

# ACTIVITY REPORT

For the period ending 31 December 2019

WESTERN AREAS LTD



## FORRESTANIA DELIVERING IN LINE WITH GUIDANCE AND STRONG PROGRESS ON ODYSSEUS MINE INFRASTRUCTURE

### DECEMBER QUARTER 2019 HIGHLIGHTS

- Mine production of 5,849 nickel tonnes and 11,654 nickel tonnes for the half year
- Mill production of 5,399 nickel tonnes and 10,658 nickel tonnes for half year (FY20 guidance range of 21,000 to 22,000 tonnes for full year)
- Unit cash cost of nickel in concentrate of A\$3.10/lb for quarter and A\$3.07 for the half year (FY20 guidance of A\$2.90/lb to A\$3.30/lb)
- Nickel sales of 3,991 nickel tonnes and 9,042 nickel tonnes for half year, impacted by timing of export shipment after quarter end on 1 January 2020
- Net free cashflow of A\$19.0m increased cash at bank to A\$184.9m (Sep quarter A\$165.9m)
- Final fully franked FY19 dividend of A\$5.5m paid to shareholders
- Successful commissioning of underground main pump station and associated infrastructure at Odysseus, with underground mine rehabilitation advancing
- New nickel concentrate offtake contracts executed post quarter end, commencing in February 2020

*Western Areas Managing Director, Mr Dan Lougher, said that the Company was pleased to deliver another quarter of consistent performance, and is tracking well towards achieving FY20 guidance.*

*“Along with strong, consistent results from our existing operations, our new mine at Odysseus continues to take shape, with significant infrastructure work now complete. The improved terms from our latest round of nickel offtake contracts will deliver enhanced revenues, while demonstrating that future demand for nickel is expected to be robust,” Mr Lougher said.*

Western Areas (“WSA” or the “Company”) (ASX: WSA) is pleased to present the quarterly report for the second quarter FY2020. The Forrestania operation produced 5,399tn of nickel in concentrate for the quarter, generating operating cashflow of A\$56.7m. This allowed the Company to record strong net free cashflow of A\$19.0m after all capital expenditure, exploration and payment of the FY19 full year dividend. As foreshadowed, cash flow this quarter included high nickel sales receivables being converted into cash. Conversely, nickel concentrate stockpiles awaiting shipment built up in December, as Kambalda deliveries were delayed due to bushfire related road closures and timing of an export shipment missing quarter end and leaving port on 1 January 2020. These timing differences will reverse in the March quarter.

At Odysseus, the construction programme is making excellent progress, hitting the key development milestones required to continue advancing this new, long life mining operation. Underground mine development and surface infrastructure construction accelerated with the life of mine pump station and de-watering reticulation systems commissioned, and underground decline rehabilitation recommencing in newly dewatered areas of the mine. Solid progress has been made toward the refurbishment of the shaft headgear and winder in South Africa with opportunistic and cost effective structural and painting works now to be completed before shipment to site for erection. Mining studies for the AM5/6 deposits at Odysseus are continuing, which will provide upside and optionality within the mining production sequences.

Subsequent to quarter end, Western Areas awarded two new offtake contracts to each of BHP Billiton Nickel West Pty Ltd and Jinchuan Co. Ltd for the Company’s high grade Forrestania operation concentrate product. These new contracts follow the successful completion of a highly competitive tender process that resulted in significantly improved commercial terms when compared to the current offtake agreements. Importantly these contracts have been awarded to traditional nickel smelter operators, which the Company believes will continue to be involved in the major supply lines for the emerging electric vehicle battery market.

The nickel price has been volatile over the quarter, reacting unpredictably to global geopolitical news flow related to Indonesian government policy to ban nickel laterite exports and market expectations related to trade tariff negotiations. An increase in LME nickel stocks occurred during the quarter, however encouragingly they remain at multi-year lows.



## PRODUCTION OVERVIEW

Item	Unit	2018/2019		2019/2020		YTD 1H 2020
		Mar Qtr	Jun Qtr	Sep Qtr	Dec Qtr	
Total Ore Mined	tonnes	141,595	133,312	147,356	144,932	292,288
Mine Grade	Ni %	4.3%	4.1%	3.9%	4.0%	4.0%
<b>Total Nickel Mined</b>	tonnes	<b>6,066</b>	<b>5,423</b>	<b>5,805</b>	<b>5,849</b>	<b>11,654</b>
Ore Processed (Milling/Concentrator)	tonnes	<b>146,935</b>	<b>152,329</b>	<b>149,729</b>	<b>143,409</b>	<b>293,138</b>
Processed Grade	Ni %	4.2%	4.0%	3.9%	4.2%	4.1%
Average Processing Recovery	%	88%	88%	89%	89%	89%
<b>Total Nickel in Concentrate</b>	tonnes	<b>5,448</b>	<b>5,433</b>	<b>5,259</b>	<b>5,399</b>	<b>10,658</b>
<b>Total Nickel Sold</b>	tonnes	<b>5,189</b>	<b>5,890</b>	<b>5,051</b>	<b>3,991(*)</b>	<b>9,042</b>
Contained Nickel in Stockpiles	tonnes	4,510	3,317	3,315	4,389	
Cash Cost Nickel in Concentrate	A\$/lb	<b>2.82</b>	<b>2.96</b>	<b>3.06</b>	<b>3.10</b>	<b>3.07</b>
Cash Cost Nickel in Concentrate	US\$/lb	2.01	2.07	2.09	2.12	2.11
Exchange Rate	US\$/A\$	0.71	0.70	0.69	0.68	0.69
<b>Net Nickel Price (before payability applied)</b>	A\$/lb	<b>8.31</b>	<b>8.09</b>	<b>11.50</b>	<b>9.39</b>	<b>10.57</b>

(\*) Noting the export shipment missed the quarter end, leaving port on 1 January 2020

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 exploration interests in Canada through shareholdings 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 the northern Forrestania 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>.

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## CORPORATE AND FINANCING

### CASHFLOW

Net free cashflow of A\$19.0m for the period resulted in a closing cash balance of A\$184.9m at quarter end (Sep quarter A\$165.9m). The significant cashflow items during the quarter included:

- Operating cashflow was A\$56.7m as a result of the nickel price (pre-payable deduction) reported at A\$9.39/lb for the quarter and further assisting the free cashflow results was the conversion of working capital (sales receivables) into cash during the quarter;
- Odysseus mine development and construction expenditure of A\$14.9m; and
- Dividend payment of \$5.5m.

Sustaining mine development and capital expenditure at Forrestania totalled A\$10.6m (Sep quarter A\$10.7m). Growth expenditure for the Odysseus mine development at Cosmos was A\$14.9m (Sep quarter A\$14.0m), primarily related to the completion of the underground pump station construction and dismantling and refurbishment of the shaft haulage infrastructure in South Africa. Exploration expenditure was A\$6.2m for the quarter, including a A\$0.8m payment for the purchase of the Kathleen Valley tenements from Ramelius Resources.

Cash at bank plus nickel sales receivables totalled A\$189.8m (Sep quarter A\$207.3m). The nickel sales receivable balance was impacted by a timing variance related to the December export shipment which commenced loading on 31 December 2019 and completing loading on 1 January 2020. As revenue is recognised when concentrate crosses the ship's rail, only the portion of the cargo that was onboard the vessel as at midnight 31 December 2019 is accrued into revenue and the remaining cargo is accounted for as inventory awaiting shipment as at the half year end. As the cash payment for the shipment is received via a letter of credit prior to the vessel loading, the receivable balance is consequently low as at the end of the half year. Furthermore, nickel deliveries to Kambalda were delayed due to road closures caused by bushfires well north of the site. These are purely timing differences with all deferred sales being delivered into the March quarter.

### HEDGING

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

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

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

Hedging Details – FY20			
US\$ Hedging – Collar Options		Nickel Hedging – Forwards	
US\$ Hedged	22,500,000	Nickel tonnes	1,200
Average Put	US\$0.6589	Average Rate	US\$16,375
Average Call	US\$0.6857		

### GUIDANCE

As is normal practice, the Company will provide any adjustments to FY20 guidance in conjunction with release of the half year statutory results.



