ASX ANNOUNCEMENT

ASX : CXO

3rd November 2014

New broad intersections extend mineralisation over 500m strike Inkheart, NT

HIGHLIGHTS

- **Final assays received for Core's recent 2,500m RC drilling in the NT**
- **New broad silver and lead intersections have extended continuity of mineralisation at Inkheart to at least 500m strike**
- **Highest grade assays include 3m @ 198g/t Ag and 4.1% Pb (IKRC016) and 3m @ 177 g/t Ag and 4.1% Pb (IKRC007)**
- **Thick mineralised zones at Inkheart are open along strike and at depth**
- **These results further highlight the potential of the Bitter Springs Formation to host economic deposits of minerals**
- **Focus of drilling by the Company will now shift to imminent programs at Virginia and Copper Royals**

Core Exploration Ltd (ASX:CXO) has intersected additional broad zones of silver and lead mineralisation including high grades, in the final drill assays from the Company's recently completed RC drilling program at the Inkheart and Blueys Prospects in the NT.

The mineralised zone at Inkheart containing wide and high-grade intersections has now been intercepted consistently for at least 500m along strike within the targeted Bitter Springs Formation.

New thick zones of mineralisation were intersected in the two recent drill sections to the south west of the original discovery drilling by Core at Inkheart in May 2014. Drillhole IKRC016, 250m south west of the May discovery drilling, intersected 12m @ 82g/t Ag and 1.4% Pb including 3m 198g/t Ag and 4.1% Pb (Figures 1 & 2, Table 1).

IKRC022 intersected 36m @ 20g/t Ag and 0.3%Pb within a substantial 50m wide intersection (63-123m) of altered, veined and mineralised rocks containing elevated silver, lead, zinc and copper. This is the first evidence of large-scale alteration and mineralisation processes identified by Core.

The mineralised zones at Inkheart are open to the north east, at depth and potentially to the south west. Core believes there is potential for further mineralisation over a much larger area within the target Bitter Springs Formation geology. This reinforces the tenement wide and regional potential of the Bitter Springs Formation for the discovery of economic precious and base-metal deposits (Figures 1-3).

Higher grades at the Blueys and Inkheart Prospects have been intersected in structurally controlled zones within broader, lower grade mineralisation and alteration halos within the Bitter Springs Formation.

Core's Managing Director Stephen Biggins commented "Given there was only one traverse of holes previously drilled by Core within its new discovery at Inkheart, this second drill program was focussed on locating where mineralisation is positioned within the potentially large system. With the new assays results in hand and our rapidly increasing geological understanding gained by drilling, the next phases of exploration at Inkheart can focus on testing the sweet-spots and further increasing the scale at Inkheart"

