BUXTON RESOURCES

ASX Release **28 January 2014**

Quarterly Activities Report
For the period ending 31 December 2013

Highlights

Zanthus Ni & Cu – Fraser Range

- **$150,000 WA Government grant received for Zanthus drilling**
- **~ 3,000m RC drill program planned to test up to 20 conductors defined in recent ground EM survey for Ni-Cu sulphide mineralization**
- **Numerous areas of anomalous nickel/copper and separate gold zones identified in recent surface calcrete geochemistry program**
- **All clearances received, drilling currently delayed by heavy rains**

Yalbra Graphite – Gascoyne Region

- **Wide intercepts of very high grade graphite intersected in majority of the 15 drill-holes completed**
- **Believed to be the highest grade graphite drill intercepts reported in Australia**
- **Significant portions of medium and coarse flake graphite shown in recent petrographic studies**
- **Follow up resource drilling and metallurgical work planned**

Dempster Ni, Cu & Au Project – Albany Fraser Orogen

- **Significant new tenement applications in exciting area emerging for magmatic nickel-copper and gold mineralisation**
- **Large and expanding ground position immediately along strike from targets generated recently by other companies in the region**
- **Confirmed presence of potentially fertile mafic-ultramafic rocks including gabbros and dunites observed in historical drilling**
- **Significant surface nickel calcrete anomalies at two prospects, with a peak historical bottom-of-hole RAB result of 0.25% nickel and 348ppm copper**

Widowmaker Ni & Cu – Fraser Range

- **Recent calcrete sampling identifies new Ni-Cu surface anomaly with associated Cr, As and locally Co, Mo and Bi, located along a significant regional shear-zone**

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Zanthus – Fraser Range

Buxton Resources is pleased to announce it has been successful in obtaining funding under the WA Government's co-funded Exploration Incentive Drilling Scheme, offered by the Department of Mines and Petroleum. The grant is capped at $150,000 and will be used by the Company to partially fund a first pass RC drilling program to test bedrock EM anomalies for nickel and copper sulphide mineralisation.

The ground moving loop (MLTEM) and fixed loop (FLTEM) survey at Zanthus has defined a total of 20 potential bedrock conductors (Figure 1, Table 1). Four of these have been deemed high-priority nickel sulphide drill targets, with six others defined as medium priority drill targets.

Additionally, the Company has received results for the recently completed calcrete surface geochemistry program which highlights a number of areas of nickel, copper and separately, gold anomalism.

The limited strike length, relative conductance, proximity to gravity highs and surface nickel anomalism makes the four high priority areas compelling drill targets. Buxton plans to test the majority of the identified MLTEM and FLTEM conductors for Ni-Cu sulphide mineralisation with an initial ~3,000m RC drilling program in Q1 2014 as soon as ground conditions permit safe access to site.

Table 1. List and brief description of all Zanthus MLTEM and FLTEM conductors.

NAME	PRIORITY	COMMENTS
ZV01	med	Weak to moderate conductor plunge north and dipping moderately east. Conductor is coincident with the margin of a gravity high.
ZV02	**high**	**Strong though small, sub-horizontal bedrock conductor.**
ZV03	med	Weak, small, sub-horizontal conductor within or above interpreted intrusive body.
ZV04	low	Moderate strength, unresolved orientation, within or above an interpreted intrusive body.
ZV05	low	Weak response from a small or deep conductor. Associated high gravity and magnetic remanence.
ZV06west	low	Weak, probable stratigraphic conductor, dipping to the east.
ZV06east	med	Strong, probable stratigraphic conductor, dipping to the east.
ZV07north	**high**	**Moderate strength conductor, irregular shape, wedged between two broad gravity highs.**
ZV07	**high**	**High strength conductor, irregular shape, wedged between two broad gravity highs.**
ZV08	med	Weak, near surface, subvertical conductor occurring toward the centre of a broad gravity high.
ZV10	med	Strong response, moderately east-dipping conductor, possibly stratigraphic. Weak nickel geochemical anomalism.
ZV11	med	Strong response, steeply east-dipping conductor, possibly stratigraphic.
ZV12	low	Weak, sub horizontal conductor. May be part of, or close to, an extensive surficial or stratigraphic conductor.
ZV13	low	Moderate strength, moderately east dipping probable stratigraphic conductor.
ZV14	low	Weak, sub-horizontal conductor coincident with the margin of a gravity high.
ZV15	low	Weak, small, sub-horizontal conductor within or above interpreted intrusive body.
ZV16	**high**	**Strong, discrete steeply east dipping conductor over discrete gravity high and located at the margins of two interpreted intrusive bodies. Associated surface nickel geochemical anomalism.**
ZV17	low	Strong, moderately east dipping conductor. Probably stratigraphic.
ZV19	low	Weak, steeply east dipping conductor. Probably stratigraphic.
ZV20	low	Moderate, steeply east dipping conductor. Probably stratigraphic.

