ACTIVITY REPORT

For the period ending 31 March 2019

WESTERN AREAS LTD

Lowest Quarterly Cash Cost and Highest Production Year to Date, Odysseus Mine Underground Development Advancing as Planned

March Quarter 2019 Highlights:

- **Lowest quarterly cash cost for the year, unit cash cost of nickel in concentrate of A$2.82/lb and A$2.98 YTD**
- **Mine production of 6,066 nickel tonnes and 17,785 nickel tonnes YTD**
- **Mill production of 5,448 nickel tonnes and 16,242 nickel tonnes YTD, highest quarterly production YTD**
- **Cash at bank plus nickel sales receivables increased to A$149.9m (December quarter A$143.8m)**
- **Stronger nickel price for the quarter (A$8.31) with $10.3m cash receipted on 1 April resulting in higher sales receivable balance at quarter end**
- **Odysseus underground development advancing well, dewatering and decline rehabilitation progressing as planned**

Western Areas Managing Director, Mr Dan Lougher, said the March quarter was another consistent performance in line with plan across the operations.

"Pleasingly the March quarter result was the lowest cash cost of production of nickel into concentrate for the year."

"It is also very exciting to see the decline rehabilitation start at the Odysseus mine, our next long life project that will underpin the future of Western Areas."

Western Areas ("WSA" or the "Company") (ASX: WSA) is pleased to report significant improvements in both the grade of ore mined and cost of production for the March quarter. Production metrics remain on track to meet full year guidance and the improved nickel price should result in stronger second half earnings and operating cashflow.

The Forrestania operation continued to operate consistently and reliably. Pleasingly average mined grade across the operation improved during the quarter resulting in nickel production of 6,066 nickel tonnes in ore. The Cosmic Boy Concentrator throughput was in line with forecast producing 5,448 nickel tonnes in concentrate, noting that a major planned maintenance shut down occurred during the quarter. Both nickel mined and concentrate production were the highest quarterly production results for the financial year to date.

Nickel in concentrate sales totalled 5,189 tonnes. Timing of export shipping services resulted in an increase of nickel in concentrate awaiting shipment at quarter end, with the concentrate expected to ship and the resultant sales revenue to be recognised during April.

Cash at bank plus nickel sales receivables increased to A$149.9m (December A$147.4m) at the end of the quarter, supported by the higher nickel price and including the timing variance mentioned above, with A$10.3m received on 1 April for the shipment which occurred at the end of March.

The Odysseus mine has advanced into the underground decline rehabilitation stage following successful installation of the Schlumberger pump early in January. To date, 2,033 metres of decline have been rehabilitated to a depth of 236 vertical metres from surface. The project remains on schedule and on budget with all near term surface infrastructure complete and preparations to dismantle and prepare the haulage shaft infrastructure for export from South Africa to the Cosmos site well advanced. Evaluation of the potential upside from mining the AM5 and AM6 deposits is ongoing, with a reserve position expected to be completed in the second half of the calendar year.

While the nickel market has been recently more volatile, the Company averaged a realised price of A$8.31/lb (pre payable deductions) for the quarter. The fundamental outlook for nickel remains strong as the emerging EV battery market continues to gain momentum. This is highlighted by the LME nickel stockpile falling below 175kt, its lowest level since 2013, confirming that nickel supply remains in deficit. This provides the Company with strong encouragement for achieving better terms in the upcoming offtake renegotiations later in the year.

Production Overview

Item	Unit	FY18	FY19			FY19 YTD Total
		Jun Qtr	Sep Qtr	Dec Qtr	Mar Qtr	
Total Ore Mined	tonnes	160,714	141,567	139,528	141,595	422,690
Mine Grade	Ni %	4.0%	4.1%	4.2%	4.3%	4.2%
Total Nickel Mined	**tonnes**	**6,381**	**5,868**	**5,851**	**6,066**	**17,785**
Ore Processed (Milling/Concentrator)	tonnes	**152,425**	**156,706**	**154,517**	**146,935**	**458,158**
Processed Grade	Ni %	4.0%	3.9%	4.0%	4.2%	4.0%
Average Processing Recovery	%	89%	89%	88%	88%	89%
Total Nickel in Concentrate	**tonnes**	**5,368**	**5,379**	**5,415**	**5,448**	**16,242**
Total Nickel Sold	**tonnes**	**5,176**	**5,018**	**5,386**	**5,189**	**15,593**
Contained Nickel in Stockpiles	tonnes	4,755	4,820	4,413	4,510	
Cash Cost Nickel in Concentrate	**A$/lb**	**2.80**	**2.99**	**3.15**	**2.82**	**2.98**
Cash Cost Nickel in Concentrate	US$/lb	2.12	2.19	2.26	2.01	2.15
Exchange Rate	US$/A$	0.76	0.73	0.72	0.71	0.72
Net Nickel Price (before payability applied)	**A$/lb**	**8.71**	**7.91**	**7.01**	**8.31**	**7.74**

Western Areas has Australia's highest grade nickel mines and is a low unit cash cost producer. Its main asset, the 100% owned Forrestania Nickel Project, is located 400km east of Perth in Western Australia. Western Areas is also Australia's second largest independent sulphide nickel miner producing approximately 22,000 to 25,000 nickel tonnes in ore per annum from its Flying Fox and Spotted Quoll mines - two of the lowest cost and highest grade nickel operations in the world.

An active nickel project developer at Cosmos and explorer at Western Gawler in Australia, the Company also holds exploration interests in Canada through shareholdings in Grid Metals (formerly Mustang Minerals). Additionally, the Company has exposure to the emerging lithium market via its shareholding in Kidman Resources Limited.

The Board remains focused on the core business of low cost, long life nickel production, new nickel discoveries and generating returns to shareholders. It has put in place the cost structure and capabilities to prosper throughout the cycle by adopting prudent capital management and an opportunistic approach. Its latest presentation can be found at **http://www.westernareas.com.au/investor-centre/corporate-presentations.html**.

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Corporate and financing

Cashflow

Operational cashflow for the quarter totalled A$6.0m (September quarter A$18.2m). Absolute operating costs remained in line with the prior quarter, however receipts from customers were lower due to A$10.3m being received on 1 April, rather than inside the quarter end. The higher average (pre-payable deduction) realised nickel price for the quarter of A$8.31/lb (December quarter A$7.01/lb) and cash receipt timing variance, have resulted in a significant increase in working capital balances at quarter end.

Capital and mine development expenditure at Forrestania remained in line with the plan at A$13.9m (December quarter A$8.1m). Growth expenditure for the Odysseus project at Cosmos returned to a more normalised level at A$6.6m (December quarter A$18.7m), with the majority of the expenditure relating to the ongoing underground decline rehabilitation works, underground dewatering and the shaft haulage system detailed design and relocation. Exploration expenditure for the quarter was A$2.7m.

Cash at bank at quarter end was A$116.7m (December quarter A$134.3m), while cash at bank plus nickel sales receivables totalled A$149.9m (December quarter A$147.4m). The significant items during the quarter included:

- An increase in working capital on the balance sheet with March export revenue of A$10.3m being received on 1 April and an increase in nickel awaiting shipping at the end of the quarter;
- Odysseus mine development and DFS expenditure of A$6.6m; and
- Quotation period adjustment repayments of A$2.4m relating to sales that occurred in the first half of the financial year. At this time there are no further negative QP payments outstanding.

Hedging

When pricing is supportive, the Company manages nickel price and foreign exchange risk with a combination of short term quotation period (QP) hedging and a set limit of medium term hedging. The policy allows the use of forward sales, bought options and collar style options:

- QP hedging is used to manage the risk of price fluctuations for nickel already shipped to offtake partners, where the nickel price is yet to be finalised; and
- Medium-term hedging is used to manage the risk of nickel price fluctuations, with a maximum 25% of expected nickel sales per month hedged out for a period of 12 to 18 months.

Details of hedging in place at quarter end are as follows:

Hedging Details - FY 2019				
Nickel Hedging - Collar Options			**US$ Hedging - Collar Options**	
Ni Tonnes Hedged	1,200		US$ Hedged	7,500,000
Average Floor	US$11,750/ tonne		Average Put	US$0.7300
Average Cap	US$15,000/ tonne		Average Call	US$0.6799

Kidman Resources Limited (Kidman)

The Company owns 17.4m shares in Kidman with a market value of A$21.2m, based on a closing 31 March share price of A$1.215/share.

Mine safety and environment

Safety

There was one Lost Time Injury (LTI) recorded during the quarter. The LTI Frequency Rate consequently increased from 1.80 to 2.66. However, the Total Recordable Injury Frequency Rate reduced from 8.1 to 7.1 at quarter end.

Key safety management initiatives included updating the Health and Hygiene Management Plan and the Emergency Management Plan. The Department of Mines, Industry Regulation and Safety (DMIRS) conducted an Emergency Preparedness Audit on Operations during the quarter with no significant defects recorded.

Emergency Response Team (ERT) training focused on team skills, underground search and rescue, firefighting and breathing apparatus. The ERT responded to three callouts during the quarter which included a food delivery truck rollover, a small bushfire due to a lightning strike (both off WSA tenements) and a small power pole fire at the Cosmic Boy concentrator switch-yard due to sparking from insulators.

ERT open circuit Breathing Apparatus Training Course

Environment

Forrestania (FNO)

No reportable environmental incidents were recorded during the quarter.

The environmental team completed all required compliance monitoring and reporting during the period. Baseline environmental studies for the New Morning Daybreak (NMDB) project were completed including pump testing of a hydrological production bore-hole.

The Teddy Bear Mine Closure Plan was accepted by the Department of Mines, Industry Regulation and Safety (DMIRS), and a number of DMIRS program-of-work applications (PoW) were approved to allow exploration at Mt Hope and other areas. A Conservation Management Plan for exploration within the Jilbadji nature reserve is awaiting ministerial approval.

NMDB hydrological production bore-hole pump testing

Cosmos

One environmental incident was reported to DWER in January when the open-pit dewatering transfer station overflowed due to the failure of an outlet pump. A thorough investigation was completed and photo monitoring points established to monitor any potential impact on downstream vegetation.

Dewatering of the open-pit and underground workings continued during the quarter and all water monitoring and compliance reporting obligations were completed. A Mining Proposal was submitted to DMIRS for approval of the Cosmos Project including the Odysseus underground mine, new waste rock dump, shaft and associated infrastructure.

An Aboriginal heritage survey was completed with the Tjiwarl Aboriginal Corporation for an upcoming exploration programme and an area surrounding a sand resource earmarked for paste-fill sand supply.

Group photo of sand resource heritage survey with Tjwarl and WSA staff participants

Mine and mill production statistics and cash costs

TONNES MINED		FY18	FY19			YTD Total
		Jun Qtr	Sep Qtr	Dec Qtr	Mar Qtr	
Flying Fox						
Ore Mined	tonnes	67,236	58,699	59,309	56,386	174,394
Grade	Ni%	3.9%	4.0%	4.3%	4.5%	4.3%
Flying Fox Nickel Mined	**tonnes**	**2,625**	**2,330**	**2,574**	**2,550**	**7,454**
Spotted Quoll						
Ore Mined	Tonnes	93,478	82,868	80,219	85,209	248,296
Grade	Ni%	4.0%	4.3%	4.1%	4.1%	4.2%
Spotted Quoll Nickel Mined	**Tonnes**	**3,756**	**3,538**	**3,277**	**3,516**	**10,331**
Total Ore Mined	**Tonnes**	**160,714**	**141,567**	**139,528**	**141,595**	**422,690**
Grade	**Ni%**	**4.0%**	**4.1%**	**4.2%**	**4.3%**	**4.2%**
Total Nickel Mined	**Tonnes**	**6,381**	**5,868**	**5,851**	**6,066**	**17,785**

Flying Fox

Mine Production

Production was **56,386 tonnes of ore at an average grade of 4.5% nickel for 2,550 nickel tonnes**. Ore production was predominately (92%) derived from long-hole stoping (LHS) and ore drive development (8%).

LHS production was sourced solely from the T5 area, namely from the 460, 425, 385, 295 and 230 stopes. Associated paste-filling of stope voids resulted in 16,952 m3 of paste poured.

Mine Development

There was 344m of twin boom jumbo capital incline development at the 1195, 1170, 1150 accesses to the old Flying Fox orebody plus 160 and 210 escape-way cuddies and 345 access.

The lower parts of the mine completed 221m of single-boom jumbo development which involved:

- 60m of operating waste development at the 460, 210 and 160 levels;
- 113m in paste-fill (between the 460 and 210 levels) to facilitate slot drilling; and
- 48m of ore drive development at the 460, 370, 210, and 160 levels.

There was no capital infrastructure work undertaken during the quarter.

370 west ore drive (4.5m W x 4.5m H) with a face grade of 5.1% Ni

Spotted Quoll

Mine Production

Spotted Quoll production was **85,209 tonnes of ore at an average grade of 4.1% nickel for 3,516 nickel tonnes**. Ore production was sourced predominately from LHS (66%) with the remainder (34%) from ore drive development.

The 'twin-boom area' ("TBA") saw ongoing production from the 660, 627 and 610 levels and commencement of stoping on the 595 level. The 'single-boom area' ("SBA") completed production on the 862 level, with ongoing production from the 920, 852, 825, 842, 832, 819, 818 and 804 levels, and commencement of the 795 level early in the quarter.

Mine Development

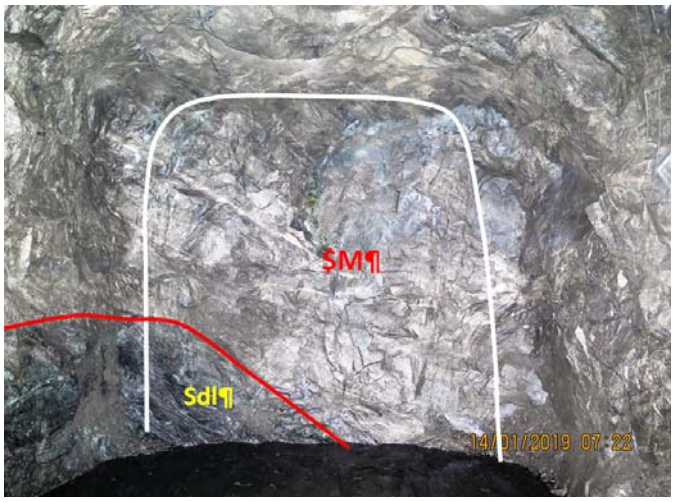
Total jumbo development for the quarter was 1,211m, which included 185m of capital decline development. During the quarter, 471m of lateral capital development and 136m of operating waste development occurred, which included 105m of paste-fill development to facilitate slot drilling.

The 'Stage 2' 550 and 535 ore drive levels were established from the 540 level off the main decline, with 346m ore drive development completed between 580 and 535 levels by quarter end.

A total of 73m of SBA ore drive development was completed between the 747 and 836 levels.

Infrastructure

At the Spotted Quoll "Stage 2" zone, the 722 Level underground Sat-Stat refuelling station was installed which reduced the tramming distance to surface to refuel by 12km return and increased the equipment availability. The capital primary ventilation system was advanced to the 540 Level with the successful opening of the 570 to 540 return airway (RAW) long-hole rise. The secondary escape egress was extended from the 600 to 510 Level, which included 83m of 1.1m raise-bore back reaming and 98m of escape-way ladder-tube installation.



SBA 836 ore drive (4.0m W x 3.5m H) with a face grade of 5.6% Ni

Cosmic Boy Nickel Concentrator

TONNES MILLED AND SOLD		FY18	FY19			YTD Total
		Jun Qtr	Sep Qtr	Dec Qtr	Mar Qtr	
Total Ore Milled	**tonnes**	**152,425**	**156,706**	**154,517**	**146,935**	**458,158**
Grade	%	4.0%	3.9%	4.0%	4.2%	4.0%
Ave. Recovery	%	89%	89%	88%	88%	89%
Nickel in Concentrate Produced (i)	**tonnes**	**5,368**	**5,379**	**5,415**	**5,448**	**16,242**
Nickel in Concentrate Sold	**tonnes**	**5,176**	**5,018**	**5,386**	**5,189**	**15,593**
(i) Includes MREP Nickel tonnes produced.						