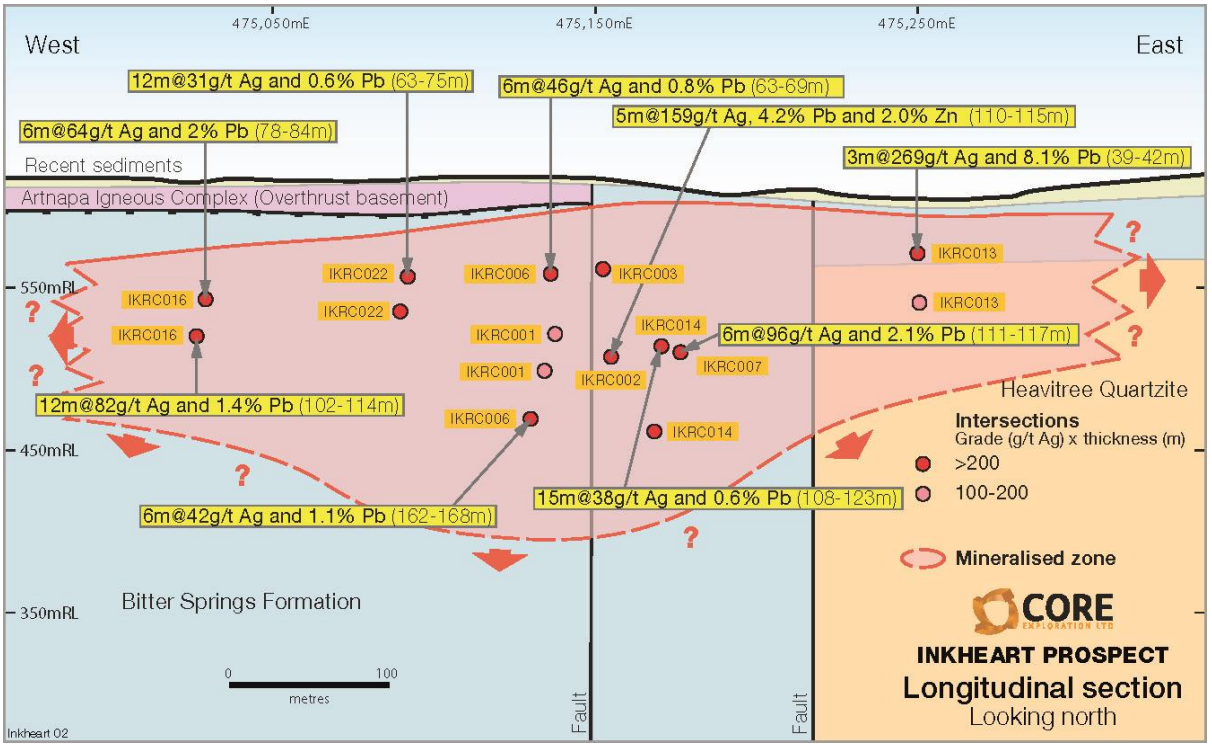

Figure 1. Long section of significant drill results (>100g/t x m Ag) and interpreted mineralised zone and geology, Inkheart Prospect, NT.

Next Steps

The next steps to increase the scale of mineralisation at Blueys and Inkheart, on the Company's 100% owned EL 28136 would include:

- Diamond drilling to target the HTQ-BSF contact at depth, test the depth extent of mineralisation and to enable detailed structural analysis and characterisation of alteration and mineralisation
- RC drilling to infill and extend mineralisation along strike at Inkheart
- Repeating the successful process that led to the discovery of Inkheart by conducting a regional soil survey at 200m spacing over the Bitter Springs Formation with EL 28136

Core will consider these possible next steps on EL 28136 in early 2015 in the context of results from upcoming drilling of copper targets at Virginia and the Copper Royals district and after interpretation of the new AEM survey in the exciting Jervois Domain tenements.

