

# ACTIVITY REPORT

For the period ending 30 June 2020

WESTERN AREAS LTD



## WESTERN AREAS FINISHES FY20 IN STRONG POSITION – STRATEGICALLY SET FOR LONG TERM NICKEL PRODUCTION

Western Areas (“WSA” or the “Company”) (ASX: WSA) is pleased to provide the June Quarterly Activity report.

### JUNE QUARTER 2020 HIGHLIGHTS

- Odysseus underground mine development preparing for fresh decline take-off toward the Odysseus deposit
- Strategic 19.9% investment in Panoramic Resources Ltd completed for A\$28.6m
- Exploration success at Western Gawler has the potential to unlock a new base metal province
- Forrestania and Cosmos operations continue materially unaffected by Covid-19
- Nickel production contained in ore mined of 5,841 tonnes. FY20 total of 23,391 tonnes
- Mill production of 5,114 nickel tonnes in concentrate. FY20 total of 20,926 tonnes (99.7% of guidance)
- Unit cash cost of nickel in concentrate of A\$3.23/lb. FY20 total A\$3.13/lb, reporting at the mid-point of guidance
- Operating cashflow of A\$22.9m with cash at bank of A\$144.8m and no debt
- Cash plus receivables and liquid assets of \$190.6m (Mar Q A\$193.3m)

***Western Areas Managing Director, Mr Dan Lougher, said it has been a busy quarter at Western Areas across many fronts, including exploration, project development and operations, while also advancing and building long term strategic optionality into the Company via an investment in Panoramic Resources. Pleasingly our assets continued to operate reliably and consistently, enabling the Company to materially deliver into all FY20 guidance metrics, acknowledging a slight shortfall in nickel concentrate production, achieving 99.7% of guided production range.***

***Most encouragingly during the quarter, our systematic and sustained exploration effort at the West Gawler Project in South Australia has started to show its potential as a new base metal region, with the first diamond drill hole at the Sahara target area intersecting a significant interval of mineralisation,” Mr Lougher said.***

Consistent with the Company’s strategy of investing in base metal projects at attractive entry points in the cycle, the Company acquired 19.9% of Panoramic Resources Limited (Panoramic) via a A\$28.6m investment into Panoramic’s recent capital raising. The investment enhances Western Areas’ portfolio of quality nickel projects via exposure to the Savannah North Mine in the east Kimberley region of Western Australia, which has a significant nickel sulphide resource that includes valuable copper and cobalt by-products.

The Company is encouraged by the first diamond drilling program at the West Gawler Project successfully intersecting significant widths of nickel and copper bearing sulphide mineralisation at the Sahara prospect. Observations from logging and assays have identified thick intervals of nickel and copper-bearing sulphide mineralisation extending over a 250m zone. This encouraging zone will be the focus of follow up work over the coming quarter.

The Forrestania mine site had a safe and productive quarter, producing 5,114 tonnes of nickel in concentrate and shipping 4,777 tonnes of nickel to offtake customers. During the quarter the operations continued to operate in line with Covid-19 social distancing protocols and modified fly in fly out (FIFO) rosters. Following the easing of restrictions in Western Australia, the operations returned to normal FIFO roster patterns as of 1 July 2020. The Company continues to employ very few interstate employees.

At Cosmos the Odysseus mine development rehabilitation activity has now entered the lower Alec Mairs’ (AM) decline adjacent to the AM5 ore body, this is the final stage of the underground rehabilitation phase for the project, prior to the commencement of the new decline development across to the Odysseus orebody. Surface infrastructure activities included completion of the shaft collar pre-cementation works, which is now ready for the concrete foundation to be installed for the raisebore machine. Following a Covid-19 enforced shut down in South Africa, refurbishment and modification of the shaft headgear and winder have recommenced. Pending no further lock downs, the equipment will be shipped to Australia during the second half of the calendar year.

Base metal markets have somewhat stabilised and appear to be consolidating a partial recovery following the Covid-19 pandemic-induced volatility and price falls during the March Quarter. Despite the volatility, the Company’s realised nickel price was slightly higher quarter on quarter at A\$8.50/lb. The long-term view remains positive for class one nickel sulphide products that will be increasingly required to feed the global demand forecasted for plug in electric vehicle (EV) batteries in the future.



## PRODUCTION OVERVIEW

Item	Unit	2019/2020				YTD Total
		Sep Qtr	Dec Qtr	Mar Qtr	Jun Qtr	
Total Ore Mined	tonnes	147,356	144,932	142,056	160,858	595,202
Mined Grade	Ni %	3.9%	4.0%	4.2%	3.6%	3.9%
<b>Total Nickel Mined</b>	tonnes	<b>5,805</b>	<b>5,849</b>	<b>5,896</b>	<b>5,841</b>	<b>23,391</b>
Ore Processed (Milling/Concentrator)	tonnes	<b>149,729</b>	<b>143,409</b>	<b>142,200</b>	<b>151,302</b>	<b>586,640</b>
Processed Grade	Ni %	3.9%	4.2%	4.1%	3.8%	4.0%
Average Processing Recovery	%	89%	89%	89%	89%	89%
<b>Total Nickel in Concentrate</b>	tonnes	<b>5,259</b>	<b>5,399</b>	<b>5,154</b>	<b>5,114</b>	<b>20,926</b>
<b>Total Nickel Sold</b>	tonnes	<b>5,051</b>	<b>3,991</b>	<b>6,038</b>	<b>4,777</b>	<b>19,857</b>
Contained Nickel in Stockpiles	tonnes	3,315	4,389	3,456	3,738	
<b>Cash Cost Ni in Concentrate (ex MREP)</b>	A\$/lb	<b>3.06</b>	<b>3.06</b>	<b>3.07</b>	<b>3.17</b>	<b>3.09</b>
Total Cash Cost Ni Conc (inc. MREP)	A\$/lb	<b>3.06</b>	<b>3.10</b>	<b>3.14</b>	<b>3.23</b>	<b>3.13</b>
Total Cash Cost Ni Conc (inc. MREP)	US\$/lb	2.09	2.12	2.07	2.12	2.10
Exchange Rate	US\$/A\$	0.69	0.68	0.66	0.66	0.68
<b>Net Nickel Price (before payability applied)</b>	A\$/lb	<b>11.50</b>	<b>9.39</b>	<b>8.40</b>	<b>8.50</b>	<b>9.38</b>

Western Areas has Australia's highest grade nickel mines and is a low unit cash cost producer. Its main asset, the 100% owned Forrestania Nickel Project, is located 400km east of Perth in Western Australia. Western Areas is also Australia's second largest independent sulphide nickel miner, producing approximately 21,000 to 22,000 nickel tonnes in concentrate per annum from its Flying Fox and Spotted Quoll mines - two of the lowest cost and highest grade nickel operations in the world.

The key growth project is the Odysseus mine located at the Cosmos Nickel Operation. With a long, ten year mine life and low operating cost, the Odysseus mine will underpin the Company's nickel production well into the future.

The Company is an active explorer across its significant tenement holding at Forrestania, Cosmos and Western Gawler in Australia. The Company also holds a 19.9% intertest in Panoramic Resources Ltd, the owner of the Savanah Nickel mine in Western Australia, and exploration interests in Canada via a 10.6% holding in Grid Metals Corp (TSXV:GRDM). Additionally, the Company has exposure to the emerging lithium market via an exploration joint venture with Wesfarmers Chemicals Energy and Fertilizers (WES CEF) across Forrestania's northern tenements.

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

**The announcement was authorised for release by the officers below. For further details, please contact:**

**Dan Lougher**  
Managing Director & CEO  
Western Areas Ltd  
Telephone +61 8 9334 7777  
Email: [dlougher@westernareas.com.au](mailto:dlougher@westernareas.com.au)

**Joseph Belladonna**  
Chief Financial Officer  
Western Areas Ltd  
Telephone +61 8 9334 7777  
Email: [jbellaonna@westernareas.com.au](mailto:jbellaonna@westernareas.com.au)

**Shane Murphy**  
FTI Consulting  
Telephone +61 8 9321 8533  
0420 945 291  
Email: [shane.murphy@fticonsulting.com](mailto:shane.murphy@fticonsulting.com)



## CORPORATE AND FINANCING

### STRATEGIC INVESTMENT IN PANORAMIC RESOURCES

During the June quarter the Company announced it entered into a subscription agreement with Panoramic Resources Limited ("Panoramic") to acquire 19.9% of Panoramic as a cornerstone investor of a larger capital raising. Western Areas acquired its 19.9% holding at an issue price of A\$0.07 per share paying a total cash consideration of A\$28.6 million.

Western Areas has shown a willingness to hold strategic investments in the past, which have delivered significant value to shareholders. As at 30 June 2020, the investment was valued at A\$32.7m.

This investment provides Western Areas with exposure to any future restart of the long-life Savannah North Project, which has a significant nickel sulphide resource and reserve that includes valuable copper and cobalt by-products. Furthermore, the investment is strategically aligned with Western Areas' existing nickel portfolio with production from Flying Fox and Spotted Quoll, and future growth from the Odysseus mine development project. Western Areas is providing technical input and assistance to Panoramic. This investment is consistent with the Company's strategy of investing in promising base metal opportunities at attractive entry points in the cycle.

### CASHFLOW

The Company finished the financial year with A\$144.8m cash at bank and no debt. As outlined above, the significant cashflow item for the period was the A\$28.6m investment in Panoramic Resources Ltd, while operating cashflow remained relatively consistent quarter on quarter reporting at A\$22.9m (Mar Q – A\$22.4m). The average nickel price (pre-payable deduction) was A\$8.50/lb (Mar quarter A\$8.40/lb).

As planned, growth expenditure at the Odysseus mine development accelerated over the quarter reporting at A\$16.9m (Mar Q - A\$12.0m). Expenditure primarily related to underground rehabilitation and surface civil earthworks for the raisebore and shaft haulage infrastructure. Sustaining mine development and capital expenditure at Forrestania was consistent with the prior quarter at A\$9.0m (Mar Q - A\$11.3m). Exploration expenditure was A\$2.4m for the quarter.

Western Areas balance sheet remains robust; cash at bank, plus nickel sales receivables, totalled A\$158.0m (Mar Q - A\$193.3m). Late in June some nickel deliveries were again impacted by weather-related road closures, delaying several deliveries to Kambalda. Cash at bank, plus nickel sales receivables and liquid investments, total \$190.6m (Mar Q – 193.3m).

### HEDGING

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

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

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

Hedging Details – FY21			
US\$ Hedging – Collar Options		US\$ Hedging – Forward Sales	
US\$ Hedged	\$7,500,000	US\$ Hedged	\$15,000,000
Average Call	US\$0.680	Average Forward	0.658
Average Put	US\$0.641	-	-



## FY20 GUIDANCE OUTCOMES

The company has a long history of meeting its guidance promises, materially delivering its guidance metrics for FY20. The Company acknowledges that nickel in concentrate produced was very slightly below the guidance range (74tn or <0.5% below). While the Company expected to report inside the guidance range, unplanned down time throughout June, relating to unplanned grid power supply interruptions, caused the minor variance. As previously guided, the Cosmos development expenditure was below forecast due to the timing of the commencement of some capital items, flowing from Covid-19 impacts in South Africa, once these impacts are fully assessed a revised development schedule and preproduction capital cost expenditure profile will be prepared. Following normal process, FY21 guidance will be released in conjunction with the FY20 financial results.

Category	FY20 Guidance	FY20 Actuals
Nickel tonnes in Concentrate Production	21,000 to 22,000	20,926
Unit Cash Cost of Production (Nickel in Concentrate)	A\$2.90/lb to \$3.20/lb	A\$3.13/lb
Mine Development	A\$33m to A\$38m	A\$33.2m
Property, Plant & Equipment	A\$7m to A\$10m	A\$8.4m
Cosmos Development & Feasibilities	A\$75m to A\$85m	A\$58.2m
Exploration	A\$14m to A\$17m	A\$15.6m

## MINE SAFETY AND ENVIRONMENT

### SAFETY

No Lost Time Injuries (LTI) were recorded and the Total Recordable Incident Frequency Rate (TRIFR) is currently 8.38.

Key safety management initiatives focussed on COVID-19 infection control, including extended rosters, adjustments to village life to minimise personnel interaction and associated fatigue management. To mitigate the temporary closure of the gym, the site expanded its network of solar lit walk trails that have proved popular with personnel.

Reduction burns were undertaken to minimise bush fire loading for the forthcoming bushfire season.



ERT Reduction burn

### ENVIRONMENT

#### Forrestania (FNO)

No reportable environmental incidents were recorded, and several key approvals were obtained during the quarter from Department of Mines and Industry Regulation (DMIRS) and Department of Water and Environmental Regulation (DWER), including approvals for the Bioleach and Bioheap projects, TSF Southern Expansion and the Forrestania Mine Closure Plan.

The annual rehabilitation program commenced in June, focussing on rehabilitation of the Lounge Lizard Sand Pit. Landform preparation works were completed to establish a suitable landform over approximately 10ha and 4.5ha before the area was direct-seeded by a specialist contractor using suitable native species. In addition, infill planting of 1.5ha of the Spotted Quoll and Flying Fox waste dumps was completed with 12,000 local native seedlings and 15kg of local provenance seed collected at FNO.

A joint effort by the FNO environmental department and WSA exploration department also saw a total of 17ha of former exploration disturbance verified as rehabilitated by the end of the 2019/20 reporting year, exceeding new disturbance by a ratio of two for one.



Planting of the Lounge Lizard sand pit





## Cosmos (CNO)

No reportable environmental incidents were recorded and the environmental team completed all required compliance monitoring and reporting during the period.

Dewatering of the underground development continued with all water management ponds in operation and the seepage recovery network functioning well.

Engagement with the Tjiwarl Aboriginal Corporation continued and Aboriginal heritage monitors were engaged to oversee the ground preparation for the exploration drilling programme at Kathleen Valley.

## MINE AND MILL PRODUCTION STATISTICS AND CASH COSTS

Tonnes mined	Unit	2019/2020				YTD Total
		Sep Qtr	Dec Qtr	Mar Qtr	Jun Qtr	
<b>Flying Fox</b>						
Ore Mined	tonnes	61,414	60,081	63,501	69,398	254,394
Grade	Ni%	3.7%	4.5%	4.3%	3.4%	4.0%
<b>Flying Fox Nickel Mined</b>	tonnes	<b>2,280</b>	<b>2,712</b>	<b>2,754</b>	<b>2,343</b>	<b>10,089</b>
<b>Spotted Quoll</b>						
Ore Mined	Tonnes	85,942	84,851	78,555	91,460	340,808
Grade	Ni%	4.1%	3.7%	4.0%	3.8%	3.9%
<b>Spotted Quoll Nickel Mined</b>	Tonnes	<b>3,525</b>	<b>3,137</b>	<b>3,142</b>	<b>3,498</b>	<b>13,302</b>
<b>Total Ore Mined</b>	Tonnes	147,356	144,932	142,056	160,858	595,202
<b>Grade</b>	Ni%	3.9%	4.0%	4.2%	3.6%	3.9%
<b>Total Nickel Mined</b>	Tonnes	<b>5,805</b>	<b>5,849</b>	<b>5,896</b>	<b>5,841</b>	<b>23,391</b>

## FLYING FOX

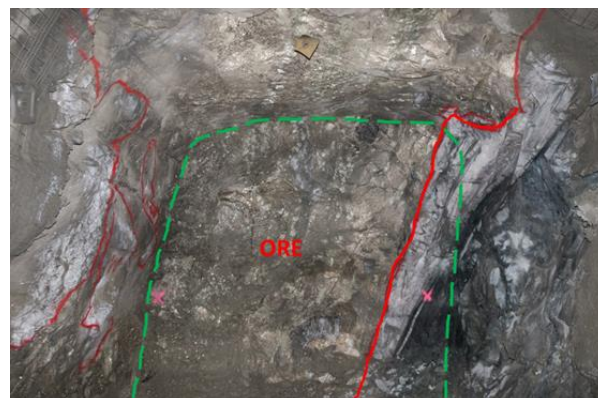
### Mine Production

Production was **69,398 tonnes of ore at an average grade of 3.4% nickel for 2,343 nickel tonnes**. Ore production was predominately (73%) derived from long-hole stoping (LHS) and the remainder (27%) from ore drive development.

LHS production was sourced from the T5, LL, OLD FF namely from the 1220, 1205, 1195, 370, 345, 200 and 180 stopes. Associated paste-filling of stope voids resulted in 12,314m<sup>3</sup> of paste poured.

### Mine Development

There was 561m of total jumbo development from the T5, T6, and 'old Flying Fox' areas. The Streeter Decline re-commenced in April and advanced 82m to a depth of 1,270m below surface. The remaining development included 179m of capital (195 and 160 levels), 40m of operating waste development (370 to 160 levels), 18m of paste fill (370 to 180 levels) and 242m of ore drive development (370 and 160).



180 East ore drive (4.7m W x 4.5m H) with a face grade of 6.6% Ni



## SPOTTED QUOLL

### Mine Production

Spotted Quoll production comprised **91,460 tonnes of ore at an average grade of 3.8% nickel for 3,498 nickel tonnes**. Ore production was sourced predominately from LHS (60%) with the remainder (40%) from ore drive development.

The 'twin-boom area' (TBA) saw completion of the 610 level and ongoing production from the 595, 580, 565 and 550 levels. The 'single-boom area' (SBA) saw completion of the 920, 825, 819 and 818 levels, with continued production from between the 852 to 770 levels (nine ore drives) and commencement of the 836 level, mid quarter.

### Mine Development

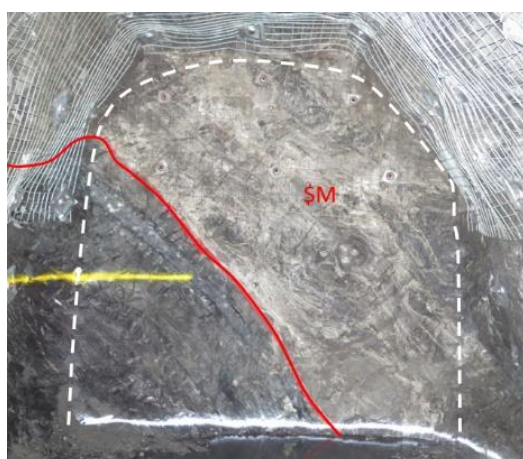
Total jumbo development for was 1,006m, which included 105m of capital decline development. Also, during the quarter, 244m of lateral capital development and 190m of operating waste development was completed, which included 117m of paste-fill development to facilitate slot drilling.

The 'Stage 2' levels saw 410m of ore drive development completed between the 490 and 445 levels. The SBA had 57m of ore drive development completed in the 727 and 717 levels.

### Infrastructure

At the Spotted Quoll 'Stage 2' zone, the capital primary ventilation system was advanced to the 450 Level with the successful opening of the 480 to 450 return airway (RAW) long-hole rise.

The capital secondary egress was extended to the 480-450 level, which included 35m of escapeway ladder-tube installation.



SBA 77 ore drive (3.5m W x 3.5m H) with a face grade of 5.2% Ni



TBA 445 ore drive (4.5m W x 4.5m H) with a face grade of 8.8% Ni

## COSMIC BOY NICKEL CONCENTRATOR

Tonnes milled	Unit	2019/2020				YTD Total
		Sep Qtr	Dec Qtr	Mar Qtr	Jun Qtr	
Total Milled Ore	tonnes	149,729	143,409	142,200	151,302	586,640
Grade	%	3.9%	4.2%	4.1%	3.8%	4.0%
Ave. Recovery	%	89%	89%	89%	89%	89%
Nickel in Concentrate Produced (i)	tonnes	5,259	5,399	5,154	5,114	20,926
Nickel in Concentrate Sold	tonnes	5,051	3,991	6,038	4,777	19,857

(i) Includes MREP Nickel tonnes produced.



