



# BLACK CANYON

## ASX Announcement



15 July 2021

ASX:BCA

## High-Grade Hydrothermal Manganese confirmed at the Oakover East Project

Outcropping manganese and historic drilling results further highlight potential to expand known mineralisation along the Fig Tree manganese trend

### HIGHLIGHTS

- Field assessment confirms outcropping surface manganese mineralisation associated with previous drill results at Fig Tree located 35km south of the Woodie Woodie Operation
- The assessments also identified prospective manganese targets which have not been adequately drill-tested
- Surface manganese mineralisation was observed along a strike of 1200m between the SU1 and ZL1 prospects, where previous down dip drilling intersected significant high grade intervals, including:
  - 11m @ 18.8% Mn from 66m (SU2RC001)
  - 6m @ 16.8% Mn from 7m (SU2RC008)
  - 14m @ 18.5% Mn from 52m including 8m @ 27.8% Mn (SU2RC011)
  - 14m @ 16.2% Mn from 54m including 9m @ 21.4% Mn (SURC020)
  - 11m @ 15.0% Mn from 62m including 5m @ 24.4% Mn (SURC021)
  - 13m @ 13.6% Mn from 13m including 7m @ 18.3% Mn (ZLRC016)
  - 26m @ 12.6% Mn from 18m including 10m @ 18.2% Mn (ZLTRC015)
- At the TU1 and AP1 prospects widespread surface mineralisation identified over 500m supported by rock chip sampling and limited previous drilling
- HD1 prospect delineated over a strike of ~170m with potential to the northwest to HW1. Significant previous drill results from HD1 include:
  - 7m @ 33.2% Mn from 2m (HADRC007)
  - 3m @ 17.0% Mn from surface (HADRC018)
- Surface mineralisation that remains untested in addition to large areas of prospective geology that have not been subjected to ground geophysical surveys and follow-up drilling.

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## BLACK CANYON

Black Canyon (ASX: BCA) is pleased to advise that it has confirmed the presence of extensive surface manganese mineralisation (Figure 1) and highlighted further significant scope to grow the known mineralisation in several more areas within its Carawine Project in WA's Pilbara.

A field assessment conducted over the Oakover East tenements confirmed outcropping zones of manganese located along the prospective Carawine Dolomite and Pinjin Chert contact zone and multiple residual surface deposits along the Fig Tree Manganese Trend (Figure 2).

The recent field trip at Oakover East was successful in verifying this exploration data, which includes a host of previous significant drill results.

Located 35km south of the operating Woodie Woodie Manganese Mine, Oakover East is part of Black Canyon's Carawine Project which is subject to the farm-in and joint venture agreement with Carawine Resources Ltd (ASX:CWX) whereby Black Canyon can earn up to a 75% interest in the Carawine Project tenements.

**Black Canyon Executive Director Brendan Cummins said:** *"The recent field trip to the Oakover East Project to review the string of prospects along the Fig Tree Manganese Trend has provided invaluable information on the potential of the prospects for high-grade, hydrothermal style manganese mineralisation. Being located only 35km from the Woodie Woodie Operations the Fig Tree Manganese Trend has a similar geological setting, and previous drilling has successfully identified the prospective manganese corridor. Black Canyon intends to leverage the high-quality exploration dataset that covers the project to carefully review the geological and more importantly the structural setting of the known manganese prospect and to generate new targets for evaluation and drill testing."*

*"The Woodie Woodie operation has a long history of discovering and developing multiple small but high value manganese mineral resources. More than 30 pits have been developed at Woodie Woodie ranging from 0.2Mt to 10Mt with an average size of 0.5Mt<sup>1</sup>. The strategy for Black Canyon is to explore the multiple discrete known zones of manganese mineralisation and new targets that may develop into mineral resources with the application of ground geophysics and follow-up drill testing"*.



**Figure 1. Surface Mn-Fe mineralisation at the AP1 prospect (looking north)**

Note (1) S. A. Jones (2017): Geology and geochemistry of fault-hosted hydrothermal and sedimentary manganese deposits in the Oakover Basin, east Pilbara, Western Australia, Australian Journal of Earth Sciences, DOI: 10.1080/08120099.2017.1272492

The region has been the subject of previous aerial and surface geophysical surveys, mapping, rock chip sampling and RC drill testing which has provided a substantial high-quality dataset to assist in target evaluation and ranking. The rock chip and drill data provided in this release have been collated from previous technical reports submitted to DMIRS and available for download from the WAMEX web interface. This information has been reviewed and presented in JORC tables (Appendix 1 to 4). The field trip conducted by BCA was to assist in verifying this previous exploration data.

A summary of the individual prospects identified along the Fig Tree Manganese Trend is provided below.

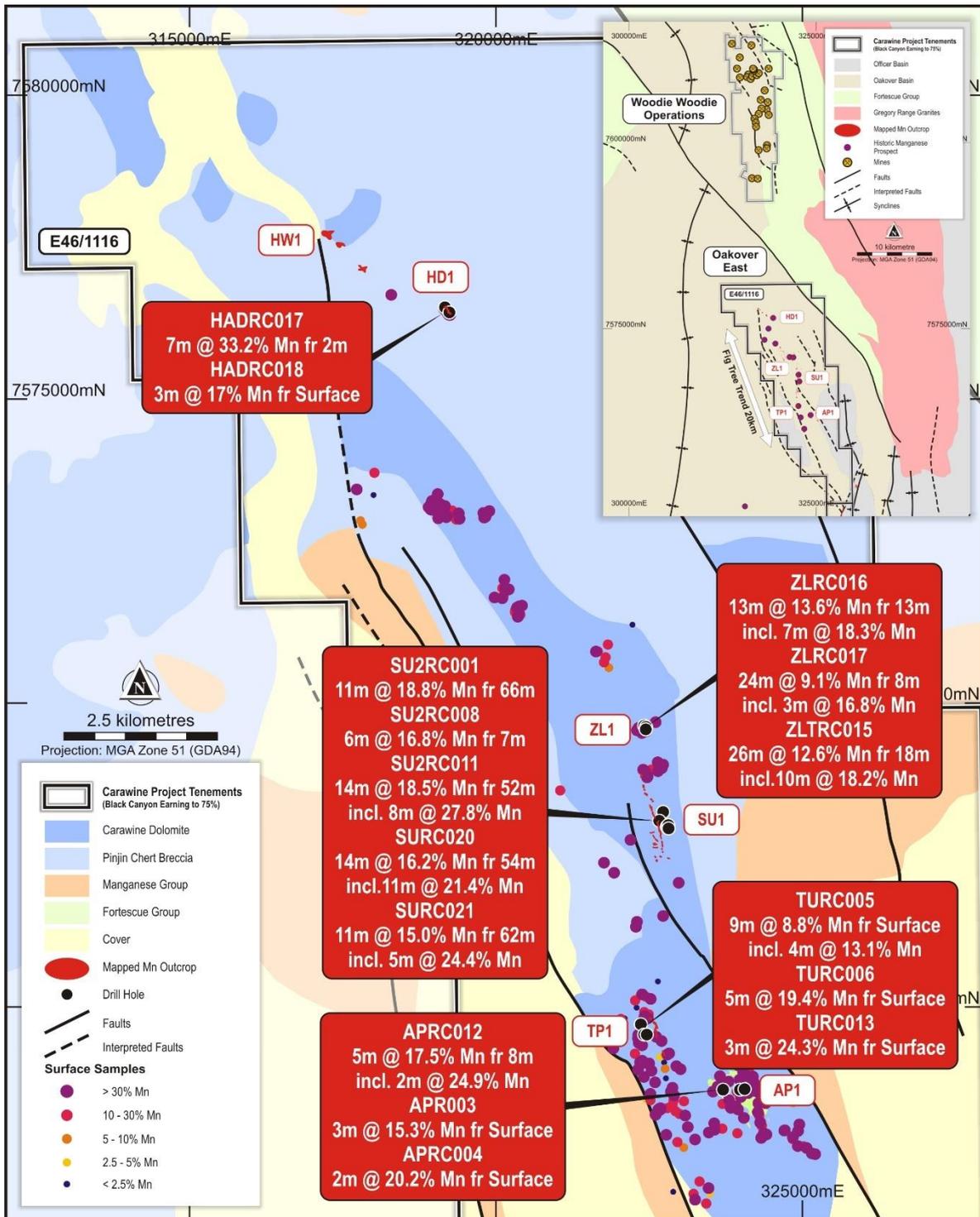


Figure 2. Fig Tree Manganese prospects and significant previous drill results

### Sugai – Zillate Trend (renamed SU1 and ZL1 respectively)

Surface mineralisation comprising a range of moderate to high grade manganese outcrops were traced along a strike of 1200m between the SU1 and ZL1 prospects. A small number of previous rock chip samples at the ZL1 prospect reported moderate to high grade manganese contents as displayed in Table 1.