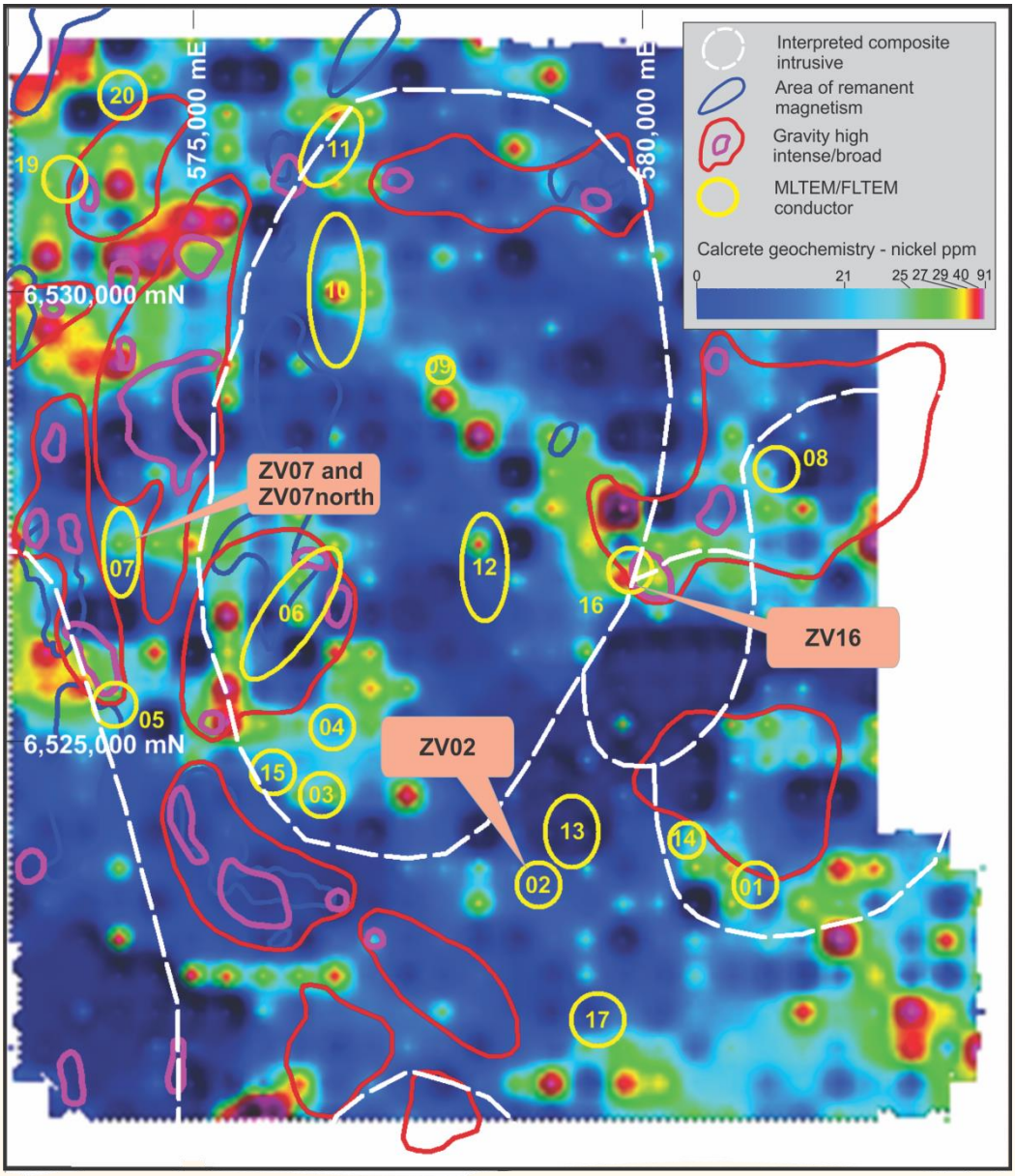

Figure 1. MLTEM and FLTEM conductors over gridded nickel calcrete geochemistry, interpreted intrusive bodies, remanently magnetised zones and gravity anomalies.

Calcrete Geochemistry

The Company recently received the laboratory analytical results for a total of 736 surface calcrete geochemical samples. These show broad areas of nickel and copper anomalism that show correlation with gravity high anomalies and the margins of gravity high anomalies (Figure 1). The peak result of 91ppm Ni was achieved over an area in the southern part of the tenement along strike from a sub-cropping mafic rock.

Additionally, the calcrete sampling results show significant, coherent gold anomalies in two areas of the tenement, with a peak value of 19.2ppb achieved. The Company intends to follow up these anomalies in due course.

Conclusions

The Company is excited by the identification of numerous conductors in favourable geological/geophysical settings at Zanthus. These conductors represent good targets for potential massive and disseminated nickel sulphide mineralisation.

Buxton plans to drill an initial ~3,000m RC program to test the majority of the targets identified in the MLTEM-FLTEM survey. The drilling program was expected to begin in early Q1 of calendar 2014, however, a heavy rainfall event in the area is expected to delay the commencement of the program. This drilling program represents the next step in what is expected to be an ongoing exploration program at Zanthus.

