

■ **LOM Production** - 290,000oz Au

■ **Annual Production** - 60,000oz pa (years 1-4)



*The chart above shows the proportion and relative sequencing of the combined Swan, Swift and Howards Indicated and Inferred Resources over the initial Project life of approximately six years*





# Estimated Costs and Project Economics

# Estimated capital and operating costs

- Modest pre-production capital of \$62M
- Based on all new processing plant
- Utilises some existing capital items from other Panoramic sites
- Competitive cash costs due to a combination of:
  - Free milling feed
  - High metallurgical recoveries
- Opportunities to save on capital and operating costs:
  - Competitive bid for construction of plant and associated infrastructure
  - Utilise second hand equipment in the processing plant
  - Optimise the process flowsheet
  - Competitive bid for open pit mining contract
  - Higher metallurgical recoveries

## Capital Cost Summary

Item	Initial Capital (A\$M)	Sustaining (A\$M)	Total over Project Life (A\$M)
Capitalised Mining	13	-	13
Processing Facilities	36	-	36
Processing Infrastructure	5	-	5
Tailings Dam	1	3	4
Other	7	-	7
Sustaining	-	2	2
<b>Total</b>	<b>62</b>	<b>5</b>	<b>67</b>

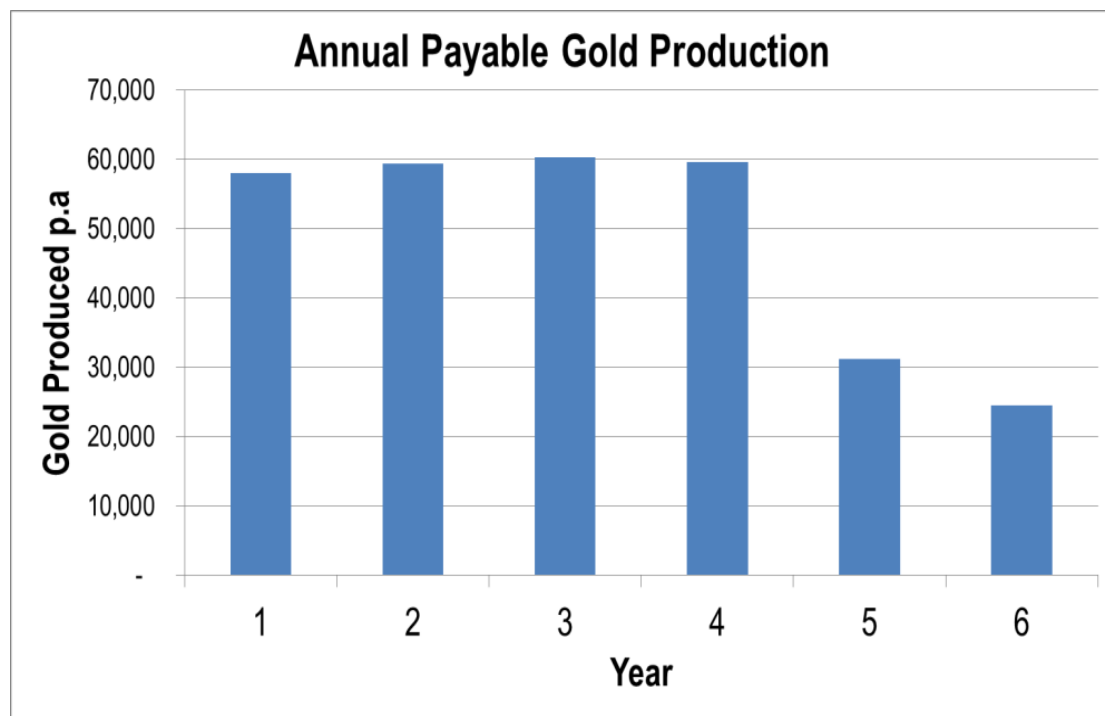
## Operating Costs Summary

Item	A\$/t Milled	A\$/oz Au
Total Mining (after waste and cutbacks)	35	598
Processing*	28	471
General and Administration	4	72
Sustaining Capital	1	17
Royalties	3	45
Refining	0	5
<b>All in sustaining cost (AISC)</b>	<b>72</b>	<b>1,209</b>

