



NORTHERN STAR
RESOURCES LIMITED

ASX Code: NST

Jundee Gold Mine

Jundee Overview
Reserve and Resource
In Mine Exploration & Growth
In Mine Extension Projects
Surface Exploration & Extension Projects
Appendix

1. Jundee Mine and Geology Overview August 2015

Competent Persons Statements

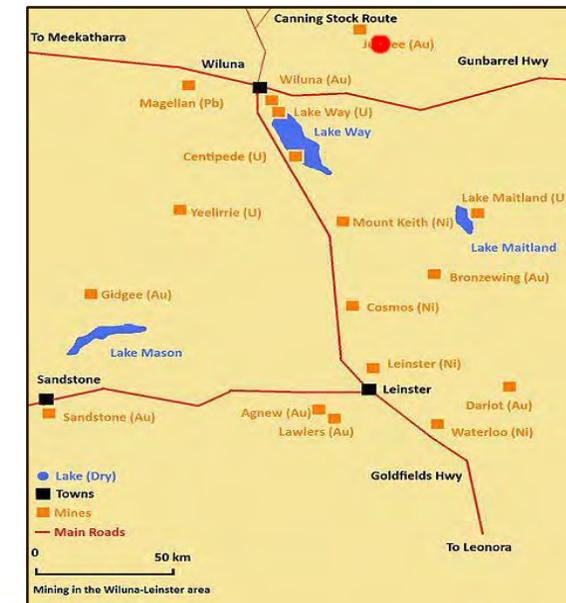
- ✦ The information in this announcement that relates to exploration results, data quality, geological interpretations and Mineral Resource estimations for the Company's Jundee Project is based on information compiled by Brook Ekers and fairly represents this information. Mr Ekers is a Member of the Australian Institute of Geoscientists and a full-time employee of Northern Star Resources Limited who has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Ekers consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.
- ✦ The information in this announcement that relates to Ore Reserve estimations for the Company's Jundee Project is based on information compiled by Jeff Brown and fairly represents this information. Mr Brown is a Member of the Australian Institute of Mining and Metallurgy who is a full-time employee of Northern Star Resources Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Brown consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

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, 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.

Jundee Operation Overview

- **Location :** Western Australia - 50km Northeast of the town of Wiluna and 970km Northeast of Perth
- **Mining History:** First production from Open pits commenced in 1995 - transitioning into an underground-only operation by Sept 2007 delivering a total combined mill production of 41.8M tonnes with an average head grade of 5.1gpt and a 94% recovery for 6.4M fine ounces of gold poured to end June 2015.
- **Mineral Resource (incl. of Reserve) (30 June 2015¹):** 1.4Moz Au (11.9Mt at 3.5g/t)
- **Mineral Reserve (30 June 2015¹):** 596Koz Au (3.5Mt at 5.3g/t)
- **Current operations:** Mechanised underground operations from 3 separate portals (Invicta, Barton, Gateway) - ore is accessed and extracted through declines and ore drives - with top-down long-hole open stoping being the main mining method. The current underground operation supplies ~ 1.2Mtpa ore to the mill.
- **Mill & Capacity:** Jundee Mill – SAG/BM configuration - CIP - 1.3 Mtpa hard rock capacity/ 1.7Mtpa oxide capacity
- **Power:** A 12MW gas fired power station connected to the Gold Fields Gas Pipeline via privately owned spur pipeline and an 9MW backup diesel fired power station
- **Access:** Private airport as well as local roads that are connected to a major highway
- **Accommodation :** Village has rooms for 600+ staff
- **Outstanding Growth Potential:** 4 Key Underground in-mine resource areas of focus with potential to significantly increase the LOM – Wilson Gap, Moneyline/Midas/Nexus, Gateway HW and In-Mine material (Barton, Invicta and Westside).
- **Open Pit Opportunity:** Current studies being conducted on 410koz open pit resource for supplementary oxide feed options over and above current U/G hard rock feed
- **Aggressive exploration of in/near mine mineralisation:** Extensional deep-hole project identified high potential targets below and south of current mining area. A\$17M, 2.4km long drill drive under construction
- **Aggressive Regional exploration :** Extensive tenement holdings with highly prospective and relatively untested regional targets a focus in 2015.



History, Exploration and Discovery



Jundee - Nimary Goldfield

1978-1983	Chevron explores for base metals
1983-1989	M. Creasy finds gold nuggets
1989	Nimary tenements dropped

Nimary

1989-1990	Hunter Resources - lag anomaly 36,400 ounces
1991-1992	No further work
1993-1995	Eagle Mining farm-in 747,000 ounces
1995	Open Pit Mining begins Aug'95

Jundee

1989 - 1992	M. Creasy - LAG & RAB drilling
1991	GCM-Creasy JV Agreement
1993-1995	1,300,000 ounces from eight deposits
1995	First Open Pit ore Milled Dec 1995
1997	First UG ore produced Dec 1997
1997	GCM takes over Eagle and Wiluna Mining
1998	1 Moz gold produced
2000	Normandy Mining takeover
2001	Westside discovered
2002	Newmont Mining
2007	Nimary Mill and Camp shut down
2013	6 Moz gold produced
2014	Northern Star purchase Jundee

Current Production (9mnth ave)

99%	Underground fresh rock
<1%	Surface oxide
135,000	Milled tonnes/mth
5.7 g/t	Average grade

Jundee Mine and Infrastructure



• Underground Operations

- 3 Operational Portals (Barton, Invicta, and Gateway) with a total of 203km of underground development done since commencing of UG operations in Aug 1997.
- Multiple, narrow vein mineralised lodes (>1000 modelled)
- Current Max Depth below surface - Stopping 700m, Development 770m, Centroid of Mining 550m below surface
- Top down cascading LHOS mining method
- 5 x Primary Exhaust Vent Fans
- UG Magazines, Fuel stations, Pump Stations

• Surface Operations *(The Golden Triangle)*

- Multiple Open Pits - Suspended Nov 07
- Haulage completed Jun 08, milling completed Aug 08

• Milling Operations

- Jundee Mill – SABC configuration - CIP - 1.3Mtpa hard rock capacity
- Nimary Mill decommissioned
- Tailings – in-pit tailings (Fisher) and paddock deposition on TSF2

• Supporting Infrastructure

- 2 x Powerhouse – 21MW capacity (Gas 12MW, Diesel 9MW)
- Water Supply – 2 bore fields – 14 km from operations
- Accommodation Village (600+ capacity) - 4km
- Gravel Airstrip

• Landholdings

- 64 Tenements covering 420 km² over a strike-length of 45kms in the Yandal Greenstone belt
- Head lease holder of 1 pastoral station covering 8,200 km²

Consistent Historical Operational Statistics

Jundee Historic Production and Financial results							NST Production and Financial results		
Callender Years		2010	2011	2012	2013	2014	FY2015		
Jundee Ore Mined	Mt	1.0	0.9	1.1	1.1	1.3	Jundee Ore Mined	Mt	1.3
Jundee Ore Grade	gpt	10.9	13.2	8.7	6.6	6.7	Jundee Ore Grade	gpt	5.9
Jundee Mined Ounces	OZ	362,000	372,000	303,000	243,000	275,000	Jundee Mined Ounces	OZ	237,883
Mill Processed Tonnes	Mt	1.6	1.3	1.5	1.6	1.4	Mill Processed Tonnes	Mt	1.3
Mill Processed Grade	gpt	7.2	8.1	7.3	5.6	5.8	Mill Processed Grade	gpt	5.8
Mill Recovery	%	95	95	94	94	93	Mill Recovery	%	93
Mill Gold Produced	OZ	348,000	326,000	327,000	275,000	250,000	Mill Gold Produced	OZ	222,850
Free Cash Flow	USD '000	\$199,776	\$308,412	\$297,729	\$160,195	N/A	Free Cash Flow	A\$	\$114,355
Total CAS/Gold Sold	USD/Oz	\$442	\$538	\$672	\$738	N/A	Total Gold Sold	OZ	223,727oz
Total Cost/GEO	USD/Oz	\$533	\$659	\$778	\$848	N/A	All in Sustaining Cost	A\$	\$1,008/oz

Focused Exploration Delivering Consistent Growth

Jundee Reserves incl. Stockpiles and GIC				
Release	(M tonnes)	g/t	(Koz)	
Dec-13	3	4.3	411	NMT
Jun-14	2.5	4.8	383	NST
Dec-14	2.8	4.6	415	NST
Jun-15	3.5	5.3	596	NST

Jundee Resource (inclusive of Reserve)				
Release	(M tonnes)	g/t	(Koz)	
Dec-13	3.6	4.4	506	NMT
Jun-14 Tot	4.2	6.4	851	NST
<i>Dec-14 UG</i>	<i>4.5</i>	<i>6.1</i>	<i>877</i>	Normal UG + Stockpiles (48Koz)
<i>Dec-14 O/P</i>	<i>4.7</i>	<i>1.8</i>	<i>271</i>	New O/P (Cook, DDragon, Gourdis, Mensies)
Dec-14 Tot	9.2	3.9	1,148	Total Jundee UG & Surface Resource as on 31Dec-14
<i>Jun -15 UG</i>	<i>4.4</i>	<i>6.7</i>	<i>941</i>	Underground material and valued stockpiles (38Koz)
<i>Jun-15 O/P</i>	<i>7.6</i>	<i>1.7</i>	<i>408</i>	Open pit material (Newly added Vause)
Jun- 15 Tot	11.9	3.5	1,349	Total Jundee UG & Surface Resource as on 30 June-15

Jundee Gold Production and Replacement Jul14-Jun15

1. 2014FY Production

Mine Production: Mined 1.25Mt for 237Koz @ 5.9g/t – (Sourced 100% from underground operations at Invicta, Barton, and Gateway)

Mill Production: Milled 1.3Mt containing 240Koz @ 5.8g/t - (Achieving a recovery of 93% for 223Koz recovered @ 5.4g/t)

2. End of 2014FY Reserves and Resource

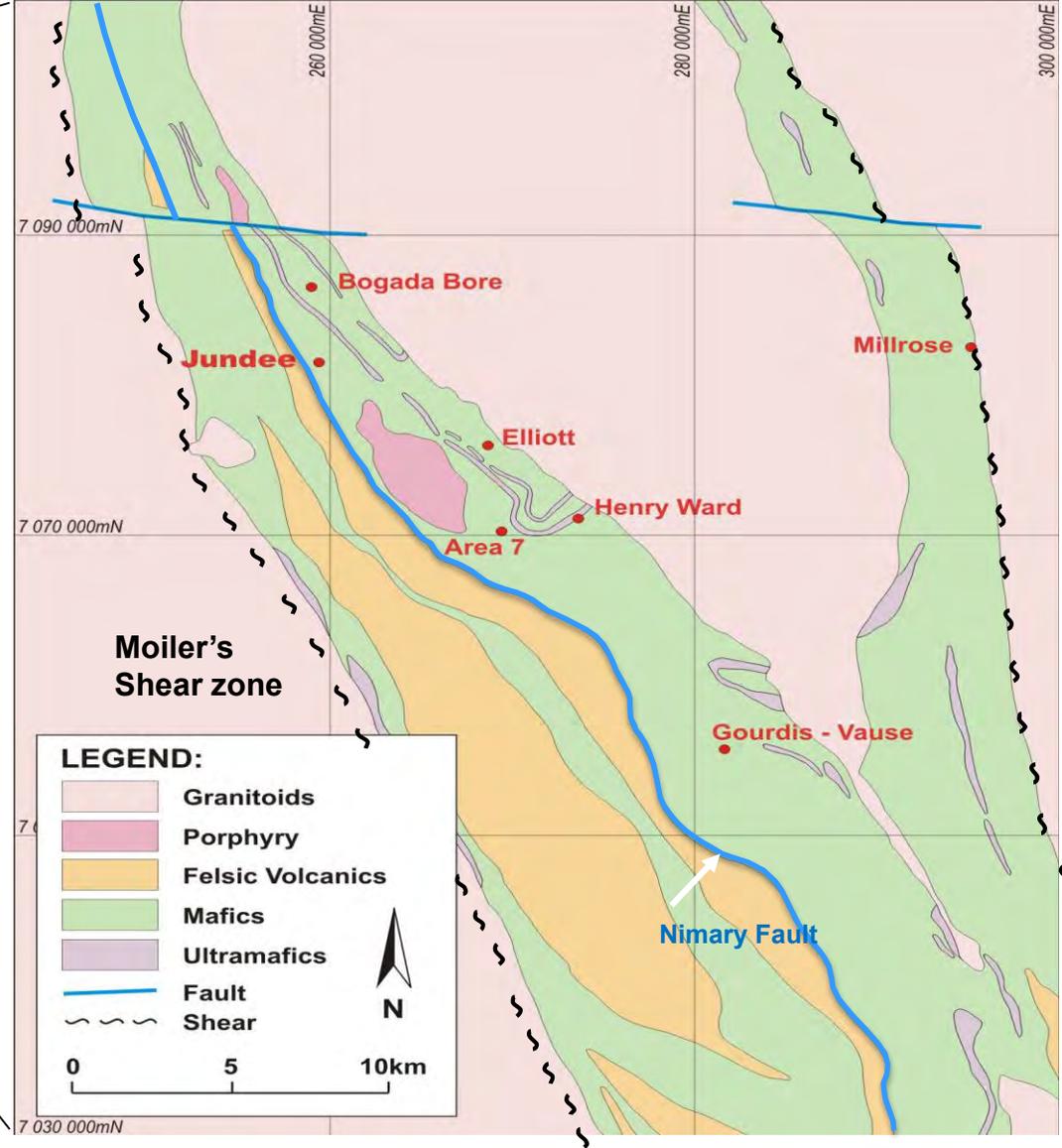
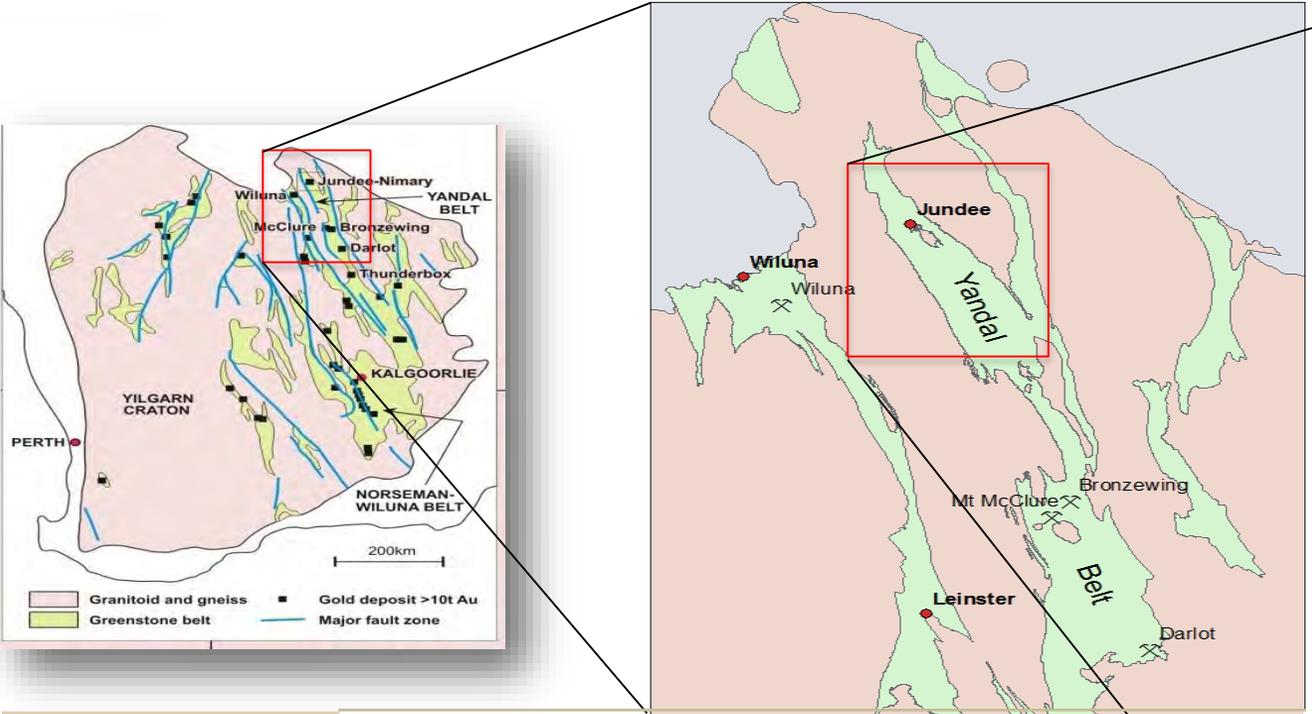
Jun15 Total Reserve = 0.6Moz (Increased by 213Koz (+ 55%) from NST opening balance declared Jun-14)