Yalbra Graphite Project – Gascoyne Region

The Company completed 15 RC drill holes for a total of 1,674 metres at Yalbra in November 2013. Drilling within the Main Zone intersected substantial widths of very high grade graphite mineralisation across multiple parallel zones (Table 2, Figures 2 & 3). Higher grade drilling results include:

- YBRC001 32m @ 23.4% TGC (from 55m) inc. 7m @ 32.6% TGC;
- YBRC002 14m @ 22.3% TGC (from 75m) inc. 6m @ 26.8% TGC;
- YBRC011 14m @ 21.5% TGC (from 45m) inc. 5m @ 33.0% TGC;
- YBRC012 31m @ 22.9% TGC (from 19m) inc. 5m @ 30.2% TGC; and
- YBRC015 31m @ 22.5% TGC (from 158m) inc. 6m @ 33.0% TGC

Additionally, initial petrographic studies show that significant portions of medium and coarse flake graphite occur in the samples. Observations show that graphite flakes generally range from 100 to 500 microns long and in some cases reach over 1mm in length (Figure 4).

Drilling Results

In total, 11 holes were drilled on the Main Zone, with a further 4 holes drilled on a VTEM anomaly termed the Northern Zone. Many of the RC drill-holes in the Main Zone intersected multiple horizons of very high grade graphite (Table 2, Figures 2 & 3). The Main Zone at Yalbra shows two major, parallel, east-west striking graphite horizons over a strike length exceeding 500m (Figures 2 & 3). The graphite mineralisation is open in both directions along strike and at depth.

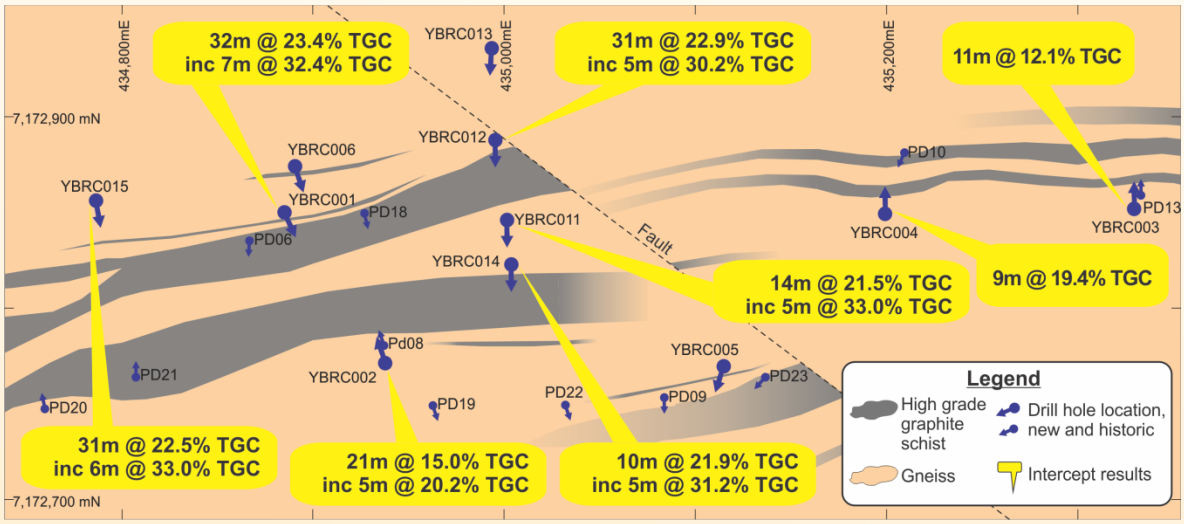

Figure 2. Map across Main Zone at Yalbra showing substantial intercepts of very high grade graphite and simplified geology.