## MINE SAFETY AND ENVIRONMENT

### SAFETY

The mining operations did not record a Lost Time Injury (LTI) during the quarter. While not an operational mining incident, a contract laboratory technician at the BioHeap Laboratory in Perth unfortunately sustained a fractured ankle when a hired mechanical appliance toppled over inside the laboratory as it was being delivered.

The FNO Emergency Response Team (ERT) successfully carried out some hazard reduction burning around the aerodrome and the concentrator and completed a cyanide awareness campaign. ERT training included internal 'Road Crash Rescue' scenarios and four nationally recognised "Closed Circuit Breathing Apparatus (Underground Search and Rescue - BG4) courses.

During December the ERT responded to a rapidly developing bushfire, started by multiple lightning strikes to the south east of the Cosmic Boy village. While the fire was in the vicinity of FNO for two days, the entire incident lasted for 18-days with the FNO ERT forming part of a large-scale operation to contain the bushfire, which actions successfully defended critical FNO assets with minimal damage sustained to infrastructure. Fifteen Bush Fire Brigades from nine shires and Department of Fire and Emergency Services (DFES) resources were deployed to fight the fire, which affected 300,000 hectares.



*Bushfire briefing*



*Bushfire at Forrestania*

### ENVIRONMENT

#### Forrestania (FNO)

No reportable environmental incidents were recorded during the quarter and the environmental team completed all required compliance monitoring and reporting, including the annual reporting required by the Department of Mines and Industry Regulation (DMIRS) and the Department of Water and Environmental Regulation (DWER).

An aboriginal heritage survey was successfully completed with the Ballardong people over the Mt Gibb and Hatters Hill areas.



*Local Thorny Devil*





## Cosmos (CNO)

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

The three-year Cosmos Mine Closure Plan was completed and submitted in December, including a Surface Water Management and an Acid Mine Drainage Management assessment. The environmental team also completed all required compliance monitoring including annual reporting to both the Department of Mines and Industry Regulation (DMIRS) and the Department of Water and Environmental Regulation (DWER).

A SODAR wind trailer was deployed in November to monitor and record wind and solar radiation data to support renewable energy studies for the operation.

An aboriginal heritage survey over the northern Kathleen Valley tenements was also successfully completed.



*SODAR wind trailer*

## MINE AND MILL PRODUCTION STATISTICS AND CASH COSTS

Tonnes mined	Unit	2018/2019		2019/2020		YTD Total
		Mar Qtr	Jun Qtr	Sep Qtr	Dec Qtr	
<b>Flying Fox</b>						
Ore Mined	tonnes	56,386	57,213	61,414	60,081	121,495
Grade	Ni%	4.5%	4.2%	3.7%	4.5%	4.1%
<b>Flying Fox Nickel Mined</b>	tonnes	<b>2,550</b>	<b>2,381</b>	<b>2,280</b>	<b>2,712</b>	<b>4,992</b>
<b>Spotted Quoll</b>						
Ore Mined	Tonnes	85,209	76,099	85,942	84,851	170,793
Grade	Ni%	4.1%	4.0%	4.1%	3.7%	3.9%
<b>Spotted Quoll Nickel Mined</b>	Tonnes	<b>3,516</b>	<b>3,042</b>	<b>3,525</b>	<b>3,137</b>	<b>6,662</b>
<b>Total Ore Mined</b>	Tonnes	<b>141,595</b>	<b>133,312</b>	<b>147,356</b>	<b>144,932</b>	<b>292,288</b>
<b>Grade</b>	Ni%	<b>4.3%</b>	<b>4.1%</b>	<b>3.9%</b>	<b>4.0%</b>	<b>4.0%</b>
<b>Total Nickel Mined</b>	Tonnes	<b>6,066</b>	<b>5,423</b>	<b>5,805</b>	<b>5,849</b>	<b>11,654</b>



## FLYING FOX

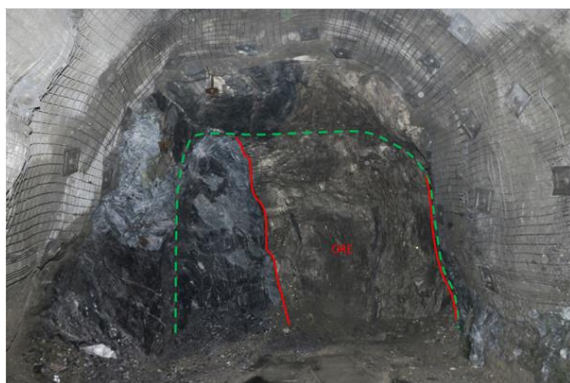
### Mine Production

Production was **60,081 tonnes of ore at an average grade of 4.5% nickel for 2,712 nickel tonnes**. Ore production was predominately (76%) derived from long-hole stoping (LHS) and the remainder (24%) from ore drive development. This was the best quarterly production over the last 4 periods.

LHS production was sourced solely from the T5 area, namely from the 460 (5.2kt @ 3.5% Ni), 455 (5.3kt @ 3.6% Ni), 345 (6.4kt @ 6.5% Ni), 295 (12.5kt @ 4.7% Ni) and 200 (16.6kt @ 5.2% Ni) stopes. Associated paste-filling of stope voids resulted in 15,696m<sup>3</sup> of paste poured.

### Mine Development

There was 409m of total jumbo development in the T5 area. This included 117m of capital (180, 200, 335 and 370 levels), 41m of operating waste (160, 180 and 200 levels), 51m of paste-fill (between the 345 and 200 levels) and 200m of ore drive development (160 and 370 levels), plus 6m of flat-back at the 335 level.



*160 ore drive with a face grade of 4.8% Ni*



*370 S2 ore drive with a face grade of 4.3% Ni*

## SPOTTED QUOLL

### Mine Production

Spotted Quoll production comprised **84,510 tonnes of ore at an average grade of 3.7% nickel for 3,137 nickel tonnes**. Ore production was sourced predominately from LHS (58%) with the remainder (42%) from ore drive development, which impacted the quarter on quarter grade.

The 'twin-boom area' (TBA) saw ongoing production from the 610 and 595 levels, and commencement of the 580 level early in the quarter. The 'single-boom area' (SBA) continued production from the 920, 852, 842, 825, 819, 818, 804, 795 and 788 levels, and commencement of the 774 level late in the quarter.

### Mine Development

Total jumbo development for the quarter was 1,020m, which included 128m of capital decline development. During the quarter, 330m of lateral capital development and 153m of operating waste development was also completed, which included 70m of paste-fill development to facilitate slot drilling.

The 'Stage 2' 490 and 475 ore drive levels were established from the 480 level off the main decline, with 399m of ore drive development completed between the 550 and 475 levels.

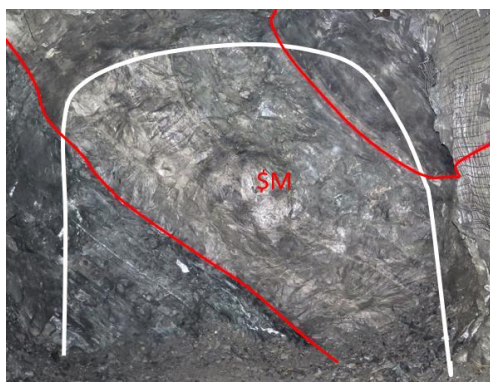
The SBA had 10m of ore drive development completed between the 852 and 795 secondary levels.



## Infrastructure

The capital primary ventilation system was advanced to the 480 level with the successful excavation of the 510 to 480 return airway (RAW) long-hole rise as well as the secondary egress raise-bore (1.1m diameter).

Services reticulation bore-holes (paste-fill and rising main) were extended from the 510 to 480 level, plus the 510 level high voltage 11kV/1kV electrical substation and the 536 remote stench gas activation unit were also installed.



505 ore drive with a face grade of 5.5% Ni



475 ore drive with a face grade of 6.8% Ni

## COSMIC BOY NICKEL CONCENTRATOR

Tonnes milled	Unit	2018/2019		2019/2020		YTD Total
		Mar Qtr	Jun Qtr	Sep Qtr	Dec Qtr	
Total Milled Ore	tonnes	146,935	152,329	149,729	143,409	293,138
Grade	%	4.2%	4.0%	3.9%	4.2%	401%
Ave. Recovery	%	88%	88%	89%	89%	89%
Nickel in Concentrate Produced (i)	tonnes	5,448	5,433	5,259	5,399	10,658
Nickel in Concentrate Sold	tonnes	5,189	5,890	5,051	3,991(*)	9,042

(i) Includes MREP Nickel tonnes produced.