Jun15 Total Resource = 1.3Moz (Increased by 498Koz (+58%) from NST opening balance declared Jun-14)

- Actual 12 month Reserve addition/conversion = {(Closing-Opening)+Depleted} = {(596Koz - 383Koz) + 241Koz} = 454 Koz (effectively replacing 241Koz milled and adding 213Koz to Reserves over the 2014FY)

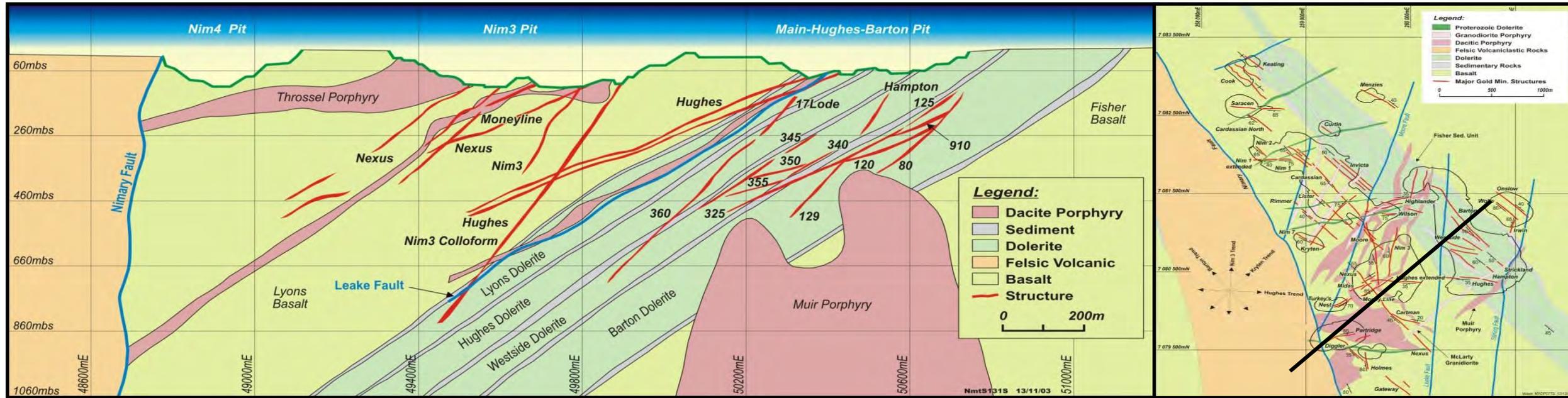
¹Refer ASX Announcement released 4 August 2015 titled: Northern star grows mine lives significantly with 2.7Moz Increase in resources to 8.9Moz.

Regional Geology - Jundee Goldfield



Province	* Archaean Yilgarn Craton
Area	* Eastern Goldfields
Sequence	* Northern Yandal Greenstone Belt * Few historic workings, sparse outcrop and truncated lateritic profile * Felsic - mafic - ultramafic dominated greenschist facies (Dated at about 2700Ma; intrusions 2680 to 2640Ma)

Jundee Au Deposit – Geological Setting



- ✦ Gold mineralisation (2,700 million years) occurs within a Greenstone sequence approximately ~ 2.2km thick consisting of Archaean basalts and sedimentary units intruded by dolerite sills and dacitic porphyries over an area of 4km (long) and 2.5km (wide) and dipping 45°SW - 80°SW up to sub-vertical Nimary fault. Younger dacite, granodiorite and lamprophyre intrusions are common.
- ✦ Mineralisation is hosted in a series of complex brittle fractures presented as discontinuous quartz +/- carbonate veins (typically <0.5m wide) containing abundant visible gold. To date, ~70% of the gold mined was hosted within the more brittle dolerite units and the remaining 30% within the basalts and dacites.
- ✦ Alteration and sulphide mineral assemblage suggest the composition of the ore fluid was similar to other orogenic gold deposits.
- ✦ Post mineralisation faulting is limited well identified and has little impact on mining.

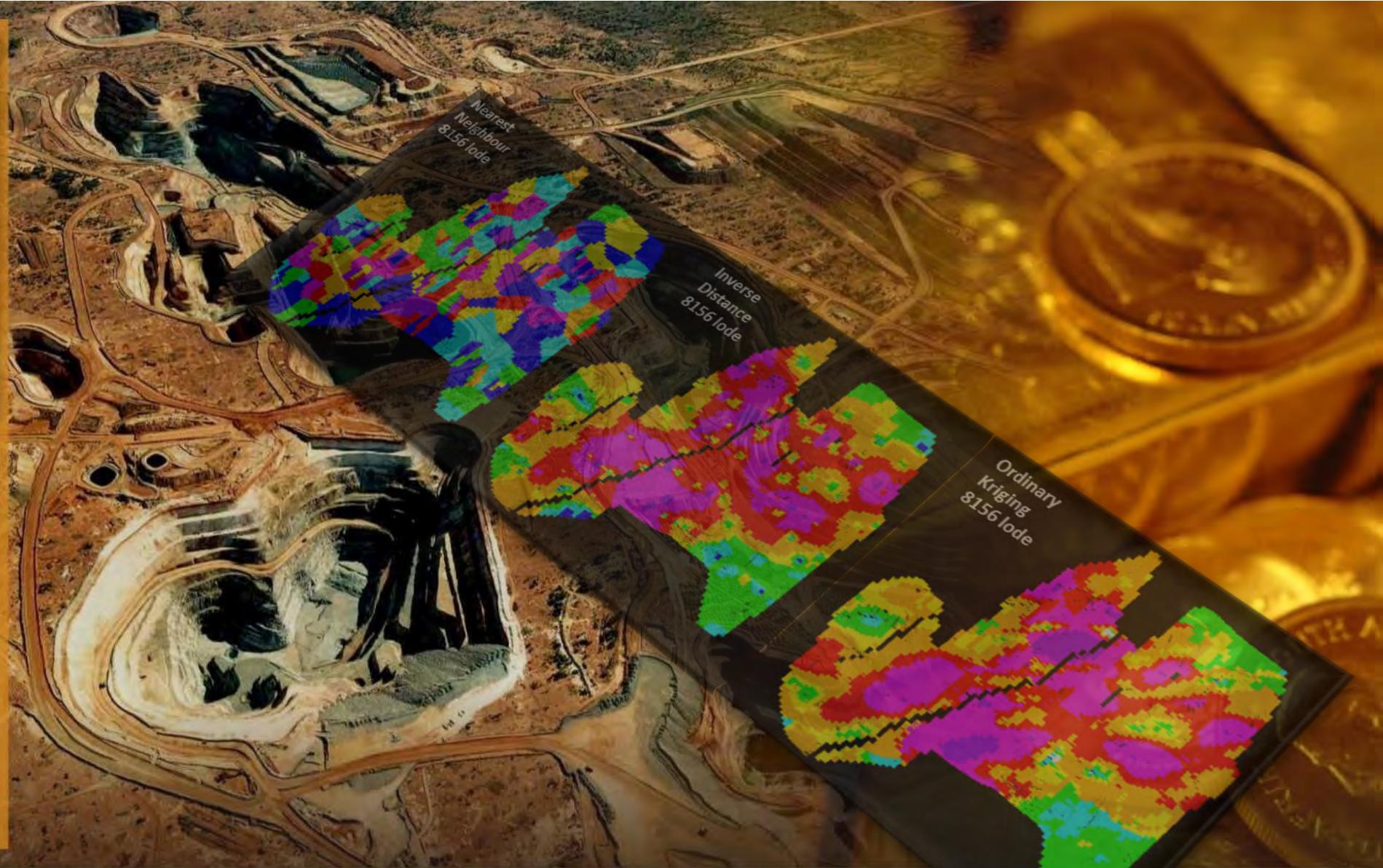
Mineralisation Style - High Grade and High Nugget





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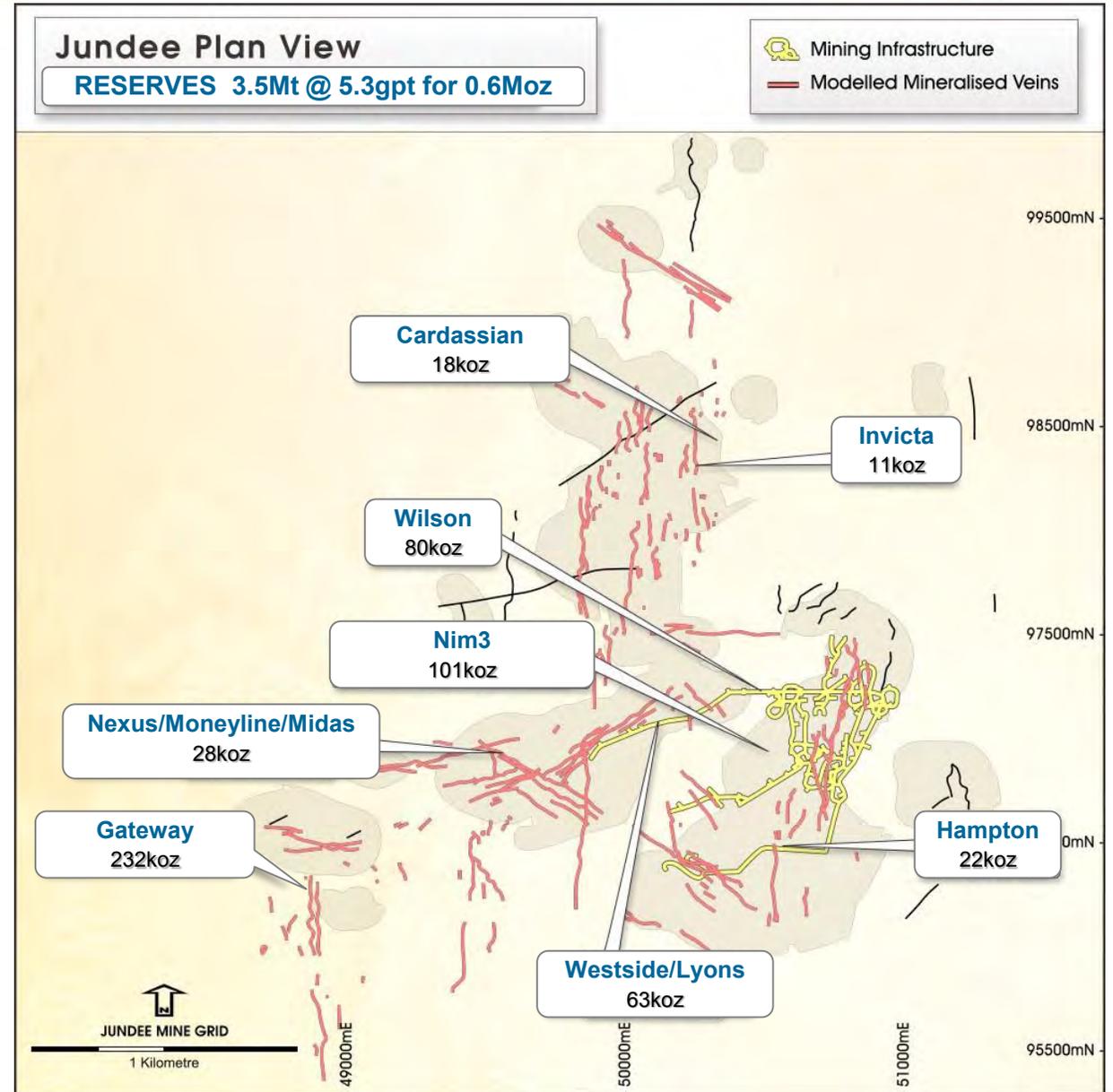
2. Jundee Reserve and Resource

August 2015

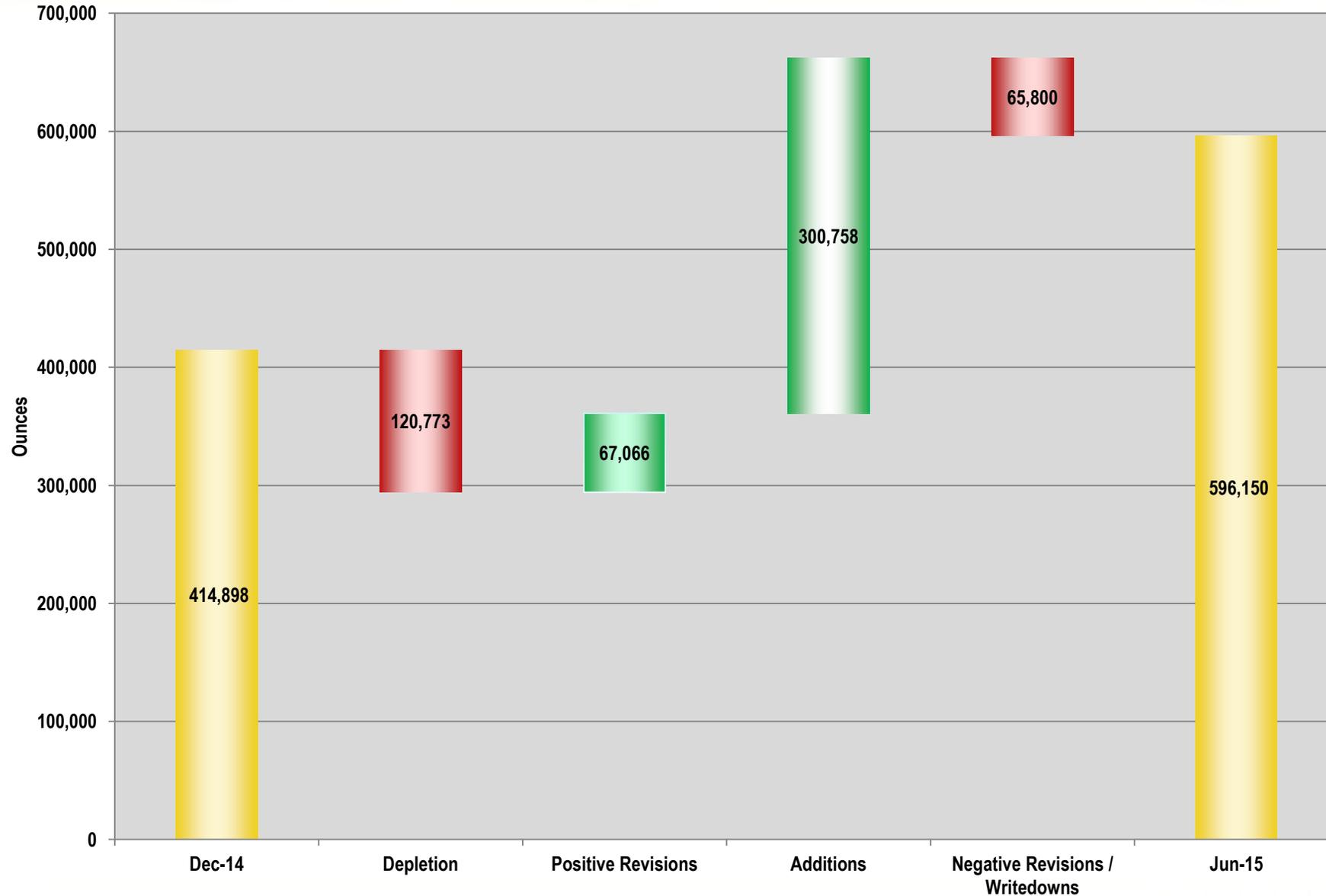
Jundee Reserves as at June 2015



JUNDEE MINE GOLD MINERAL RESERVE			
As at 30 June 2015			
	PROVED and PROBABLE		
	Tonnes	Grade	Ounces
Based on attributable ounces Au	(000's)	(gpt)	(000's)
JUNDEE GOLD PROJECT			
Underground			
Barton			
Cardassian	121	4.6	18
Gateway	932	7.7	232
Hampton	151	4.6	22
Hughes			
Invicta	42	7.9	11
Nexus/Moneyline/Midas	132	6.7	28
Nim3	358	8.7	101
Westside / Lyons	324	6.0	63
Wilson	394	6.3	80
Subtotal Underground	2,454	7.0	555
Open Pit			
Cook			
Desert Dragon			
Gourdis			
Menzies			
Vause			
Subtotal Open Pit			
Surface Stockpiles			
UG and Oxide Material	1,075	1.1	38
Gold in Circuit			3
Subtotal Surface Stockpiles	1,075	1.2	41
TOTAL RESERVES	3,529	5.3	596