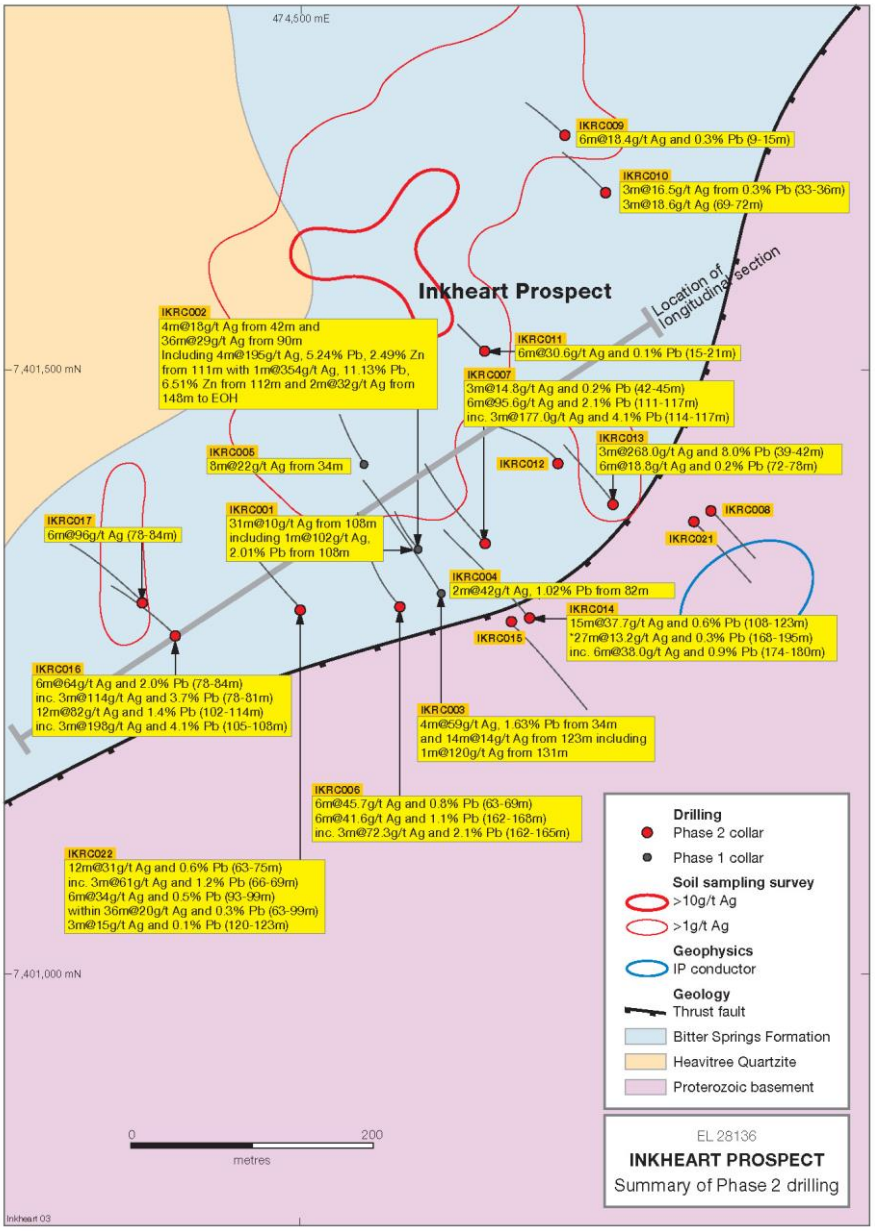

Figure 2. Drillhole locations and significant assays overlain on geology, Inkheart Prospect, NT

Assay Results and Drilling

Hole_ID	Intersection	Including
BLRC013	9m @ 27g/t Ag & 0.4% Pb [48-57m]	inc 3m @ 42g/t Ag & 0.4% Pb [48-51m]
	3m @ 10g/t Ag & 0.1% Pb [75-78m]	
IKRC006	**6m @ 46g/t Ag & 0.8% Pb [63-69m]**	
	3m @ 72g/t Ag & 2.1% Pb [162-165m]	
	3m @ 14g/t Ag & 0.2% Pb [174-177m]	
IKRC007	3m @ 15g/t Ag & 0.2% Pb [42-45m]	
	6m @ 96g/t Ag & 2.1% Pb [111-117m]	**inc 3m @ 177g/t Ag & 4.1% Pb [114-117m]**
IKRC009	6m @ 18g/t Ag & 0.3% Pb [9-15m]	
IKRC010	3m @ 17g/t Ag & 0.3% Pb [33-36m]	
	3m @ 19g/t Ag [69-72m]	
IKRC011	6m @ 31g/t Ag & 0.1% Pb [15-21m]	
IKRC013	**3m @ 269g/t Ag & 8.1% Pb [39-42m]**	
	6m @ 19g/t Ag & 0.2% Pb [72-78m]	
IKRC014	**15m @ 38g/t Ag & 0.6% Pb [108-123m]**	
	27m @ 13g/t Ag & 0.3% Pb [168-195m]	**inc 6m @ 38g/t Ag & 0.9% Pb [174-180m]**
IKRC016	**6m @ 64g/t Ag & 2.0% Pb [78-84m]**	**inc 3m @ 114g/t Ag & 3.7% Pb [78-81m]**
	12m @ 82g/t Ag & 1.4% Pb [102-114m]	**inc 3m @ 198g/t Ag & 4.1% Pb [105-108m]**
IKRC017	**6m @ 96g/t Ag[78-84m]**	
IKRC022	**36m @ 20g/t Ag & 0.3% Pb [63-99m]**	**inc 12m @ 31g/t Ag & 0.6% Pb [63-75m]**
		inc 3m @ 61g/t Ag & 1.2% Pb [66-69m]
		inc 6m @ 34g/t Ag & 0.5% Pb [93-99m]
	3m @ 15g/t Ag & 0.1% Pb [120-123m]	

