

## Quarterly Activities Report for period ending 31<sup>st</sup> March 2019

Buxton Resources Limited (ASX: BUX or “Buxton”) is pleased to release the quarterly activities report and Appendix 5B for the period ended 31<sup>st</sup> March 2019 (the Quarter).

### Merlin Project

- Fully funded 2019 field season to commence post wet season
- Joint technical committee established (BUX-IGO)
- Buxton granted a 24-month option period for IGO to enter into an Earn-in and Joint Venture at Merlin where;
  - BUX is free carried through to completion of a Feasibility
  - IGO to spend \$8M over 4 years to earn 70%
- Merlin continues to deliver high grade Ni-Cu-Co sulphide intercepts, 2018 highlights include:
  - DMDD0015      6.60m    @ 3.47% Ni eq. from 309.4m within;  
                         14.00m   @ 1.88% Ni eq. from 304.0m
  - DMDD0018      2.19m    @ 5.24% Ni eq. from 236.0m within;  
                         6.00m    @ 2.40% Ni eq. from 236.0m
  - DMDD0022      9.90m    @ 1.50% Ni eq. from 242.7m within;  
                         15.00m   @ 1.06% Ni eq. from 242.0m
- Merlin Option (Buxton-Independence Group) 2019 drill program
  - Deep penetrating SQUID moving-loop EM planned
  - Deep drilling with downhole EM planned
  - 24-month option period to enter into a 70:30 Joint Venture

### West Kimberley JV (IGO-BUX)

- Aerial geophysical surveying planned
- Geological mapping and surface geochemistry planned
- IGO earning 80%, BUX free carried to Feasibility Study

### Fraser Range JV (IGO-BUX)

- Multiple high priority targets, including “Solar” large EM anomaly along strike from Creasy Silver Knight discovery
- Deep drilling and downhole EM planned at Solar
- BUX 10% free carried to Decision to Mine

### Corporate

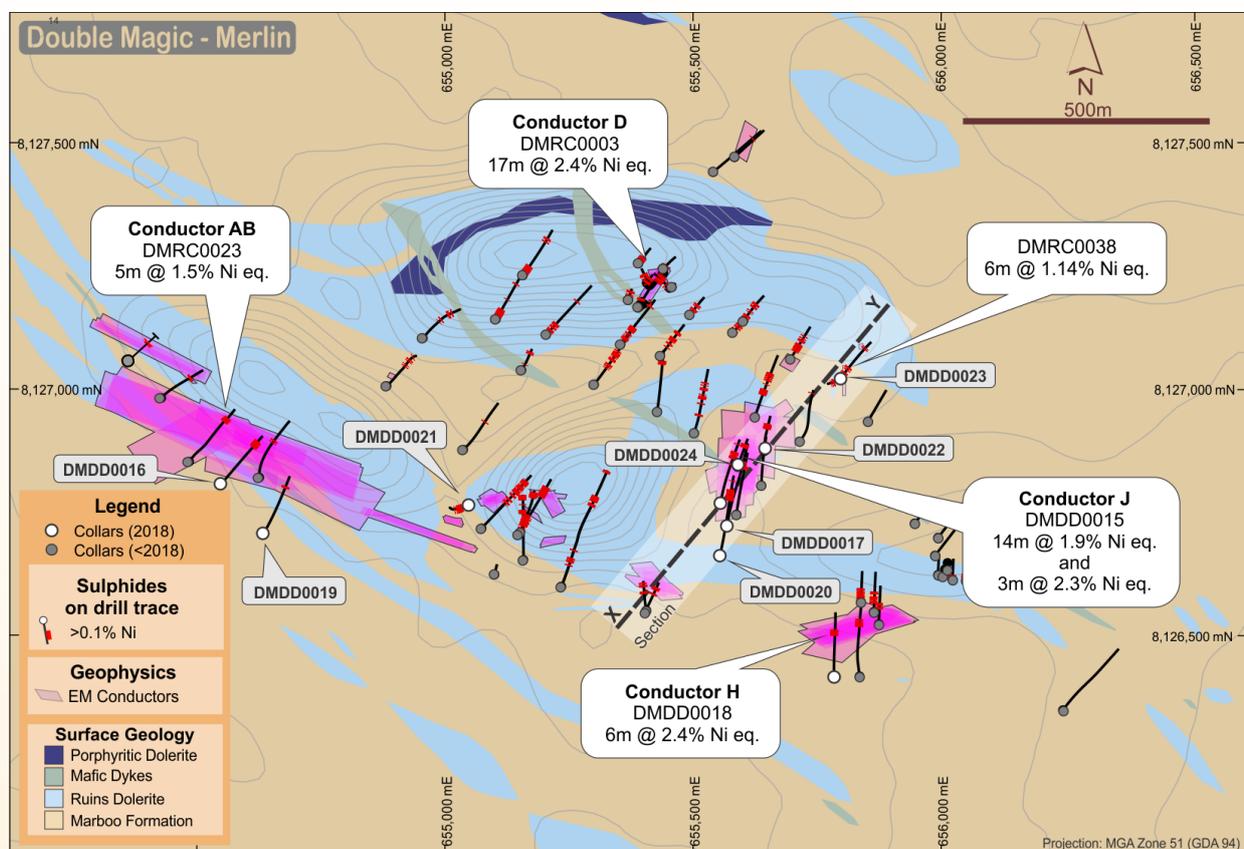
- Exploration Incentive Scheme Co-funded Drilling funding for Merlin for up to \$150,000 granted for calendar year 2019
- Cash balance (31 March 2019) of approximately \$5.13 million

