

# **Activity Report**

For the period ending 31 March 2015

Western Areas is an Australian-based nickel miner listed on the ASX. The main asset is the 100% owned Forrestania Nickel Project, 400km east of Perth. Western Areas is Australia's second largest sulphide nickel miner producing approx. 25,000 tonnes per annum nickel in ore from the Flying Fox and Spotted Quoll mines.

Flying Fox and Spotted Quoll are two of the lowest cost and highest grade nickel mines in the world.

Western Areas is an active nickel explorer in Western Australia and holds significant exploration interests in Canada and Finland through shareholdings in Mustang Minerals and FinnAust Mining Plc.

The total Mineral Resource Estimate at Spotted Quoll now stands at 2.7Mt at an average grade of 5.7% Ni containing 153k nickel tonnes. The total Ore Reserve Estimate at Spotted Quoll comprises 2.8 Mt at 4.0% Ni containing approximately 113k nickel tonnes.

The total Massive Sulphide Mineral Resource Estimate at Flying Fox now stands at 1.8Mt at an average grade of 5.3% Ni containing 97k nickel tonnes. The total Ore Reserve Estimate at Flying Fox comprises 1.4t at an average grade of 4.0% Ni containing approximately 55k nickel tonnes.

The Cosmic Boy concentrator consistently produces around 25,000 tonnes per annum of nickel contained in concentrate.

Western Areas has offtake agreements with BHP Billiton for 12,000 tpa nickel in concentrate and 13,000 tpa with Jinchuan for a total 25,000 tpa nickel in concentrate.

The Board remains focused on the core business of low cost, long life nickel production, new nickel discoveries and generating returns to shareholders.

ASX code: WSA Shares on issue: 232.3m shares Market capitalisation: Approx A\$710m @ \$3.05 per share

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#### FREE CASHFLOW GENERATION CONTINUES AND UNIT CASH COSTS TRACK BETTER THAN GUIDANCE.

Western Areas (WSA or the Company) is pleased to report another strong quarterly performance across the full suite operational metrics including safety, costs, and continued positive free cashflow generation. The cashflow performance demonstrates the Company's resilience to difficult external operating conditions currently being experienced in the resources industry. **There were no lost time injuries for the quarter with a reduced LTIFR of 0.98** 

The mill successfully completed its major planned shutdown for the financial year in February. Despite additional costs associated with shutdowns, and the March quarter being the shortest of the year, **unit cash cost of production was A\$2.32/lb (US\$1.82/lb) for nickel in concentrate**. Year to date unit cash cost of production is A\$2.36/lb, being better than our upgraded guidance range of A\$2.40/lb to A\$2.50/lb. As a result, **the Company now expects full year costs to be at the lower end of the guidance previously provided.** 

The Company again generated free cashflow for the quarter despite the nickel price retreating to below US\$6.00/lb by quarter end. Pre-consolidated **free cashflow generation was A\$15.4m**, which included the second last interest payment of A\$4.0m on the remaining convertible bonds (A\$125.0m) which are due to be retired on 2 July 2015. **Consolidated cash at bank (which includes FinnAust Mining) is A\$193.0m and net cash has increased to A\$68.0m**.

Mine production was **142,734 tonnes of ore at an average grade of 4.7% for 6,702 nickel tonnes**. Mill production was 6,180 nickel tonnes in concentrate for the quarter. Year to date production is at 19,125 nickel tonnes in concentrate, indicating that full year concentrate production guidance remains on track to reach the upper end of the range 24,500 to 25,500 nickel tonnes.

#### March Quarter 2015 Highlights:

- 1. There were ZERO lost time injuries for the quarter which resulted in a reduced LTIFR of 0.98. Should there be no LTIs in the June quarter, LTIFR will be reported at 0.0.
- 2. Flying Fox mine production was 72,144 tonnes of ore mined at 4.6% for 3,330 tonnes (7.3M lbs) of contained nickel.
- 3. Spotted Quoll mine production was 70,590 tonnes of ore at 4.8% for 3,372 tonnes (7.4M lbs) of contained nickel.
- 4. Mill throughput was 145,933 tonnes of ore at an average grade of 4.7% nickel with recovery of 90%.
- 5. An interim fully franked dividend of 3.0 cents was declared. Payment of the dividend occurred on 10 April 2015.
- 6. A remodelling of the Flying Fox massive sulphide Resource resulted in an increase of 11,394 tonnes of nickel at an average grade of 5.4% nickel. The main increase in Resources was in the T5 massive area of 10,414 tonnes of nickel.
- 7. Drilling at Old Flying Fox intersected 3.73m @ 7.29% nickel.
- 8. Mill enhancement project feasibility study was successfully completed.
- **9. Western Gawler geophysical interpretation** was completed with drilling commencing next quarter. Access Agreements have been finalised.

#### 1. CORPORATE AND FINANCING

#### Cashflow

Pre-consolidated cash at bank was A\$190.7m at the end of the quarter, being an increase of A\$15.4m over the previous quarter figure of A\$175.3m. The consolidated group's cash position was A\$193.0m, which included the majority-owned FinnAust Mining Plc cash at bank of A\$2.4m. Group cash at bank plus nickel sales receivables totals at A\$205.9m. The consolidated group net cash position increased to A\$68.0m.

#### Dividend

Western Areas declared a significant increase in the interim dividend during the quarter, declaring a fully franked 3 cent per share dividend (A\$6.7m) on 19 February 2015. This was paid to shareholders on 10 April 2015.

#### **Debt Facilities**

The \$125m ANZ loan facility remains undrawn and is not due to expire until March 2017. This low cost facility provides repayment certainty for the maturity of the July 2015 convertible bonds (although it is unlikely to be required) but also provides balance sheet flexibility. The Company has commenced discussions to assess the optimum funding package going forward given the planned debt free status within the next three months.

#### **Convertible Bonds**

A single tranche of convertible bonds with a face value of A\$125m remains outstanding and matures on 2 July 2015. The bonds have a 6.4% coupon and a conversion strike price of A\$6.32/share. These bonds are currently planned to be repaid using existing cash reserves. This will approximately result in a A\$12m reduction in borrowing costs for FY16 compared to FY15.

#### Hedging

When required and the pricing is supportive, the Company manages nickel sales price risk with a combination of short term quotation period (QP) hedging and a set limit of medium term nickel 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 that is yet to have its nickel price finalised.
- 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 maximum of 12 months.

At quarter's end, the hedge book consisted of a small proportion of forecast US\$ sales. Details of hedges as at 31 March 2015 are as follows:

Hedging Details	FY 2015	FY 2016
US\$ Hedging - Collar Options		
US\$ Sold	\$15,000,000	\$30,000,000
Average US\$ FX Cap	\$0.8300	\$0.8300
Average US\$ FX Floor	\$0.7195	\$0.7195

#### 2. MINE SAFETY AND ENVIRONMENT

#### Safety

There were ZERO loss time injuries (LTI) recorded for the quarter and the LTI frequency rate finished at 0.98. Operations at the end of the quarter were 363 days LTI free. Of significance, the Spotted Quoll mine has yet to have an LTI since commencing and stands at 1,445 LTI free days whilst surface exploration stands at 2,465 LTI free days. These are outstanding achievements and all concerned are congratulated.

A recent improvement in our safety management system has been the introduction of active vehicle monitoring and driver education, which has resulted in significant improvement in driver behaviours.

#### Environment

One minor process water leak occurred from an exploration water truck late in the quarter which was promptly reported and remedied resulting in negligible impact.

Monitoring of Malleefowl continued during the quarter. Malleefowl activity, including evidence of breeding success, has been recorded on motion sensor cameras at several mounds in the area.

Environmental team members attended a native fauna handling course in Perth with the aim of ensuring that they have the correct skills to manage situations involving fauna handling.

#### **Compliance and Approvals**

New aerial imagery was captured across all of Western Areas' tenements. The new imagery will be used to improve the accuracy of Annual Environmental and Mining Rehabilitation Fund Reporting for the 2014-2015 reporting period, as well as for exploration.

New compliance actions undertaken during the quarter include:

1. Implementation of a more efficient Eucalyptus steedmanii (DRF) Management Plan

New approvals received during the quarter include:

- 1. Works Approval for the Cosmic Boy camp waste water system expansion; and
- 2. Works Approval for the Flying Fox paste plant.

#### Mine Rehabilitation

Development and implementation continued on rehabilitation plans which included the collection of provenance native seeds to be used in various rehabilitation projects.

#### Sustainability

Western Areas agreed to enter into an arrangement with the Department of Parks and Wildlife to sponsor their flagship Western Shield fauna recovery program. Sponsorship funds will help support native fauna recovery actions in WA's Central Wheatbelt region.





Environmental Technician Amy Hefferon at a native fauna handling course held in Perth

#### Community

In late February, the Company hosted a second visit by a student group from Kent Street Senior High School to the Spotted Quoll and Flying Fox mine-sites (surface) and concentrator. The school actively promotes the resources industry as an attractive career choice for its students.