The Cosmic Boy Concentrator processed 146,935 tonnes of ore at an average grade of 4.2% nickel for a total of 37,023 tonnes of concentrate grading 14.7% nickel. This resulted in 5,448 nickel tonnes produced at a metallurgical recovery of 88.4% with average concentrator availability of 98.4%.

A total of 35,689 tonnes of concentrate was delivered, containing 5,189 nickel tonnes, for the quarter.

Other sales unit costs for the quarter were royalties at A$0.23/lb and concentrate transport of A$0.36/lb of nickel in concentrate.

Stockpiles

Ore stockpiles at the end of the quarter totalled **96,114 tonnes of ore at 3.8% nickel for 3,684 nickel tonnes** representing two months of mill feed, thereby enabling the selection of an optimal mill feed blend.

The concentrate stockpile at quarter end was 5,481 tonnes at an average grade of 15.1% nickel, containing 826 nickel tonnes which included 123 containers at Esperance port ready for the April shipment.

STOCKPILES		FY18	FY19		
		Jun Qtr	Sep Qtr	Dec Qtr	Mar Qtr
Ore	tonnes	135,793	118,549	101,455	96,114
Grade	%	3.2%	3.5%	3.7%	3.8%
Concentrate	tonnes	2,972	4,462	4,093	5,481
Grade	%	15.1%	15.4%	15.6%	15.1%
Contained Nickel in Stockpiles	**tonnes**	**4,755**	**4,820**	**4,413**	**4,510**

Cash Costs

FINANCIAL STATISTICS		FY18	FY19			YTD
		Jun Qtr	Sep Qtr	Dec Qtr	Mar Qtr	
Group Production Cost/lb						
Mining Cost (*)	A$/lb	2.03	2.24	2.38	2.11	2.24
Haulage	A$/lb	0.07	0.07	0.07	0.06	0.07
Milling	A$/lb	0.52	0.49	0.51	0.48	0.49
Admin	A$/lb	0.21	0.22	0.22	0.20	0.21
By Product Credits	A$/lb	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Cash Cost Ni in Con (***)	**A$/lb**	**2.80**	**2.99**	**3.15**	**2.82**	**2.98**
Cash Cost Ni in Con (***)	**US$/lb(**)**	**2.12**	**2.19**	**2.26**	**2.01**	**2.15**
Exchange Rate US$ / A$		**0.76**	**0.73**	**0.72**	**0.71**	**0.72**

(*) Mining Costs are net of deferred waste costs and inventory stockpile movements.

(**) US$ FX for Relevant Quarter is RBA average daily rate (Mar Qtr = A$1:US$0.71)

(***) Payable terms are not disclosed due to confidentiality conditions of the offtake agreements. Cash costs exclude royalties and concentrate logistics costs.

Note: Grade and recovery estimates are subject to change until the final assay data are received.

The March quarter was the lowest cash cost of production quarter year to date, with reported cost of production for nickel in concentrate (excluding smelting/refining charges, concentrate logistics and royalties) at A$2.82/lb (US$2.00/lb). The improved performance resulted from:

- An increase in the ratio of stope ore versus development ore, as was planned in the yearly mining plan;
- As foreshadowed in the prior quarter, a moderation in rise and fall (R&F) charges as some of the indexes utilised in the calculation reduced; and
- Higher quarter on quarter grade reporting to the mill, with positive block model reconciliation being reported, particularly from Flying Fox.

The year to date cost of production stands at A$2.98/lb, well within the full year guidance range of A$2.80/lb to A$3.20/lb.

Forrestania Mineral Resources and Ore Reserves

A full summary of the Company's Mineral Resource and Ore Reserve estimates is included at the end of this report.

Flying Fox

Five resource extension diamond holes targeting the lower portion of T5 and the T5Z9 domain were drilled during the quarter. A long section of the holes and assay results are shown below:

BHID	Interval (m)	Grade (NI %)
LUG115	3.00	0.5
LUG116	0.56	3.5
LUG117	1.49	1.5
LUG117	1.25	9.5
LUG121	1.19	1.5
FUG799	1.04	0.4

The Mineral Resource was updated and a comparison of the old and new (end of December) resource estimates is shown below:

	Old Resource Estimate			Updated Resource Estimate		
RESCAT	Ore Tonnes (t)	Grade (Ni %)	Ni Tonnes (t)	Ore Tonnes (t)	Grade (Ni %)	Ni Tonnes (t)
Indicated	1,405,814	5.1	71,708	1,460,019	5.4	78,841
Inferred	332,756	2.5	8,300	305,403	1.4	4,275

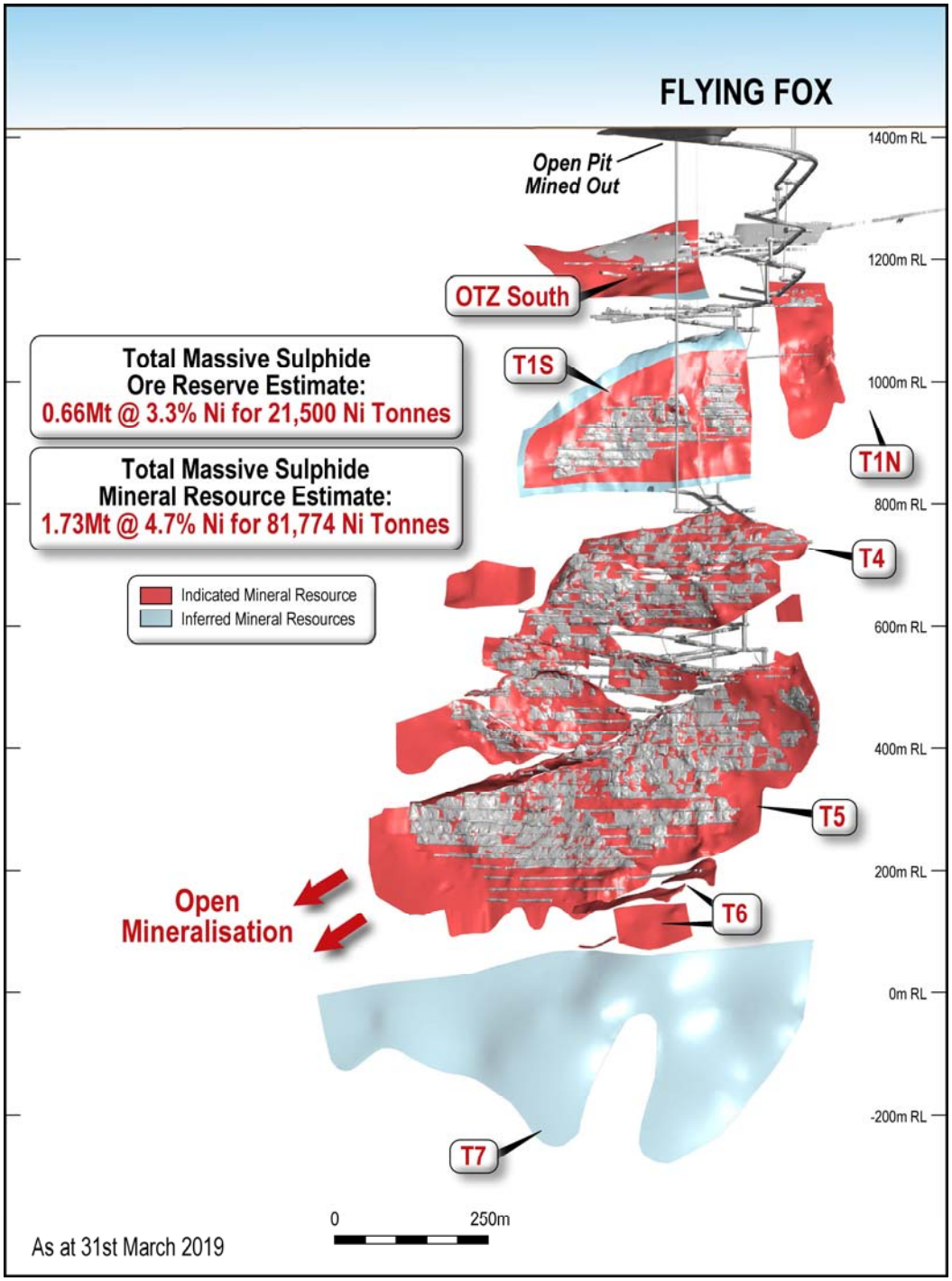
In summary:

- Net gain in the Indicated category of 7,133 Ni tonnes due to an increase in overall grade;
- Net loss of 4,025 Ni tonnes in the Inferred category due to conversion of some of the Inferred to Indicated; and
- Overall net gain of 3,108 Ni tonnes.

The technical and economic review of the lower grade ore at the Flying Fox mine continued during the quarter. The purpose of this review is to assess the suitability of the lower grade ore to heap leaching using the Company's Bioheap technology, with the view of extending the mine life. This work will continue into the June quarter.

The Flying Fox **Massive Sulphide Mineral Resource,** including depletion to the end of March 2019, stands at **1.73Mt of ore at a grade of 4.7% Ni for 81,774 nickel tonnes**.

The Flying Fox **Massive Sulphide Ore Reserve**, including depletion to the end of March 2019, stands at **0.66Mt of ore at a grade of 3.3% Ni for 21,500 nickel tonnes**.



Spotted Quoll

The surface diamond drilling program to investigate Stage 3 (below the T3 fault) mineralisation continued during the quarter with results expected in the June quarter. No additional resource extension or resource definition drilling took place.

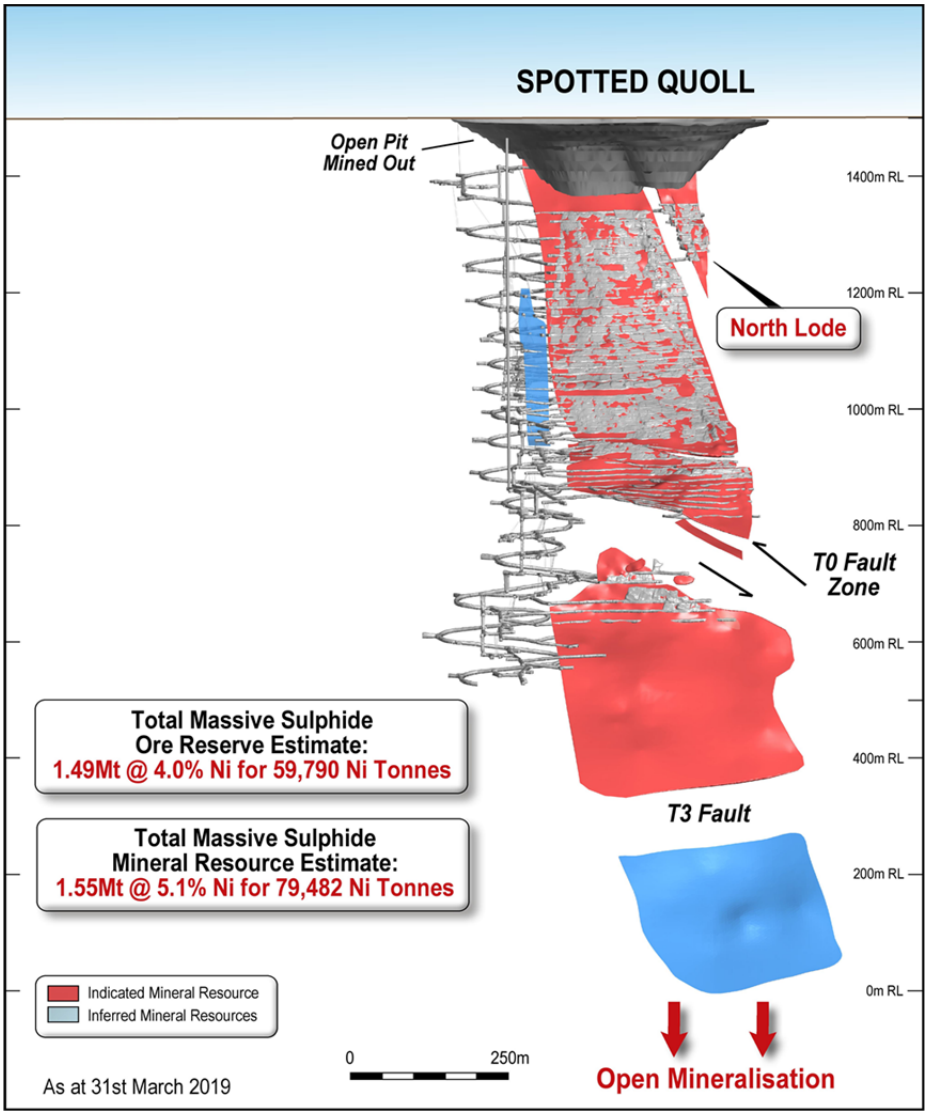
The Mineral Resource Estimate was updated and a comparison of the old and new (end of December) resource estimates is shown below:

	Old Resource Estimate			Updated Resource Estimate		
RESCAT	Ore Tonnes (t)	Grade (Ni %)	Ni Tonnes (t)	Ore Tonnes (t)	Grade (Ni %)	Ni Tonnes (t)
Indicated	1,512,287	5.5	83,691	1,447,247	5.7	82,876
Inferred	144,581	3.1	4,540	144,581	3.1	4,540

In summary there was a **net loss in the Indicated category of 905 Ni tonnes** due mainly to the sub vertical intrusion intercepted near the top of Stage 2.

The Spotted Quoll **Mineral Resource**, including depletion to the end of March 2019, stands at **1.55Mt of ore at a grade of 5.1% Ni for 79,482 nickel tonnes**.

The Spotted Quoll **Ore Reserve**, including depletion to the end of March 2019, stands at **1.49Mt of ore at a grade of 4.0% Ni for 59,790 nickel tonnes**.



Growth Projects

Cosmos Operations

Odysseus Project

The Early Works program made strong progress during the quarter with a summary given below:

- The Schlumberger submersible pump was installed and commissioned in early January and was pumping over 100L/s to water management ponds by mid-January;
- The in-pit diesel pump was removed in late February having dewatered 90% of the in-pit water and will be replaced by an electrical pump station early in the June quarter. Access will be via an adit to the underground workings. By quarter end the open-pit water level had dropped 32 vertical metres to leave approximately 144k m^3 remaining in the pit; and
- The temporary Cosmos diesel power station was upgraded to 1,250KW units to meet the increasing load from the underground activity.