Jundee Reserve movement – Dec 2014 to June 2015



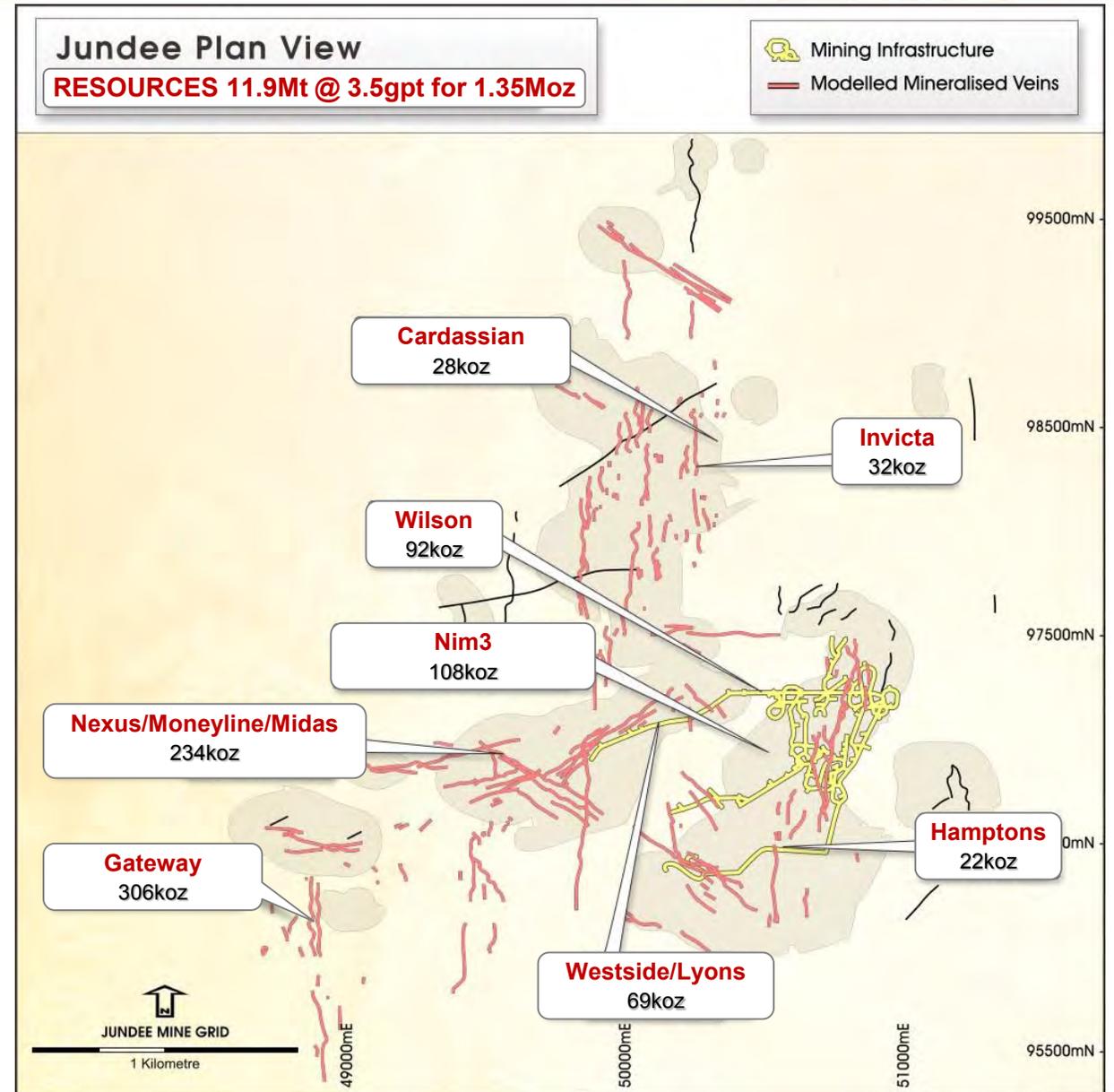
Jundee Resources as at June 2015



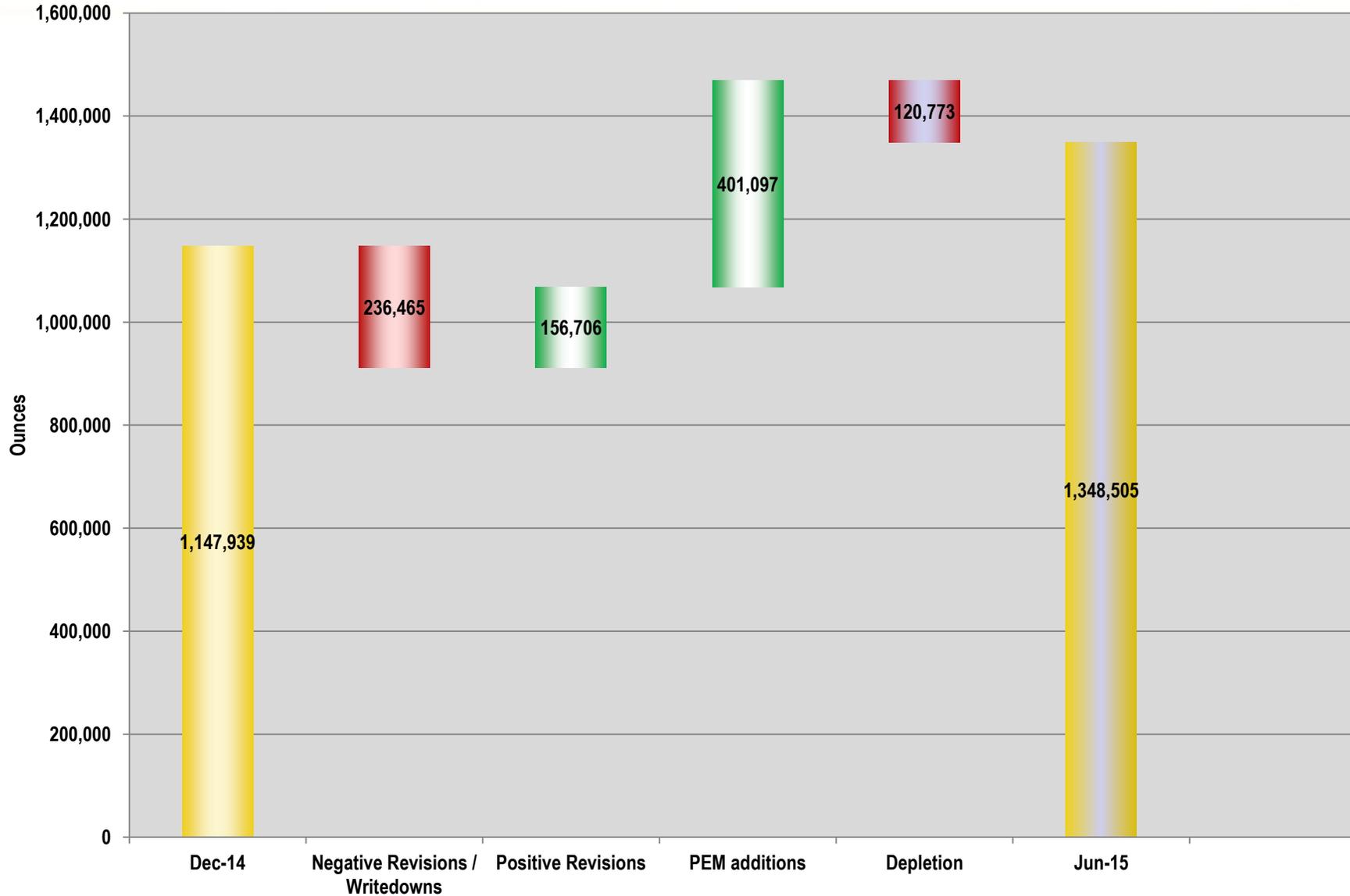
JUNDEE MINE GOLD MINERAL RESOURCE

As at 30 June 2015

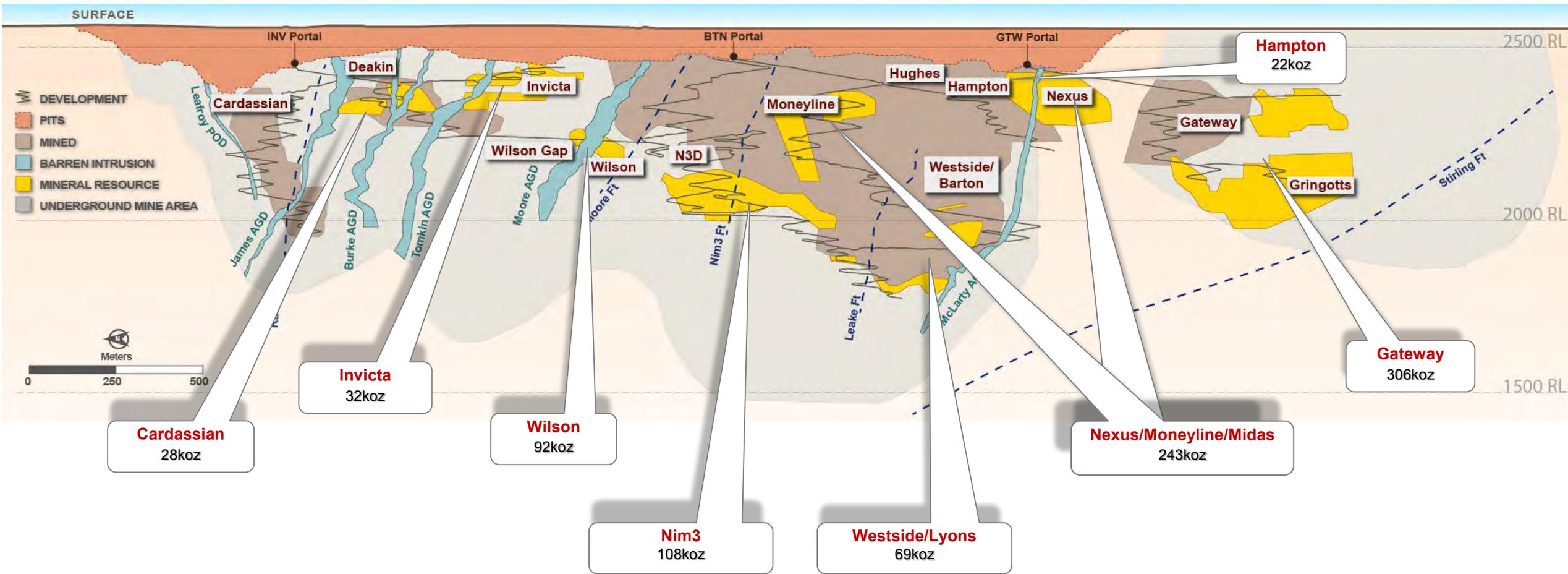
		TOTAL (MI&Inf)		
		Tonnes	Grade	Ounces
		(000's)	(gpt)	(000's)
Based on attributable ounces Au				
JUNDEE GOLD PROJECT				
Underground				
	Barton			
	Cardassian	164	5.3	28
	Gateway	1117	8.5	306
	Hampton	151	4.6	22
	Hughes			
	Invicta	73	13.6	32
	Nexus/Moneyline/Midas	554	13.6	243
	Nim3	418	8.0	108
	Westside / Lyons	354	6.0	69
	Wilson	444	6.4	92
Subtotal Underground		3275	8.5	899
Open Pit				
	Cook	180	6.1	35
	Desert Dragon	371	2.0	24
	Gourdis	3786	1.5	180
	Menzies	724	1.9	45
	Vause	2565	1.5	123
Subtotal Open Pit		7626	1.7	408
Surface Stockpiles				
	UG and Oxide Material	1075	1.1	38
	Gold in Circuit			3
Subtotal Surface Stockpiles		1075	1.2	41
TOTAL RESOURCES		11976	3.5	1349



