WESTERN AREAS

16 June 2017 **ASX: WSA**

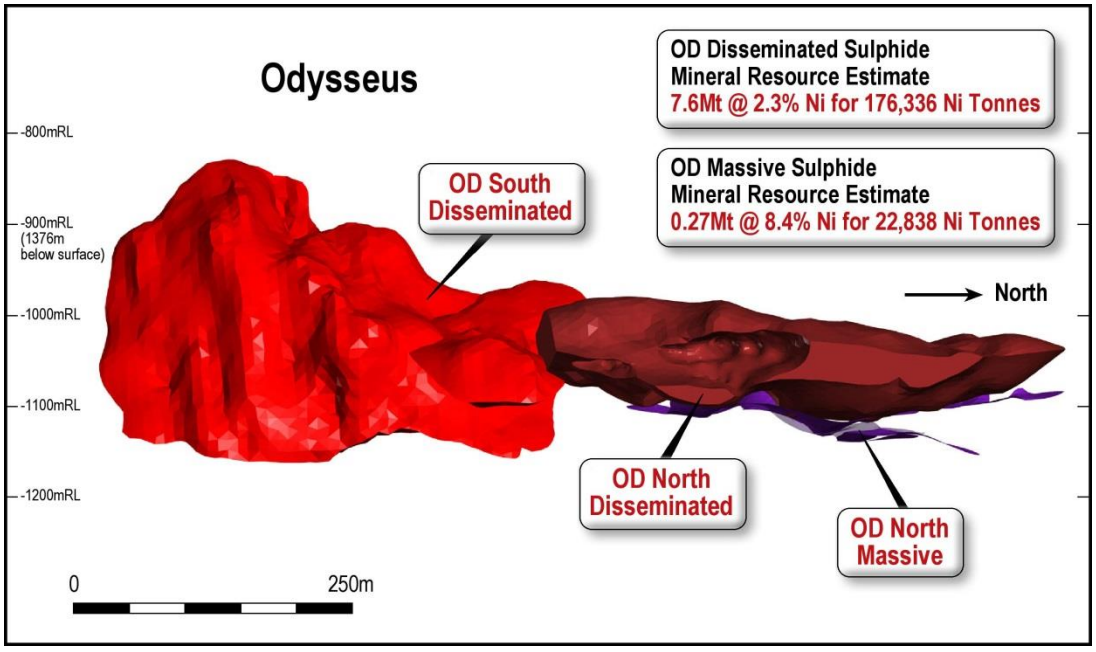
News Release

SIGNIFICANT INCREASE IN ODYSSEUS HIGH GRADE NICKEL RESOURCES AND UPGRADED DISSEMINATED INDICATED MINERAL RESOURCES

Western Areas Ltd (ASX: WSA, "Western Areas" or the "Company") is pleased to announce that the Company has trebled the defined high grade Massive Sulphide Mineral Resource at the Cosmos Odysseus Project ("Project" or "Odysseus"). A significant percentage of the Disseminated Inferred Mineral Resource at the Project has also been upgraded to the Indicated category providing increased confidence and flexibility in the Definitive Feasibility Study that is currently underway (Table 1).

Key highlights from the Mineral Resource update include:

- ✓ **A 311% increase in the Total Massive Sulphide Resource to 22,838 nickel tonnes grading 8.4% Ni which now includes 8,836 nickel tonnes grading 6.1% Ni in the Indicated category;**
- ✓ **A 78% increase in the Odysseus North disseminated Indicated Resource to 81,156 nickel tonnes grading 2.6% Ni (previously 45,519 nickel tonnes grading 2.8% Ni);**
- ✓ **An overall increase in the Indicated to Inferred disseminated resource ratio from 77% to 94%, which includes a ratio increase of 56% to 93% in Odysseus North disseminated;**
- ✓ **The increase in Indicated Resource provides greater flexibility to the proposed mine design and schedule of the Definitive Feasibility Study; and**
- ✓ **The Total Odysseus Mineral Resource Estimate now stands at 7.9Mt @ 2.5% Ni for 199,174 nickel tonnes at a cut-off of 1.5% Ni.**