*Table 1. Rock chip data from across the ZL1 prospect.*

Sample ID	Prospect	East (GDA94)	North (GDA94)	RL	Mn (%)	Fe (%)	Previous Company	Sample Date
FTMB011	ZL1	322467	7568792	400	<b>32.13</b>	8.61	Consolidated Minerals	24/10/2009
FTMB012	ZL1	322470	7568799	400	18.72	18.21	Consolidated Minerals	24/10/2009
FTMB013	ZL1	322476	7568802	400	<b>39.13</b>	10.5	Consolidated Minerals	24/10/2009
FTMB014	ZL1	322480	7568789	400	11.13	8.45	Consolidated Minerals	24/10/2009
FTMB015	ZL1	322465	7568835	400	8.29	15.9	Consolidated Minerals	24/10/2009
FTMB016	ZL1	322461	7568815	400	18.62	8.31	Consolidated Minerals	24/10/2009
FTMB017	ZL1	322446	7568829	400	18.67	12.77	Consolidated Minerals	24/10/2009
FTMB018	ZL1	322431	7568897	400	<b>40.53</b>	7.49	Consolidated Minerals	24/10/2009
FTMB019	ZL1	322437	7568889	400	<b>50.96</b>	3.56	Consolidated Minerals	24/10/2009
FTMB021	ZL1	322404	7568919	400	<b>39.06</b>	5.6	Consolidated Minerals	24/10/2009

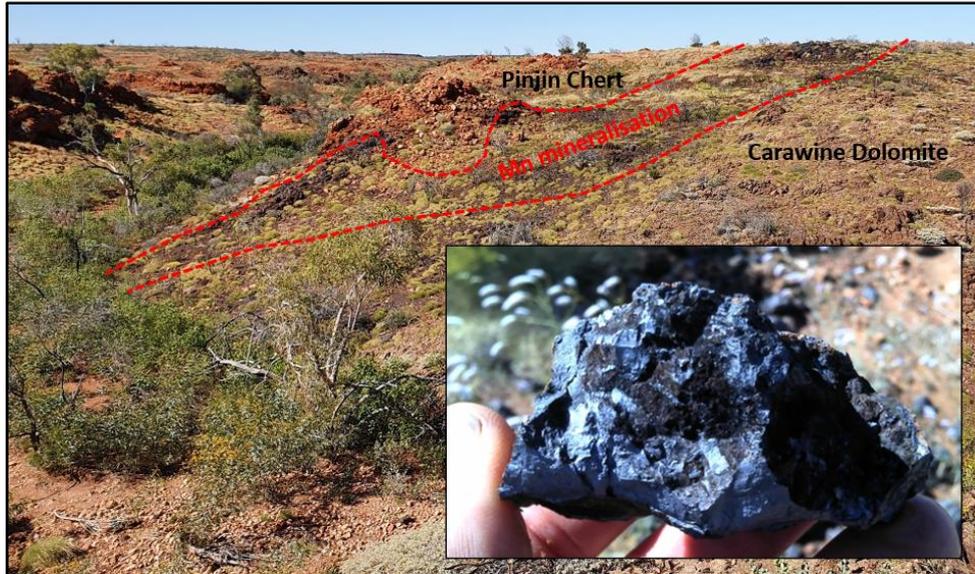
Previous drilling has been undertaken at both the Sugai and Zillate prospects with significant results reported in Table 2.

*Table 2. Significant drill data from the SU1 & ZL1 prospects.*

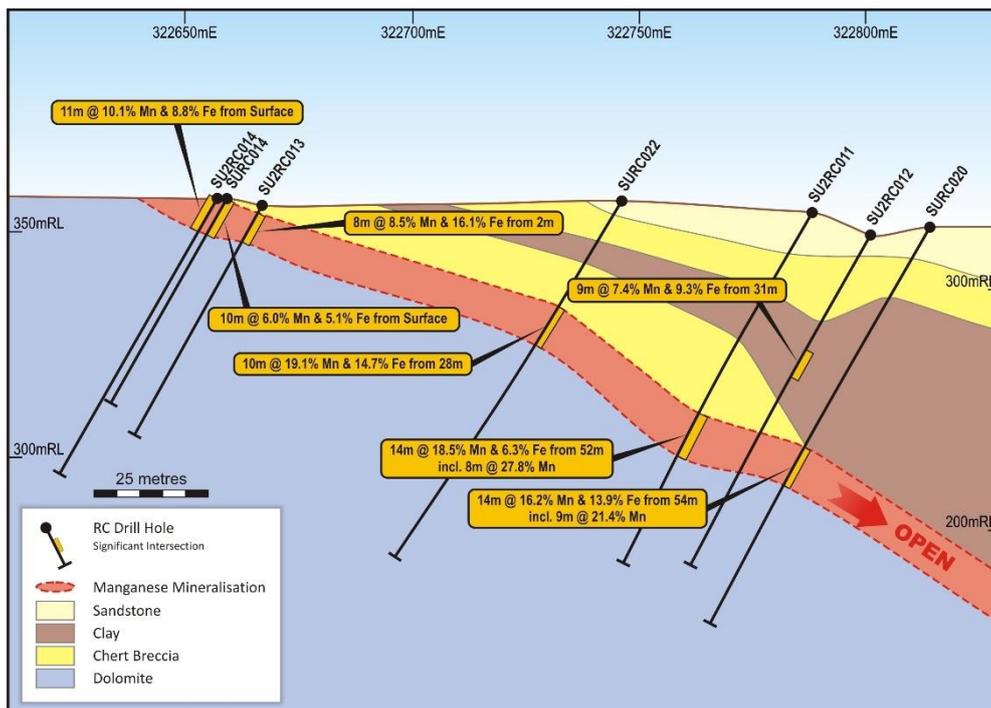
Hole Id	Prospect	Drill Collar Information						Interval				
		East (GDA94)	North (GDA94)	RL	Depth	Dip	Azimuth	From (m)	To (m)	Width (m)	Mn (%)	Fe (%)
SU2RC001	SU1	322725	7568202	360	118	-60	270	66	77	11	18.8	6.3
SU2RC004	SU1	322707	7568173	358	100	-60	270	54	65	11	15.6	11.6
SU2RC005	SU1	322761	7568051	354	88	-60	270	54	66	12	10.8	10.2
SU2RC006	SU1	322793	7568077	356	124	-60	270	75	92	17	11.5	14
SU2RC008	SU1	322661	7568056	344	64	-60	270	7	13	6	16.8	13.3
SU2RC009	SU1	322709	7567985	345	70	-60	270	10	13	3	14.3	14.1
SU2RC010	SU1	322743	7567990	351	76	-60	270	23	28	5	17.6	12.5
SU2RC011	SU1	322788	7567963	354	88	-60	270	<b>52</b>	<b>66</b>	<b>14</b>	<b>18.5</b>	<b>6.4</b>
Including 8m @ 27.8% Mn & 7.8% Fe												
SU2RC012	SU1	322802	7567884	349	82	-60	270	31	40	9	7.4	9.3
SU2RC013	SU1	322667	7567958	356	58	-60	262.1	2	10	8	8.5	16.1
Including 3m @ 14.1% Mn & 18.7% Fe												
SU2RC014	SU1	322659	7567898	357	52	-60	270	0	10	10	6	5.1
Including 2m @ 13.3% Mn & 7.3% Fe												
SURC019	SU1	322657	7567935	357	70	-60	270	0	11	11	10.1	8.8
Including 3m @ 15.4% Mn & 13.1% Fe												
SURC020	SU1	322814	7567931	351	100	-60	270	<b>54</b>	<b>68</b>	<b>14</b>	<b>16.2</b>	<b>13.9</b>
Including 9m @ 21.4% Mn & 17.2% Fe												
SURC021	SU1	322807	7567987	357	100	-60	270	<b>62</b>	<b>73</b>	<b>11</b>	<b>15</b>	<b>12.7</b>
Including 5m @ 24.4% Mn & 10.0% Fe												
SURC022	SU1	322747	7567887	357	94	-60	270	<b>28</b>	<b>38</b>	<b>10</b>	<b>19.1</b>	<b>14.7</b>
SURC023A	SU1	322744	7567695	363	31	-60	270	22	31	9	14	19.4
SURC023B	SU1	322739	7567695	363	82	-60	270	23	28	5	11.2	15.8
ZLRC006	ZL1	322557	7568748	354	58	-60	270	<b>22</b>	<b>46</b>	<b>24</b>	<b>6.7</b>	<b>6.1</b>
Including 4m @ 10.3% Mn & 12.2% Fe												
ZLRC008	ZL1	322528	7568752	353	94	-60	270	30	32	2	32.9	11.2
ZLRC016	ZL1	322444	7569600	345	70	-60	90	<b>13</b>	<b>26</b>	<b>13</b>	<b>13.6</b>	<b>10.2</b>
Including 7m @ 18.3% Mn & 8.4% Fe												
ZLRC017	ZL1	322416	7569622	344	64	-60	90	<b>8</b>	<b>32</b>	<b>24</b>	<b>9.1</b>	<b>14.4</b>
Including 3m @ 16.8% Mn & 9.6% Fe												
ZLRC019	ZL1	322448	7569657	342	58	-60	90	2	4	2	21.6	7

