MEDIA/ASX RELEASE

23 December, 2014

Exploration drilling locates new manganese discovery

Assay results from an initial 38 holes at Spitfire Resources Ltd's South Woodie Woodie project in Western Australia reveals a new manganese discovery

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KEY POINTS

- **Assay results now received from RC holes sampled at South Woodie Woodie**
- **Manganese layer encountered, opens up new area of exploration potential "The Western Front"**

Spitfire Resources Limited (ASX: SPI) "Spitfire" or "the Company" is pleased to advise that it has received the assay results from Reverse Circulation (RC) drilling at its South Woodie Woodie manganese project in the East Pilbara region of Western Australia.

The drilling program was concentrated on the western side of tenement E46/835 which is part of the Company's South Woodie Woodie project. This area has had no previous exploration and the discovery of manganese at this new location is considered encouraging.

Assays from this new area returned a number of near-surface intersections including:

* Hole no. 021: 6m @ 22.2%Mn from 43m, including 4m @ 26.9%Mn;
* Hole no. 019: 10m @ 21.3%Mn from 43m, including 5m @ 25.0%Mn; &
* Hole no. 010: 14m @ 15.9%Mn from 51m, including 3m @ 22.0%Mn.

(Full details showing all drilling collar locations are shown in Appendix 1.
A plan projection of the Western Front target area is shown on Figures 2 & 3.)

These intercepts come from two areas referenced by the drilling team as "The Western Front". The Western Front exhibits no surface manganese signature but was identified as prospective following radiometric, geophysical and geological structure analysis of certain areas based on similarities in composition to the anomalies found at Spitfire's Contact/Contact North deposit

The distance between the intercepts at drill holes 19 & 21 to drill hole number 10 is approximately 3.3km. This represents a large area that could potentially host more manganese discoveries.

Geology

The geology of the western edge of tenement (E46/835) is dominated with a thick layer of calcrete covering most of the area. This layer is up to 15m thick and is predominantly flat lying. This calcrete layer sits over a layer of clay that is believed to have formed as a result of a heavily weathered and altered dolomite. Directly below this clay layer is the manganese layer. This layer ranges in consistency from siliceous braunite through to friable pyrolusite. The manganese content is gradually replaced with a highly siliceous altered dolomite at depth. The manganese layer is between 3m and 20m in depth. This siliceous dolomite continues at depth and is being tested to identify its dolomite sub group.

The outcrop feature is a siliceous dolomite with visible hydrologic alteration and veining of manganese and silica. The outcrop is positioned next to a large erosional feature (more than 1.5km in diameter) that extends in most directions. This feature could be the result of a large dissolution zone known to indicate the presence of a manganese deposits at depth. Further exploration work to test this area by geophysical means will be considered in 2015.

Management Comment

Spitfire's Executive Chairman, James Hamilton, said the Company was delighted to have hit manganese on the western side of its leases at an area that has previously had no exploration.

"To be intercepting manganese in this first short, sharp program is most pleasing," Hamilton said. "The results demonstrate the prospectivity of the area and give encouragement to our belief that the area may host high-grade manganese deposits. Finding high-grade manganese ore remains our priority for this project.

"A full desktop review of the results and pathway planning is now underway given that we are in the wet season in the Eastern Pilbara."

TABLE 1: Drilling collar and intersections

Hole ID	Easting	Northing	RL	EOH Depth	Dip	Azimuth	From	To	Interval	% Mn
Hole 010	306562	7559055	354	88	-90	0	43	55	14	15.9
Hole 019	304686	7556396	353	94	-90	0	43	52	10	21.3
Hole 021	304492	7556228	353	82	-90	0	51	56	6	22.2