Odysseus Mineral Resource after the upgrade

		Tonnes	Ni	NiT	
Odysseus South Disseminated	XST	3,884,857	2.17	84,301	Indicated Resource
	WSA	***4,016,949***	***2.11***	***84,767***	
	XST	169,165	2.13	3,603	Inferred Resource
	WSA	***219,641***	***1.96***	***4,302***	

		Tonnes	Ni	NiT	
Odysseus North Disseminated	XST	1,631,495	2.79	45,519	Indicated Resource
	WSA	***3,128,943***	***2.59***	***81,156***	
	XST	1,586,175	2.21	35,054	Inferred Resource
	WSA	***225,248***	***2.71***	***6,111***	

		Tonnes	Ni	NiT	
Odysseus Total Disseminated	***WSA***	***7,145,892***	***2.32***	***165,923***	Indicated Resource
	WSA	***444,889***	***2.34***	***10,413***	Inferred Resource

		Tonnes	Ni	NiT	
Odysseus North Massive	XST	-			Indicated Resource
	WSA	***145,830***	***6.06***	***8,836***	
	XST	48,043	11.58	5,563	Inferred Resource
	WSA	***124,900***	***11.21***	***14,002***	

Table: 1
Comparison of previous Xstrata (XST) and current WSA Resource

Western Areas Managing Director, Dan Lougher, said that it was pleasing to tick off another milestone for the Odysseus Project at Cosmos.

“The increase in the confidence level of the resources at Odysseus was one of the critical path items for the timely completion of the project DFS, and will support the definition of an Ore Reserve for the project. The amount of massive sulphides included from limited drilling and the increase in total nickel tonnes was above our expectation when we completed due diligence on this acquisition,” Mr Lougher said.

“We are also pleased to advise that Piran Mining has been appointed as Project Manager for the DFS and has already commenced work. Piran Mining was Project Manager for the Spotted Quoll feasibility study which has turned into one of the great success stories for underground mining in Western Australia. Piran is well versed in the quality controls and high technical expectations driven by the Western Areas team, which was an important factor in making this appointment,” Mr Lougher said.

-ENDS-

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CP STATEMENT:
The information within this report as it relates to Mineral Resources is based on information compiled by Mr Andre Wulfse. Mr Wulfse is a Fellow of AusIMM and a full time employee of Western Areas. Mr Wulfse has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.' Mr Wulfse consents to the inclusion in the report of the matters based on the information in the 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 release include: "the Disseminated Inferred Mineral Resource at the Project has also been upgraded to the Indicated category providing increased confidence and flexibility in the Definitive Feasibility Study".

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.

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

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

JORC 2012 TABLE 1 – Odysseus Mineral Resource Estimate

Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	• *Targets were sampled using Diamond drilling, and holes were typically drilled perpendicular to the strike (north-south) of the stratigraphy, at angles ranging between 55° and 80°.* • *Drill holes were located initially with hand held GPS and later surveyed by differential GPS. Each sample was submitted to ALS laboratories at Malaga, Perth and was weighed to determine density by the weight in air, weight in water method. All sampling was conducted under WSA QAQC protocols which are in accordance with industry best practice.* • *Diamond drill core (NQ2) is ¼ core sampled on geological intervals (0.2m to 1.5m) to achieve sample weights under 2kgs. Samples were crushed, dried and pulverised (total prep) to produce a sub sample for analysis by 4 acid digest with an ICP/AES and FA/ICP (Au, Pt, Pd) finish.*
	• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	• *All samples were prepared and assayed by independent commercial laboratories whose instruments are regularly calibrated* • *Geophysical survey QC parameters were reviewed by an independent supervising geophysicists from Newexco Services Pty Ltd*
	• Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m 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.	• *Diamond core is typically marked at 1m intervals* • *Sample intervals are marked up by geologists based on geology* • *Sampled mineralisation intervals are sent to a commercial laboratory for crushing and grinding before assaying.*
Drilling techniques	• Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	• *Diamond drilling comprises HQ and NQ2 sized core.* • *Core is oriented using the Boart Longyear TruCore orientation system*
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• *Diamond core recoveries have been logged and recorded in the database* • *Diamond core is logged and recorded in the database. Overall recoveries are >95% and there were no core loss issues or significant sample recovery problems. Core loss is noted where it occurs* • *Diamond core was reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the drillers.*
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	• *All geological logging was carried out to a high standard using well established nickel host rock and wall rock geology codes in using spreadsheets with appropriate spreadsheet templates as a guide.*
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	• *Final logging is quantitative and core photography is done to a high standard in both dry and wet form.*