ZLTRC005	ZL1	322518	7568767	353	100	-60	270	10	31	21	15.6	7.1
								Including 12m @ 21.5% Mn & 7.3% Fe				
ZLTRC006	ZL1	322502	7568800	350	100	-60	270	15	24	9	10.6	13.3
								Including 4m @ 14.3% Mn & 11% Fe				
ZLTRC015	ZL1	322556	7568758	353	64	-	269.5	18	44	26	12.6	7.2
								Including 10m @ 18.2% Mn & 5.9% Fe				

Further work is warranted to target structural complexity where manganese may be remobilised into cross cutting structures.



**Figure 3. SU1 outcropping Mn enrichment up dip from previous drill results and along the contact between the overlying Pinjin Chert and underlying Carawine Dolomite (looking south). Inset: high grade manganese sample from creek exposure**



**Figure 4. SU1 prospect Cross section (looking north)**

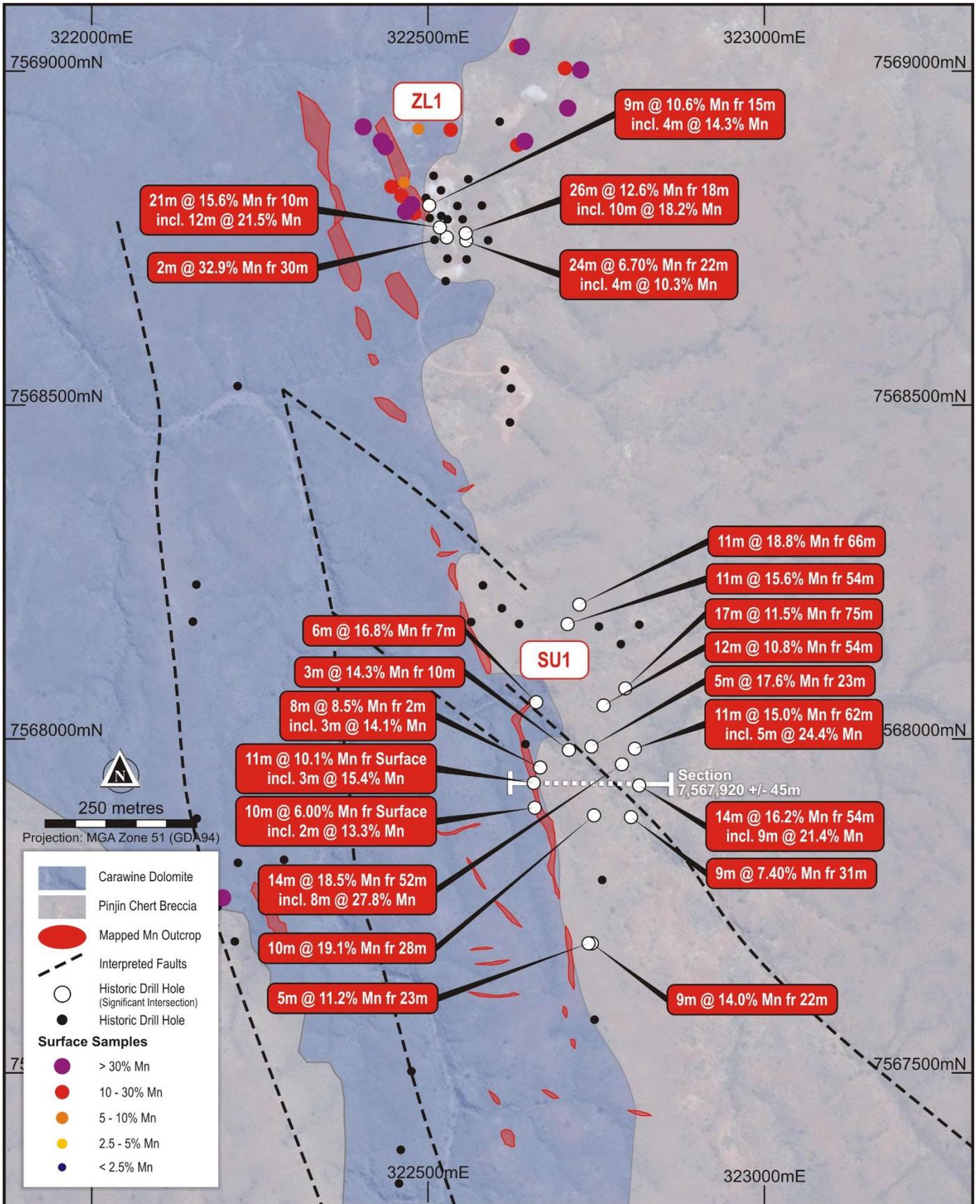


Figure 5. SU1- ZL1 significant previous drill results

## Turpentine (renamed TU1)

The surface mineralisation at TU1 comprises a widespread blanket of mostly residual manganese and iron enrichment overlying the Carawine Dolomite. The main TU1 outcrop comprises a manganese and iron enriched zone extending 450m long and approximately 120m wide with previous surface rock chip samples ranging from 30 to 55% Mn.

Rock chip data from across the TU1 prospect area are presented in Table 3.