Western Areas continues its strong commitment to the Starlight Children's Foundation WA and the sponsorship of the Western Quoll enclosure at the Perth Zoo.



Kent St student's metallurgy presentation

# Activity Report

For the period ending 31 March 2015

#### 3. MINE AND MILL PRODUCTION AND CASH COSTS

		2013/2014		2014/2015		YTD
Tonnes Mined		Jun Qtr	Sep Qtr	Dec Qtr	Mar Qtr	Total
Flying Fox						
Ore Tonnes Mined	Tns	67,966	65,097	64,122	72,144	201,363
Grade	Ni %	5.1%	5.2%	4.9%	4.6%	4.9%
Ni Tonnes Mined	Tns	3,479	3,384	3,114	3,330	9,828
Spotted Quoll - Underground						
Ore Tonnes Mined	Tns	58,497	68,446	68,324	70,590	207,360
Grade	Ni %	4.8%	4.8%	5.1%	4.8%	4.9%
Ni Tonnes Mined	Tns	2,801	3,276	3,483	3,372	10,131
Total - Ore Tonnes Mined	Tns	126,463	133,543	132,446	142,734	408,723
Grade	Ni %	5.0%	5.0%	5.0%	4.7%	4.9%
Total Ni Tonnes Mined	Tns	6,280	6,660	6,597	6,702	19,959

#### Flying Fox

#### Production

Flying Fox produced **72,144 tonnes of ore at an average grade of 4.6% for 3,330t** of contained nickel.

Ore production was split between longhole stoping (55%), jumbo development (40%) and air-leg mining by specialist contractors (5%).

Production was predominantly from the 285, 295, 385 & 515 longhole stopes in the T5 area. Air-leg production continued in the 750, 760 and 1070 (rise only) levels. The T4 area continued stoping in the 670 stope and with minor air-leg production from the 730 level.

#### Mine Development

With the Streeter Decline on hold as planned, capital development continued with the establishment of the 230 level stockpiles, 215 foot-wall drives plus ore body access and 255 level stockpiles and foot-wall drives for a total of 303m. The next leg of the return airway was completed during the quarter via a 26m longhole rise to provide primary ventilation to the lower levels of the mine.

A total of 58.7m of operating waste jumbo development was completed at the 255 and 245 levels plus 3.2m air-leg development at the 1070 level.

A total of 447.4m of jumbo ore development was completed from the 527, 285, 255 and 245 levels plus 86.9m of air-leg development from the 1070 (completed) and 760 levels.





245 SOD ore drive with face grade of 5.0% Ni

#### Infrastructure

The surface paste plant construction made excellent progress with surface civil works completed. The installation of underground pipe work and drilling of internal holes continued during the quarter.

#### Spotted Quoll

#### Production

Spotted Quoll production was **70,590t at an average grade of 4.8% nickel for 3,372 nickel tonnes**. The top North lode stoping block (from 1229 to 1245 level) was successfully stoped during the quarter. Active main lode stoping levels were 1095, 1065, 1050 1035 (Block B) and 997 (Block C).

A significant new sand resource was delineated near the Flying Fox mine. This will allow Western Areas to produce paste at reduced cement content (and reduced cost) whilst extending the life of the old Outokumpu tailings which is mixed with the sand to generate paste fill material.

#### Mine Development

Total jumbo development for the quarter was 1,257m which included 224m from the Hanna Decline and 453m of ore drive development. The Hanna Decline was restarted as a priority heading after completion of the North Lode decline/incline link to access the steeper stage 2 of the Main Lode (starting at the 705 level).

Narrow vein development (single boom jumbo) intercepted high grade ore on the 911 level.



911 narrow vein ore drive with a face grade of 5.6% Ni

#### Infrastructure

Geotechnical drilling for the planned surface to underground 4.0m diameter raisebore return-airway shaft was completed, confirming that the proposed shaft column is geotechnically suitable for excavation. The project is scheduled to start in the second quarter FY16.

#### **Cosmic Boy Nickel Concentrator**

		2013/2014		2014/2015		YTD
Tonnes Milled and Sold		Jun Qtr	Sep Qtr	Dec Qtr	Mar Qtr	Total
Ore Processed	Tns	151,232	153,474	152,407	145,933	451,814
Grade	%	4.7%	4.7%	4.7%	4.7%	4.7%
Ave. Recovery	%	89%	90%	90%	90%	90%
Ni Tonnes in Concentrate	Tns	6,336	6,511	6,434	6,180	19,125
Ni Tonnes in Concentrate Sold	Tns	6,374	6,648	6,246	6,452	19,346
Total Nickel Sold	Tns	6,374	6,648	6,246	6,452	19,346

The Cosmic Boy concentrator **processed 145,933 tonnes of ore at an average grade of 4.7% nickel for a total of 42,506 tonnes of concentrate grading 14.5% nickel.** As a consequence, 6,180 tonnes of contained nickel was produced with a metallurgical recovery of 90% and plant availability of 97%. A planned mill reline conducted in the quarter reduced the milled tonnes compared to the previous three quarters. This was the major shutdown planned for the financial year and resulted in normalised production reducing by approximately 200 to 250 tonnes of nickel.

Delivery of concentrate to BHP Billiton's operations at Kambalda and Jinchuan's smelter in China continued without disruption during the quarter. A total of 44,150 tonnes of concentrate was delivered containing 6,452 tonnes of nickel. The concentrate stockpile at quarter end was 1,240 tonnes grading 14.5% nickel, containing 180 tonnes of nickel.

Stockpiles		Jun Qtr	Sep Qtr	Dec Qtr	Mar Qtr
Ore	Tns	137,889	118,561	98,602	95,399
Grade	%	3.8%	4.0%	4.2%	4.2%
Concentrate	Tns	2,058	1,752	2,644	1,240
Grade	%	15.2%	14.3%	15.7%	14.5%
Contained Ni in Stockpiles	Tns	5,575	4,998	4,581	4,219

At the end of the quarter, 95,399 tonnes of ore at an average grade of 4.2% nickel, containing over 4,039 tonnes of nickel was stockpiled at both the mine ore pads and run-of mine pad. This represents approximately two months of mill feed and enables the selection of an optimal mill feed blend.

The construction of the main buildings for the replacement laboratory has progressed well. Final fit out of the buildings has commenced with a finish expected early in the next quarter.

The Cosmic Boy Mill Recovery Enhancement feasibility study has been completed. The feasibility study achieved its aim of successfully developing a flow sheet for incorporation into the Cosmic Boy Concentrator to cost effectively enhance mill recoveries. Western Areas is now engaging appropriate engineering companies to manage the next phase of this value enhancing project subject to final Board approval in the June quarter.





Figure 1: Design schematic of primary and secondary leach tanks of the Mill Enhancement Project

#### Cash Costs

		2013/2014		2014/2015		MAR
Financial Statistics		Jun Qtr	Sep Qtr	Dec Qtr	Mar Qtr	YTD
Group Production Cost/lb						
Mining Cost (*)	A\$/lb	1.99	1.82	1.55	1.64	1.67
Haulage	A\$/lb	0.05	0.06	0.06	0.06	0.06
Milling	A\$/lb	0.43	0.44	0.43	0.46	0.45
Admin	A\$/lb	0.16	0.20	0.21	0.18	0.20
By Product Credits	A\$/lb	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Cash Cost Ni in Con (***)	A\$/lb	2.61	2.50	2.23	2.32	2.36
Cash Cost Ni in Con/Ib (***)	US\$/Ib (**)	2.43	2.31	1.91	1.82	2.02
Exchange Rate US\$ / A\$		0.93	0.93	0.86	0.79	0.86

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

(\*\*) US\$ FX for Relevant Quarter is RBA ave daily rate (Mar Qtr = A\$1:US\$0.7866)

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

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

The unit cash cost of production of nickel in concentrate (excluding smelting/refining charges and royalties) for the quarter was A\$2.32/lb (US\$1.82/lb). With year to date unit cash costs now sitting at A\$2.36/lb, the Company is pleased to advise that full year guidance is now likely to be at the low end of the upgraded guidance provided in February 2015 of A\$2.40/lb to A\$2.50/lb.

The main contributing factors to the continuing out-performance in costs relate to the combination of positive reconciliation to reserve (which includes minimising waste dilution), optimal mill feed blend, reductions in key supplier/ service contract costs and the continual focus on all costs principally at the mine site from a dedicated operational team.

#### 5. FORRESTANIA MINERAL RESOURCES AND ORE RESERVES

#### Flying Fox

The Flying Fox massive sulphide mineralisation was remodelled during the quarter based on development mapping and 4,500m of underground diamond drilling. This resulted in an overall increase in nickel grade from 5.1% nickel to 5.4% nickel for the domains below T1 and a subsequent increase of over 11,394t of nickel compared to the previous model after depletion of both models to 31 March 2015. The T5 and





pegmatite lodes resource grade are currently in excess of 6% nickel. The grade increases are commensurate with the positive mill to face grade reconciliation experienced over the past few months.