Cosmos open-pit at start of January 2019

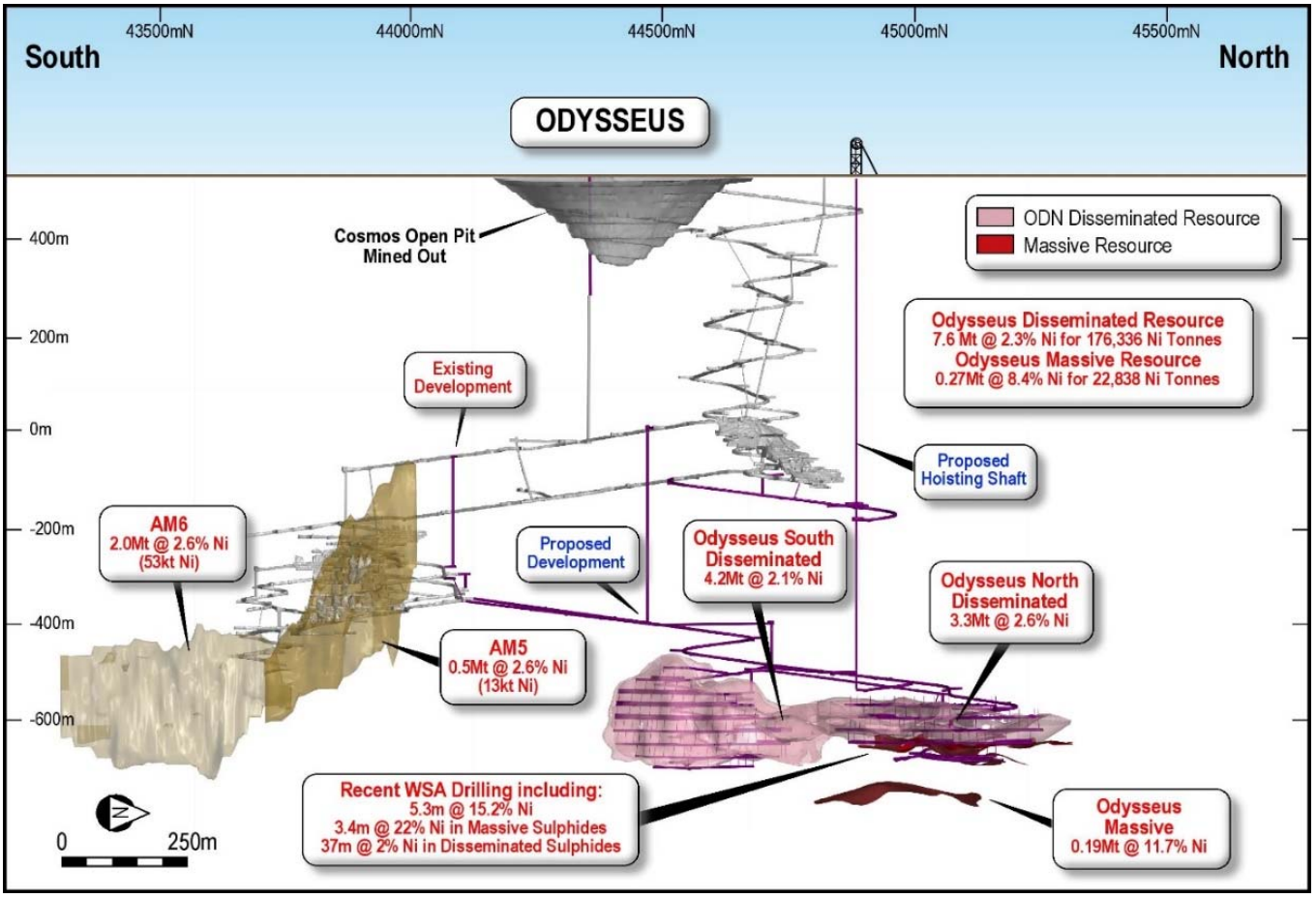
Cosmos open-pit at quarter end

Underground infrastructure:

- The mining contractor entered the Ilias portal on 18th January to commence decline ground support rehabilitation and by quarter end had advanced 2,033m down the decline which equates to ~236m vertical depth;
- Primary ventilation was also re-established with the commissioning of a 55kW exhaust fan;
- Inspection of the first 140m long escape-way was carried out and was found to be in good condition. It is expected that deeper escapeways will be in the same condition, potentially resulting in cost savings; and
- A specialist contractor successfully drilled two surface to underground electrical service-holes (HT and 1KV cable).

Next Steps:

- Decline rehabilitation to be completed to the 10,000m RL pump station (approx. 500m bs) level by June quarter;
- Pump station to be re-commissioned and new pumping infrastructure installed for life of mine; and
- Rehabilitation of the main decline down to the AM5 and AM6 orebodies to be completed by Feb 2020.



Post Definitive Feasibility Study ("DFS") Projects:

The Post DFS projects progressed well with a summary below:

- Additional geotechnical logging for Odysseus was completed during the quarter and this data will be used to update the existing Mining Rock Mass Model (MRMM) and structural models. The development of these models will be completed during the June quarter and will be used to refine the placement of the permanent underground infrastructure. The geotechnical logging of selected AM5 and AM6 drill-cores is planned for the June quarter as part of the mine design and reserve evaluation;
- Geotechnical diamond drilling of the shaft footprint foundations (i.e. shaft headframe, winder house, paste plant and other infrastructure) were nearing completion at quarter end (eight PQ triple tubed cores to a nominal depth of 40m, i.e. fresh rock) and geotechnical logging of this core is currently underway. Following the completion of the foundation drilling program, the drilling contractor will then move onto the shaft geotechnical drill-hole (depth 1.2km);
- During the quarter a comprehensive tender and adjudication process was undertaken in South Africa for the uplift, refurbishment and shipping to Australia of the assets purchased. By the quarter end, a recommendation for the award of the winder mechanicals and the winder electrical packages was submitted to the Company for approval and it is likely that the headframe structural package will be awarded early in the June quarter. Preparations for the mobilisation of South African personnel to the Impala Mine were progressed, and site works are expected to commence on all three packages during the June quarter; and
- The detailed engineering design (DED) of the shaft and materials handling systems progressed well.

Diamond drill rig undertaking shaft footprint geotechnical drilling

Mill Recovery Enhancement Project (MREP)

MREP optimisation work continued during the quarter with a summary below:

- The leaching circuit was maintained in continuous mode;
- Five power outages occurred during the quarter which resulted in circuit disturbances that adversely affected production. These were caused by pole top fires and a lightning strike at the Bounty sub-station. A schedule of pole cleaning has commenced to prevent re-occurrence of these events and no permanent damage was sustained at the sub-station;
- The sulphide precipitation circuit continued to produce on-specification nickel sulphide; and
- The pressure filter and separate bagging facilities were fully operational which enabled the sale of stand-alone product.

Spot sales of the MREP product have continued while customers evaluate the product.

Mill Scats

During the quarter additional large-scale column testing commenced to investigate the solution chemistry and leaching solution flow-rates to assist with the design of the planned heap leach operation. Geotechnical investigation and process design criteria were finalised which will be used to complete the final designs and costs for the heap-leach pad and associated facilities.

New Morning/Daybreak Project (NMDB)

The NMDB Feasibility Study continued during the quarter, as summarised below:

- Twenty-four oxide bottle-roll leach tests were conducted to understand the oxide ore leaching kinetics. Further work is planned to investigate methods that may improve nickel recovery from the oxide zones;
- Metallurgical testing on the transition and primary zones is scheduled to commence in the next quarter; and
- Completion of the planned open pit preliminary hydrological drilling program which included a single production bore-hole and one monitoring bore-hole.

Exploration

Overview

Exploration activity significantly increased during the quarter, with the Company completing its first drilling campaign at the Woodford prospect within the Iluka Farm-In and Joint Venture ground in South Australia. The Company is also pleased to announce significant nickel oxide mineralisation intersected at the Mystic project within its 100% WSA held Western Gawler tenure.

The Company has also advanced its exploration planning at Cosmos, completing an extensive heritage survey covering numerous surface targets.

Kidman Resources continued soil sampling activities across its northern Forrestania farm-in tenure, with some anomalous lithium values returned within tenement E77/1734.

St George Mining identified new conductive targets at the Fairbridge and West End prospect with additional RC programs continuing within the main Cathedrals Belt. Tenement E29/638 is in joint venture between St George Mining (SQG 75%) and Western Areas (WSA 25% free-carried).

Exploration highlights over the quarter include:

- Return of significant nickel oxide mineralisation from several holes at the Mystic Prospect (Western Gawler) including 18m @ 2.06% Ni (including 5m @ 4.29% Ni) from 19WGAC444;
- Completion of an 1882-line km airborne EM SkyTEM survey over the Iluka Farm-in Joint Venture Project area with numerous conductors identified for follow-up targeting; and
- Successful completion of a regionally extensive heritage survey at Cosmos covering future surface targeting platforms at Neptune, Penelope and Ajax.

Cosmos

Prospero – Tapinos to Alec Mairs Corridor

The Company has identified the 2.5km corridor extending between Prospero – Tapinos and Alec Mairs as being of notable exploration and strategic significance, with historical drilling intersecting both low-grade disseminated (Mt Goode style) and higher grade, basal-contact-proximal (Alec Mairs style) nickel sulphide mineralisation. In March, an extensive heritage survey was undertaken, with a principle aim of establishing new surface drill platforms to test the prospective Penelope target for accumulations of elevated nickel sulphide, located 1km south of Alec Mairs. Additional heritage sites were also assessed during this survey, incorporating potential future drill platforms to test Neptune and the Ajax Prospect (located north of Odysseus). Outcomes from this survey will be available early in the June quarter.

Forrestania

Western Ultramafic Corridor

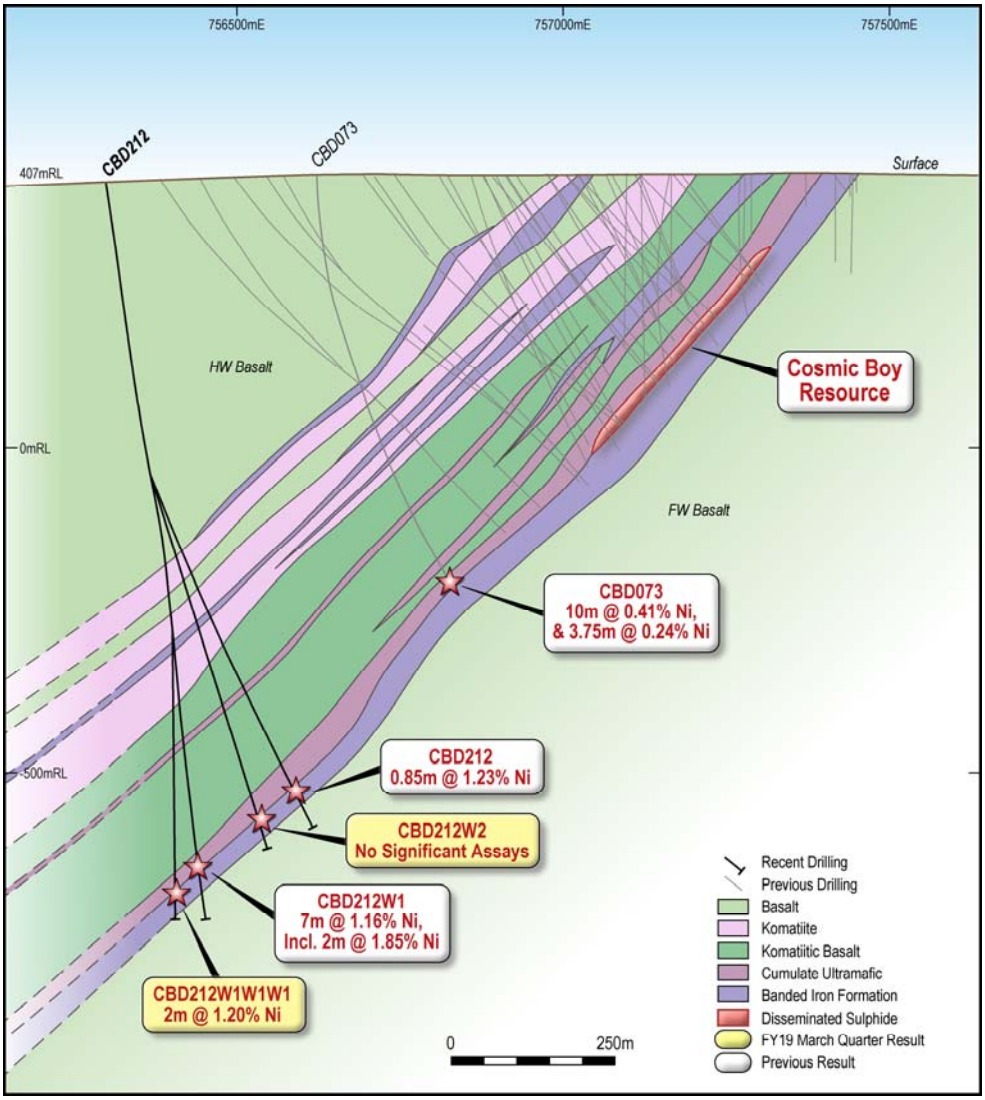
The 25km long Western Ultramafic Corridor, hosting the producing high-tenor nickel mines of Spotted Quoll and Flying Fox, together with the inventory of the New Morning resource, continues to represent a significant exploration opportunity for the discovery of additional nickel sulphide mineralisation. The Company has commenced a strategic exploration review of the Western Ultramafic Corridor, assessing the potential for this zone to host additional, likely-blind mineral systems at depth. This corridor has received significant exploration attention over the past decade, and particularly following the discovery of the 'blind' Spotted Quoll deposit in 2007. Work will continue into the June and September quarters, focusing on geophysical methods to guide exploration targeting.

Cosmic Boy

Located to the west of the Cosmic Boy Mill and concentrator, the Cosmic Boy Deposit (last mined in 1999, producing a total of 3.77Mt @ 1.46% Ni for 55,081t of contained nickel) is characterised by ultramafic-hosted, predominantly high-tenor, disseminated nickel sulphides, lying proximal to a basal contact with a banded iron formation sequence. Additional accumulations of nickel sulphide are located in hanging-wall positions, potentially emplaced due to structural repetition.

Following on from the encouraging results reported in the December quarter, an additional two diamond holes (for 1026.6m) were completed to test the continuity of mineralisation above CBD212W1 and the interpreted down-plunge extents. Results from this program are tabulated below and presented in cross-section view. CBD212W1W1W1, intersected disseminated sulphides (2m @ 1.2% Ni) at the basal contact, 45m down plunge of CBD212W1. CBD212W2, designed to test the southern lateral extent of the potential ultramafic channel, 100m south and up-dip of CBD212W1, failed to intersect significant mineralisation.

Some potential exists for a significant nickel system to occur north of CBD212W1, with this hole interpreted to have intersected the vertically plunging southern margin of the Cosmic Boy channel system. Success in this area would require the mineral system to increase in both width and grade. Additional follow-up drilling is not planned at this stage.



Cosmic Boy 6391700mN Cross Section (Looking North)

	Exploration Results Nickel – Cosmic Boy March 2019									
HOLEID	**Easting**	**Northing**	**RL**	**EOH**	**Type**	**Dip**	**Azimuth**	**Width (m)**	**Ni %**	**FROM (m)**
CBD212W1 W1W1	756295	6391700.6	407	1124.9	DDH	-82	90	6	0.75	1073
	and							2	1.20	1085.8
CBD212W2	756295	6391700.6	407	1000.3	DDH	-82	91	No significant Assays		

Mt Hope (Gold)

A shallow, ninety-hole reverse circulation drill program commenced across the Mt Hope region in March. The program has been designed to test several structural gold targets. These targets are interpreted to be analogous in setting to mineralisation hosted with the Bounty Gold Camp located approximately 10km to the north.

