#### 21 August 2015

# NEW HIGH GRADE GRAPHITE MINERALISATION IDENTIFIED AT CORKWOOD CENTRAL

- Mapping identifies extensive new flake graphite mineralised zones at Corkwood Central
- High grade graphite mineralisation returned in rock samples up to 20.2% Total Graphitic Carbon
- Planning for geophysics and drilling to test most prospective targets underway

Sayona Mining Limited (ASX: SYA) ("Sayona" or the "Company") is pleased to announce the results of a recently completed mapping and sampling program at the Corkwood Central prospect.

The aim of the program was to map and sample the central portion of the Corkwood geophysical anomaly on the Western Iron granted Exploration License E80/4511, where there has been no previous graphite exploration.

Mapping has identified outcropping graphite mineralisation along a 10 kilometre strike extent within the 20 kilometre long geophysical anomaly at Corkwood.

A total of 110 rock grab sample have been submitted for assay, with results ranging from 0.65% to 20.2% TGC (total graphitic carbon), including:

- Seventeen of the samples returning 5% TGC or greater; and
- Two of the highest samples included 20.2% TGC and 16.8% TGC.

The graphite mineralisation is contained in units commonly 10 metres or more in thickness and up to 50 metres in thickness.

The company believes the discovery of new mineralisation is encouraging evidence that the Corkwood project has the potential to host economic graphite mineralisation. The identification of high grade graphite mineralisation above 20% TGC and other better zones of mineralisation present as immediate drill targets.

Metallurgical test work and a petrographic study is being planned to determine if the new areas of graphite mineralisation contain a high proportion of jumbo and large flake graphite, as identified to the south and north (see ASX announcement 10 July 2015), along the prospective 20 kilometre plus strike extent target within the Corkwood project area.

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### **Corkwood Central Exploration Program Overview**

The recent mapping and sampling programme principally targeted a 10 kilometre strike extent within the central portion of the Corkwood project (within E80/4511 or the Western Iron Ore Option area), which has never previously been explored for its graphite potential.

Mapping has identified persistent horizons of graphitic gneiss with up to 5 parallel units locally being present. The principle unit has widths commonly of 10 metres or more, and ranges up to 50 metres in width. Secondary units appear narrower, but outcrop is poor and this hinders their interpretation.

Some of the graphite units have carbonate alteration related to early stage shearing but the package generally does not appear to have been affected by post metamorphic intrusions or other events which could negatively impact graphite flake preservation. Importantly, the graphite mineralisation is visually similar to that identified further to the north and south during the company's first sampling of the project area in June. A previous petrographic study of these samples identified the presence of coarse and jumbo flake graphite (see ASX announcement 10 July).

A total of 110 rock grab samples were collected. Results range from 0.65% TGC to 20.2% TGC. The two highest assay results, 20.2% TGC and 16.8% TGC, come from samples spaced 5 km apart. Sample locations and selected results are shown in Figure 1 for the northern areas and Figure 2 for the southern areas.

The graphite mineralisation observed during recent mapping is coincident with geophysical electromagnetic anomalism. This data, from past airborne GEOTEM surveying, was reprocessed to help guide the field programme. Interpretation of the geophysics however suggests a broader area of conductive anomalism that that observed on the ground. Given the high degree of cover over the graphite horizons in the project area, there remains scope for additional mineralisation to be present under cover.

Samples have also been collected for metallurgical test work, the programmes for which are being commissioned, so as to deliver information on the graphite flake size, purity and its potential high technology applications. It is anticipated the information will also help vector drilling into those areas where the graphite has the best quality in combination with grade and thickness.

The Company is planning to commence drill testing of the prospective Corkwood leases in October 2015 once statutory and Native Title requirements have been completed.



Figure 1: Graphite mineralisation identified on surface at Corkwood



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Sayona Mining Limited is an Australian, ASX-listed, company focused on sourcing and developing high purity flake graphite for use in the rapidly growing new technology sectors. Please visit us as at www.sayonamining.com.au

#### COMPETENT PERSON STATEMENT

The information in this report that relates to Exploration Results is based on information compiled by Mr Simon Attwell, a Competent Person, and who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Attwell is an employee of Attgold Pty Ltd ("Attgold") which provides geological services to Sayona. Mr Attwell is a financial beneficiary, being a director and shareholder of Attgold if Sayona exercises its option to purchase the East Kimberley Graphite project.