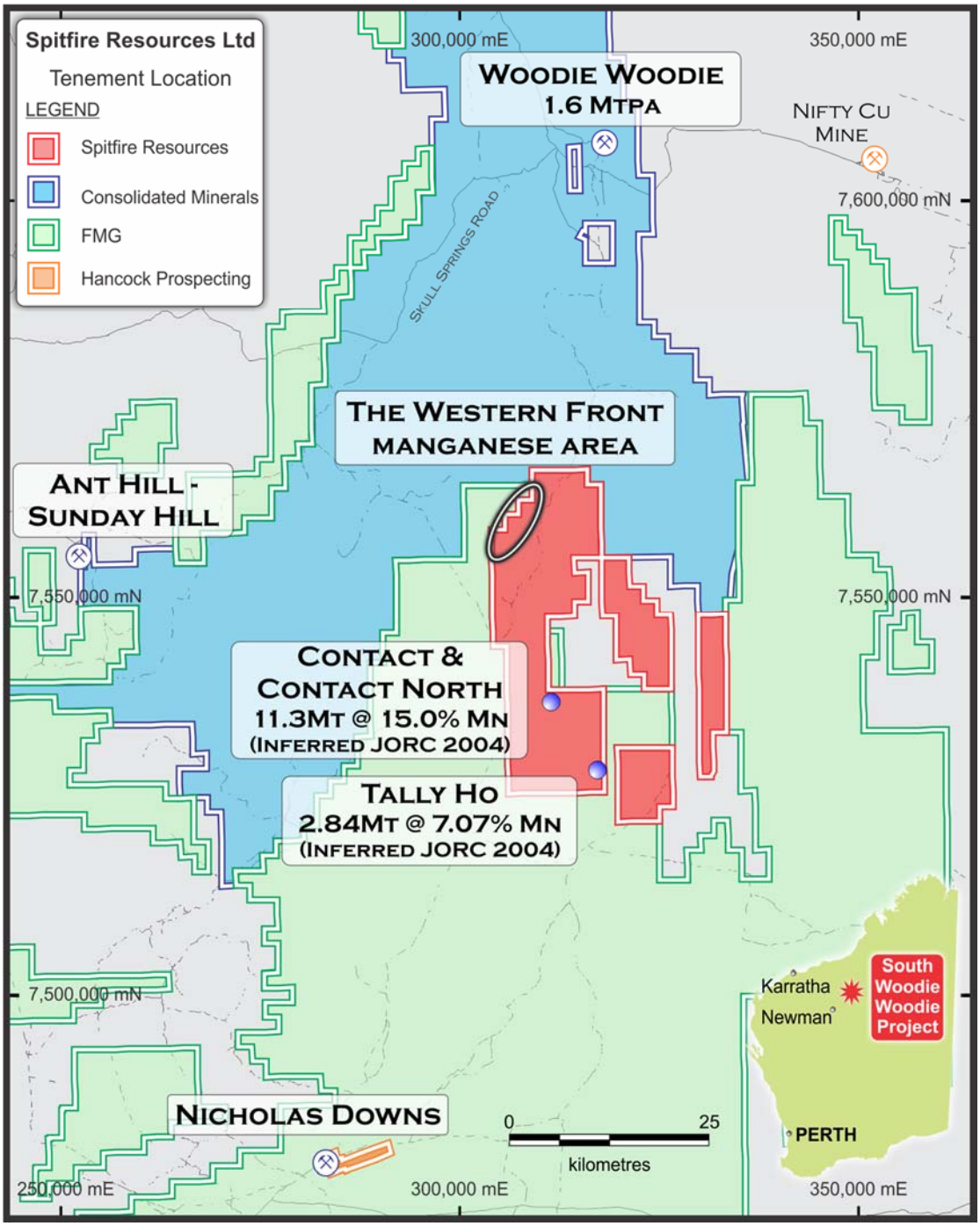

Figure 1. South Woodie Woodie tenement map

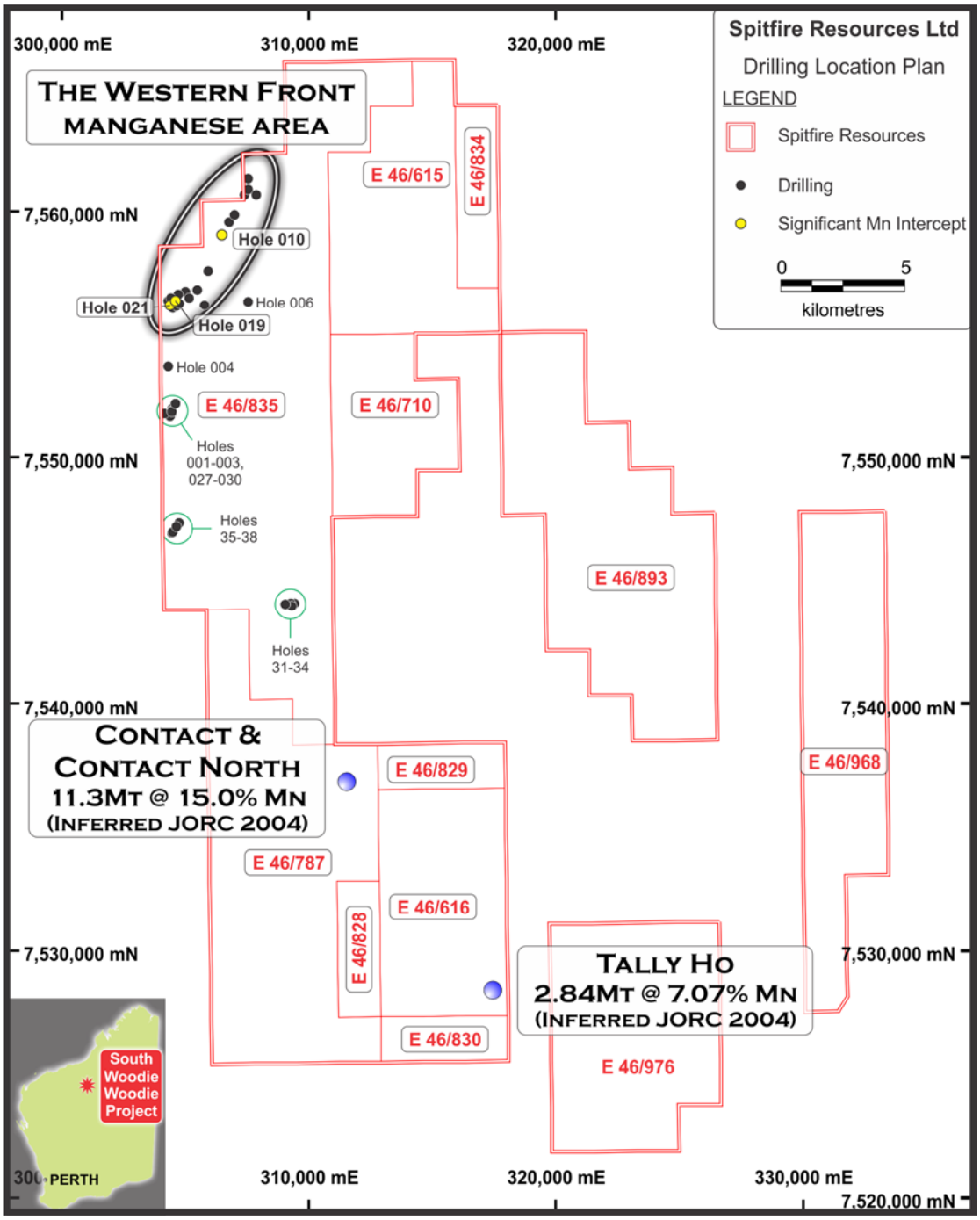

Figure 2. The Western Front manganese area

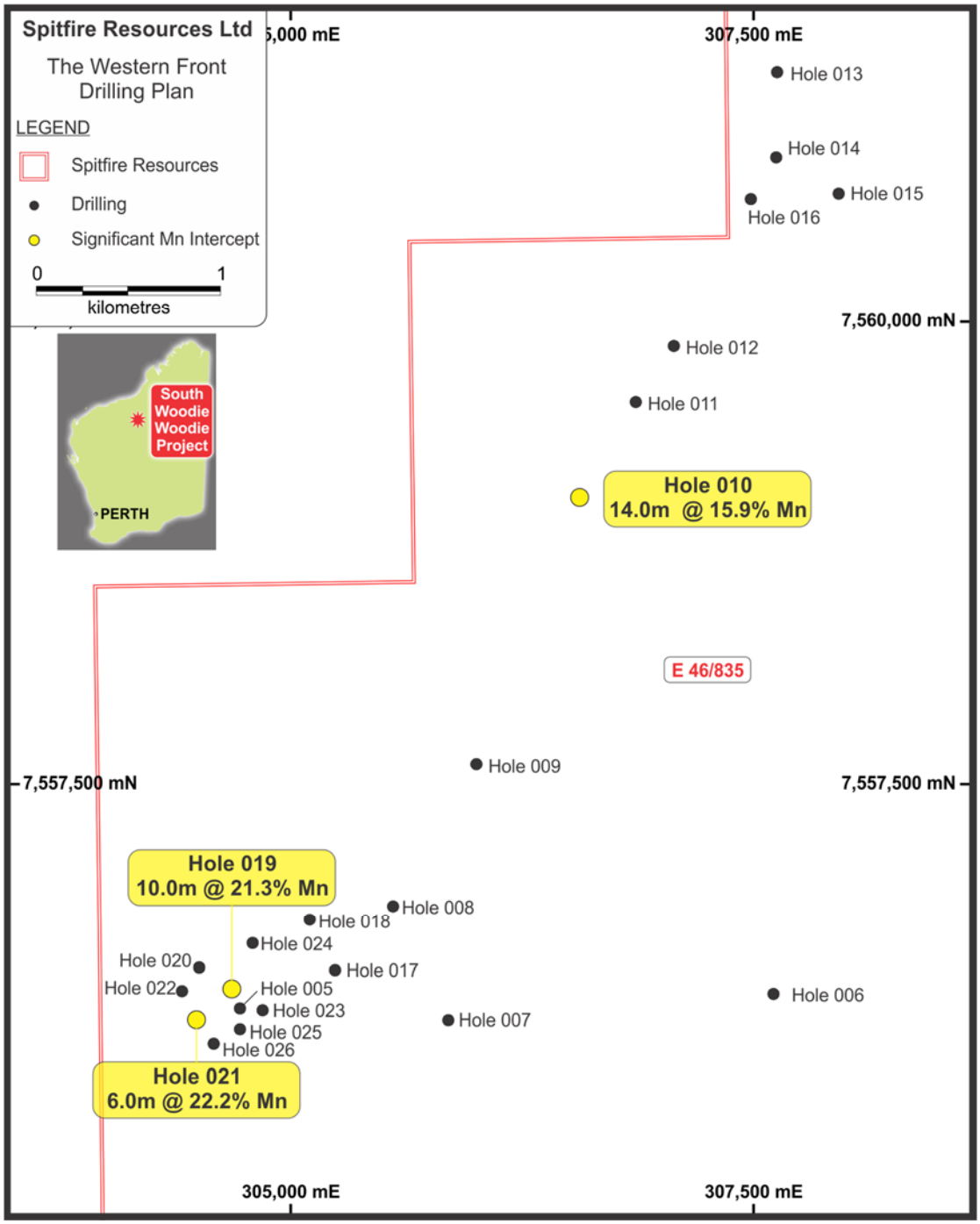

Figure 3. Close up of the Western Front manganese area

Hole ID	Easting	Northing	RL	Dip	Azimuth	EOH Depth
Hole 001	304515	7551862	346	-90	000	100
Hole 002	304561	7551888	343	-90	000	80
Hole 003	304541	7551951	345	-90	000	80
Hole 004	304388	7553746	357	-90	000	76
Hole 005	304728	7556286	348	-90	000	88
Hole 006	307606	7556363	336	-90	000	80
Hole 007	305854	7556222	352	-90	000	113
Hole 008	305557	7556839	356	-90	000	83
Hole 009	306002	7557609	356	-90	000	87
Hole 010	306562	7559055	354	-90	000	88
Hole 011	306866	7559568	354	-90	000	70
Hole 012	307068	7559870	353	-90	000	80
Hole 013	307625	7561352	353	-90	000	88
Hole 014	307622	7560891	353	-90	000	80
Hole 015	307961	7560697	353	-90	000	80
Hole 016	307485	7560667	353	-90	000	80
Hole 017	305242	7556492	354	-90	000	80
Hole 018	305104	7556767	354	-90	000	118
Hole 019	304686	7556396	353	-90	000	94
Hole 020	304509	7556505	353	-90	000	82
Hole 021	304492	7556228	353	-90	000	82