## Merlin Project

Laboratory assays from the 2018 drilling at Merlin (Double Magic) have confirmed numerous well-developed zones of Ni-Cu-Co mineralisation at the Project (Table 1, Figures 1 & 2).

### Merlin a very high metal tenor system (average 8% Ni tenor) with individual assays up to 8.14% Nickel, 5.26% Copper and 0.69% Cobalt

All holes from the 2018 drilling (Table 2, Figure 1) intersected visible nickel-copper sulphide mineralisation, including numerous occurrences of brecciated massive sulphide with coarse grained pentlandite and chalcopyrite. Untested 2018 downhole EM plates remain, including within the Conductor C interpreted hinge zone, proximal to gravity high feature. Numerous large conductors related to Ni-Cu mineralisation remain open along strike and at depth.



**Figure 1.** Plan of the Merlin Prospect, showing drill hole collars and traces, interpreted geology and EM conductors highlighting selected intercepts across the Project area. Also showing the section and clip for Conductor J (Fig. 2).

Buxton entered into binding agreements with Independence Group NL (ASX:IGO) to dramatically advance and accelerate the exploration of the Merlin (Double Magic) Project, with Buxton currently remaining managers (refer to BUX ASX announcement 29 November 2018).

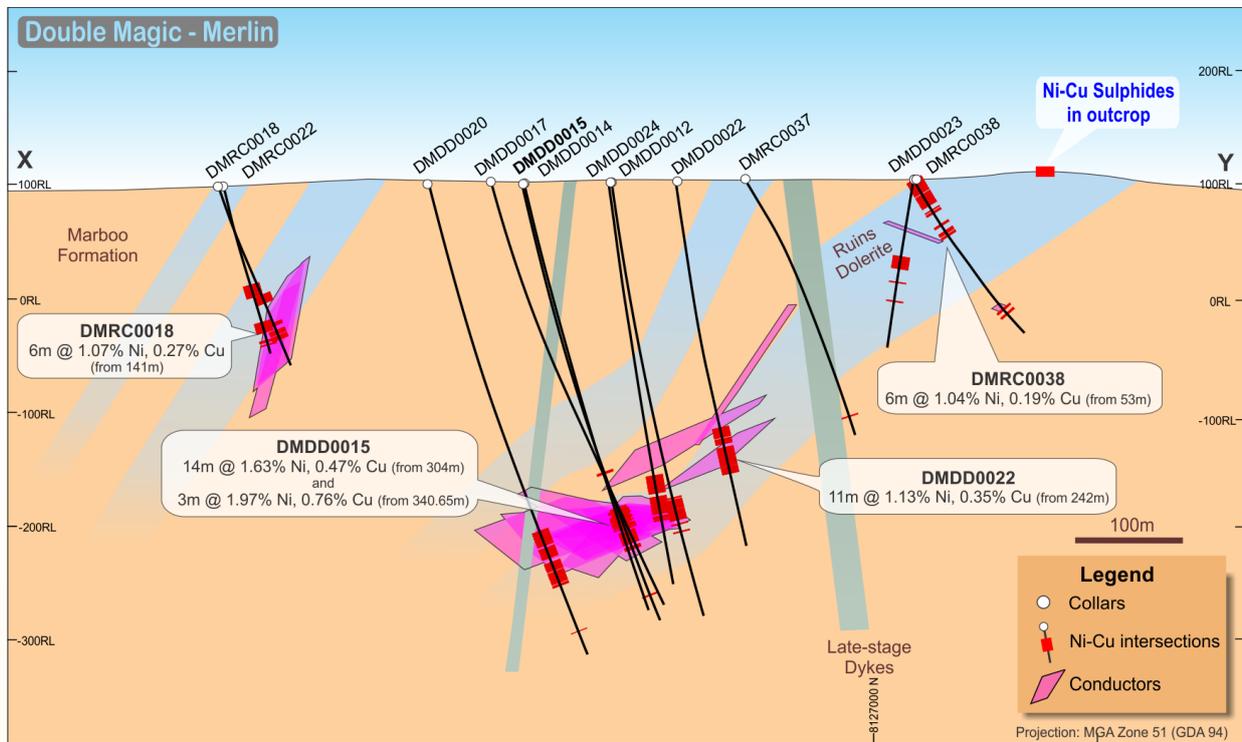
A joint technical committee between BUX and IGO has been established, with recent data and drill core review generating several work initiatives that are actively being progressed. All previous datasets, including numerous geophysical surveys are being reviewed and reprocessed by IGO.