Table 1. Significant drill intersections from Core's Sep/Oct RC drilling program at Inkheart and Blueys Prospects, NT.

Better drill intersections to date at Inkheart are offset from the surface soil geochemical anomalism. The soil anomalism correlates with the contact between the Heavitree Quartzite (HTQ) and Bitter Springs Formation (BSF).

Aside from the most north-easterly drilling traverses where structural uplift of HTQ is evident, the majority of the Inkheart drilling did not test the target HTQ-BSF contact at depth as drilling depths were constrained by the ability of RC drilling method to maintain sample quality below the water table.

The south western holes at Inkheart (IKRC018-20) did not return significant results, but each nominal drill section was only tested with a single hole on 200m spaced lines, thus potential for south-west extensions in that area and further to the southwest should not be discounted.

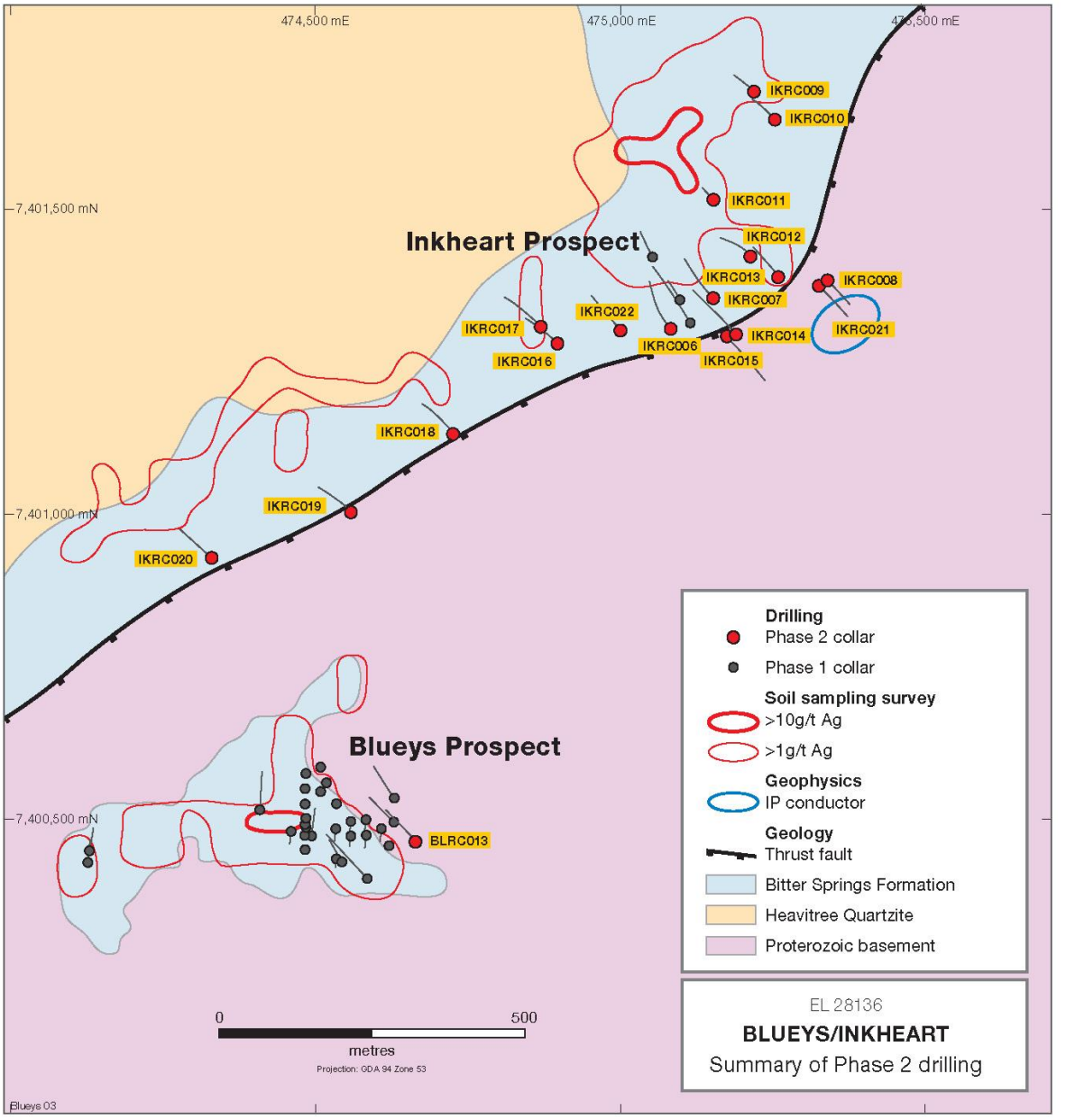

Figure 3. Drillhole locations Inkheart and Blueys Prospects, NT

Inkheart Prospect Mineralisation and Geology

Mineralisation at Inkheart is interpreted to be structurally controlled and likely related to the over-thrusting of the older (Mesoproterozoic) Artnarpa Igneous Complex over the younger (Neoproterozoic) Bitter Springs Formation (BSF) and (Heavitree Quartzite (HTQ) (Amadeus Basin). This over-thrusting has provided a fluid pathway for metal-bearing fluids to interact with reactive (carbonate) lithologies of the BSF, therefore providing a trap to accumulate base metals and silver.