Jundee Resource movement between Dec14 and June 2015



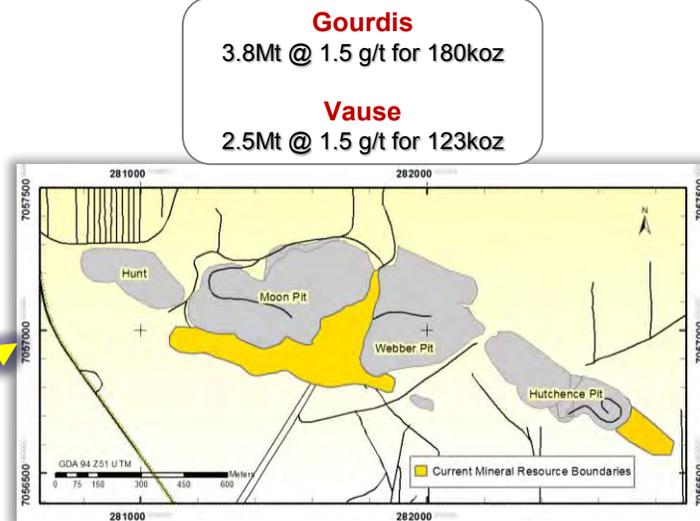
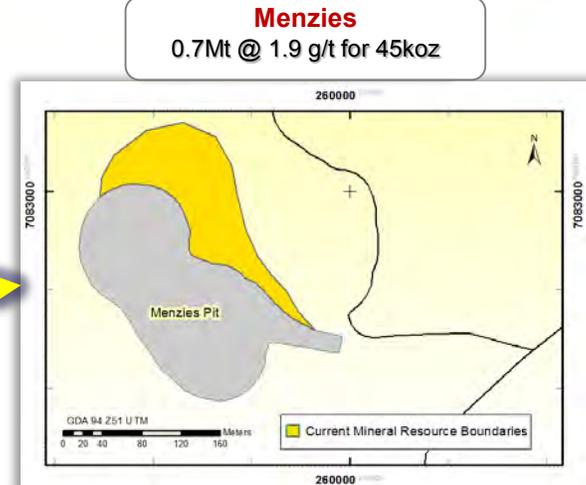
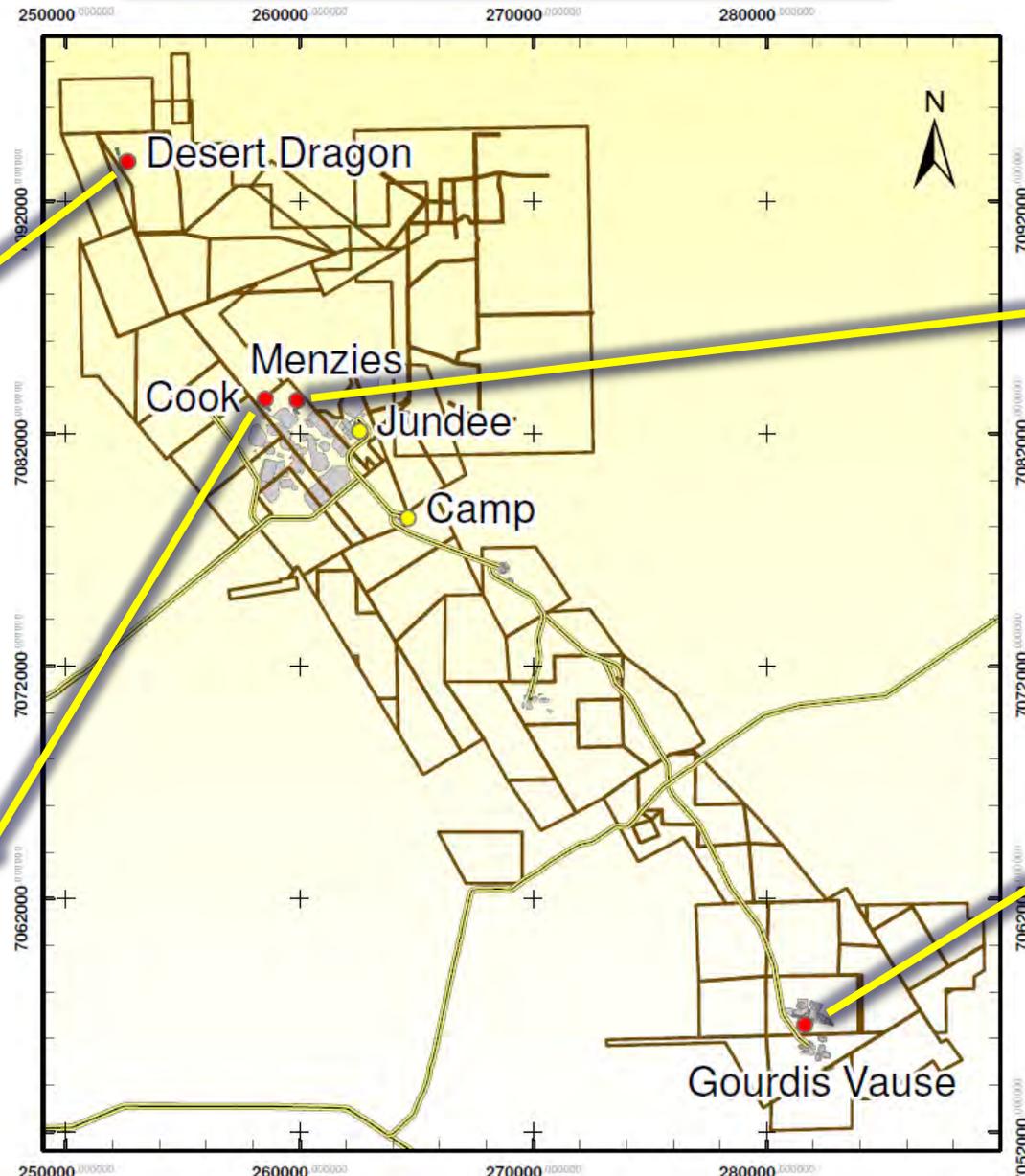
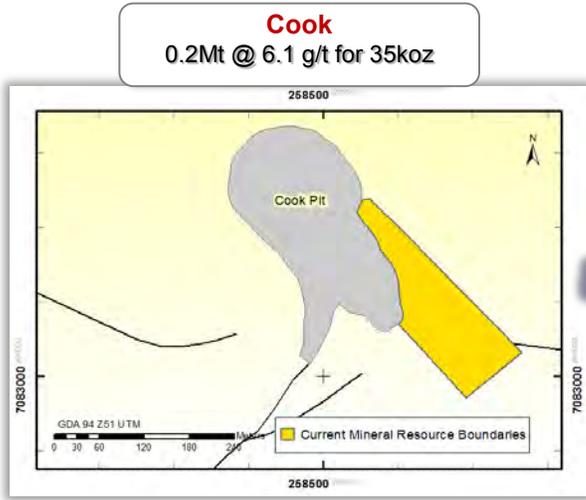
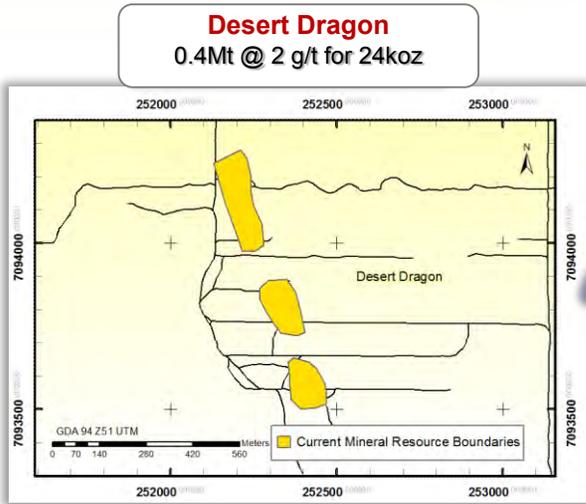
Jundee Gold Project - Underground Resource June 2015



Jundee Gold Project - Surface Resource June 2015



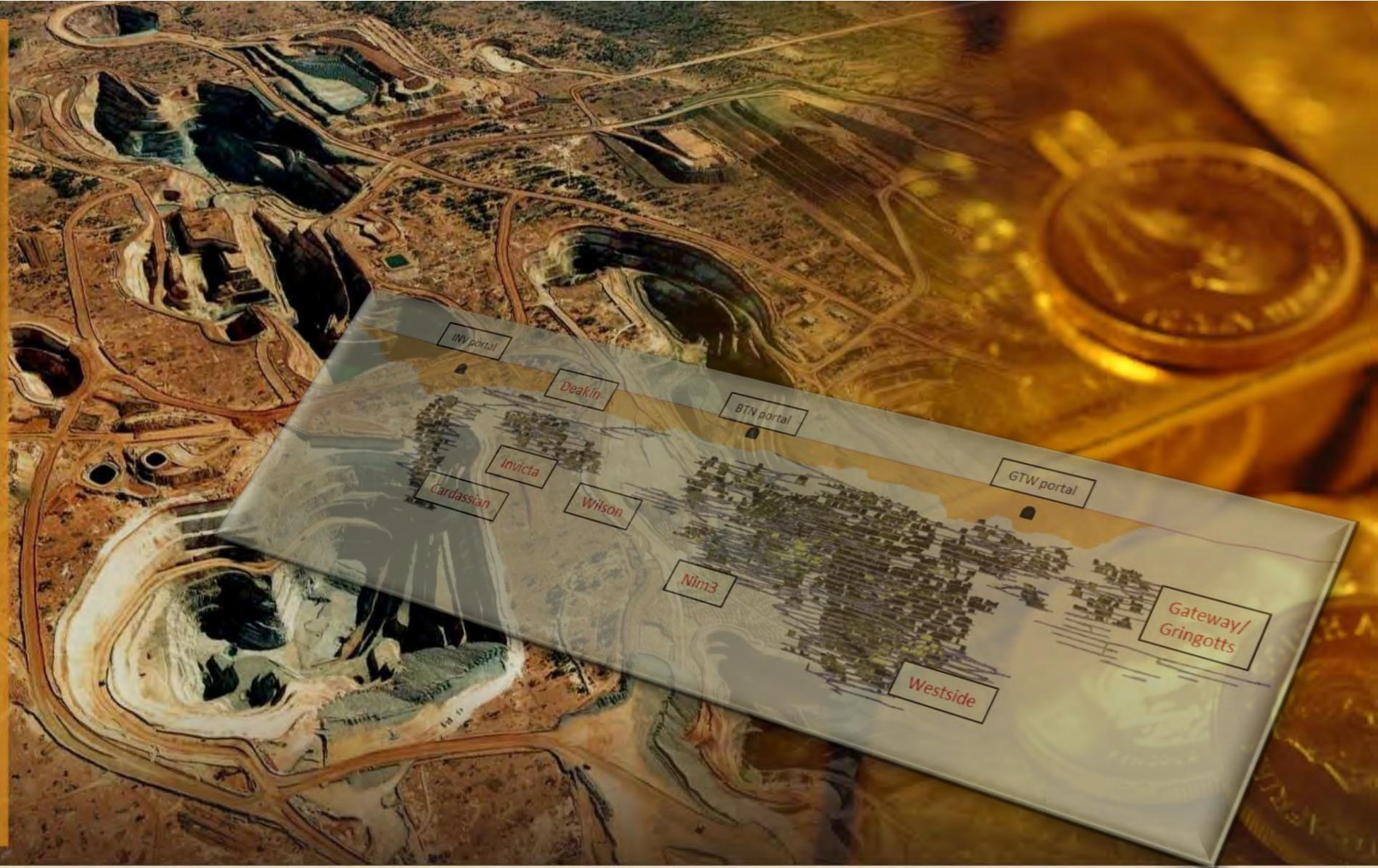
Surface Open Pit RESOURCES 7.6Mt @ 1.7g/t for 0.4Moz





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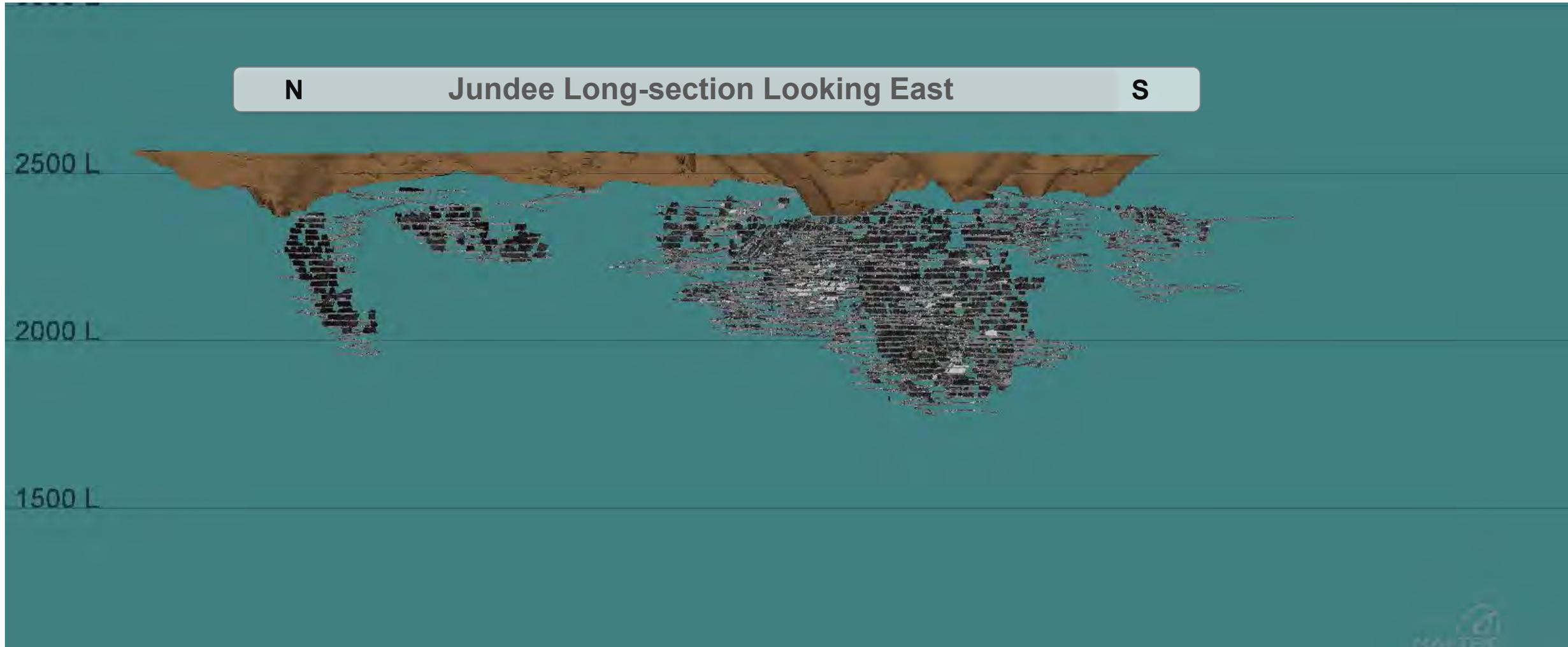
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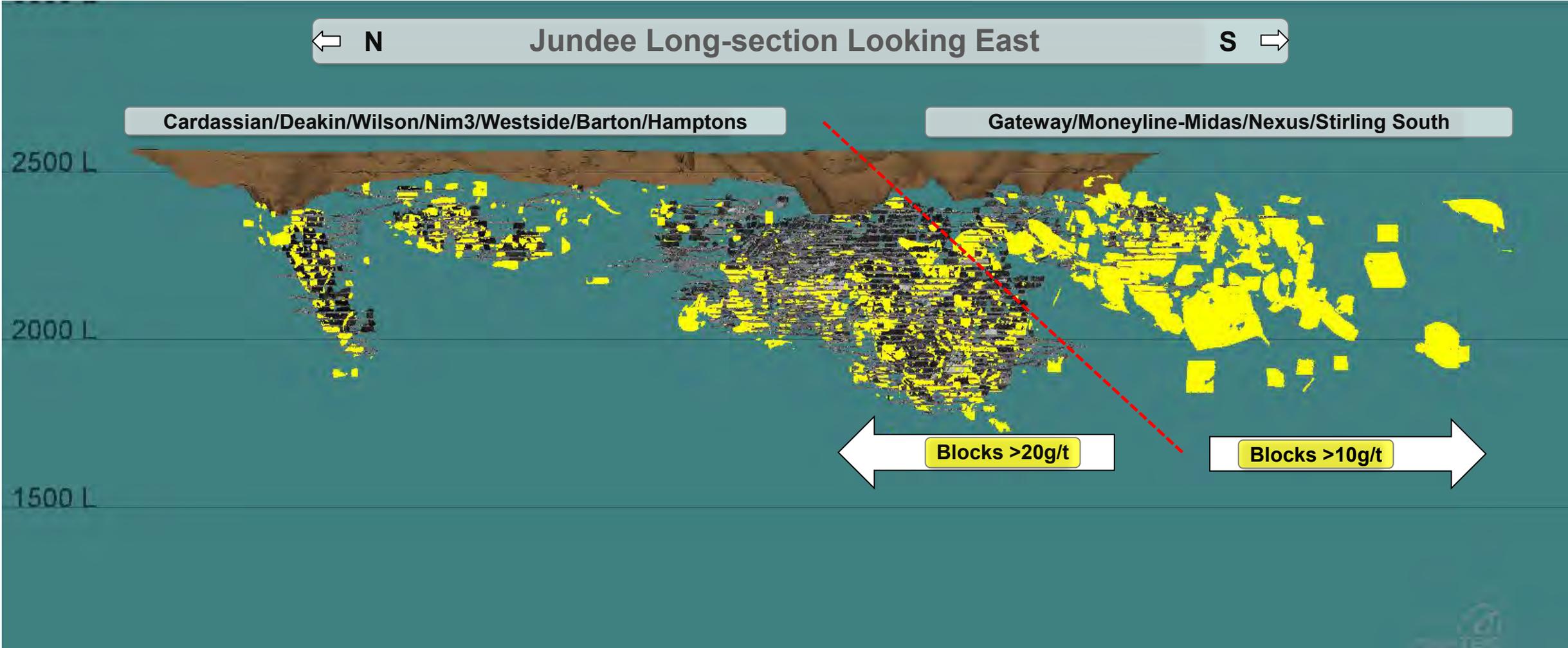
3. Jundee In-Mine Exploration & Growth