**Table 1. Merlin 2018 Assay Intersections >0.25% Ni**

HoleID	Interval	Ni%	Cu%	Co%	NiEq%	From	
DMDD0015	2.00	0.32	0.11	0.01	0.38	269.90	
	<b>14.00</b>	<b>1.63</b>	<b>0.47</b>	<b>0.06</b>	<b>1.88</b>	<b>304.00</b>	
	<i>including</i>	<b>6.60</b>	<b>3.01</b>	<b>0.87</b>	<b>0.10</b>	<b>309.40</b>	
	10.50	0.58	0.14	0.02	0.65	326.50	
	<i>including</i>	<b>2.50</b>	<b>1.15</b>	<b>0.24</b>	<b>0.03</b>	<b>326.50</b>	
<i>including</i>	<b>2.98</b>	<b>1.97</b>	<b>0.76</b>	<b>0.05</b>	<b>340.65</b>		
<i>including</i>	<b>1.39</b>	<b>3.93</b>	<b>1.41</b>	<b>0.10</b>	<b>4.58</b>	<b>342.24</b>	
DMDD0016	4.75	0.51	0.19	0.02	0.60	239.00	
	<b>0.90</b>	<b>1.23</b>	<b>0.25</b>	<b>0.03</b>	<b>1.35</b>	<b>242.85</b>	
	<b>2.80</b>	<b>0.83</b>	<b>0.51</b>	<b>0.02</b>	<b>1.07</b>	<b>246.70</b>	
	6.85	0.54	0.17	0.02	0.63	250.50	
	2.75	0.48	0.16	0.02	0.57	260.75	
4.90	0.29	0.11	0.01	0.35	267.50		
DMDD0017	<b>3.00</b>	<b>0.88</b>	<b>0.35</b>	<b>0.03</b>	<b>1.05</b>	<b>318.00</b>	
	<b>2.10</b>	<b>0.97</b>	<b>0.17</b>	<b>0.03</b>	<b>1.06</b>	<b>324.90</b>	
	0.30	0.58	0.11	0.02	0.64	334.00	
DMDD0018	2.00	0.29	0.07	0.01	0.33	222.00	
	1.00	0.28	0.07	0.01	0.32	226.00	
	<b>2.19</b>	<b>4.60</b>	<b>1.37</b>	<b>0.12</b>	<b>5.24</b>	<b>236.00</b>	
	<b>2.70</b>	<b>0.69</b>	<b>0.63</b>	<b>0.02</b>	<b>1.00</b>	<b>239.30</b>	
	0.70	0.43	0.13	0.01	0.50	247.00	
DMDD0019	3.35	0.36	0.11	0.01	0.42	336.65	
	1.00	0.36	0.04	0.01	0.38	344.00	
DMDD0020	11.50	0.29	0.10	0.01	0.35	329.50	
	3.00	0.39	0.13	0.01	0.46	345.00	
	5.00	0.31	0.11	0.01	0.37	360.00	
	7.00	0.44	0.17	0.02	0.53	369.00	
	2.10	0.34	0.12	0.01	0.40	379.00	
DMDD0021	0.45	0.30	0.11	0.01	0.36	97.00	
	0.62	0.28	0.06	0.01	0.31	188.38	
	1.00	0.29	0.12	0.01	0.35	191.00	
	3.44	0.40	0.13	0.01	0.47	211.56	
	2.00	0.44	0.17	0.02	0.53	220.00	
	1.00	0.31	0.04	0.01	0.33	225.00	
	1.00	0.25	0.03	0.01	0.28	240.00	
	<b>0.30</b>	<b>4.44</b>	<b>0.29</b>	<b>0.69</b>	<b>5.80</b>	<b>248.50</b>	
	14.00	0.49	0.13	0.02	0.57	252.00	
	<i>including</i>	<b>1.45</b>	<b>1.40</b>	<b>0.15</b>	<b>0.09</b>	<b>1.58</b>	<b>263.20</b>
	1.00	0.31	0.10	0.01	0.37	273.00	
	7.50	0.34	0.10	0.01	0.40	276.50	
	5.00	0.37	0.15	0.01	0.45	293.00	
1.50	0.33	0.12	0.01	0.40	329.00		
DMDD0022	5.00	0.27	0.14	0.01	0.34	224.00	
	3.00	0.35	0.13	0.01	0.42	233.00	
	<b>15.00</b>	<b>0.92</b>	<b>0.29</b>	<b>0.03</b>	<b>1.06</b>	<b>242.00</b>	
	2.50	0.84	0.06	0.03	0.88	258.00	
DMDD0023	2.50	0.38	0.12	0.01	0.44	72.50	
	<b>0.75</b>	<b>2.15</b>	<b>0.10</b>	<b>0.06</b>	<b>2.20</b>	<b>79.60</b>	
DMDD0024	15.00	0.31	0.11	0.01	0.37	263.00	
	10.55	0.55	0.16	0.02	0.63	286.00	
	2.20	0.81	0.20	0.03	0.93	299.80	