*\*Processing cost includes road train haulage of Howards*

# Robust project economics at A\$1,700/oz

- Revenue - \$496M
- EBITDA - \$A149M
- Pre-tax cashflow - \$72M
- Pre-tax NPV (11%) - \$37M
- IRR - 30%
- Average all-in sustaining cost A\$1,209/oz



# Sensitivity to A\$ gold price

Pre-tax cashflows and NPVs at various gold prices	A\$/oz Gold Price				
	1,600	1,700	1,800	1,900	2,000
Cashflow after royalties (A\$M)	53	82	110	139	168
NPV 11% after royalties (A\$M)	17	37	57	77	97

- Highly leveraged to A\$/oz gold price
- A\$100/oz increase in Au price adds ~A\$30M to pre-tax cashflow

Project NPVs at various discount rates	5%	6%	7%	8%	9%	10%	11%
Pre Tax NPV (A\$M) at A\$1,700/oz	58	54	51	47	43	40	37

## Opportunities and Risks

### Opportunities

- Exploration success
- Incorporation of additional Resources (free milling or refractory)
- Optimisation of mining schedules and production rates
- Optimisation of process flow sheet
- Operating and capital cost reductions

### Risks

- A\$ gold price
- Operating costs eg. diesel price
- Metallurgical recoveries
- Project financing
- Regulatory approvals



## Next Steps



# Next Steps

- Commence detailed design and optimisation for delivery of a Feasibility Study
- Seek indicative funding terms for the Project
- Enhance shareholder value through:
  - sale of the project; or
  - hold and develop



*Aerial view of the Swan and Swift open pits*

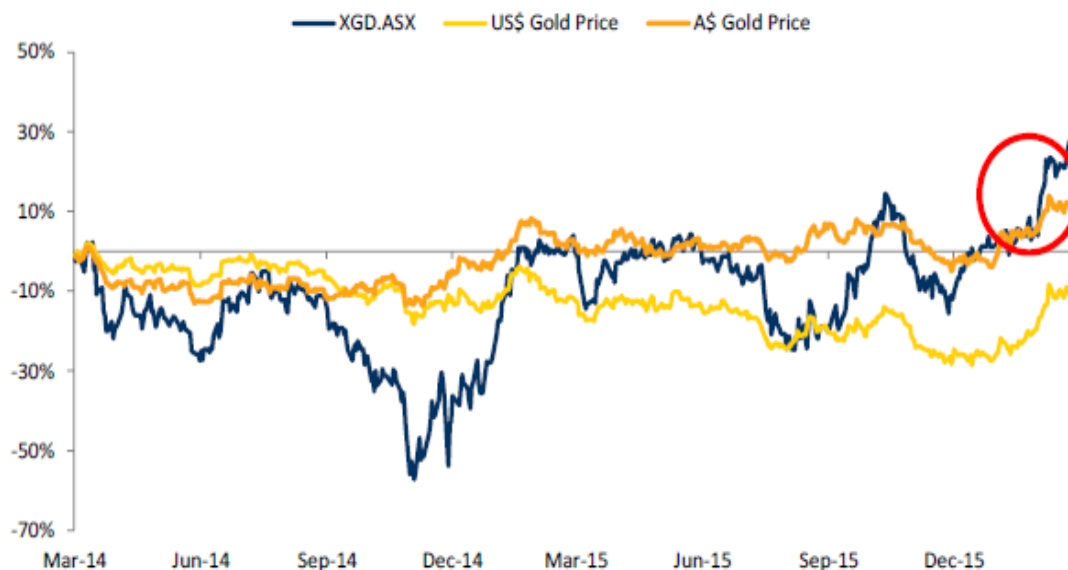


# Summary

# Summary

- Gum Creek hosts a significant gold Resource of 1.3Moz
- The Free Milling Scoping Study demonstrates a pathway to 60,000oz annual production for a modest capital cost of \$62M
- The Project has a relatively short lead time to production of 12 months and significant leverage to A\$ gold price
- The Study significantly enhances the value of the asset for sale and/or to hold and develop
- Potential for further exploration success and option to mine and treat the significant Wilsons refractory Resource
- Potential to re-rate Panoramic as an Australian gold development stock, noting that Australian gold equities have outperformed recently

Australian gold equities significantly outperforming both A\$ and US\$ gold prices.