Mr Attwell has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity 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 Attwell consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



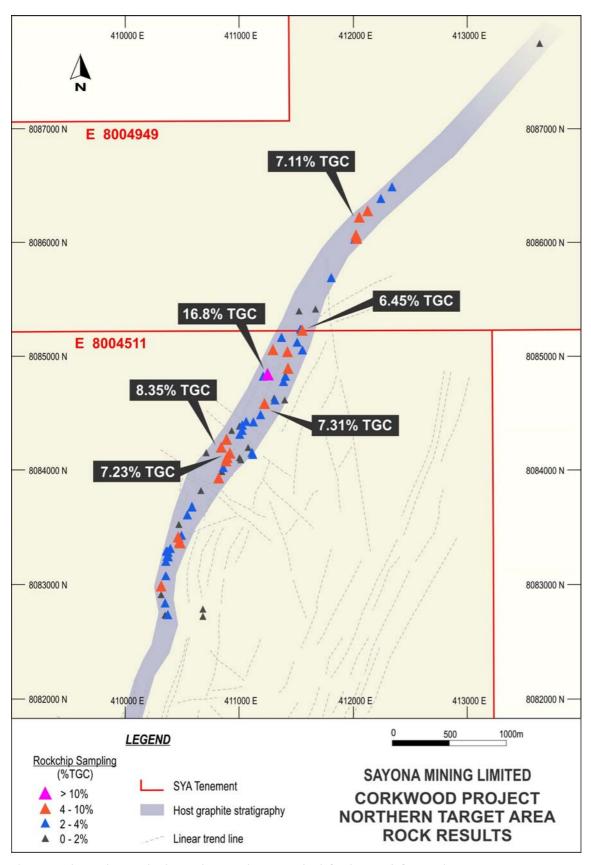


Figure 1: Sample results from the northern end of Corkwood Central



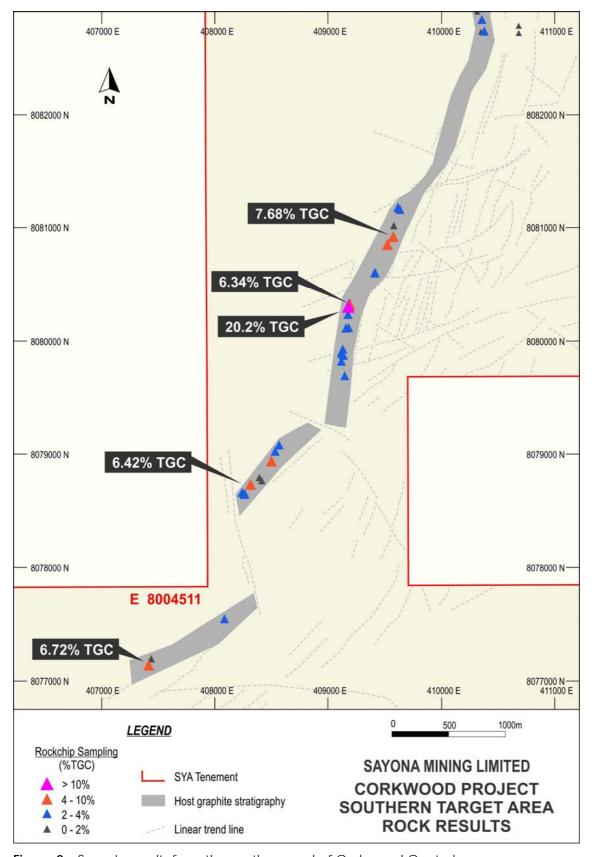


Figure 2 - Sample results from the southern end of Corkwood Central



**Table 1 Rock Sample Assay Results** 

Sample	East	North	% TGC
SK555121	412025	8086026	5.16
SK555122	411021	8084334	2.25
SK555123	410883	8084261	4.78
SK555124	410581	8083669	3.65
SK555125	410475	8083356	4.66
SK555126	409567	8080908	7.68
SK555127	409126	8079855	2.93
SK555128	410839	8084190	8.35
SK555129	411665	8085403	1.06
SK555130	411522	8085388	0.93
SK555131	411533	8085224	2.21
SK555132	411547	8085216	6.45
SK555133	411549	8085036	2.87
SK555134	411527	8085006	2.25
SK555135	411288	8085045	4.01
SK555136	411203	8084810	3.58
SK555137	411247	8084831	16.8
SK555138	411397	8084809	2.31
SK555139	411396	8084610	1.34
SK555140	411316	8084603	1.41
SK555141	411309	8084606	2.24
SK555142	411300	8084624	0.65
SK555143	411019	8084385	2.13
SK555144	411021	8084380	2.11
SK555145	411073	8084191	1.11
SK555146	411107	8084140	2.43
SK555147	411116	8084124	3.42
SK555148	411000	8084100	1.21
SK555149	411012	8084083	1.52
SK555150	410891	8084100	4.25
SK555151	410877	8084068	5.77
SK555152	410854	8084006	3.36
SK555153	410661	8083813	1.34
SK555154	410540	8083598	2.22
SK555155	410490	8083416	2.18
SK555156	410460	8083405	4.48
SK555157	409623	8081146	3.46



SK555158	409607	8081163	2.29
SK555159	409568	8081004	1.36
SK555160	409135	8079680	2.23
SK555161	409108	8079806	2.31
SK555162	409120	8079915	3.35
SK555163	409114	8079875	2.8
SK555164	409106	8079882	2.53
SK555165	409146	8080098	2.81
SK555166	409171	8080100	3.24
SK555167	409191	8080308	1.71
SK555168	409170	8080291	20.2
SK555169	410358	8083279	2.16
SK555170	410367	8083272	2.29
SK555171	410382	8083269	1.3
SK555172	410354	8083191	3.05
SK555173	410351	8083063	3
SK555174	410314	8082976	4.43
SK555175	410311	8082900	1.85
SK555176	410678	8082777	1.07
SK555177	410680	8082711	1.54
SK555178	410367	8082720	2.47
SK555179	410344	8082725	1.31
SK555180	410343	8082821	3.69
SK555181	409516	8080841	5.29
SK555182	409404	8080585	2.45
SK555183	409401	8080584	3.75
SK555184	409175	8080314	2.95
SK555185	409185	8080306	6.34
SK555186	409166	8080215	2.79
SK555187	408561	8079066	3.5
SK555188	408524	8079005	2.91
SK555189	408490	8078927	4.22
SK555190	408382	8078785	1.95