Ni equivalent calculation:  $Ni \% Equiv. = (Ni\% \times Ni \text{ recovery}) + ((Cu\% \times Cu \text{ recovery}) \times (Cu \text{ price}/Ni \text{ price})) + ((Co\% \times Co \text{ recovery}) \times (Co \text{ price}/Ni \text{ price}))$  where Ni = US\$13,450/t, Cu = US\$6,553/t, Co = US\$33,000/t. Metal prices sourced from LME 5<sup>th</sup> March 2019. Ni recovery = 94%, Cu recovery = 99% and Co recovery = 88%. Recovery values based on preliminary metallurgical test work as reported ASX:BUX 16<sup>th</sup> August 2017

A significant exploration program at Merlin this field season is being finalised to test several hypotheses, including depth extensions to the intrusive complex and possible structurally hosted zones of mineralisation. At minimum the field season will comprise deep penetrating SQUID MLTEM planned for Q2 2019 and a deep drilling and DHTeM program planned for Q3 2019.



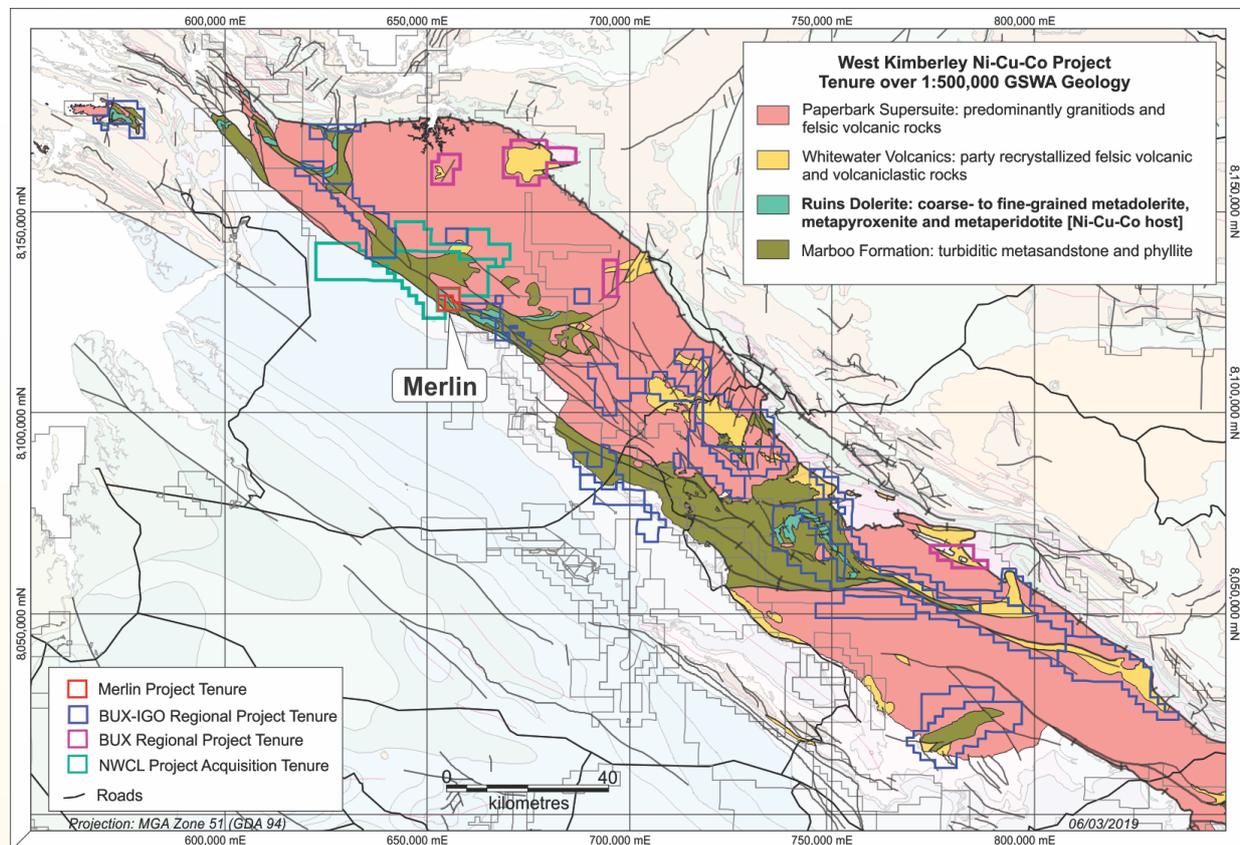
**Figure 2.** Cross section at Conductor J, showing drill hole traces, modelled DHTeM plates and interpreted geology.

**Table 2. 2018 Drill hole Location Details**

Hole Type	Hole ID	Easting	Northing	RL	Azimuth	Inclination	EOH Depth
Diamond	DMDD0015	655,552	8,126,771	103	010	-75	411.8
Diamond	DMDD0016	654,550	8,126,810	90	035	-70	300.0
Diamond	DMDD0017	655,565	8,126,725	103	010	-72	412.2
Diamond	DMDD0018	655,780	8,126,420	97	355	-75	319.2
Diamond	DMDD0019	654,635	8,126,710	90	032	-76	396.7
Diamond	DMDD0020	655,551	8,126,665	100	008	-74	448.1
Diamond	DMDD0021	655,047	8,126,768	100	250	-85	520.2
Diamond	DMDD0022	655,640	8,126,875	103	0	-80	331.2
Diamond	DMDD0023	655,792	8,127,021	105	245	-80	151.2
Diamond	DMDD0024	655,586	8,126,843	102	25	-80	361.2

## West Kimberley Joint Venture

The recently formed regional joint venture between Buxton Resources and Independence Group NL will allow for significantly increased Ni-Cu sulphide exploration activity in the underexplored King Leopold Orogen (Figure 3). A highly experienced team has been established and work has commenced. Aerial geophysics, geological mapping and surface geochemistry is currently planned for the 2019 field season.