*Table 3. Rock chip data from across the TU1 prospect.*

Sample ID	Prospect	East (GDA94)	North (GDA94)	RL	Mn (%)	Fe (%)	Previous Company	Sample Date
PM102257	TU1	322326	7564550	400	55.3	1.33	Consolidated Minerals	9/10/2008
FT-TU01	TU1	322680	7564186	400	2.52	0.87	Consolidated Minerals	3/03/2011
FT-TU02	TU1	322746	7564087	400	1.35	1.33	Consolidated Minerals	3/03/2011
FT-TU03	TU1	322764	7563997	400	8.03	7.46	Consolidated Minerals	3/03/2011
FT-TU07	TU1	322499	7564087	400	52.8	3.64	Consolidated Minerals	3/03/2011
FT-TU08	TU1	321919	7564526	400	27.8	7.63	Consolidated Minerals	5/03/2011
FT-TU09	TU1	321912	7564595	400	2.43	1.25	Consolidated Minerals	5/03/2011
FT-TU10	TU1	322298	7564986	400	1.99	48.3	Consolidated Minerals	5/03/2011
FT-TU11	TU1	322419	7564929	400	24.6	11.8	Consolidated Minerals	5/03/2011
FT-TU12	TU1	322428	7564872	400	52.7	2.59	Consolidated Minerals	5/03/2011
FT-TU13	TU1	322479	7564833	400	30.8	3.81	Consolidated Minerals	5/03/2011
FT-TU14	TU1	322392	7564783	400	51.3	5.1	Consolidated Minerals	5/03/2011
FT-TU-20	TU1	322490	7564885	400	19.5	17.7	Consolidated Minerals	29/03/2011
FT-TU-21	TU1	322323	7564555	400	33.1	14.7	Consolidated Minerals	29/03/2011
FT-TU-22	TU1	322425	7564536	400	51.8	5.89	Consolidated Minerals	29/03/2011
FT-TU-23	TU1	322615	7564529	400	52.4	4.3	Consolidated Minerals	29/03/2011
FT-TU-24	TU1	322702	7564457	400	51	2.74	Consolidated Minerals	29/03/2011
FT-TU-25	TU1	322824	7564251	400	50.3	6.33	Consolidated Minerals	29/03/2011
FT-TU-26	TU1	322798	7564230	400	43.2	8.32	Consolidated Minerals	29/03/2011
FT-TU-27	TU1	322944	7564044	400	52.2	5.21	Consolidated Minerals	29/03/2011
FT-TU-28	TU1	323013	7563992	400	55.4	4.67	Consolidated Minerals	29/03/2011
FT-TU-32	TU1	322540	7563968	400	50.8	4.59	Consolidated Minerals	30/03/2011
FT-TU-33	TU1	322379	7564097	400	39.1	2.4	Consolidated Minerals	31/03/2011
FT-TU-34	TU1	322479	7564088	400	41.2	9.92	Consolidated Minerals	31/03/2011
FT-TU-35	TU1	322384	7564135	400	31.5	11.8	Consolidated Minerals	31/03/2011
FT-TU-36	TU1	322352	7564109	400	31.5	11.9	Consolidated Minerals	31/03/2011
FT-TU-37	TU1	322372	7564080	400	38.3	1.61	Consolidated Minerals	31/03/2011
FT-TU-38	TU1	322318	7563985	400	41.5	2.22	Consolidated Minerals	31/03/2011
FT-TU-39	TU1	322266	7564244	400	11.3	38.1	Consolidated Minerals	31/03/2011
FT-TU-40	TU1	321916	7564337	400	40	10	Consolidated Minerals	1/04/2011
FT-TU-41	TU1	322103	7564810	400	1.48	50.8	Consolidated Minerals	1/04/2011
FT-TU-42	TU1	322037	7564810	400	10.3	36.8	Consolidated Minerals	1/04/2011
KFT004	TU1	322330	7564422	400	54.2	3.31	Consolidated Minerals	28/07/2009
KFT007	TU1	322386	7564386	400	42.2	10.4	Consolidated Minerals	28/07/2009
KFT010	TU1	322318	7564499	400	34.8	17.8	Consolidated Minerals	28/07/2009

The previous drilling completed into the manganese outcrops at TU1 yielded shallow zones of mostly outcropping manganese mineralisation ranging between 3 and 6m thickness with previous drill intersects reported in Table 4.

*Table 4. Significant drill intersects from the TU1 prospect.*

Hole ID	Prospect	Drill Collar Information						Interval				
		East (GDA94)	North (GDA94)	RL	Depth	Dip	Azimuth	From (m)	To (m)	Width (m)	Mn (%)	Fe (%)
TURC003	TU1	322622	7564658	371	64	-60	270	1	9	8	11.9	11.8
TURC005	TU1	322458	7564539	373	58	-60	270	0	9	9	8.8	7.6

								Including 4m @ 13.1% Mn & 9.8% Fe				
TURC006	TU1	322416	7564540	374	64	-60	270	0	5	5	19.4	17.6
TURC007	TU1	322414	7564600	372	64	-60	270	1	4	3	7	7.4
TURC009	TU1	322353	7564493	374	64	-60	270	0	5	5	10.6	12.6
TURC011	TU1	322241	7564596	374	64	-60	270	0	6	6	7.3	10.8
TURC013	TU1	322360	7564710	372	64	-60	270	0	3	3	24.3	10.2
TURC022	TU1	322481	7563877	373	58	-60	270	0	5	5	9.1	9.1
TURC024	TU1	322904	7563997	374	64	-60	270	0	2	2	11.8	8.5

There remains potential to delineate a zone of moderate to high grade manganese mineralisation as indicated by previous rock chip and drill data at the TU1 prospect with an infill drill program.



*Figure 6. Turpentine prospect Mn-Fe surface enrichment (looking west)*

### Ah Ping (renamed AP1)

AP1 comprises an extensive corridor of residual ferruginous and manganese colluvium and outcrops overlying flat dipping Carawine Dolomite and similar to mineralisation observed at the TU1 prospect. The mineralisation footprint at AP1 extends over 1000m long as evident by the rock chip data collected by previous explorers with very high-grade manganese encountered across and along strike. The previous rock chip data from across the AP1 prospect is presented in Table 5

*Table 5. Rock chip data from across the AP1 prospect.*

Sample ID	Prospect	East (GDA94)	North (GDA94)	RL	Mn (%)	Fe (%)	Previous Company	Sample Date
PM102259	AP1	324370	7562940	400	54.9	2.31	Consolidated Minerals	9/10/2008
FT-AP-01	AP1	324402	7563435	400	50.1	9.25	Consolidated Minerals	22/09/2011
FT-AP-02	AP1	324282	7563434	400	39.3	11.2	Consolidated Minerals	22/09/2011
FT-AP-03	AP1	324272	7563286	400	43.1	11.1	Consolidated Minerals	22/09/2011
FT-AP-04	AP1	324297	7563217	400	27.5	18.3	Consolidated Minerals	22/09/2011
FT-AP-05	AP1	324336	7563058	400	25	21	Consolidated Minerals	22/09/2011
FT-AP-06	AP1	324336	7562873	400	44.4	11.2	Consolidated Minerals	22/09/2011
FT-AP-07	AP1	324404	7562917	400	43.9	8.71	Consolidated Minerals	22/09/2011
FT-AP-08	AP1	324284	7563614	400	48.1	4.87	Consolidated Minerals	22/09/2011

FT-AP-09	AP1	324217	7563683	400	<b>38.1</b>	5.95	Consolidated Minerals	22/09/2011
FT-AP-10	AP1	324202	7563636	400	<b>46.7</b>	8.63	Consolidated Minerals	22/09/2011
FT-AP-11	AP1	324111	7563600	400	<b>51.1</b>	8.68	Consolidated Minerals	22/09/2011
FT-AP-12	AP1	323995	7563538	400	<b>48.1</b>	4.95	Consolidated Minerals	22/09/2011
FT-AP-13	AP1	323915	7563386	400	<b>40</b>	10.2	Consolidated Minerals	22/09/2011
FT-AP-14	AP1	323802	7563484	400	<b>50.6</b>	5.05	Consolidated Minerals	22/09/2011
FT-AP-16	AP1	323619	7563705	400	<b>45.9</b>	10.1	Consolidated Minerals	22/09/2011
FT-AP-17	AP1	323654	7563878	400	<b>52.9</b>	5.8	Consolidated Minerals	22/09/2011
FT-AP-18	AP1	324208	7563775	400	<b>41</b>	2.36	Consolidated Minerals	22/09/2011
FT-AP-19	AP1	324131	7563863	400	<b>37.3</b>	11.6	Consolidated Minerals	22/09/2011
FT-AP-20	AP1	324032	7563949	400	<b>32.2</b>	20.4	Consolidated Minerals	22/09/2011
FT-AP-21	AP1	323977	7563818	400	<b>51.7</b>	4.14	Consolidated Minerals	22/09/2011
FT-AP-22	AP1	323794	7563786	400	<b>38</b>	17.3	Consolidated Minerals	22/09/2011
FT-AP-23	AP1	323721	7563776	400	<b>40.2</b>	8.41	Consolidated Minerals	22/09/2011
FT-AP-24	AP1	323932	7563620	400	24.3	25.1	Consolidated Minerals	22/09/2011
FT-AP-25	AP1	324068	7563647	400	<b>45.4</b>	5.17	Consolidated Minerals	22/09/2011
FT-AP-30	AP1	323698	7563417	400	26.6	19.5	Consolidated Minerals	22/09/2011
FT-AP-31	AP1	323835	7563355	400	<b>56.6</b>	2.12	Consolidated Minerals	22/09/2011
FT-AP-32	AP1	324046	7563193	400	<b>46.1</b>	10.2	Consolidated Minerals	22/09/2011
FT-AP-33	AP1	324299	7563655	400	28.9	24.2	Consolidated Minerals	26/09/2011
FT-AP-34	AP1	324425	7563486	400	<b>33.9</b>	14	Consolidated Minerals	26/09/2011
FT-AP-35	AP1	324195	7563872	400	<b>34.2</b>	4.68	Consolidated Minerals	26/09/2011
FT-AP-36	AP1	324125	7563955	400	28.3	22	Consolidated Minerals	26/09/2011
FT-AP-37	AP1	323951	7564051	400	<b>57.5</b>	2.25	Consolidated Minerals	26/09/2011
FT-AP-38	AP1	323541	7563623	400	<b>47.4</b>	8.09	Consolidated Minerals	26/09/2011
FT-AP-39	AP1	323946	7563335	400	<b>54.5</b>	3.78	Consolidated Minerals	26/09/2011
WS07881	AP1	324331	7562864	400	<b>58.02</b>	1.21	Consolidated Minerals	6/10/2009
WS07965	AP1	324336	7563054	400	29.28	27.82	Consolidated Minerals	
WS07966	AP1	324295	7563251	400	29.56	28.14	Consolidated Minerals	6/10/2009
WS07967	AP1	324314	7563112	400	<b>54.46</b>	2.78	Consolidated Minerals	
WS07969	AP1	324415	7562919	400	<b>51.01</b>	3.8	Consolidated Minerals	

A limited number of holes drill tested the residual manganese and iron enrichment blanket at the AP1 prospect but those holes did encounter from surface 1 to 5m intervals of Mn mineralisation prior to intersecting the Carawine Dolomite. The previous drill results are presented in Table 6.