The Cosmic Boy Concentrator processed **151,302 tonnes of ore at an average grade of 3.8% nickel** for a total of **35,232 tonnes of concentrate grading 14.5% nickel**, resulting in 5,114 nickel tonnes produced at a recovery of 89% and an average concentrator availability of 98.8%.

Maintenance work included a planned 19-hour shutdown to inspect the mill drivetrain, change out of the mill trommel, pulp lifter re-lining, pump maintenance and upgrade to reagent systems.

A total of **33,131 tonnes of concentrate was delivered for sale during the quarter, containing 4,777 nickel tonnes**, including the Mill Recovery Enhancement Project (MREP) product. Deliveries to customers were impacted by weather-related road closures late in June.

The Concentrator processed 586,641 tonnes of ore at an average grade of 4.0% nickel for the financial year. A total of 141,821 tonnes of concentrate grading 14.8% nickel, resulting in 20,926 nickel tonnes was produced at a recovery of 89%. This included product from MREP.

Other unit sales costs for the quarter were royalties at A\$0.23/lb and concentrate transport of A\$0.53/lb of nickel in concentrate delivered to customers.



Mill operator, Bruce Chrystall (aka Billy Bob)



Plant metallurgist Adam Knedler checking the cyanide strength.

## Stockpiles

Ore stockpiles at the end of the quarter totalled 90,136 tonnes of ore at 3.3% nickel for 2,979 nickel tonnes, representing one and half months of concentrator feed, and the concentrate stockpile was 4,987 tonnes at an average grade of 15.2% nickel, containing 759 nickel tonnes.

Stockpiles	Unit	2019/2020			
		Sep Qtr	Dec Qtr	Mar Qtr	Jun Qtr
Ore	tonnes	75,638	77,426	80,581	90,136
Grade	%	3.8%	3.5%	3.6%	3.3%
Concentrate	tonnes	2,875	11,146	3,668	4,987
Grade	%	15.8%	14.8%	15.4%	15.2%
<b>Contained Nickel in Stockpiles</b>	tonnes	<b>3,315</b>	<b>4,389</b>	<b>3,456</b>	<b>3,738</b>



## Cash Costs

Financial Statistics	Unit	2019/2020				YTD
		Sep Qtr	Dec Qtr	Mar Qtr	Jun Qtr	
<b>Group Production Cost/lb</b>						
Mining Cost (*)	A\$/lb	2.26	2.28	2.25	2.34	2.28
Haulage	A\$/lb	0.06	0.06	0.06	0.07	0.06
Milling	A\$/lb	0.55	0.53	0.55	0.53	0.54
Admin	A\$/lb	0.22	0.21	0.22	0.23	0.22
By Product Credits	A\$/lb	(0.03)	(0.02)	(0.01)	-	(0.01)
<b>Flotation Cash Cost Ni in Con (**)</b>	A\$/lb	<b>3.06</b>	<b>3.06</b>	<b>3.07</b>	<b>3.17</b>	<b>3.09</b>
<b>Total Cash Cost Ni in Con (***) incl MREP</b>	A\$/lb	<b>3.06</b>	<b>3.10</b>	<b>3.14</b>	<b>3.23</b>	<b>3.13</b>
<b>Cash Cost Ni in Con/lb (***)</b>	US\$/lb(**)	<b>2.09</b>	<b>2.12</b>	<b>2.07</b>	<b>2.12</b>	<b>2.10</b>
<b>Exchange Rate US\$ / A\$</b>		<b>0.69</b>	<b>0.68</b>	<b>0.66</b>	<b>0.66</b>	<b>0.68</b>

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

(\*\*) US\$ FX for Relevant Quarter is RBA average daily rate (Jun Qtr = A\$1:US\$0.66)

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

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

The full year total cash cost, including MREP, is A\$3.13/lb (US\$2.10/lb), which is in line with the mid-point of full year guidance.

The June quarter flotation cash cost of nickel per pound was A\$3.17/lb, year to date A\$3.09/lb. The total cash cost of production for nickel in concentrate including MREP (excluding smelting/refining charges, concentrate logistics and royalties) was A\$3.23/lb (US\$2.17/lb) for the quarter. The quarter on quarter change in unit cost of production was mainly due to lower grade ore mined and milled from Flying Fox, as some of the newly added lower grade areas of the mine plan are being blended into the schedule.

## FORRESTANIA MINERAL RESOURCES AND ORE RESERVES

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

### FLYING FOX

No additional resource extension drilling was completed during the quarter.

The Flying Fox **Massive Sulphide Ni Mineral Resource** was updated during the quarter and now stands at **1.18Mt of ore at a grade of 3.8% Ni for 45,307 nickel tonnes**.

The Flying Fox **Massive Sulphide Ore Reserve** was updated during the quarter and now stands at **0.40Mt of ore at a grade of 3.0% Ni for 12,020 nickel tonnes**.

A comparison of the Resource between the old and the updated model is shown below.

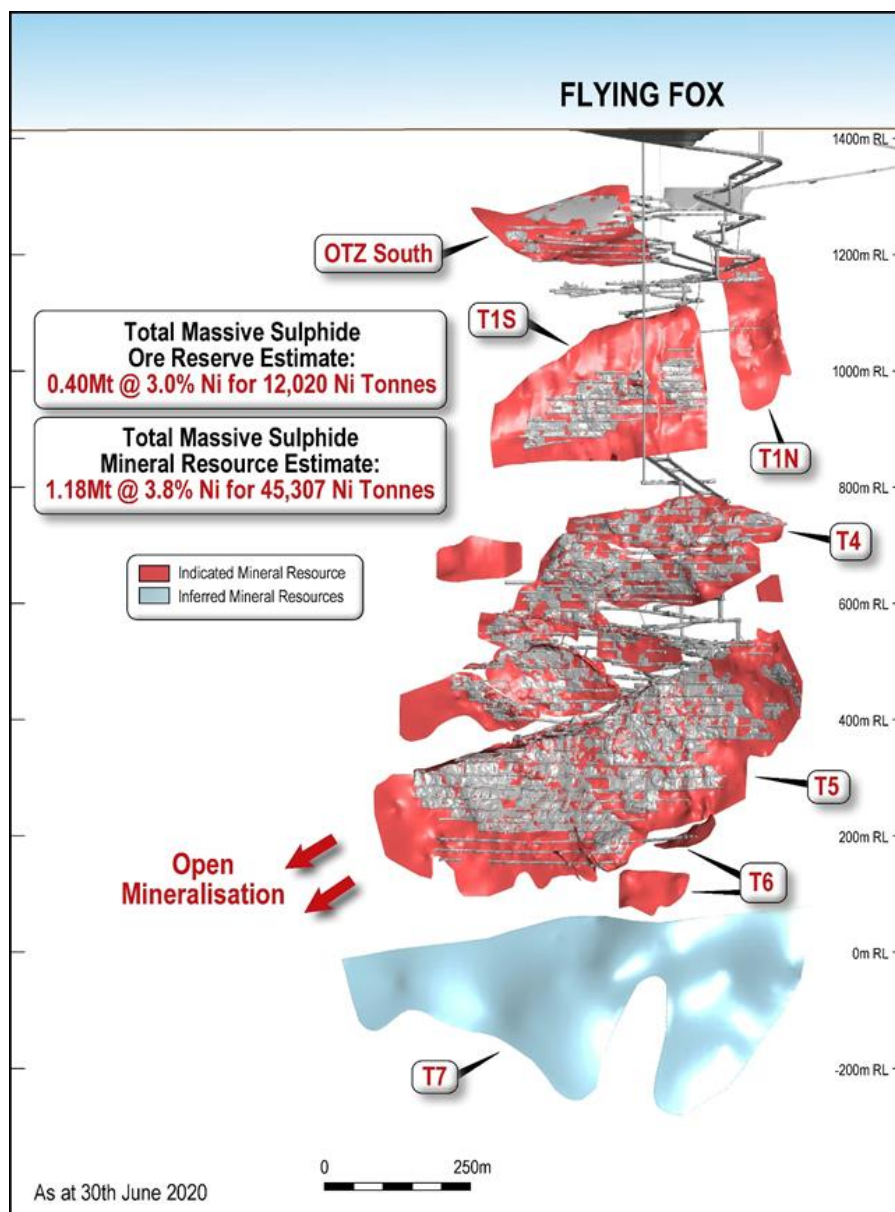
MODEL	Mt	Ni%	Nit
Old	1.54	4.5	69,805
New	1.18	3.8	45,307
Difference	-0.36	-0.7	-24,498

Note: Both models depleted to 30 June 2020 (for comparative purposes)





The year on year differences are due to a drop in grade at the base of T5 and the T6 orebodies, and approximately 16,000 Ni tonnes removed from the resource, following the latest Ore Reserve Estimate and low-grade mining study. Material that was previously classified as pillars, including hanging wall lodes, have been excluded from the Mineral Resource Statement.



## SPOTTED QUOLL

No underground resource extension drilling took place during the quarter.

The Spotted Quoll **Mineral Resource**, was updated during the quarter and stands at **1.09Mt of ore at a grade of 6.0% Ni for 65,231 nickel tonnes**.

The Spotted Quoll **Ore Reserve** was updated during the quarter and stands at **1.20Mt of ore at a grade of 4.0% Ni for 49,600 nickel tonnes**.



A comparison of the Resource between the old and the updated model is shown below:

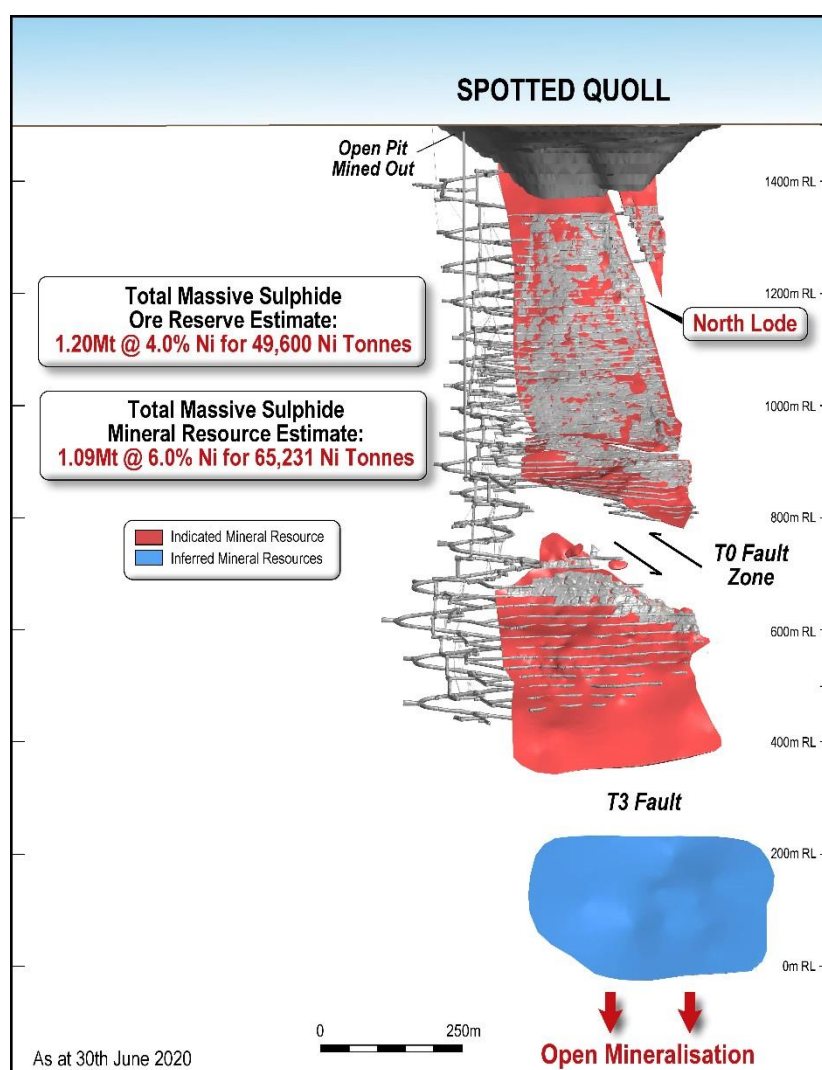
MODEL	Mt	Ni%	Nit
Old	1.27	5.2	65,818
New	1.09	6.0	65,231
Difference	-0.18	0.8	-587

**Note: Both models depleted to 30 June 2020 (for comparative purposes)**

The differences between the two estimates are mainly due to the modelling changes made to Stage 2 over the past 12 months, as a result of additional data from an aggressive grade control drilling and ore development schedule.

Phase 2 of the Stage 3 surface drilling program (consisting of a parent hole and two wedges), was completed during the quarter and an updated Inferred resource estimate was completed. The drilling program resulted in a decrease in grade as shown below.

MODEL	CAT	Mt	Ni%	Nit
Old	Inferred	0.15	5.0	7,228
New	Inferred	0.15	4.1	6,041
Difference		0	-0.9	-1,187





## GROWTH PROJECTS

### COSMOS OPERATIONS

#### Odysseus Mine Development

##### Surface

The final section of the permanent rising main system was connected and fully commissioned during the quarter. This now allows for efficient de-watering of the underground development via pump stations 1 and 2. All water pumped out of the mine now reports to the surface water management ponds.

In addition, the concrete batch plant facility was completed and commissioned. This will provide all concrete for the upcoming civil works for the construction programme and life of mine underground shotcrete requirements.

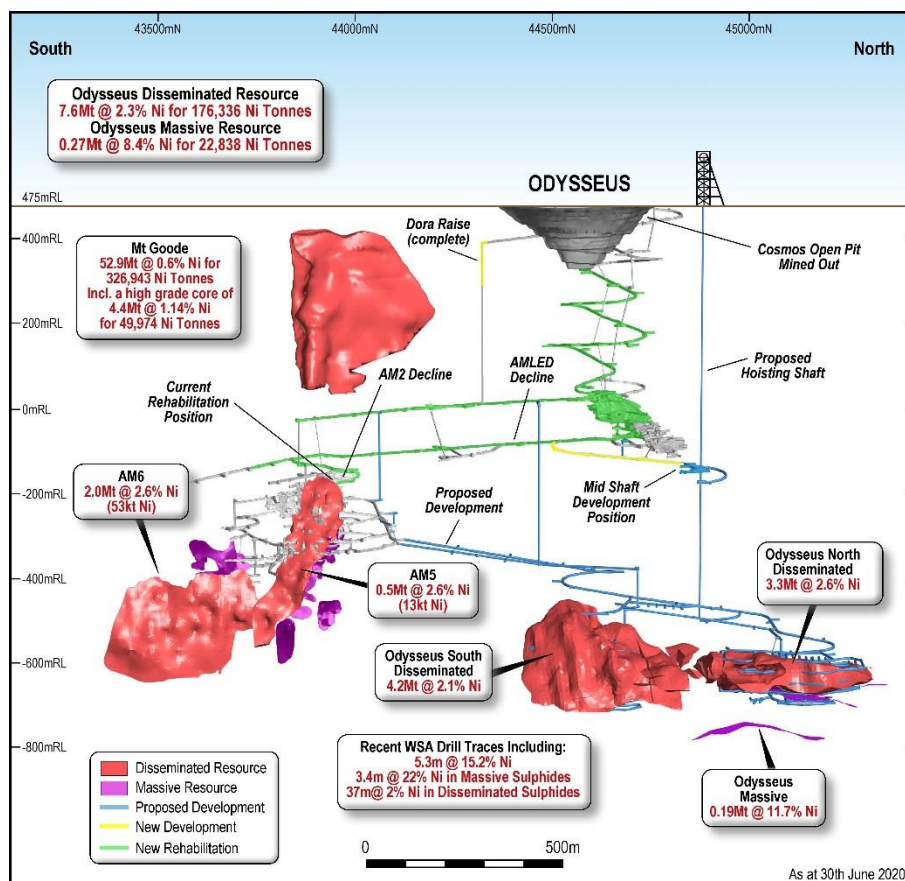
Following completion of the shaft box-cut excavation, a specialist contractor completed nine bore-holes to facilitate the pre-cementation ground consolidation program for the top 60m of the proposed shaft barrel. This will provide stable ground conditions for the future shaft barrel reaming. The box cut is now available for the construction of the shaft sub-brace civil works.

##### Underground

Ground-support rehabilitation totalled 1,298m for the quarter, including 540m in the AMLED decline, 370m in the AM2 decline and 388m of associated lateral capital development. Development continued in the mid-shaft access decline (319m), which will provide bottom access to the fresh air intake raise bore pilot hole. An additional 78m of associated development e.g. stockpiles were also completed.

The main fresh-air ventilation circuit was extended to the top of the AM2 decline, facilitated by the installation of a set of double ventilation access doors at the top of the AMD decline. The raise-bore contractor completed two pilot drill-holes (total 630m) for the upcoming central and southern return ventilation raise-bore shafts which form part of the Odysseus life of mine ventilation circuit.

Electrical high voltage (HV) reticulation was extended to the top of the AM2 with the addition of a 2MVA sub-station.





## Hoisting Shaft Project

The project team commenced final 'Issue for Construction' (IFC) drawings to support the major contracts tender and award process. The civil work package will be ready for award early in the September quarter to facilitate the construction of the shaft sub-brace concrete works. Once completed, RUC will be mobilised to commence the pilot hole of the main fresh air intake/haulage shaft.

### South Africa Based Engineering Works

The headframe and associated infrastructure components were transported to various Johannesburg and Rustenburg workshops for inspection and refurbishment. In country works (RSA) were reduced during the quarter as a result of Covid-19 industry shutdowns. This has resulted in a delay in the planned delivery of the headframe and winder to Perth with the anticipated delivery now in late October.

- **Electrical control systems:** All the new components for this work were ordered and delivered during the quarter. The build and fit out of the two electrical houses were commenced, with progress tracking to schedule until the national lock down in late March. The winder house crane was fully refurbished during the quarter by the OEM and tested for compliance with relevant Australian Standards.
- **Structural:** The headframe refurbishment progressed well, with final painting and modifications to the sheave wheels commencing early in the quarter.
- The planned completion of this work is now September 2020, after which the assets will be packed and handed over to the Company's designated freight forwarder for shipment to Australia by the end of the year.

## AM6 ORE RESERVE ESTIMATION

Mine planning and scheduling work for the AM6 Reserve estimation is ongoing with expected completion early in the September quarter. The AM6 deposit contains an Indicated and Inferred Resource of 2.0Mt at 2.6% Ni for 53k nickel tonnes.

## MILL RECOVERY ENHANCEMENT PROJECT (MREP)

MREP optimisation work continued during the quarter as summarised below:

- High pressure compressors were introduced to mitigate blockages of leach tank aeration spargers.
- The oxidation enhancement project commenced during the quarter, with final engineering drawings completed, equipment ordered. Commissioning is expected in the September quarter. This project is designed to enhance the dissolved oxygen in the first part of the leach circuit to improve leaching rates.
- Further modifications in the leach circuit have been undertaken to enable small recycle streams of slurry to be used in a spray circuit to help reduce froth build up in the primary leach tanks.

## MILL SCATS PROJECT

The demonstration scats, heap leach (20,000t) project received the works approval from DWER. Minor changes have been made to the work packages to capture the requirements of the work approval.