Criteria	JORC Code explanation	Commentary
	• The total length and percentage of the relevant intersections logged.	• *All holes are logged in full.*
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken.	• *Diamond core is sampled as quarter core only and cut by experienced field crew on site by diamond saw.*
	• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	• *All samples are core; samples are crushed and split by independent commercial laboratory personnel.*
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	• *The independent commercial labs prepared the samples using industry best practice which involves oven drying, coarse crushing and pulverizing using certified methods and equipment that is regularly tested and cleaned.*
	• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	• *The field crew prepares and inserts QAQC certified reference materials OREAS and Geostats standards have been selected based on their grade range and mineralogical properties, with approximately 12 different standards used.*
	• Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	• *Standards and blanks are inserted approximately every 20 samples or at least one every hole for short RC drilling.*
	• Whether sample sizes are appropriate to the grain size of the material being sampled.	• *All geological logging was carried out to a high standard using well established geology codes in LogChief software.*
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	• *All samples are assayed by independent certified commercial laboratories.* • *The laboratories used are experienced in the preparation and analysis of nickel sulphide ores.*
	• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	• *Handheld calibrated Niton XRF are used to get preliminary semi-quantitative measurements* • *No Geophysical tools or handheld XRF instruments were used to determine any element concentrations that were subsequently used for MRE or exploration reporting purposes*
	• Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• *Certified reference materials are included in all batches dispatched at an approximate frequency of 1 per 25 samples, with a minimum of two per batch.* • *Field duplicates are inserted into submissions at an approximate frequency of 1 in 25, with placement determined by Nickel grade and homogeneity. Lab checks, both pulp and crush, are taken alternately by the lab at a frequency of 1 in 25.* • *Accuracy and precision were assessed using industry standard procedures such as control charts and scatter plots.* • *Evaluations of standards are completed on a monthly, quarterly and annual basis using QAQCR.*
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel.	• *Geological interpretation using intersections peer viewed by senior WSA geologists.*
	• The use of twinned holes.	• *Not applicable – No twinned holes*
	• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• *All primary geophysical data were recorded digitally and sent in electronic format to Newexco Services Pty Ltd for quality control and evaluation.* • *All geological logging was carried out to a high standard using well established geology codes in LogChief software.* • *All other data including assay results are captured in Excel .* • *Drill holes, sampling and assay data is stored in a SQL Server database*

Criteria	JORC Code explanation	Commentary
		located in a secure data center.
	• Discuss any adjustment to assay data.	• *None*
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	• *Downhole surveys were completed using a gyroscopic instrument on all resource definition holes.* • *Check surveys were done by a professional independent surveyor*
	• Specification of the grid system used.	• *MGA94 Zone 51 grid coordinate system is used as a standard.*
	• Quality and adequacy of topographic control.	• *The project area is flat and the topo data density is adequate for MRE purposes* • *Collar positions were picked up by suitably qualified surveyors*
Data spacing and distribution	• Data spacing for reporting of Exploration Results.	• *The WAD002 intersect is approximately 40m along strike from WAD002A and WAD002W1W1W1 daughters which are less than 10m apart at the massive sulphide elevation.*
	• 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.	• *Not applicable – No Mineral Resource or Ore Reserve reported*
	• Whether sample compositing has been applied.	• *Sample compositing has been applied using appropriate cut-off grades for reporting of Exploration Results* • *A nominal 1m sample composite length has been applied for MRE Reporting purposes*
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	• *The majority of the drill holes are orientated to achieve intersection angles as close to perpendicular as possible.* • *Geological structures including late stage granite pegmatites were modeled prior to the WSA managed drilling program and accounted for during drill hole navigation which was monitored on a regular basis by the Competent Person to ensure unbiased sampling of the deposit*
	• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• *No orientation based sampling bias has been observed in the data, intercepts are reported as downhole lengths unless otherwise stated.*
Sample security	• The measures taken to ensure sample security.	• *Standard West Australian mining industry sample security measures were adhered to*
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• *Newexco Pty Ltd an independent exploration company, has reviewed the sampling techniques employed by WSA.*