(\*) Noting the export shipment missed the quarter end, leaving port on 1 January 2020

The Cosmic Boy Concentrator processed **143,409 tonnes of ore at an average grade of 4.2% nickel** for a total of **35,938 tonnes of concentrate grading 15.0% nickel**, resulting in 5,399 nickel tonnes produced at a recovery of 89.4% and an average concentrator availability of 97.4%. Maintenance work for the quarter included a planned 28-hour shutdown, in addition to several unplanned downtime events totalling 90 hours (evacuation for a bushfire event, power outage from burnt power poles and ball mill lubrication fault).

A total of 26,758 tonnes of concentrate were delivered for sale during the quarter, containing 3,991 nickel tonnes, including the Mill Recovery Enhancement Project product. The lower concentrate sales is purely the result of a timing variance due to the impact of road closures preventing concentrate being delivered to BHP and the export ship loading occurring over the 31<sup>st</sup> December and 1<sup>st</sup> January. The unsold concentrate at the half year end will be delivered in the March quarter.

Other unit sales costs for the quarter were royalties at A\$0.28/lb and concentrate transport of A\$0.42/lb of nickel in concentrate delivered to customers.



Maintenance underway on the crusher product screen





## Stockpiles

Ore stockpiles at the end of the quarter totalled 77,426 tonnes of ore at 3.5% nickel for 2,739 nickel tonnes, representing one and half months of concentrator feed and the concentrate stockpile was 11,146 tonnes at an average grade of 14.8% nickel, containing 1,650 nickel tonnes. The concentrate stockpile included 4,205 tonnes of concentrate that was loaded onto the ship on 1<sup>st</sup> January.

Stockpiles	Unit	2018/2019		2019/2020	
		Mar Qtr	Jun Qtr	Sep Qtr	Dec Qtr
Ore	tonnes	96,114	77,098	75,638	77,426
Grade	%	3.8%	3.8%	3.8%	3.5%
Concentrate	tonnes	5,481	2,390	2,875	11,146
Grade	%	15.1%	15.1%	15.8%	14.8%
<b>Contained Nickel in Stockpiles</b>	tonnes	<b>4,510</b>	<b>3,317</b>	<b>3,315</b>	<b>4,389</b>

## Cash Costs

Financial Statistics	Unit	2018/2019		2019/2020		YTD
		Mar Qtr	Jun Qtr	Sep Qtr	Dec Qtr	
Group Production Cost/lb						
Mining Cost (*)	A\$/lb	2.11	2.24	2.26	2.28	2.27
Haulage	A\$/lb	0.06	0.07	0.06	0.06	0.06
Milling	A\$/lb	0.48	0.46	0.55	0.53	0.54
Admin	A\$/lb	0.20	0.22	0.22	0.21	0.21
By Product Credits	A\$/lb	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
<b>Flotation Cash Cost Ni in Con (***)</b>	A\$/lb	<b>2.82</b>	<b>2.96</b>	<b>3.06</b>	<b>3.06</b>	<b>3.06</b>
<b>Total Cash Cost Ni in Con (***) inc MREP</b>	A\$/lb	<b>-</b>	<b>-</b>	<b>3.06</b>	<b>3.10</b>	<b>3.07</b>
<b>Cash Cost Ni in Con/lb (***)</b>	US\$/lb(**)	<b>2.01</b>	<b>2.07</b>	<b>2.09</b>	<b>2.12</b>	<b>2.11</b>
<b>Exchange Rate US\$ / A\$</b>		<b>0.71</b>	<b>0.70</b>	<b>0.69</b>	<b>0.68</b>	<b>0.69</b>

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

(\*\*) US\$ FX for Relevant Quarter is RBA average daily rate (Dec Qtr = A\$1:US\$0.68)

(\*\*\*) 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 cash cost of production for nickel in concentrate (excluding smelting/refining charges, concentrate logistics and royalties) was A\$3.10/lb (US\$2.12/lb) for the quarter. The year to cash cost is A\$3.07/lb (US\$2.11/lb) which is below the mid-point of the full year guidance range.

The total cash cost, including the mill recovery enhancement project production and operating cost, was A\$3.10/lb, which includes the production of a combination of flotation and high-grade nickel sulphide precipitate product.





## 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.

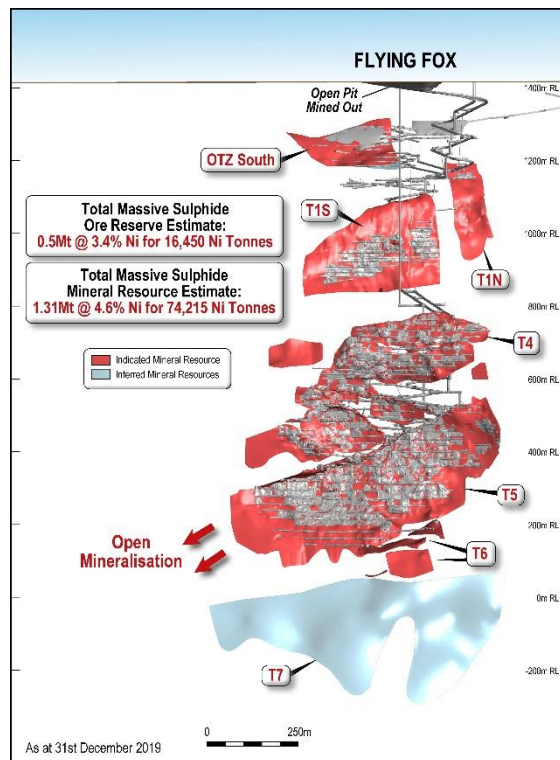
### FLYING FOX

No additional resource extension drilling was completed during the quarter.

The Flying Fox low grade mining assessment was revisited during the quarter with a fully costed forecast expected in the following quarter. At this stage it is anticipated that the low-grade component of the mine plan may increase the mine life for another six to twelve months. This assumes the low grade is processed via heap leach techniques at the mine site with the pregnant liquor pumped to the MREP precipitation facility at the CB concentrator.

The Flying Fox **Massive Sulphide Ni Mineral Resource**, including depletion to the end of December 2019, stands at **1.31Mt of ore at a grade of 4.6% Ni for 74,215 nickel tonnes**.

The Flying Fox **Massive Sulphide Ore Reserve**, including depletion to the end of December 2019, stands at **0.5Mt of ore at a grade of 3.4% Ni for 16,450 nickel tonnes**.