There remains potential to delineate a zone of moderate to high grade manganese mineralisation as indicated by previous rock chip and drill data at the AP1 prospect with an infill drill program.

**Table 6. Significant drill intersects from the AP1 prospect.**

Hole ID	Prospect	Drill Collar Information						Interval				
		East (GDA94)	North (GDA94)	RL	Depth	Dip	Azimuth	From (m)	To (m)	Width (m)	Mn (%)	Fe (%)
APRC002	AP1	324201	7563636	379	124	-60	270	0	1	1	17.4	12.3
APRC003	AP1	323978	7563634	376	34	-60	270	0	3	3	15.3	18.9
APRC004	AP1	324055	7563643	379	34	-60	270	0	2	2	20.2	8
APRC005	AP1	323702	7562988	361	130	-60	270	9	11	2	11.7	10.9
APRC006	AP1	324222	7563233	370	100	-60	270	0	1	1	16.9	17.5
APRC008	AP1	324290	7563009	361	124	-60	270	2	5	3	8.8	22.2
APRC010	AP1	323961	7563418	368	76	-60	270	0	1	1	15.1	9.7
APRC011	AP1	323563	7563639	371	34	-60	270	0	7	7	7.6	9.9
APRC012	AP1	323703	7563633	372	46	-60	270	<b>8</b>	<b>13</b>	<b>5</b>	<b>17.5</b>	<b>20.5</b>
								<b>including 2m @ 24.9% Mn &amp; 16.5% Fe</b>				



*Figure 7. Southern extent of AP1 showing approximately 300m of striking Fe-Mn surface enrichment (looking south)*

### **Haden and Haden NW (renamed HD1 and HW1)**

High grade mineralisation was previously sampled and drilled at the HD1 Prospect. The outcrop is 170m long with a width ranging from 10 to 20m. A structurally controlled corridor from the HD1 prospect was also mapped for approximately 2500m to the NW with three other manganese enriched outcrops also identified. A single rock chip sample was previously taken at one of the three prospects that returned an assay of 34.2% Mn (PM102265) which supports the grade potential of the additional targets

The previous rock chip samples taken from across the HD1 and HW1 prospects are presented in Table 7.

*Table 7. Rock chip data from across the HD1 & HW1 prospects*

Sample ID	Prospect	East (GDA94)	North (GDA94)	RL	Mn (%)	Fe (%)	Previous Company	Sample Date
HAD001	HD1	319249	7576411	400	<b>53.9</b>	1.84	Consolidated Minerals	16/04/2010
HAD002	HD1	319252	7576402	400	<b>55.6</b>	1.69	Consolidated Minerals	16/04/2010
HAD003	HD1	319243	7576401	400	<b>56</b>	1.09	Consolidated Minerals	16/04/2010
HAD004	HD1	319238	7576407	400	<b>54.6</b>	1.27	Consolidated Minerals	16/04/2010
HAD005	HD1	319226	7576406	400	<b>57.5</b>	1.23	Consolidated Minerals	16/04/2010
HAD006	HD1	319215	7576423	400	<b>57.3</b>	0.82	Consolidated Minerals	16/04/2010
HAD007	HD1	319225	7576428	400	<b>52.7</b>	0.82	Consolidated Minerals	16/04/2010
HAD008	HD1	319214	7576431	400	<b>53.5</b>	0.44	Consolidated Minerals	16/04/2010
HAD009	HD1	319225	7576432	400	<b>55.3</b>	0.79	Consolidated Minerals	16/04/2010
HAD010	HD1	319221	7576448	400	<b>53.3</b>	6.35	Consolidated Minerals	16/04/2010
HAD011	HD1	319162	7576512	400	<b>37.1</b>	12.8	Consolidated Minerals	16/04/2010
HAD012	HD1	319161	7576498	400	<b>57</b>	1.09	Consolidated Minerals	16/04/2010
HAD013	HD1	319174	7576492	400	<b>57.6</b>	0.89	Consolidated Minerals	16/04/2010
HAD014	HD1	319151	7576502	400	<b>50.2</b>	7.16	Consolidated Minerals	16/04/2010
PM106826	HD1	319244	7576407	400	<b>52.8</b>	1.4	Consolidated Minerals	27/01/2009
PM102265	HW1	318290	7576730	400	<b>34.2</b>	4.91	Consolidated Minerals	10/10/2008



# BLACK CANYON

The mineralisation at HD1 appears to be structurally controlled with high grade manganese remobilizing into structures within the Pinjin Chert above the Carawine Dolomite basement contact. This is evident in hole HADRC017 that encountered 7m @ 33.2% Mn from 2m.

Future evaluation will examine the possibility of a steep dipping mineral horizon at HD1 and drill testing the 3 new prospects along strike to the NW. Previous significant drill results are presented in Table 8.

*Table 8. Significant drill intersects from the HD1 prospect.*

Hole Id	Prospect	Drill Collar Information						Interval				
		East (GDA94)	North (GDA94)	RL	Depth	Dip	Azimuth	From (m)	To (m)	Width (m)	Mn (%)	Fe (%)
HADRC008	HD1	319159	7575905	343	151	-60	270	83	85	2	13.1	3.6
HADRC010	HD1	319487	7576041	345	154	-60	90	67	71	4	6.3	4.2
HADRC013	HD1	319211	7575995	345	154	62.4	286.2	46	52	6	8.2	8.8
HADRC014	HD1	319214	7576057	342	154	60.1	266.1	52	55	3	12.2	4.9
HADRC015	HD1	319154	7576084	343	124	60.2	273.6	44	49	5	7.5	3.7
HADRC017	HD1	319234	7576419	348	82	62.3	89.6	2	9	7	33.2	4.5
HADRC018	HD1	319164	7576505	344	82	-62	94.5	0	3	3	17	15.2



*Figure 8. HD1 prospect showing high grade manganese outcrops (looking east). Inset - high grade manganese sample from HD1*

This announcement is approved for release by the Board of Directors.

**ENDS**

**For Further Information**

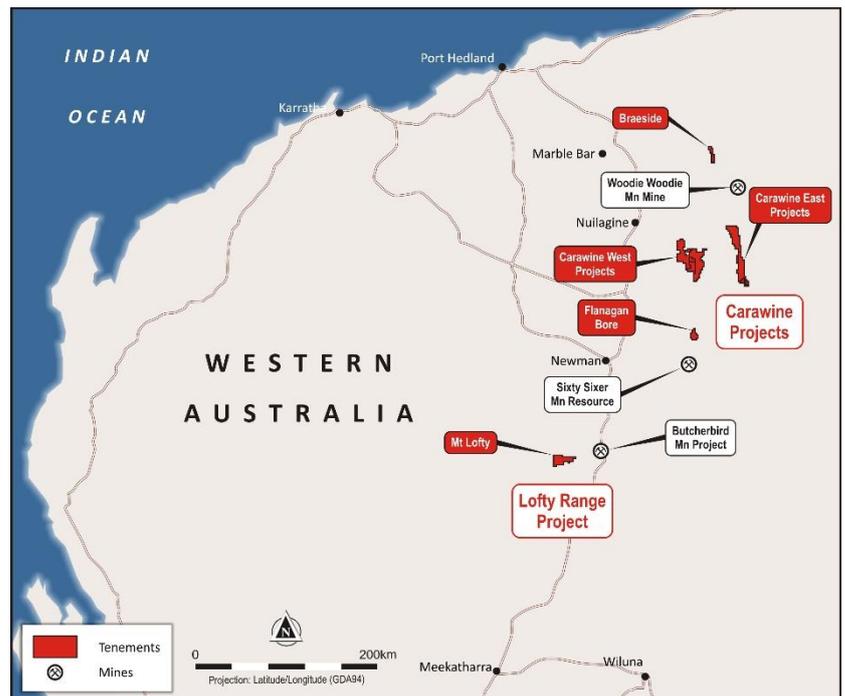
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**Competent Person Statement**

The information in this report that relates to previous Exploration Results is based on, and fairly represents, information and supporting documentation reviewed by Mr Brendan Cummins, Executive Director of Black Canyon Limited. Mr Cummins is a member of the Australian Institute of Geoscientists and he has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which has been 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 Cummins consents to the inclusion in this release of the matters based on the information in the form and context in which they appear. Mr Cummins is a shareholder of Black Canyon Limited.