August 2015

Jundee Gold Mine - Long Section Decline and Mined Stopes

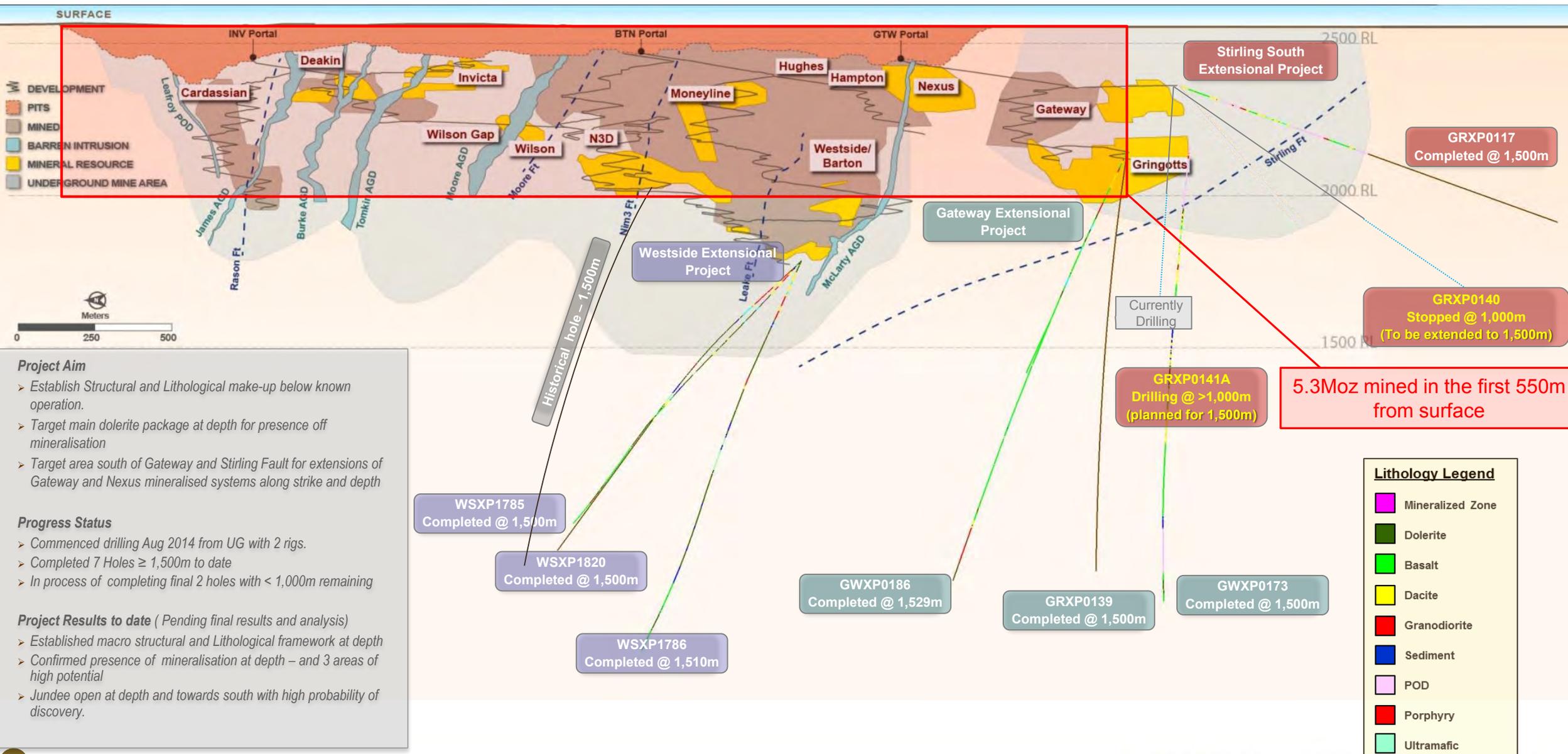


Jundee Gold Mine – In-mine potential above cut-off

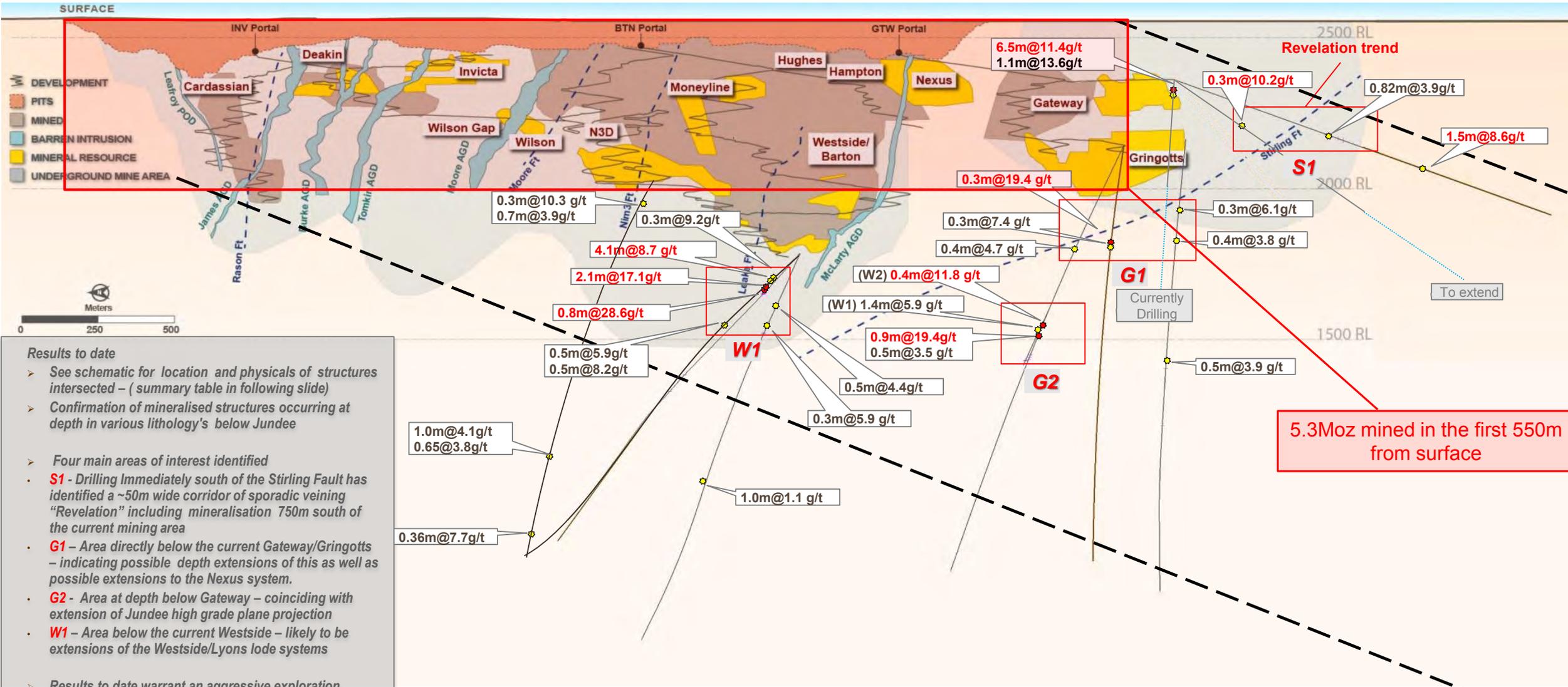


Yellow shading = unclassified mineralisation and current resources that remain unmined

Jundee Gold Project - Extensional Drilling Project (Lithology)



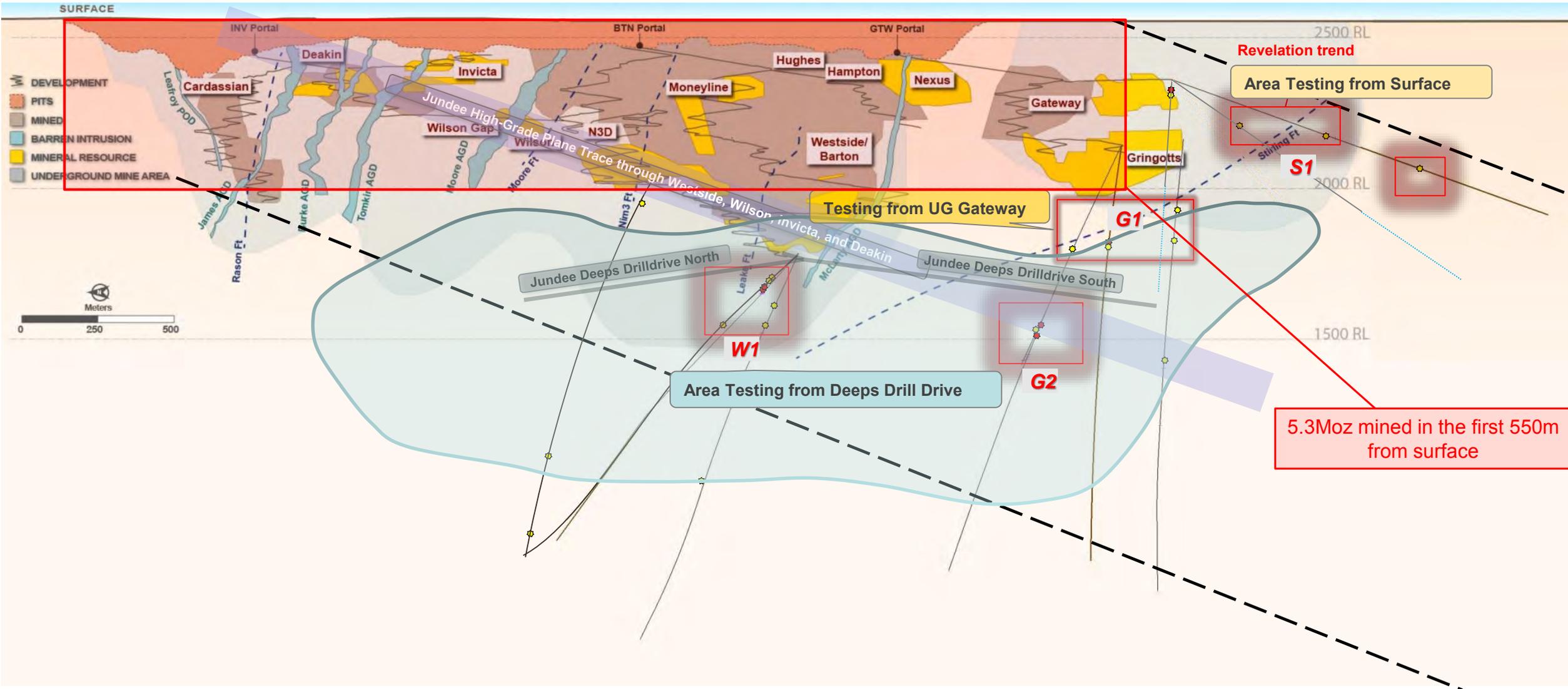
Jundee - Extensional Project (Mineralised Structures intersected & Significant Results to date)



Results to date

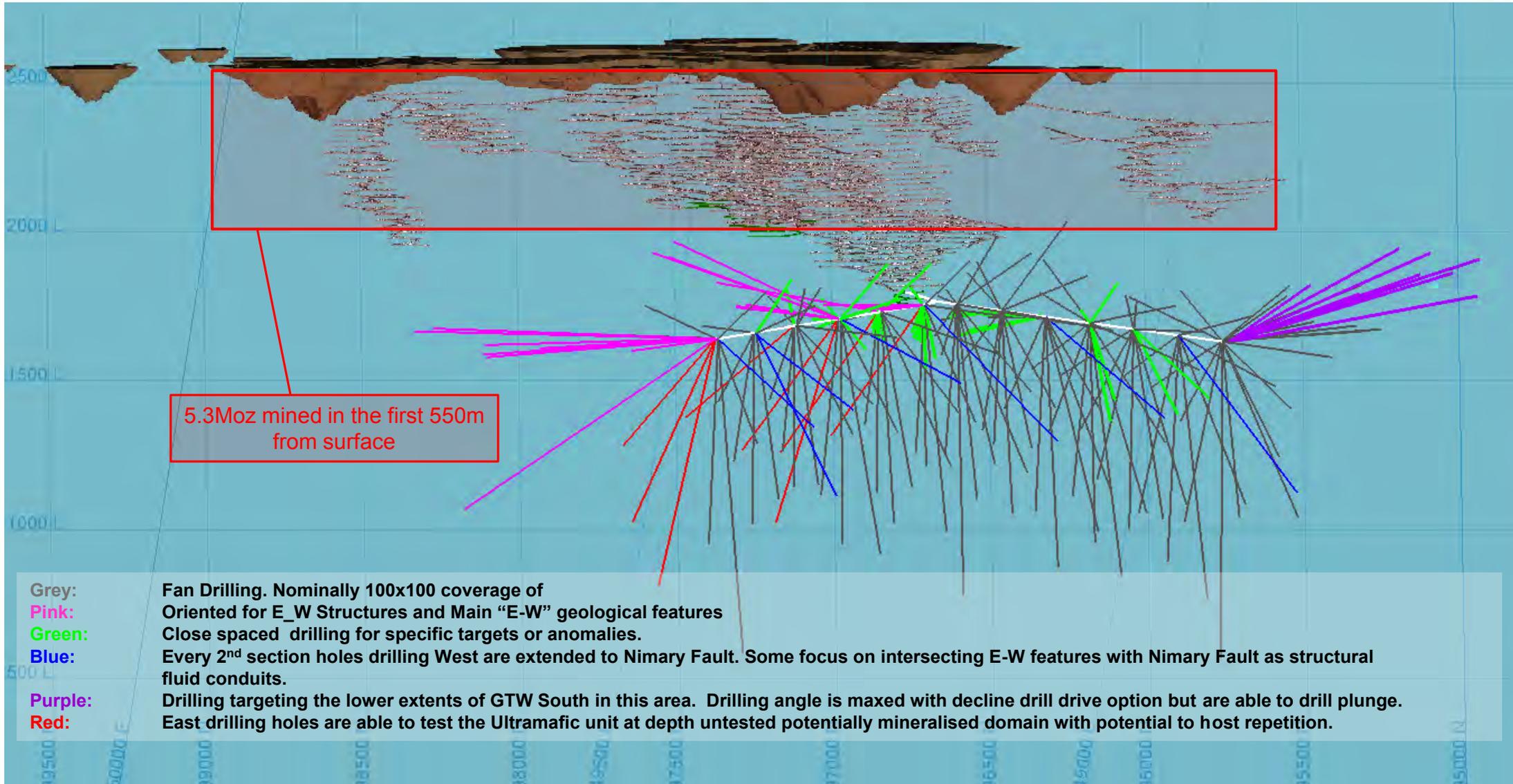
- See schematic for location and physicals of structures intersected – (summary table in following slide)
- Confirmation of mineralised structures occurring at depth in various lithology's below Jundee
- Four main areas of interest identified
 - **S1** - Drilling Immediately south of the Stirling Fault has identified a ~50m wide corridor of sporadic veining "Revelation" including mineralisation 750m south of the current mining area
 - **G1** - Area directly below the current Gateway/Gringotts - indicating possible depth extensions of this as well as possible extensions to the Nexus system.
 - **G2** - Area at depth below Gateway - coinciding with extension of Jundee high grade plane projection
 - **W1** - Area below the current Westside - likely to be extensions of the Westside/Lyons lode systems
- Results to date warrant an aggressive exploration strategy that will enable NST to test a volume of similar size to Jundee's current workings that contained 4moz+

Jundee - Extensional Project Phase 2 (Exploration Strategy and Schedule)



Jundee Gold Project - Extensional Project Phase2

(Jundee Deeps Drill Drive and Drilling below current operations)