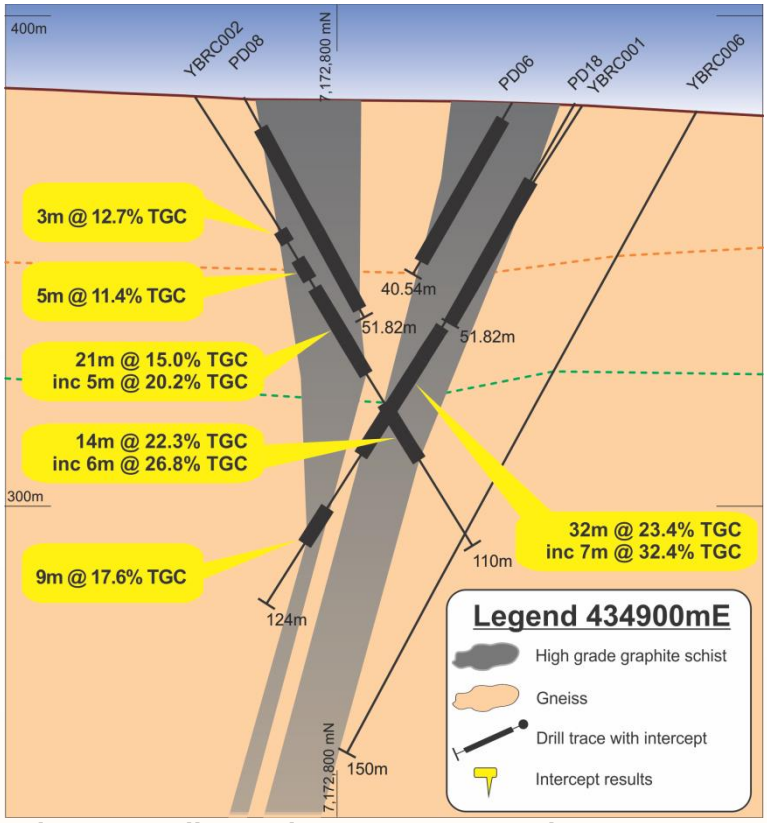

Figure 3. Yalbra Main Zone cross-section 434900mE.

Of particular note is a consistent core of extremely high grade graphite averaging over 30% TGC (total graphitic carbon) within the northernmost mineralised horizon (Table 2, Figure 2). Additionally, the major very high grade graphite horizons have been intersected at very shallow depths within the soft saprolite zone (e.g. YBRC012 & 014) and in fresh rock at much deeper depths (e.g. YBRC015). The grades and thicknesses of the very high grade graphite across these zones is remarkably consistent along strike and across a large depth range. Field observations and historical trenching and drilling results also show that the high-grade graphite zones begin from surface.

In the Northern Zone, four drill-holes tested a VTEM anomaly. Whilst high-grade graphite was intersected, the widths were generally small (Table 2). This zone does however remain a valid future target for further drill testing.

Petrographic Results

An initial petrographic study focused on four polished blocks of RC drill-chip samples from various depths across the very high-grade Main Zone. Encouragingly, results show a significant portion of the graphite exists as medium to coarse flakes within high-grade micro-bands. Observations show that graphite flakes generally range from 100 to 500 microns long and in some cases reach over 1mm in length. Fine-grained graphite also occurs, but is mainly confined to lower grade micro-bands.

The typical crystal size therefore in the high-grade micro-bands is well above the commercial definition for coarse flake graphite, which is >150 microns in length.

Table 2. All significant 2013 Yalbra RC drilling intersections

HoleID	From (m)	To	Width (m)	TGC (%)	Est. true width (%)	Comments
			Main Zone			
YBRC001	**55**	**87**	**32**	**23.4**	40	
including	**56**	**63**	**7**	**32.4**		
	100	**109**	**9**	**17.6**	55	
YBRC002	33	36	3	12.7	50	
	40	45	5	11.4	50	
	47	**68**	**21**	**15.0**	50	
including	**60**	**65**	**5**	**20.2**		
	75	**89**	**14**	**22.3**	85	
including	**79**	**85**	**6**	**26.8**		
YBRC003	28	39	11	12.1	75	
YBRC004	9	11	2	14.3	65	
	18	**27**	**9**	**19.4**	65	
	55	60	5	12.5	65	
YBRC005	No significant intercepts					failed hole due to water ingress
YBRC006	No significant intercepts					hole did not reach target depth
YBRC011	**45**	**59**	**14**	**21.5**	80	
including	**51**	**56**	**5**	**33.0**		
	73	79	6	19.5	80	
YBRC012	**19**	**50**	**31**	**22.9**	90	
including	**36**	**41**	**5**	**30.2**		
	103	**114**	**11**	**18.8**	80	
	140	**167**	**27**	**15.6**	70	
including	**160**	**165**	**5**	**27.6**		
YBRC013	No significant intercepts					
YBRC014	**20**	**30**	**10**	**21.9**	80	
including	**20**	**25**	**5**	**31.2**		
YBRC015	**158**	**189**	**31**	**22.5**	60	
including	**179**	**185**	**6**	**33.0**		
			Northern Zone			
YBRC007	67	70	3	17.1	85	
	82	86	4	10.4	85	
YBRC008	25	30	5	11.3	85	includes a 4m spear composite
YBRC009	123	127	4	7.0	85	
YBRC010	21	24	3	14.9	85	

Conclusion

Drilling and petrographic results from the Yalbra graphite project have far exceeded the Company's expectations. Very high-grade graphite occurs within multiple zones over 500m strike length and is open at depth and along strike. A significant portion of graphite in petrographic samples was shown to have medium to coarse flake sizes.

The Company is currently planning its 2014 work program for Yalbra. It will involve both RC drilling for resource definition, and diamond drilling in order to obtain samples for an initial metallurgical test work program.