Hole 022	304417	7556382	353	-90	000	82
Hole 023	304852	7556276	353	-90	000	75
Hole 024	304796	7556641	353	-90	000	88
Hole 025	304730	7556175	353	-90	000	82
Hole 026	304586	7556096	346	-90	000	61
Hole 027	304546	7551994	343	-90	000	58
Hole 028	304702	7552233	346	-90	000	64
Hole 029	304267	7551825	343	-90	000	80
Hole 030	304468	7551722	362	-90	000	80
Hole 031	309122	7544160	362	-90	000	80
Hole 032	309369	7544078	362	-90	000	80
Hole 033	309355	7544172	362	-90	000	80
Hole 034	309484	7544176	363	-90	000	80
Hole 035	304565	7547025	382	-90	000	120
Hole 036	304580	7547075	380	-90	000	80
Hole 037	304747	7547293	379	-90	000	80
Hole 038	304847	7547421	377	-90	000	80

Appendix 1: Summary of drilling collar locations results

Competent Person's Report

The information in this report relating to exploration results and mineral resources is based on information compiled by Mr. Stuart Peterson the Company's Consulting Exploration Manager who is a Member of the Australian Institute of Mining and Metallurgy. Mr Peterson has sufficient experience relevant to the style of the mineralisation and to the type of activity