The favourable structural environment has been further enhanced by internal rheological contrasts in part between the mechanically brittle underlying HTQ and the overlying variably ductile BSF. More importantly, internal rheological contrasts with the BSF are now considered a key controlling factor providing localised dilation zones as carbonate and fissile carbonaceous shale facies ductility contort and fold around the more competent units.

The implications for the mineralising model for Inkheart and Blueys have potential to be significant. If mineralisation is localised in or at the margin to brittle rocks within the highly contorted BSF, rather than more limited cross-cutting vein structures, there is potential for significant broad zones of mineralisation in fold hinges internally within the BSF (e.g. IKRC022 36m @ 20g/t Ag & 0.3% Pb [63-99m]).

Mineralisation is often visible as galena (lead sulphide) and is generally accompanied by increased abundance of pyrite. There is a strong association of silver with lead whereas copper and zinc levels are more variable and early indications suggest these metals may be zoned along strike.

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The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Stephen Biggins (BSc(Hons)Geol, MBA) as Managing Director of Core Exploration Ltd who is a member of the Australasian Institute of Mining and Metallurgy and is bound by and follows the Institute's codes and recommended practices. He has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activities being 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. Biggins consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. This report includes exploration information that was prepared and previously disclosed by Core under the JORC Code 2012 in the ASX release on 17/06/2014 "High grade silver lead intersections from maiden drilling program Albarta Project, NT." and on 21/10/2014 "Additional Silver Lead Mineralisation Discovered at Inkheart".