SK555191	408402	8078753	1.42
SK555192	408255	8078633	3.29
SK555193	408079	8077528	3.97
SK555194	407410	8077123	6.72
SK555195	407432	8077183	1.66
SK555196	405855	8076475	1.21
SK555197	405814	8076473	2.73



8078719 8078645 8078631 8083519 8083367 8083306 8083227 8083222 8083922 8083979 8084299 8084340	6.42 3.01 3.37 1.74 4.04 2.29 3.89 2.33 3.48 4.01 1.56 2.18
8078631 8083519 8083367 8083306 8083227 8083232 8083662 8083922 8083979 8084299	3.37 1.74 4.04 2.29 3.89 2.33 3.48 4.01 1.56
8083519 8083367 8083306 8083227 8083232 8083662 8083922 8083979 8084299	1.74 4.04 2.29 3.89 2.33 3.48 4.01 1.56
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8083922 8083979 8084299	4.01 1.56
8083979 8084299	1.56
8084299	
	2.18
8084340	2.20
	1.41
8084378	1.87
8084414	2.02
8084411	2.52
8084469	2.16
8084572	7.31
8084761	3.27
8084885	4.77
8085107	2.55
8085145	2.77
8085677	2.95
8086015	3.49
8086051	5.23
8086205	7.11
8086266	6
8086365	2.9
8086473	2.25
8087738	1.18
8085026	5.38
8084144	1.48
8084139	7.23
	8084378 8084414 8084411 8084469 8084572 8084761 8084885 8085107 8085145 8085677 8086015 8086051 8086205 8086266 8086365 8086473 8087738 8087738 8085026 8084144

Note; co-ordinates are MGA zone 52 (GDA94)



## JORC Code, 2012 edition - Table 1 (section 1; Sampling Techniques and Data)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>the rock grab samples were collected as a first pass assessment of the project to host graphite mineralisation. The samples have an irregular spacing reflecting the reconnaissance nature of the assessment. Rock samples were collected as grab samples from in-situ outcropping rock, so as to be representative of the observed mineralised zone.</li> <li>Multiple rock fragments at each sample location were collected so that the sample submitted for assay was as representative as possible of the sample site.</li> <li>The presence or absence of mineralisation was initially determined visually by the field geologist.</li> <li>The rock grab sampling is a standard approach during the initial reconnaissance which was carried out.</li> </ul>
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).	Not applicable, no drilling has been carried out
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	Not applicable, no drilling has been carried out
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant</li> </ul>	Notes relating to each sample were recorded in a field note book. This information is of insufficient detail to support any Mineral Resource Estimation.



Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul> <li>intersections logged.</li> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all subsampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Not applicable, no drilling has been carried out</li> <li>The sample preparation of the rock samples follows industry best practice, involving oven drying, crushing and pulverising, carried out by ALS, Perth with the pulp sent to ALS Brisbane for analysis.</li> <li>No measures have been taken to ensure sampling is statistically representative of the in situ sampled material. The collection methodology is considered appropriate for this early stage assessment of the project.</li> <li>The sample size is considered appropriate to the material being sampled and to produce results to indicate the degree of mineralisation in the areas sampled.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>Analysis was carried out by ALS, Brisbane which is a certified laboratory in compliance with AS/NZS-9001:2000. Graphite was determined by multistage Leco furnace with infra-red detection, method C-IR18, which is considered a total determination of the graphite content</li> <li>Not used</li> <li>No additional quality control measures beyond that of the Laboratory QA/QC were implemented.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>The results are considered acceptable and have been reviewed by multiple geologists. The company conducts internal data verification, data entry and storage protocols which have been followed.</li> <li>No adjustments to assay data has been undertaken</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Samples were located during collection by handheld GPS (Garmin 64s) with a typical accuracy of +/- 5m.</li> <li>The grid system used is Australian Geodetic MGA Zone 52 (GDA94).</li> <li>The level of topographic control offered by the handheld GPS is considered sufficient for the work undertaken</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s)</li> </ul>	There was no predetermined grid spacing to the program with sample sites being selected as outcrop was located, initially during 200m traversing and also at closer spacing, selected in order to give a first pass dataset to evaluate the area



Criteria	JORC Code explanation	Commentary
	<ul> <li>and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The data spacing and distribution is not sufficient to establish the degree of geological and grade continuity appropriate for Mineral Resource estimation procedures.</li> <li>Samples have not been composited.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>Sampling was carried out over small areas of outcrop, across the strike of the unit where possible, but due to poor outcrop it is not known if they are representative of the horizon.</li> <li>Not applicable, no drilling has been carried out</li> </ul>
Sample security	The measures taken to ensure sample security.	All samples were collected by the field geologist and stored in a secure location until completion of the program when they were delivered to ALS laboratories, Perth by commercial courier.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews of the data have been conducted at this stage

## JORC Code, 2012 edition - Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The project comprises granted tenement E80/4511 and applications ELA80/4915, ELA80/4948-9. Sayona has an Option to Purchase agreement over these areas with Western Iron Pty Ltd and Attgold Pty Ltd as discussed herein. The author is a related party to Attgold Pty Ltd, of which he is a director and part beneficiary.</li> <li>The tenement applications are subject to approval by DMP, and require agreements with the KLC / Native Title holders and the Violet Valley Aboriginal Reserve. The project lies within the regional Ord River Catchment area and the Corkwood project lies to the west of the Purnululu National Park, but is not contained within it.</li> <li>The Company believes that the applications will proceed to grant in a similar way that prior and current tenure in the district has progressed to grant and where exploration including drilling has taken place.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Past exploration in the region, mainly carried out in the search for nickel sulphide, has provided useful data.</li> <li>Together with government data provided by GSWA the information has allowed recognition of the projects graphite potential</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	Graphite is being targeted within carbonaceous horizons of the Paleoproterozoic Tickalara metamorphics of the Halls



Criteria	JORC Code explanation	Commentary
		Creek Orogen. Deep burial metamorphism has caused carbon to crystalize as graphite flakes which have been subsequently preserved as the rock cooled. The original mineralisation has also been subsequently affected by deformation, including folding and faulting.
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	Drilling has not been carried out. A summary of rock sample locations is tabulated and presented graphically within the above report.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>No averaging or cut-off grades have been applied assay results.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>Exploration is at an early stage and information contains insufficient data points to allow these relationships to be reported</li> </ul>
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	Sample plans are attached
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	All the assay results are reported herein.
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.	The exploration reported herein is still at an early stage but results are consistent with geological and geophysical data



Criteria	JORC Code explanation	Commentary
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale stepout drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Further more detailed mapping and follow up sampling is required together with other programs described in the report above.</li> </ul>