The detailed design, engineering and construction is planned in the next quarter with first material, pregnant leach solution (PLS), expected from the heap in the December quarter. The PLS recovered from the heap leach will be fed to the metal recovery circuit located at MREP to produce high grade nickel sulphide precipitate.

## NEW MORNING/DAYBREAK PROJECT (NMDB)

The NMDB oxide ore is amenable to high intensity leaching. Alternate processing options are being investigated for the upper pit layers, including nearby toll treatment.

The BioHeap™ process will be tested as part of the next stage of evaluation on the deeper transition and primary ores from the NMDB deposits, however the primary ores are amenable to flotation, which is likely to be a preferred process option, as it does not involve additional capital expenditure for processing.





## FLYING FOX LOW GRADE (FFLG)

Large scale column test-work for potential heap leaching of FFLG ore commenced and is continuing to evaluate process parameters around the leaching of the FFLG ore. Parallel flotation test-work is also continuing in order to select the most appropriate processing route with expected completion in the September quarter.

## EXPLORATION

### OVERVIEW

The Company was pleased to announce in June, highly encouraging results from its maiden diamond drill hole at the Sahara prospect within the Western Gawler Project in South Australia. The Sahara prospect, along with several other identified targets within the immediate surrounding area, will establish the foundation for a refocussed drilling program throughout the remainder of 2020.

A hiatus in drilling at Forrestania within the June quarter enabled the brownfields team to refine and consolidate the next programme of exploration work. Additional encouraging results returned from the Seagull prospect warrants additional drill testing. Planning is well advanced to test for potential northern extensions of elevated nickel sulphide intercepts encountered during the quarter, including 3.4m @ 1.52% Ni from SD048.

At Cosmos, site works for both nickel and gold drilling programs were completed towards the end of the June quarter. The Company is set to commence follow-up diamond drill testing of the Penelope prospect (south of Alec Mairs), along with a focused reverse circulation (RC) drilling program targeting several gold prospective targets within the recently acquired Kathleen Valley Group of tenements (now transferred from Ramelius Resources).

Drilling recommenced for St George Mining at Mt Alexander in the June quarter, with a reverse circulation (RC) resource drill-out completed at the Stricklands Prospect and deep drilling at the Investigators Prospect also underway, testing a large conductive target defined from an earlier magnetotelluric (MT) survey. Tenement E29/638, is in joint venture between St George Mining (SQG 75%) and Western Areas (WSA 25% free-carried).

### COSMOS

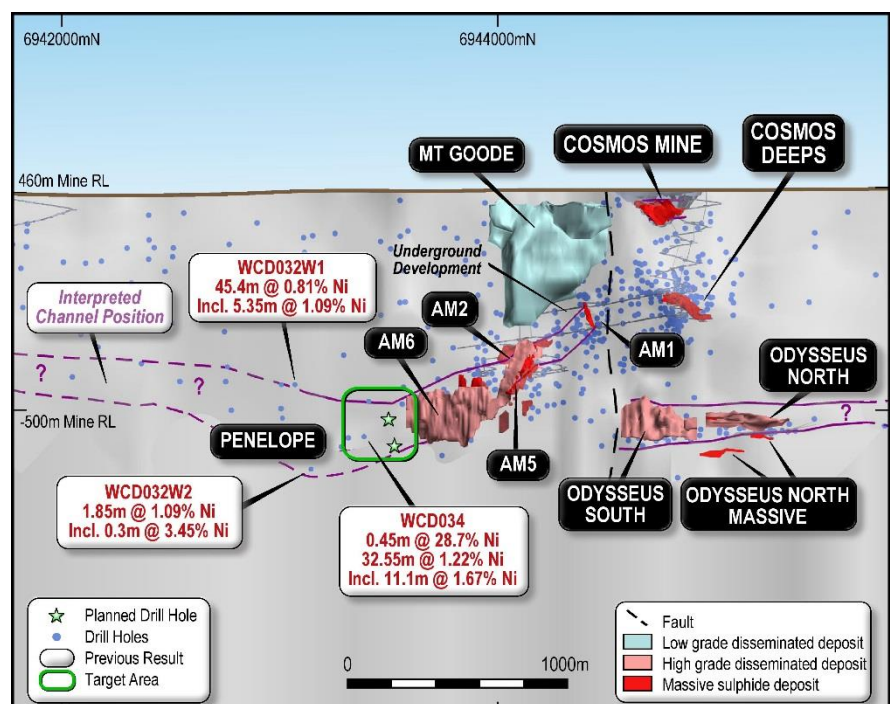
The Company has identified that the 2.5km corridor extending between Prospero-Tapinos and Alec Mairs is of notable exploration significance, with historic drilling intersecting both low-grade disseminated (Mt Goode style) and higher grade, basal-contact-proximal (Alec Mairs style) nickel sulphide mineralisation. With a renewed focus to assess the near-mine exploration opportunities surrounding the future mining centre at Odysseus, the Penelope to Alec Mairs corridor represents an opportunity for the Company to identify and delineate additional nickel sulphide accumulations in what is a relatively under-explored area proximal to planned underground infrastructure.

### Penelope

Planning for the next phase of drill targeting at the Penelope prospect was completed during the June quarter, with a drill rig mobilising to site towards the end of June.

Previous drilling delineated several zones of broad, high-tenor, disseminated sulphide mineralisation, with notable nickel sulphide accumulations within drill hole WCD034 (32.55m @ 1.22% Ni including 11.1m @ 1.67% Ni) on the northern flanks of the Penelope mineral system. Importantly, this interval is located just 300m south of the AM6 resource (2.0Mt @ 2.6% Ni).

Two target positions are proposed to test the currently untested 300m strike-length corridor between Penelope and AM6, with drilling scheduled to commence early in the September





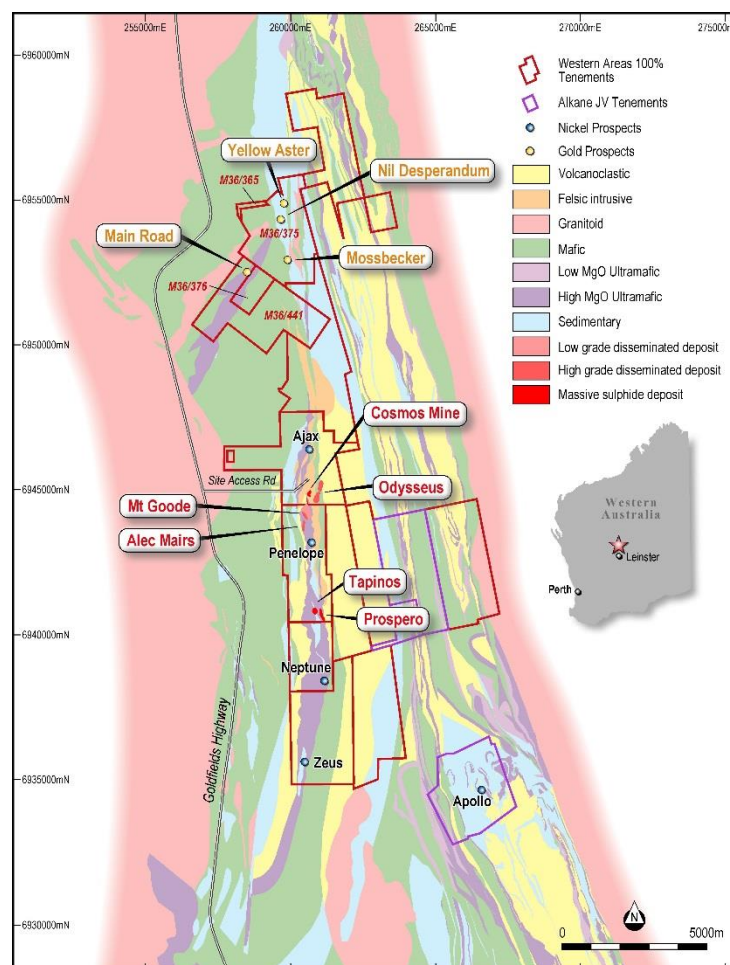
quarter. Both target positions will be assessed as wedges from existing drill hole WCD034. This target corridor represents an exciting opportunity for the Company, as it will aim to establish a link between the broad zones of disseminated nickel sulphide mineralisation at Penelope and the resource envelope at AM6 resource, 300m to the north.

## Kathleen Valley (Au)

The Company recently acquired an additional four mining tenements from Ramelius Resources Limited (M36/365, M36/375, M36/376 and M36/441), with the company now expanding its lease holding at the Cosmos Nickel Operations over a contiguous package of 102km<sup>2</sup>.

The completion of a heritage survey in December 2019, coupled with the notification (in the June quarter) of an approved Section 18 application has paved the way for the commencement of a targeted reverse circulation (RC) drilling program, with drilling commence in July 2020.

Planning work has identified several near-mine structural gold targets, predominantly along strike and beneath existing mining activity. The focus is along the Main Road structural corridor, coupled with additional targets associated with the Jones Creek Conglomerate, centred on prospects at Mossbecker, Nil Desperandum and Yellow Aster.



Location Map: Cosmos Prospects

## FORRESTANIA

On ground exploration activities paused across the June quarter at Forrestania, with attention centred on advanced planning for several drilling and geophysical programs scheduled for the December quarter.

## Seagull

Located within the Eastern Ultramafic Belt, approximately 3km north of the previously mined Cosmic Boy Deposit, the Seagull prospect has been the focus of numerous previous exploration drilling programs, with the most recent of these completed in 2006.



A geological reinterpretation in late 2019 identified the potential for extensions to the mineralised system down-plunge to the north. In support of this work, a total of three diamond holes and one wedge hole (for 1,979.84m) were completed in the March quarter 2020, with assay results for the final hole from this program (SD048) returned in the June quarter.

Significant intersections returned from SD048 include a broad zone of predominantly disseminated mineralisation comprising 54.75m @ 0.65% Ni, including a semi-massive interval of 1.1m @ 1.56% and 3.4m @ 1.52% Ni located on an infolded ultramafic/banded iron formation contact. Structural measurements and geological interpretations indicate this mineralisation plunges moderately to the north-west, with the system interpreted to be open down-plunge. Drill hole planning to test the northern down-plunge potential of the Seagull system is well advanced, with drilling anticipated to recommence in the December quarter.

Exploration Results - Seagull June Quarter 2020											
HOLE ID	Easting	Northing	RL	EOH	Type	Dip	Azimuth	Width (m)	Ni %	From (m)	
SD048	756579.5	6393480	399.8	642.9	DD	-56	18.1	54.75	0.65	545.25	
	including							1.10	1.56	546.05	
	and							3.40	1.52	568.6	

## REGIONAL EXPLORATION (SOUTH AUSTRALIA)

The Company moved to an important phase within the Western Gawler Project through the June quarter, embarking on a diamond drilling program to test several priority targets within both the Iluka Farm-In and Joint Venture Project (WSA earning 75%) and the Western Gawler Project (WSA 100%). These targets were derived from an extensive campaign of target generation and assessment work completed in 2019. This work culminated, in June, with the successful intersection of significant widths of nickel and copper-bearing mineralisation at the Sahara prospect.

Encouraged by the early drill results at Sahara, the Company applied for an additional three exploration licenses, interpreted to cover the northern extremity of the Fowler Domain. Together with the existing WSA 100% held tenure and Iluka Farm-in and Joint Venture ground, this represents a total contiguous area of 11,898km<sup>2</sup>.

A total of four holes were completed over the June quarter (for 1,112m), with the primary focus on the Mystic and Sahara prospects.

### **Iluka Farm-in and Joint Venture (WSA earning up to 75%) EL 5452, EL 5675, EL 5878, EL 5879 and EL 6251.**

The Company embarked on its maiden diamond drilling program within the Iluka Farm-in and Joint Venture ground during the quarter, with the first drill hole targeting a moderate bedrock moving loop electro-magnetic (MLEM) conductor at the Sahara prospect (formerly known as F1-6).

A total of 450.3m from one drill hole (20WGDD0005) was completed within the Joint Venture during the June quarter.

### **Sahara**

The intersection of significant accumulations of nickel and copper-bearing sulphides within drill hole 20WGDD0005 represents a significant achievement for the Western Gawler project, underpinning the Company's exploration strategy to systematically identify, define, prioritise, and test high quality targets.

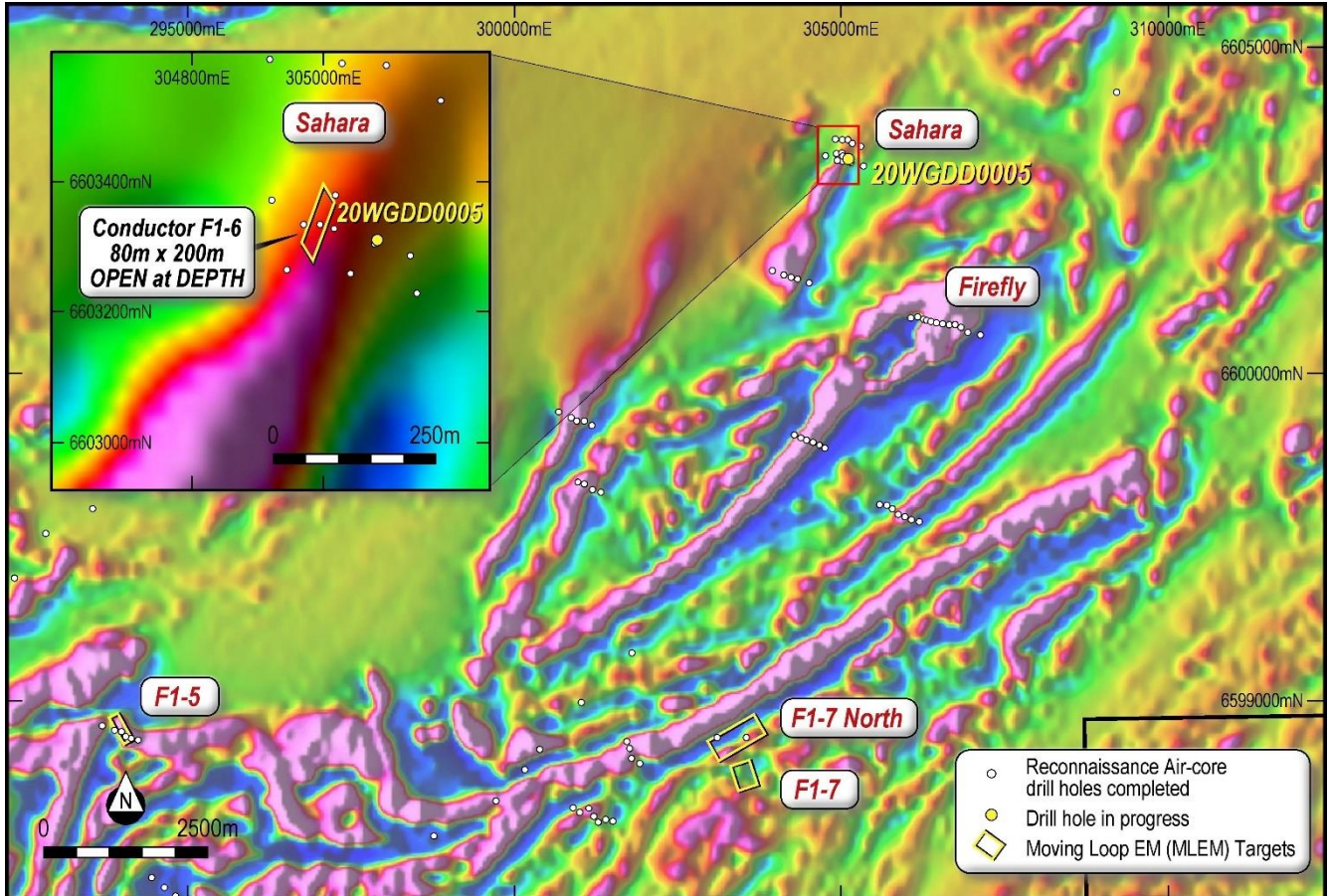
Diamond drilling commenced at Sahara on 10 June, targeting a coincident magnetic high and previously identified bedrock electromagnetic (EM) conductor. An additional moving loop EM (MLEM) survey, completed in July 2019, was designed to follow up, confirm and refine this previously identified conductor. The conductor plate was interpreted as possessing moderate conductance (800–1,100 Siemens) with plate dimensions of 80m (strike length) x >200m down dip extent, unconstrained and open at depth.

Early observations from logging have identified thick sequences of disseminated to blebby nickel and copper-bearing sulphides, (extending over a broad discontinuous zone of 250m), with minor localised concentrations of stringer to breccia and semi-massive sulphides, with sulphides predominantly observed as pyrrhotite, with minor pentlandite and chalcopyrite. Mineralisation is interpreted to be hosted within a metagabbro-pyroxenite (defined over a total downhole width of approximately 330m), with a lower contact against metasedimentary rocks.

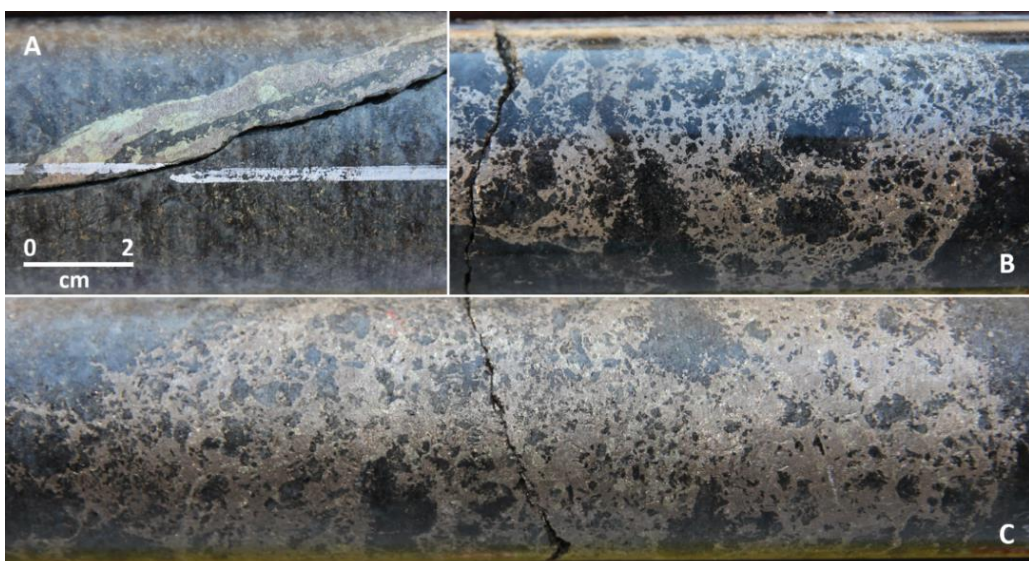




The Company is extremely encouraged by this early success at Sahara, with a key focus now to determine the nature and extent of mineralisation within the immediate vicinity of 20WGDD0005, aided by downhole EM. Furthermore, an additional set of untested EM conductors within the broader Sahara–Firefly district (including at F1-5 and F1-7) are considered high priority targets and will form part of the next phase of drilling, in conjunction with further drilling underway at Sahara.



*Sahara Prospect and additional regional targets*



*Variable sulphide textures within drill hole 20WGDD0005. A) Late stage, pyrrhotite–chalcopyrite vein at 121.6m; B) Pyrrhotite–pentlandite matrix sulphide at 204.3m; C) Pyrrhotite–pyrite–pentlandite breccia to semi-massive sulphides at 197.9m.*





## Western Gawler (WSA 100%) EL 5688, EL 5939, EL 6087, EL 6248, EL 6249

Commencing early April, a total of three diamond drill holes were completed testing both the oxide and bedrock nickel and copper sulphide mineralisation potential across the Mystic prospect.