described to qualify as a competent person as defined in the 2012 Edition of the 'Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves.' The information in relation to mineral resources was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported. Mr Peterson consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	Samples were obtained over a 1 metre composite and a representative sub sample of ~3kg was collected through the use of a riffle splitter at the rig. Samples were crushed, dried and pulverised (total prep) to produce a sub sample for analysis These samples underwent XRF assay. Duplicate and Standard testing was performed under Spitfire protocols and QAQC procedures as per industry best practice.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	Reverse Circulation was performed at the exploration drilling. RC drilling accounts for all of the total drilling and comprises of a 140mm diameter face sampling hammer drilling.

Criteria	JORC Code explanation	Commentary
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.*	RC recoveries are logged and recorded in the database. Overall recoveries are >95% and there are no significant sample recovery problems. RC samples were visually checked for recovery, moisture and contamination. No relationship in sample recovery and grade was seen in the RC samples.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	Geological logging of RC samples at recorded lithology, mineralogy, mineralisation, weathering, colour and other features of the samples. All drill holes were logged in full.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	The sample preparation follows industry best practice in sample preparation involving oven drying, coarse crushing of the whole sample down to <32mm to be tested for metallurgical properties. 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 1:15 for both deposits. No field duplicates have been taken. Samples are selected to weigh less than 3kg to ensure total preparation at the pulverisation stage. The sample sizes are considered to be appropriate to correctly represent the manganese mineralisation based on: the style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and percent value assay ranges for the primary elements.