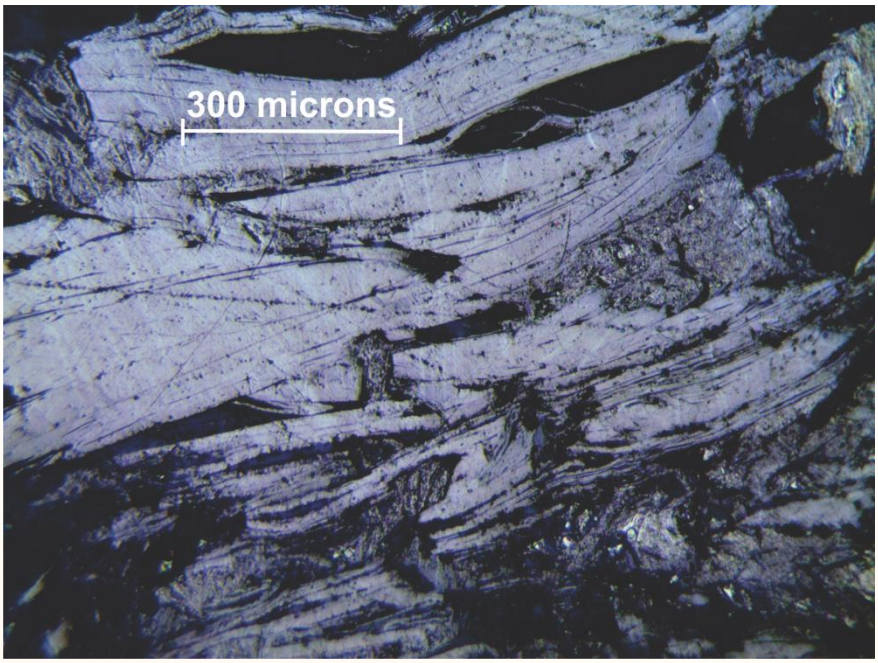

Figure 5. Photomicrograph of coarsely crystalline graphite with minor mica from graphite-rich layer YBRC001 80-81m. Reflected light. Field of view is 1200 microns.

Table 3. Collar details for Yalbra 2013 RC drilling program.

Hole ID	Zone	East	North	Depth	Azimuth	Dip
YBRC001	Main	434885	7172850	124	155	-55
YBRC002	Main	434938	7172771	110	340	-55
YBRC003	Main	435330	7172852	70	360	-55
YBRC004	Main	435199	7172849	70	360	-65
YBRC005	Main	435116	7172769	45	200	-55
YBRC006	Main	434891	7172873	150	165	-55
YBRC011	Main	435002	7172846	100	180	-55
YBRC012	Main	434995	7172888	180	175	-55
YBRC013	Main	434993	7172936	150	360	-55
YBRC014	Main	435004	7172824	55	360	-55
YBRC015	Main	434787	7172856	200	175	-60
YBRC007	Northern	432599	7174480	110	360	-55
YBRC008	Northern	432624	7174546	84	360	-55
YBRC009	Northern	432600	7174431	148	360	-55
YBRC010	Northern	432593	7174510	78	360	-55

Dempster Ni, Cu & Au – Albany Fraser Orogen

Buxton has acquired a significant ground position totaling 1,365km^2 prospective for nickel-copper and gold deposits at Dempster within the Albany Fraser Orogen. This project straddles the interpreted boundary of the Archaean Yilgarn Craton and the Proterozoic Albany Fraser Orogen and has a similar tectonic position to the Tropicana Gold Deposit.

In addition, historical work at the Dempster Project has identified significant nickel surface calcrete anomalies. One of these, the Prickle prospect, was drilled and shown to be underlain by a mafic-ultramafic rock package including gabbros and dunites. Peak results were 0.25% Ni and 348ppm Cu, indicating potential fertile source rocks for nickel-copper sulphide mineralisation.

Historical BHP drilling also intersected 1m @ 0.7 ppm Au at the base of a RAB drill hole.

Recent work by other exploration companies in the area has defined a number of high quality Ni-Cu sulphide targets immediately along strike from Buxton's tenements. The Company is excited about the potential at Dempster and intends to ramp up its exploration efforts in this area in 2014.