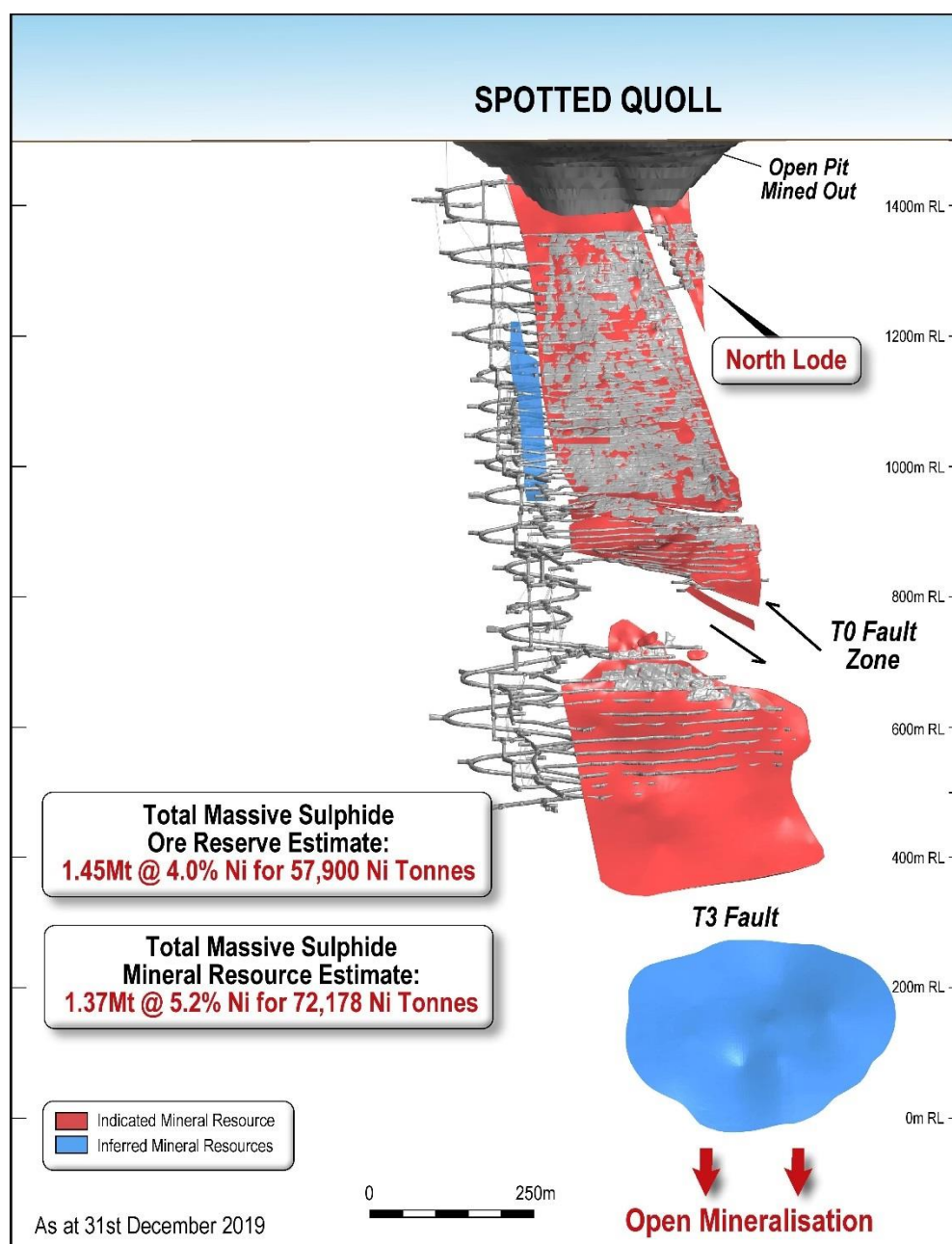
## SPOTTED QUOLL

No underground resource extension drilling took place during the quarter.

The Stage 3 surface drilling program (consisting of a parent hole and two wedges), to test a thicker north-east trending plunge identified in the previous drilling program was commenced, and is expected to be completed during the March quarter.

The Spotted Quoll **Mineral Resource**, including depletion to the end of December 2019, stands at **1.37Mt of ore at a grade of 5.2% Ni for 72,178 nickel tonnes**.

The Spotted Quoll **Ore Reserve**, including depletion to the end of December 2019, stands at **1.45Mt of ore at a grade of 4.0% Ni for 57,900 nickel tonnes**.





## GROWTH PROJECTS

### COSMOS OPERATIONS

#### Odysseus Mine

The Cosmos village had a further 104 rooms (total 301) refurbished to match the increased onsite workforce. The surface diesel power station was upgraded with a fourth 1MW unit added due to the increased electrical demand from the growing underground infrastructure.

A conceptual mining assessment of the AM5/6 orebody was completed by an external consultant. The AM5 and AM6 orebodies contain an indicated resource of 0.5Mt at a grade of 2.6% nickel and 2Mt at a grade of 2.6% nickel respectively. Based on the positive results of the conceptual study, a pre-feasibility study will now be undertaken to estimate an ore reserve including operating and capital cost estimates for infrastructure.

In addition, optimisation work on the proposed Cosmos mill upgrade was initiated. This included options to increase throughput, plus identifying long lead items that may need to be ordered in the short to medium term.

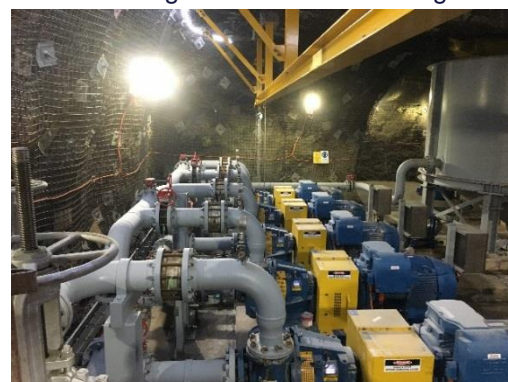
#### Underground Infrastructure

Underground construction of life of mine infrastructure continued with the commissioning of the two new underground pump stations by specialist contractors delivering approximately 105 L/sec to the surface water management ponds.

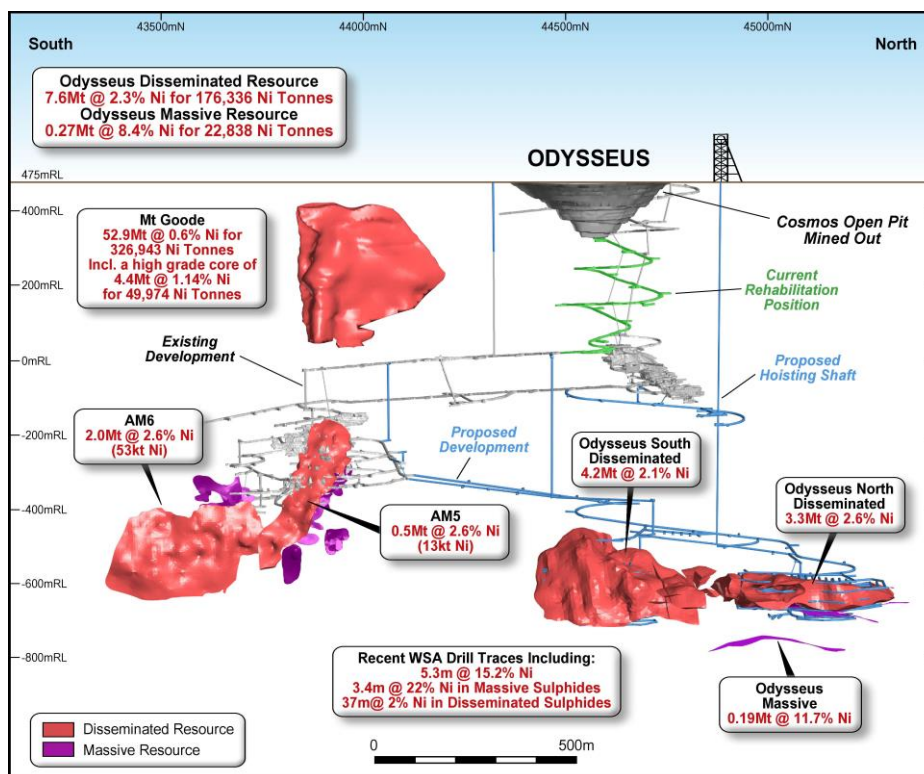
This enabled the re-start of ground-support rehabilitation of both the Ilias and AMD declines and by the end of the quarter, a total 860m of rehab had been completed. The water level was at the 9942 RL, which is 537m below surface and the de-commissioned Schlumberger submersible pump was also removed to surface.

The central ventilation access drive was completed and a decline to provide a platform for mid-shaft grouting of the shaft barrel was commenced.

The combined hoisting shaft and underground raise-bore tender was awarded.



**Pump Station 2**







## Hoisting Shaft Project Engineering

Significant engineering design work was completed during the quarter, with layout and preliminary earthworks for the concrete batch plant finalised and the contract for the installation of the foundations issued. Mobilisation of the construction crew is scheduled for January 2020.

Commissioning of the batch plant is scheduled in the March quarter in preparation for final mix design testing and approval. This work is critical to ensure the batch plant is tested and approved in preparation for the commencement of the headframe construction. Major work tender packages for both the shaft earthworks and civils were completed.

Recruitment of key personnel for the project continued with the appointment of an Electrical Superintendent and two Batch Plant/Civil Supervisors.