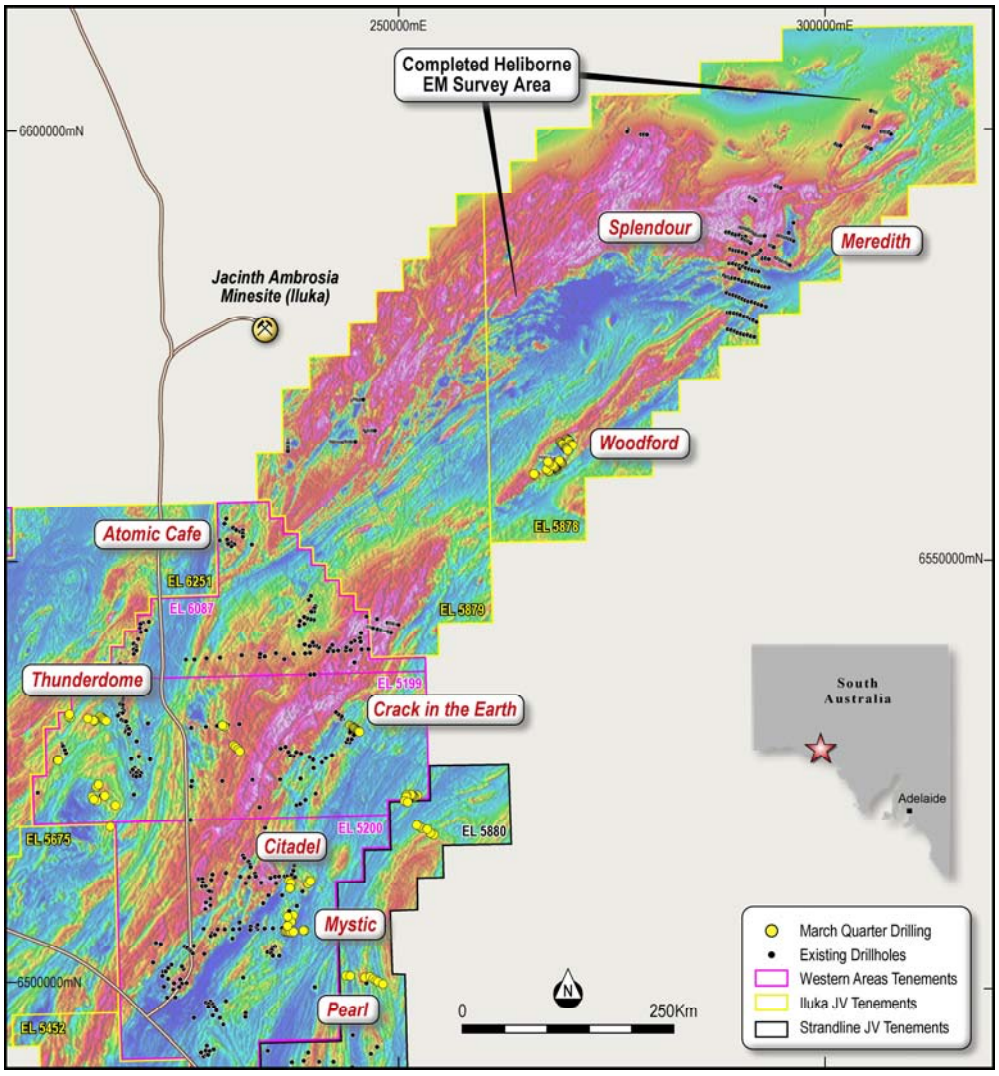
Kidman Resources Ltd Farm-in and Joint Venture (Lithium)

During the quarter, Kidman Resources collected 1,271 soil samples, completing the E77/1734 ("Galaxy") programme. Results from E77/1734 have been analysed with anomalous lithium values returned in the southern section of the tenement. This anomalism coincides with local structural complexity where northeast-southwest trending structures become more north-south trending. The anomalous results, in conjunction with the geological setting, make this an excellent Lithium-Caesium-Tantalum (LCT) pegmatite drill target.

Regional Exploration

Western Gawler (WSA 100%)

Several air-core drilling programmes were completed during the quarter. Programs were designed to follow up conductive responses from Moving Loop Electromagnetic (MLEM) regional targets identified in 2018, along with prospect-scale drilling at Thunderdome, Mystic, Citadel and Crack in the Earth. For the quarter, 72 holes were completed for 5213m.

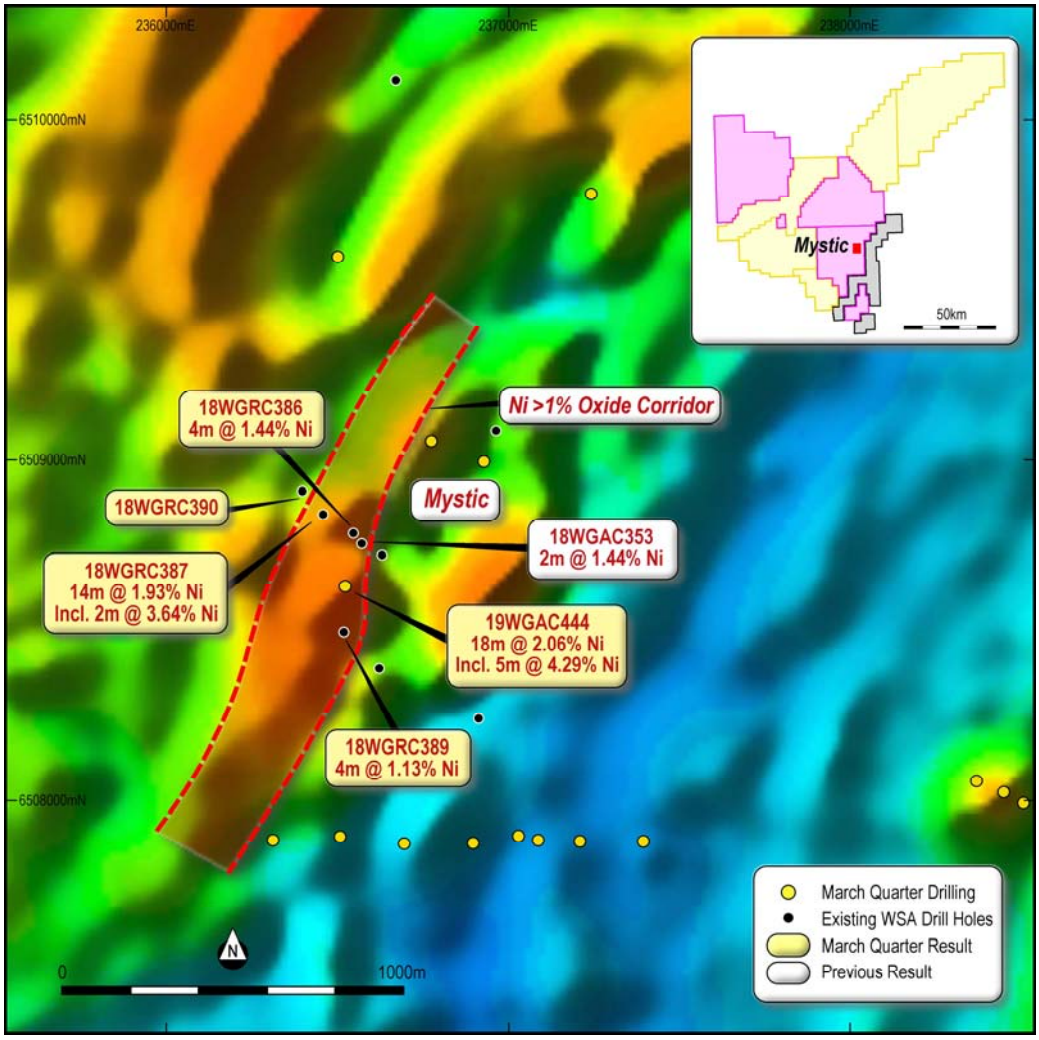


Western Gawler – March FY19 Quarter Activity

Mystic Nickel Oxide Zone

The Mystic Prospect represents an emerging Western Gawler target following the identification of elevated nickel in oxide mineralisation (reported in the September 2018 quarter) from within drill-hole 18WGAC353 returning 2m @ 1.44% Ni.

A series of follow-up RC holes was completed in the December 2018 quarter, designed to test for prospective intrusive basement host rocks and associated nickel sulphide mineralisation. Results from this set of drilling were returned early in the March 2019 quarter, with several significant nickel oxide results including 14m @ 1.93% Ni from 18WGRC387 and 4m @ 1.44% Ni from within 18WGRC386. No basement nickel sulphides were identified from this program. A follow-up air-core hole, completed in the March quarter also returned significantly elevated nickel oxide mineralisation, comprising 18m @ 2.06% Ni from within 19WGAC444, including 5m @ 4.29% Ni.



Mystic Prospect – Nickel Oxide Corridor >1%

This identified nickel oxide corridor is hosted within a weathered iron-chromite enriched clay horizon (nontronite to montmorillonite), developed over an un-mineralised ultramafic basement sequence. The corridor is broadly defined as 300m wide and 400m along strike, open to both the north and south. Further air-core drilling is planned to extend drilling coverage and evaluate the economic potential of this zone in the second half of 2019. The Company is particularly encouraged by these result as they represent the highest-grade nickel mineralisation identified to date across the Fowler Domain of the Western Gawler project.

Air-core drilling tested numerous other prospects (including Thunderdome, Crack in the Earth, Atomic Cafe and Interceptor), with assay results anticipated in the June quarter.

Exploration Results - Western Gawler March Quarter										
HOLEID	Easting	Northing	RL	EOH	Type	Dip	Azi	Width (m)	Ni %	FROM (m)
18WGRC387	236457	6508846	68	148	RC	-60	120	14	1.93	60
including								***2***	***3.64***	***62***
18WGRC386	236545	6508788	70	148	RC	-60	120	2	1.20	56
and								4	1.44	62
18WGRC389	236544	6508493	63	137	RC	-60	120	4	1.13	76
18WGRC390	236394	6508911	65	184	RC	-60	120	24	0.52	52
19WGAC444	235618	6508628	59	117	AC	-90	0	18	2.06	54
including								***5***	***4.29***	***66***
including								***1***	***4.91***	***67***

Strandline Farm-in and Joint Venture (WSA earning up to 90%) EL 5880

An additional 20 air-core holes were drilled for 1045m. Drill traverses were completed across conductive trends identified from MLEM surveying carried out in the December quarter. Drilling intersected a series of highly deformed granitic intrusive units and interpreted sedimentary sequences with localised chlorite shear zones. The MLEM trends are interpreted to be associated with conductive geological contacts (shear zones) and younger sequences of conductive sedimentary cover, overlying older crystalline basement rocks. No significant geochemical anomalies were identified. However, drilling has provided new geological insight into an area previously devoid of drill coverage.

Iluka Farm-in and Joint Venture (WSA earning up to 75%) EL 56251, EL5452, EL 5675, EL 5878 and EL5879.

In July 2018, the Company announced an expansion of its Western Gawler exploration strategy via the execution of a Farm-in and Joint Venture Agreement with Iluka (Eucla Basin) Pty Limited. Building on momentum generated from recently completed drilling on 100% WSA ground, the Company has moved to establish a series of exploration programs across this Farm-In and Joint Venture ground. Important project milestones were reached with the completion of a regional-scale airborne EM survey and the commencement of air-core drilling.

Woodford

The Company completed its maiden drilling program within Iluka Farm-in and Joint Venture ground, completing 36 air-core drill-holes across the Woodford prospect, targeting prospective mafic pyroxenite bodies within interpreted larger regional-scale intrusive complexes. This program is ongoing into the June quarter.

Airborne Electromagnetic (EM) Surveying

During the quarter a regional-scale heli-borne EM Survey was completed over the Iluka Farm-in Joint Venture Project area. The survey was completed using the SkyTEM312 HP system, which is optimised to provide increased depth of investigation due to the high current and low base frequency of 12.5 Hz. The primary objective of the survey was to define EM conductors with potential to represent semi-massive to massive sulphide bodies associated with Ni-Cu-Co-PGE mineralisation in remote project areas with poor ground access.

The survey covered a strike-length of 65km over an area of 657 km² (1882-line kilometres). Flight lines were initially surveyed at a 400m line spacing, with infill surveying at 200m line spacing over selected areas. The survey identified a total of 77 EM targets in areas of little or no previous drilling, including nine moderate-response and 68 low-response targets. Data interpretation and modelling is on-going and will be incorporated with existing regional geophysical datasets and drill targeting in the coming quarter.

-ENDS-

COMPETENT PERSON'S STATEMENT:

The information within this report as it relates to mineral resources, ore reserves and exploration results is based on information compiled by Mr Andre Wulfse, Mr Marco Orunesu Preiata and Mr Graeme Gribbin of Western Areas Ltd. Mr Wulfse is a Fellow of AusIMM, Mr Orunesu Preiata is a member of AusIMM and Mr Gribbin is a member of AIG. Mr Wulfse, Mr Orunesu Preiata and Mr Gribbin are all full time employees of Western Areas. Mr Wulfse, Mr Orunesu Preiata and Mr Gribbin have sufficient experience which is relevant to the style 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 Gribbin, Mr Wulfse and Mr Orunesu Preiata consent to the inclusion in the report of the matters based on the information in the form and context in which it appears.

FORWARD LOOKING STATEMENT:

This release contains certain forward-looking statements including nickel production targets. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production and expected costs.

Examples of forward looking statements used in this report include: "Production metrics remain on track to meet full year guidance and the improved nickel price should result in stronger second half earnings and operating cashflow", and, "The fundamental outlook for nickel remains strong as the emerging EV battery market continues to gain momentum", and, "Rehabilitation of the main Odysseus decline down to the AM5 and AM6 orebodies to be completed by Feb 2020".

These forward-looking statements are subject to a variety of risks and uncertainties beyond the Company's ability to control or predict which could cause actual events or results to differ materially from those anticipated in such forward-looking statements. Western Areas Ltd undertakes no obligation to revise these forward-looking statements to reflect subsequent events or circumstances.

This announcement does not include reference to all available information on the Company and should not be used in isolation as a basis to invest in Western Areas Ltd. Potential investors should refer to Western Areas' other public releases and statutory reports and consult their professional advisers before considering investing in the Company.

Western Areas Ore Reserve and Mineral Resource Statement – Effective date 31st March 2019

	Tonnes	Grade Ni%	Ni Tonnes	Classification	JORC Code
Ore Reserves					
1. Flying Fox Area	660,117	3.3	21,500	Probable Ore Reserve	2012
2. Spotted Quoll Area	600	7.3	40	Proved Ore Reserve	2012
	1,498,500	4.0	59,750	Probable Ore Reserve	2012
3. Diggers Area					
Digger South	2,016,000	1.4	28,950	Probable Ore Reserve	2004
Digger Rocks	93,000	2.0	1,850	Probable Ore Reserve	2004
TOTAL FORRESTANIA ORE RESERVE	**4,268,217**	**2.6**	**112,090**		
4. Cosmos area					
Odysseus South	4,483,700	1.9	85,620	Probable Ore Reserve	2012
Odysseus North	3,651,900	2.2	78,900	Probable Ore Reserve	2012
TOTAL COSMOS ORE RESERVE	**8,135,600**	**2.0**	**164,520**		
TOTAL WESTERN AREAS ORE RESERVE	**12,403,817**	**2.2**	**276,610**		
Mineral Resources					
1. Flying Fox Area					
T1 South	144,125	4.6	6,625	Indicated Mineral Resource	2012
	45,041	2.3	1,036	Inferred Mineral Resource	2012
T1 North	54,217	5.1	2,736	Indicated Mineral Resource	2012
OTZ Sth Massive Zone	184,466	5.8	10,783	Indicated Mineral Resource	2012
T4 Massive Zone	212,835	5.8	12,364	Indicated Mineral Resource	2012
T5 Massive Zone + Pegs	756,837	5.3	40,132	Indicated Mineral Resource	2012
T6 Massive Zone	86,657	5.6	4,865	Indicated Mineral Resource	2012
T7 Massive Zone	248,720	1.3	3,233	Inferred Mineral Resource	2012
Total High Grade	1,732,898	4.7	81,774		
T5 Flying Fox Disseminated Zone	197,200	0.8	1,590	Indicated Mineral Resource	2004
	357,800	1.0	3,460	Inferred Mineral Resource	2004
T5 Lounge Lizard Disseminated Zone	4,428,000	0.8	36,000	Indicated Mineral Resource	2004
Total Disseminated Flying Fox/Lounge Lizard	4,983,000	0.8	41,050		
Total FF/LL	6,715,898	1.8	122,824		
2. New Morning / Daybreak					
Massive Zone	340,126	3.3	11,224	Indicated Mineral Resource	2012
	78,067	3.9	3,025	Inferred Mineral Resource	2012
Disseminated Zone	3,318,468	1.2	41,181	Indicated Mineral Resource	2012
	2,496,658	1.3	32,498	Inferred Mineral Resource	2012
Total New Morning / Daybreak	6,233,319	1.4	87,928		
3. Spotted Quoll Area					
Spotted Quoll					
	1,400,668	5.4	74,942	Indicated Mineral Resource	2012
	144,581	3.1	4,540	Inferred Mineral Resource	2012
Total Spotted Quoll	1,545,249	5.1	79,482		
Beautiful Sunday	480,000	1.4	6,720	Indicated Mineral Resource	2004
Total Western Belt	14,974,466	2.0	296,954		
4. Cosmic Boy Area					
Cosmic Boy	180,900	2.8	5,050	Indicated Mineral Resource	2004
Seagull	195,000	2.0	3,900	Indicated Mineral Resource	2004
Total Cosmic Boy Area	375,900	2.4	8,950		
5. Diggers Area					
Diggers South - Core	2,704,500	1.4	37,570	Indicated Mineral Resource	2004
Digger South - Core	362,700	1.2	4,530	Inferred Mineral Resource	2004
Digger Rocks - Core	282,940	1.7	4,790	Indicated Mineral Resource	2004
Digger Rocks - Core	50,600	1.3	670	Inferred Mineral Resource	2004
Purple Haze	560,000	0.9	5,040	Indicated Mineral Resource	2004
Total Diggers Area	3,960,740	1.3	52,600		
TOTAL FORRESTANIA MINERAL RESOURCE	**19,311,106**	**1.9**	**358,504**		
6. Cosmos Area					
AM5	479,914	2.6	12,430	Indicated Mineral Resource	2012
	26,922	1.9	509	Inferred Mineral Resource	2012
AM6	1,704,548	2.7	45,171	Indicated Mineral Resource	2012
	329,443	2.5	8,203	Inferred Mineral Resource	2012
Odysseus South Disseminated	4,016,949	2.1	84,767	Indicated Mineral Resource	2012
	219,641	2.0	4,302	Inferred Mineral Resource	2012
Odysseus North - Disseminated	3,128,943	2.6	81,156	Indicated Mineral Resource	2012
	225,248	2.7	6,111	Inferred Mineral Resource	2012
Odysseus North - Massive	70,106	12.6	8,814	Indicated Mineral Resource	2012
	124,900	11.2	14,002	Inferred Mineral Resource	2012
Total Cosmos Area	10,326,614	2.6	265,465		
7. Mt Goode Area					
Mt Goode	13,563,000	0.8	105,791	Measured Mineral Resource	2012
	27,363,000	0.6	158,705	Indicated Mineral Resource	2012
	12,009,000	0.5	62,447	Inferred Mineral Resource	2012
Total Mt Goode Area	52,935,000	0.6	326,943		
TOTAL COSMOS MINERAL RESOURCE	**63,261,614**	**0.9**	**592,408**		
TOTAL WESTERN AREAS MINERAL RESOURCE	**82,572,720**	**1.2**	**950,912**		