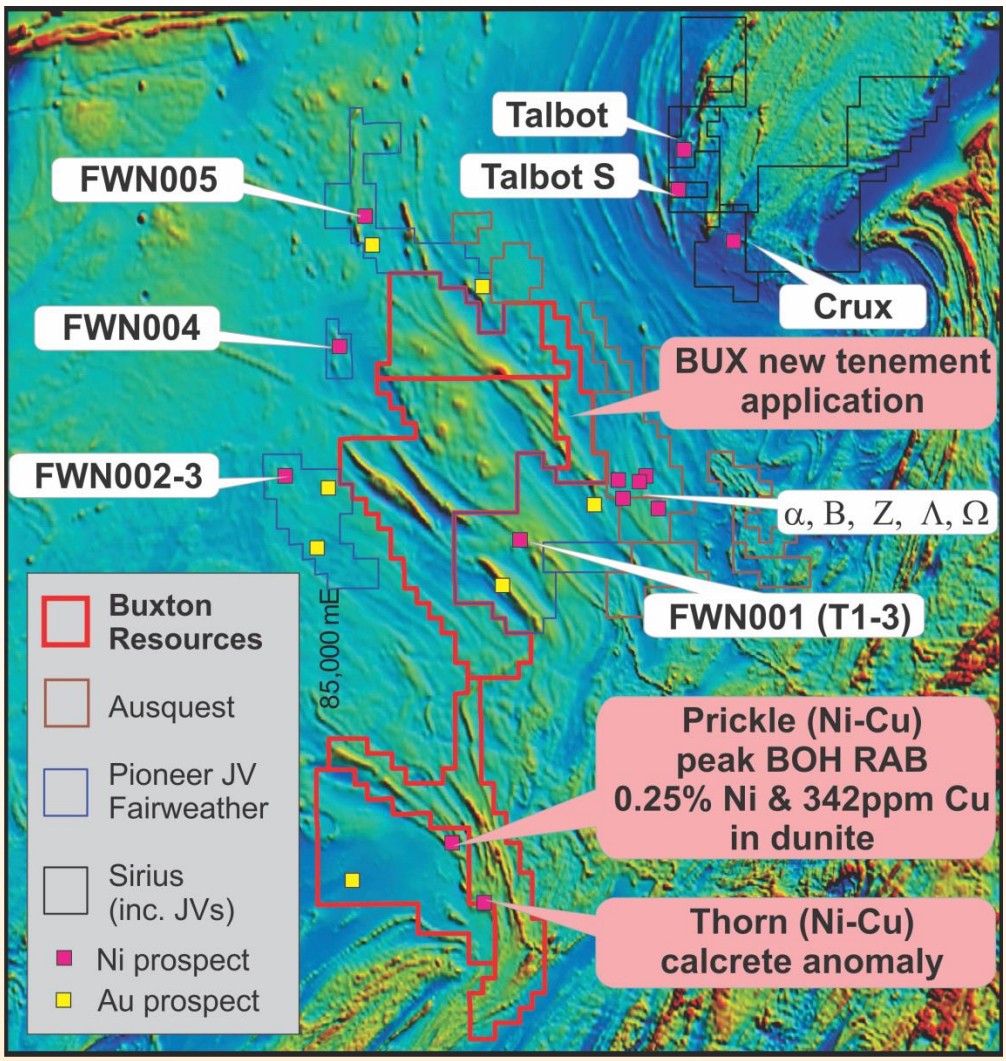

Figure 6. Location of the Company's Dempster tenements in relation to other companies' projects and major prospects.

Widowmaker – Fraser Range

A calcrete sampling program was completed at Widowmaker to follow up a significant area of very strong multi-metal anomalism along a regional shear zone. The metal association over this anomaly variable includes Ni-Cu-Co-Cr-As. The broad anomaly is in the order of 3km long, whilst a central core zone has a strike length of approximately 700m (Figure 7).

The sampling program conducted nominally at 40m x 200m spacing also identified a number of other weaker multi-metal anomalies which will require infill sampling in the future. Peak results at the main calcrete anomaly were: 143ppm Ni, 115ppm Cu, 25ppm Co, 1,130 ppm Cr & 137ppm As. Statistics of the Widomaker calcrete sampling program are listed in Table 4 below.

Table 4. Statistics for main elements of interest, Widowmaker calcrete sampling.

Element ppm	Tot	Min	Max	Mean	Median	25th percentile	50th percentile	75th percentile	90th percentile
As	289	0	227	6.2	0	0	0	6	17.0
Co	289	0	26	7.0	7	4	7	10	13.0
Cr	289	0	1130	53.9	39	25	39	73	103.2
Cu	289	0	79	20.0	19	14	19	26	35.0
Ni_ppm	289	0	143	19.9	19	11	19	30	36.0