### Project Engineering Design

The shaft and materials handling, detailed engineering design (DED) progressed during the quarter with the detailed engineering design of the shaft and materials handling systems now 95% complete.

### Project Engineering Work

Completion of all South African site-based activities relating to the upliftment of the winder and headframe assets was achieved. This work was completed without accident or incident, a credit to all the sub-contractors involved and to the South African consultant who managed the site and held the necessary statutory positions on behalf of the Company.

The final item to be dismantled and removed was the headframe 1,500t bin as shown below.



A comprehensive strip and inspection of the 3.6MW DC drive was completed. Relatively minor items were identified to be refurbished or replaced to ensure that the drive will be in excellent condition prior to installation. Maintenance and repairs, plus winder mechanicals refurbishment and replacement work, will be undertaken in South Africa prior to shipping.





The headframe structural modification and refurbishment continued during the quarter and the structure will now also be painted prior to shipping to Australia. The headframe work program has been extended to May 2020 to allow for the extra work to be completed prior to shipping to Australia.



*Headframe modifications in progress*

## **MILL RECOVERY ENHANCEMENT PROJECT (MREP)**

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

- The Nickel Sulphide Precipitate (NSP) product continues to be sold into a short-term offtake contract. A small parcel was also supplied to an alternate customer for a refinery trial; and
- The small Tailings Recovery Circuit (TRC) unit continues to produce nickel that is fed back into the concentrate stream. This has enabled the CBC to lift total recovery by approximately three percent.

## **MILL SCATS PROJECT**

The large-scale mill scats test-work programme continued with evaluation of leaching rates and potential heap leach conditions (i.e. water quality, temperature, feed pH, irrigation rate, particle size, heap height, magnetic separation and nickel solution concentration).

A decision to proceed to a site-based demonstration scats heap leach (20,000t) will depend on the outcome of this test work and is expected in the following quarter.

## **NEW MORNING/DAYBREAK PROJECT (NMDB)**

The NMDB nickel oxide beneficiation and leaching test-work was completed, and potential future processing routes for the oxide ore are being investigated. The other ore types present at the deposit, including transitional and primary ore, are scheduled to be tested over the second half of FY20.

## **FLYING FOX LOW GRADE (FFLG)**

Large scale column test-work of FFLG ore commenced and is expected to last approximately nine months. During this time overall heap leach project capital and operating cost estimates for the FFLG ore type will be investigated.



## EXPLORATION

### OVERVIEW

An elevated level of drilling activity was maintained at Cosmos, with drilling at Neptune extending the known mineral corridor along its southern flank by an additional 500m. Drilling at Penelope successfully intersected a narrow interval of very high-grade massive nickel sulphide mineralisation within WCD034, confirming the potential for this corridor to host additional high-grade nickel sulphide deposits.

At Western Gawler, the Company completed a series of along-strike air-core holes within its emerging nickel prospect at Mystic, defining a corridor in excess of 1.5km strike (and open to the north-east), with significant results including 15m @ 1.72% Ni within 19WGAC887.

At Forrestania, the Company received all heritage and environmental approvals to enable commencement of the multi commodity drill program within the Hatters Hill district.

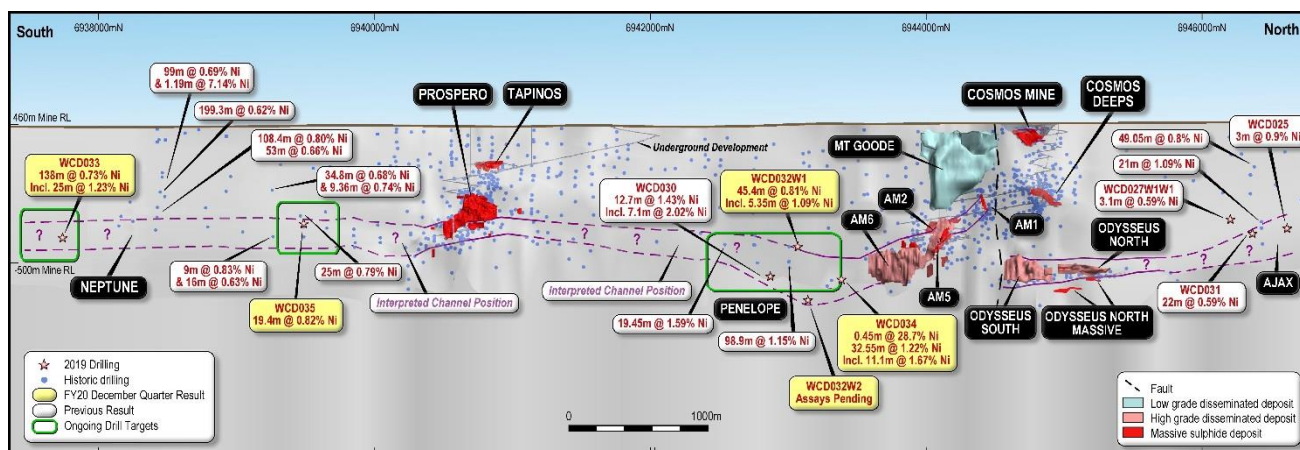
St George Mining reported thick intercepts of nickel-copper sulphides down-plunge of its shallow deposits, with recent nickel sulphides intersected at Investigators (within tenement E29/638) testing deeper electromagnetic (EM) conductors. Tenement E29/638, is in joint venture between St George Mining (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. In addition, the Company believes the interpreted ultramafic channel, which hosts the Odysseus resource, is considerably under-explored along its northern flanks (north of Odysseus) and its southern perimeter at Neptune.

Over the December quarter, two rigs were operating for most of the period. The focus of activities was twofold, with one rig testing the northern and southern strike extents to mineralisation at Neptune, with a second rig focusing efforts on delineating the nature of mineralisation on the northern flanks of the Penelope prospect, within the vicinity of the Alec Mairs (AM5/AM6) mineral system. In total, 3771.6m were drilled for the quarter.

Drilling at Cosmos will pause during the March quarter, to enable all results to be returned from this current phase of drilling.



*Cosmos Long Section (Looking West)*

### Penelope

Located within the Prospero-Tapinos to Alec Mairs Corridor, the Penelope prospect extends over a 1km target area and is positioned approximately 500m south of the Alec Mairs resource complex. The prospect represents the most significant under-tested, near-mine target at Cosmos. The Company believes that the target area's proximity to existing and future mine infrastructure at Odysseus and Alec Mairs (AM5/AM6), coupled with its potential to host significant accumulations of nickel sulphides, supports the need to complete a robust drill targeting program to fully determine its prospectivity and potential to host new ore bodies.



Results from the previous quarters' drilling were received in the December quarter, with a significant interval returned from WCD032W1 of 45.4m @ 0.81% Ni, including 5.35m @ 1.09% Ni.

An additional three holes were completed over the December quarter, with broad zones of disseminated, blebby to locally stringer and occasionally matrix (net-textured) style mineralisation identified in all three holes. Of most significance were results from WCD034, targeting approximately 400m south of the AM6 (Alec Mairs) mineral system. This drill-hole successfully intersected a broad interval of mineralisation, returning 32.55m @ 1.22% Ni (including 11.1m @ 1.67% Ni). The zone, hosted primarily within mesocumulate ultramafic and containing between 8-15% sulphide is positioned away from the basal contact. Significantly, a narrow semi-massive to massive zone of very high-grade nickel sulphide mineralisation was intersected (hosted within adcumulate ultramafic) returning 0.45m @ 28.7% Ni. This interval is interpreted to have been remobilised and bears some similarity to massive sulphide intervals intersected below the Odysseus mineral resource. Drill-core inspection indicates that this intercept contains predominantly millerite with subordinate pentlandite, however confirmatory petrographic work will be undertaken.

The Company believes that the intersection of very high-grade massive nickel sulphides at Penelope serves to provide additional vindication of its long-held view that the broader Cosmos Nickel Belt possesses significant exploration upside.