### Mystic Nickel Zone

The Mystic Nickel Zone represents a significant two-fold exploration opportunity to both delineate and define an emerging near-surface high-grade nickel oxide zone, and secondly, to explore the potential for significant accumulations of primary nickel-sulphide mineralisation at depth.

In an important milestone for the project, assays received from the first two drill holes (20WGDD0001 and 20WGDD0002) have geochemically confirmed the intersection of primary nickel-copper sulphide mineralisation at Mystic, and further underpin the potential to develop intrusive hosted deposits at Mystic and more broadly within the Fowler Domain.

### Mystic Diamond Drilling

During the June quarter, an additional three diamond drill holes were completed at Mystic for a total of 661.7m.

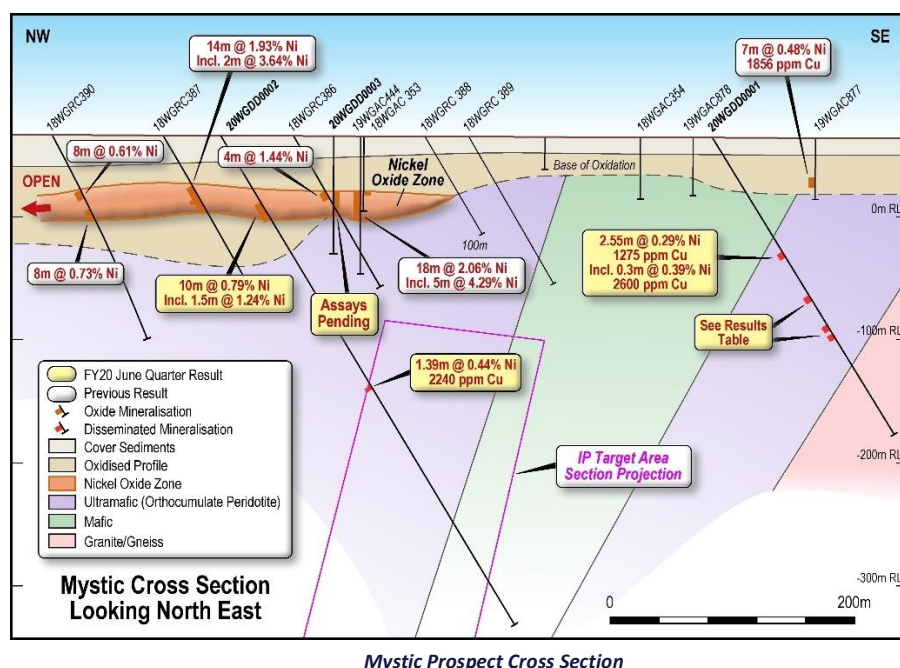
The first hole of the program (20WGDD0001) was designed to test a strong Ni-Cu anomaly identified during 2019 air core drilling within 19WGAC877, including significant downhole oxide zone intervals of 7m @ 0.48% Ni and 1,856ppm Cu, co-incident with a strong, near-surface, magnetic anomaly.

Results from drill hole 20WGDD0001 are particularly encouraging, as they have confirmed the presence of nickel and copper-bearing primary sulphide mineralisation at Mystic, with the most significant zone including 0.3m @ 0.39% Ni, 2600ppm Cu and 424ppb Pt + Pd. This intersection is contained within a broader 12.1m wide interval (from 109m downhole), characterised by disseminated sulphides hosted within an orthocumulate ultramafic intrusive body.

Both oxide and primary sulphide mineralisation was intersected within drill hole 20WGDD0002, with significant oxide values returned including 10m @ 0.79% Ni (from 61m). Importantly, nickel sulphide mineralisation was also encountered from 234m downhole (1.39m @ 0.44% Ni, 2240ppm Cu), which is located on an internal contact within a thick ultramafic sequence and co-incident with the margin of a defined Induced Polarisation (IP) target area.

An additional two holes were drilled within the June quarter, targeting the nickel oxide zone along strike to the north. Assay results for both holes are pending.

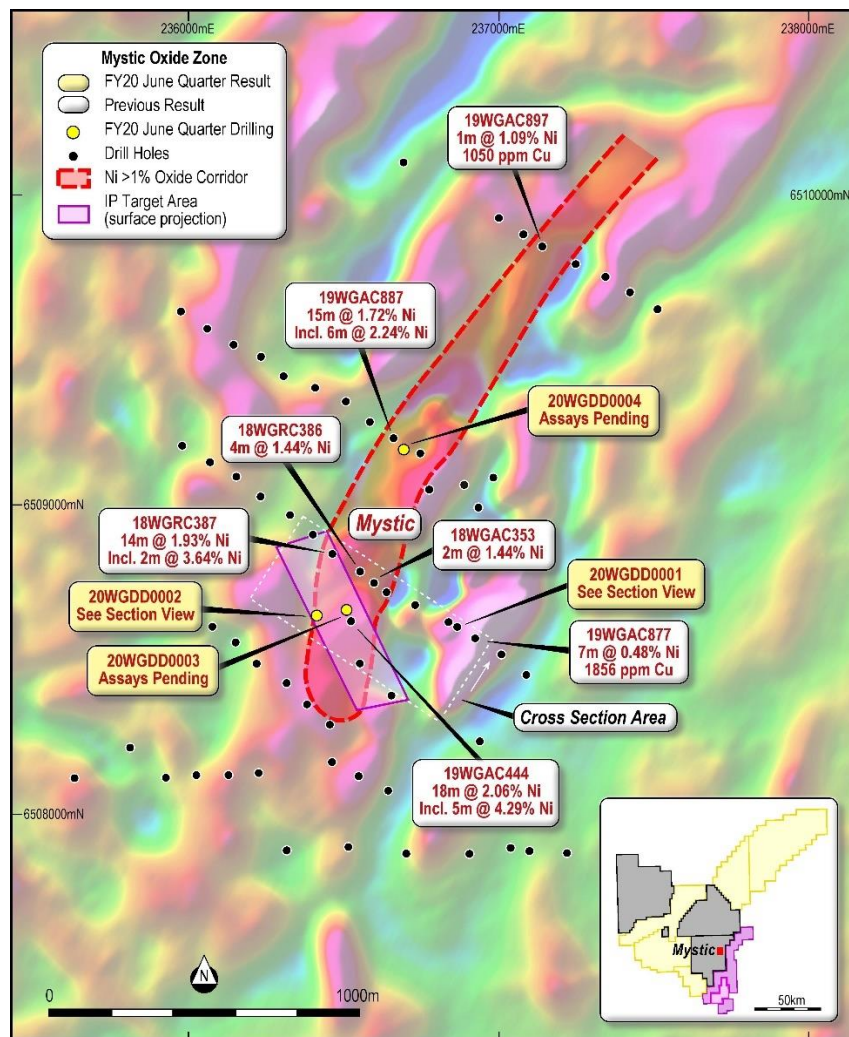
The important milestone of confirming multiple zones of primary sulphide mineralisation during the quarter further underpins the prospectivity at Mystic and the exploration strategy applied by the company within the Fowler Domain more generally.





Additional nickel oxide delineation holes are planned at Mystic along with a series of shallow drill holes, designed to follow up anomalous results returned from drill hole 20WGDD0001.

Exploration Results – Mystic June Quarter 2020													
HOLE ID	Easting	Northing	RL	EOH	Type	Dip	Azi	Width (m)	Ni %	Cu (ppm)	Pt+Pd (ppb)	From (m)	Style
20WGDD0001	236835	6508622	71	282.3	DD	-60	130	12.1	0.2	456	95	109	Primary
	including							2.55	0.29	1275	263	110.25	Primary
	including							0.3	0.39	2600	424	110.25	Primary
	and							4	0.21	261	405	156	Primary
	and							4.95	0.22	431	362	177.4	Primary
	and							1.4	0.12	638	538	188.6	Primary
20WGDD0002	236402	6508650	50	450.3	DD	-60	120	10	0.79	332	24	61	Oxide
	including							1.5	1.24	34	5	1.5	Oxide
	and							1.39	0.44	2240	249	234	Primary



Mystic Prospect

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

No work was completed during the quarter.



**-ENDS-**

**COMPETENT PERSON'S STATEMENT:**

The information within this report as it relates to mineral resources, ore reserves and exploration results is based on information compiled by Mr Andre Wulfse, Mr Marco Orunesu Preiata and Mr Graeme Gribbin of Western Areas Ltd. Mr Wulfse is a Fellow of AusIMM, Mr Orunesu Preiata is a member of AusIMM and Mr Gribbin is a member of AIG. Mr Wulfse, Mr Orunesu Preiata and Mr Gribbin are all full time employees of Western Areas. Mr Wulfse, Mr Orunesu Preiata and Mr Gribbin have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.' Mr Gribbin, Mr Wulfse and Mr Orunesu Preiata consent to the inclusion in the report of the matters based on the information in the form and context in which it appears.

**FORWARD LOOKING STATEMENT:**

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

Examples of forward looking statements used in this report include: "Following a Covid-19 enforced shut down in South Africa, refurbishment and modification of the shaft headgear and winder has recommenced. Pending no further lock downs, the equipment will be shipped to Australia during the second half of the calendar year.", and, "The long-term view remains positive for class one nickel sulphide products that will be increasingly required to feed the global demand forecasted for plug in electric vehicle (EV) batteries in the future."

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

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



## WESTERN AREAS ORE RESERVE AND MINERAL RESOURCE STATEMENT

	Tonnes	Grade Ni%	Ni Tonnes	Classification	JORC Code
<b>Ore Reserves</b>					
1. Flying Fox Area	395,300	3.0	12,020	Probable Ore Reserve	2012
2. Spotted Quoll Area	1,225,000	4.0	49,600	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
<b>TOTAL FORRESTANIA ORE RESERVE</b>	<b>3,729,300</b>	<b>2.5</b>	<b>92,420</b>		
4. Cosmos area					
Odysseus South	4,483,700	1.9	85,620	Probable Ore Reserve	2012
Odysseus North	3,651,900	2.2	78,900	Probable Ore Reserve	2012
<b>TOTAL COSMOS ORE RESERVE</b>	<b>8,135,600</b>	<b>2.0</b>	<b>164,520</b>		
<b>TOTAL WESTERN AREAS ORE RESERVE</b>	<b>11,864,900</b>	<b>2.2</b>	<b>256,940</b>		
<b>Mineral Resources</b>					
1. Flying Fox Area					
T1 South	158,821	3.7	5,838	Indicated Mineral Resource	2012
T1 North	51,798	4.9	2,524	Indicated Mineral Resource	2012
OTZ Sth Massive Zone	112,045	4.6	5,096	Indicated Mineral Resource	2012
T4 Massive Zone	96,557	5.2	5,039	Indicated Mineral Resource	2012
T5 Massive Zone + Pegs	454,224	4.7	21,506	Indicated Mineral Resource	2012
T6 Massive Zone	45,334	3.4	1,533	Indicated Mineral Resource	2012
T7 Massive Zone	259,568	1.4	3,771	Inferred Mineral Resource	2012
<b>Total High Grade</b>	<b>1,178,347</b>	<b>3.8</b>	<b>45,307</b>		
T5 Flying Fox Disseminated Zone	197,200	0.8	1,590	Indicated Mineral Resource	2004
T5 Lounge Lizard Disseminated Zone	357,800	1.0	3,460	Inferred Mineral Resource	2004
<b>Total FF/LL</b>	<b>4,428,000</b>	<b>0.8</b>	<b>36,000</b>	<b>Indicated Mineral Resource</b>	<b>2004</b>
2. New Morning / Daybreak					
Massive Zone	340,126	3.3	11,224	Indicated Mineral Resource	2012
	78,067	3.9	3,025	Inferred Mineral Resource	2012
	2,496,658	1.3	32,498	Inferred Mineral Resource	2012
<b>Total New Morning / Daybreak</b>	<b>6,233,319</b>	<b>1.4</b>	<b>87,928</b>		
3. Spotted Quoll Area					
Spotted Quoll	147,724	4.1	6,041	Inferred Mineral Resource	2012
<b>Total Spotted Quoll</b>	<b>1,091,596</b>	<b>6.0</b>	<b>65,231</b>		
Beautiful Sunday	480,000	1.4	6,720	Indicated Mineral Resource	2004
<b>Total Western Belt</b>	<b>13,966,262</b>	<b>1.8</b>	<b>246,236</b>		
4. Cosmic Boy Area					
Cosmic Boy	180,900	2.8	5,050	Indicated Mineral Resource	2004
Seagull	195,000	2.0	3,900	Indicated Mineral Resource	2004
<b>Total Cosmic Boy Area</b>	<b>375,900</b>	<b>2.4</b>	<b>8,950</b>		
5. Diggers Area					
Diggers South - Core	2,704,500	1.4	37,570	Indicated Mineral Resource	2004
Digger South - Core	362,700	1.2	4,530	Inferred Mineral Resource	2004
Digger Rocks - Core	282,940	1.7	4,790	Indicated Mineral Resource	2004
Digger Rocks - Core	50,600	1.3	670	Inferred Mineral Resource	2004
Purple Haze	560,000	0.9	5,040	Indicated Mineral Resource	2004
<b>Total Diggers Area</b>	<b>3,960,740</b>	<b>1.3</b>	<b>52,600</b>		
<b>TOTAL FORRESTANIA MINERAL RESOURCE</b>	<b>18,302,902</b>	<b>1.7</b>	<b>307,786</b>		
6. Cosmos Area					
AM5	479,914	2.6	12,430	Indicated Mineral Resource	2012
	26,922	1.9	509	Inferred Mineral Resource	2012
AM6	1,704,548	2.7	45,171	Indicated Mineral Resource	2012
	329,443	2.5	8,203	Inferred Mineral Resource	2012
Odysseus South Disseminated	4,016,949	2.1	84,767	Indicated Mineral Resource	2012
	219,641	2.0	4,302	Inferred Mineral Resource	2012
Odysseus North - Disseminated	3,128,943	2.6	81,156	Indicated Mineral Resource	2012
	225,248	2.7	6,111	Inferred Mineral Resource	2012
Odysseus North - Massive	70,106	12.6	8,814	Indicated Mineral Resource	2012
	124,900	11.2	14,002	Inferred Mineral Resource	2012
<b>Total Cosmos Area</b>	<b>10,326,614</b>	<b>2.6</b>	<b>265,465</b>		
7. Mt Goode Area					
Mt Goode	13,563,000	0.8	105,791	Measured Mineral Resource	2012
	27,363,000	0.6	158,705	Indicated Mineral Resource	2012
	12,009,000	0.5	62,447	Inferred Mineral Resource	2012
<b>Total Mt Goode Area</b>	<b>52,935,000</b>	<b>0.6</b>	<b>326,943</b>		
<b>TOTAL COSMOS MINERAL RESOURCE</b>	<b>63,261,614</b>	<b>0.9</b>	<b>592,408</b>		
<b>TOTAL WESTERN AREAS MINERAL RESOURCE</b>	<b>81,564,516</b>	<b>1.1</b>	<b>900,194</b>		





## JORC 2012 TABLE 1 – FLYING FOX – MINERAL RESOURCE ESTIMATION

### SECTION 1: SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code Explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> </ul>	<ul style="list-style-type: none"> <li>The Flying Fox (FF) Deposit is sampled using diamond drilling (DD) on nominal 50 x 30m grid spacing.</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 preliminary geological models.</li> <li>Only assay results from an independent certified commercial laboratory from DD holes are used to estimate grades into the resource block model. Handheld XRF Spectrometers are used to gain a semi – quantitative Nickel grade when core is first logged. These are replaced in the database by wet chemistry derived assay grades once received and are not used for resource estimation purposes.</li> </ul>
	<ul style="list-style-type: none"> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	<ul style="list-style-type: none"> <li>Samples are taken in accordance with well-established and properly documented company protocols</li> <li>Sample representivity is assured by an industry standard internal QAQC program that includes certified reference standards, blanks and replicate samples.</li> <li>QA results are routinely assessed by WSA Geologists and Quality Controls include re-assaying of batches of samples if the QA results are not within pre-determined precision, accuracy and contamination thresholds.</li> <li>All samples are prepared and assayed by an independent commercial laboratory whose analytical instruments are regularly calibrated.</li> </ul>
	<ul style="list-style-type: none"> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Surface Diamond drill (DD) core is marked at 1m intervals and sample lengths are typically of this length. Grade Control drilling is typically 0.5m sample lengths through the mineralised zone due to whole core sampling</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>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type,</li> </ul>	<ul style="list-style-type: none"> <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 any of the FF deposits.</li> </ul>



Criteria	JORC Code Explanation	Commentary
	whether core is oriented and if so, by what method, etc.).	<ul style="list-style-type: none"> <li>All surface drilled core is oriented using ACT II control panels and ACT III downhole units. Grade control drilling is not oriented</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	<ul style="list-style-type: none"> <li>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>
	<ul style="list-style-type: none"> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	<ul style="list-style-type: none"> <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>
	<ul style="list-style-type: none"> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <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	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Geological logging is 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>
	<ul style="list-style-type: none"> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> </ul>	<ul style="list-style-type: none"> <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>
	<ul style="list-style-type: none"> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>All drillholes are logged in full. The Flying Fox database contains over 83,000 geological entries.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> </ul>	<ul style="list-style-type: none"> <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 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>
	<ul style="list-style-type: none"> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> </ul>	<ul style="list-style-type: none"> <li>No non-core samples were taken for the purpose of this MRE.</li> </ul>
	<ul style="list-style-type: none"> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul style="list-style-type: none"> <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 pulverization of the entire</li> </ul>



Criteria	JORC Code Explanation	Commentary
		<p>sample (total prep) using LM5 grinding mills to a grind size of 90% passing 75 microns. Sample preparation is carried out by a commercial certified laboratory.</p> <ul style="list-style-type: none"> <li>The sample preparation technique is well established and appropriate for Ni sulphide deposits.</li> </ul>
	<ul style="list-style-type: none"> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	<ul style="list-style-type: none"> <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>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Sample representativity is assured through the methods previously discussed</li> <li>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.</li> <li>A monthly QAQC report is generated and distributed to the relevant stakeholders for review and follow up action</li> </ul>
	<ul style="list-style-type: none"> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> </ul>	<ul style="list-style-type: none"> <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 analyzed for Al (0.01%), As (5ppm), Co (1ppm), Cu (1ppm), Fe (0.01%), Cr (1ppm), Mg (0.01%), Ni (1ppm), S (0.01%), Ti (0.01%) and Zn (1ppm) using an ICP or Atomic Absorption finish (typical detection limits in brackets).</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No Geophysical tools or handheld XRF instruments were used to determine any element concentrations that were subsequently used for MRE purposes.</li> </ul>



Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Standards and blanks were routinely used to assess company QAQC (approx. 1 standard for every 15-20 samples). Duplicates were taken on a 10 % by volume basis (on underground drilling only), field-based umpire samples were assessed on a regular basis. Accuracy and precision were assessed using industry standard procedures such as control charts and scatter plots. In occasional cases where a sample did not meet the required quality threshold, the batch was re-analyzed.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> </ul>	<ul style="list-style-type: none"> <li>Historically, Newexco Services Pty Ltd independently visually verified significant intersections in the diamond core.</li> </ul>
	<ul style="list-style-type: none"> <li>The use of twinned holes.</li> </ul>	<ul style="list-style-type: none"> <li>No holes were twinned in the recent drilling programs.</li> </ul>
	<ul style="list-style-type: none"> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
	<ul style="list-style-type: none"> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>No adjustments were made to assay data compiled for this MRE.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Hole collar locations were surveyed by WSA surveyors. The Leica GPS1200 used for all surface work has an accuracy of +/- 3cm.</li> </ul>
	<ul style="list-style-type: none"> <li>Specification of the grid system used.</li> </ul>	<ul style="list-style-type: none"> <li>A two-point transformation is used to convert the data from MGA50 to Local Grid &amp; 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"</li> </ul>
	<ul style="list-style-type: none"> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <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>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>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).</li> </ul>
	<ul style="list-style-type: none"> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <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>