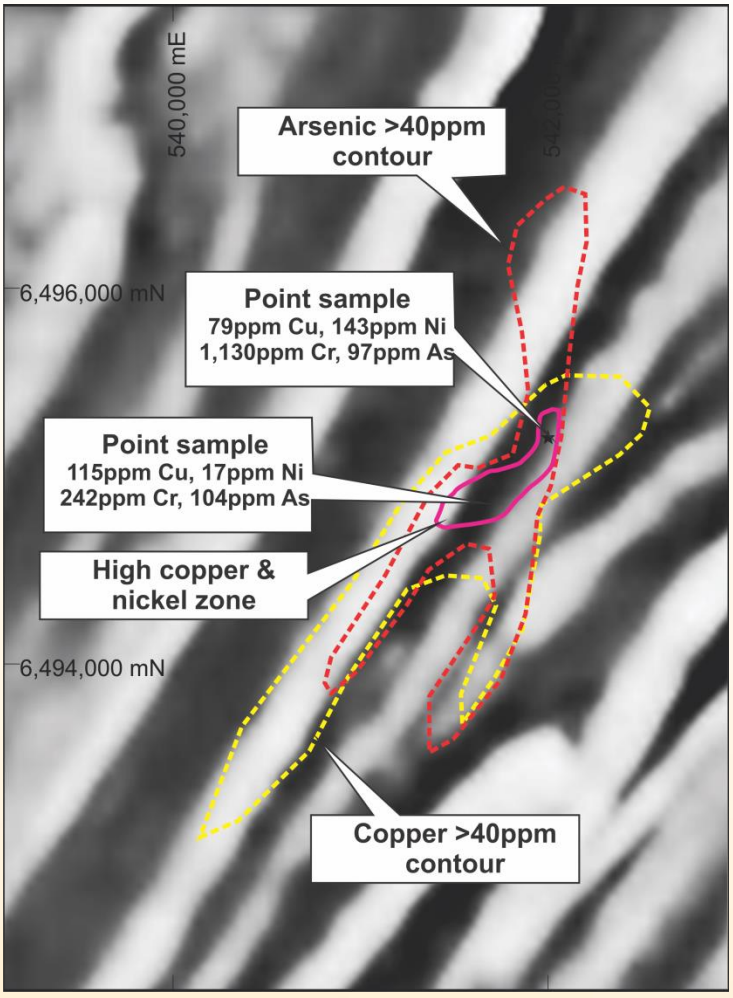

Figure 7. Main calcrete multi-metal anomaly over RTP_1VD magnetic image.

Corporate

On 28th November 2013, the Company held its Annual General Meeting of Shareholders. All resolutions that were put were unanimously passed on a show of hands.

Cash balance as at 31 December 2013 of $2.4 million sees Buxton well funded into 2014.

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Competent Persons

The information in this report that relates to exploration results and geology for the Zanthus, Widowmaker and Dempster projects has all previously been reported under the 2004 edition of Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves based on information compiled and/or reviewed by Dr Julian Stephens, Member of the Australian Institute of Geoscientists and Non-Executive Director for Buxton Resources Limited. No material changes have occurred to this information. Dr Stephens has sufficient experience which is relevant to the activity being undertaken to qualify as a "Competent Person", as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and consents to the inclusion in this report of the matters reviewed by him in the form and context in which they appear.

The information in this report that relates to exploration results and geology for the Yalbra Graphite Project is based on information compiled and/or reviewed by Dr Julian Stephens, Member of the Australian Institute of Geoscientists and Non-Executive Director for Buxton Resources Limited. Dr Stephens has sufficient experience which is relevant 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 and consents to the inclusion in this report of the matters reviewed by him in the form and context in which they appear.

Appendix 1: JORC 2012 compliance tables – Yalbra Graphite Project

Section 1

Criteria	Drilling Commentary
Sampling Techniques	Reverse circulation drilling was employed to generate 1m samples, split 1:8 at the rig to provide a bulk sample and an assay sample. Mineralised samples were submitted as single metre split samples, for low or non-mineralised samples, multiple metre, composite spear samples were generated from the bulk samples. Duplicate samples were taken on average every 20th sample (both split and composites) to provide checks on sample representivity.
Drilling Techniques	Drilling was planned on nominal 100m-spaced sections across the Yalbra prospect. A total of 1674m of 5 and 3/4 inch reverse circulation drilling has been completed at 2 prospects. Drill holes were generally drilled at -55 degree dip on azimuths deemed appropriate to perpendicularly cross-cut mineralisation zones. Several drillholes were drilled to scissor the mineralisation (drilled at opposing azimuths) in an attempt to determine the dip of the mineralisation bands.
Drill Sample Recovery	The RC bulk sample recovery was routinely examined for representivity. The analysis laboratory records received sample weights, and the company retrieved this data for analysis. It is not believed that any bias has occurred due to loss or gain of sample.
Logging	100% of the drill holes were geologically logged by qualified and experienced geologists, recording relevant data to a set template to metre intervals. All logging included lithological features, mineral assemblages, mineralisation percentages and basic graphite flake characteristics, all qualitative by nature. All data was codified to a set company codes system. This offers sufficient detail for the purposes of interpretation and further studies.

Sub-sampling techniques and sample preparation	All 1m intervals were cone (rotary) split at the drill rig cyclone, producing a 4-5kg analysis sample and a 20kg bulk bulk. Each 1m mineralised sample was then 50:50 riffle split to produce an analysis sample or 2-2.5kg. Non-mineralised analysis samples were prepared as multiple metre (generally 4m composites) spear samples. Sample preparation is consistent with industry best practice. Field QC procedures involved the use of certified reference material assay standards, blanks and duplicates for company QC measures, and laboratory standards, replicate assaying and barren washes for laboratory QC measures. The insertion rate of each of these QAQC measures averaged better than 1:20. The sample size is deemed appropriate for the material and analysis method.
Quality of assay data and laboratory tests	The samples were analysed at Genalysis Intertek in Perth, Australia. Sample preparation included drying, crushing, splitting and pulverizing. A split of the sample was analysed using an ELTRA analyser to determine total graphitic carbon content (TGC). The detection limits and precision for the TGC analyses are considered to be adequate for the purpose of any resource estimations in the future. The laboratory procedures are considered to be appropriate for reporting TGC according to industry best practice. Company QAQC samples were employed at 5-8% of total samples analysed. The results of the company-inserted and laboratory-inserted standards, blanks and sample repeats demonstrate the accuracy and precision of TGC results are satisfactory
Verification of sampling & assaying	Significant mineralisation intersections were verified by alternative company personnel. No twin holes were drilled. All data was collected initially on paper logging sheets, codified to the Company's templates. This data was hand entered to spread sheets and validated by Company geologists. This data was then imported to a Microsoft Access Database, and then validated using MapInfo software. No adjustments to assay data have been made.
Location of data points	All XYZ surveying was completed using a handheld GPS to MGA94 / Zone 50 South grid system, to an accuracy of approximately 5m. All down-hole surveying was carried out using a Reflex Ez-Trak multi-shot survey tool at 30m intervals down hole. Topographical control is sufficient for the stage of exploration.
Data spacing & distribution	Drill spacing at this point of the exploration program is irregular, however drill-holes have been planned to accommodate a 100m spaced future drill program. No Mineral Resource estimation is considered at this time. No data compositing has occurred.
Orientation of data in relation to geological structure	The orientation of the drilling is not expected to introduce sampling bias.
Sample security	Samples were packaged and stored in secure storage from the time of gathering through to submission. Laboratory best practice methods were employed by the laboratory upon receipt.
Audits or reviews	No audits of the sampling techniques and data were carried out due to the early stage of exploration. It is considered by the Company that industry best practice methods have been employed at all stages of the exploration.