Exploration Results - Penelope December Quarter 2019										
HOLE ID	Easting	Northing	RL	EOH	Type	Dip	Azimuth	Width (m)	Ni %	From (m)
WCD032W1	261302.8	6943098.7	470.3	1091.6	DD	-66	264	45.4	0.81	989
	including							5.35	1.09	1014
	and							6.40	1.15	1027.6
WCD034	261218.9	6943409	472.4	1475.6	DD	-70	266	0.45	28.7	1308.45
	and							2.15	1.97	1313
	including							0.9	3.27	1313
	and							32.55	1.22	1341.65
	including							11.1	1.67	1344.9

## Neptune

Located 2km south of the previously-mined Prospero high-grade nickel deposit, the Neptune prospect is defined by a significant accumulation of disseminated to locally stringer-style nickel sulphide mineralisation extending over 1.5km in strike length. Drilling within the December quarter centred on two holes designed to assess the potential for the Neptune disseminated nickel sulphide system to extend along strike to the north and south.

Completed in October 2019, WCD033 was designed as the southernmost drill test at Neptune, targeting approximately 500m south of previous drilling. Within a broader (380m down-hole) adcumulate ultramafic hosted zone of disseminated nickel sulphides, an elevated mineralised zone returned 138m @ 0.73% Ni from 999m, including 25m @ 1.23% (from 1027m). Drilling at Neptune has now delineated a system extending in excess of 2km along strike (north – south), with mineralisation open to the south.

The Company believes that the large footprint, disseminated style nickel sulphide system identified at Neptune has similarities to near-surface mineralisation previously defined at Mt Goode, with the potential for additional accumulations of nickel sulphide mineralisation along strike considered high.

A brief hiatus in exploration drilling at Cosmos is scheduled for the March quarter FY20. The hiatus will enable all analytical results to be collated, geological interpretations to be updated and the next phase of drilling planned, with a focus of 2020 drilling to ascertain the resource potential for large tonnage disseminated systems at Cosmos (Penelope and Neptune).



Exploration Results - Neptune December Quarter 2019										
HOLE ID	Easting	Northing	RL	EOH	Type	Dip	Azimuth	Width (m)	Ni %	From (m)
WCD033	262500	6937898.1	460.5	1329.5	DD	-55	226	28.6	0.81	898.4
	including							3	1.51	921
	and							138	0.73	999
	including							25	1.23	1027
	which includes							3	1.65	1030
WCD035	261907.9	6939488.6	460.5	986.5	DD	-56	263.9	19.4	0.82	797.6

## FORRESTANIA

### Hatters Hill – Mt Gibb

The Company, in collaboration with the South West Aboriginal Land and Sea Council and representatives of the Ballardong People completed a detailed heritage survey in the September quarter, with a primary focus on the Hatters Hill area within tenement E74/603.

During the December quarter, the Company successfully received heritage and environmental approvals to commence drilling over numerous target areas. Reverse Circulation (RC) drilling is anticipated to commence early in the March quarter, with the focus being on several identified base metals, gold and lithium targets.

## REGIONAL EXPLORATION (SOUTH AUSTRALIA)

The Company has identified that the Mystic to Woodford trend, extending north to the established prospects of Meredith and Splendour, defines a corridor of elevated prospectivity within the Western Gawler Project area. This corridor will continue to remain the key focus area for future exploration programs.

Activity focus:

- Completion of regional and prospect-scale air-core drilling within the Iluka Farm-in and Joint Venture (FIJVA).
- Completion of extensional air-core drilling at the Mystic prospect.
- Completion of a heritage clearance survey.
- Ongoing litho-geochemical studies.

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

With the significant expansion of exploration activities in the Western Gawler over the past 18 months, resulting from the July 2018 execution of a farm in joint venture agreement with Iluka (Eucla Basin) Pty Limited, the Company has markedly advanced its understanding of the prospectivity of the northern Fowler Domain.

An ongoing series of 2019 air-core drilling campaigns were completed over the December quarter, culminating in a series of programs focusing on the Splendour and Woodford prospects. In total, 28 holes were completed for 2,002m.

### Splendour

Recent drilling at Splendour has confirmed a 1.5km long, anomalous Ni-Cu-PGE corridor, interpreted to be associated with a structural zone located along the margin of a concentric layered intrusive body.

Following on from encouraging nickel-oxide zones intersected in the September quarter (including 15m @ 1.14% Ni, with a highlighted interval of 1m @ 2.27% Ni in 19WGAC658), an additional six infill air-core holes were completed within the defined 1.5km long, anomalous corridor. Additional elevated nickel oxide results included 3m @ 1.26% Ni from 60m within 19WGAC876.

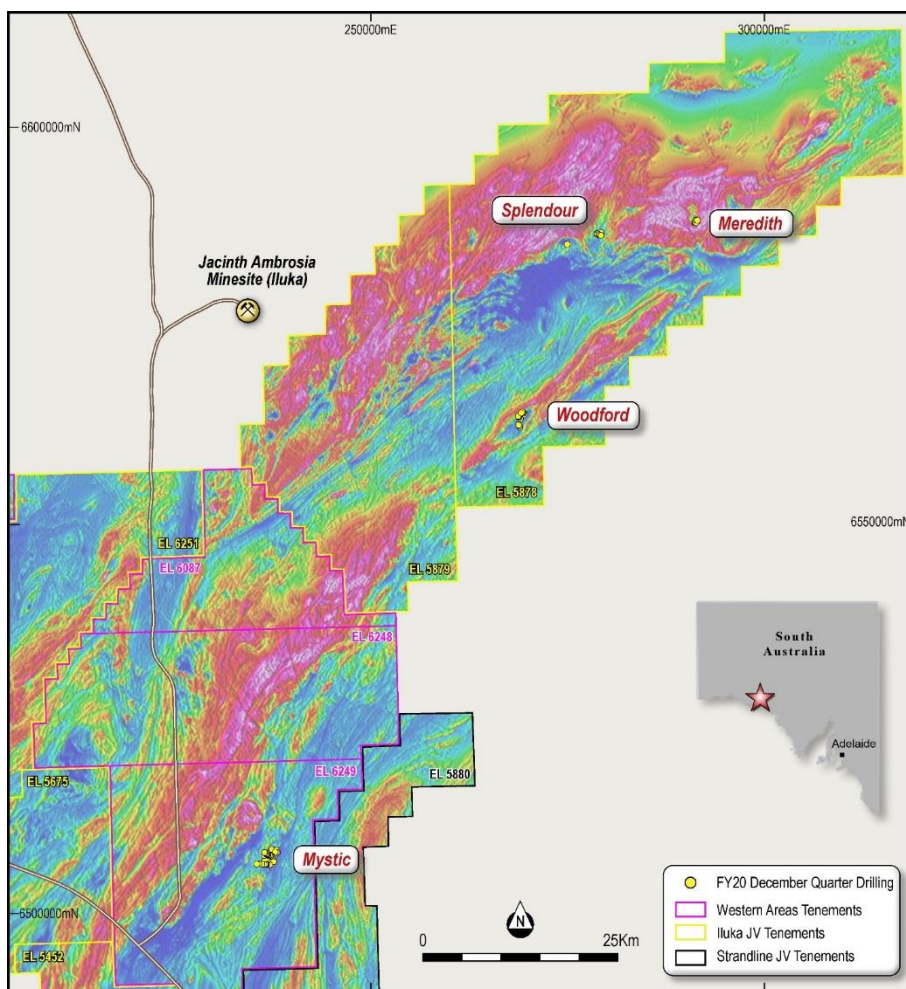




Interpretation of recently processed, high-resolution aeromagnetic imagery (acquired in the previous quarter) is ongoing. Aided by this detailed interpretive work, designed to further map the spatial extent of Ni-Cu-PGE prospective intrusive bodies, a focused diamond drill program will commence in the March quarter.

## Exploration Results Nickel – Iluka FIJVA December Quarter 2019

Hole ID	Easting	Northing	RL	EOH	Type	Dip	Azi	Width (m)	Ni %	Cu (ppm)	Pt+Pb (ppb)	From (m)
19WGAC876	290528	6589167	85	87	AC	-90	0	3	1.26	45	28	60



Western Gawler – December FY20 Quarter Activity

### Woodford

At Woodford, an additional 15 air-core holes (for 946m) were completed, following up on anomalous results returned in the June quarter from 19WGAC493 (1m @ 996ppm Cu, 685ppb Pt+Pd and 0.12% Ni) and other extensional targets. Assay results are expected in the March quarter.