Section 2: Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.	• *The Cosmos Nickel Complex comprises 26 tenements covering some 9,226Ha. The tenements include mining leases and miscellaneous licenses* • *Western Areas wholly owns 23 tenements, which were acquired from Xstrata Nickel Australasia in October 2015. The remainder of the tenements (3) are subject to a Joint Venture with Alkane Resources NL, where Western Areas has earned 80.6% interest* • *All tenements are in good standing*
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• *Historical nickel exploration has been completed by Glencore PLC, Xstrata Nickel Australasia and Jubliee Mines NL*

Criteria	JORC Code explanation	Commentary
Geology	• Deposit type, geological setting and style of mineralisation.	• *The deposits form part of the Cosmos Nickel Complex, which lies within the Agnew-Wiluna Belt of the central Yilgarn Craton, Western Australia* • *The deposit style is komatiite hosted, disseminated to massive nickel sulphides.* • *The mineralisation typically occurs in association with the basal zone of high MgO cumulate ultramafic rocks.* • *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*
Drill hole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: – easting and northing of the drill hole collar – elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar – dip and azimuth of the hole – down hole length and interception depth – hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	• *See drill hole summary tables enclosed in the text and below.*
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• *Standard weighted averaging of drill hole intercepts were employed. No maximum or minimum grade truncations were used in the estimation.* • *The reported assays have been length and bulk density weighted. A lower nominal 0.5% Ni cut-off is applied to the disseminated intersects and no cut-off is applied to the massive intersects, with no top cut applied. High grade intercepts internal to broader zones of mineralisation are reported as included intervals.* • *Metal equivalents have not been used*
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	• *Drill hole intersections may not be true widths*
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate	• *Maps and sections are Included within report. Disseminated and Massive nickel sulphide results for WAD002W1W1W1 are shown below superimposed on a provisional disseminated low grade shell*

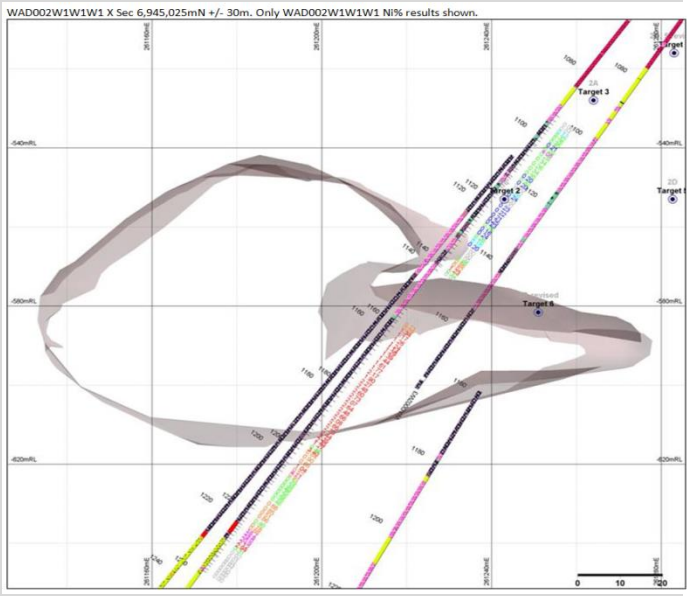
HOLEID	Easting	Northing	RL_MINE	DEPTH (m)	Type	DIP	Azimuth	Width (m)	Ni %	FROM (m)
WAD002	261630.351	6944917.08	476.661	1402.23	DD	-75	275	27.82	0.83	1107.18
	including							3.96	1.11	1116.04
	and							8.18	0.81	1146
	and							12.54	1.96	1165.18
	including							6.03	2.65	1166.97