**About Black Canyon**

Black Canyon has entered into a farm-in and joint venture with ASX listed Carawine Resources Limited (ASX:CWX) to acquire a majority interest in the Carawine Project in Western Australia. The Carawine Project covers approximately 800km<sup>2</sup> of tenure located south of the operating Woodie-Woodie manganese mine, providing a large footprint in a proven and producing manganese belt. Black Canyon has also applied directly for another exploration license adjacent to the Carawine Project that would increase the total land holdings to over 1400km<sup>2</sup> on grant. In addition to manganese, the Carawine Project also hosts multiple copper occurrences including the Western Star prospect which comprises a large zone of surface copper enrichment.



The Company has also secured the Lofty Range manganese project located immediately to the west of the Butcherbird manganese deposit being developed by Element 25.

Manganese and copper continue to have attractive fundamentals with growing utilization in the battery mineral sector and challenging supply conditions.

## APPENDIX 1- Previous RC drill results from within the boundary of tenement E46/1116

Hole Id	Prospect	Drill Collar Information						Interval				
		East (GDA94)	North (GDA94)	RL	Depth (m)	Dip	Azimuth	From (m)	To (m)	Width (m)	Mn (%)	Fe (%)
SU2RC001	SU1	322725	7568202	360	118	-60	270	66	77	11	18.8	6.3
SU2RC002	SU1	322636	7568173	358	82	-60	270	No significant result				
SU2RC003	SU1	322610	7568196	355	82	-60	270	No significant result				
SU2RC004	SU1	322707	7568173	358	100	-60	270	54	65	11	15.6	11.6
SU2RC005	SU1	322761	7568051	354	88	-60	270	54	66	12	10.8	10.2
SU2RC006	SU1	322793	7568077	356	124	-60	270	75	92	17	11.5	14
SU2RC007	SU1	322787	7568143	353	118	-60	270	No significant result				
SU2RC008	SU1	322661	7568056	344	64	-60	270	7	13	6	16.8	13.3
SU2RC009	SU1	322709	7567985	345	70	-60	270	10	13	3	14.3	14.1
SU2RC010	SU1	322743	7567990	351	76	-60	270	23	28	5	17.6	12.5
SU2RC011	SU1	322788	7567963	354	88	-60	270	52	66	14	18.5	6.4
								including 8m @ 27.8% Mn & 7.8% Fe				
SU2RC012	SU1	322802	7567884	349	82	-60	270	31	40	9	7.4	9.3
SU2RC013	SU1	322667	7567958	356	58	-60	262.1	2	10	8	8.5	16.1
								including 3m @ 14.1% Mn & 18.7% Fe				
SU2RC014	SU1	322659	7567898	357	52	-60	270	0	10	10	6	5.1
								including 2m @ 13.3% Mn & 7.3% Fe				
SU2RC015	SU1	322759	7567789	360	64	-60	270	34	39	5	12.6	15.8
SU2RC016	SU1	322748	7567580	362	58	-60	270	No significant result				
SURC001	SU1	322476	7567503	361	118	-60	270	No significant result				
SURC002	SU1	322457	7567335	358	76	-60	270	No significant result				
SURC003	SU1	322460	7567386	359	70	-60	270	No significant result				
SURC004	SU1	322280	7567704	363	82	-60	270	0	4	4	17	16.1
SURC005	SU1	322213	7567698	358	82	-60	270	13	14	1	6.8	11.1
SURC006	SU1	322188	7567749	362	64	-60	270	No significant result				
SURC007	SU1	322218	7567816	360	76	-60	270	9	12	3	6.2	8.4
SURC008	SU1	322280	7567872	359	58	-60	270	No significant result				
SURC009	SU1	322286	7567820	359	58	-60	270	No significant result				
SURC010	SU1	322157	7567882	361	88	-60	90	20	21	1	5.9	9.2
SURC011	SU1	322151	7568176	354	76	-60	270	No significant result				
SURC012	SU1	322156	7568232	352	76	-60	270	No significant result				
SURC013	SU1	322294	7567751	358	76	-60	270	No significant result				
SURC014	SU1	322582	7568231	354	82	-60	270	23	28	5	11.4	9.4
SURC015	SU1	322564	7568176	357	100	-60	270	7	9	2	11.8	12.9
SURC016	SU1	322754	7568169	360	124	-60	270	68	75	7	9.2	6.4
SURC017	SU1	322814	7568172	354	130	-60	270	103	105	2	24.5	9.2
SURC018	SU1	322645	7567993	352	76	-60	270	No significant result				
SURC019	SU1	322657	7567935	357	70	-60	270	0	11	11	10.1	8.8
								including 3m @ 15.4% Mn & 13.1% Fe				
SURC020	SU1	322814	7567931	351	100	-60	270	54	68	14	16.2	13.9
								including 9m @ 21.4% Mn & 17.2% Fe				
SURC021	SU1	322807	7567987	357	100	-60	270	62	73	11	15	12.7
								including 5m @ 24.4% Mn & 10.0% Fe				
SURC022	SU1	322747	7567887	357	94	-60	270	28	38	10	19.1	14.7
SURC023A	SU1	322744	7567695	363	31	-60	270	22	31	9	14	19.4
SURC023B	SU1	322739	7567695	363	82	-60	270	23	28	5	11.2	15.8
ZLRC001	ZL1	322503	7568781	352	82	-60	270	19	26	7	9.9	6.9
ZLRC002	ZL1	322529	7568779	353	94	-60	270	20	26	6	10.3	6.8
ZLRC003	ZL1	322552	7568779	352	88	-60	270	29	30	1	5.8	4.6
ZLRC004	ZL1	322590	7568748	356	106	-60	270	68	69	1	7.8	5.3
ZLRC005	ZL1	322558	7568719	356	94	-60	270	41	46	5	10.3	7
ZLRC006	ZL1	322557	7568748	354	58	-60	270	22	46	24	6.7	6.1
								including 4m @ 10.3% Mn & 12.2% Fe				
ZLRC007	ZL1	322529	7568720	353	88	-60	270	17	23	6	9.7	7.1
ZLRC008	ZL1	322528	7568752	353	94	-60	270	30	32	2	32.9	11.2
ZLRC009	ZL1	322510	7568748	352	88	-60	270	27	29	2	8.9	3.1
ZLRC010	ZL1	322497	7568811	349	43	-60	270	18	24	6	9.9	8.3
ZLRC011	ZL1	322564	7569528	351	82	-60	270	9	11	2	13	13.4