The total Flying Fox massive sulphide (including T1) resource now stands at **1,813,488 tonnes at a grade of 5.3% nickel for 96,797 tonnes of nickel**. After depletion to the end of March 2015, the Ore Reserve Estimate now stands at **1,367,468 tonnes of ore at a grade of 4.0% nickel for 55,036 tonnes of nickel**. The ore reserve is currently being updated based on the new resource model and will be published towards the end of the June quarter.

Further resource extension testing of the T6 Resource was completed during the quarter. The last two diamond holes, which are each in excess of 300m length, are expected to be completed by the end of May 2015. A new model will be designed which is expected to result in an increase of nickel tonnes for this domain (between T5 and T7).



Figure 2: Longitudinal section of the Flying Fox Resource model below the 800mRL



#### Spotted Quoll

The Spotted Quoll orebody was remodelled during the quarter with an increase in the nickel grade of the Indicated and Measured nickel tonnes from 5.5% nickel to 5.7% nickel with a 2.5% decrease in ore tonnes.

The Spotted Quoll Mineral Resource Estimate now stands at **2,695,803 tonnes of ore at a grade of 5.7% nickel for 152,686 tonnes of nickel.** After depletion for the quarter, the Spotted Quoll Ore Reserve Estimate now stands at **2,799,479 tonnes of ore at a grade of 4.0% nickel for 113,170 tonnes of nickel.** Reserve estimation work is currently underway on the new resource model and it is expected that an updated reserve estimate will be published towards the end of the June quarter.



Figure 3: Spotted Quoll schematic with current resource and mining development





#### **Old Flying Fox**

The 'Old Flying Fox' (OTZ) domain continued to be investigated for ore resource potential. Outokumpu's Flying Fox production from 1994 to 1997 was 240,000t @ 3.2% nickel for 7,680 tonnes of nickel. The schematic below shows the results of the current phase of underground diamond drilling that was undertaken from Stockpile 5 into the area below the Outokumpu workings. The drilling results were extremely encouraging with FUG740 intersecting massive sulphides, including 3.73m @ 7.29% nickel.



Figure 4: Footwall view of results of March 2015 quarter diamond drilling into the OTZ ore body

All assays greater than 1% nickel from the SP5 drill program are shown in the table below.

BHID	Interval m	Ni%	From	Comment
FUG738	1.84	5.77	359.05	\$M/Grg\$- Outokumpu
FUG738	0.81	5.55	362.87	\$T- Outokumpu
FUG739	0.1	8.73	361.99	\$M
FUG739	0.79	7.91	369.15	\$M
FUG740	3.73	7.29	312.86	\$M, \$T
FUG740	0.87	1.97	317.71	\$S within Grp
FUG741	0.4	1.17	298.97	\$T, \$D
FUG742	0.38	4.05	291.2	\$M
FUG742	1.67	6.5	295.93	\$T, \$M
FUG743A	0.93	7.45	232.66	\$M
FUG743A	0.51	1.14	233.59	Scch\$
Significant Assay Intervals for OTZ				

#### *New Morning / Daybreak*

Surface exploration drilling of the southern Daybreak orebody to assess open-pit potential was completed during the quarter. Preliminary results indicate that the Daybreak orebody extends south along strike compared to the previous resource model. The schematic below shows a summary of the March quarter drilling with mineralised zones (assay results pending). Remodelling and further metallurgical assessment will continue once assay grades have been received.

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BHID	Interval m	Ni%	From (m)	Comment
NMD197	3.78	1.72	137.82	Significant core loss within interval. Hole redrilled as NMD197W1
NMD197W1	5.14	2.22	134.69	\$T, Rs\$
NMD198	17	1.21	26.0	Mineralised intercepts within clays in RC precollar
NMD198	4.0	1.59	45.0	Mineralised intercepts within clays in RC precollar
				Mineralised intercepts within clays.
NMD198	9.8	0.63	81.25	Felsic intrusive (Grm) intersected near contact
NMD199W1	1.3	-	149.4	Assay results pending
NMD200	3.2	-	69.0	Assay results pending
NMD201	1.5	-	107	Assay results pending
NMD201	1.5	-	110.2	Assay results pending
NMD202	2.9	-	82.9	Assay results pending
NMD203	0.8	-	133.6	Assay results pending
NMD204	13.3	-	86.7	Assay results pending
NMD204	2.6	-	103.9	Assay results pending
NMD205	2.1	-	140.6	Assay results pending
NMD205	0.6	-	158.6	Assay results pending



Figure 5: March quarter drilling with current New Morning and Day Break resource model shapes

#### 6. BIOHEAP

Initial bio-leach testwork of New Morning and Daybreak transitional ore samples (to 150m depth) was successfully completed during the quarter and confirmed that the New Morning ore is amenable to processing via the BioHeap process technology. Further samples will be tested to examine the shallow areas of the deposit.

BioHeap continues to seek alliances and working relationships with research institutes, engineering firms and test work facilities. Several proposals were provided to potential clients during the quarter along with initial discussions with other companies who are interested in using the BioHeap technology.

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Amenability testing, in the BioHeap Laboratory

#### 7. EXPLORATION

The March quarter saw a wide range of exploration activities undertaken at Forrestania, some exploration on the Southern Cross joint venture tenements and completion of access agreements with the relevant Native Title parties for exploration work to be undertaken over the tenements in the Western Gawler region of South Australia. A number of potential joint venture opportunities were assessed during the period and some of these are ongoing and not yet finalised.

#### Forrestania Projects

As well as drilling targets within the Western Ultramafic Belt (WUB), Flying Fox North/North Ironcap, Sibelius, and Spotted Quoll South prospects (Figure 6), drilling was also directed towards the Mt Hope prospect within the Eastern Ultramafic Belt (EUB). Nine electromagnetic (EM) ground geophysical surveys were undertaken or were in progress at the end of the quarter. Surveys were completed at Lake King, Parker Dome, Teddy Bear, Central Ultramafic Belt (CUB), Cosmic Boy South, Mt Hope, West Quest and South Quest areas/prospects. Drilling was also undertaken on the shallower portions of the New Morning mineralisation, as outlined in Section 6.

Planned June quarter exploration and drilling activities are proposed to continue at North Ironcap and Sibelius prospects within the WUB and on the CUB area (South Tetley) and EUB targets, including the Mt Hope and West Quest prospects. Ground geophysical surveys (EM) over the EUB and CUB will continue.



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Figure 6: Plan showing Forrestania tenements, mines and key prospects





Figure 7: Interpreted long projection of the Western Belt footwall contact extending 6km from Spotted Quoll to Flying Fox

Data compiled which covers the six kilometres strike north of the Flying Fox mine up to south of Beautiful Sunday, indicates that a number of areas that warrant further testing. Three holes have just been completed to test the eastern corridor and basal contact and coincident magnetic highs observed within the interpreted ultramafic corridor. Initial geological logging has not identified nickel sulphides. The results from assays and planned DHEM will be required to assess the effectiveness of these holes. Compilation of data from the work to date will be finalised during the June quarter and further work will be undertaken where warranted.

HOLE ID	Easting	Northing	RL_MINE	DEPTH (m)	Туре	DIP	Azimuth	INTERCEPTS FROM (m)
NID046	752740	6415400	1408	205.7	DDH	-60	270	Assays Pending
NID047	752870	6414600	1411	243.9	RC + diamond tail	-60	270	Assays Pending
NID048	752500	6414500	1412	353.7	RC + diamond tail	-60	270	Assays Pending

#### Eastern Ultramafic Belt (EUB)

The prospectivity of the Mt Hope area, located approximately 30km northeast of Flying Fox, continues to be assessed (Figure 8). The area contains a significant volume of cumulate ultramafic rocks (known as the Mt Hope dunite) over a strike length of 8km. Previous work identified the upper cumulate contact as being prospective. Hole MHD036, drilled during the September quarter, **returned 12m @1.1% nickel from 529m** close to the upper contact, which is at 555.7m. March exploration activities, including 7 drill holes, assessed the prospectivity of the upper contact, particularly above the recent intercept in MHD036.



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Figure 8: Interpreted long projection of the Mt Hope area.

Importantly, MHD038 returned 22m @ 0.7% nickel from 305m. MHD038 is 230m south of MHD036 and both intersections are interpreted to be on the same stratigraphic horizon, suggesting a possible northerly plunge to the mineralisation. In addition holes, MHRC059 to MHRC062 tested the shallower portions of the upper contact close to MHD036 and returned narrow weakly mineralised intercepts. The data from these recent holes, together with the yet to be completed DHEM surveys, will be integrated and further drill testing to locate any associated massive sulphide will be conducted in the June quarter.