COSMOS (OdyNorth ResDef) - WAD002A Exploration Results February, 2017

HOLEID	Easting	Northing	RL_MINE	DEPTH (m)	Type	DIP	Azimuth	Width (m)	Ni %	FROM (m)
WAD002A	261630.351	6944917.077	476.661	1274.9	DD	-75	275	25.99	2.46	1170.00
	and							1.28	5.30	1201.80
	and							2.57	12.56	1226.66
	including							1.61	18.03	1227.05

COSMOS (OdyNorth ResDef) - Exploration Results WAD002W1W1W1

HOLEID	Easting	Northing	RL_MINE	DEPTH (m)	Type	DIP	Azimuth	Width (m)	Ni %	FROM (m)	COG
WAD002W1W1W1	261630.351	6944917.077	476.661	1384.10	DD	-75	275	0.39	4.08	1102.62	
	including							1.45	1.23	1139.78	
	and							37.42	1.99	1159.82	1.0 % Ni
	including							25.75	2.31	1170.00	1.5% Ni
	and							0.28	3.40	1198.42	
	and							0.66	4.11	1205.49	
	and							5.27	15.23	1224.00	
	including							3.44	22.03	1224.00	

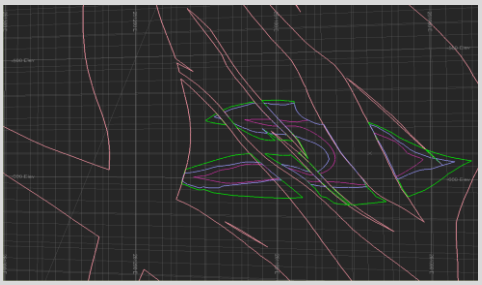
Criteria	JORC Code explanation	Commentary
	sectional views.	
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• *All results above a nominal cut-off are reported for the disseminated intersects and all the massive intercepts are reported*
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• *Included within report* • *Information on structure type, dip, dip direction alpha and beta angles, texture, shape, roughness and fill material is stored in the structural logs in the database.*
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• *Preliminary plans are included within the report* • *Future explorations programs may change depending on results and strategy*

Section 3: Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
Database Integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	• *Database validated by site geologists.* • *All data is entered utilising Maxwell's LogChief software for logging of drillhole data in the field on dedicated laptops.* • *Assay data in the form of csv files from the primary assay laboratory ALS Chemex and the umpire assay laboratory Genalysis received by exploration are imported directly into the database whenever possible.*
	• Data validation procedures used.	• *The LogChief software provides the first level of data validation, utilising locked lookup tables for all data fields which have set codes attributed to them.* • *The Datashed database utilises validation lookup tables and trigger scripts to ensure that all numeric, date and code information is correct.* • *All QAQC controls are reviewed and actioned after each submission.*
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	• The Competent Person (Andre Wulfse) is an employee of Western Areas and has undertaken regular site visits since the acquisition of Cosmos.
	• If no site visits have been undertaken indicate why this is the case.	• Not applicable.

Geological interpretation	• Confidence in (or conversely, the uncertainty) of the geological interpretation of the mineral deposit.	• *The Odysseus deposit is hosted within an ultramafic unit and consists of disseminated nickel sulphide mineralisation as a high grade core surrounded by medium and low grade zones.*
		• *Late stage pegmatites sit above, below and also crosscut the modelled ore body.*
		• *The wall rocks and mineralised envelopes were digitised in 3 dimensions using Implicit and Explicit modelling*
		• *Polygons and wireframes were snapped to both underground and surface drillhole intercepts as appropriate.*
		• *Wireframe triangulations were created from digitised polygons, and subdivided into domains as necessary, while taking into account geology and / or grade distribution. All triangulations were validated and checked to ensure they are closed and not crossing.*
		• *Five primary geological and geostatistical mineralised domains were modelled:*
		  ○ *Super high grade (>3.5% Ni)*
		  ○ *High grade (1.5-3.5% Ni)*
		  ○ *Medium grade (1.0 – 1.5% Ni)*
		  ○ *Low grade (0.4 – 1.0% Ni)*
		  ○ *Massive sulphide domain*
		• *Seven main lithological domains were created from the base of the massive sulphides to surface over a strike length of 3.5km:*
		  ○ *Felsic Volcanic*
		  ○ *Felsic Porphyry*
		  ○ *Granite Pegmatite*
		  ○ *Ultramafic*
		  ○ *Sediments*
		  ○ *Mafic*
		  ○ *Granites*
		• The orebody and the immediately surrounding wall rocks have been modeled to a level of confidence commensurate with the resource classification applied and discussed later. Geologic and grade continuity confidence has been substantially improved since the