Hole ID	Easting	Northing	RL	Total Depth	DIP	TAZ	Completion
IKRC006	475081	7401305	618.9	192	-60	325	Sep 2014
IKRC007	475152	7401357	614.4	186	-60	315	Sep 2014
IKRC008	475338	7401385	605.8	115	-60	135	Sep 2014
IKRC009	475219	7401695	611.6	90	-60	315	Sep 2014
IKRC010	475252	7401649	612.0	102	-60	315	Sep 2014
IKRC011	475152	7401517	607.7	60	-60	315	Sep 2014
IKRC012	475212	7401425	606.9	108	-60	315	Sep 2014
IKRC013	475257	7401391	606.7	114	-60	325	Sep 2014
IKRC014	475189	7401296	616.1	198	-60	315	Sep 2014
IKRC015	475174	7401294	616.9	210	-60	135	Sep 2014
IKRC016	474896	7401281	615.8	132	-60	315	Sep 2014
IKRC017	474868	7401309	621.3	150	-60	315	Sep 2014
IKRC018	474727	7401134	612.8	150	-60	315	Sep 2014
IKRC019	474558	7401006	616.6	162	-60	315	Sep 2014
IKRC020	474328	7400929	622.0	150	-60	315	Sep 2014
BLRC013	474664	7400463	605.1	150	-60	315	Sep 2014
IKRC021	475324	7401376	605.7	126	-60	135	Sep 2014
IKRC022	474999	7401304	618.7	132	-60	315	Oct 2014

Table 2. Reverse circulation drillhole information, Blueys and Inkheart Prospects, NT.

Blueys Inkheart RC Drilling – September 2014– JORC 2012

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

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 'RC 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.*	• All RC drill cuttings were spear sampled. • RC sampling was initially undertaken using 3m composite intervals for first-pass analysis however a one metre un-composited samples collected using a splitter on the cyclone were retained for future follow-up analysis over anomalous zones. • All drilled intervals were sampled as 3-metre composites • Each one metre drilled interval is qualitatively annotated with a sample quality based on weight and moisture content.
Drilling techniques	• *Drill type (eg core, RC, 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).*	• Coughlan Drilling were contracted to undertake RC drilling • All drilling was face sampling with a 5 1/2" RC Hammer • RC drilling was drilled at various angles and orientations with downhole surveys undertaken nominally every 30m down hole
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.*	• A visual estimate of recovery over individual one-metre drilled estimates was recorded. • RC drilling only so no assessment of sample representivity or sample bias available.

Criteria	JORC Code explanation	Commentary
	• *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.*	
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.*	• Drill cuttings are qualitatively logged and photographed • Qualitative logging includes lithology, colour, mineralogy, description, marker horizons, weathering, texture, alteration and mineralisation
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.*	• See Sampling section above for a description of sampling and sub-sampling techniques. • Sample sizes are considered appropriate for the expected grainsize of mineralisation. • Every twentieth sample submitted for analysis was sampled was duplicated. Certified standards were submitted in sequence for every 25 samples submitted. • Subsampling techniques are undertaken in line with standard operating practices in order to ensure no bias associated with sub-sampling. • The nature, quality and appropriateness of the sampling technique is considered adequate for the type of mineralisation and confidence level being attributed to this initial reconnaissance drilling program.
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*	• A certified and accredited global laboratory (Intertek-Genalysis) was used for all assays. • Sample preparation was undertaken in Alice Springs with analysis undertaken at Intertek's Adelaide laboratory. • Samples were analysed using Intertek's 4A/OM10 technique which