Source: Bloomberg; RBC Capital Markets



# History of Gum Creek

# History of Gum Creek (formerly Gidgee)

- 1930 - Gold first discovered at Gidgee
- 1931-1954 - small scale mining
- 1950's-1980's - exploration by a number of international companies including INCO, WMC, AMAX and AMOCO for nickel and copper-zinc massive sulphides
- 1983 - AMOCO (later Cyprus) commenced gold exploration
- 1988 - Australian Resources Ltd commenced mining
- 2005 - operations placed onto care and maintenance (gold price <US\$500/oz)
- **Total historic production in excess of 1Moz gold**



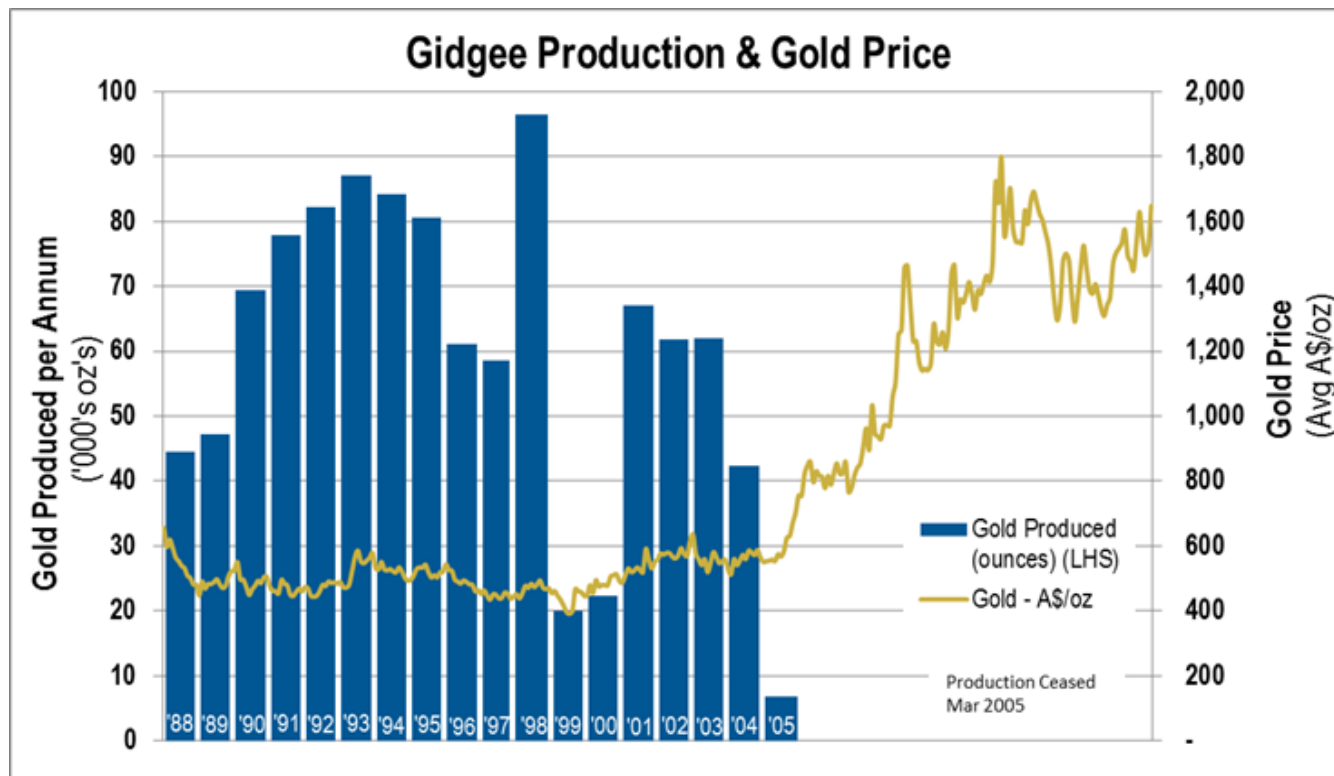
## Panoramic:

- Acquired Gidgee in 2011 and Wilsons in 2012
- Completed original Scoping Study in 2012
- Between 2011-2015, undertook drilling programs and upgraded the Resources to a total of 1.3Moz
- Metallurgical testwork and mine planning optimisation studies
- Major airborne EM and gravity data sets acquired in 2015 which have generated a number of new targets



# Production 1988 - 2005

- 1988 -October 1999 - Australian Resources Limited mined Gidgee
- October 1999 - Abelle Limited took over Gidgee and resumed mining in February 2000
- End 2002 - Open pit mining ceased and milling was reduced to two weeks on, one week off to treat underground ore from Swan Bitter
- 2003 - Abelle was taken over by Harmony Gold
- November 2003 - Harmony sold Gidgee to Legend Mining
- March 2005 - Legend ceased mining at Gidgee and placed the operation onto care and maintenance



Ore produced from 20 open pits and three underground mines

Since closure in 2005 the gold price in A\$ has risen approximately 2.5 times



# Appendices

# Appendix 1

*The Mining Inventory is based on existing Resources (refer to Appendix 2), and there has been no conversion of the Mineral Resource to Ore Reserve as a result of this Study. Key mining parameters used in the Study are as follows:*

## Swan

The open pit Resource model includes modifying factors

- Cut off grade – 0.7g/t Au
- Minimum Mining Width – 4m downhole
- Internal Dilution – 2m downhole
- Edge Dilution – 1m either side downhole
- High Grade Cuts – Oxide – 10g/t, Transitional – 20g/t, Fresh – 200g/t
- Pit Slope angles range from 35-45 degrees
- Ramp widths range from 12-18m wide with a gradient of 1 in 9
- Batter angles range from 55 degrees near the surface to 70 degrees at the base, berm heights of 20m and minimum berm widths of 7m

## Swift

The open pit Resource model includes modifying factors

- Cut off grade – 0.7g/t Au
- Minimum Mining Width – 4m downhole
- Internal Dilution – 2m downhole
- Edge Dilution – 1m either side downhole
- High Grade Cuts – Oxide – 20g/t, Transitional – 30g/t, Fresh – 30g/t
- Pit Slope angles range from 40-44 degrees
- Ramp widths range from 12-18m wide with a gradient of 1 in 9
- Batter angles range from 55 degrees near the surface to 70 degrees near the base, berm heights of 20m and minimum berm widths of 5m

## Howards

The following mining factors were applied to the Howards Resource

- Cut off grade – 0.88g/t Au
- Mining dilution – 5%
- Mining loss – 5%
- Pit Slope angles were 45 degrees
- Ramp widths range from 12-18m wide with a gradient of 1 in 9
- Batter angles of 70 degrees, berm heights of 20m and berm widths of 5m