JORC 2012 TABLE 1 – Flying Fox – Mineral Resource Estimation

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	• *The Flying Fox (FF) Deposit is sampled using diamond drilling (DD) on nominal 50 x 30m grid spacing.* • *Grade control data which includes sludge drilling and short hole diamond drilling results as well as face mapping are used to build the preliminary geological models.* • *Only assay results from an independent certified commercial laboratory from DD holes are used to estimate grades into the resource block model. Handheld XRF Spectrometers are used to gain a semi – quantitative Nickel grade when core is first logged. These are replaced in the database by wet chemistry derived assay grades once received and are not used for resource estimation purposes.*
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• *Samples are taken in accordance with well-established and properly documented company protocols* • *Sample representivity is assured by an industry standard internal QAQC program that includes certified reference standards, blanks and replicate samples.* • *QA results are routinely assessed by WSA Geologists and Quality Controls include re-assaying of batches of samples if the QA results are not within pre-determined precision, accuracy and contamination thresholds.* • *All samples are prepared and assayed by an independent commercial laboratory whose analytical instruments are regularly calibrated.*
	• *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• *Surface Diamond drill (DD) core is marked at 1m intervals and sample lengths are typically of this length. Grade Control drilling is typically 0.5m sample lengths through the mineralised zone due to whole core sampling* • *Sample boundaries are selected to match the main geological and mineralisation boundaries.* • *Sampled mineralisation intervals are sent to a commercial laboratory for crushing and grinding before assaying*
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• *Diamond drilling comprised NQ2 sized core for underground and surface drilling and LTK sized core for the grade control drilling.* • *Standard tube is used in most cases unless core recovery issues are expected when triple tube is used. This is typically in the oxidised zone which has no bearing on any of the FF deposits.* • *All surface drilled core is oriented using ACT II control panels and ACT III downhole units. Grade control drilling is not oriented*
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	• *Core recoveries are logged and recorded in the database. Overall recoveries are >95% and there are no core loss issues or significant sample recovery problems in the sulphide zone.*
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	• *Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the drillers.*
	• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• *The bulk of the resource is defined by diamond core drilling which has high core recoveries.* • *The massive sulphide style of mineralisation and the consistency of the mineralised intervals are considered to preclude any issue of sample bias due to material loss or gain.*
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	• *Geological logging is carried out to a very high level of detail which is peer reviewed* • *Geotechnical data such as RQD and number of defects (per interval) are recorded.* • *Information on structure type, dip, dip direction, alpha angle, beta angle, texture, shape, roughness and fill material is captured.*
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	• *Logging of diamond core and RC samples records lithology, mineralogy, mineralisation, structural data (DDH only), weathering, colour and other features of the samples.* • *Core is photographed in both dry and wet form.*

Criteria	JORC Code explanation	Commentary
	• The total length and percentage of the relevant intersections logged.	• All drillholes are logged in full. The Flying Fox database contains over 83,000 geological entries.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken.	• Core is cut in half on site (with the exception of underground grade control core) by diamond saw blades • Surface derived drill holes are halved again with one quarter sent for assay and one quarter preserved as a geological archive • Underground exploration derived drilling core is not halved again. Half of the cut core is sent for assay with the other half preserved as a geological archive • Underground grade control derived drilling core is not cut. Full core is sent for assay. • All core is prepared and assayed by an independent commercial certified laboratory. Samples are crushed, dried and pulverised to produce a sub sample for analysis by 4 acid digest with an ICP/AES finish
	• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	• No non-core samples were taken for the purpose of this MRE.
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	• The sample preparation of diamond core follows industry best practice in involving oven drying, coarse crushing of the core sample down to ~10 mm followed by pulverization of the entire sample (total prep) using LM5 grinding mills to a grind size of 90% passing 75 microns. Sample preparation is carried out by a commercial certified laboratory. • The sample preparation technique is well established and appropriate for Ni sulphide deposits.
	• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	• Over and above the commercial laboratory's internal QAQC procedures, WSA includes field Ni standards ranging from 0.7% - 11.5% to test assay accuracy • Duplicates are routinely submitted by WSA to test sample precision • Standards are fabricated and prepared by Geostats Pty Ltd., using high – grade nickel sulphide ore. • Blank samples are routinely submitted by WSA to test sample contamination • Pulp duplicates obtained from the primary lab are taken on a 10% by volume basis and submitted to a secondary lab as an additional QAQC check
	• Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	• Sample representatively is assured through the methods previously discussed • The Project Geologists are responsible for the management of the quality assurance program and assay results that do not conform are immediately brought to the attention of the relevant commercial laboratory so that remedial action can be implemented. Typically, this type of action will involve re assaying the relevant batch of samples. • A monthly QAQC report is generated and distributed to the relevant stakeholders for review and follow up action
	• Whether sample sizes are appropriate to the grain size of the material being sampled.	• The sample sizes are considered to be appropriate on the following basis: the style of mineralisation (massive sulphide), the thickness and consistency of the intersections, the sampling methodology and percent value assay ranges for the primary elements.
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	• All samples are assayed by an independent certified commercial laboratory. The laboratory used by WSA is experienced in the preparation and analysis of nickel sulphide ores. • Samples are dissolved using nitric, perchloric, hydrofluoric and hydrochloride acid digest to destroy silica. • Samples are analyzed for Al (0.01%), As (5ppm), Co (1ppm), Cu (1ppm), Fe (0.01%), Cr (1ppm), Mg (0.01%), Ni (1ppm), S (0.01%), Ti (0.01%) and Zn (1ppm) using an ICP or Atomic Absorption finish (typical detection limits in brackets).
	• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	• No Geophysical tools or handheld XRF instruments were used to determine any element concentrations that were subsequently used for MRE purposes.
	• Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• Standards and blanks were routinely used to assess company QAQC (approx. 1 standard for every 15-20 samples). Duplicates were taken on a 10 % by volume basis (on underground drilling only), field-based umpire samples were assessed on a regular basis. Accuracy and precision were assessed using industry standard procedures such as control charts and scatter plots. In occasional cases where a sample did not meet the required quality threshold, the batch was re-analyzed.
Verification of	• The verification of significant intersections by either independent or alternative company	• Historically, Newexco Services Pty Ltd independently visually verified

Criteria	JORC Code explanation	Commentary
sampling and assaying	*personnel.*	*significant intersections in the diamond core.*
	• *The use of twinned holes.*	• *No holes were twinned in the recent drilling programs.*
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	• *Primary data was collected using Excel templates utilising lookup codes, on laptop computers. All data was validated by the supervising geologist, and sent to Newexco for validation and integration into an SQL database.*
	• *Discuss any adjustment to assay data.*	• *No adjustments were made to assay data compiled for this MRE.*
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	• *Hole collar locations were surveyed by WSA surveyors. The Leica GPS1200 used for all surface work has an accuracy of +/- 3cm.*
	• *Specification of the grid system used.*	• *A two-point transformation is used to convert the data from MGA50 to Local Grid & vice versa. Points used in transformation: MGA50 Points yd1="6409502.17" xd1="752502.175" yd2="6409397.856" xd2="753390.591"Local Grid Points ym1="28223.59"xm1="33528.771"ym2="28111.84"xm2="34415.995"*
	• *Quality and adequacy of topographic control.*	• *The accuracy of the pillars used in WSA's topographical control networks is within the Mines Regulations accuracy requirement of 1:5000 for control networks.*
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• *Drillholes were spaced at an approx. 15m (northing) x 15m grid for the areas that will be affected by mining in the next two years and nominally 30m by 30m for areas that will be affected by mining in the subsequent years.*
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	• *The extensive drill program coupled with information derived from underground observations and previous open pit mining has demonstrated sufficient and appropriate continuity for both geology and grade within the Flying Fox Deposit to support the definition of Mineral Resources and Reserves, and the classification applied under the JORC Code (2012).*
	• *Whether sample compositing has been applied.*	• *Samples were composited to one metre lengths, making adjustments to accommodate residual sample lengths. A metal balance validation between the raw data and the composited data was undertaken with no material issues identified.*
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	• *The Flying Fox deposit strikes at 030 degrees and dips nominally 65 degrees east. All underground and grade control drilling was conducted from west to east. All Surface drilling was conducted from east to west.*
	• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• *No orientation-based sampling bias has been observed in the data.*
Sample security	• *The measures taken to ensure sample security.*	• *All core samples were delivered from site to Perth and then to the assay laboratory by an independent transport contractor.*
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• *The FF data is managed and certified offsite by an independent contractor.*

Section 2: Reporting of Exploration Results – Flying Fox

(Criteria listed in Section 1, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• *Forrestania Nickel Operations comprises approximately 125 tenements covering some 900km2 within the Central Yilgarn Province. The tenements include exploration licences, prospecting licences, general purpose leases, miscellaneous licences and mining leases.* • *Western Areas wholly owns 106 tenements, 55 tenements of which were acquired from Outokumpu in 2002 and a further 51 tenements acquired from Kagara in March 2012 (some which are subject to various third-party royalty agreements). The remainder of the tenements are subject to Joint Ventures, 14 tenements are part of the Mt Gibb JV where Western Areas has the right to earn 70% interest from Great Western Exploration (currently at 51% WSA) and the Lake King JV where Western Areas has earned a 70% interest from Swanoak Holdings.* • *A number of the Kagara tenements are subject to third party royalty agreements.* • *All the tenements are in good standing.*
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• *Western Areas has been exploring its wholly owned tenements since 2002. The tenements subject to the Kagara sale which took place in March 2012 were explored by Kagara since 2006 and Lionore and St Barbara prior to that time. Western Areas has managed both the Mt Gibb JV since 2009 (Great Western Exploration explored the ground prior to that time) and the Lake King JV since 2007 (A small amount of work was carried out by WMC prior to that date)*
Geology	• *Deposit type, geological setting and style of mineralisation.*	• *The deposits lie within the Forrestania Greenstone Belt, which is part of the Southern Cross Province of the Yilgarn Craton in Western Australia. The main deposit type is the komatiite hosted, disseminated to massive Nickel sulphide deposits, which include the Flying Fox and Spotted Quoll deposits. The mineralisation occurs in association with the basal section of high MgO cumulate ultramafic rocks.* • *The greenstone succession in the district also hosts a number of orogenic lode gold deposits of which Bounty Gold Mine is the biggest example.*
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* – *easting and northing of the drill hole collar* – *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• *The MRE is based upon over 7,000 geologic entries derived from over 1,000 surface and underground diamond holes over multiple domains and years of surface and underground drilling. All of this information can be considered material to the MRE and the exclusion of a summary of the data does not detract from the understanding of the report.*

Criteria	JORC Code explanation	Commentary
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• *Standard length weighted averaging of drill hole intercepts was employed. No maximum or minimum grade truncations were used in the estimation.* • *The reported assays have been length and bulk density weighted. A lower nominal 0.4% Ni cut-off is applied during the geologic modelling process and later during the MRE reporting process. No top cut is applied. High grade intercepts internal to broader zones of mineralisation are reported as included intervals.* • *No metal equivalent values are reported.*
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• *The incident angles to mineralisation are considered moderate.* • *Due to the often-steep dipping nature of the stratigraphy reported down hole intersections are moderately greater (m/1.5 ratio on average) than the true width.*
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• *Refer to Figures in the text*
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• *Only Mineral Resource Estimation results are reported.*
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• *Multi-element analysis was conducted routinely on all samples for a base metal suite and potentially deleterious elements including Al, As, Co, Cr, Cu, Fe, Mg, Ni, S, Ti, Zn, Zr. All diamond core samples were measured for bulk density which range from 2.90 - 4.79g/cm^3 for values >0.5% Ni.* • *Geotechnical logging was carried out on all diamond drill holes for recovery, defects and RQD.* • *Information on structure type, dip, dip direction alpha and beta angles, texture, shape, roughness and fill material is stored in the structural logs in the database.*
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• *Exploration within the FNO tenements continues to evaluate the prospective stratigraphic succession containing the cumulate ultramafic rocks using geochemical and geophysical surveys and drilling.*