Criteria	JORC Code Explanation	Commentary
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> </ul>	<ul style="list-style-type: none"> <li>The Flying Fox deposit strikes at 030 degrees and dips nominally 65 degrees east. All underground and grade control drilling was conducted from west to east. All Surface drilling was conducted from east to west.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No orientation-based sampling bias has been observed in the data.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>All core samples were delivered from site to Perth and then to the assay laboratory by an independent transport contractor.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>The FF data is managed and certified offsite by an independent contractor.</li> </ul>

## SECTION 2: REPORTING OF EXPLORATION RESULTS – FLYING FOX

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

Criteria	JORC Code Explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Forrestania Nickel Operations comprises approximately 125 tenements covering some 900km<sup>2</sup> 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.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <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 was carried out by WMC prior to that date)</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The deposits lie within the Forrestania Greenstone Belt, which is part of the Southern Cross Province of the Yilgarn Craton in Western Australia. The main deposit type is the komatiite hosted, disseminated to massive Nickel sulphide deposits,</li> </ul>



Criteria	JORC Code Explanation	Commentary
		<p>which include the Flying Fox and Spotted Quoll deposits. The mineralisation occurs in association with the basal section of high MgO cumulate ultramafic rocks.</p> <ul style="list-style-type: none"> <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> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>The MRE is based upon over 7,000 geologic entries derived from over 1,000 surface and underground diamond holes over multiple domains and years of surface and underground drilling. All of this information can be considered material to the MRE and the exclusion of a summary of the data does not detract from the understanding of the report.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Standard length weighted averaging of drill hole intercepts was 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 nominal 0.4% Ni cut-off is applied during the geologic modelling process and later during the MRE reporting process. No top cut is applied. High grade intercepts internal to broader zones of mineralisation are reported as included intervals.</li> <li>No metal equivalent values are reported.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <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>



Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	
<i>Diagrams</i>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Refer to Figures in the text</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Only Mineral Resource Estimation results are reported.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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/cm<sup>3</sup> 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>
<i>Further work</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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>

## SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES – FLYING FOX

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

Criteria	JORC Code Explanation	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection</li> </ul>	<ul style="list-style-type: none"> <li>All data has been recorded in Excel templates with reference lookup tables. All data is imported into an Acquire relational database</li> </ul>





Criteria	JORC Code Explanation	Commentary
	and its use for Mineral Resource estimation purposes.	
	<ul style="list-style-type: none"> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <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	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Andre Wulfse who is the Competent Person is the Group Resource Manager for Western Areas and has made many site visits to the Flying Fox Deposit. His first visit to the deposit was in 2008.</li> </ul>
Geological interpretation	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> </ul>	<ul style="list-style-type: none"> <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. The geological model is updated on a daily basis by a team of mine geologists based on detailed underground mapping of ore drives.</li> </ul>
	<ul style="list-style-type: none"> <li>Nature of the data used and of any assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Lithogeochemistry and stratigraphic interpretation have been used to assist the identification of rock types. No assumptions are made.</li> </ul>
	<ul style="list-style-type: none"> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> </ul>	<ul style="list-style-type: none"> <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 from the current interpretation. WSA has successfully planned and reconciled the deposit using a similarly derived geological and resource model.</li> </ul>
	<ul style="list-style-type: none"> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource Estimate is based upon a robust geological model which is regularly updated. The hanging wall and footwall contacts of the mineralised zone were modelled with a level of confidence commensurate with the resource classification category. The extents of the geological model were constrained by drillholes intercepts and extrapolation of the geological contacts beyond the drill data was minimal for the Indicated category.</li> </ul>
	<ul style="list-style-type: none"> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>Key factors affecting geologic continuity relate to pervasive felsic intrusive units and faults in the deeper parts of the FF orebody. The nugget effect associated with Ni mineralisation in these types of deposits affects the grade continuity. The</li> </ul>



Criteria	JORC Code Explanation	Commentary
		geological discontinuities have been modelled and the grade discontinuities have been accounted for in the estimation modelling.
<i>Dimensions</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>
<i>Estimation and modelling techniques</i>	<ul style="list-style-type: none"> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> </ul>	<ul style="list-style-type: none"> <li>Grade and ancillary element estimation using Ordinary Kriging and Inverse Power Distance (IPD) was completed using Datamine<sup>TM</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.</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 drill data.</li> <li>Sample data was flagged using domain codes generated from 3D mineralised wireframes. Qualitative Kriging Neighborhood Analysis was used to determine the optimum search neighborhood parameters.</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. Estimation validation techniques included swathe plots of the grade of the composite's vs the grade of the block model.</li> </ul>
	<ul style="list-style-type: none"> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> </ul>	<ul style="list-style-type: none"> <li>This MRE is an update of an MRE that was undertaken in 2014 and was extensively validated against the previous MRE.</li> </ul>
	<ul style="list-style-type: none"> <li>The assumptions made regarding recovery of by-products.</li> </ul>	<ul style="list-style-type: none"> <li>No assumptions were made about the recovery of by products in this estimate. WSA currently doesn't have any off-take agreements in place for by-products.</li> </ul>
	<ul style="list-style-type: none"> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> </ul>	<ul style="list-style-type: none"> <li>No elements are considered to be deleterious elements in the Flying Fox deposit</li> </ul>
	<ul style="list-style-type: none"> <li>In the case of block model interpolation, the block size in</li> </ul>	<ul style="list-style-type: none"> <li>A proto model was constructed using a 2mE x 5mN x 5mRL parent size, with sub cells. The parent cell size was selected on the basis of orebody geometry, drill spacing and SMU.</li> </ul>



Criteria	JORC Code Explanation	Commentary
	relation to the average sample spacing and the search employed.	<ul style="list-style-type: none"> <li>Thereafter individual block models were designed for each of the structural domains. The dips of the wireframes of the structural domains were used to optimally fill the wireframes with blocks. Drill spacing varies but is nominally 30m by 30m in areas that will be affected by mining in the next two years and 60m by 60m in subsequent areas.</li> <li>The size of the search ellipse was based on the drill hole spacing and structural domain dimensions. Search neighborhoods varied according to the structural domain</li> </ul>
	<ul style="list-style-type: none"> <li>Any assumptions behind modelling of selective mining units.</li> </ul>	<ul style="list-style-type: none"> <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>
	<ul style="list-style-type: none"> <li>Any assumptions about correlation between variables.</li> </ul>	<ul style="list-style-type: none"> <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>
	<ul style="list-style-type: none"> <li>Description of how the geological interpretation was used to control the resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
	<ul style="list-style-type: none"> <li>Discussion of basis for using or not using grade cutting or capping.</li> </ul>	<ul style="list-style-type: none"> <li>Geostatistical and visual investigation of the grade distribution negated the need for grade cutting or capping.</li> </ul>
	<ul style="list-style-type: none"> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul style="list-style-type: none"> <li>Validation of the block model included comparing the volume of domain boundary wireframes to block model volumes. It also involved comparing block model grades with drill hole grades by means of swathe plots showing easting, northing and elevation comparisons.</li> <li>Jackknifing and visual grade validations were undertaken.</li> <li>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.</li> <li>The assumptions and methodologies used during this estimation are very similar to that of the previous model.</li> <li>Visual validation of the block model vs the drillhole data was undertaken in Datamine and Leapfrog</li> <li>Based on a thorough validation and verification exercise, WSA is satisfied that the estimate is robust.</li> </ul>
Moisture	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>Tonnages were estimated on a dry basis.</li> </ul>





Criteria	JORC Code Explanation	Commentary
<i>Cut-off parameters</i>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>The mineral envelope was determined using a nominal 0.4% Ni grade cut-off. The resource is reported at a 0.4% Ni cut-off which is a reasonable representation of the mineralised material prior to the application of variable economic and mining assumptions and a reserve cut-off</li> </ul>
<i>Mining factors or assumptions</i>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>The Flying Fox deposit is currently being mined using long hole stopping methods. The mining method which is unlikely to change has been taken into account during the estimation process.</li> </ul>
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Ore from the Flying Fox deposit is currently being processed on site, where Nickel concentrate is produced using a three-stage crushing, ball mill, and flotation and thickener/filtration system.</li> </ul>
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>All waste and process residue are disposed of through the Cosmic Boy concentrator plant and its tailings dam. All site activities at site are undertaken in accordance with WSA's environmental policy.</li> </ul>



Criteria	JORC Code Explanation	Commentary
	this should be reported with an explanation of the environmental assumptions made.	
<i>Bulk density</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Bulk Density has been determined using a tried and tested Ni grade regression-based formula.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Core at Flying Fox is generally void of vugs, voids and other defects. Rocks are from the granulate facies sequence and faults have largely been annealed. Porosity is considered low.</li> </ul>
	<ul style="list-style-type: none"> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>As discussed previously, mineralisation is mainly restricted to a single material type (Massive Sulphide)</li> </ul>
<i>Classification</i>	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> </ul>	<ul style="list-style-type: none"> <li>The Flying Fox Mineral Resource is classified as Indicated and Inferred on the basis of geologic understanding, drillhole spacing, underground development and Kriging quality parameters. No blocks were classified as Measured.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> </ul>	<ul style="list-style-type: none"> <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>
	<ul style="list-style-type: none"> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource Estimate appropriately reflects the view of the Competent Person.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>This MRE has been internally reviewed and has not been externally reviewed</li> </ul>
<i>Discussion of relative accuracy/ confidence</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <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>



Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>The statement relates to global linear estimates of tonnes and grade.</li> <li>The grade tonnage summary by Class is given in the accompanying report</li> </ul>
	<ul style="list-style-type: none"> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>Tonnes and grade estimates within the blocks are consistent with past production data.</li> </ul>

#### SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES

Criteria	JORC Code Explanation	Commentary
<i>Mineral Resource estimate for conversion to Ore Reserves</i>	<ul style="list-style-type: none"> <li>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li> <li>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	<ul style="list-style-type: none"> <li>Western Areas Ltd (WSA) undertook a review of the Flying Fox deposit (FF) during Financial year 2020 after the completion of the new drilling campaign and updated mining data. The underlying Mineral Resource is issued in the June 2020 Quarterly Report.</li> <li>The Mineral Resources are reported inclusive of the Ore Reserves.</li> </ul>
<i>Site visits</i>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Flying Fox is an operating underground mine since 2005. The Competent Person carries out routine site visits of the deposit and its infrastructures as part of normal working duties.</li> <li>WSA set up a data collection and record system to manage Flying Fox operation from a technical and economical point of view. All these data are used in the present Ore Reserves estimation.</li> <li>Mine design and mining method is based primarily on the recommendations laid out in the updated Feasibility study and back analysis data from the current mining practice.</li> </ul>
<i>Study status</i>	<ul style="list-style-type: none"> <li>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</li> <li>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</li> </ul>	<ul style="list-style-type: none"> <li>WSA completed in 2004 a Feasibility Study for T1 and in 2006 the Feasibility Study for T5. This last study has been updated and kept alive with the current practice and data coming from the experience gained in 15 years of mining and recorded in the company system documents.</li> <li>The present Ore Reserve estimation is an update that considers the new Mineral Resource, the performance of the operation to date and a revised commodity price estimate.</li> </ul>
<i>Cut-off parameters</i>	<ul style="list-style-type: none"> <li>The basis of the cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>An Ore Reserve cut-off grade of 1.26% Ni was selected to obtain an Ore Reserve that fits the following criteria: <ul style="list-style-type: none"> <li>Minimum Head Grade fitting the Mill requirements.</li> </ul> </li> </ul>



Criteria	JORC Code Explanation	Commentary
		<ul style="list-style-type: none"> <li>– Ore Reserve average grade equal or greater than Life of Mine breakeven grade.</li> <li>– Mean Arsenic concentration that enables production of a saleable concentrate.</li> <li>– Positive Forrester LOM NPV</li> <li>– Maximise steady state production</li> <li>– LOM Nickel price curve from USD6.00/lb @ FX0.70 to USD7.50/lb @ FX 0.70.</li> <li>▪ Some of the key ore reserve assumptions are considered commercially sensitive, however as the mine has been in operation for some years the reserve cut off parameters are developed using historical operating performance and statistics. More details regarding cut off parameters are reported in the following sections.</li> </ul>
<i>Mining factors or assumptions</i>	<ul style="list-style-type: none"> <li>▪ The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</li> <li>▪ The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</li> <li>▪ The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</li> <li>▪ The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</li> <li>▪ The mining dilution factors used.</li> <li>▪ The mining recovery factors used.</li> <li>▪ Any minimum mining widths used.</li> <li>▪ The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</li> <li>▪ The infrastructure requirements of the selected mining methods.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The mining method used is a mix of direct AVOCA, reverse AVOCA long-hole stoping with bottom up sequence and rock and cemented rock fill above the 425 level. A long-hole top down sequence and paste filling of resultant voids is used below the 425 level.</li> <li>▪ The Mining Model has been realised with StudioUG and EPS Codes (Datamine software house). Mining factors have been selected using historical performance data of the deposit, particularly: <ul style="list-style-type: none"> <li>– The Mineral Resource model used is in Datamine format. It combines the Resources models for Flying Fox mine and released in June 2020 Quarterly report.</li> <li>– The minimum mining width is 1.8 metres.</li> <li>– The max stable stope length is 20 metres with a stope height between 8 and 17 metres along dip. Other geotechnical parameters are contained in the current Ground Control Management Plan.</li> <li>– Stope Planned dilution is 0.5 metres in Hanging Wall and 0.25 metres in the foot Wall.</li> <li>– 0%Ni grade assigned to the material outside the block model.</li> <li>– Stope Unplanned dilution (from hosting rock and fill) 6.0% in weight at 0 Ni%.</li> <li>– Standard SG for dilution is 2.8 t/m3.</li> <li>– Ore recovery is 98% in the stopes; and 100% in the ore drives.</li> <li>– Pillar factor for unplanned pillars is 2%.</li> <li>– Production rates reflect current mining performances and practice.</li> </ul> </li> <li>▪ No Inferred material has been utilised for the Ore Reserve estimation.</li> <li>▪ Flying Fox is an operating mine. All infrastructures (with the exception of future capital development and external plants) are present and utilised on site, and allowance, based on technical</li> </ul>





Criteria	JORC Code Explanation	Commentary
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> <li>▪ The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</li> <li>▪ Whether the metallurgical process is well-tested technology or novel in nature.</li> <li>▪ The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> <li>▪ Any assumptions or allowances made for deleterious elements.</li> <li>▪ The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</li> <li>▪ For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</li> </ul>	<p>studies, is made in the CAPEX expenditure of the Life of Mine for the new infrastructures.</p> <ul style="list-style-type: none"> <li>▪ The metallurgical factors used are from existing Cosmic Boy concentrator conventional nickel sulphide flotation techniques and historical data. Figures used are considered commercially sensitive by the company and may be made available by request.</li> <li>▪ The metallurgical process is a well tested technology for Nickel Sulphides recovery with three stages of fragmentation with wet screening for size classification, one milling stage with cyclone size classification and two stages of flotation including Arsenic rejection. A small stream of the flotation feed is sent to the Hydrometallurgical section of the concentrator that uses the BioHeap® technology to improve the overall recovery</li> <li>▪ The resultant concentrate is sold into existing off-take contracts with BHP and Tsingshan.</li> </ul>
<i>Environmental</i>	<ul style="list-style-type: none"> <li>▪ The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Flying Fox mining operations (FFO) operated by Western Areas Ltd (Western Areas), received final environmental approval to mine nickel sulphide ore as an underground operation in December 2004. Approvals were provided under Western Australian legislation; initially being the Mining Act 1978 (M Act) and later Part V of the Environmental Protection Act 1986 (EP Act). Since then, several other M Act approvals have been sought and received relating to the deepening of the Flying Fox mine and the extension of surface infrastructure required for mining operations. Additional approvals under Part V of the EP Act have also been sought in the form of Works Approvals and Prescribed Premises Licence amendments for various types of mining related infrastructure.</li> <li>▪ Other relevant approvals from state and local government include endorsements to produce drinking water via reverse osmosis and store it onsite and licences to construct habitable buildings and construct and operate septic waste water treatment facilities.</li> </ul>
<i>Infrastructure</i>	<ul style="list-style-type: none"> <li>▪ The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ All necessary infrastructures for the Flying Fox mine are present and operational on site (not including future capital underground development and external plants). Allowance, based on technical studies, is made in the CAPEX expenditure of the Life of Mine for the new infrastructures planned in Life of Mine plan.</li> </ul>



Criteria	JORC Code Explanation	Commentary
		<ul style="list-style-type: none"> <li>Flying Fox is supplied by Western Power 33kV overhead power-line from the Bounty switchyard 60km to the north of the mine-site.</li> <li>Potable water is produced via RO plants located at CB concentrator and pumped via a pipeline to the mine-site. Process water is recycled from the mine dewatering network.</li> <li>Bulk material logistics is predominately via conventional truck haulage.</li> <li>Mine personnel reside at the nearby Cosmic Boy Village (529 rooms) and are predominately a FIFO (via CB airstrip) workforce with some minor DIDO.</li> <li>The mine-site is 80km to the east of the Hyden township and has two main gazetted gravel road accesses (east from Hyden and south from Varley)</li> </ul>
Costs	<ul style="list-style-type: none"> <li>The derivation of, or assumptions made, regarding projected capital costs in the study.</li> <li>The methodology used to estimate operating costs.</li> <li>Allowances made for the content of deleterious elements.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products.</li> <li>The source of exchange rates used in the study.</li> <li>Derivation of transportation charges.</li> <li>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</li> <li>The allowances made for royalties payable, both Government and private.</li> </ul>	<ul style="list-style-type: none"> <li>Capital Underground Development costs are derived from the LOM plan based on existing contracts and historical performance and data.</li> <li>All other Capital costs are sourced as necessary via quotes from suppliers or technical studies.</li> <li>Mining, processing, administration, surface transport, concentrate logistics and state royalty costs are based on existing cost estimates.</li> <li>The nickel price and FX assumptions used were sourced from industry standard sources</li> <li>Nickel price from USD6.00/lb @ FX0.70 to USD7.50/lb @ FX 0.70.</li> <li>Net Smelter Return (NSR) factors were sourced from existing concentrate off-take contracts.</li> </ul>
Revenue factors	<ul style="list-style-type: none"> <li>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</li> <li>the derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</li> </ul>	<ul style="list-style-type: none"> <li>These have been selected after consideration of historical commodity prices variations over time and the requirement for the Reserve to be robust to potentially volatile commodity price and foreign exchange conditions.</li> <li>The price setting mechanism for the sale of product subject to this report is traded openly on the London Metals Exchange ("LME").</li> <li>Potential penalties and net smelter revenue factors are included in the Smelter Return factor used. This factor is based on the historical data from previous FY and is considered commercially sensitive by the company. Figures may be produced by request.</li> <li>Two main selling contracts structures are currently used by Western Areas. One has copper as a co-product and the second</li> </ul>