ZLRC012	ZL1	322306	7569598	346	82	-60	270	No significant result				
ZLRC013	ZL1	322346	7569593	343	82	-60	270	0	5	5	7.8	8.5
ZLRC014	ZL1	322400	7569590	343	52	-60	90	0	1	1	5.3	7
ZLRC015	ZL1	322439	7569562	345	64	-60	90	19	21	2	8.3	3.8
ZLRC016	ZL1	322444	7569600	345	70	-60	90	13	26	13	13.6	10.2
								including 7m @ 18.3% Mn & 8.4% Fe				
ZLRC017	ZL1	322416	7569622	344	64	-60	90	8	32	24	9.1	14.4
								including 3m @ 16.8% Mn & 9.6% Fe				
ZLRC018	ZL1	322441	7569623	345	70	-60	90	7	10	3	11.2	4.4
ZLRC019	ZL1	322448	7569657	342	58	-60	90	2	4	2	21.6	7
ZLTRC001	ZL1	322622	7568475	353	160	-58.9	273.7	No significant result				
ZLTRC002	ZL1	322624	7568526	357	160	-63.1	270.6	No significant result				
ZLTRC003	ZL1	322614	7568554	358	160	-60	270	73	75	2	6.9	7.1
ZLTRC004	ZL1	322526	7568687	352	100	-60	270	31	34	3	8.1	6.6
ZLTRC005	ZL1	322518	7568767	353	100	-60	270	10	31	21	15.6	7.1
								including 12m @ 21.5% Mn & 7.3% Fe				
ZLTRC006	ZL1	322502	7568800	350	100	-60	270	15	24	9	10.6	13.3
								including 4m @ 14.3% Mn & 11% Fe				
ZLTRC007	ZL1	322509	7568844	348	100	-60	270	11	15	4	7.8	8.1
ZLTRC008	ZL1	322607	7568925	354	118	-60	270	No significant result				
ZLTRC009	ZL1	322217	7568529	344	196	-59.9	92	No significant result				
ZLTRC010	ZL1	322378	7569280	350	202	-60	45	55	58	3	11.1	5.7
ZLTRC011	ZL1	322441	7569603	345	136	-60	135	24	28	4	19.4	5.2
ZLTRC012	ZL1	322520	7568784	352	100	-60	270	42	43	1	5.1	3.2
ZLTRC013	ZL1	322544	7568799	351	100	-60.5	270.4	No significant result				
ZLTRC014	ZL1	322580	7568800	353	64	-59.4	272	No significant result				
ZLTRC015	ZL1	322556	7568758	353	64	-60.2	269.5	18	44	26	12.6	7.2
								including 10m @ 18.2% Mn & 5.9% Fe				
ZLTRC016	ZL1	322520	7568822	349	64	-62	272	4	9	5	7.8	7.9
ZLTRC017	ZL1	322560	7568839	350	52	-59.8	270.6	No significant result				
TURC001	TU1	322516	7564884	367	46	-60	270	No significant result				
TURC002	TU1	322539	7564776	369	64	-60	270	No significant result				
TURC003	TU1	322622	7564658	371	64	-60	270	1	9	8	11.9	11.8
TURC004	TU1	322639	7564536	372	64	-60	270	No significant result				
TURC005	TU1	322458	7564539	373	58	-60	270	0	9	9	8.8	7.6
								including 4m @ 13.1% Mn & 9.8% Fe				
TURC006	TU1	322416	7564540	374	64	-60	270	0	5	5	19.4	17.6
TURC007	TU1	322414	7564600	372	64	-60	270	1	4	3	7	7.4
TURC008	TU1	322417	7564658	371	64	-60	270	No significant result				
TURC009	TU1	322353	7564493	374	64	-60	270	0	5	5	10.6	12.6
TURC010	TU1	322358	7564598	373	64	-60	270	No significant result				
TURC011	TU1	322241	7564596	374	64	-60	270	0	6	6	7.3	10.8
TURC012	TU1	322420	7564779	370	64	-60	270	No significant result				
TURC013	TU1	322360	7564710	372	64	-60	270	0	3	3	24.3	10.2
TURC014	TU1	322285	7564645	373	64	-60	270	No significant result				
TURC015	TU1	322360	7565014	368	64	-60	270	No significant result				
TURC016	TU1	322299	7565140	370	64	-60	270	No significant result				
TURC017	TU1	322178	7564779	373	64	-60	270	No significant result				
TURC018	TU1	322300	7564479	374	64	-60	270	No significant result				
TURC019	TU1	322418	7564419	374	64	-60	270	No significant result				
TURC020	TU1	322359	7564358	375	64	-60	270	No significant result				
TURC021	TU1	322478	7564123	376	64	-60	270	No significant result				
TURC022	TU1	322481	7563877	373	58	-60	270	0	5	5	9.1	9.1
TURC023	TU1	322869	7564029	375	64	-60	270	8	9	1	6.3	11.2
TURC024	TU1	322904	7563997	374	64	-60	270	0	2	2	11.8	8.5
TURC025	TU1	322956	7563979	373	70	-60	270	No significant result				
APRC001	AP1	324289	7563637	374	112	-60	270	No significant result				
APRC002	AP1	324201	7563636	379	124	-60	270	0	1	1	17.4	12.3
APRC003	AP1	323978	7563634	376	34	-60	270	0	3	3	15.3	18.9
APRC004	AP1	324055	7563643	379	34	-60	270	0	2	2	20.2	8
APRC005	AP1	323702	7562988	361	130	-60	270	9	11	2	11.7	10.9
APRC006	AP1	324222	7563233	370	100	-60	270	0	1	1	16.9	17.5
APRC007	AP1	324425	7563232	370	124	-60	270	No significant result				

APRC008	AP1	324290	7563009	361	124	-60	270	2	5	3	8.8	22.2
APRC009	AP1	324413	7563003	366	118	-60	270	No significant result				
APRC010	AP1	323961	7563418	368	76	-60	270	0	1	1	15.1	9.7
APRC011	AP1	323563	7563639	371	34	-60	270	0	7	7	7.6	9.9
APRC012	AP1	323703	7563633	372	46	-60	270	8	13	5	17.5	20.5
								including 2m @ 24.9% Mn & 16.5% Fe				
APRC013	AP1	323797	7563633	371	28	-60	270	16	17	1	6.3	8.9
FTRC001		323353	7561342	371	57	-60	90	0	4	4	5.4	17
FTRC002		323326	7561757	363	69	-60	90	38	42	4	13.8	8.1
								including 2m @ 20.5% Mn & 10.8% Fe				
FTRC003		323017	7562602	367	159	-60	90	No significant result				
FTRC004		323517	7561371	367	129	-60	90	No significant result				
FTRC005		322806	7563403	382	57	-60	270	21	30	9	7.7	7.2
FTRC006	TU1	322458	7564000	371	75	-60	90	No significant result				
FTRC007	TU1	322755	7564200	375	99	-60	90	No significant result				
FTRC008	AP1	323448	7564198	370	81	-60	90	No significant result				
HADRC001	HD1	319160	7576024	346	82	-60	270	No significant result				
HADRC002	HD1	319170	7576023	346	160	-60	270	63	71	8	6.5	4.4
HADRC003	HD1	319178	7576021	346	34	-90	0	No significant result				
HADRC004	HD1	319158	7575965	348	154	-60	270	77	83	6	6.6	5.9
HADRC005	HD1	318919	7575986	348	100	-60	270	55	63	8	5.5	5.3
HADRC006	HD1	319098	7575993	343	118	-60	90	66	68	2	8	4.6
HADRC007	HD1	319102	7575933	344	154	-60	90	59	64	5	6.2	6.6
HADRC008	HD1	319159	7575905	343	151	-60	270	83	85	2	13.1	3.6
HADRC009	HD1	319489	7575983	345	65	-60	90	No significant result				
HADRC010	HD1	319487	7576041	345	154	-60	90	67	71	4	6.3	4.2
HADRC011	HD1	319429	7576014	343	124	-61.4	87.8	No significant result				
HADRC012	HD1	319215	7575937	344	154	-61.4	221.2	No significant result				
HADRC013	HD1	319211	7575995	345	154	-62.4	286.2	46	52	6	8.2	8.8
HADRC014	HD1	319214	7576057	342	154	-60.1	266.1	52	55	3	12.2	4.9
HADRC015	HD1	319154	7576084	343	124	-60.2	273.6	44	49	5	7.5	3.7
HADRC016	HD1	319222	7576478	344	82	-59.4	272	No significant result				
HADRC017	HD1	319234	7576419	348	82	-62.3	89.6	2	9	7	33.2	4.5
HADRC018	HD1	319164	7576505	344	82	-62	94.5	0	3	3	17	15.2
KERC001		318370	7574986	355	154	-90	360	No significant result				
KERC002		319129	7574989	358	147	-60	270	No significant result				
KERC003		318765	7574987	360	93	-90	360	81	82	1	12	21
KERC004		318033	7575099	343	111	-60	270	43	48	5	8	11
NDMRC001		321370	7571261	346	160	-58	267.4	No significant result				
NDMRC002		321372	7571180	344	82	-59.1	268.5	No significant result				
NDMRC003		321568	7571109	343	82	-56.3	273.2	No significant result				
NDMRC004		321612	7571190	343	82	-59.9	269.9	No significant result				
NDMRC005		321491	7571027	345	82	-60	270	No significant result				
NDMRC006		321406	7570946	343	82	-57.6	265.7	No significant result				
NDMRC007		321588	7570949	344	124	-60.4	268.3	No significant result				
NDMRC008		321608	7570911	344	124	-58.2	269.9	No significant result				
NDMRC009		321648	7570950	344	160	-58.8	264.9	No significant result				
NDMRC010		321709	7571187	340	112	-63.1	270.8	No significant result				
NDMRC011		321773	7571185	339	160	-60	270	No significant result				
NDMRC012		321750	7571148	339	160	-60	270	No significant result				
NDMRC013		322051	7571053	343	160	-60	270	No significant result				
NDMRC014		322024	7571009	343	130	-60	270	89	91	2	8.9	6.9
NDMRC015		321979	7570969	336	46	-60	270	27	31	4	9.8	16.5
NDMRC016		321975	7570889	337	202	-60	270	No significant result				
NDMRC017		321904	7570890	339	82	-60	270	33	34	1	7	12.3
NDMRC018		321842	7570970	338	100	-60	270	18	23	5	7.4	10.4
NDMRC019		321902	7570970	338	88	-60	270	No significant result				
NDMRC020		321964	7571104	339	82	-60	270	70	74	4	28.2	5.2
NDMRC021		321968	7571052	337	106	-60	270	32	39	7	6.3	14.4
NDMRC022		321939	7571008	336	118	-60	270	5	23	18	8.9	15.9
NDMRC023		321859	7571008	337	94	-60	270	37	40	3	12.2	15.4
PX1		321500	7570620	300	6	-90	360	0	2	2	10.6	20.7
PX10		323350	7571720	300	9	-90	360	No significant result				