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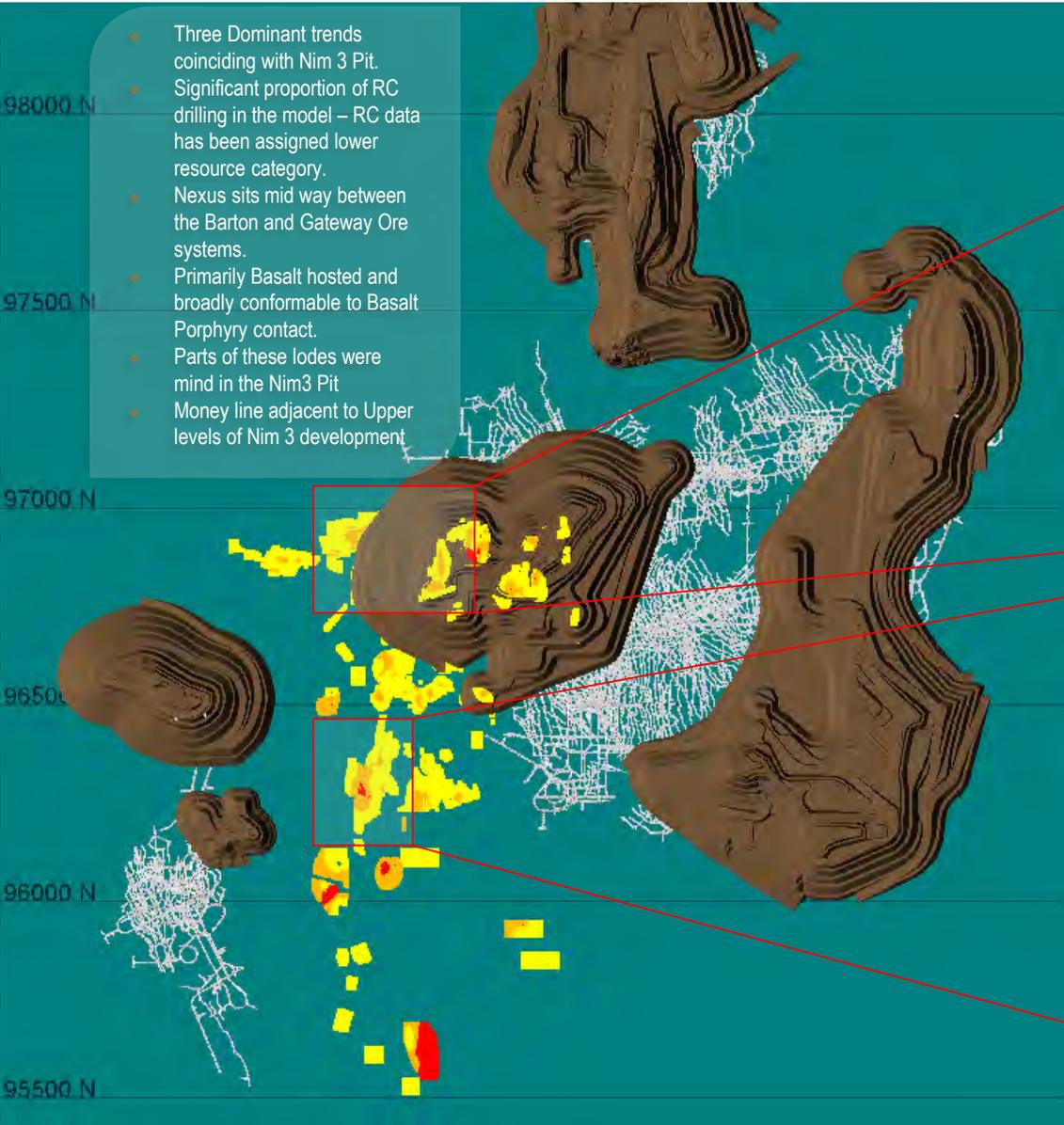


4. Jundee In-Mine Extension Projects

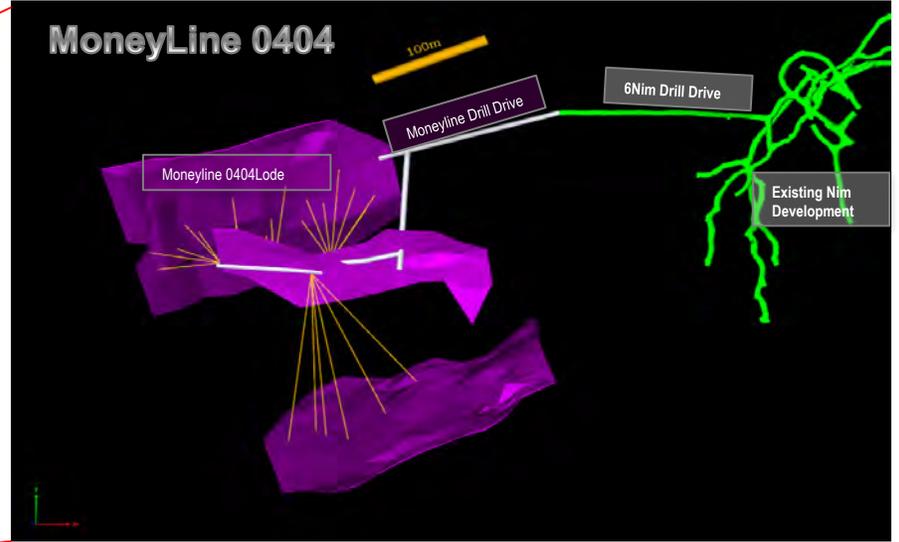
August 2015

Jundee Nexus-Moneyline-Midas

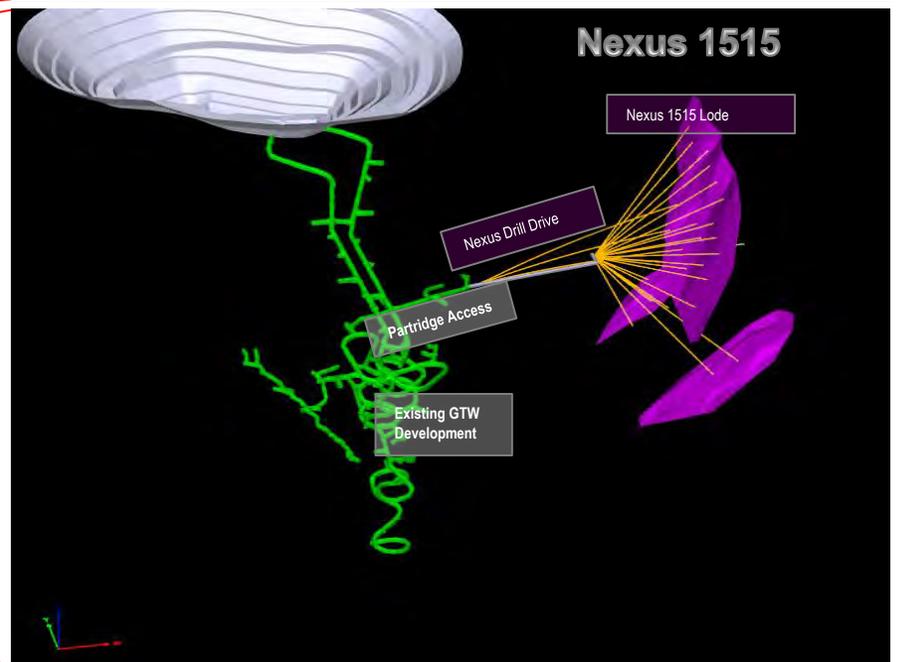
- Three Dominant trends coinciding with Nim 3 Pit.
- Significant proportion of RC drilling in the model – RC data has been assigned lower resource category.
- Nexus sits mid way between the Barton and Gateway Ore systems.
- Primarily Basalt hosted and broadly conformable to Basalt Porphyry contact.
- Parts of these lodes were mined in the Nim3 Pit
- Money line adjacent to Upper levels of Nim 3 development



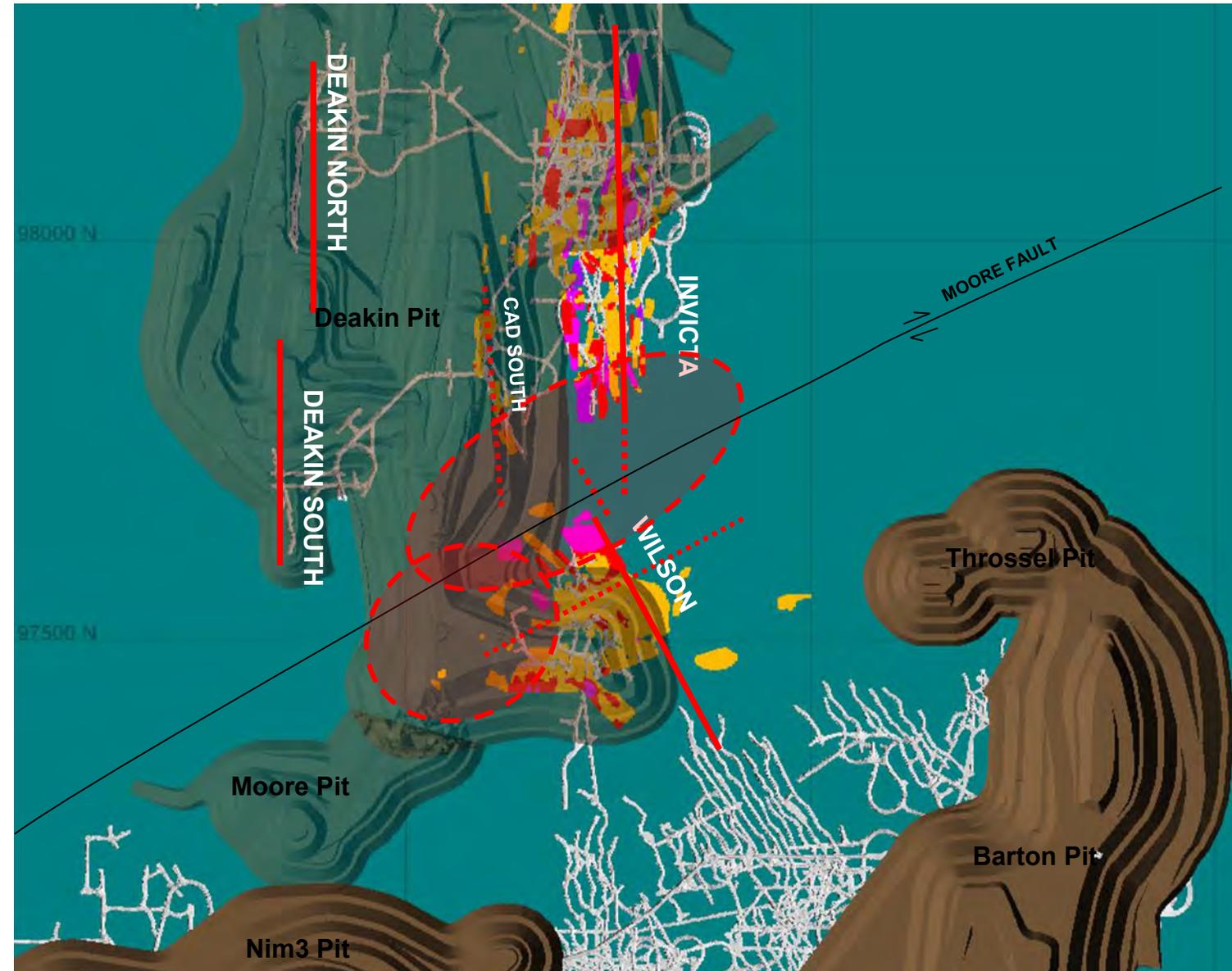
MoneyLine 0404



Nexus 1515



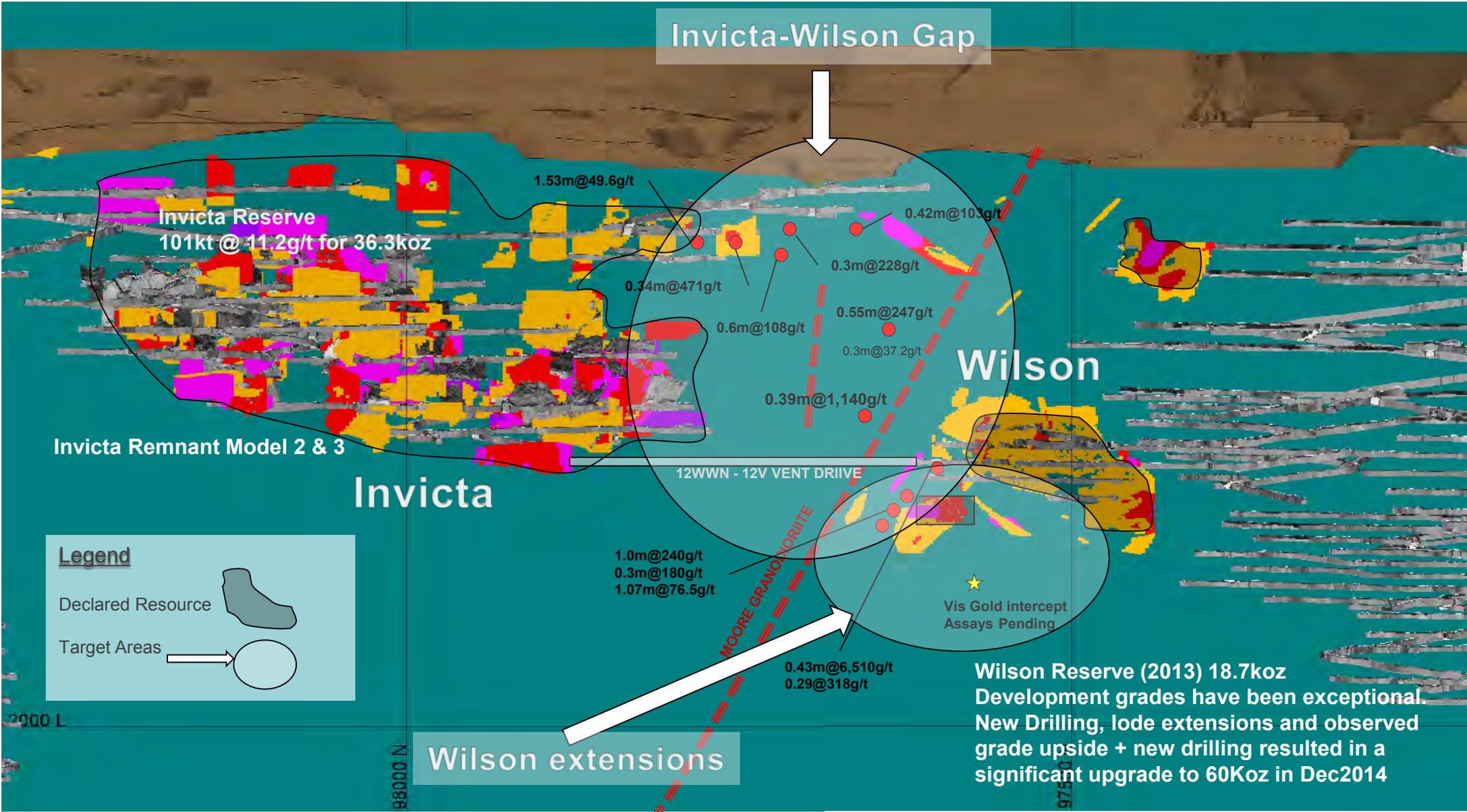
Invicta-Wilson Gap Target Overview



* Pipeline Stage: Resource Targeting with advance to Reserve in FY14

- * Invicta South Extension & Wilson North Extension
- * ~200m strike x 200m vertical extent of poorly tested ground.
- * Known mineralised trends projecting into the area.
- * Separated by the Moore Fault and Granodiorite
- * In Jundee field lode systems/ fracture arrays seem to propagate from inflexions in the Granodiorite
- * Prospective dolerite host lithology.
- * Complex intrusive/ structure.
- * In Late 2013 developed 5INV900S, bonanza gold occurrences common.
- * 4L has stopped with high grade 800g/t structure grade in face.
- * Recent drilling through this zone has picked up high grade intercepts on the strike extensions of the 900 lodes and in the FW and HW to the Granodiorite in Wilson.