		previous estimate by; ○ >3,000m of surface diamond drilling ○ Downhole geophysics ○ A pre-feasibility study including metallurgical and geotechnical studies ○ An extensive independent structural modeling study ○ Mineral Resource and Geologic remodeling using the additional data whilst cross referencing and maintaining some of the assumptions (including grade zone cut-offs) used by the previous Competent Person
	• Nature of the data used and of any assumptions made.	• Current and historic exploration data previously reported by WSA and Xstrata was used for this estimate. All material assumptions are summarized in this Table and in the report
	• The effect, if any, of alternative interpretations on Mineral Resource estimation.	• Several alternative iterations of the mineralized and lithological models were generated and critically assessed during this study. The most appropriate model was then used as a base case for mineral resource estimation. • Several alternative iterations of grade estimations using linear and non linear techniques were completed and critically assessed before finalizing the MRE • At all stages of the process, were the models compared to the previously reported models to ensure an appropriate level of consistency between the previous and the current interpretation
	• The use of geology in guiding and controlling Mineral Resource estimation.	• Geology is the overriding influencing factor in this MRE. A robust digital geologic model forms the basis of the MRE.
	• The factors affecting continuity both of grade and geology.	• Grade and geometry continuity is primarily influenced by intrusive late stage barren pegmatite dykes which penetrate the host ultramafic rocks and crosscut mineralisation in some locations. These pegmatites have been carefully modeled using implicit and explicit techniques. The grade was interpolated across the late stage pegmatite boundaries and then the areas bounded by pegmatites were blocked out with zero grades. The figure below shows the resultant effect where the areas affected by the pegmatites are barren but the overall continuity of the grade shells (low grade=green) is maintained. 

Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The strike length of the Odysseus South deposit is approximately 350m. The largest distance from the top of the mineralisation to the base is approximately 225m. The width of the deposit varies between 0.8m to 68m averaging 27m. Average grade and thickness increases down plunge to the north. • The strike length of the Odysseus North deposit is approximately 325m. The largest distance from the top of the mineralisation to the base is approximately 340m. The width of the deposit varies between 0.8m to 71m averaging 28m (5m cut off). Average grade and thickness increases to the north.
Estimation and modeling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, method was chosen include a description of computer software and parameters used and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	• The estimation was done using the following main software packages; o Leapfrog Geo Version 4.0.1 o Datamine Studio RM Version 1.2.47.0 o Snowden Supervisor Version 8.6 • Wireframing of grade and geological domains using underground and surface drilling was completed in Datamine and Leapfrog. • Sample data was composited to 1m downhole lengths and flagged on domain codes generated from 3D mineralized wireframes and 3D lithological wireframes. • Directional variography was performed for the Ni and density data for each of the domains using Snowden Supervisor software. • All estimation was completed at the parent cell scale to avoid any potential geostatistical support issues. • Top cut investigations were completed and no top cuts were applied during estimation. Low and high grade Ni domains were used instead.
	• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	• This 2017 MRE is the seventh resource estimate for the Odysseus Disseminated Nickel Sulphide Deposit. • The resource model volumetrics were compared to the previous model and variances can be explained due to the additional drilling and modeling techniques. • No mine data exists for the Odysseus deposits • Estimation validation techniques included visual comparison of the composites and estimated blocks, graphs of pass number versus % filled, swathe plots of the composite grades vs the grade of the block model, and swathe plots of kriging variance, kriging efficiency and slope of regression. • Non linear estimation techniques (Conditional Simulation) was used as an additional validation technique to validate the resource
	• The assumptions made regarding recovery of by-products.	• Ni is currently considered the only economic product that will be recovered
	• Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	• The ratio of Fe to Mg is recognized as influencing standard Ni flotation mill recoveries and both elements have been interpolated into the block model and the ratio has been calculated for each parent block in preparation for further metallurgical work. • All variables that have >1,000 assays out of a possible 4,500 assays have been estimated into the model, these are: • Fe,Mg,As,Co,Cr,Cu,S,Zn,MgO,Fe2O3

	• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	• A proto model was constructed using parent blocks of 10 mE x 15 mN x 5 mRL and sub-blocked to 1.25m x 2.5m x 1.25m. • Drillhole spacing ranges from 22m to 76 m, averaging 50 m. • The size of the search ellipse was based on the Ni variography for each domain. Three search passes were used and the search ellipses varied for each of the 13 mineralized domains • A maximum number of samples from any particular borehole were set at 30 and 36 depending on the Domain. This prevents a disproportionate number of samples from any borehole having an undue influence on the estimate.
	• Any assumptions behind modeling of selective mining units.	• No assumptions were made other than that the mineralisation in the disseminated is zoned and the outer low grade shell may not make it into the reserve category after an appropriate reserve cut-off has been applied.
	• Any assumptions about correlation between variables.	• No correlation between geochemical elements was observed.
	• Description of how the geological interpretation was used to control the resource estimates.	• Mineralised zones were digitised using explicit and implicit techniques by WSA and independent Geologists • Polygons were snapped to both underground and surface drilling intercepts. Each wireframe is representative of a grade domain, and used in compositing and estimating to ensure high grades were not smeared into the low grade zones and vice versa.
	• Discussion of basis for using or not using grade cutting or capping.	• Top cut investigations were completed and no top cuts were applied during estimation. Low and high grade Ni domains were used instead.
	• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• Estimation validation techniques included visual comparison of the composites and estimate blocks, graphs of pass number versus % filled, swathe plots of the composite grades vs the grade of the block model, and swathe plots of kriging variance, kriging efficiency and slope of regression
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages were estimated on a dry basis.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• The resource is reported above 1.5% Ni cut off grades for all mineralized material and a minimum true thickness of 1.5m for Massive sulphides
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• Standard paste fill longhole mining is assumed for the disseminated material and jumbo operated room and pillar for the massive sulphide material

Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• Ni flotation mill recovery techniques are assumed for both the disseminated and massive sulphide material
Environmental factors or assumptions	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• Potential waste and process residue disposal sites have been identified during a pre feasibility study and are not going to deviate much from previous sites using during past open cast and underground mining at Cosmos.
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	• Bulk densities are determined suing the same independent commercial laboratories as discussed in previous sections.
	• The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.	• All data used in the MRE is from competent fresh rock and void spaces are not material
	• Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• Bulk densities are determined for each sample assayed and interpolated into the block model
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories.	• Resource classification is based on a combination of Geological knowledge and confidence in the interpretation, data distribution, estimation passes, Kriging Efficiency (KE) and Slope of Regression (Slope) data analysis. • The Odysseus deposit is classified as JORC Indicated and Inferred. No blocks were classified as Measured
	• Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, and confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	• The definition of mineralised zones is based on a high level of geological understanding. It is believed that all relevant factors have been considered in this estimate, relevant to all available data.
	• Whether the result appropriately reflects the Competent Person's view of the deposit.	• The MRE reflects the Competent Person's view of the deposit and the risks associated with the grade and structural continuity.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• The MRE has not been independently audited or reviewed in its entirety. Independent Consultants have been involved in the modeling process to varying degrees.

Discussion of relative accuracy/confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	• Conditional Simulation techniques were used to determine the relative accuracy of Odysseus South within stated confidence limits and the results indicated that the global grade is very robust (within 0.05% variance) using 36 simulations.
	• The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	• The MRE Statement relates to local estimates
	• These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• The Odysseus deposit has not been mined but estimates have been compared against previous estimates and the overall geometry and global grades are consistent.