Section 3 Estimation and Reporting of Mineral Resources – Flying Fox

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	• *All data has been recorded in Excel templates with reference lookup tables. All data is imported into an AcQuire relational database*
	• *Data validation procedures used.*	• *Data validation is a fundamental part of the AcQuire database and is implemented via referential integrity and triggers. Referential constraints ensure that, for example, Hole ID matches collar and downhole data. Triggers check criteria such as code validity, overlapping intervals, depth and date consistencies. All fields of code data have associated look-up table references. Data was further validated using Datamine validation tools during the MRE process.*
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• *Andre Wulfse who is the Competent Person is the Group Resource Manager for Western Areas and has made many site visits to the Flying Fox Deposit. His first visit to the deposit was in 2008.*
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	• *Due to the spacing of drilling and the understanding of similar deposits within the Forrestania Ultramafic Belt, the geological interpretation is considered to be sound. The deposit is mainly located along the traditional footwall of the basal ultramafic metasediment contact, which was the original locus for sulphide deposition from an overlying pile of Komatiite flows. Subsequent metamorphism, deformation and intrusion of granitoid sills have contributed to a complex setting, with mineralisation now occupying a possible shear zone. The geological model is updated on a daily basis by a team of mine geologists based on detailed underground mapping of ore drives.*
	• *Nature of the data used and of any assumptions made.*	• *Lithogeochemistry and stratigraphic interpretation have been used to assist the identification of rock types. No assumptions are made.*
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	• *Alternative interpretations of the mineral resource were considered. In particular the previous model as well as the grade control model for the upper levels was extensively validated against the current geological and resource model. Alternative interpretations of mineralisation do not differ materially from the current interpretation. WSA has successfully planned and reconciled the deposit using a similarly derived geological and resource model.*
	• *The use of geology in guiding and controlling Mineral Resource estimation.*	• *The Mineral Resource Estimate is based upon a robust geological model which is regularly updated. The hanging wall and footwall contacts of the mineralised zone were modelled with a level of confidence commensurate with the resource classification category. The extents of the geological model were constrained by drillholes intercepts and extrapolation of the geological contacts beyond the drill data was minimal for the Indicated category.*
	• *The factors affecting continuity both of grade and geology.*	• *Key factors affecting geologic continuity relate to pervasive felsic intrusive units and faults in the deeper parts of the FF orebody. The nugget effect associated with Ni mineralisation in these types of deposits affects the grade continuity. The geological discontinuities have been modelled and the grade discontinuities have been accounted for in the estimation modelling.*
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• *The strike length of the Flying Fox deposit varies considerably but is up to 750 m in the T5 deposit. Distance from the top of T4 to the base of T5 is approximately 550m. The mean width of the deposit is 2.2m*
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	• *Grade and ancillary element estimation using Ordinary Kriging and Inverse Power Distance (IPD) was completed using DatamineTM Studio 3 software. The methods were considered appropriate due to drill hole spacing and the nature of mineralisation.* • *All estimation was completed at the parent cell scale thereby avoiding any potential geostatistical support issues.* • *Sample data was composited to 1m downhole lengths and flagged on domain codes. Metal balance validation tests were performed on the composites to ensure zero residuals.* • *Top cut investigations were completed and no top cuts were applied on the basis of grade distribution, Coefficient of Variation and a comparative analysis of the underground data vs the drill data.* • *Sample data was flagged using domain codes generated from 3D mineralised wireframes. Qualitative Kriging Neighborhood Analysis was used to determine the optimum search neighborhood parameters.* • *Directional variography was performed for Ni and selected ancillary elements.*

Criteria	JORC Code explanation	Commentary
		Nugget values are typical for the type of mineralisation (Ni = 20%-40% of the total variance). Ranges of continuity for Ni vary from 20m to 60m in the direction of preferred orientation of mineralisation. Estimation validation techniques included swathe plots of the grade of the composite's vs the grade of the block model.
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	• *This MRE is an update of an MRE that was undertaken in 2014 and was extensively validated against the 2014 MRE.*
	• *The assumptions made regarding recovery of by-products.*	• *No assumptions were made about the recovery of by products in this estimate. WSA currently doesn't have any off-take agreements in place for by-products.*
	• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).*	• *No elements are considered to be deleterious elements in the Flying Fox deposit*
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	• *A proto model was constructed using a 2mE x 5mN x 5mRL parent size, with sub cells. The parent cell size was selected on the basis of orebody geometry, drill spacing and SMU.* • *Thereafter individual block models were designed for each of the structural domains. The dips of the wireframes of the structural domains were used to optimally fill the wireframes with blocks. Drill spacing varies but is nominally 30m by 30m in areas that will be affected by mining in the next two years and 60m by 60m in subsequent areas.* • *The size of the search ellipse was based on the drill hole spacing and structural domain dimensions. Search neighborhoods varied according to the structural domain*
	• *Any assumptions behind modelling of selective mining units.*	• *No selective mining units were assumed in the estimate. Mining is mainly by longhole stoping and stope dimensions are largely determined by the nature of the equipment used. A global grade and width cut off is applied at the mine planning stage.*
	• *Any assumptions about correlation between variables.*	• *No assumptions were made about correlation between variables. Apart from a strong correlation between Ni% and bulk density, no other interelement correlations are observed.*
	• *Description of how the geological interpretation was used to control the resource estimates.*	• *The geological interpretation was developed using geological, structural and lithogeochemical elements. The geological framework associated with extrusive komatiite hosted deposits, and the structural elements observed at the local and wide scale were used to determine and refine mineral domains. The hangingwall and footwall contacts of mineralisation were used as hard boundaries during the estimation process and only blocks with the geological wireframe were informed with Ni grades.*
	• *Discussion of basis for using or not using grade cutting or capping.*	• *Geostatistical and visual investigation of the grade distribution negated the need for grade cutting or capping.*
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• *Validation of the block model included comparing the volume of domain boundary wireframes to block model volumes. It also involved comparing block model grades with drill hole grades by means of swathe plots showing easting, northing and elevation comparisons.* • *Jacknifing and visual grade validations were undertaken.* • *Grade and tonnage reconciliation of the previous model has been closely monitored over the past 12 months of underground mining and found to be within acceptable thresholds.* • *The assumptions and methodologies used during this estimation are very similar to that of the previous model.* • *Visual validation of the block model vs the drillhole data was undertaken in Datamine and Leapfrog* • *Based on a thorough validation and verification exercise, WSA is satisfied that the estimate is robust.*
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• *Tonnages were estimated on a dry basis.*
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• *The mineral envelope was determined using a nominal 0.4% Ni grade cut-off. The resource is reported at a 0.4% Ni cut-off which is a reasonable representation of the mineralised material prior to the application of variable economic and mining assumptions and a reserve cut-off*
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the*	• *The Flying Fox deposit is currently being mined using long hole stoping methods. The mining method which is unlikely to change has been taken into account during the estimation process.*

Criteria	JORC Code explanation	Commentary
	process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• *Ore from the Flying Fox deposit is currently being processed on site, where Nickel concentrate is produced using a three-stage crushing, ball mill, and flotation and thickener/filtration system.*
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• *All waste and process residue are disposed of through the Cosmic Boy concentrator plant and its tailings dam. All site activities at site are undertaken in accordance with WSA's environmental policy.*
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	• *Bulk Density has been determined using a tried and tested Ni grade regression-based formula.*
	• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.*	• *Core at Flying Fox is generally void of vugs, voids and other defects. Rocks are from the granulate facies sequence and faults have largely been annealed. Porosity is considered low.*
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• *As discussed previously, mineralisation is mainly restricted to a single material type (Massive Sulphide)*
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	• *The Flying Fox Mineral Resource is classified as Indicated and Inferred on the basis of geologic understanding, drillhole spacing, underground development and Kriging quality parameters. No blocks were classified as Measured.*
	• *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*	• *The definition of mineralised zones is based on a high level of geological understanding. The model has been confirmed by infill drilling, supporting the original interpretation. It is believed that all relevant factors have been considered in this estimate, relevant to all available data.*
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• *The Mineral Resource Estimate appropriately reflects the view of the Competent Person.*
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• *This MRE has internally reviewed and has not been externally reviewed*
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the*	• *The geological and grade continuity of the Flying Fox deposit is well understood and the mineralisation wireframes used to build the block model have been designed using all available exploration and mining data. Furthermore, previous estimates of grades have been tested by routine reconciliation of stockpile and mill grades to the current grade control and*

Criteria	JORC Code explanation	Commentary
	application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	*previous resource models. Post processing block model validation was extensively undertaken using geostatistical methods before the resource was reported.*
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used*	• *The statement relates to global linear estimates of tonnes and grade.* • *The grade tonnage summary by Class is given in the accompanying report*
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• *Tonnes and grade estimates within the blocks are consistent with past production data.*

JORC 2012 TABLE 1 – Spotted Quoll Mineral Resource Estimate

Section 1: Sampling Techniques and Data

Criteria	JORC Code 2012 Explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	• The Spotted Quoll Deposit was sampled using diamond drill (DD) and reverse circulation holes (RC) on a nominal 50 x 30m grid spacing as well as underground channel sampling in a limited area. • Although all available valid data was used to design the geological model, only diamond hole data was used to estimate the grade and ancillary variables into the resource model. • Over 3,000 composites derived from approximately 700 drillholes were used to estimate the grades. This represents a drilling pattern smaller than 40m by 40m over the full extent of the deposit. • Holes were generally drilled perpendicular (west) to the strike (north-south) of the stratigraphy, at angles ranging between 60° and 75°. • Closely spaced underground channel samples were used as part of the final block model validation process but were not used to estimate grades into the block model.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• Samples have been collected since discovery in 2007 in accordance with Western Areas Ltd protocols and sample representivity is assured by an industry standard QAQC program as discussed in a later section of this tabular summary.
	• *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• Diamond drill (DD) core was marked at 1m intervals and sample lengths were typically of this length. Sampling boundaries were selected to match the main geological and mineralisation boundaries. • Core was cut in half by diamond saw blades and one half quartered, with a quarter stored for assay and a quarter preserved as a geological archive. • Samples were crushed, dried and pulverised (total prep) to produce a sub sample for analysis by 4 acid digest with an ICP/AES and FA/ICP (Au, Pt, Pd) finish. Samples from reverse circulation (RC) drilling consisted of chip samples at 1m intervals from which 3 kg was pulverised to produce a sub sample for assaying as per the DD samples.
Drilling Techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Diamond drilling comprises NQ2 sized core. • The core was oriented using ACT II control panels and ACT III downhole units. • RC drilling comprises 140mm diameter face sampling hammer drilling. • Rotary air blast holes (RAB) were used to assist in geological domain analysis, but were not used for Mineral Resource Estimation purposes.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	• Diamond core and RC recoveries are logged and recorded in the database. • Overall recoveries are >95% and there are no core loss issues or significant sample recovery problems.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	• Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking. • Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the drillers. • RC samples were visually checked for recovery, moisture and contamination.
	• *Whether a relationship exists between sample recovery and grade and whether sample bias occurs*	• The resource grades are derived from high quality diamond core drilling with core recoveries in excess of 95%. • The massive sulphide style of mineralisation and the consistency of the mineralised intervals are considered to preclude any issue of sample bias due to material loss or gain.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	• Geological and geotechnical logging was carried out on all diamond drillholes for recovery, rock quality designation (RQD) and number of defects (per interval). • Information on structure type, dip, dip direction, alpha angle, beta angle, texture, shape, roughness and fill material are stored in the structure table of the database. • Sufficient data has been collected and verified to support the current Mineral Resource Estimate.

Criteria	JORC Code 2012 Explanation	Commentary
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc)*	• Logging of diamond core and RC samples recorded lithology, mineralogy, mineralisation, structural (DD only), weathering, colour and other features of the samples. • Core was photographed in both dry and wet form.
	• *The total length and percentage of the relevant intersections logged.*	• All drillholes were logged in full from the collar position to the end of the hole position.
Sub-sampling techniques and sampling preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	• Core was cut in quarters (NQ2) on site using an Almonte automatic core saw. • All samples were collected from the same side of the core.
	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*	• RC samples were collected using a riffle splitter. • All samples in the mineralised zones were dry.
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• The sample preparation of diamond core follows industry best practice in sample preparation involving oven drying, coarse crushing of the quarter core sample down to ~10mm, followed by pulverisation of the entire sample (total prep) using LM5 grinding mills to a grind size of 90% passing 75 micron. • The sample preparation for RC samples is identical, without the coarse crush stage.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	• WSA included field Ni standards ranging from 0.7% - 8.4% Ni that were routinely submitted with sample batches in order to independently monitor analytical performance. • Standards were fabricated and prepared by Gannet Holdings, Perth, using high-grade nickel sulphide ore sourced from the Silver Swan mine. • Standards were supplied in 55g sealed foil sachets.
	• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*	• Field duplicates were taken on a 15% by volume basis. • Duplicate quarter samples were sent to a commercial independent certified lab.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The sample sizes are considered to be appropriate to correctly represent the sulphide mineralisation at Spotted Quoll based on the style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and percent value assay ranges for the primary elements.
Quality of assay data laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• All samples used in the Mineral Resource Estimate were assayed by an independent certified commercial laboratory. • The laboratory used by WSA is experienced in the preparation and analysis of nickel-bearing ores. • Samples were dissolved using nitric, perchloric, hydrofluoric and hydrochloride acid digest to destroy silica. • Samples were analysed for Al(0.01%), As(5), Co (1), Cu(1), Fe(0.01%), Cr(1),Mg(0.01%),Ni(1), S(0.01%), Ti(0.01%) and Zn(1) using Method Me-ICP61 (detection limit in brackets, values in ppm unless stated). • All samples reporting > 1% Ni were re-assayed by the OG62 method.
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*	• No geophysical tools or handheld XRF instruments were used to determine any element concentrations that were subsequently used for Mineral Resource Estimate purposes.
	• *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Standards and blanks were routinely used to assess company QAQC (approx. 1 standard for every 12-15 samples). • Duplicates were taken on a 15% by volume basis, field-based umpire samples were assessed on a regular basis. • Accuracy and precision were assessed using industry standard procedures such as control charts and scatter plots. • Results indicated no material issues associated with sample preparation and analytical error; in occasional cases where a sample did not meet the required quality threshold, the entire batch was re analysed.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	• Newexco Services Pty Ltd (Newexco) has independently visually verified significant intersections in most of the diamond core.

Criteria	JORC Code 2012 Explanation	Commentary
	• *The use of twinned holes.*	• No holes were specifically twinned, but there are several holes in close proximity to each other and the resultant assays and geological logs were compared for consistency.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	• Primary data was collected using Excel templates utilising look-up codes, on laptop computers. • All data was validated by the supervising geologist, and sent to Newexco for validation and integration into an SQL database.
	• *Discuss any adjustment to assay data.*	• No adjustments were made to assay data compiled for this estimate.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	• Hole collar locations were surveyed by WSA surveyors. The Leica GPS1200 used for all surface work has an accuracy of +/- 3cm.
	• *Specification of the grid system used.*	• A 2-point transformation is used to convert the data from MGA50 to Local Grid and vice versa
	• *Quality and adequacy of topographic control.*	• The accuracy of the pillars used in WSA's topographical control networks is within the Mines Regulations accuracy requirement of 1:5000 for control networks.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• Drillholes were spaced at an approx. 30m (northing) x30m grid for the areas that will be affected by mining in the next two years and nominally 60m by 60m for areas that will be affected by mining in the subsequent years.
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	• The previous estimate and the extensive drill program coupled with information derived from previous open pit and underground mining at Spotted Quoll has demonstrated sufficient and appropriate continuity for both geology and grade within the deposit to support the definition of Mineral Resources, and the classification (Indicated and Inferred) applied. No material has been classified as Measured.
	• *Whether sample compositing has been applied.*	• Samples were composited to 1m lengths, making adjustments to accommodate residual sample lengths.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	• The Spotted Quoll deposit strikes at approximately 030° and dips nominally 50° to the east. • All drilling was conducted from east to west. • Most of the drilling was conducted from the hanging wall i.e. from the east to the west. • Results from an independent structural study on the deposit along with historical regional and near-mine structural observations complemented the detailed structural core logging results to provide a geological model that was used with an appropriate level of confidence for the classification applied under the 2012 JORC Code.
	• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• No orientation-based sampling bias has been observed in the data.
	• *The measures taken to ensure sample security.*	• All core samples were delivered from site to Perth and then to the assay laboratory by an independent transport contractor.
	• *Audits or Reviews*	• No formal external audit of the Mineral Resource has been undertaken to date. • Independent consultants assisted with the geological and mineral resource modelling.
	• *The results of any audits or reviews of sampling techniques and data.*	• The sampling techniques are standard practice at WSA; these were implemented over seven years ago and have been subject to independent reviews during this time.