Criteria	JORC Code Explanation	Commentary
		doesn't have any co-product. Allowance for this selling parameter is included in the Smelter Return factor.
<i>Market assessment</i>	<ul style="list-style-type: none"> <li>▪ The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>▪ A customer and competitor analysis along with the identification of likely market windows for the product.</li> <li>▪ Price and volume forecasts and the basis for these forecasts.</li> <li>▪ For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The commodity subject to this report is traded openly on the London Metals Exchange ("LME").</li> <li>▪ The Company has for many years maintained both long and short term offtake sales contracts with multiple customers, both locally and internationally.</li> <li>▪ Existing contracts have been assessed for the sales volume assumptions.</li> <li>▪ As the Company has been supplying multiple customers over a significant time period no acceptance testing has been assumed in the reserve development process.</li> <li>▪ These contracts have fixed dates in which the contract itself is reviewed and/or expires. The assumption to extend these contracts and the current sold volumes to the end of LOM has been made in order to assess the Ore Reserve.</li> <li>▪ For the Nickel price assumptions refer to the previous sections.</li> </ul>
<i>Economic</i>	<ul style="list-style-type: none"> <li>▪ The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</li> <li>▪ NPV ranges and sensitivity to variations in the significant assumptions and inputs.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Company has been operational for a significant period of time with contracts in place for ore mining, processing and concentrate haulage. Furthermore the operation, subject to this report, has an in-situ operating concentrator facility. As such the actual visible operating and contract rates (including rise and fall where appropriate) has been used in the NPV economic assessments. Figures are considered commercially sensitive by the company.</li> <li>▪ The discount rate has been estimated as the weighted average cost of capital for the Company.</li> </ul>
<i>Social</i>	<ul style="list-style-type: none"> <li>▪ The status of agreements with key stakeholders and matters leading to social licence to operate.</li> </ul>	<ul style="list-style-type: none"> <li>▪ All legal permits to mine Flying Fox have been obtained by Western areas following the paths described by the relevant laws with the participation of the local communities (see previous points).</li> <li>▪ As a company policy (COR-HRM-POL-1122 -Social Responsibility Policy), the relations with the local communities and territories are a key part of operational management.</li> </ul>
<i>Other</i>	<ul style="list-style-type: none"> <li>▪ To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</li> <li>▪ Any identified material naturally occurring risks.</li> <li>▪ The status of material legal agreements and marketing arrangements.</li> <li>▪ The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be</li> </ul>	<ul style="list-style-type: none"> <li>▪ It is noted that mining operations are an inherently risky business in which to operate, no other risk factors apart from the normal risk components included in all the above points and assumptions have been identified.</li> </ul>



Criteria	JORC Code Explanation	Commentary
	received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	
<i>Classification</i>	<ul style="list-style-type: none"> <li>▪ The basis for the classification of the Ore Reserves into varying confidence categories.</li> <li>▪ Whether the result appropriately reflects the Competent Person's view of the deposit.</li> <li>▪ The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</li> </ul>	<ul style="list-style-type: none"> <li>▪ Flying Fox has the following Ore Reserves at the 30th of June 2020:</li> <li>▪ Probable Ore Reserves of 395,000 ore tonnes at 3.0% for 12,020 Nickel tonnes</li> <li>▪ Ore reserves derive entirely from Indicated Mineral Resource and the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>▪ The results of any audits or reviews of Ore Reserve estimates.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Audits/Reviews of the present report have not been done because of the high confidence in the data used and the constant performance of the operation. A review may be done by external request.</li> </ul>
<i>Discussion of relative accuracy/confidence</i>	<ul style="list-style-type: none"> <li>▪ Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</li> <li>▪ 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.</li> <li>▪ Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The confidence in the present evaluation is from the fact that Flying Fox is a well establish operating mine with a sound performance database.</li> <li>▪ The present estimation, for the nature of the commodity mined, refers to global market conditions (see above points for the assumptions).</li> <li>▪ As is normal in mining operations, the key points that can have a significant impact on the performance of the Flying Fox Mine are the market conditions in general, and the Nickel price and the currency exchange rates in particular. All the other parameters are derived from sound historical production data.</li> </ul>





Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <li>It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	

## JORC 2012 TABLE 1 – SPOTTED QUOLL MINERAL RESOURCE ESTIMATE

### SECTION 1: SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code Explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> </ul>	<ul style="list-style-type: none"> <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>Over 3,000 composites derived from approximately 700 drillholes were used to estimate the grades. This represents a drilling pattern smaller than 40m by 40m over the full extent of the deposit.</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 but were not used to estimate grades into the block model.</li> </ul>
	<ul style="list-style-type: none"> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	<ul style="list-style-type: none"> <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 QA/QC program as discussed in a later section of this tabular summary.</li> </ul>
	<ul style="list-style-type: none"> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine</li> </ul>	<ul style="list-style-type: none"> <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 from reverse circulation (RC) drilling consisted of chip samples at 1m intervals from which 3 kg was pulverised to produce a sub sample for assaying as per the DD samples.</li> </ul>



Criteria	JORC Code Explanation	Commentary
	nodules) may warrant disclosure of detailed information.	
<i>Drilling Techniques</i>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul style="list-style-type: none"> <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.</li> <li>Rotary air blast holes (RAB) were used to assist in geological domain analysis, but were not used for Mineral Resource Estimation purposes.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	<ul style="list-style-type: none"> <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>
	<ul style="list-style-type: none"> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	<ul style="list-style-type: none"> <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>
	<ul style="list-style-type: none"> <li>Whether a relationship exists between sample recovery and grade and whether sample bias occurs</li> </ul>	<ul style="list-style-type: none"> <li>The resource grades are derived from high quality 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>
<i>Logging</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Geological and geotechnical logging was carried out on all diamond drillholes for recovery, rock quality designation (RQD) and number of defects (per interval).</li> <li>Information on structure type, dip, dip direction, alpha angle, beta angle, texture, shape, roughness and fill material are stored in the structure table of the database.</li> <li>Sufficient data has been collected and verified to support the current Mineral Resource Estimate.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Logging of diamond core and RC samples recorded lithology, mineralogy, mineralisation, structural (DD only), weathering, colour and other features of the samples.</li> <li>Core was photographed in both dry and wet form.</li> </ul>
	<ul style="list-style-type: none"> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>All drillholes were logged in full from the collar position to the end of the hole position.</li> </ul>
<i>Sub-sampling techniques and sampling preparation</i>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> </ul>	<ul style="list-style-type: none"> <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>
	<ul style="list-style-type: none"> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> </ul>	<ul style="list-style-type: none"> <li>RC samples were collected using a riffle splitter.</li> <li>All samples in the mineralised zones were dry.</li> </ul>



Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul style="list-style-type: none"> <li>The sample preparation of diamond core follows industry best practice in sample preparation involving oven drying, coarse crushing of the quarter core sample down to ~10mm, followed by pulverisation of the entire sample (total prep) using LM5 grinding mills to a grind size of 90% passing 75 microns.</li> <li>The sample preparation for RC samples is identical, without the coarse crush stage.</li> </ul>
	<ul style="list-style-type: none"> <li>Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples.</li> </ul>	<ul style="list-style-type: none"> <li>WSA included field Ni standards ranging from 0.7% - 8.4% Ni that were routinely submitted with sample batches in order to independently monitor analytical performance.</li> <li>Standards were fabricated and prepared by Gannet Holdings, Perth, using high-grade nickel sulphide ore sourced from the Silver Swan mine.</li> <li>Standards were supplied in 55g sealed foil sachets.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Field duplicates were taken on a 15% by volume basis.</li> <li>Duplicate quarter samples were sent to a commercial independent certified lab.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>The sample sizes are considered to be appropriate to correctly represent the sulphide mineralisation at Spotted Quoll based on the style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and percent value assay ranges for the primary elements.</li> </ul>
Quality of assay data laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> </ul>	<ul style="list-style-type: none"> <li>All samples used in the Mineral Resource Estimate were assayed by an independent certified commercial laboratory.</li> <li>The laboratory used by WSA is experienced in the preparation and analysis of nickel-bearing ores.</li> <li>Samples were dissolved using nitric, perchloric, hydrofluoric and hydrochloride acid digest to destroy silica.</li> <li>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-assayed by the OG62 method.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No geophysical tools or handheld XRF instruments were used to determine any element concentrations that were subsequently used for Mineral Resource Estimate purposes.</li> </ul>
	<ul style="list-style-type: none"> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Standards and blanks were routinely used to assess company QAQC (approx. 1 standard 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.</li> </ul>



Criteria	JORC Code Explanation	Commentary
		<ul style="list-style-type: none"> <li>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>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> </ul>	<ul style="list-style-type: none"> <li>Newexco Services Pty Ltd (Newexco) has independently visually verified significant intersections in most of the diamond core.</li> </ul>
	<ul style="list-style-type: none"> <li>The use of twinned holes.</li> </ul>	<ul style="list-style-type: none"> <li>No holes were specifically twinned, but there are several holes in close proximity to each other and the resultant assays and geological logs were compared for consistency.</li> </ul>
	<ul style="list-style-type: none"> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	<ul style="list-style-type: none"> <li>Primary data was collected using Excel templates utilising look-up 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>
	<ul style="list-style-type: none"> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>No adjustments were made to assay data compiled for this estimate.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Hole collar locations were surveyed by WSA surveyors. The Leica GPS1200 used for all surface work has an accuracy of +/- 3cm.</li> </ul>
	<ul style="list-style-type: none"> <li>Specification of the grid system used.</li> </ul>	<ul style="list-style-type: none"> <li>A 2-point transformation is used to convert the data from MGA50 to Local Grid and vice versa</li> </ul>
	<ul style="list-style-type: none"> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The previous estimate and the extensive drill program coupled with information derived from previous open pit and underground mining at Spotted Quoll has demonstrated sufficient and appropriate continuity for both geology and grade within the deposit to support the definition of Mineral Resources, and the classification (Indicated and Inferred) applied. No material has been classified as Measured.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were composited to 1m lengths, making adjustments to accommodate residual sample lengths.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> </ul>	<ul style="list-style-type: none"> <li>The Spotted Quoll deposit strikes at approximately 030° and dips nominally 50° to the east.</li> <li>All drilling was conducted from east to west.</li> <li>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</li> </ul>





Criteria	JORC Code Explanation	Commentary
		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.
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No orientation-based sampling bias has been observed in the data.</li> </ul>
	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>All core samples were delivered from site to Perth and then to the assay laboratory by an independent transport contractor.</li> </ul>
	<ul style="list-style-type: none"> <li>Audits or Reviews</li> </ul>	<ul style="list-style-type: none"> <li>No formal external audit of the Mineral Resource has been undertaken to date.</li> <li>Independent consultants assisted with the geological and mineral resource modelling.</li> </ul>
	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>The sampling techniques are standard practice at WSA; these were implemented over seven years ago and have been subject to independent reviews during this time.</li> </ul>

## SECTION 2: REPORTING OF EXPLORATION RESULTS

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

Criteria	JORC Code Explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Forrestania Nickel Operations (FNO) comprises approximately 125 tenements covering some 900km<sup>2</sup> 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>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <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</li> </ul>



Criteria	JORC Code Explanation	Commentary
		time) and the Lake King JV since 2007 (a small amount of work carried out by WMC prior to that date).
<i>Geology</i>	<ul style="list-style-type: none"> <li>▪ Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <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 largest 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>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>▪ This is a Mineral Resource Estimate summary and no exploration results are reported as such.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <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</li> </ul>	<ul style="list-style-type: none"> <li>▪ This is a Mineral Resource Estimate summary and no exploration results are reported as such – cut-offs were applied to the overall reported tonnes and grade and are discussed in the appropriate section of this table.</li> <li>▪ No metal equivalent values are used.</li> </ul>



Criteria	JORC Code Explanation	Commentary
	<p>such aggregations should be shown in detail.</p> <ul style="list-style-type: none"> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <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 length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>This is a Mineral Resource Estimate summary and no exploration results are reported.</li> <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>
<i>Diagrams</i>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>This is a Mineral Resource Estimate summary and the appropriate figures can be found elsewhere in the report.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable to a Mineral Resource Estimate summary.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>This is a Mineral Resource Estimate summary and no exploration results are reported as such.</li> <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/cm<sup>3</sup> 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>
<i>Further work</i>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. 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</li> </ul>	<ul style="list-style-type: none"> <li>This is a Mineral Resource Estimate summary and no exploration results are reported as such.</li> </ul>



Criteria	JORC Code Explanation	Commentary
	areas, provided this information is not commercially sensitive.	

## SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES

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

Criteria	JORC Code Explanation	Commentary
<i>Database Integrity</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All data has been recorded in Excel templates with reference look-up tables. All data are imported into an acquire relational database.</li> </ul>
	<ul style="list-style-type: none"> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <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>
<i>Site visits</i>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> </ul>	<ul style="list-style-type: none"> <li>The Competent Person (Andre Wulfse) is an employee of Western Areas and has undertaken regular site visits since 2008.</li> </ul>
	<ul style="list-style-type: none"> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> </ul>
<i>Geological interpretation</i>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty) of the geological interpretation of the mineral deposit.</li> </ul>	<ul style="list-style-type: none"> <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 basalt/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 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> </ul>
	<ul style="list-style-type: none"> <li>Nature of the data used and of any assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Lithogeochemistry and stratigraphic interpretation have been used to assist the identification of rock types.</li> </ul>





Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> </ul>	<ul style="list-style-type: none"> <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>
	<ul style="list-style-type: none"> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource Estimate is based upon a robust geological model discussed previously.</li> <li>The hanging wall and footwall contacts of the various mineralised domains were modelled with a level of confidence commensurate with the resource classification category applied.</li> <li>The extents of the geological model were constrained by drillhole intercepts and extrapolation of the geological contacts beyond the drill data was minimal for the Indicated category.</li> <li>Granitoid intrusives were modelled and grades were accordingly diluted in these areas.</li> </ul>
	<ul style="list-style-type: none"> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <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>
<i>Dimensions</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The strike length of the Mineral Resource is nominally 300m on average, with a range of 25m to 520m, depending on depth below surface. The nominal mean dip length is 1500m.</li> <li>The RL below the pre-existing pit is 1250mRL and the maximum depth of the Mineral Resource is 250mRL. The mean thickness of the mineralised zone is 3.1m, with a maximum thickness of 13.4m.</li> </ul>
<i>Estimation and modelling techniques</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Hard boundary geologic domains were designed using Implicit and Explicit modelling techniques.</li> <li>Grade and ancillary element estimation into the mineralised domains using Ordinary Kriging and Inverse Power Distance (IPD) was completed using Datamine™, and Supervisor 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.</li> <li>Intervals with no assays were treated as null values.</li> <li>Top-cut investigations were completed and no top-cuts were applied on the basis of grade distribution and Coefficient of Variation.</li> <li>Sample, wireframe and block model data were flagged using domain and weathering codes generated from 3D mineralised wireframes.</li> </ul>



Criteria	JORC Code Explanation	Commentary
		<ul style="list-style-type: none"> <li>▪ Extensive Exploratory Data Analysis (EDA) was carried out on the raw and composite data in order to understand the distribution in preparation for estimation and to validate the composite data against the raw data.</li> <li>▪ EDA included Histograms, Log Probability plots and Mean and Variance plots for each of the domains and sub domains.</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 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>
	<ul style="list-style-type: none"> <li>▪ The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> </ul>	<ul style="list-style-type: none"> <li>▪ This MRE is an update of an MRE that was previously reported and was validated against the same.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ The assumptions made regarding recovery of by-products.</li> </ul>	<ul style="list-style-type: none"> <li>▪ No assumptions were made about the recovery of by products in this estimate.</li> <li>▪ WSA currently does not have any offtake agreements in place for the sale of discrete by-products.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> </ul>	<ul style="list-style-type: none"> <li>▪ Arsenic (As) is considered a deleterious element as it can have an adverse effect on the recovery of Ni if not properly managed during the blending process.</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>
	<ul style="list-style-type: none"> <li>▪ In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The block model was constructed using a 2mE x 5mN x 5MRL parent size, with sub cells. All estimation was completed at the parent cell scale, thereby avoiding any potential geostatistical support issues.</li> <li>▪ The size of the search ellipse varies and is based on the drillhole spacing and domain dimensions.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Any assumptions behind modelling of selective mining units.</li> </ul>	<ul style="list-style-type: none"> <li>▪ No selectivity was built into the model on the basis that full extraction of the ore zone using longhole and airleg stoping is expected</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Any assumptions about correlation between variables.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Known correlation between Density and Ni grade was used to estimate tonnages.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Description of how the geological interpretation was used to control the resource estimates.</li> </ul>	<ul style="list-style-type: none"> <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 wider scale, were used to determine and refine mineral domains.</li> </ul>



Criteria	JORC Code Explanation	Commentary
		<ul style="list-style-type: none"> <li>The hanging wall and footwall contacts of mineralisation were used as hard boundaries during the estimation process and only blocks within the geological wireframe were informed with Ni grades.</li> </ul>
	<ul style="list-style-type: none"> <li>Discussion of basis for using or not using grade cutting or capping.</li> </ul>	<ul style="list-style-type: none"> <li>Geostatistical and visual investigation of the grade distribution negated the need for grade cutting or capping.</li> </ul>
	<ul style="list-style-type: none"> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul style="list-style-type: none"> <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>Estimation validation techniques included swathe plots of the grade of the composites vs the grade of the block model as shown below.</li> <li>Visual grade validations using Datamine™, Supervisor and Leapfrog were undertaken.</li> <li>The assumptions and methodologies used during this estimation are very similar to that of the previously reported Mineral Resource Estimate.</li> </ul>
Moisture	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>Tonnages were estimated on a dry basis.</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>The mineral envelope was determined using a nominal 0.4% Ni grade cut-off.</li> <li>The Mineral Resource is reported at a 0.4% Ni cut-off for Indicated and 0% Ni for Inferred, which is a reasonable representation of the mineralised material prior to the application of economic and mining assumptions and an Ore Reserve cut-off.</li> <li>The Spotted Quoll mineralisation tenor is relatively high compared to other komatiite-hosted deposits, and hence the use of a lower cut-off grade is appropriate.</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>The Spotted Quoll deposit is currently being mined primarily using longhole 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> <li>The Mineral Resource was depleted against mining.</li> </ul>



Criteria	JORC Code Explanation	Commentary
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Ore from the Spotted Quoll deposit is currently being processed on site, where Nickel concentrate is produced using a three-stage crushing, ball mill, and flotation and thickener/ filtration system.</li> <li>Arsenic rejection in the flotation circuit has been modelled based on current and historic operational performance.</li> </ul>
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All waste and process residue will be disposed of through the Cosmic Boy concentrator plant and its tailings dam.</li> <li>All site activities will be undertaken in accordance with WSA's environmental policy.</li> </ul>
<i>Bulk density</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>There is a strong correlation between Ni and bulk density at Forrestania and a robust Ni grade regression formula was used to estimate bulk density into the blocks.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <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>
	<ul style="list-style-type: none"> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <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>





Criteria	JORC Code Explanation	Commentary
<i>Classification</i>	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> </ul>	<ul style="list-style-type: none"> <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 are classified as Measured.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, and confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> </ul>	<ul style="list-style-type: none"> <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 interpretations.</li> <li>All relevant factors have been considered in this estimate.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource Estimate appropriately reflects the view of the Competent Person who is a full-time employee of Western Areas and has been working on the deposits since 2008, both as a consultant and an employee.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>No audit has been undertaken on the current MRE to date, but the model was designed with the assistance of independent consultants.</li> </ul>
<i>Discussion of relative accuracy/ confidence</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The geological and grade continuity of the Spotted Quoll deposit is well understood and the mineralisation wireframes used to build the block model have been designed using all available exploration and mining data.</li> <li>Post-processing block model validation was extensively undertaken using geostatistical methods.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource statement relates to local estimates of tonnes and grade.</li> </ul>
	<ul style="list-style-type: none"> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>The MRE was compared to the production grade control data. The upper section of the deposit has been mined by open pit methods and underground mining has been in place for over five years.</li> </ul>



## SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES

Criteria	JORC Code Explanation	Commentary
<i>Mineral Resource estimate for conversion to Ore Reserves</i>	<ul style="list-style-type: none"> <li>▪ Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li> <li>▪ Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Western Areas Ltd (WSA) undertook a review of the Spotted Quoll deposit (SQ) during Financial year 2020 after the completion of the new drilling campaign and updated mining data. The underlying Mineral Resource is issued in June 2020 Quarterly Report.</li> <li>▪ The Mineral Resources estimate is inclusive of the Ore Reserves.</li> </ul>
<i>Site visits</i>	<ul style="list-style-type: none"> <li>▪ Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>▪ If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Spotted Quoll is an operating underground mine since 2010. The Competent Person carries out routine inspections of the mine-site and underground workings as part of his normal duties.</li> <li>▪ WSA has established a fit-for-purpose data collection and record keeping system used by the technical staff to effectively manage the operation. This data is used in the present Ore Reserves estimation.</li> <li>▪ Mine design and mining method is based primarily on the recommendations laid out in the updated Feasibility study and back analysis data from the current mining practice.</li> </ul>
<i>Study status</i>	<ul style="list-style-type: none"> <li>▪ The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</li> <li>▪ The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</li> </ul>	<ul style="list-style-type: none"> <li>▪ WSA completed a SQ Feasibility Study in November 2010 as a continuation of the Spotted Quoll open pit (release 15th of December 2010). Underground mining commenced on the 2nd of May 2010 with firing the first portal face. The Feasibility Study is still valid and has been updated with the experience gained.</li> <li>▪ The current Ore Reserve estimation is an update of a pre-existing reserve using the new Mineral Resource, updated modifying factors, mine performance KPI's and a revised commodity price estimate.</li> </ul>
<i>Cut-off parameters</i>	<ul style="list-style-type: none"> <li>▪ The basis of the cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>▪ An Ore Reserve cut-off grade of 2% Ni was selected to obtain an Ore Reserve that fits the following criteria: <ul style="list-style-type: none"> <li>– Minimum Head Grade fitting the Mill requirements.</li> <li>– Ore Reserve average grade equal or greater than Life of Mine breakeven grade.</li> <li>– Mean Arsenic concentration that enables production of a saleable concentrate</li> <li>– Positive Forresteria LOM NPV</li> <li>– Maximise steady state production</li> <li>– LOM Nickel price curve from USD6.00/lb @ FX0.70 to USD7.50/lb @ FX 0.70.</li> </ul> </li> <li>▪ Some of the key ore reserve assumptions are considered commercially sensitive, however as the mine has been in operation for some years the reserve cut off parameters are developed using historical operating performance and</li> </ul>



Criteria	JORC Code Explanation	Commentary
<i>Mining factors or assumptions</i>	<ul style="list-style-type: none"> <li>▪ The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</li> <li>▪ The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</li> <li>▪ The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</li> <li>▪ The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</li> <li>▪ The mining dilution factors used.</li> <li>▪ The mining recovery factors used.</li> <li>▪ Any minimum mining widths used.</li> <li>▪ The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</li> <li>▪ The infrastructure requirements of the selected mining methods.</li> </ul>	<p>statistics. More details regarding cut off parameters are reported in the following sections.</p> <ul style="list-style-type: none"> <li>▪ The mining method used is predominantly longhole stoping with a top down sequence and paste filling of resultant voids.</li> <li>▪ The mining model used 5DPlanner and EPS Codes (Datamine software house). Mining factors have been selected using historical performance data of the deposit, particularly: <ul style="list-style-type: none"> <li>– The Mineral Resource model used is in Datamine format. It combines the Resources models for Spotted Quoll mine and has been released in June 2020 Quarterly report.</li> <li>– The minimum mining width is 2.0 metre.</li> <li>– The average stable stope length is between 20 and 30 metres with a stope height between 7 and 15 metres. Other geotechnical parameters are contained in the current Ground Control Management Plan.</li> <li>– Stope Hanging Wall planned dilution is 0.50 metres and Foot Wall planned dilution is from 0.1 to 0.2 metres at 0.21 Ni%.</li> <li>– Stope Unplanned dilution (including hosting rock and paste dilution) is included in the stope design shapes at 0 Ni%.</li> <li>– 0% Ni grade is assigned to the material outside the block model.</li> <li>– Ore recoveries range from 98% in the stopes and 100% in the ore drives.</li> <li>– Pillar factor for unplanned pillars is 0%.</li> <li>– Production rates reflect current mining performances and practice.</li> <li>– Standard SG for dilution is 2.8t/m3.</li> </ul> </li> <li>▪ No Inferred material has been utilised for the Ore Reserve estimation.</li> <li>▪ Spotted Quoll is an operating mine with existing infrastructure and planned extensions included in the LOM plan.</li> </ul>
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> <li>▪ The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</li> <li>▪ Whether the metallurgical process is well-tested technology or novel in nature.</li> <li>▪ The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> <li>▪ Any assumptions or allowances made for deleterious elements.</li> <li>▪ The existence of any bulk sample or pilot scale test work and the degree to which such samples are</li> </ul>	<ul style="list-style-type: none"> <li>▪ The metallurgical factors used are from the existing Cosmic Boy Concentrator (CBC) using conventional nickel sulphide floatation techniques combined with historical operating performance data. These factors are considered commercially sensitive and may be made available on request.</li> <li>▪ The metallurgical process is a well tested technology for Nickel Sulphides recovery with three stages of fragmentation with wet screening for size classification, one milling stage with cyclone size classification and two stages of flotation including Arsenic rejection. A small stream of the flotation feed is sent to the Hydrometallurgical section of the concentrator that uses the BioHeap® technology to improve the overall recovery.</li> <li>▪ The resultant concentrate is sold into existing off-take contracts with BHP and Tsingshan.</li> </ul>



Criteria	JORC Code Explanation	Commentary
	<p>considered representative of the orebody as a whole.</p> <ul style="list-style-type: none"> <li>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</li> </ul>	
<i>Environmental</i>	<ul style="list-style-type: none"> <li>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</li> </ul>	<ul style="list-style-type: none"> <li><b>Spotted Quoll open pit mine received final environmental approval in October 2009. Approvals were provided under both Western Australian legislation; principally being Parts IV and V of the Environmental Protection Act 1986 (EP Act) and the Mining Act 1978 (M Act) and Commonwealth legislation being the Environment Protection and Biodiversity Conservation Act 1999, (EPBC Act). Environmental approval has also been received, to mine Nickel sulphide ore from the underground extension of the Spotted Quoll open cut mine under Western Australian legislation being principally Parts IV and V of the EP Act and the M Act. No further approval was required from the Commonwealth for underground mining at Spotted Quoll.</b></li> <li><b>A list of Key State and Commonwealth approvals obtained for both the Spotted Quoll open pit and the underground operations may be made available by request.</b></li> </ul>
<i>Infrastructure</i>	<ul style="list-style-type: none"> <li>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</li> </ul>	<ul style="list-style-type: none"> <li><b>Spotted Quoll is an operating mine with adequate infrastructure and planned future capital project extensions are included in the LOM plan.</b></li> <li><b>Spotted Quoll is supplied by Western Power 33kV overhead power-line from the Bounty switchyard 60km to the north of mine-site.</b></li> <li><b>Potable water is produced via RO plants located at CB concentrator and pumped via a pipeline to the mine-site. Process water is recycled from the mine dewatering network.</b></li> <li><b>Bulk material logistics is predominately via conventional truck haulage.</b></li> <li><b>Mine personnel reside at the nearby Cosmic Boy Village (529 rooms) and are predominately a FIFO (via CB airstrip) workforce with some minor DIDO.</b></li> <li><b>The mine-site is 80km to the east of the Hyden township and has two main gazetted gravel road accesses (east from Hyden and south from Varley)</b></li> </ul>
<i>Costs</i>	<ul style="list-style-type: none"> <li>The derivation of, or assumptions made, regarding projected capital costs in the study.</li> <li>The methodology used to estimate operating costs.</li> <li>Allowances made for the content of deleterious elements.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products.</li> </ul>	<ul style="list-style-type: none"> <li><b>Capital Underground Development costs are derived from the LOM plan based on existing contracts and historical performance and data.</b></li> <li><b>All other Capital costs are sourced as necessary via quotes from suppliers or technical studies.</b></li> <li><b>Mining, processing, administration, surface transport, concentrate logistics and state royalty costs are based on existing cost estimates.</b></li> <li><b>The nickel price and FX assumptions used were sourced from industry standard sources</b></li> <li><b>Nickel price from USD6.00/lb @ FX0.70 to USD7.50/lb @ FX 0.70.</b></li> </ul>





Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <li>▪ The source of exchange rates used in the study.</li> <li>▪ Derivation of transportation charges.</li> <li>▪ The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</li> <li>▪ The allowances made for royalties payable, both Government and private.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Net Smelter Return (NSR) factors were sourced from existing concentrate off-take contracts.</li> </ul>
<i>Revenue factors</i>	<ul style="list-style-type: none"> <li>▪ The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</li> <li>▪ the derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</li> </ul>	<ul style="list-style-type: none"> <li>▪ These have been selected after consideration of historical commodity prices variations over time and the requirement for the Reserve to be robust to potentially volatile commodity price and foreign exchange conditions.</li> <li>▪ The price setting mechanism for the sale of product subject to this report is traded openly on the London Metals Exchange ("LME").</li> <li>▪ Potential penalties and net smelter revenue factors are included in the Smelter Return factor used. This factor is based on the historical data from previous FY's and is considered commercially sensitive by the company and may be made available on request.</li> <li>▪ Two main selling contracts structures are currently used by Western Areas. One has copper as a co-product and the second doesn't have any co-product. Allowance for this selling parameter is included in the Smelter Return factor.</li> </ul>
<i>Market assessment</i>	<ul style="list-style-type: none"> <li>▪ The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>▪ A customer and competitor analysis along with the identification of likely market windows for the product.</li> <li>▪ Price and volume forecasts and the basis for these forecasts.</li> <li>▪ For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The commodity subject to this report is traded openly on the London Metals Exchange ("LME").</li> <li>▪ The Company has for many years maintained both long and short term off-take sales contracts with multiple customers, both locally and internationally.</li> <li>▪ Existing contracts have been assessed for the sales volume assumptions.</li> <li>▪ As the Company has been supplying multiple customers over a significant time period no acceptance testing has been assumed in the reserve development process.</li> <li>▪ These contracts have fixed dates in which the contract itself is reviewed and/or expires. The assumption to extend these contracts and the current sold volumes to the end of LOM has been made in order to assess the Ore Reserve.</li> <li>▪ Refer to the previous section for nickel price assumptions.</li> </ul>
<i>Economic</i>	<ul style="list-style-type: none"> <li>▪ The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</li> <li>▪ NPV ranges and sensitivity to variations in the significant assumptions and inputs.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Company has been operational for a significant period of time with contracts in place for ore mining, processing and concentrate haulage. Furthermore the operation, subject to this report, has an in-situ operating concentrator facility. As such the actual visible operating and contract rates (including rise and fall where appropriate) has been used in the NPV economic assessments. Figures are considered commercially sensitive by the company.</li> </ul>



Criteria	JORC Code Explanation	Commentary
		<ul style="list-style-type: none"> <li>The discount rate has been estimated as the weighted average cost of capital for the Company.</li> </ul>
<i>Social</i>	<ul style="list-style-type: none"> <li>The status of agreements with key stakeholders and matters leading to social licence to operate.</li> </ul>	<ul style="list-style-type: none"> <li>All legal permits to mine Spotted Quoll have been obtained by Western areas following the paths described by the relevant laws with the participation of the local communities (see previous points).</li> <li>As a company policy (COR-HRM-POL-1122 -Social Responsibility Policy), the relations with the local communities and territories are a key part of operational management.</li> </ul>
<i>Other</i>	<ul style="list-style-type: none"> <li>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:                             <ul style="list-style-type: none"> <li>Any identified material naturally occurring risks.</li> <li>The status of material legal agreements and marketing arrangements.</li> <li>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>It is noted that mining operations are an inherently risky business in which to operate, no other risk factors apart from the normal risk components included in all the above points and assumptions have been identified.</li> </ul>
<i>Classification</i>	<ul style="list-style-type: none"> <li>The basis for the classification of the Ore Reserves into varying confidence categories.</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> <li>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</li> </ul>	<ul style="list-style-type: none"> <li>Spotted Quoll has the following reserves at the 30th of June 2020:                             <ul style="list-style-type: none"> <li>Probable Ore Reserves: 1,225,000 ore tonnes at 4.0% Ni for 49,600 Nickel tonnes</li> </ul> </li> <li>The ore reserve generated appropriately reflects the Competent Person's view of the deposit.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Ore Reserve estimates.</li> </ul>	<ul style="list-style-type: none"> <li>Audits/Reviews of the present report have not been done because of the high confidence in the data used and the constant performance of the operation. A review may be done by external request.</li> </ul>
<i>Discussion of relative accuracy/confidence</i>	<ul style="list-style-type: none"> <li>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure</li> </ul>	<ul style="list-style-type: none"> <li>The confidence in the present evaluation is based on Spotted Quoll being a well established operating mine with a mature performance database.</li> </ul>



Criteria	JORC Code Explanation	Commentary
	<p>deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</p> <ul style="list-style-type: none"> <li>▪ 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.</li> <li>▪ Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</li> <li>▪ It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The present estimation, for the nature of the commodity mined, refers to global market conditions (see above points for the assumptions).</li> <li>▪ As is normal in mining operations, the key points that can have a significant impact on the performance of the Spotted Quoll Mine are the market conditions in general, and the Nickel price and the currency exchange rates in particular. All the other parameters are derived from sound historical production data.</li> </ul>



## JORC 2012 TABLE 1 – FORRESTANIA EXPLORATION

### 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 style="list-style-type: none"><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 style="list-style-type: none"><li>▪ Forresterania 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.</li><li>▪ Several 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 style="list-style-type: none"><li>▪ Acknowledgment and appraisal of exploration by other parties.</li></ul>	<ul style="list-style-type: none"><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 Lion Ore and St Barbara prior to that time.</li><li>▪ Western Areas has managed the Mt Gibb JV since 2009 (Great Western Exploration explored the ground prior to that time).</li><li>▪ Kidman Resources Limited has entered into a Farm-in and Joint Venture with Western Areas, with a Stage 1 opportunity to earn in to 50% lithium rights.</li></ul>																																								
Geology	<ul style="list-style-type: none"><li>▪ Deposit type, geological setting and style of mineralisation.</li></ul>	<ul style="list-style-type: none"><li>▪ The FNO lies within the Forresterania 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>																																								
Drill hole Information	<ul style="list-style-type: none"><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 style="list-style-type: none"><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></ul></li></ul>	<ul style="list-style-type: none"><li>▪ Drill hole summary details supporting reported intersections from the Seagull prospect are captured in the enclosed table.</li></ul> <table><tr><th>HOLEID</th><th>Easting</th><th>Northing</th><th>RL</th><th>EOH Depth (m)</th><th>Type</th><th>DIP</th><th>Azimuth</th></tr><tr><td>SD046</td><td>756581</td><td>6393477.6</td><td>399.8</td><td>622.3</td><td>DD</td><td>-60</td><td>46.2</td></tr><tr><td>SD047</td><td>756579.7</td><td>6393478.6</td><td>399.9</td><td>464.94</td><td>DD</td><td>-57</td><td>27.6</td></tr><tr><td>SD047W1</td><td>756579.7</td><td>6393478.6</td><td>399.9</td><td>675.8</td><td>DD</td><td>-57</td><td>27.6</td></tr><tr><td>SD048</td><td>756579.5</td><td>6393480</td><td>399.8</td><td>642.9</td><td>DD</td><td>-56</td><td>18.1</td></tr></table>	HOLEID	Easting	Northing	RL	EOH Depth (m)	Type	DIP	Azimuth	SD046	756581	6393477.6	399.8	622.3	DD	-60	46.2	SD047	756579.7	6393478.6	399.9	464.94	DD	-57	27.6	SD047W1	756579.7	6393478.6	399.9	675.8	DD	-57	27.6	SD048	756579.5	6393480	399.8	642.9	DD	-56	18.1
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Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <li>– down hole length and interception depth</li> <li>– hole length.</li> </ul> <ul style="list-style-type: none"> <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>	
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>▪ <b>Standard weighted averaging of drill hole intercepts were employed. No maximum or minimum grade truncations were used in the estimation.</b></li> <li>▪ <b>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.</b></li> <li>▪ <b>Metal equivalents have not been used</b></li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <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 (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Drill hole intersections may not be true widths</b></li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>▪ <b>Included within report</b></li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>▪ 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</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>All relevant assay results have been reported</b></li> </ul>



Criteria	JORC Code Explanation	Commentary
	misleading reporting of Exploration Results.	
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li><b>Included within the report</b></li> <li><b>Geophysics</b></li> <li><b>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</b></li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li><b>Preliminary plans are included within the report</b></li> <li><b>Future explorations programs may change depending on results and strategy</b></li> </ul>



## JORC 2012 TABLE 1 – COSMOS NICKEL COMPLEX EXPLORATION

### SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code Explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration targets were tested and sampled from diamond drilling (DD) core, and holes were mostly drilled perpendicular to the strike (north-south) of the stratigraphy.</li> <li>Drill holes were located initially with hand held GPS and later surveyed by differential GPS. DD holes were used to obtain high quality samples that were fully oriented and logged for lithological, structural, geotechnical attributes. Each sample of diamond drill core submitted to ALS laboratories at Malaga, Perth was weighed to determine density by the weight in air, weight in water method. All sampling was conducted under WSA QAQC protocols which are in accordance with industry best practice.</li> <li>Diamond drill core (NQ2) is 1/4 core sampled on geological intervals (0.2m - 1.5m) to achieve sample weights under 2kgs.</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.</li> </ul>
	<ul style="list-style-type: none"> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	<ul style="list-style-type: none"> <li>All samples were prepared and assayed by independent commercial laboratories whose instruments are regularly calibrated</li> <li>Geophysical survey QC parameters were reviewed by independent supervising geophysicists from Newexco Services Pty Ltd</li> </ul>
	<ul style="list-style-type: none"> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond core is typically marked at 1m intervals</li> <li>Sample intervals marked up by geologists based on geology.</li> <li>Sampled mineralisation intervals are sent to a commercial laboratory for crushing and grinding before assaying.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Diamond Drilling utilized a UDR1200 rig</li> <li>Diamond drilling comprises HQ and NQ2 sized core.</li> <li>Historical data is derived from both surface and underground diamond drilling</li> </ul>