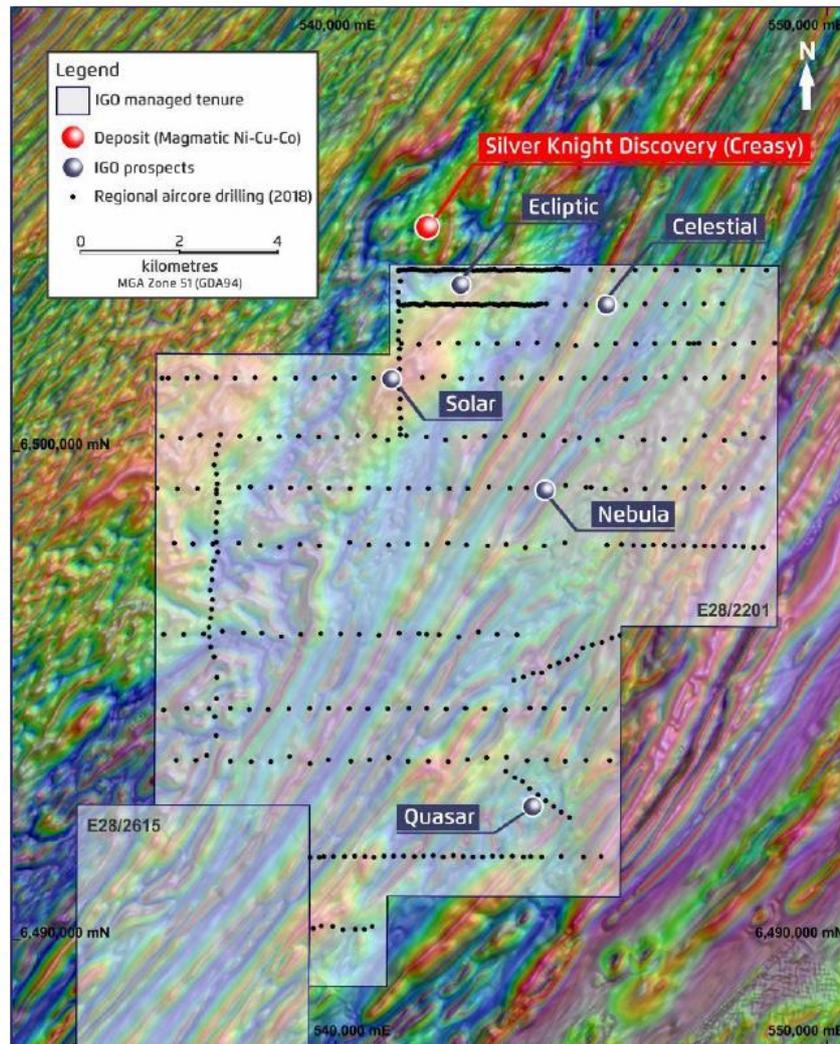
**Figure 3.** Buxton's West Kimberley Ni-Cu-Co tenements over interpreted bedrock geology (GSWA 1:500,000). Merlin tenure in red, BUX-IGO regional JV in blue, NWCL acquisition in green and BUX regional in magenta.

Independence Group NL (ASX:IGO) is currently managing exploration whilst earning into the West Kimberley Project, with Buxton being free carried until completion of a Feasibility Study (refer to ASX: BUX announcement 29 November 2018 for further information).

## Fraser Range Joint Venture

Independence Group has been undertaking systematic greenfields exploration in the Fraser Range targeting Nova style (magmatic Ni-Cu-Co sulphide) discoveries within over ~15,000km<sup>2</sup> of regional tenure. Exploration spend has been in the region of ~\$20m per annum for several years. The only tenement specifically referred to in several recent IGO announcements and presentations is the Widowmaker JV with Buxton.

Five high priority drill targets have been delineated on the Widowmaker tenement (Figure 4). Of note are the Ecliptic and Solar Prospects along trend from the Creasy Group's Silver Knight discovery. At Ecliptic aircore drilling has identified Ni-Cu anomalism in ultramafic rocks and a low-temperature SQUID MLTEM survey has defined a large (2-3km) long EM plate at Solar. Deep diamond drilling of the Solar Prospect is expected to commence in Q1 2019.



**Figure 4.** Drill targets at the Widowmaker (E28/2201) BUX-IGO joint venture in the Fraser Range, high priority targets include Ecliptic and Solar Prospects along strike from the Creasy Group Silver Knight Discovery (figure from IGO RIU conference presentation: <https://www.asx.com.au/asxpdf/20190221/pdf/442twqw68jgtlq.pdf>).

Buxton and IGO entered into a joint venture agreement for two tenements in the Fraser Range, Widowmaker E28/2201 and Zanthus E28/1959, in 2016 whereby Buxton retained a 10% free carry to decision to mine and IGO manages all exploration (refer to BUX ASX announcement 24 August 2016).