Section 2

Criteria	Drilling Commentary
Mineral tenement & land tenure status	Buxton Resources owns an 85% interest in the E09/1985 (Yalbra) tenement, with Montezuma Mining Company holding the remaining 15% interest. Montezuma will retain a 15% free carried interest up to a decision to mine, then will elect to either contribute on a prorata basis, or dilute to a 1% gross revenue royalty.
	The tenement is in good standing and there are no known significant impediments to exploration or mining in the area.
Exploration done by other parties	No other parties were involved in this exploration program.
Geology	The Yalbra area is located proximal to the boundary of the Yilgarn Block and the Gascoyne Province where Archaean rocks have undergone deformation and metamorphism during Lower Proterozoic orogenesis. The Archaean rock types comprise gneisses, amphibolites, granofels, quartzites and iron formations. The Yalbra mineralisation is characterised as multiple, very high grade bands of graphite schist hosted within gneissic rocks of intermediate composition.
Drill hole information	Refer to Table 1 within text.
Data aggregation methods	No top cuts have been applied. A nominal 10% Total Graphitic Carbon lower cut-off has been applied in the determination of significant intercepts. High grade intercepts within broader low grade intervals have been separated as "including" results. No metal equivalent values are used in this report.
Relationship between mineralisation widths & intercept lengths	Due to the steep dip (-80 to vertical) of the mineralisation bands, and restrictions on the dip that drilling machinery can operate under (i.e. minimum -55 dip) downhole mineralisation widths are longer than true widths.
Diagrams	Figures in text
Balanced reporting	Representative reporting of low and high grades has been effected within this report.
Other substantive exploration data	Additional mineralogical and graphite flake size and deportment information is provided in the text.
Further work	Further work programs are planned and include diamond and RC drilling, in addition to mineralogical and metallurgical test work. The planning is not sufficiently advanced to report at this stage.

BUXTON RESOURCES

Appendix 2: Changes in interests in mining tenements - Buxton Resources Ltd 1/10/13-31/12/13

	Tenement	Location	% at beginning of quarter	% at end of quarter
Interests in mining tenements relinquished, reduced or lapsed	E63/1525	Esperance	100	0
	E63/1596	Esperance	100	0

Interest in mining tenements acquired or increased	E28/2395	Dundas	0	100
	E28/2396	Dundas	0	100
	E63/1675	Dundas	0	100
	E63/1676	Dundas	0	100
	E63/1677	Dundas	0	100
	E63/1684	Dundas	0	100
	E63/1685	Dundas	0	100
	E63/1686	Dundas	0	100
	E63/1687	Dundas	0	100
	E63/1688	Dundas	0	100
	E66/88	Northampton	0	100
	E70/4563	Bridgetown	0	100

The mining tenements held at the end of the quarter and their location	E 28/2201	Dundas	100	100
	E 28/1959	Dundas/Kal-Boulder	100	100
	E 63/1595	Esperance	100	100
	E 63/1582	Esperance	90	90
	E 63/1634	Dundas & Esperance	100	100
	E63/1675	Dundas	0	100
	E63/1676	Dundas	0	100
	E63/1677	Dundas	0	100
	E63/1684	Dundas	0	100
	E63/1685	Dundas	0	100
	E63/1686	Dundas	0	100
	E63/1687	Dundas	0	100
	E63/1688	Dundas	0	100
	E28/2395	Dundas	100	100
	E28/2396	Dundas	100	100
	E 09/1985	Upper Gascoyne	85	85
	E 09/1972	Upper Gascoyne	90	90
	E 09/2022	Upper Gascoyne	100	100
	E 66/85	Northampton	100	100
	E 66/87	Northampton	100	100
	E 66/86	Northampton	100	100
	E66/88	Northampton	0	100
	E 63/1621	Coolgardie & Dundas	100	100
	E70/4563	Bridgetown	0	100