### Regional Targets

During the quarter, results were received for drilling completed on 11 additional regional targets within EL 5878 and EL 5879. Prospective mafic-ultramafic host rocks were intersected at Fairbridge, Vanguard and Pitchfork, however no geochemically anomalous results were reported from these areas.



## Geological Studies

Litho-geochemical and geological investigative work continued throughout the December quarter, completed in conjunction with CSA Global consultants. Two key individual magmatic series were identified, and are interpreted to be associated with nickel-copper geochemical anomalies. These features are indicative of fertile Ni-Cu mineral systems and will be used to further refine priority areas and drill targets in the coming quarter.

## Heritage Surveying

In collaboration with the Far West Coast Aboriginal Corporation, the Company completed a heritage survey in December. Findings from the survey resulted in heritage approved drill sites and access tracks totalling 34 line-kms covering prospective areas. The successful completion of this survey will facilitate drill targeting commencing in the March quarter FY20.

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

Activities focussed on drilling within the Mystic prospect during the quarter, with a key focus on extending coverage over the Mystic Nickel Oxide target.

## Mystic Nickel Zone

Drilling throughout 2019 confirmed the presence of orthocumulate ultramafic rocks containing trace level magmatic sulphides, which are overlain by significant nickel oxide intersections with results that include 18m @ 2.06% Ni from hole 19WGAC444 (including 5m @ 4.29% Ni).

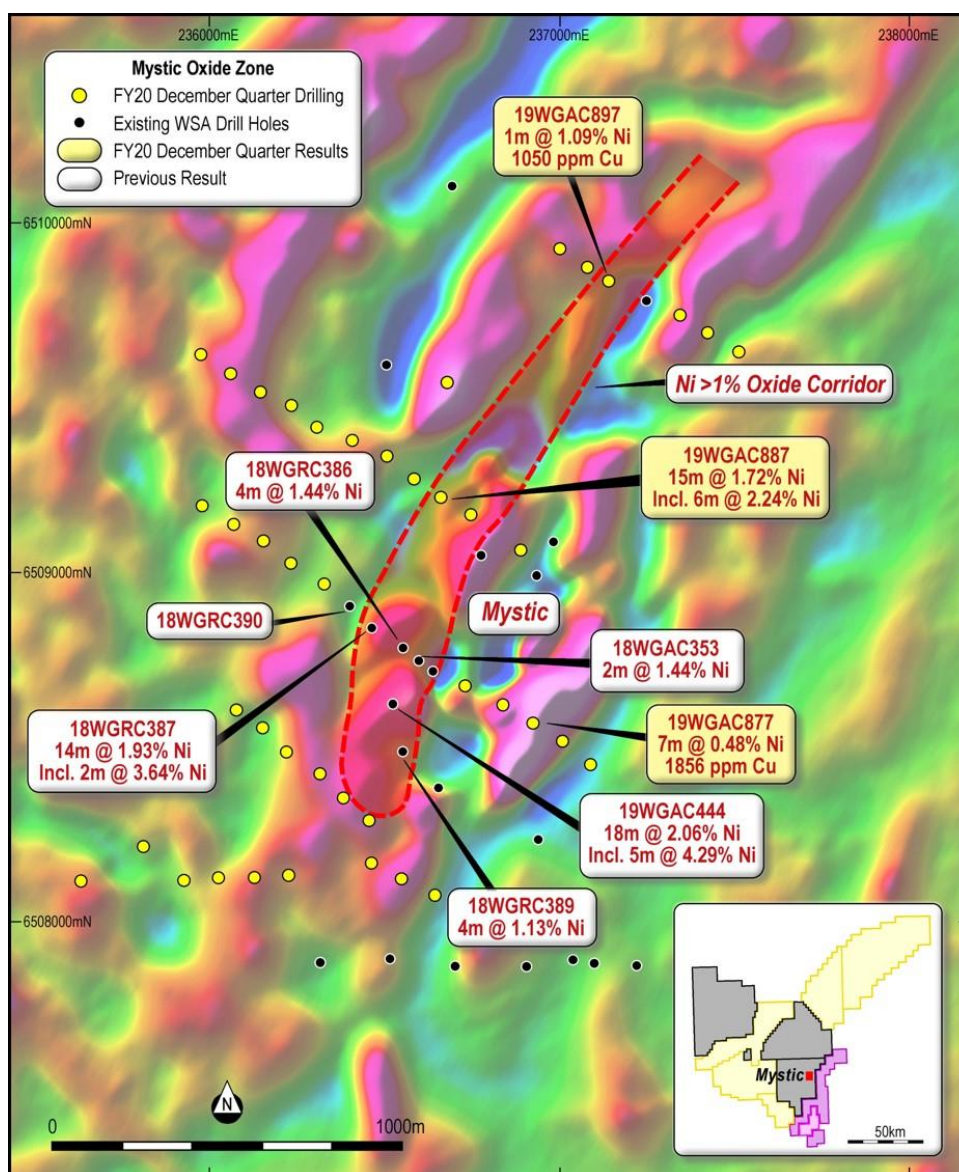
Within the December quarter, air-core drilling was completed to test the strike extensions of the Mystic oxide zone (to the north-east and south-west), with a total of 45 air-core drill-holes completed (for 2,769m).

Anomalous results were reported within five drill-holes including 6m @ 2.24% Ni from 42m within 19WGAC887 and 7m @ 1,856ppm Cu from 35m within 19WGAC877. This recent round of drilling has confirmed that the nickel oxide zone extends up to 1.5km in strike length and remains open to the north-east. Elevated nickel and copper values within 19WGAC877 (east of the main oxide corridor) are particularly encouraging, suggesting further concentration of nickel oxide mineralisation may be present extending to the east.

Further drilling is planned into the March quarter FY20, with focused diamond drilling programs designed to test for primary accumulations of nickel sulphide mineralisation beneath the peak geochemical anomaly associated with 19WGAC444 (18m @ 2.06% Ni, including 5m @ 4.29%Ni) and a coincident Induced Polarisation (IP) anomaly identified during Moving Loop EM surveying over the target area. Additional air-core drilling will also be completed to test strike extensions to the north-east.

### Exploration Results Nickel – Western Gawler (100% WSA) December Quarter 2019

Hole ID	Easting	Northing	RL	EOH	Type	Dip	Azi	Width (m)	Ni %	Cu (ppm)	From (m)
19WGAC877	236914	6508573	60	56	AC	-90	0	7	0.48	1856	35
	including							3	0.49	2167	38
19WGAC880	236321	6508971	60	82	AC	-90	0	6	1.04	188	65
	including							2	1.31	354	60
	and							1	1.33	56	65
19WGAC886	236741	6509170	55	48	AC	-90	0	6	1.25	134	33
19WGAC887	236655	6509219	55	58	AC	-90	0	15	1.72	54	39
	including							6	2.24	29	42
19WGAC897	237134	6509838	55	72	AC	-90	0	1	1.09	1050	53



*Mystic Prospect – Nickel oxide corridor drilling overlying magnetic image*

## 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: "The improved terms from our latest round of nickel offtake contracts will deliver enhanced revenues, while demonstrating that future demand for nickel is expected to be robust" and, "Kambalda deliveries were delayed due to bushfire related road closures and timing of an export shipment missing quarter end and leaving port on 1 January 2020. These timing differences will reverse in the March quarter".