HOLE ID	Easting	Northing	RL_MINE	DEPTH (m)	Туре	DIP	Azimuth	INTERCEPTS FROM (m)
MHD038	762904	6438402	1394	506.7	RC/DD	-60	90	22m @ 0.7% Ni from 305m
MHD039	763128	6437494	1397	124	RC/DD	-60	90	NSI
MHRC057	763102	6434100	1391	169	RC	-60	90	3m @ 0.4 from 54m
MHRC059	763072	6438769	395	129	RC	-60	90	2m @ 0.8 % Ni from 81m
MHRC060	763062	6438698	393	159	RC	-60	90	8m @ 0.3% Ni from 60m
MHRC061	763058	6438623	392	149	RC	-60	90	15m @ 0.5% Ni from 100m
MHRC062	763064	6438544	393	203.5	RC	-60	90	3.3m @ 0.9% Ni from 126m

#### **Geophysical Surveys**

Nine EM ground geophysical surveys were undertaken or were in progress by quarter end. Surveys were completed at Lake King, Parker Dome, Teddy Bear, Central Ultramafic Belt (CUB), Cosmic Boy South, Mt Hope and West and South Quest areas / prospects. Anomalous responses, indicating the presence of conductors, were returned from the Central Ultramafic Belt (CUB), Cosmic Boy South, Mt Hope, West Quest and South Quest areas / prospects. While the results of the surveys are encouraging the true significance of the conductive responses will need to be evaluated. Any conductors deemed to be related to massive mineralisation are expected to be drill tested in the June quarter.

#### 8. AUSTRALIAN REGIONAL EXPLORATION

#### Western Gawler Nickel-Copper Joint Venture (WSA to earn up to 90% interest)

On 9 October 2014, the Company announced the execution of separate Farm-in and Joint Venture Agreements with Gunson Resources Limited (now Strandline Resources Limited) and Monax Mining Limited. The Agreements provide a staged program for Western Areas to acquire up to a 90% interest in a number of key tenements within the Western Gawler region of South Australia. With a combined project area of approximately 2,746km<sup>2</sup>, WSA now holds a strategic land position in an area of increasing interest for gold and base-metal exploration, as recently highlighted by the Doray Minerals deal to earn-in to the gold rights of Iluka Resources' extensive tenement package.

#### March Quarter 2015 Highlights:

- Access Agreements with the Far West Coast claimants have been finalised;
- Project scale geophysical interpretation completed;
- Tectonic similarities to the Fraser Range and Musgraves regions were confirmed;
- Large number of potential mafic/ultramafic intrusions identified for drill testing; and
- On-ground exploration including extensive drilling to begin during next quarter

The project area covers a Proterozoic aged, interpreted craton margin, with long lived and complex structural and intrusive history. The area is known to host mafic-ultramafic intrusive rocks, and the area is interpreted to be tectonically related to the Musgrave (Nebo/Babel and Succoth) and Albany-Fraser Orogens (Nova/Bollinger).

The focus during the quarter was the completion of the project scale interpretation of the recently acquired magnetic data, and finalising the statutory and heritage approvals process. A significant milestone was achieved with the completion of the Access Agreement with the Far West Coast native tile claimants. This agreement allows the next phase of exploration to proceed once the clearance and consultation activities are undertaken. Consultation is also continuing with the Aboriginal Lands Trust and the SA government and is expected to be completed early next quarter.

The interpretation of the magnetic data, combined with a detailed review of the historical core and previous exploration activity, has provided a significant increase in the understanding of the area. The interpretation has revealed numerous features that are indicative of mafic/ultramafic intrusions, many of which are clustered in potential 'camps' (Figure 9). These features have been ranked and prioritised based on a number of key criteria and their prospectivity will be evaluated in the upcoming drilling program. Additionally, exploration activities will also be aimed at determining the prospectivity of other domains and gathering further geological, geochronological and geochemical information within the broader project area.

Due to the variable thickness of cover over the project area (~0-100m), RC drilling will be used as a first pass for both testing of the specific targeted features and the broader litho-geochemical and target generation work. It is anticipated that drilling activities will commence in the June quarter, and should continue through into the September quarter. This drilling will be partly funded (up to \$100,000) by the SA Government as part of the PACE Discovery Drilling 2015 program. Any positive results will be followed up with further RC and Diamond Drilling, and geophysics.

#### Activity Report For the period ending 31 March 2015



Western Gawler Project tenure overlaying magnetics (TMI - Colour and B&W)

Coord System: GDA1994 MGA Zone 53S

Figure 9: Recently captured magnetic imagery of the Western Gawler Project. The area shown in higher resolution highlights a number of the features that are interpreted to be mafic/ultramafic intrusions.

#### Southern Cross Goldfields Nickel Joint Venture (WSA 70% interest)

Exploration work during the quarter continued to be delayed by the exit of the primary tenement holder, Cliffs Natural Resources (CNR). The divestment has now been completed and the project tenure is now 100% owned by JV partner, Black Oak Minerals (formally Southern Cross Goldfields). WSA maintains 70% of the nickel rights.

The Perrinvale area is relatively unexplored for nickel sulphides and early indications suggest that the stratigraphy could be similar to that as seen in the Mt Alexander Nickel Project (BHPB/WSA JV). The sequence is believed to contain high volumes of high MgO ultramafics (that appear to be channelised), proximal to a felsic volcanic footwall sequence. Similar stratigraphy is seen in other highly prospective nickel terranes in Western Australia, and previous drilling at Mt Alexander by WMC/BHPB has intersected 14m @ 1.91% Ni and 0.75% Cu (including 4.1m @ 4.77% Ni and 1.68% Cu).





The recent reconnaissance and mapping work has highlighted a number of interesting magnetic features which may represent steeply plunging channelised shoots at the interpreted base of the ultramafic pile (Figure 10). The planned work program at Perrinvale is scheduled to commence at the beginning of the June quarter and will aim to screen the entire length of the interpreted basal contact using Airborne EM (SuperMax VTEM) and Auger geochemistry. Any anomalous results will be followed up with RC drilling and surface geophysics.



Area of planned exploration activity overlaying magnetics (TMI)

Coordinate System : GDA 1994 MGA Z 50

Figure 10: The planned exploration activity at the Perrinvale Project will focus on testing the extent of the interpreted basal ultramafic horizon. The western portion of the greenstone belt is now believed to young to the east, and therefore the lower stratigraphic unit is of primary importance.





#### 9. FINNAUST MINING Plc (WSA 60%)

Drilling for the quarter was focused on the Kelkka Nickel – Copper project and further evaluation of the Hammaslahti mine corridor where high-grade, poly-metallic mineralization was originally discovered in hole R325 in July 2014.

A three hole drill programme focusing on previously announced nickel mineralisation discovered in hole R306 at Kelkka has just been completed, and while no massive sulphides were encountered, lower-grade magmatic sulphides continue to be intersected (see photos below). The technical team is currently at site investigating the significance of the geology and is planning for the next phase of exploration drilling.





At Hammaslahti the mineralised envelope has been traced over 500m along a north to south strike with the lode plunging at approximately 25 degrees to the south. As previously announced earlier drilling targeted the keel section of the synform, the flanks of which hosted mineralization at R325 and R326. Exploration failed to locate significant mineralisation in the keel and flank locations. FinnAust geologists are reviewing existing and potential targets within the mine corridor prior to submitting a new exploration proposal to the Board.

The Outokumpu area target generation continues based on the recently viewed, cutting edge, ZTEM geophysical data presented by the GTK to FinnAust geologists is being interpreted and applied to existing target areas prior to exploration proposals being finalised.

-ENDS-

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Or visit: www.westernareas.com.au



#### COMPETENT PERSON'S STATEMENT:

The information within this report as it relates to exploration results, mineral resources, ore reserves and mine development activities is based on information compiled by Mr Charles Wilkinson, Mr Andre Wulfse and Mr Dan Lougher of Western Areas Ltd. Mr Wilkinson, Mr Wulfse and Mr Lougher are members of AusIMM and are full time employees of the Company. Mr Wilkinson, Mr Wulfse, and Mr Lougher 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 Wilkinson, Mr Wulfse and Mr Lougher 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: "the Company now expects full year costs to be at the lower end of the guidance previously provided" and, "full year concentrate production guidance remains on track to reach the upper end of the range 24,500 to 25,500 nickel tonnes" and, " Preliminary results indicate that the Daybreak orebody extends south along strike compared to the previous resource model".

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

For Purposes of Clause 3.4 (e) in Canadian instrument 43-101, the Company warrants that Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.