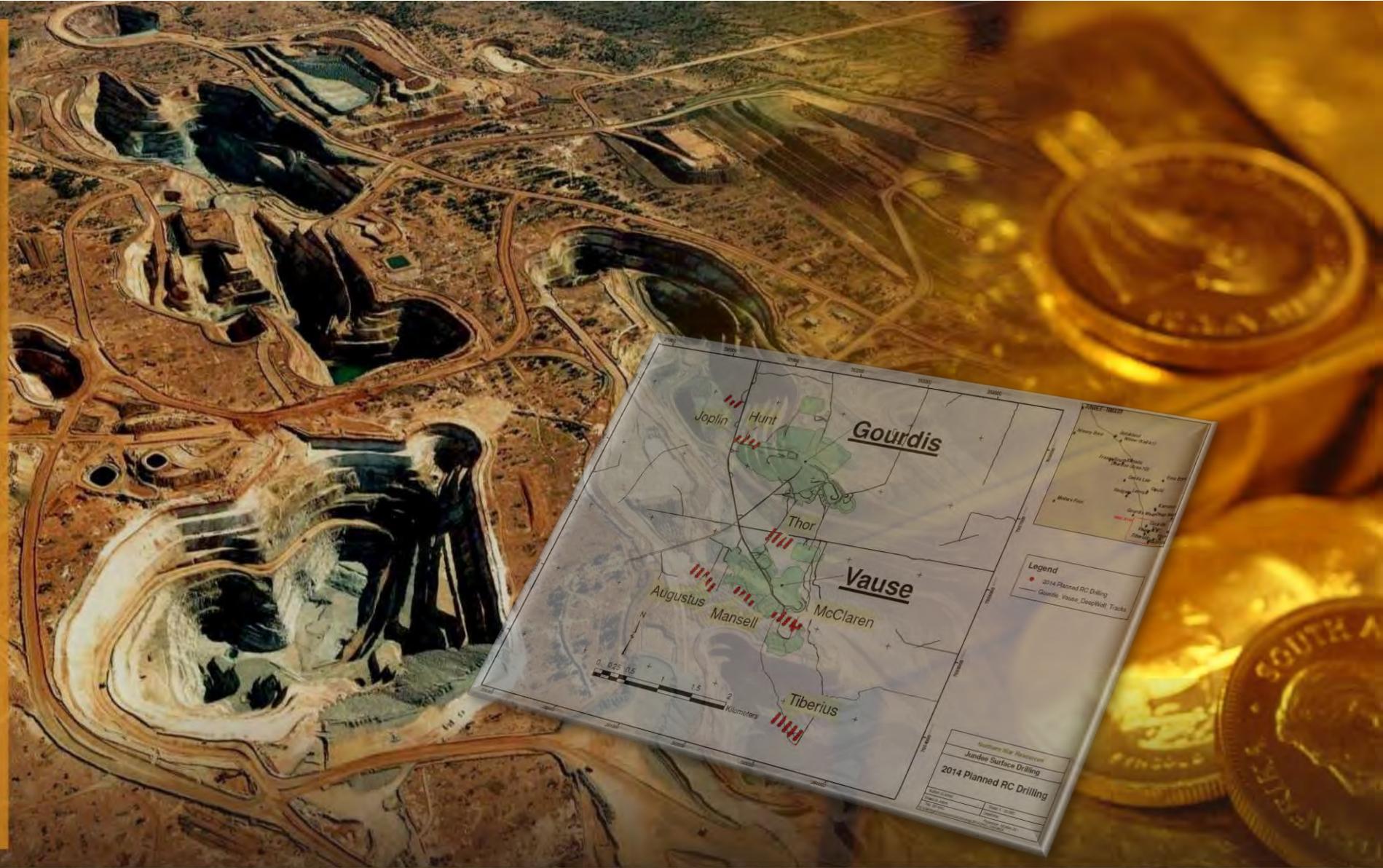
Jundee Invicta-Wilson Gap (Invicta South/Wilson North)





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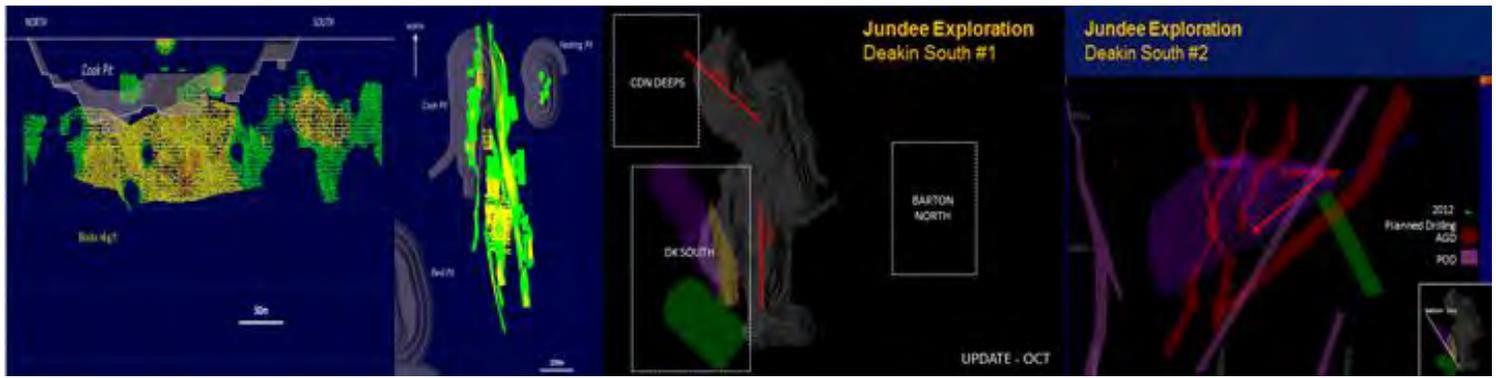
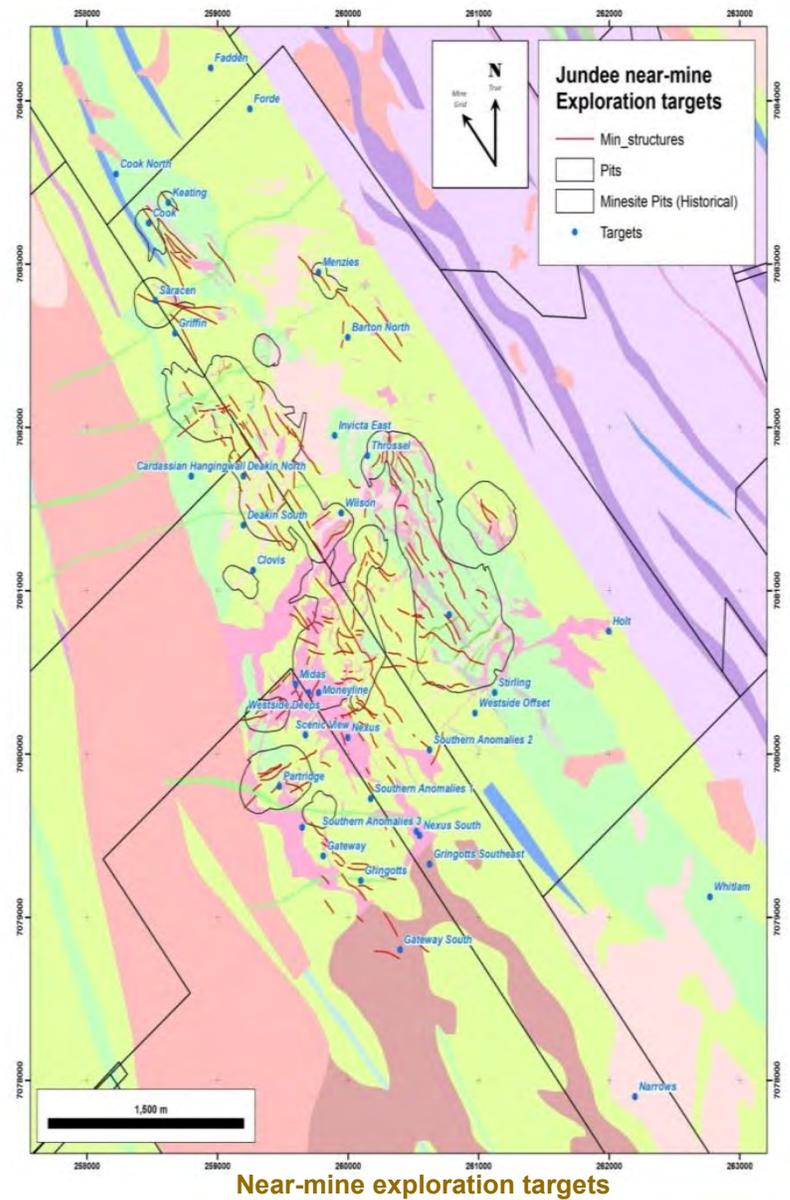
5. Jundee Surface Exploration & Extension Projects

August 2015

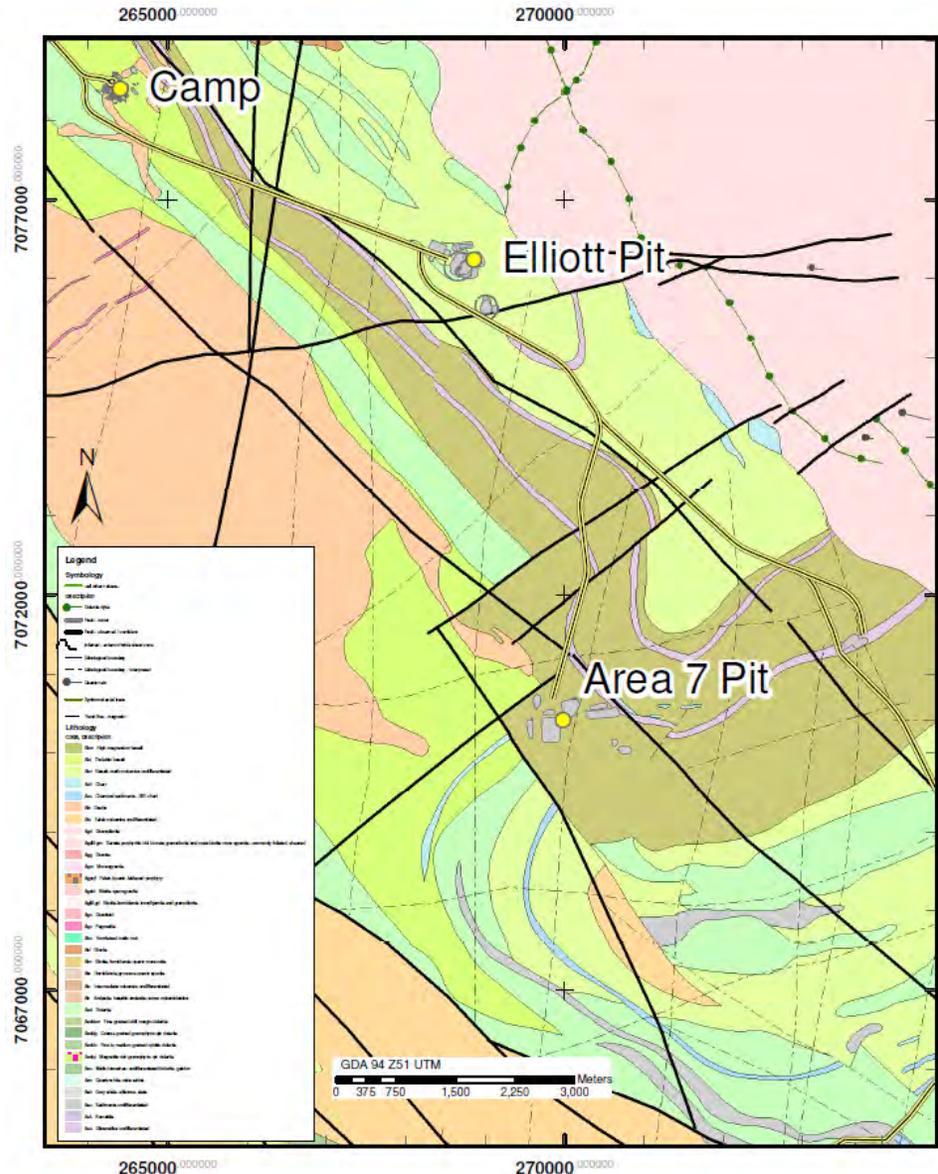
Jundee – Exploration Upside



<p>Overview</p>	<ul style="list-style-type: none"> * Jundee tenements comprise 420 km² with more than 1,000 identified mineralised lodges containing many high-grade point anomalies * The Westside system currently provides the majority of Jundee underground reserves * Systematic drill testing of this system is continuing at present
<p>Exploration success</p>	<ul style="list-style-type: none"> * The field has enjoyed a good history of reserve replacement with full reserve replacement occurring eight out of the last 18 years with a life of mine discovery cost of US\$25/oz
<p>Further opportunities</p>	<ul style="list-style-type: none"> * Future exploration will focus on incremental additions adjacent to readily accessible infrastructure