Criteria	JORC Code Explanation	Commentary
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond core recoveries have been logged and recorded in the database</li> <li>Diamond core are logged and recorded in the database. Overall recoveries are &gt;95% and there was no core loss issues or significant sample recovery problems. Core loss is noted where it occurs.</li> <li>Diamond core was reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the drillers.</li> <li>RC recoveries are logged and recorded in the database and RC samples were visually checked for recovery, moisture and contamination. Drilling close to the lake shore for the Neptune drilling resulted in high water flows which reduced the sample size and loss of fines from the sample.</li> <li>The drilling by diamond core method has high recoveries. The massive sulphide style of mineralisation and the consistency of the mineralised intervals are considered to preclude any issue of sample bias due to material loss or gain.</li> <li>Drilling in the oxidised profile results in more incomplete core recoveries.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All geological logging was carried out to a high standard using well established geology codes in LogChief software.</li> <li>All logging recorded in a Panasonic Toughbook PC.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> </ul>	<ul style="list-style-type: none"> <li>Core is photographed in both dry and wet form and logging is done in detail.</li> </ul>
	<ul style="list-style-type: none"> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>All diamond drill holes were logged and photographed in full. RC holes are logged in full.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond core is sampled as quarter core only; cut by the field crew on site by diamond saw.</li> </ul>
	<ul style="list-style-type: none"> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> </ul>	<ul style="list-style-type: none"> <li>RC samples were collected on the rig using cone splitters. Composite samples are collected via riffle splitting or spearing to generate a single sample of less than 3kg.</li> </ul>
	<ul style="list-style-type: none"> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul style="list-style-type: none"> <li>Sample preparation follows industry best practice involving oven drying, coarse crushing and pulverising.</li> </ul>
	<ul style="list-style-type: none"> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	<ul style="list-style-type: none"> <li>The field crew prepares and inserts the QAQC certified reference materials into the relevant calico bags.</li> <li>OREAS and Geostats standards have been selected based on their grade range and mineralogical properties, with approximately 12 different standards used.</li> </ul>
	<ul style="list-style-type: none"> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for</li> </ul>	<ul style="list-style-type: none"> <li>Standards and blanks are inserted approximately every 20 samples or at least one every hole for both diamond and RC drilling.</li> </ul>





Criteria	JORC Code Explanation	Commentary
	instance results for field duplicate/second-half sampling.	
	<ul style="list-style-type: none"> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>All geological logging was carried out to a high standard using well established geology codes in LogChief software.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> </ul>	<ul style="list-style-type: none"> <li>All samples are assayed by independent certified commercial laboratories.</li> <li>The laboratories used are experienced in the preparation and analysis of nickel sulphide ores.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No Geophysical tools or handheld XRF instruments were used to determine any element concentrations that were subsequently used for MRE or exploration reporting purposes.</li> </ul>
	<ul style="list-style-type: none"> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Certified reference materials are included in all batches dispatched at an approximate frequency of 1 per 25 samples, with a minimum of two per batch.</li> <li>Field duplicates are inserted into submissions at an approximate frequency of 1 in 25, with placement determined by Nickel grade and homogeneity. Lab checks, both pulp and crush, are taken alternately by the lab at a frequency of 1 in 25.</li> <li>Accuracy and precision were assessed using industry standard procedures such as control charts and scatter plots.</li> <li>Evaluations of standards are completed on a monthly, quarterly and annual basis using QAQCR.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> </ul>	<ul style="list-style-type: none"> <li>Geological interpretation using intersections peer viewed by prior company and WSA geologists.</li> </ul>
	<ul style="list-style-type: none"> <li>The use of twinned holes.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
	<ul style="list-style-type: none"> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	<ul style="list-style-type: none"> <li>All primary geophysical data were recorded digitally and sent in electronic format to Newexco Services Pty Ltd for quality control and evaluation.</li> <li>All geological logging was carried out to a high standard using well established geology codes in LogChief software.</li> <li>All other data including assay results are imported via Datashed software.</li> <li>Drillholes, sampling and assay data is stored in a SQL Server database located in a dedicated data center.</li> </ul>
	<ul style="list-style-type: none"> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>none</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine</li> </ul>	<ul style="list-style-type: none"> <li>Downhole surveys completed using the Reflex "Gyro Sprint-IQ™" north seeking gyroscopic instrument on all resource definition and Exploration diamond holes. Exploration RC holes</li> </ul>



Criteria	JORC Code Explanation	Commentary
	workings and other locations used in Mineral Resource estimation.	were surveyed down-hole using an Eastman single shot camera. Underground drill-hole collar locations verified via survey pickup.
	<ul style="list-style-type: none"> <li>Specification of the grid system used.</li> </ul>	<ul style="list-style-type: none"> <li>MGA94 Zone 51 grid coordinate system is used.</li> <li>A two point transformation is used to convert the data from AMG84_51 mine grid and vice versa.</li> </ul>
	<ul style="list-style-type: none"> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>The project area is flat and the topographic data density is adequate for MRE purposes</li> <li>Collar positions were picked up by suitably qualified surface and underground surveyors</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>Drill hole spacing at Neptune, Penelope, Zeus and Ajax is varied according to the nature of target type. Where initial drilling was undertaken holes are nominally 250m to 400m apart. Where mineralisation is identified holes are spaced at an approx 100m to 200m spacing.</li> <li>For other projects, drill spacing will vary based on the target being tested.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Samples are collected at 1m intervals (Diamond and Aircore) and 4m composites (RC)</li> </ul>
	<ul style="list-style-type: none"> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling compositing has been applied to some of the RC sampling (2m to 4m). Where significant results are intersected, RC samples will be broken into 1m intervals. No RC sampling was performed for the quarter.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> </ul>	<ul style="list-style-type: none"> <li>The majority of the drill holes are orientated to achieve intersection angles as close to perpendicular as possible. The steep dipping nature of the stratigraphy at some targets (70° to 80°) means this is not always achieved.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No orientation based sampling bias has been observed in the data, intercepts are reported as downhole lengths.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Standard West Australian mining industry sample security measures were observed.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Adrian Black of Newexco Pty Ltd (a member of the AIG), an independent exploration company, has reviewed the data and sampling techniques employed by the Company.</li> </ul>



## 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 style="list-style-type: none"><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 style="list-style-type: none"><li>Cosmos Nickel Complex comprises 26 tenements covering some 9,226Ha. The tenements include mining leases and miscellaneous licenses</li><li>Western Areas wholly owns 23 tenements, which were acquired from Xstrata Nickel Australasia in October 2015. The remainder of the tenements (3) are subject to a Joint Venture with Alkane Resources NL, where Western Areas has earned 80.6% interest</li><li>All tenements are in good standing</li></ul>																																																
Exploration done by other parties	<ul style="list-style-type: none"><li>Acknowledgment and appraisal of exploration by other parties.</li></ul>	<ul style="list-style-type: none"><li>Historical nickel exploration has been completed by Glencore PLC, Xstrata Nickel Australasia and Jubilee Mines NL</li></ul>																																																
Geology	<ul style="list-style-type: none"><li>Deposit type, geological setting and style of mineralisation.</li></ul>	<ul style="list-style-type: none"><li>The deposits form part of the Cosmos Nickel Complex, which lies within the Agnew-Wiluna Belt of the central Yilgarn Craton, Western Australia</li><li>The deposit style is komatiite hosted, disseminated to massive nickel sulphides.</li><li>The mineralisation typically occurs in association with the basal zone of high MgO cumulate ultramafic rocks.</li><li>Many of the higher grade ore bodies in the Cosmos Nickel Complex also show varying degrees of remobilisation, and do not occur in a typical mineralisation profile</li></ul>																																																
Drill hole Information	<ul style="list-style-type: none"><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 style="list-style-type: none"><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>	<ul style="list-style-type: none"><li>Drill hole summary details supporting reported intersections from the Neptune Project are captured in the enclosed table.</li></ul> <table><tr><th>HOLEID</th><th>Easting</th><th>Northing</th><th>RL</th><th>EOH Depth (m)</th><th>Type</th><th>DIP</th><th>Azimuth</th></tr><tr><td>WCD032</td><td>261302.8</td><td>6943098.7</td><td>470.3</td><td>547.6</td><td>DD</td><td>-66</td><td>264</td></tr><tr><td>WCD032W1</td><td>261302.8</td><td>6943098.7</td><td>470.3</td><td>1091.6</td><td>DD</td><td>-66</td><td>264</td></tr><tr><td>WCD033</td><td>262500</td><td>6937898.1</td><td>460.5</td><td>1329.5</td><td>DD</td><td>-55</td><td>226</td></tr><tr><td>WCD034</td><td>261218.9</td><td>6943409</td><td>472.4</td><td>1475.6</td><td>DD</td><td>-70</td><td>266</td></tr><tr><td>WCD035</td><td>261907.9</td><td>6939488.6</td><td>460.5</td><td>986.5</td><td>DD</td><td>-56</td><td>263.9</td></tr></table>	HOLEID	Easting	Northing	RL	EOH Depth (m)	Type	DIP	Azimuth	WCD032	261302.8	6943098.7	470.3	547.6	DD	-66	264	WCD032W1	261302.8	6943098.7	470.3	1091.6	DD	-66	264	WCD033	262500	6937898.1	460.5	1329.5	DD	-55	226	WCD034	261218.9	6943409	472.4	1475.6	DD	-70	266	WCD035	261907.9	6939488.6	460.5	986.5	DD	-56	263.9
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Criteria	JORC Code Explanation	Commentary
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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.</li> <li>Metal equivalents have not been used</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <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 (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Drill hole intersections may not be true widths</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Included within report</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All relevant assay results have been reported</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <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</li> </ul>	<ul style="list-style-type: none"> <li>Included within report</li> <li>Geophysics</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>





Criteria	JORC Code Explanation	Commentary
	characteristics; potential deleterious or contaminating substances.	
<i>Further work</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>▪ <b>Preliminary plans are included within the report</b></li> <li>▪ <b>Future explorations programs may change depending on results and strategy</b></li> </ul>



## JORC 2012 TABLE 1: WESTERN GAWLER JOINT VENTURE

### SECTION 1: SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code Explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration targets were tested and sampled from diamond drilling (DD) core, and holes were mostly drilled perpendicular to the strike (NE-SW) of the stratigraphy.</li> <li>Drill holes were located with handheld GPS.</li> <li>DD holes were used to obtain high quality samples that were fully oriented and logged for lithological, structural, geotechnical attributes. Each sample of diamond drill core submitted to ALS laboratories at Malaga, Perth. All sampling was conducted under WSA QAQC protocols which are in accordance with industry best practice.</li> <li>Diamond drill core (NQ2) is 1/4 core sampled on geological intervals (0.2m - 1.5m) to achieve sample weights under 3kgs.</li> <li>Samples were crushed, dried and pulverised (total prep) to produce a sub sample for analysis by 4 acid digest with an ICP/MS and FA/ICP (Au, Pt, Pd) finish.</li> </ul>
<i>Drilling Techniques</i>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Exploration targets are tested using DDH drilling. Holes were drilled between 60-90 degrees.</li> <li>A track-mounted Sandvik DDH rig is used. .</li> <li>Diamond drilling comprises PQ2, HQ3 and NQ2 sized core.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias</li> </ul>	<ul style="list-style-type: none"> <li>Diamond core recoveries have been logged and recorded in the database</li> <li>Diamond core are logged and recorded in the database. Overall recoveries are &gt;95% and there was no core loss issues or significant sample recovery problems. Core loss is noted where it occurs.</li> <li>Diamond core was reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the drillers.</li> </ul>



Criteria	JORC Code Explanation	Commentary
Logging	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc)</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>The drilling by diamond core method has high recoveries.</li> <li>Geological logging is recorded and validated in 'Ocris' Logging Software (Toughbook platform) &amp; stored in an Acquire database.</li> <li>Drill core is logged for lithology, mineralogy, mineralisation, weathering, fabric, grainsize, colour, structure, and other relevant features.</li> <li>Geotechnical logging was not completed due to the nature of drill method.</li> <li>Core is photographed both in wet and dry form.</li> <li>All holes have been logged from the surface to the end of hole.</li> <li>Petrology is used to verify the field geological logging.</li> </ul>
Sub-sampling techniques and sampling preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond core is sampled as either quarter or half core; cut by ALS Perth .</li> <li>Sample preparation follows industry best practice involving oven drying, coarse crushing and pulverising.</li> <li>The field crew prepares and inserts the QAQC certified reference materials into the relevant calico bags.</li> <li>OREAS and Geostats standards have been selected based on their grade range and mineralogical properties, with approximately 12 different standards used.</li> <li>Standards and Blanks are inserted approximately every 25 samples.</li> </ul>
Quality of assay data laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>All samples are processed by ALS Minerals (Australian Laboratory Services P/L) in Perth, Western Australia</li> <li>All drill samples are subjected to ICP-MS (ME-MS61 and ME-MS61r for selected EOH samples) analysis using nitric, perchloric, hydrofluoric and hydrochloride acid digest.</li> <li>All samples are also assayed for PGE's using PGM-ICP23</li> <li>Standards and blanks are routinely used to assess company QAQC (approx 1 standard for every 25-50 samples).</li> <li>Certified reference materials are included in all batches dispatched at an approximate frequency of 1 per 25 samples, with a minimum of two per batch.</li> <li>Field duplicates are inserted into submissions at an approximate frequency of 1 in 25, with placement determined by Nickel grade and homogeneity. Lab checks, both pulp and crush, are taken alternately by the lab at a frequency of 1 in 25.</li> <li>Accuracy and precision were assessed using industry standard procedures such as control charts and scatter plots.</li> </ul>



Criteria	JORC Code Explanation	Commentary
		<ul style="list-style-type: none"> <li>Evaluations of standards are completed on a monthly, quarterly and annual basis using QAQCR.</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Primary data was collected using Ocris logging software spreadsheets, on Toughbook computers.</li> <li>All data is validated by the supervising geologist and sent to WSA Perth for further validation and integration into an Acquire database.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Drill holes were located using hand held GPS.</li> <li>Elevation data is captured with handheld GPS, and cross referenced with local topographical maps,</li> <li>Downhole Survey Data is collected using a digital Reflex survey tool,</li> <li>MGA94 Zone 53 grid coordinate system is used.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Drill holes are located and specifically planned according to target location and stratigraphic location.</li> <li>Drillhole spacing at Mystic varies according to the nature of the target type.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The majority of the drill holes are drilled at 60 degrees to achieve the best possible intersection angle in steeply dipping terrane.</li> <li>Heritage and/or environmental constraints may prevent some ideal drilling solutions.</li> <li>No orientation-based sampling bias has been observed in the data, intercepts are reported as down-hole lengths.</li> </ul>
<i>Sample Security</i>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>All samples are captured and prepared for transport onsite under the supervision of WSA staff.</li> </ul>
<i>Audits and Reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Adrian Black of Newexco Pty Ltd (a member of the AIG), an independent exploration company, has reviewed the data and sampling techniques employed by WSA.</li> </ul>





## SECTION 2: REPORTING OF EXPLORATION RESULTS

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

Criteria	JORC Code Explanation	Commentary																																								
Mineral tenement and land tenure status	<ul style="list-style-type: none"><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 license to operate in the area.</li></ul>	<ul style="list-style-type: none"><li>The Western Gawler Project comprises 6 exploration licenses covering some 4,448km2, of which 5 are held 100% WSA. EL 6087(formerly EL 5077), EL6248 (formerly EL 5199), EL6249 (formerly EL5200), EL5688 and EL5939</li><li>Licence EL 5880 (formerly EL 4440) is operated under the Strandline Resources Ltd / Western Areas Ltd Farm-In and Joint Venture (JV) Agreement.</li><li>The Fowler JV Project consists of 5 exploration licenses under a Farm In and Joint Venture Agreement (FIJVA) between Iluka (Eucla Basin) Pty Limited and Western Areas Limited, all of which all are held by Iluka (Eucla Basin) Pty Limited. EL5878, EL5879, EL6251, EL5675 and, EL5452.</li></ul>																																								
Exploration done by other parties.	<ul style="list-style-type: none"><li>Acknowledgment and appraisal of exploration by other parties.</li></ul>	<ul style="list-style-type: none"><li>The project area was originally explored by BHP Billiton as part of its extensive gold, titanium, Iron and nickel target generation work, and more recently by Gunson Resources Limited (Nickel), Equinox (Base Metals and Gold) and Iluka Resources Ltd (Mineral Sands). It is deemed that the previous exploration was of variable effectiveness.</li><li>The South Australian Government has performed widely spaced stratigraphic diamond drilling along a number of traverses in the tenure</li><li>The success rate of historical RC drilling is low, while the AC and Diamond drilling was effective.</li><li>Gravity, Magneto Tellurics and Airborne Electro-magnetics have been used in selective locations within the project area.</li><li>The historical geophysics is deemed to have been effective.</li></ul>																																								
Geology	<ul style="list-style-type: none"><li>Deposit type, geological setting and style of mineralisation.</li></ul>	<ul style="list-style-type: none"><li>The Western Gawler Project lies within the Fowler Domain of western South Australia. The Fowler Domain is a Mesoproterozoic orogenic belt comprised of medium to high metamorphic grade basement lithologies and younger felsic, mafic and ultramafic intrusives.</li><li>Similarly aged terranes globally contain significant accumulations of nickel and copper sulphides.</li><li>Whilst not primary target types, the area may also be prospective for orogenic gold, IOCG and skarn related mineralisation.</li></ul>																																								
Drill hole Information	<ul style="list-style-type: none"><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></ul>	<p>All collar related information pertaining to the location of the reported assay results are included within the exploration results table contained within the body of this report.</p> <table><thead><tr><th>HOLEID</th><th>Easting</th><th>Northin g</th><th>RL</th><th>EOH Depth (m)</th><th>Type</th><th>DIP</th><th>Azimuth</th></tr></thead><tbody><tr><td>20WGDD0002</td><td>236402</td><td>6508650</td><td>50</td><td>450.3</td><td>DD</td><td>-60</td><td>120</td></tr><tr><td>20WGDD0003</td><td>236507</td><td>6508652</td><td>69</td><td>96.7</td><td>DD</td><td>-90</td><td>0</td></tr><tr><td>20WGDD0004</td><td>236688</td><td>6509195</td><td>76</td><td>114.7</td><td>DD</td><td>-90</td><td>0</td></tr><tr><td>20WGDD0005</td><td>305078</td><td>6603313</td><td>213</td><td>450.3</td><td>DD</td><td>-60</td><td>290</td></tr></tbody></table>	HOLEID	Easting	Northin g	RL	EOH Depth (m)	Type	DIP	Azimuth	20WGDD0002	236402	6508650	50	450.3	DD	-60	120	20WGDD0003	236507	6508652	69	96.7	DD	-90	0	20WGDD0004	236688	6509195	76	114.7	DD	-90	0	20WGDD0005	305078	6603313	213	450.3	DD	-60	290
HOLEID	Easting	Northin g	RL	EOH Depth (m)	Type	DIP	Azimuth																																			
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Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <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>	Datum MGA94 (Z53)
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</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 style="list-style-type: none"> <li><b>Standard weighted averaging of drill hole intercepts were employed. No maximum or minimum grade truncations were used in the estimation.</b></li> <li><b>The reported assays have been length weighted. A lower arbitrary 0.2% Ni cut-off is applied, with no top cut applied. High grade intercepts internal to broader zones of mineralisation are reported as included intervals.</b></li> <li><b>Metal equivalents have not been used</b></li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <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 (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li><b>Drill hole intersections may not be true widths</b></li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li><b>Included within report</b></li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li><b>All relevant assay results have been reported</b></li> </ul>



Criteria	JORC Code Explanation	Commentary
	misleading reporting of Exploration Results.	
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li><b>Multi-element analysis is conducted routinely on all samples for a base metal and PGM suite and potentially deleterious elements.</b></li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. 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 style="list-style-type: none"> <li><b>Exploration within the Western Gawler Project is ongoing.</b></li> <li><b>At this stage of the exploration program, the nature of the geological model is evolving. Details of further work and will be forthcoming as the project progresses.</b></li> </ul>