## Appendix 2 - GUM CREEK GOLD - RESOURCES AS AT 30 JUNE 2015

Resource	Date of Resource	JORC Compliance	Measured		Indicated		Inferred		Total		Metal (Au oz)
			Tonnes	Au (g/t)	Tonnes	Au (g/t)	Tonnes	Au (g/t)	Tonnes	Au (g/t)	
Gum Creek Gold Project											
Swan OC	Jun-15	2012	-	-	2,250,000	2.57	990,000	2.36	3,240,000	2.51	261,100
Heron South	Oct-12	2004	-	-	1,000,000	2.31	136,000	1.41	1,136,000	2.20	80,300
Howards	Jul-13	2012	-	-	5,255,000	1.07	716,000	1.01	5,971,000	1.06	204,000
Specimen Well	Jun-12	2004	-	-	289,000	2.06	72,000	1.79	361,000	2.00	23,200
Toedter	Jun-12	2004	-	-	-	-	661,000	1.62	661,000	1.62	34,400
Eagles Peak	Mar-06	2004	-	-	13,000	3.46	-	-	13,000	3.46	1,400
Orion	Mar-06	2004	-	-	22,000	3.04	-	-	22,000	3.04	2,200
Deep South	Mar-06	2004	-	-	20,000	3.02	-	-	20,000	3.02	1,900
Shiraz	Jul-13	2012	-	-	2,476,000	0.84	440,000	0.76	2,916,000	0.83	77,600
Swan UG	Jun-15	2012	-	-	207,000	8.71	77,000	11.25	284,000	9.40	85,800
Swift UG	Jun-15	2012	-	-	-	-	46,000	10.25	46,000	10.25	15,200
Omega UG	Mar-06	2004	-	-	31,000	9.20	-	-	31,000	9.20	9,200
Kingfisher UG	Mar-06	2004	-	-	390,000	6.80	-	-	390,000	6.80	85,300
Wilsons UG	Jul-13	2012	-	-	2,131,000	5.33	136,000	5.97	2,267,000	5.37	391,500
Total (Au)			-	-	14,084,000	2.32	3,274,000	2.12	17,358,000	2.28	1,273,100

*Note: further 2012 Edition JORC compliance tables are referenced in the Company's ASX announcement dated 30 September 2015*

# Qualifying statement and notes

*Swan OC resource cutoff grade is 0.7 g/t. The resources (both Ind & Inf categories) have been partially diluted over a minimum mining width of 2.5m and confined to a Aus \$2,000 Whittle pit shell*

*Eagles Peak resource cutoff grade is 1.2 g/t*

*Orion resource cutoff grade is 1.3 g/t*

*Deep South resource cutoff grade is 1.2 g/t*

*Swan UG resource cutoff grade is 4.0 g/t for Indicated resource wireframes near historic workings and 6.0 g/t for Inferred resource wireframes away from historic workings. In transitioning the Swan UG resource from JORC2004 to 2012 in 2015 the Inferred resource cut-off grade has gone from 5.0 to 6.0 g/t Au. The resource is based on an approximate 2.5m minimum vertical mining width.*

*Swift UG resource cutoff grade is 6.0 g/t. In transitioning the Swift UG resource from JORC2004 to 2012 in 2015 the Inferred resource cut-off grade has gone from 5.0 to 6.0g/t Au*

*Omega UG resource cutoff grade is 3.0 g/t*

*Kingfisher UG resource cutoff grade is 3.0 g/t*

*Individual Project Resources and Reserves are stated on an equity basis*

*The information in this report that relates to the Swan OC, Eagles Peak, Orion, Deep South, Swan UG, Swift UG, Omega, and Kingfisher Mineral Resources is based on information compiled by or reviewed by Dr Spero Carras (FAusIMM). Dr Carras is the Executive Director of Carras Mining Pty Ltd and was acting as a consultant to Legend Mining Ltd in 2006 and Panoramic Resources Ltd in 2012. Dr Carras has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2004 Edition of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Carras consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.*

*Heron South resource cutoff grade is 0.5 g/t*

*Howards resource cutoff grade is 0.5 g/t*

*Specimen Well resource cutoff grade is 0.5 g/t*

*Toedter resource cutoff grade is 0.5 g/t*

*Wilsons resource cutoff grade is 2.0 g/t*

*Individual Project Resources and Reserves are stated on an equity basis*

**Competent Persons Statement** - *The information in this report that relates to the Heron South, Howards, Specimen Well, Toedter and Wilsons Mineral Resources is based on information compiled by or reviewed by Andrew Bewsher (AIG) and Ben Pollard (AIG & MAusIMM). Andrew Bewsher and Ben Pollard are full time employees of BM Geological Services and have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Andrew Bewsher and Ben Pollard consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.*