### **New World Cobalt West Kimberley Project**

Buxton is pleased to announce that the agreement with New World Cobalt Limited (New World) has formally been completed. Buxton entered into an agreement with New World to acquire its West Kimberley Project which comprises New World's interest in three tenements (E04/1972, E04/2314 & E04/2423) adjacent and contiguous to Buxton's flagship Merlin Project (refer to ASX: BUX announcement 6 November 2018 for key terms and additional information).

## Corporate

Buxton continues to meet all necessary expenditure needs and is, per usual, operating with demonstrable financial constraint and responsibility. Cash balance as at 31 March 2019 was approximately \$5.13 million.

Buxton wishes to acknowledge the ongoing support provided by the WA Government through its Exploration Incentive Scheme (EIS) program.

### For further information please contact:

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## Competent Persons

*The information in this report that relates to Exploration Results is based on information compiled by Mr. Derek Marshall, Member of the Australasian Institute of Geoscientists, and Mr. Eamon Hannon Fellow of the Australian Institute of Geoscientists. Mr. Marshall and Mr. Hannon are full-time employees of Buxton. Mr. Marshall and Mr. Hannon have sufficient experience which is relevant to the activity being undertaken to qualify as a "Competent Person", as defined in the 2012 edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Marshall and Mr. Hannon consent to the inclusion in this report of the matters based on the information in the form and context in which it appears.*

## Appendix 1: Changes in interests in mining tenements - Buxton Resources Ltd 01/01/19 – 31/03/19

Interests in mining tenements relinquished, reduced or lapsed	Tenement	Location	% at beginning of quarter	% at end of quarter
	E63/1720	Albany Fraser	100	0

Interest in mining tenements acquired or increased	E 04/2582	Kimberley	0	100
	E 04/2588	Kimberley	0	100
	E 04/2590	Kimberley	0	100
	E 80/5183	Kimberley	0	100

The mining tenements held at the end of the quarter and their location	E 04/1533	Kimberley	100	100
	E 04/2026	Kimberley	100	100
	E 04/2060	Kimberley	100	100
	E 04/2142	Kimberley	100	100
	E 04/2407	Kimberley	100	100
	E 04/2408	Kimberley	100	100
	E 04/2411	Kimberley	100	100
	E 04/2466	Kimberley	100	100
	E 04/2467	Kimberley	100	100
	E 04/2468	Kimberley	100	100
	E 04/2469	Kimberley	100	100
	E 04/2480	Kimberley	100	100
	ELA 04/2527	Kimberley	100	100
	ELA 04/2530	Kimberley	100	100
	ELA 04/2536	Kimberley	100	100
	ELA 04/2549	Kimberley	100	100
	E 04/2550	Kimberley	100	100
	ELA 04/2578	Kimberley	100	100
	ELA 04/2579	Kimberley	100	100
	ELA 04/2580	Kimberley	100	100
	ELA 04/2581	Kimberley	100	100
	E 04/2582	Kimberley	100	100
	ELA 04/2583	Kimberley	100	100
	ELA 04/2584	Kimberley	100	100
	ELA 04/2585	Kimberley	100	100
	ELA 04/2587	Kimberley	100	100
	E 04/2588	Kimberley	100	100
	ELA 04/2589	Kimberley	100	100
	E 04/2590	Kimberley	100	100
	E 09/1985	Gascoyne	100	100

E 28/1959	Fraser Range	10	10
E 28/2201	Fraser Range	10	10
E 28/2620	Yilgarn	100	100
ELA 63/1675	Albany Fraser	100	100
ELA 63/1676	Albany Fraser	100	100
ELA 63/1677	Albany Fraser	100	100
ELA 63/1685	Albany Fraser	100	100
ELA 63/1686	Albany Fraser	100	100
ELA 63/1687	Albany Fraser	100	100
E 63/1720	Albany Fraser	100	0
ELA 77/2237	Yilgarn	100	100
ELA 77/2238	Yilgarn	100	100
E 77/2549	Yilgarn	100	100
E 80/5183	Kimberley	100	100
ELA 80/5184	Kimberley	100	100
ELA 80/5284	Kimberley	100	100
ELA 80/5285	Kimberley	100	100
ELA 80/5286	Kimberley	100	100
ELA 80/5287	Kimberley	100	100
ELA 80/5288	Kimberley	100	100
P 04/0269	Kimberley	100	100

**Abbreviations and Definitions used in Tenement Schedule:**

E Exploration Licence      ELA Exploration Licence Application      P Prospecting Licence