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	491,000	3.4	16,450	Probable Ore Reserve	2012
2. Spotted Quoll Area	1,447,900	4.0	57,900	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>4,047,900</b>	<b>2.6</b>	<b>105,150</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>12,183,500</b>	<b>2.2</b>	<b>269,670</b>		
<b>Mineral Resources</b>					
1. Flying Fox Area					
T1 South	144,125	4.6	6,625	Indicated Mineral Resource	2012
T1 North	45,041	2.3	1,036	Inferred Mineral Resource	2012
OTZ Sth Massive Zone	54,217	5.1	2,736	Indicated Mineral Resource	2012
T4 Massive Zone	167,495	6.0	10,030	Indicated Mineral Resource	2012
T5 Massive Zone + Pegs	212,835	5.8	12,364	Indicated Mineral Resource	2012
T6 Massive Zone	654,166	5.1	33,475	Indicated Mineral Resource	2012
T7 Massive Zone	84,388	5.6	4,716	Indicated Mineral Resource	2012
T7 Massive Zone	248,720	1.3	3,233	Inferred Mineral Resource	2012
Total High Grade	1,610,987	4.6	74,215		
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
T5 Lounge Lizard Disseminated Zone	4,428,000	0.8	36,000	Indicated Mineral Resource	2004
Total Disseminated Flying Fox/Lounge Lizard	4,983,000	0.8	41,050		
Total FF/LL	6,593,987	1.7	115,265		
2. New Morning / Daybreak					
Massive Zone	340,126	3.3	11,224	Indicated Mineral Resource	2012
Massive Zone	78,067	3.9	3,025	Inferred Mineral Resource	2012
Massive Zone	2,496,658	1.3	32,498	Inferred Mineral Resource	2012
Total New Morning / Daybreak	6,233,319	1.4	87,928		
3. Spotted Quoll Area					
Spotted Quoll	146,678	5.0	7,228	Inferred Mineral Resource	2012
Total Spotted Quoll	1,374,988	5.2	72,178		
Beautiful Sunday	480,000	1.4	6,720	Indicated Mineral Resource	2004
Total Western Belt	14,682,294	1.9	282,091		
4. Cosmic Boy Area					
Cosmic Boy	180,900	2.8	5,050	Indicated Mineral Resource	2004
Seagull	195,000	2.0	3,900	Indicated Mineral Resource	2004
Total Cosmic Boy Area	375,900	2.4	8,950		
5. Diggers Area					
Diggers South - Core	2,704,500	1.4	37,570	Indicated Mineral Resource	2004
Digger South - Core	362,700	1.2	4,530	Inferred Mineral Resource	2004
Digger Rocks - Core	282,940	1.7	4,790	Indicated Mineral Resource	2004
Digger Rocks - Core	50,600	1.3	670	Inferred Mineral Resource	2004
Purple Haze	560,000	0.9	5,040	Indicated Mineral Resource	2004
Total Diggers Area	3,960,740	1.3	52,600		
<b>TOTAL FORRESTANIA MINERAL RESOURCE</b>	<b>19,018,934</b>	<b>1.8</b>	<b>343,641</b>		
6. Cosmos Area					
AM5	479,914	2.6	12,430	Indicated Mineral Resource	2012
AM5	26,922	1.9	509	Inferred Mineral Resource	2012
AM6	1,704,548	2.7	45,171	Indicated Mineral Resource	2012
AM6	329,443	2.5	8,203	Inferred Mineral Resource	2012
Odysseus South Disseminated	4,016,949	2.1	84,767	Indicated Mineral Resource	2012
Odysseus North - Disseminated	219,641	2.0	4,302	Inferred Mineral Resource	2012
Odysseus North - Disseminated	3,128,943	2.6	81,156	Indicated Mineral Resource	2012
Odysseus North - Massive	225,248	2.7	6,111	Inferred Mineral Resource	2012
Odysseus North - Massive	70,106	12.6	8,814	Indicated Mineral Resource	2012
Odysseus North - Massive	124,900	11.2	14,002	Inferred Mineral Resource	2012
Total Cosmos Area	10,326,614	2.6	265,465		
7. Mt Goode Area					
Mt Goode	13,563,000	0.8	105,791	Measured Mineral Resource	2012
Mt Goode	27,363,000	0.6	158,705	Indicated Mineral Resource	2012
Mt Goode	12,009,000	0.5	62,447	Inferred Mineral Resource	2012
Total Mt Goode Area	52,935,000	0.6	326,943		
<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>82,280,548</b>	<b>1.1</b>	<b>936,049</b>		



## 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>



Drill sample recovery	<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>
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>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>
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>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 instance results for field duplicate/second-half sampling.</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>



	<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 workings and other locations used in Mineral Resource estimation.</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 were surveyed down-hole using an Eastman single shot camera. Underground drill-hole collar locations verified via survey pickup.</li> </ul>
	<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>

## JORC 2012 TABLE 1 – COSMOS NICKEL COMPLEX EXPLORATION

### 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,</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</li> </ul>



	<p>native title interests, historical sites, wilderness or national park and environmental settings.</p> <ul style="list-style-type: none"><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>	<p>the tenements (3) are subject to a Joint Venture with Alkane Resources NL, where Western Areas has earned 80.6% interest</p> <ul style="list-style-type: none"><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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WCD032	261302.8	6943098.7	470.3	547.6	DD	-66	264																																											
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WCD035	261907.9	6939488.6	460.5	986.5	DD	-56	263.9																																											
Data aggregation methods	<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>▪ 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>																																																



	<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 (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 misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>All relevant assay results have been reported</b></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>▪ <b>Included within 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: 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>Air-core (AC) and Reverse Circulation (RC) drilling is used for sampling.</li> <li>Each sample interval is split to approximately 3kg using a rig mounted rotary splitter.</li> <li>Each sample is sent for analysis to ALS Global laboratories in Perth, Western Australia.</li> <li>The sample is pulverised in the laboratory (total prep) to produce a sub sample for assaying.</li> <li>All sampling was conducted using WSA QAQC sampling protocols which are in accordance with industry best practice.</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 AC and RC drilling. Holes were drilled between 60-90 degrees.</li> <li>A truck-mounted air-core rig is used with a 3 inch diameter face sampling hammer drilling or Air-Core bit.</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>Drilling recoveries are digitally logged, recorded and captured within the project database.</li> <li>Overall recoveries are &gt;95% and there has been no significant loss of sample material due to ground or drilling issues.</li> <li>Each individual sample is visually checked and logged for recovery, moisture and contamination.</li> <li>The style of expected mineralisation and the consistency of the mineralised intervals are expected to preclude any issue of sample bias due to material loss or gain.</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> <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>Geological logging is recorded and validated in MS excel spreadsheets (Toughbook platform)</li> <li>Drill chips are logged for lithology, mineralogy, mineralisation, weathering, fabric, grainsize, colour and other relevant features.</li> <li>Geotechnical logging was not completed due to the nature of drill method.</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>
<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> <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>The drill samples were collected every metre on the drill rig using a rotary splitter.</li> <li>When required, composite samples are taken using a sampling spear.</li> <li>Field QC procedures involve the use of certified reference material as assay standards, along with blanks, duplicates and barren washes. The insertion rate of these averaged 1:20, with an increased rate in mineralised zones.</li> <li>Field duplicates are conducted on approximately 1 in 25 drill intersections.</li> <li>The sample sizes are considered to be appropriate to correctly represent the geological model based on: the style of mineralisation, the thickness and consistency of the expected intersections, the sampling methodology and percent value assay ranges for the primary elements.</li> </ul>
<i>Quality of assay data laboratory tests</i>	<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> </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>Primary data was collected using validated MS excel spreadsheets, on Toughbook computers.</li> </ul>



	<ul style="list-style-type: none"> <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>▪ 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 hand held GPS, and cross referenced with local topographical maps (DMP produced), SRTM data and recently captured DTM models (where covered by the Aeromagnetic Surveys – Thomson Aviation).</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>▪ Samples are collected every metre down hole.</li> <li>▪ Sample compositing has not yet been applied, but may do so depending on the assay information required.</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 vertically which may reduce range of lithologies or cross section of stratigraphy sampled in areas that are steeply dipping.</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> <li>▪ All samples are collected in sealed task specific containers (Bulk bags – plastic pallets) and delivered from site to Perth and then the assay laboratory via 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
<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 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 4,448km<sup>2</sup>, 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>
<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>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>
<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 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>
<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> </ul> </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>



	<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>	
<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>Where assays results have been reported, they represent both single sampling interval (1m) and composite intervals up to 3m in width.</b></li> <li>▪ <b>No metal equivalents have 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>Not applicable</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>Refer to Table for location coordinates relating to the reported elevated intervals.</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 misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Balanced reporting of material results is provided.</b></li> </ul>





<p><i>Other substantive exploration data</i></p>	<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 was conducted routinely on all samples for a base metal and PGM suite and potentially deleterious elements.</b></li> </ul>
<p><i>Further work</i></p>	<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>