Section 2: Reporting of Exploration Results

(Criteria listed in Section 1, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• Forrestania Nickel Operations (FNO) comprises approximately 125 tenements covering some 900km^2 within the Central Yilgarn Province. The tenements include exploration licences, prospecting licences, general purpose leases, miscellaneous licences and mining leases. • Western Areas wholly owns 106 tenements, 55 tenements of which were acquired from Outokumpu in 2002 and a further 51 tenements acquired from Kagara in March 2012 (some which are subject to various third-party royalty agreements). The remainder of the tenements are subject to Joint Ventures, 14 tenements are part of the Mt Gibb JV where Western Areas has the right to earn 70% interest from Great Western Exploration (currently at 51% WSA) and the Lake King JV where Western Areas has earned a 70% interest from Swanoak Holdings. • A number of the Kagara tenements are subject to third party royalty agreements. • All the tenements are in good standing. Six tenements are pending grant.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Western Areas has been exploring its wholly owned tenements since 2002. The tenements subject to the Kagara sale which took place in March 2012 were explored by Kagara since 2006 and LionOre and St Barbara prior to that time. • Western Areas has managed both the Mt Gibb JV since 2009 (Great Western Exploration explored the ground prior to that time) and the Lake King JV since 2007 (a small amount of work carried out by WMC prior to that date).
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The deposits lie within the Forrestania Greenstone Belt, which is part of the Southern Cross Province of the Yilgarn Craton in Western Australia. • The main deposit type is the komatiite hosted, disseminated to massive nickel sulphide deposits, which include the Flying Fox and Spotted Quoll deposits which are currently being mined. • The mineralisation occurs in association with the basal section of high MgO cumulate ultramafic rocks. • The greenstone succession in the district also hosts a number of orogenic lode gold deposits of which Bounty Gold Mine is the largest example. • Some exploration for this style of deposit is undertaken by Western Areas from time to time in the FNO tenements.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* – *easting and northing of the drill hole collar* – *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• This is a Mineral Resource Estimate summary and no exploration results are reported as such.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• This is a Mineral Resource Estimate summary and no exploration results are reported as such – cut-offs were applied to the overall reported tonnes and grade and are discussed in the appropriate section of this table. • No metal equivalent values are used.
Relationship between mineralisation widths and	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its*	• This is a Mineral Resource Estimate summary and no exploration results are reported. • The incident angles to mineralisation are considered moderate. • Due to the often-steep dipping nature of the stratigraphy, reported down hole

Criteria	JORC Code explanation	Commentary
intercept lengths	*nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	intersections are moderately greater (m/1.5 ratio on average) than the true width.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• This is a Mineral Resource Estimate summary and the appropriate figures can be found elsewhere in the report.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Not applicable to a Mineral Resource Estimate summary.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• This is a Mineral Resource Estimate summary and no exploration results are reported as such. • Multi-element analysis was conducted routinely on all samples for a base metal suite and potentially deleterious elements including Al, As, Co, Cr, Cu, Fe, Mg, Ni, S, Ti, Zn, Zr. All diamond core samples were measured for bulk density which range from 2.90 - 4.79g/cm^3 for values >0.5% Ni. • Geotechnical logging was carried out on all diamond drill holes for recovery, defects and RQD. • Information on structure type, dip, dip direction alpha and beta angles, texture, shape, roughness and fill material is stored in the structural logs in the database.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• This is a Mineral Resource Estimate summary and no exploration results are reported as such.

Section 3: Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database Integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	• All data has been recorded in Excel templates with reference look-up tables. All data are imported into an acQuire relational database.
	• *Data validation procedures used.*	• Validation is a fundamental part of the acQuire data model and is implemented via referential integrity and triggers. • Referential constraints ensure that, for example, Hole ID matches collar and downhole data. Triggers check criteria such as code validity, overlapping intervals, depth and date consistencies. • All fields of code data have associated look-up table references.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	• The Competent Person (Andre Wulfse) is an employee of Western Areas and has undertaken regular site visits since 2008.
	• *If no site visits have been undertaken indicate why this is the case.*	• Not applicable.
Geological interpretation	• *Confidence in (or conversely, the uncertainty) of the geological interpretation of the mineral deposit.*	• Confidence in the geological interpretation is high, due to the history of mining, the spacing of drilling and the understanding of similar deposits within the Forrestania Ultramafic Belt. • The deposit is located within the traditional footwall of the basal ultramafic metasediment contact, which was probably the original locus for sulphide deposition from an overlying pile of komatiite flows. Subsequent metamorphism, deformation and intrusion of granitoid sills has contributed to a complex setting, with mineralisation now occupying a possible shear zone within the footwall sediments, 15-20m (stratigraphical) beneath the basalt/ultramafic contact.

Criteria	JORC Code explanation	Commentary
		• The deposit is principally a body of matrix magmatic sulphide mineralisation in which the original pentlandite and pyrrhotite assemblage has been overprinted by arsenic-bearing assemblages dominated by gersdorffite and minor nickeline. Sulphide abundances of 20% to 90% are common. • Mean nickel grades of ore intersections are in the order of 4% to 12% Ni.
	• *Nature of the data used and of any assumptions made.*	• Lithogeochemistry and stratigraphic interpretation have been used to assist the identification of rock types.
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	• Alternative interpretations of the Mineral Resource were considered. In particular, the previous model and the grade control models were extensively validated against the current geological and resource model. • Alternative interpretations of mineralisation do not differ materially from the current interpretation. • WSA has successfully mined the deposit using a similarly derived geological and resource model which is subject to monthly mill-to-face grade and tonnage reconciliation.
	• *The use of geology in guiding and controlling Mineral Resource estimation.*	• The Mineral Resource Estimate is based upon a robust geological model discussed previously. • The hanging wall and footwall contacts of the various mineralised domains were modelled with a level of confidence commensurate with the resource classification category applied. • The extents of the geological model were constrained by drillhole intercepts and extrapolation of the geological contacts beyond the drill data was minimal for the Indicated category. • Granitoid intrusives were modelled and grades were accordingly diluted in these areas.
	• *The factors affecting continuity both of grade and geology.*	• Key factors affecting continuity relate to pervasive felsic intrusive units and faults. • The geological discontinuities have been modelled and the grade discontinuities have been accounted for in the estimation modelling.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The strike length of the Mineral Resource is nominally 300m on average, with a range of 25m to 520m, depending on depth below surface. The nominal mean dip length is 1500m. • The RL below the pre-existing pit is 1250mRL and the maximum depth of the Mineral Resource is 250mRL. The mean thickness of the mineralised zone is 3.1m, with a maximum thickness of 13.4m.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, method was chosen include a description of computer software and parameters used and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	• Hard boundary geologic domains were designed using Implicit and Explicit modelling techniques. • Grade and ancillary element estimation into the mineralised domains using Ordinary Kriging and Inverse Power Distance (IPD) was completed using Datamine™, and Supervisor software. • The methods were considered appropriate due to drill hole spacing and the nature of mineralisation. • Sample data was composited to 1m downhole lengths. • Intervals with no assays were treated as null values. • Top-cut investigations were completed and no top-cuts were applied on the basis of grade distribution and Coefficient of Variation. • Sample, wireframe and block model data were flagged using domain and weathering codes generated from 3D mineralised wireframes. • Extensive Exploratory Data Analysis (EDA) was carried out on the raw and composite data in order to understand the distribution in preparation for estimation and to validate the composite data against the raw data. • EDA included Histograms, Log Probability plots and Mean and Variance plots for each of the domains and sub domains. • Qualitative Kriging Neighbourhood Analysis was used to determine the optimum search neighbourhood parameters. Directional variography was performed for Ni and selected ancillary elements. • Nugget values are typical for the type of mineralisation (Ni = 20% - 40% of the total variance). Ranges of continuity for Ni vary from 20m to 60m in the direction of preferred orientation of mineralisation. • Estimation validation techniques included swathe plots of the grade of the composites vs the grade of the block model.
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate*	• This MRE is an update of an MRE that was previously reported and was validated against the same.

Criteria	JORC Code explanation	Commentary
	takes appropriate account of such data.	
	• *The assumptions made regarding recovery of by-products.*	• No assumptions were made about the recovery of by products in this estimate. • WSA currently does not have any offtake agreements in place for the sale of discrete by-products.
	• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*	• Arsenic (As) is considered a deleterious element as it can have an adverse effect on the recovery of Ni if not properly managed during the blending process. • As was routinely assayed with Ni and was subsequently modelled and estimated into the block model using mutually exclusive domains to that of Ni. • Other non-grade elements were estimated into the block model.
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	• The block model was constructed using a 2mE x 5mN x 5MRL parent size, with sub cells. All estimation was completed at the parent cell scale, thereby avoiding any potential geostatistical support issues. • The size of the search ellipse varies and is based on the drillhole spacing and domain dimensions.
	• *Any assumptions behind modelling of selective mining units.*	• No selectivity was built into the model on the basis that full extraction of the ore zone using longhole and airleg stoping is expected
	• *Any assumptions about correlation between variables.*	• Known correlation between Density and Ni grade was used to estimate tonnages.
	• *Description of how the geological interpretation was used to control the resource estimates.*	• The geological interpretation was developed using geological, structural and lithogeochemical elements. • The geological framework associated with extrusive komatiite-hosted deposits, and the structural elements observed at the local and wider scale, were used to determine and refine mineral domains. • The hanging wall and footwall contacts of mineralisation were used as hard boundaries during the estimation process and only blocks within the geological wireframe were informed with Ni grades.
	• *Discussion of basis for using or not using grade cutting or capping.*	• Geostatistical and visual investigation of the grade distribution negated the need for grade cutting or capping.
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• Validation of the block model included comparing the volume of resource wireframes to block model volumes. • It also involved comparing block model grades with drill hole grades by means of swathe plots showing easting, northing and elevation comparisons. • Estimation validation techniques included swathe plots of the grade of the composites vs the grade of the block model as shown below. • Visual grade validations using Datamine™, Supervisor and Leapfrog were undertaken. • The assumptions and methodologies used during this estimation are very similar to that of the previously reported Mineral Resource Estimate.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages were estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The mineral envelope was determined using a nominal 0.4% Ni grade cut-off. • The Mineral Resource is reported at a 0.4% Ni cut-off for Indicated and 0% Ni for Inferred, which is a reasonable representation of the mineralised material prior to the application of economic and mining assumptions and an Ore Reserve cut-off. • The Spotted Quoll mineralisation tenor is relatively high compared to other komatiite-hosted deposits, and hence the use of a lower cut-off grade is appropriate.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should*	• The Spotted Quoll deposit is currently being mined primarily using longhole stoping methods with paste fill. • The mining method, which is unlikely to change, has been taken into account during the estimation process. • The Mineral Resource was depleted against mining.

Criteria	JORC Code explanation	Commentary
	be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Ore from the Spotted Quoll deposit is currently being processed on site, where Nickel concentrate is produced using a three-stage crushing, ball mill, and flotation and thickener/ filtration system. • Arsenic rejection in the flotation circuit has been modelled based on current and historic operational performance.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• All waste and process residue will be disposed of through the Cosmic Boy concentrator plant and its tailings dam. • All site activities will be undertaken in accordance with WSA's environmental policy.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	• There is a strong correlation between Ni and bulk density at Forrestania and a robust Ni grade regression formula was used to estimate bulk density into the blocks.
	• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.*	• Core at Spotted Quoll is generally void of vugs, voids and other defects. Rocks are from the amphibolite facies and faults have largely been annealed. Porosity is considered low.
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• The bulk density values were estimated into the block model using the same search parameters that were used to interpolate Ni within the geological domains.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	• The Spotted Quoll Mineral Resource is classified as Indicated and Inferred on the basis of drillhole spacing and Kriging efficiency. • Only blocks that are between existing ore drives are classified as Measured.
	• *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, and confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*	• The definition of mineralised zones is based on a high level of geological understanding. • The model has been confirmed by infill drilling, supporting the original interpretations. • All relevant factors have been considered in this estimate .

Criteria	JORC Code explanation	Commentary
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Mineral Resource Estimate appropriately reflects the view of the Competent Person who is a full-time employee of Western Areas and has been working on the deposits since 2008, both as a consultant and an employee.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No audit has been undertaken on the current MRE to date, but the model was designed with the assistance of independent consultants.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	• The geological and grade continuity of the Spotted Quoll deposit is well understood and the mineralisation wireframes used to build the block model have been designed using all available exploration and mining data. • Post-processing block model validation was extensively undertaken using geostatistical methods.
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	• The Mineral Resource statement relates to local estimates of tonnes and grade.
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The MRE was compared to the production grade control data. The upper section of the deposit has been mined by open pit methods and underground mining has been in place for over five years.

JORC 2012 TABLE 1 – Forrestania Exploration

Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	• *Exploration targets were tested and sampled from diamond drilling (DD) core, and holes were mostly drilled perpendicular to the strike (north-south) of the stratigraphy.* • *Drill holes were located initially with hand held GPS and later surveyed by differential GPS. DD holes were used to obtain high quality samples that were fully oriented and logged for lithological, structural, geotechnical attributes. Each sample of diamond drill core submitted to ALS laboratories at Malaga, Perth was weighed to determine density by the weight in air, weight in water method. All sampling was conducted under WSA QAQC protocols which are in accordance with industry best practice.* • *Diamond drill core (NQ2) is 1/4 core sampled on geological intervals (0.2m - 1.5m) to achieve sample weights under 2kgs.* • *Samples were crushed, dried and pulverised (total prep) to produce a sub sample for analysis by 4 acid digest with an ICP/AES and FA/ICP (Au, Pt, Pd) finish.*
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• *All samples were prepared and assayed by independent commercial laboratories whose instruments are regularly calibrated* • *Geophysical survey QC parameters were reviewed by independent supervising geophysicists from Newexco Services Pty Ltd*
	• *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent*	• *Diamond core is typically marked at 1m intervals* • *Sample intervals marked up by geologists based on geology.* • *Sampled mineralisation intervals are sent to a commercial laboratory for crushing and grinding before assaying.*

Criteria	JORC Code explanation	Commentary
	sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• *Diamond Drilling utilized a UDR1200 rig* • *Diamond drilling comprises HQ and NQ2 sized core.* • *Historical data is derived from both surface and underground diamond drilling*
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• *Diamond core recoveries have been logged and recorded in the database* • *Diamond core are logged and recorded in the database. Overall recoveries are >95% and there was no core loss issues or significant sample recovery problems. Core loss is noted where it occurs.* • *Diamond core was reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the drillers.* • *The drilling by diamond core method has high recoveries. The massive sulphide style of mineralisation and the consistency of the mineralised intervals are considered to preclude any issue of sample bias due to material loss or gain.* • *Drilling in the oxidised profile results in more incomplete core recoveries.*
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	• *All geological logging was carried out to a high standard using well established geology codes in LogChief software.* • *All logging recorded in a Panasonic Toughbook PC .*
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	• *Core is photographed in both dry and wet form and logging is done in detail.*
	• *The total length and percentage of the relevant intersections logged.*	• *All diamond drill holes were logged and photographed in full. RC holes are logged in full.*
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	• *Diamond core is sampled as quarter core only; cut by the field crew on site by diamond saw.*
	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*	• *Not applicable for this program*
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• *Sample preparation follows industry best practice involving oven drying, coarse crushing and pulverising.*
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	• *The field crew prepares and inserts the QAQC certified reference materials into the relevant calico bags.* • *OREAS and Geostats standards have been selected based on their grade range and mineralogical properties, with approximately 12 different standards used.*
	• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*	• *Standards and blanks are inserted approximately every 20 samples or at least one every hole for both diamond and RC drilling.*
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• *All geological logging was carried out to a high standard using well established geology codes in LogChief software.*
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• *All samples are assayed by independent certified commercial laboratories.* • *The laboratories used are experienced in the preparation and analysis of nickel sulphide ores.*
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*	• *No Geophysical tools or handheld XRF instruments were used to determine any element concentrations that were subsequently used for MRE or exploration reporting purposes.*
	• *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable*	• *Certified reference materials are included in all batches dispatched at an approximate frequency of 1 per 25 samples, with a minimum of two per batch.* • *Field duplicates are inserted into submissions at an approximate frequency of 1*