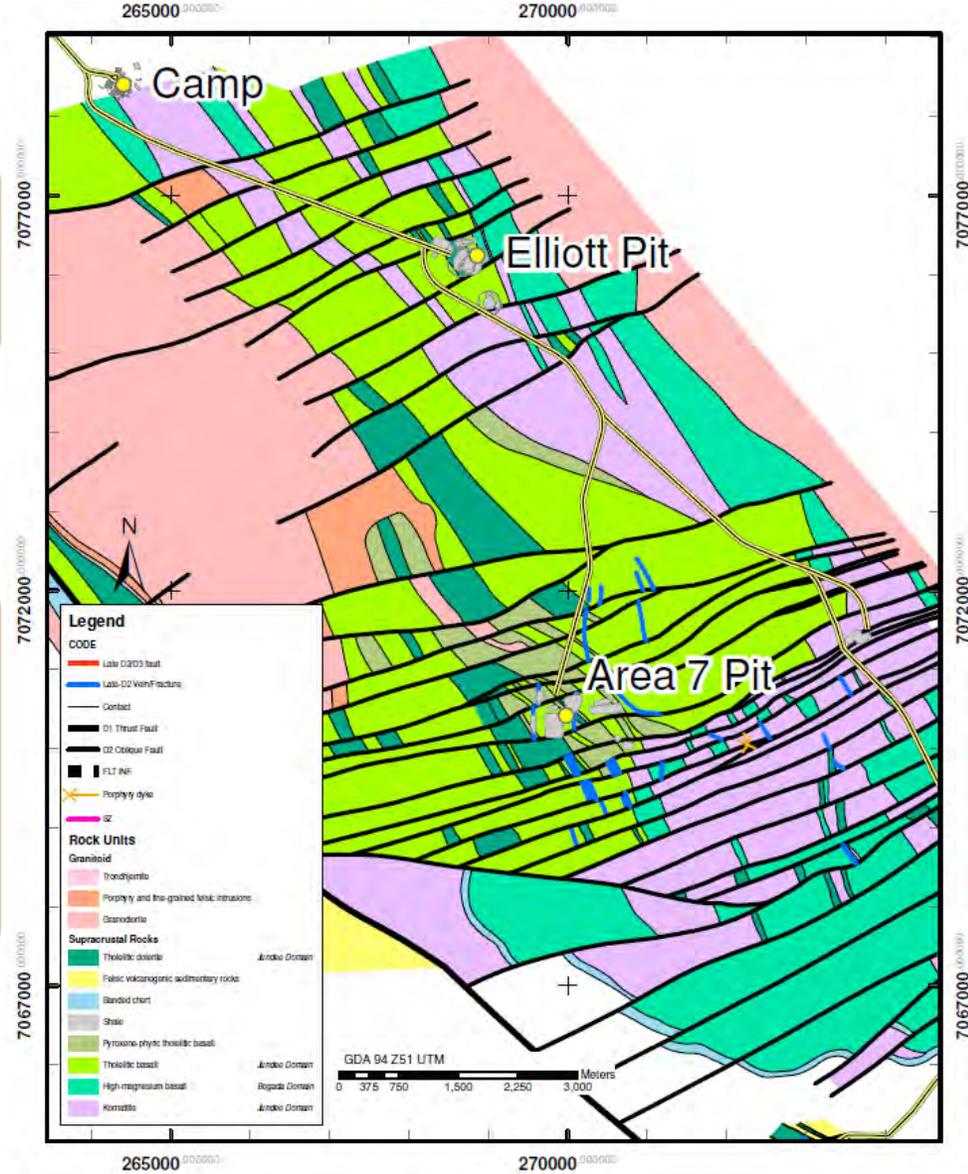
Jundee – Exploration Target Mapping



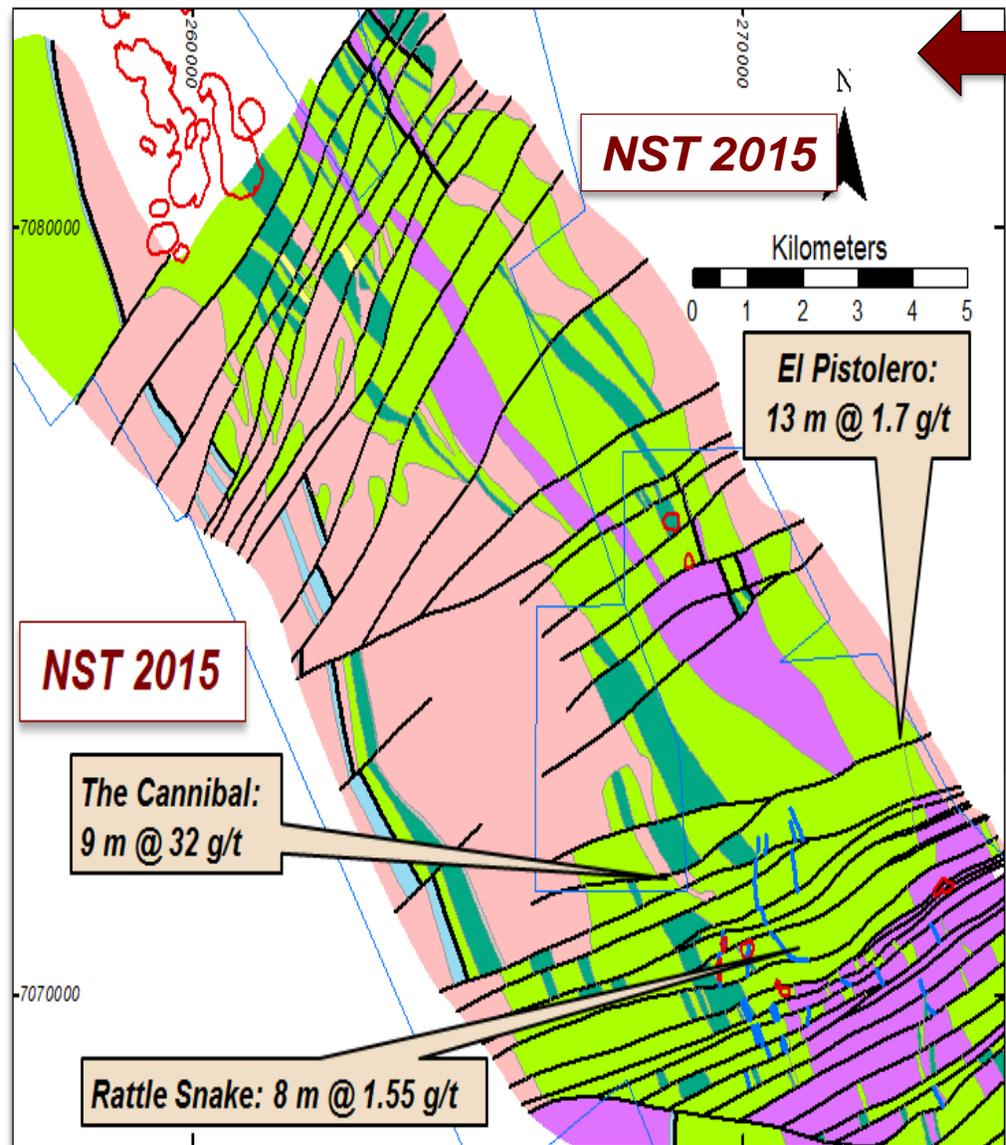
The Original interpreted geology map (left) was constructed via geophysics and field observation.

New mapping (right) required robust field observations made whilst traversing the mapping area on foot.

Remote sensing data is utilised as a support tool only.



Jundee – New Model and Exploration Strategy



New Geological Interpretation

Based on fact surface mapping and collection of chips from 6,500 drill holes

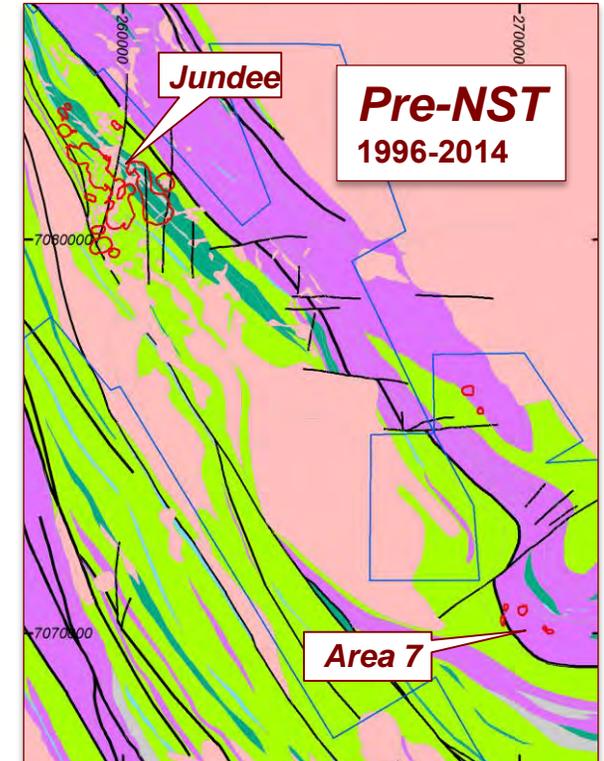
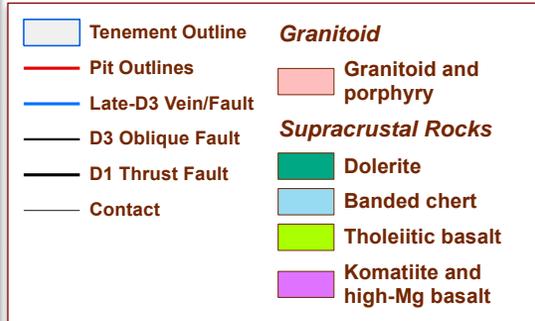
Recognition of a major array of oblique faults that control:

- Off-set of mafic host-rock units (by as much as 1.5 km)

- Shape of (host) granitoid intrusions

- Location of second-order faults, vein arrays and gold mineralisation

Powerful tool for re-examining existing data and identifying untapped potential within mature exploration belt



Previous Interpretation

Reliant largely on geophysical datasets that are strongly influenced by surface units

Controlling structures not recognised

Drilling data lacks proper context, targets missed



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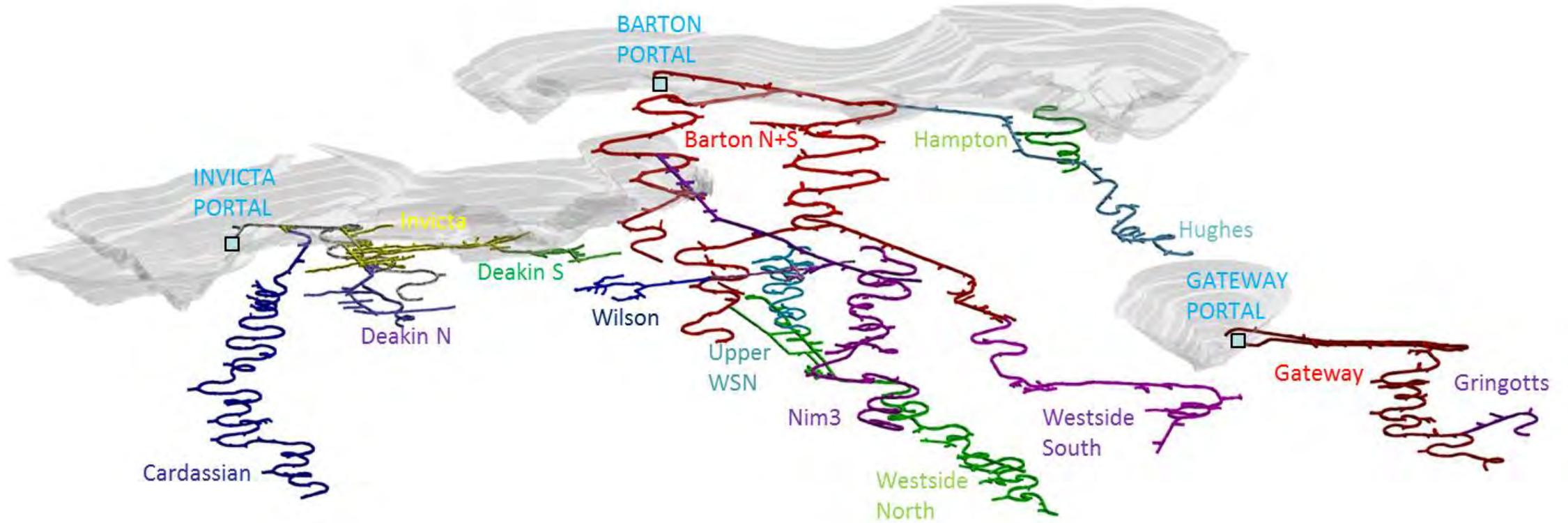
ASX Code: NST



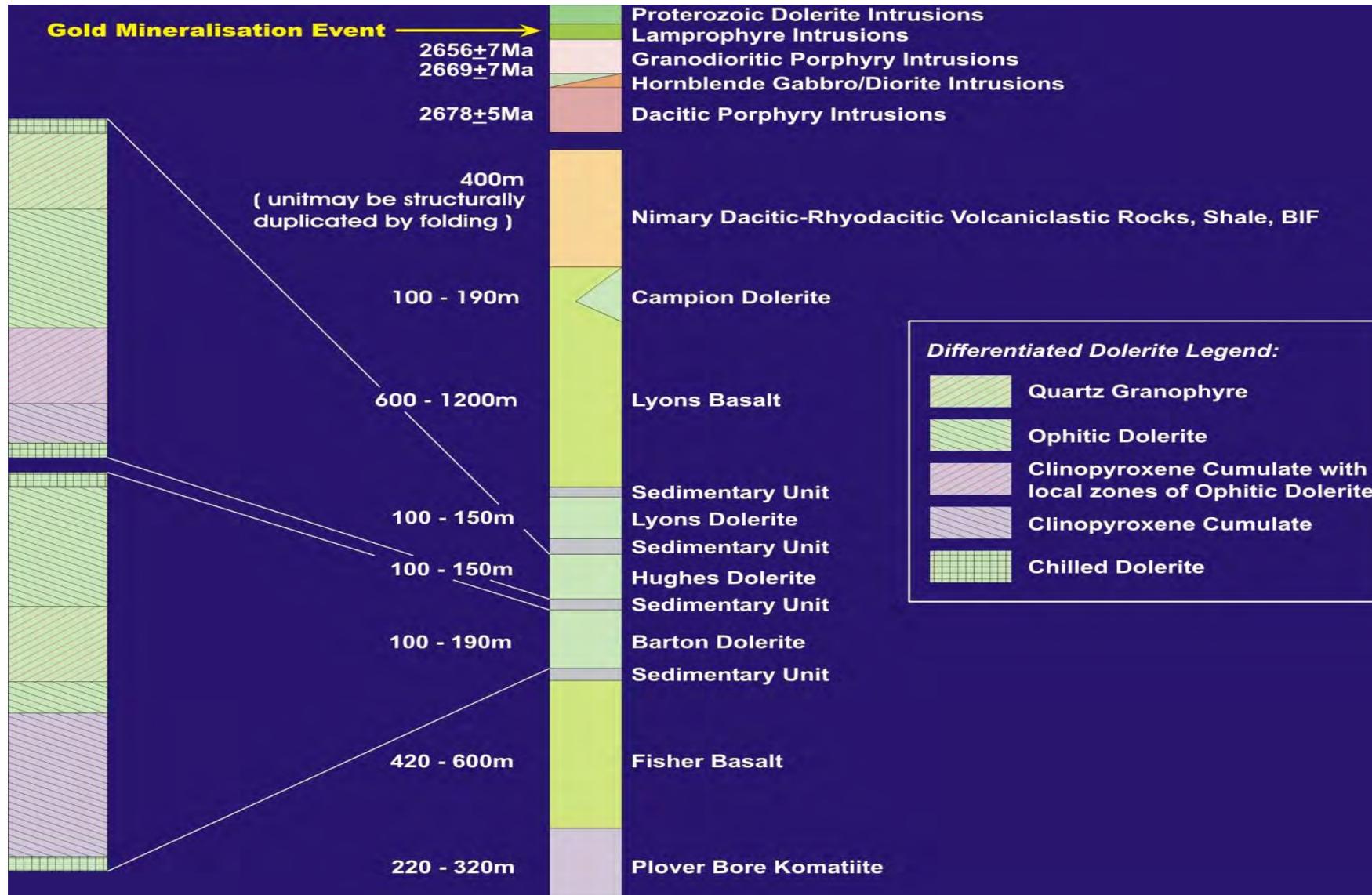
5. Jundee Appendix

August 2015

Jundee Gold Mine – General Mine Design Overview



Jundee Mine Stratigraphy



Resource and Ore Reserve Table as at 30 June 2015



JUNDEE MINE GOLD MINERAL RESERVE				
As at 30 June 2015		PROVED and PROBABLE		
Based on attributable ounces Au		Tonnes (000's)	Grade (gpt)	Ounces (000's)
JUNDEE GOLD PROJECT				
Underground				
	Barton			
	Cardassian	121	4.6	18
	Gateway	932	7.7	232
	Hampton	151	4.6	22
	Hughes			
	Invicta	42	7.9	11
	Nexus/Moneyline/Midas	132	6.7	28
	Nim3	358	8.7	101
	Westside / Lyons	324	6.0	63
	Wilson	394	6.3	80
Subtotal Underground		2454	7.03	555
Open Pit				
	Cook			
	Desert Dragon			
	Gourdis			
	Menzies			
	Vause			
Subtotal Open Pit				
Surface Stockpiles				
	UG and Oxide Material	1075	1.1	38
	Gold in Circuit			3
Subtotal Surface Stockpiles		1075	1.20	41
TOTAL RESERVES		3529	5.25	596

JUNDEE MINE GOLD MINERAL RESOURCE				
As at 30 June 2015		TOTAL (MI&Inf)		
Based on attributable ounces Au		Tonnes (000's)	Grade (gpt)	Ounces (000's)
JUNDEE GOLD PROJECT				
Underground				
	Barton			
	Cardassian	164	5.3	28
	Gateway	1117	8.5	306
	Hampton	151	4.6	22
	Hughes			
	Invicta	73	13.6	32
	Nexus/Moneyline/Midas	554	13.6	243
	Nim3	418	8.0	108
	Westside / Lyons	354	6.0	69
	Wilson	444	6.4	92
Subtotal Underground		3275	8.54	899
Open Pit				
	Cook	180	6.1	35
	Desert Dragon	371	2.0	24
	Gourdis	3786	1.5	180
	Menzies	724	1.9	45
	Vause	2565	1.5	123
Subtotal Open Pit		7626	1.66	408
Surface Stockpiles				
	UG and Oxide Material	1075	1.1	38
	Gold in Circuit			3
Subtotal Surface Stockpiles		1075	1.20	41
TOTAL RESOURCES		11976	3.50	1349



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Northern Star Resources
An Australian Mid Cap gold miner – for global investors

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August 2015