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### Activity Report

For the period ending 31 March 2015

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Western Areas Ore Reserve / Mineral Resource Statement - Effective date 31st March 2015						
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Deposit	Ionnes	Grade Ni%	Ni Ins	JORC Classification	JORC Code	
Ole Reserves						
1 Elving Fox Area	1 367 468	40	55 036	Probable Ore Reserve	2012	
	1,001,100	1.0	00,000		2012	
2. Spotted Quoll	181,058	4.5	8,058	Proved Ore Reserve	2012	
	2,618,421	4.0	105,112	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 ORE RESERVES	6,275,947	3.2	199,006			
Mineral Resources						
1. Flying Fox Area	64 550	1.0	2 560	Indicated Mineral Decourse	2004	
11 South	64,550 35,200	4.0	2,560	Indicated Mineral Resource	2004	
T1 North	45 400	4.9	1,720	Indicated Mineral Resource	2004	
	12,700	4.8	610	Inferred Mineral Resource	2004	
T4 Massive Zone	149 592	5.8	8 604	Indicated Mineral Resource	2012	
T5 Massive Zone + Peas	1,234,171	6.1	75,375	Indicated Mineral Resource	2012	
T6 and T7 Massive Zone	47,331	5.2	2,450	Indicated Mineral Resource	2012	
	224,544	1.6	3,578	Inferred Mineral Resource	2012	
Total High Grade	1,813,488	5.3	96,797			
T5 FF Disseminated Zone	197,200	0.9	1,590	Indicated Mineral Resource	2004	
	357,800	1.0	3,460	Inferred Mineral Resource	2004	
T5 LL Disseminated Zone	4,428,000	0.8	36,000	Indicated Mineral Resource	2004	
Total Disseminated FF - LL	4,983,000	0.8	41,050			
Total Elving Fax, Lawren Linged	0.700.400	2.0	407.047			
Total Flying Fox - Lounge Lizard	6,796,488	2.0	137,847			
New Morning / Daybreak						
Massive Zone	321,800	3.7	12.010	Indicated Mineral Resource	2004	
	93.100	3.5	3.260	Inferred Mineral Resource	2004	
Disseminated Zone	1,069,800	0.9	9,650	Indicated Mineral Resource	2004	
	659,200	0.9	5,780	Inferred Mineral Resource	2004	
Total New Morning / Daybreak	2,143,900	1.4	30,700			
Spotted Quoll	326,719	6.4	20,949	Measured Mineral Resource	2012	
	1,905,495	5.6	106,610	Indicated Mineral Resource	2012	
	463,589	5.4	25,127	Inferred Mineral Resource	2012	
Total Spotted Quoll	2,695,803	5.7	152,686			
Beautiful Sunday	480.000	1 1	6 700	Indicated Mineral Decourse	2004	
Beautiful Sunday	480,000	1.4	6,720	Indicated Mineral Resource	2004	
TOTAL WESTERN BELT	12,116,191	2.7	327.953			
	,,					
2. 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			
3. Diggers Area	3 000 000	15	44 700	Indicated Mineral Persource	2004	
Diggers South - Uplo	3,000,000	1.5 0.7	44,700	Indicated Mineral Posource	2004	
Diggers South - Halo Digger Rocks - Core	4,000,000 54 900	37	2 030	Indicated Mineral Resource	2004	
Digger Rocks - Core	172 300	1.1	2,000	Inferred Mineral Resource	2004	
Digger Rocks - Halo	1.441.000	0.7	10 350	Inferred Mineral Resource	2004	
Purple Haze	560.000	0.9	5.040	Indicated Mineral Resource	2004	
TOTAL DIGGERS AREA	10,028,200	1.0	99,570			
TOTAL MINERAL RESOURCES	22,520,291	1.9	436,473			





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#### Table 1: JORC 2012 TABLE 1- Flying Fox Mineral Resource Estimate March 2015

Section 1:	Sampling	Techniques	and Data
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Criteria	JORC Code 2012 Explanation	WSA 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.	<ul> <li>The Flying Fox (FF) Deposit is sampled using diamond drilling (DD) on nominal 50 x 30m grid spacing.</li> <li>The composite file used in the Mineral Resource Estimate (MRE) contains a total of 423 UG DD, 562 Grade control DD and 120 Surface DD holes.</li> <li>Grade control data which includes sludge drilling and short hole diamond drilling results as well as face mapping are used to build the geological models.</li> <li>Only results from DD holes are used to estimate grade into the resource block model. The total number of 1m composites derived from the holes used in the MRE is 5,757.</li> <li>Handheld XRF Spectrometers are used to gain a semi – quantative Nickel grade. These are replaced in the database by actual assay grades once received and are not used in the resource estimation process.</li> </ul>
	• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	<ul> <li>Samples are taken in accordance with well established WSA exploration protocols</li> <li>Sample representivity is assured by an industry standard internal QAQC program.</li> <li>All samples are prepared and assayed by an independent commercial laboratory whose instruments are regularly calibrated.</li> </ul>
	• 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.	<ul> <li>Diamond drill (DD) core is marked at 1m intervals and sample lengths are typically of this length.</li> <li>Sample boundaries are selected to match the main geological and mineralisation boundaries.</li> <li>Sampled mineralisation intervals are sent to a commercial laboratory for crushing and grinding before assaying</li> </ul>
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).	<ul> <li>Diamond drilling comprised NQ2 sized core for underground and surface drilling and LTK sized core for the grade control drilling.</li> <li>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 this MRE.</li> <li>All core is oriented using ACT II control panels and ACT III downhole units.</li> </ul>
Drill sample	Method of recording and assessing core and chin sample	Diamond core recoveries are logged and recorded
recovery	recoveries and results assessed.	<ul> <li>Dramona core recoveries are logged and recorded in the database. Overall recoveries are &gt;95% and there are no core loss issues or significant sample recovery problems in the sulphide zone.</li> </ul>
	• Measures taken to maximise sample recovery and ensure representative nature of the samples.	<ul> <li>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.</li> </ul>



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	grade and whether sample bias is expected	<ul> <li>The bulk of the resource is defined by diamond core drilling which has high core recoveries.</li> <li>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.</li> </ul>
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.	<ul> <li>Geological logging was carried out to a very high level of detail which is peer reviewed</li> <li>Geotechnical data such as RQD and number of defects (per interval) are recorded.</li> <li>Information on structure type, dip, dip direction, alpha angle, beta angle, texture, shape, roughness and fill material is captured.</li> </ul>
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc)     The total length and percentage of the relevant intersections	<ul> <li>Logging of diamond core and RC samples records lithology, mineralogy, mineralisation, structural data (DDH only), weathering, colour and other features of the samples.</li> <li>Core is photographed in both dry and wet form.</li> </ul>
	logged.	database contains over 83,000 geological entries.
Sub-sampling techniques and sampling preparation	• If core, whether cut or sawn and whether quarter, half or all core taken.	<ul> <li>Core is cut in half on site (with the exception of underground grade control core) by diamond saw blades</li> <li>Surface derived drill holes are halved again with one quarter sent for assay and one quarter preserved as a geological archive</li> <li>Underground exploration derived drilling core is not halved again. Half of the cut core is sent for</li> </ul>
		<ul> <li>assay with the other half preserved as a geological archive</li> <li>Underground grade control derived drilling core is not cut. Full core is sent for assay.</li> <li>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</li> </ul>
	• 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.	<ul> <li>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 pulverisation of the entire sample (total prep) using LM5 grinding mills to a grind size of 90% passing 75 micron. Sample preparation is carried out by a commercial certified laboratory.</li> <li>The sample preparation technique is well established and appropriate for Ni sulphide deposits.</li> </ul>
	• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	<ul> <li>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</li> <li>Duplicates are routinely submitted by WSA to test sample precision</li> <li>Standards are fabricated and prepared by Geostats Pty Ltd., using high – grade nickel sulphide ore.</li> <li>Blank samples are routinely submitted by WSA to test sample contamination</li> <li>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</li> </ul>



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• 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
• 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 laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	<ul> <li>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.</li> <li>Samples are dissolved using nitric, perchloric, hydrofluoric and hydrochloride acid digest to destroy silica.</li> <li>Samples are 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 AD02_ICP (detection limit in brackets, values in ppm unless stated).</li> </ul>
	• 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.	<ul> <li>No Geophysical tools or handheld XRF instruments were used to determine any element concentrations that were subsequently used for MRE purposes.</li> </ul>
	• 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.	<ul> <li>Standards and blanks were routinely used to assess company QAQC (approx 1 std 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. Results indicated no material issues associated with sample prep and analytical error. In occasional cases where a sample did not meet the required quality threshold, the batch or partial batch was re- analysed.</li> </ul>
sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel.	<ul> <li>Newexco Services Pty Ltd has independently visually verified significant intersections in the diamond core.</li> </ul>

Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> </ul>	•	Newexco Services Pty Ltd has independently visually verified significant intersections in the diamond core.
	• The use of twinned holes.	•	No holes were twinned in the recent drilling programs.



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• 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.	<ul> <li>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.</li> </ul>
	• 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.	<ul> <li>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.</li> </ul>
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.	<ul> <li>The Flying Fox deposit strikes at 030° and dips nominally 65° east. All underground and grade control drilling was conducted from west to east. All Surface drilling was conducted from east to west. The majority of the drilling was conducted</li> </ul>

from the foot wall i.e. from the west to the east.