Criteria	JORC Code explanation	Commentary
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.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	The method used for all manganese assays was X-Ray Fluorescence (XRF) XRF offers a robust and repeatable method, consistent with industry requirements. The relatively low flux to sample ratio offers good sensitivity for the majority of elements and creates a matrix which is not subject to particle size effects. The XRF method delivers highly accurate and precise results across the full range of manganese oxide ore types. No geophysical tools were used to determine any element concentrations used in either resource estimate. Sample preparation checks for fineness were carried out by the laboratory as part of their internal procedures Laboratory QAQC involves the use of internal lab standards using certified reference material, blanks, splits and replicates as part of the in house procedures. Umpire laboratory campaigns with two other laboratories have been carried out as independent checks of the assay and these show good precision. Certified reference materials, having a good range of values, were inserted blindly and randomly. Results highlight that sample assay values are accurate and that contamination has been contained. Repeat or duplicate analysis for samples reveals that precision of samples is within acceptable limits
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	Spitfire management and geological staff identified significant intercepts within the RC samples based on previous training and assay correlation. No twin holes were drilled in this drilling program.

Criteria	JORC Code explanation	Commentary
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	Hole collar locations for all holes were surveyed using a hand held Garmin GPS C78s with an accuracy of +/-4 m. Elevation was adjusted to the Aster Satellite data with height accuracy within +/-0.5m. Prior to further work, the actual drill collars and surrounding topography will be surveyed for inclusion in possible future resource models. The grid system used is MGA_GDA94, zone 51. Topographic surface uses Aster Satellite data contours with height accuracy within +/-0.5m.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	Nominal drill hole spacing for the drilling ranges from 200m to 3300m as this is an exploration drill program. Samples have been composited to one metre lengths
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	All holes were drilled vertically as the deposit is flat lying so no orientation data was collected.
Sample security	• *The measures taken to ensure sample security.*	Chain of custody is managed by Spitfire. Samples for Contact/Contact North are stored on site and delivered by Spitfire personnel to Regal Transport in Newman then transported to the assay laboratory. Whilst in storage, they are kept on a locked yard. Tracking sheets have been set up to track the progress of batches of samples.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	A review of the sampling techniques and data was carried out by MET's as part of each resource estimate and the database is considered to be of sufficient quality to carry out resource estimation. An internal system audit was undertaken by Spitfire in January 2013.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	The drilling is located wholly within the exploration licence E46/835. The tenement is owned by SPITFIRE AUSTRALIA (SWW) PTY LTD. The tenement sits on the Nyiyaparli native claim (NTC)WC05/6. The tenement is in good standing and no known impediments exist.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	No previous systematic exploration has been undertaken at the western side of E46/835 prospect.
Geology	• *Deposit type, geological setting and style of mineralisation.*	The tenement lies within the Balfour Downs sub-basin and is covered by a portion of the Hamersley Group based by the Fortescue sediments and Archaean granite-greenstone basement. The target areas are the manganese seams hosted by the Carawine Dolomite, upper member of the Hamersley group.
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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level*	Refer to Appendix 1: Summary of drilling collar locations results

Criteria	JORC Code explanation	Commentary
	in metres) of the drill hole collar o *dip and azimuth of the hole* o *down hole length and interception depth* o *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.*	
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.*	All assays reported have not been truncated or length weighted. No selective procedures were used to skew the high grade manganese results. No metal equivalent values are used for reporting exploration results.
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 (eg 'down hole length, true width not known').*	The exploration area is dominantly flat lying and is drilled to a grid with drill holes inclined to -90. The intersection angles for the drilling appear to be close to perpendicular to the mineralised zones, therefore reported downhole intersections approximate true width.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Refer to Figure1 in body of text

Criteria	JORC Code explanation	Commentary
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	All results are reported.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	All results have been reported if they are material and/or meaningful
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.*	All further work planned exploration activities will be explained in the main body of the text.

Sections 3, 4 and 5 of the 2012 JORC code do not apply to the exploration drilling results at the current project stage.

For further information, please contact:

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