Criteria	JORC Code explanation	Commentary
	levels of accuracy (i.e. lack of bias) and precision have been established.	*in 25, with placement determined by Nickel grade and homogeneity. Lab checks, both pulp and crush, are taken alternately by the lab at a frequency of 1 in 25.* • *Accuracy and precision were assessed using industry standard procedures such as control charts and scatter plots.* • *Evaluations of standards are completed on a monthly, quarterly and annual basis using QAQCR.*
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	• *Geological interpretation using intersections peer viewed by prior company and WSA geologists.*
	• *The use of twinned holes.*	• *Not applicable*
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	• *All primary geophysical data were recorded digitally and sent in electronic format to Newexco Services Pty Ltd for quality control and evaluation.* • *All geological logging was carried out to a high standard using well established geology codes in LogChief software.* • *All other data including assay results are imported via Datashed software.* • *Drillholes, sampling and assay data is stored in a SQL Server database located in a dedicated data center.*
	• *Discuss any adjustment to assay data.*	• *none*
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	• *Downhole surveys completed using the Axis "Champ Gyro™" north seeking gyroscopic instrument on all resource definition and Exploration diamond holes. Exploration RC holes were surveyed down-hole using an Eastman single shot camera. Underground drill-hole collar locations verified via survey pickup.*
	• *Specification of the grid system used.*	• *MGA94 Zone 51 grid coordinate system is used.* • *A two point transformation is used to convert the data from AMG84_51 mine grid and vice versa.*
	• *Quality and adequacy of topographic control.*	• *The project area is flat and the topographic data density is adequate for MRE purposes* • *Collar positions were picked up by suitably qualified surface and underground surveyors*
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• *Drill hole spacing at Cosmic Boy comprised one parent and three wedge holes (using the same surface collar reference point) with target intersections spaced between 50 – 100m apart.* • *For other projects, drill spacing will vary based on the target being tested.*
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	• *Samples are collected at 1m intervals (Diamond and Aircore) and 4m composites (RC)*
	• *Whether sample compositing has been applied.*	• *No*
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	• *The majority of the drill holes are orientated to achieve intersection angles as close to perpendicular as possible.*
	• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• *No orientation based sampling bias has been observed in the data, intercepts are reported as downhole lengths.*
Sample security	• *The measures taken to ensure sample security.*	• *Standard West Australian mining industry sample security measures were observed.*
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• *Adrian Black of Newexco Pty Ltd (a member of the AIG), an independent exploration company, has reviewed the data and sampling techniques employed by the Company.*

JORC 2012 TABLE 1 – Forrestania Exploration

Section 2: Reporting of Exploration Results

(Criteria listed in Section 1, also apply to this section.)

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Mineral tenement and land tenure status</td><td>• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.
• The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</td><td>• Forrestania Nickel Operations comprises approximately 125 tenements covering some 900km2 within the Central Yilgarn Province. The tenements include exploration licences, prospecting licences, general purpose leases, miscellaneous licences and mining leases.
• Western Areas wholly owns 106 tenements, 55 tenements of which were acquired from Outokumpu in 2002 and a further 51 tenements acquired from Kagara in March 2012 (some which are subject to various third party royalty agreements). The remainder of the tenements are subject to Joint Ventures.
• A number of the Kagara tenements are subject to third party royalty agreements.
• All the tenements are in good standing. Six tenements are pending grant.</td></tr>
<tr><td>Exploration done by other parties</td><td>• Acknowledgment and appraisal of exploration by other parties.</td><td>• Western Areas has been exploring its wholly owned tenements since 2002. The tenements subject to the Kagara sale which took place in March 2012 were explored by Kagara since 2006 and Lion Ore and St Barbara prior to that time.
• Western Areas has managed the Mt Gibb JV since 2009 (Great Western Exploration explored the ground prior to that time).
• Kidman Resources Limited has entered into a Farm-in and Joint Venture with Western Areas, with a Stage 1 opportunity to earn in to 50% lithium rights.</td></tr>
<tr><td>Geology</td><td>• Deposit type, geological setting and style of mineralisation.</td><td>• The FNO lies within the Forrestania Greenstone Belt, which is part of the Southern Cross Province of the Yilgarn Craton in Western Australia. The main deposit type is the komatiite hosted, disseminated to massive Nickel sulphide deposits, which include the Flying Fox and Spotted Quoll deposits which are currently being mined. The mineralisation occurs in association with the basal section of high MgO cumulate ultramafic rocks.
• The greenstone succession in the FNO district also hosts a number of orogenic lode gold deposits of which Bounty Gold Mine is the biggest example. Some exploration for this style of deposit is undertaken by Western areas from time to time in the FNO tenements.</td></tr>
<tr><td>Drill hole Information</td><td>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:
– easting and northing of the drill hole collar
– elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar
– dip and azimuth of the hole
– down hole length and interception depth
– hole length.
• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</td><td>• Drill hole summary details supporting reported intersections from the Cosmic Boy Project are captured in the enclosed table.

<table>
<tr><th>HOLEID</th><th>Easting</th><th>Northing</th><th>RL</th><th>EOH Depth (m)</th><th>Type</th><th>DIP</th><th>Azimuth</th><th>Comments</th></tr>
<tr><td>CBD212</td><td>756295</td><td>6391700.6</td><td>407</td><td>1058.2</td><td>DDH</td><td>-82</td><td>90</td><td>Complete</td></tr>
<tr><td>CBD212W1</td><td>756295</td><td>6391700.6</td><td>407</td><td>1137.5</td><td>DDH</td><td>-82</td><td>90</td><td>Complete</td></tr>
<tr><td>CBD212W1W1W1</td><td>756295</td><td>6391700.6</td><td>407</td><td>1124.9</td><td>DDH</td><td>-82</td><td>90</td><td>Complete</td></tr>
<tr><td>CBD212W2</td><td>756295</td><td>6391700.6</td><td>407</td><td>1000.3</td><td>DDH</td><td>-82</td><td>90</td><td>Complete</td></tr>
</table></td></tr>
<tr><td>Data aggregation methods</td><td>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.
• Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.
• The assumptions used for any reporting of metal equivalent values should be clearly stated.</td><td>• Standard weighted averaging of drill hole intercepts were employed. No maximum or minimum grade truncations were used in the estimation.
• The reported assays have been length and bulk density weighted. A lower arbitrary 0.5% Ni cut-off is applied, with no top cut applied. High grade intercepts internal to broader zones of mineralisation are reported as included intervals.
• Metal equivalents have not been used</td></tr>
<tr><td>Relationship between mineralisatio</td><td>• These relationships are particularly important in the reporting of Exploration Results.</td><td>• Drill hole intersections may not be true widths</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
n widths and intercept lengths	• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• *Included within report*
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• *All relevant assay results have been reported*
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• *Included within report* • *Geophysics* • *Information on structure type, dip, dip direction alpha and beta angles, texture, shape, roughness and fill material is stored in the structural logs in the database.*
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• *Preliminary plans are included within the report* • *Future explorations programs may change depending on results and strategy*

JORC 2012 TABLE 1: SECTION 1: Sampling Techniques and Data – Western Gawler Joint Venture

Section 1: Sampling Techniques and Data

Criteria	JORC Code Explanation	Comment
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples*	• *Air-core (AC) and Reverse Circulation (RC) drilling is used for sampling.* • *Each sample interval is split to approximately 3kg using a rig mounted rotary splitter.* • *Each sample is sent for analysis to ALS Global laboratories in Perth, Western Australia.* • *The sample is pulverised in the laboratory (total prep) to produce a sub sample for assaying.* • *All sampling was conducted using WSA QAQC sampling protocols which are in accordance with industry best practice.*

Criteria	JORC Code Explanation	Comment
	from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	
Drilling Techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• *Exploration targets are tested using AC and RC drilling. Holes were drilled between 60-90 degrees.* • *A truck-mounted air-core rig is used with a 3 inch diameter face sampling hammer drilling or Air-Core bit.*
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias*	• *Drilling recoveries are digitally logged, recorded and captured within the project database.* • *Overall recoveries are >95% and there has been no significant loss of sample material due to ground or drilling issues.* • *Each individual sample is visually checked and logged for recovery, moisture and contamination.* • *The style of expected mineralisation and the consistency of the mineralised intervals are expected to preclude any issue of sample bias due to material loss or gain.*
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc)* • *The total length and percentage of the relevant intersections logged.*	• *Geological logging is recorded and validated in MS excel spreadsheets (Toughbook platform)* • *Drill chips are logged for lithology, mineralogy, mineralisation, weathering, fabric, grainsize, colour and other relevant features.* • *Geotechnical logging was not completed due to the nature of drill method.* • *All holes have been logged from the surface to the end of hole.* • *Petrology is used to verify the field geological logging.*
Sub-sampling techniques and sampling preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• *The drill samples were collected every metre on the drill rig using a rotary splitter.* • *When required, composite samples are taken using a sampling spear.* • *Field QC procedures involve the use of certified reference material as assay standards, along with blanks, duplicates and barren washes. The insertion rate of these averaged 1:20, with an increased rate in mineralised zones.* • *Field duplicates are conducted on approximately 1 in 25 drill intersections.* • *The sample sizes are considered to be appropriate to correctly represent the geological model based on: the style of mineralisation, the thickness and consistency of the expected intersections, the sampling methodology and percent value assay ranges for the primary elements.*
Quality of assay data laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of*	• *All samples are processed by ALS Minerals (Australian Laboratory Services P/L) in Perth, Western Australia* • *All drill samples are subjected to ICP-MS (ME-MS61 and ME-MS61r for selected EOH samples) analysis using nitric, perchloric, hydroflouric and hydrochloride acid digest.* • *All samples are also assayed for PGE's using PGM-ICP23* • *Standards and blanks are routinely used to assess company QAQC (approx 1 standard for every 25-50 samples).*

Criteria	JORC Code Explanation	Comment
	bias) and precision have been established.	
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• *Primary data was collected using validated MS excel spreadsheets, on Toughbook computers.* • *All data is validated by the supervising geologist and sent to WSA Perth for further validation and integration into an Acquire database.*
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• *Drill holes were located using hand held GPS.* • *Elevation data is captured with hand held GPS, and cross referenced with local topographical maps (DMP produced), SRTM data and recently captured DTM models (where covered by the Aeromagnetic Surveys – Thomson Aviation).* • *MGA94 Zone 53 grid coordinate system is used.*
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• *Drill holes are located and specifically planned according to target location and stratigraphic location.* • *Samples are collected every metre down hole.* • *Sample compositing has not yet been applied, but may do so depending on the assay information required.*
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• *The majority of the drill holes are drilled vertically which may reduce range of lithologies or cross section of stratigraphy sampled in areas that are steeply dipping.* • *Heritage and/or environmental constraints may prevent some ideal drilling solutions.* • *No orientation based sampling bias has been observed in the data, intercepts are reported as down-hole lengths.*
Sample Security	• *The measures taken to ensure sample security.*	• *All samples are captured and prepared for transport onsite under the supervision of WSA staff.* • *All samples are collected in sealed task specific containers (Bulka bags – plastic pallets) and delivered from site to Perth and then the assay laboratory via WSA staff.*
Audits and Reviews	• *The results of any audits or reviews of sampling techniques and data.*	• *Adrian Black of Newexco Pty Ltd (a member of the AIG), an independent exploration company, has reviewed the data and sampling techniques employed by WSA.*

Section 2: Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	*JORC 2012 Explanation*	Comment
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	• *The Western Gawler Project comprises 6 exploration licenses covering some 4,448km2, of which 5 are held 100% WSA. (EL 6087(formerly EL 5077), EL6248 (formerlyEL 5199), EL6249 (formerly EL5200), EL5688 and EL5939)* • *Licence EL 5880 (formerly EL 4440) is operated under the Strandline Resources Ltd / Western Areas Ltd Farm-In and Joint Venture (JV) Agreement.* • *The Fowler JV Project consists of 5 exploration licenses under a Farm In and Joint Venture Agreement (FIJVA) between Iluka (Eucla Basin) Pty Limited and Western Areas Limited, all of which all are held by Iluka (Eucla Basin) Pty Limited. EL5878, EL5879, EL6251, EL5675 and, EL5452.*
Exploration done by other parties.	• *Acknowledgment and appraisal of exploration by other parties.*	• *The project area was originally explored by BHP Billiton as part of its extensive gold, titanium, Iron and nickel target generation work, and more recently by Gunson Resources Limited (Nickel), Equinox (Base Metals and Gold) and Iluka Resources Ltd (Mineral Sands). It is deemed that the previous exploration was of variable effectiveness.* • *The South Australian Government has performed widely spaced stratigraphic diamond*

<table>
<tr><th>Criteria</th><th>JORC 2012 Explanation</th><th>Comment</th></tr>
<tr><td></td><td></td><td>drilling along a number of traverses in the tenure
• The success rate of historical RC drilling is low, while the AC and Diamond drilling was effective.
• Gravity, Magneto Tellurics and Airborne Electro-magnetics have been used in selective locations within the project area.
• The historical geophysics is deemed to have been effective.</td></tr>
<tr><td>Geology</td><td>• Deposit type, geological setting and style of mineralisation.</td><td>• The Western Gawler Project lies within the Fowler Domain of western South Australia. The Fowler Domain is a Mesoproterozoic orogenic belt comprised of medium to high metamorphic grade basement lithologies and younger felsic, mafic and ultramafic intrusives.
• Similarly aged terranes globally contain significant accumulations of nickel and copper sulphides.
• Whilst not primary target types, the area may also be prospective for orogenic gold, IOCG and skarn related mineralisation.</td></tr>
<tr><td>Drill hole Information</td><td>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:
• easting and northing of the drill hole collar
• elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar
• dip and azimuth of the hole
• down hole length and interception depth
• hole length.
• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</td><td>
<table>
<tr><th>HOLEID</th><th>Easting</th><th>Northing</th><th>RL</th><th>EOH Depth (m)</th><th>Type</th><th>DIP</th><th>Azimuth</th></tr>
<tr><td>18WGRC387</td><td>236457</td><td>6508846</td><td>68</td><td>148</td><td>RC</td><td>-60</td><td>120</td></tr>
<tr><td>18WGRC386</td><td>236545</td><td>6508788</td><td>70</td><td>148</td><td>RC</td><td>-60</td><td>120</td></tr>
<tr><td>18WGRC389</td><td>236544</td><td>6508493</td><td>63</td><td>137</td><td>RC</td><td>-60</td><td>120</td></tr>
<tr><td>18WGRC390</td><td>236394</td><td>6508911</td><td>65</td><td>184</td><td>RC</td><td>-60</td><td>120</td></tr>
<tr><td>19WGAC444</td><td>235618</td><td>6508628</td><td>59</td><td>117</td><td>AC</td><td>-90</td><td>0</td></tr>
</table>
</td></tr>
<tr><td>Data aggregation methods</td><td>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.
• Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.
• The assumptions used for any reporting of metal equivalent values should be clearly stated.</td><td>• Where assays results have been reported, they represent both single sampling interval (1m) and composite intervals up to 3m in width.
• No metal equivalents have been used.</td></tr>
<tr><td>Relationship between mineralisation widths and intercept lengths</td><td>• These relationships are particularly important in the reporting of Exploration Results.
• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.
• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. ‘down hole length, true width not known’).</td><td>• Not applicable</td></tr>
<tr><td>Diagrams</td><td>• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</td><td>• Refer to Table for location coordinates relating to the reported elevated intervals.</td></tr>
</table>

Criteria	*JORC 2012 Explanation*	Comment
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• *Balanced reporting of material results is provided.*
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• *Multi-element analysis was conducted routinely on all samples for a base metal and PGM suite and potentially deleterious elements.*
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• *Exploration within the Western Gawler Project is ongoing.* • *At this stage of the exploration program, the nature of the geological model is evolving. Details of further work and will be forthcoming as the project progresses.*