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Audits or Reviews	•	No external audit of the Mineral Resource has been undertaken to date.
• The results of any audits or reviews of sampling techniques and data.		

# 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	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>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.</li> <li>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.</li> <li>A number of the Kagara tenements are subject to third party royalty agreements.</li> <li>All the tenements are in good standing. Six tenements are pending grant.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>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)</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>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.</li> <li>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.</li> </ul>



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Drill hole Information	<ul> <li>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:</li> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> <li>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.</li> </ul>	See drill hole summary tables enclosed in the text.
Data aggregation methods	<ul> <li>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.</li> <li>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 clearly stated.</li> </ul>	<ul> <li>Standard weighted averaging of drill hole intercepts were employed. No maximum or minimum grade truncations were used in the estimation.</li> <li>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. A lower arbitrary 0.5g/t Au cut-off is applied, with no top cut applied. High grade intercepts intercepts internal to broader zones of mineralisation are reported as included intervals. A lower arbitrary 0.5g/t Au cut-off is applied, with no top cut applied. High grade intercepts internal to broader zones of mineralisation are reported as included intervals</li> <li>No metal equivalent values are used.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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 lenath, true width not known').</li> </ul>	<ul> <li>The incident angles to mineralisation are considered moderate.</li> <li>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.</li> </ul>
Diagrams	<ul> <li>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.</li> </ul>	• 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.	All 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.	<ul> <li>Multi-element analysis was conducted routinely on all samples for a base metal suite and potentially deleterious elements including AI, 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/cm3 for values &gt;0.5% Ni. Geotechnical logging was carried out on all diamond drill holes for recovery, defects and RQD.</li> <li>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.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of</li> </ul>	<ul> <li>Exploration within the FNO tenements continues to evaluate the prospective stratigraphic succession containing the cumulate ultramafic rocks using geochemical and geophysical surveys and drilling.</li> </ul>



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possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.
 The lateral and vertical extents of the New Morning Deeps target are yet to be constrained. Drilling is currently planned at a nominal 80 x 80 pattern. The lateral extents are as yet, unclear. The target is open at depth. Once the extents of the target are better understood, this drill grid pattern may be reduced.
 At this stage of the exploration program, the nature of the geological model is evolving. Details of further work will be forthcoming as the project progresses.

#### Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, 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.	<ul> <li>All data has been recorded in Excel templates with reference lookup tables. All data is imported into an Acquire relational database</li> </ul>
	• Data validation procedures used.	<ul> <li>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.</li> </ul>
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	<ul> <li>Andre Wulfse who is the Competent Person is the Group Geology Manager for Western Areas and has made many site visits to the Flying Fox Deposit. His first visit to the deposit was in 2008.</li> </ul>
	• 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.	<ul> <li>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.</li> </ul>
	• Nature of the data used and of any assumptions made.	<ul> <li>Lithogeochemistry and stratigraphic interpretation have been used to assist the identification of rock types. No assumptions are made.</li> </ul>
	• The effect, if any, of alternative interpretations on Mineral Resource estimation.	<ul> <li>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</li> </ul>



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The use of geology in guiding and controlling Mineral Resource estimation.      The factors affecting continuity both of grade and geology.	<ul> <li>from the current interpretation. WSA has successfully planned and reconciled the deposit using a similarly derived geological and resource model.</li> <li>The Mineral Resource Estimate is based upon a robust geological model. 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.</li> <li>Key factors affecting geologic continuity relate to pervasive felsic intrusive units and faults. The nugget effect associated with Ni mineralisation in these types of deposits affects the grade continuity. The geological</li> </ul>
	grade discontinuities have been modelled and the grade discontinuities have been accounted for in the estimation modelling.
• 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
• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including	Grade and ancillary element estimation using Ordinary Kriging and Inverse Power Distance
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.	<ul> <li>(IPD) was completed using Datamine<sup>1101</sup> Studio 3 software. The methods were considered appropriate due to drill hole spacing and the nature of mineralisation.</li> <li>All estimation was completed at the parent cell scale thereby avoiding any potential geostatistical support issues.</li> <li>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. Intervals with no assays were excluded from the MRE.</li> <li>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 drilldata.</li> <li>Sample data was flagged using domain codes generated from 3D mineralised wireframes. Qualitative Kriging Neighbourhood Analysis was used to determine the optimum search neighbourhood parameters.</li> <li>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.</li> </ul>
	The use of geology in guiding and controlling Mineral Resource estimation.      The factors affecting continuity both of grade and geology.      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 nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, methad 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.



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• 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 August 2014 and was extensively validated against the August 2014 MRE.
• The assumptions made regarding recovery of by-products.	<ul> <li>No assumptions were made about the recovery of by products in this estimate.</li> <li>WSA currently doesn't have any off take agreements in place for by-products.</li> </ul>
• Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	<ul> <li>No elements are considered to be deleterious elements in the Flying Fox deposit</li> </ul>
• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	<ul> <li>A proto model was constructed using a 5mE x 5mN x 10mRL parent size, with sub cells. Thereafter individual block models were designed for each of the 16 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.</li> </ul>
	The size of the search ellipse was based on the drill hole spacing and structural domain dimensions. Search neighbourhoods varied according to the structural domain but two main search passes were used; the first was 150m x 120m x 50m in the X, Y and Z directions respectively. The second pass used a search volume factor of 1.5 of the first pass.
• Any assumptions behind modelling of selective mining units.	<ul> <li>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.</li> </ul>
• Any assumptions about correlation between variables.	<ul> <li>No assumptions were made about correlation between variables. Apart from a strong correlation between Ni% and bulk density, no other interelement correlations are observed.</li> </ul>
• 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 Validation of the block model included comparison of model data to drill hole data, and use of comparing the volume of domain boundary reconciliation data if available. 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. 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 Tonnages were estimated on a dry basis. . with natural moisture, and the method of determination of the moisture content. Cut-off parameters • The basis of the adopted cut-off grade(s) or quality The mineral envelope was determined using parameters applied. a nominal 0.2% 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 made regarding possible mining methods, The Flying Fox deposit is currently being assumptions minimum mining dimensions and internal (or, if applicable, mined using long hole stoping methods. The external) mining dilution. It is always necessary as part of mining method which is unlikely to change the process of determining reasonable prospects for has been taken into account during the eventual economic extraction to consider potential mining estimation process. 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 • The basis for assumptions or predictions regarding Ore from the Flying Fox deposit is currently . or assumptions metallurgical amenability. It is always necessary as part of being processed on site, where Nickel the process of determining reasonable prospects for concentrate is produced using a three-stage eventual economic extraction to consider potential crushing, ball mill, and flotation and metallurgical methods, but the assumptions regarding thickener/filtration system. 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.



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Environmental Assumptions made regarding possible waste and process All waste and process residue is disposed of factors or residue disposal options. It is always necessary as part of through the Cosmic Boy concentrator plant the process of determining reasonable prospects for assumptions and its tailings dam. All site activities at site eventual economic extraction to consider the potential are undertaken in accordance with WSA's environmental impacts of the mining and processing environmental policy. 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. Bulk density • Whether assumed or determined. If assumed, the basis Bulk Density has been determined using a for the assumptions. If determined, the method used, tried and tested Ni grade regression based whether wet or dry, the frequency of the measurements, formula. the nature, size and representativeness of the samples. Core at Flying Fox is generally void of vugs, • The bulk density for bulk material must have been measured by methods that adequately account for void voids and other defects. Rocks are from the spaces (vugs, porosity, etc), moisture and differences granulate facies sequence and faults have between rock and alteration zones within the deposit. largely been annealed. Porosity is considered low. • Discuss assumptions for bulk density estimates used in the The bulk density values were estimated into the block model using a linear equation evaluation process of the different materials. derived from previous data studies and interpolated with the estimate Ni within the geological domains. Classification • The basis for the classification of the Mineral Resources The Flying Fox Mineral Resource is classified into varying confidence categories. as Indicated and Inferred on the basis of drillhole spacing, underground development and Kriging quality parameters. No blocks

		were classified as Measured.
	• Whether appropriate account has been taken of all relevant factors (ie 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).	<ul> <li>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.</li> </ul>
	• 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.	<ul> <li>This is a follow up of a previous Mineral Resource Estimate that was completed and reported in accordance with the JORC Code</li> </ul>

(2004) and has not been externally reviewed.