Criteria	JORC Code explanation	Commentary
	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.*	involves near-total 4 acid digest and analysis using ICP-OES and ICP-MS for 46 elements including Ag and Pb. • Internal certified laboratory QAQC is undertaken by Intertek. • Duplicates and certified standards were inserted in sequence as detailed above.
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.*	• Primary data is captured dirtectly into an in-house referential and integrated database system designed and managed by the Exploration Manager. All assay data is cross-validated within the database by various integrity scripts and externally using MapInfo drill hole validation checks including interval integrity checks. • Laboratory assay data is not adjusted.
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.*	**<u>Collar co-ordinate surveys</u>** • All coordinates are recorded in GDA 94 MGA Zone 53. • Surveys have been undertaken by Core Exploration staff using a hand-held GPS this tool has an accuracy of approximately 3m. • Topographic control uses the DTM generated by the UTS 100m airborne survey conducted over the area by Western Desert in 2008 **<u>Down hole surveys</u>** • Downhole surveys were undertaken using a Reflex electronic survey camera system supplied by Coughlan Drilling nominally every 30m down hole.
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*	• Initial reconnaissance RC drilling only. • See drilling section above regarding composite sampling

Criteria	JORC Code explanation	Commentary
	applied. • *Whether sample compositing has been applied.*	
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.*	• Initial reconnaissance drilling only
Sample security	• *The measures taken to ensure sample security.*	• Sample Intervals are put into individually numbered calico sample bags and are then loaded into cable tied bulka-bags before being dispatched to Intertek-Alice Springs for sample preparation.. • Assay pulps are returned to Core Exploration from contracted laboratories on a regular basis and stored securely for future reference.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews have been undertaken

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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 Inkheart / Blueys prospect areas is contained within EL 28136 that is 100% held by DBL Blues Pty Ltd a wholly owned subsidiary of Core Exploration Ltd. • Core Exploration manages EL 28136. • EL 28136 is located on Love Creek Station which is Aboriginal Freehold Land owned by the Central Land Council (CLC). • A work agreement has been signed with the CLC over EL 28136 and the work programme undertaken has been authorised by the CLC . • All drilling was undertaken outside of Heritage, Conservation or National Parks on EL 28136. • All work was undertaken within the scope of the Exploration Mining Management Plan (EMMP) that was approved by NTDME
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Various phases of historical exploration have been undertaken at Blueys by a number of companies over the last 30 years. Inkheart was discovered by CXO early in 2014 with this drilling program designed to follow up the initial drilling traverse completed in May 2014.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Geology comprises Neo-Proterozoic Amadeus Basin Metasediments of the Heavitree Quartzite and Bitter Springs Formation that have been in part over thrust by Meso-Proterozoic Artnarpa Igneous Complex. Drilling is targeting Ag-Pb mineralisation.
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*	• Drill hole information is recorded within the CXO in-house database with all collar locations listed in the table accompanying this document.

Criteria	JORC Code explanation	Commentary
	○ *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.*	• No material information is excluded.
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.*	• Aggregated intersections have been calculated separately for silver and lead using a 10g/t silver cut-off or 0.1% lead cut-off. Minimum intersection widths are 3m and up to 3m (9m IKRC022) of internal dilation are included. • No metal equivalents are reported.
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').*	• Initial reconnaissance drilling only thus geometric relationship of mineralisation to vertical drill orientation unknown.
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.*	• See attached plans showing drill hole density and sections as well as the tabulated drill hole information data accompanying this document.
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.*	• See attached table of intersections. • Reported intersections use the criteria detailed in the above section "data aggregation methods".
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*	• Mineralisation is generally hosted by carbonate-rich lithologies of the Bitter Springs Formation. Due to the drilling technique primary textures are hard to distinguish or are obliterated.

Criteria	JORC Code explanation	Commentary
	deleterious or contaminating substances.	• Groundwater is generally present below 100m depth. • Multi-element geochemistry assaying (45 elements) is routine for all sampling. Some elemental associations are recognised within certain lithologies within the region and are used as a tool to assist in interpretation of original lithologies where alteration affected the ability to visually determine the lithology.
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.*	• Subject to Board approval further drilling may be undertaken