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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.	<ul> <li>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 previous resource models. Post processing block model validation was extensively undertaken using geostatistical methods before the resource was reported.</li> </ul>
	• 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.	<ul> <li>The statement relates to local estimates of tonnes and grade.</li> </ul>
	• These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	<ul> <li>The MRE is compared to the production grade control data and the results are discussed in the CPR. The upper section of the deposit has been mined by open pit methods and underground mining has been in place for several years.</li> </ul>





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#### JORC 2012 TABLE 1 – Spotted Quoll Mineral Resource Estimate March 2015 Section 1: Sampling Techniques and Data

Criteria	JORC Code 2012 Explanation	Comment
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.	<ul> <li>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.</li> <li>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.</li> <li>A total of 2410 composites derived from 719 diamond drillholes were used to estimate the grades. This represents a data density of less than 40m squares over the full extent of the deposit.</li> <li>Holes were generally drilled perpendicular (west) to the strike (north-south) of the stratigraphy, at angles ranging between 60° and 75°.</li> <li>Closely spaced underground channel samples were used as part of the final block model validation process.</li> </ul>
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	<ul> <li>The Spotted Quoll Deposit was initially discovered in 2007 using geophysical techniques. It has since been exploited using open pit and underground mining techniques.</li> <li>This MRE is an update of the previous MRE based on additional exploration, underground development and an independent structural study.</li> <li>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.</li> </ul>
	• 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.	<ul> <li>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.</li> <li>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.</li> <li>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 at 1m intervals from which 3 kg was pulverised to produce a sub sample for assaying as per the DD samples.</li> </ul>



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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).	<ul> <li>Diamond drilling comprises NQ2 sized core</li> <li>The core was oriented using ACT II control panels and ACT III downhole units.</li> <li>RC drilling comprises 140mm diameter face sampling hammer drilling. No RC results were used in the grade estimation</li> </ul>

Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed.	<ul> <li>Diamond core and RC recoveries are logged and recorded in the database.</li> <li>Overall recoveries are &gt;95% and there are no core loss issues or significant sample recovery problems.</li> </ul>
	• Measures taken to maximise sample recovery and ensure representative nature of the samples.	<ul> <li>Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking.</li> <li>Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the drillers.</li> <li>RC samples were visually checked for recovery, moisture and contamination.</li> </ul>
	• Whether a relationship exists between sample recovery and grade and whether sample bias occurs	<ul> <li>The resource grades are derived from diamond core drilling with core recoveries in excess of 95%.</li> <li>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.</li> </ul>
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.	<ul> <li>Geological and geotechnical logging was carried out on all diamond drillholes for recovery, RQD and number of defects (per interval). Information on structure type, dip, dip direction, alpha angle, beta angle, texture, shape, roughness and fill material is stored in the structure table of the database.</li> <li>Sufficient data has been collected and verified to support the current Mineral Resource Estimate.</li> </ul>
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc)	<ul> <li>Logging of diamond core and RC samples recorded lithology, mineralogy, mineralisation, structural (DDH only), weathering, colour and other features of the samples.</li> <li>Core was photographed in both dry and wet form.</li> </ul>
	• The total length and percentage of the relevant intersections logged.	<ul> <li>All drillholes were logged in full from the collar position to the end of the hole position.</li> </ul>
Sub- sampling techniques and sampling preparation	• If core, whether cut or sawn and whether quarter, half or all core taken.	<ul> <li>Core was cut in quarters (NQ2) on site using an Almonte automatic core saw.</li> <li>All samples were collected from the same side of the core.</li> </ul>
	• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	<ul> <li>RC samples were collected using a riffle splitter.</li> <li>All samples in the mineralised zones were dry.</li> </ul>



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• For all sample types, the nature, quality and appropriateness The sample preparation of diamond core • of the sample preparation technique. follows industry best practice in sample preparation involving oven drying, coarse crushing of the quarter core sample down to ~10 mm 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 • WSA included field Ni standards ranging to maximise representivity of samples. 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 Field duplicates were taken on a 15% by • of the in situ material collected, including for instance results for volume basis. field duplicate/second-half sampling. Duplicate quarter samples were sent to a commercial independent certified lab by WSA. • Whether sample sizes are appropriate to the grain size of the The sample sizes are considered to be • material being sampled. appropriate to correctly represent the sulphide mineralisation at Spotted Quoll based on: 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 laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	<ul> <li>All samples were assayed by an independent certified commercial laboratory.</li> <li>The laboratory used by WSA is experienced in the preparation and analysis of nickel sulphide ores.</li> <li>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).</li> <li>All samples reporting &gt; 1%Ni were re-</li> </ul>
		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.	<ul> <li>No geophysical tools or handheld XRF instruments were used to determine any element concentrations that were subsequently used for MRE purposes.</li> </ul>



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	• 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.	<ul> <li>Standards and blanks were routinely used to assess company QAQC (approx 1 std for every 12-15 samples).</li> <li>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.</li> <li>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.</li> </ul>
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel.	<ul> <li>Newexco Services Pty Ltd (Newexco) has independently visually verified significant intersections in the diamond core.</li> </ul>
	• The use of twinned holes.	No holes were twinned.
	• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	<ul> <li>Primary data was collected using Excel templates utilising lookup codes, on laptop computers.</li> <li>All data was validated by the supervising geologist, and sent to Newexco for validation and integration into an SQL database.</li> </ul>
	• Discuss any adjustment to assay data.	<ul> <li>No adjustments were made to assay data compiled for this estimate.</li> </ul>

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 are: MGA50 Points yd1="6409901.808" xd1="752967.748" yd2="6409502.17" xd2="752502.175" Local Grid Points ym1="28619.176" xm1="33997.535" ym2="28223.604" xm2="33528.778"
	• 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.



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#### • Whether the data spacing and distribution is sufficient to The extensive drill program coupled with • establish the degree of geological and grade continuity information derived from underground appropriate for the Mineral Resource and Ore Reserve observations and previous open pit mining estimation procedure(s) and classifications applied. has demonstrated sufficient and appropriate continuity for both geology and grade within the Spotted Quoll Deposit to support the definition of Mineral Resources and Reserves, and the classification (Measured, Indicated and Inferred) applied. Only areas adjacent to current underground development and stoping has been classified as Measured, whereas Indicated material is supported by data densities of 40m squares. • 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.	<ul> <li>The Spotted Quoll deposit strikes at 030° and dips nominally 50° east.</li> <li>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.</li> <li>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.</li> </ul>
	• 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.	<ul> <li>No orientation based sampling bias has been observed in the data.</li> </ul>
	• The measures taken to ensure sample security.	<ul> <li>All core samples were delivered from site to Perth and then to the assay laboratory by an independent transport contractor.</li> </ul>
	Audits or Reviews	No external audit of the Mineral Resource     has been undertaken to date.
	• The results of any audits or reviews of sampling techniques and data.	This MRE has not been formally     independently reviewed as yet.

#### 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	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>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.</li> <li>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</li> </ul>



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Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	<ul> <li>King JV where Western Areas has earned a 70% interest from Swanoak Holdings.</li> <li>A number of the Kagara tenements are subject to third party royalty agreements.</li> <li>All the tenements are in good standing. Six tenements are pending grant.</li> <li>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.</li> <li>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)</li> </ul>
Geology	• Deposit type, geological setting and style of mineralisation.	<ul> <li>The deposits lie within the Forrestania Greenstone Belt, which is part of the Southern Cross Province of the Yilgarn Craton in Western Australia.</li> <li>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.</li> <li>The mineralisation occurs in association with the basal section of high MgO cumulate ultramafic rocks.</li> <li>The greenstone succession in the district also hosts a number of orogenic lode gold deposits of which Bounty Gold Mine is the biggest example.</li> <li>Some exploration for this style of deposit is undertaken by Western areas from time to time in the FNO tenements.</li> </ul>
Drill hole Information	<ul> <li>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: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	See drill hole summary tables enclosed in the text.
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Standard weighted averaging of drill hole intercepts were employed. No maximum or minimum grade truncations were used in the estimation.</li> <li>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. A lower arbitrary 0.5g/t Au cut-off is applied, with no top cut applied. High grade intercepts internal to broader zones of mineralisation are reported as included intervals. A lower arbitrary 0.5g/t Au cut-off is applied, with no top cut applied. High grade intercepts internal to broader zones of mineralisation are reported as included intervals</li> <li>No metal equivalent values are used.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with</li> </ul>	<ul> <li>The incident angles to mineralisation are considered moderate.</li> <li>Due to the often steep dipping nature of the</li> </ul>



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	<ul> <li>respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	stratigraphy reported down hole intersections are moderately greater (m/1.5 ratio on average) than the true width.
Diagrams	<ul> <li>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.</li> </ul>	• 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.	All results are reported.
Other substantive exploration data	<ul> <li>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.</li> </ul>	<ul> <li>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/cm3 for values &gt;0.5% Ni.</li> <li>Geotechnical logging was carried out on all diamond drill holes for recovery, defects and RQD.</li> <li>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.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Exploration within the tenements continues to evaluate the prospective stratigraphic succession containing the cumulate ultramafic rocks using geochemical and geophysical surveys and drilling.</li> <li>At this stage of the exploration program, the nature of the geological model is evolving. Details of further work will be forthcoming as the project progresses.</li> </ul>

### Section 3 Estimation and Reporting of Mineral

#### Resources

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

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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.	<ul> <li>All data has been recorded in excel templates with reference lookup tables. All data are imported into an Acquire relational database</li> </ul>
	• Data validation procedures used.	<ul> <li>Validation is a fundamental part of the AcQuire data model and is implemented via referential integrity and triggers.</li> <li>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.</li> <li>All fields of code data have associated look-up table references</li> </ul>



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Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	The MRE is a result of input from the Mine, Project Geologists and Consultants, Andre Wulfse who is the Competent Person has made many site visits to the Spotted Quoll Deposit 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.      Nature of the data used and of any assumptions made.	<ul> <li>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.</li> <li>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 basal/ultramafic contact.</li> <li>The deposit is principally a body of matrix magmatic sulphide mineralisation in which the original pentlandite and pyrrhotite assemblage has been strongly overprinted by arsenic – bearing assemblages dominated by gersdorffite and minor nickeline. Sulphide abundances of 20% to 90% are common.</li> <li>Mean nickel grades of ore intersections are in the order of 4% to 12% Ni.</li> <li>Lithogeochemistry and stratigraphic interpretation have been used to assist the</li> </ul>
		interpretation have been used to assist the identification of rock types. No assumptions are made.



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	• The effect, if any, of alternative interpretations on Mineral Resource estimation.	<ul> <li>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.</li> <li>Alternative interpretations of mineralisation do not differ materially from the current interpretation.</li> <li>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.</li> </ul>
	• The use of geology in guiding and controlling Mineral Resource estimation.	<ul> <li>The Mineral Resource Estimate is based upon a robust geological model.</li> <li>The hanging wall and footwall contacts of the mineralised zone were modelled with a level of confidence commensurate with the resource classification category.</li> <li>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.</li> <li>Granitoid intrusives were modelled and included in the model and grades were accordingly diluted in these areas.</li> </ul>
	• The factors affecting continuity both of grade and geology.	<ul> <li>Key factors affecting continuity relate to pervasive felsic intrusive units and faults.</li> <li>The geological discontinuities have been modelled and the grade discontinuities have been accounted for in the estimation modelling.</li> </ul>
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.	<ul> <li>The strike length of the 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.</li> <li>The RL below the pre existing pit is 1250mRL and the maximum depth of the Resource is 250mRL. The mean thickness of the mineralised zone is 3.1m with a maximum thickness of 13.4m.</li> </ul>
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.	<ul> <li>Grade and ancillary element estimation using Ordinary Kriging and Inverse Power Distance (IPD) was completed using Datamine<sup>™</sup> Studio 3 software.</li> <li>The methods were considered appropriate due to drill hole spacing and the nature of mineralisation.</li> <li>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.</li> <li>Intervals with no assays were excluded from the MRE. Top cuts 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 drilldata.</li> <li>Sample data was flagged using domain codes generated from 3D mineralised wireframes.</li> <li>Qualitative Kriging Neighbourhood Analysis was used to determine the optimum search neighbourhood parameters. Directional variography was performed for Ni and selected ancillary elements.</li> <li>Nugget values are typical for the type of mineralisation (Ni = 20% -40% of the total</li> </ul>



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	<ul> <li>variance). Ranges of continuity for Ni vary from 20m to 60m in the direction of preferred orientation of mineralisation.</li> <li>Estimation validation techniques included swathe plots of the grade of the composites vs the grade of the block model.</li> </ul>
• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	<ul> <li>This MRE is an update of an MRE that was previously reported and was extensively validated against the same.</li> </ul>
• The assumptions made regarding recovery of by- products.	<ul> <li>No assumptions were made about the recovery of by products in this estimate.</li> <li>WSA currently doesn't have any off take agreements in place for by-products.</li> </ul>
• Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	<ul> <li>Arsenic 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.</li> <li>As was routinely assayed with Ni and was subsequently modelled and estimated into the block model using mutually exclusive domains to that of Ni.</li> <li>Other non grade elements were estimated into the block model.</li> </ul>
• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	<ul> <li>The block model was constructed using a 25mE x 20mN x 10mRL parent size, with sub cells. All estimation was completed at the parent cell scale thereby avoiding any potential geostatistical support issues.</li> <li>The size of the search ellipse was based on the drill hole spacing and domain dimensions. Two search passes were used; the first was 150m x 120m x 50m in the X, Y and Z directions respectively.</li> <li>The second pass used a search volume factor of 50% of the first pass. Drill spacing is 30m by 30m in areas that will be affected by mining in the next two years and 60m by 60m in subsequent areas.</li> </ul>
• Any assumptions behind modelling of selective mining units.	No selective mining units were assumed in the estimate.
• Any assumptions about correlation between variables.	<ul> <li>No assumptions were made about correlation between variables.</li> </ul>
Description of how the geological interpretation was used to control the resource estimates.	<ul> <li>The geological interpretation was developed using geological, structural and lithogeochemical elements.</li> <li>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.</li> <li>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.</li> </ul>
• Discussion of basis for using or not using grade cutting or capping.	<ul> <li>Geostatistical and visual investigation of the grade distribution negated the need for grade cutting or capping.</li> </ul>



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	• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	<ul> <li>Validation of the block model included comparing the volume of resource wireframes to block model volumes.</li> <li>It also involved comparing block model grades with drill hole grades by means of swathe plots showing easting, northing and elevation comparisons.</li> <li>Visual grade validations were undertaken. Jacknifing was performed.</li> <li>Grade and tonnage reconciliation of the previous model has been closely monitored and found to be within acceptable thresholds.</li> <li>The assumptions and methodologies used during this estimation are very similar to that of the previous model.</li> </ul>
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	<ul> <li>Tonnages were estimated on a dry basis.</li> </ul>
Cut-off parameters Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.      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 accumentance methods and	<ul> <li>The mineral envelope was determined using a nominal 0.4% Ni grade cut-off.</li> <li>The resource is reported at a 0.4% Ni cut-off for Measured and 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 a reserve cut-off.</li> <li>The Spotted Quoll mineralisation tenor is relatively high when compared to other Komatiite hosted deposits, and hence a lower cut-off grade is appropriate.</li> <li>The Spotted Quoll deposit is currently being mined using long hole stoping methods with paste fill.</li> <li>The mining method which is unlikely to change has been taken into account during the estimation process.</li> </ul>
Metallurgical factors or assumptions	<ul> <li>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.</li> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part</li> </ul>	<ul> <li>The Mineral Resource was depleted against mining.</li> <li>Ore from the Spotted Quoll deposit is currently being processed on site, where Nickel</li> </ul>
	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.	<ul> <li>concentrate is produced using a three-stage crushing, ball mill, and flotation and thickener/filtration system.</li> <li>Arsenic rejection in the flotation circuit ranges from 50 – 70 %.</li> </ul>





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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.	<ul> <li>All waste and process residue is disposed of through the Cosmic Boy concentrator plant and its tailings dam.</li> <li>All site activities are undertaken in accordance with WSA's environmental policy.</li> </ul>
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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.	<ul> <li>Bulk Density has been determined using Ni grade regression based formula.</li> </ul>
	• 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.	<ul> <li>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.</li> </ul>
	• Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	<ul> <li>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.</li> </ul>

Classification	• The basis for the classification of the Mineral Resources into varying confidence categories.	<ul> <li>The Spotted Quoll Mineral Resource is classified as Indicated and Inferred on the basis of drillhole spacing and Kriging efficiency.</li> <li>Only blocks that are between existing ore drives and within the crown pillar are classified as Measured.</li> </ul>
	• Whether appropriate account has been taken of all relevant factors (ie 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).	<ul> <li>The definition of mineralised zones is based on a high level of geological understanding.</li> <li>The model has been confirmed by infill drilling, supporting the original interpretation.</li> <li>It is believed that all relevant factors have been considered in this estimate, relevant to all available data.</li> </ul>
	• 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 is a follow up of a previous Mineral Resource Estimate that was completed and

Resource	e estimates.	Resource Estimate that was completed and	
		reported in accordance with the JORC Code	
		(2012) and has not been externally reviewed to	
		date.	



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Discussion of • Where appropriate a statement of the relative The geological and grade continuity of the . relative accuracy and confidence level in the Mineral Resource Spotted Quoll deposit is well understood and the accuracy/confidence estimate using an approach or procedure deemed mineralisation wireframes used to build the appropriate by the Competent Person. For example, the block model have been designed using all application of statistical or geostatistical procedures to available exploration and mining data. quantify the relative accuracy of the resource within Furthermore, previous estimates of grades have stated confidence limits, or, if such an approach is not been tested by routine reconciliation of stockpile deemed appropriate, a qualitative discussion of the and mill grades to the current grade control and factors that could affect the relative accuracy and previous resource models. confidence of the estimate. Post processing block model validation was extensively undertaken using geostatistical methods. • The statement should specify whether it relates to The Mineral Resource statement relates to local • global or local estimates, and, if local, state the relevant estimates of tonnes and grade. tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence The MRE was compared to the production grade ٠ of the estimate should be compared with production control data. The upper section of the deposit data, where available. has been mined by open pit methods and underground mining has been in place for over two years.