PX11		322260	7571720	300	6	-90	360	No significant result				
PX12		323080	7572900	300	6	-90	360	No significant result				
PX13		324150	7571920	300	9	-90	360	2	5	3	26.4	4.3
PX14		324160	7571970	300	9	-90	360	No significant result				
PX15		324240	7571980	300	8	-90	360	0	2	2	21	12.3
PX16		324310	7571980	300	7	-90	360	1	3	2	13	14.5
PX17		324360	7571960	300	9	-90	360	0	1	1	21.4	5.5
PX18		324800	7572340	300	9	-90	360	No significant result				
PX19		324810	7572380	300	9	-90	360	No significant result				
PX2		321450	7570650	300	6	-90	360	0	2	2	11.8	25.9
PX20		325090	7572080	300	9	-90	360	0	2	2	14.9	19.8
PX21		325120	7571760	300	10	-90	360	No significant result				
PX22		325200	7571660	300	9	-90	360	0	1	1	27.1	16.6
PX23		325130	7571540	300	6	-90	360	No significant result				
PX24		325870	7571880	300	9	-90	360	No significant result				
PX3		321310	7570960	300	6	-90	360	0	2	2	15.5	8.9
PX4		320660	7570850	300	10	-90	360	2	3	1	6.7	10.8
PX5		320670	7570780	300	9	-90	360	0	4	4	11.4	12.5
PX6		320630	7570700	300	6	-90	360	0	1	1	11.7	21.4
PX7		320620	7570680	300	9	-90	360	0	2	2	9.6	22.4
PX8		323360	7572300	300	11	-90	360	1	7	6	11.7	18.5
PX9		323260	7571780	300	6	-90	360	No significant result				
GMWB001		318065	7573523	354	34	-90	360	No significant result				
GMRC001		317842	7573580	366	100	-60	270	No significant result				
GMRC002		317877	7573619	366	100	-60	270	No significant result				
GMRC003		317906	7573578	361	100	-60	270	No significant result				
GMRC004		318006	7573637	351	190	-60	270	80	81	1	6.3	1.3
GMRC005		318085	7573635	356	172	-60	270	75	79	4	11.1	15.7
GMRC006		318047	7573598	352	124	-60	270	70	71	1	13.7	21.9
GMRC007		318082	7573560	354	142	-56.8	257.5	72	75	3	14.3	17
GMRC008		318173	7573557	359	190	-58.5	265.3	No significant result				
GMRC009		318051	7573523	354	160	-57.1	265.7	No significant result				
GMRC010		318110	7573533	355	154	-57.7	264.8	No significant result				
GMRC011		318167	7573475	358	160	-60.8	265.4	No significant result				
GMRC012		318186	7573417	363	172	-59.3	262.3	116	120	4	8.8	5.3
GMRC013		318126	7573442	358	178	-60	270	No significant result				
GMRC014		318086	7573480	354	160	-60	270	No significant result				
GMRC015		318049	7573438	355	118	-60	270	No significant result				
GMRC016		318086	7573402	356	178	-60	270	No significant result				
GMRC017		318124	7573359	357	184	-60	270	No significant result				
GMRC018		317937	7573378	363	100	-60	270	No significant result				
GMRC019		317911	7573420	358	100	-60.1	267.7	No significant result				
GMRC020		318003	7573480	354	190	-60	270	No significant result				
GMRC021		317866	7573364	367	112	-60	270	No significant result				
GMRC022		318134	7572882	355	190	-59.4	264.5	No significant result				
GMRC023		318086	7572922	350	190	-62.2	269.1	No significant result				
GMRC024		318007	7572921	349	190	-59	267.4	No significant result				
GMRC025		318041	7572960	355	190	-58.5	266.2	No significant result				
GMRC026		317967	7572963	351	190	-58.1	271.1	No significant result				
GMRC027		318047	7572876	351	160	-60	270	No significant result				
GMRC028		318418	7572880	375	190	-60	270	No significant result				
93AQR001		328536	7556462	410	40	-90	360	No significant result				
93AQR002		328736	7556462	410	50	-90	360	No significant result				
93AQR003		328936	7556462	405	54	-90	360	No significant result				
93AQR004		329136	7556462	405	60	-90	360	No significant result				
93AQR005		329336	7556462	410	60	-90	360	No significant result				
93AQR006		329536	7556462	405	60	-90	360	No significant result				
93AQR007		329736	7556462	405	60	-90	360	No significant result				
93AQR011		328436	7556942	400	50	-90	360	No significant result				
93AQR012		328636	7556942	400	60	-90	360	No significant result				
93AQR013		328836	7556942	400	60	-90	360	No significant result				
93AQR014		327036	7556942	400	60	-90	360	No significant result				
93AQR015		329236	7556942	400	60	-90	360	No significant result				

93AQR016		329436	7556942	400	60	-90	360	No significant result
93AQR017		329636	7556942	400	60	-90	360	No significant result

## APPENDIX 2- JORC Table 1 for previous RC drill results from within the boundary of E46/1116

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The historic data is reported to the Western Australian Mines Department, and it is a condition of the license (under the Mining Act) that the Tenement holder report information in sufficient detail to enable subsequent parties to reliably use the information.</li> <li>Historic reports have then been accessed from WAMEX and raw files retrieved and entered into a drill data base.</li> <li>The information describes RC drilling and sampling.</li> <li>In all cases industry standard methods of sample collection appropriate to the period were employed.</li> <li>In many cases sampling methods are not reported in detail, however it is not expected that measures of representivity are material to the context in which historic results are reported and can be relied upon</li> <li>The majority of the drilling reported was completed by Consolidated Minerals which are considered a leader in the exploration and mining of manganese ores</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>The drill type referred to in the historic reports is Reverse Circulation (RC)</li> <li>Where the drill diameter is not reported in the text, it is not considered material to the reader's understanding of the results given the context in which historic results are reported.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Historic reports of results refer to industry standard methods of sample collection appropriate to the period were employed.</li> <li>In most cases measures relating to sample recovery are not reported, however these are not expected to materially affect the understanding of the historic results given the context in which they are reported.</li> <li>Cavities encountered during drilling have been reported in the drill logs</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <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 intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>The historic drill results were downloaded and provided detailed drill logs and legends so the geology could be interpreted.</li> <li>Where relevant to the understanding of the results reported, results of geological logging have been included in the text of the release.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <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 sub-sampling stages to maximise representivity of samples.</li> </ul>	<ul style="list-style-type: none"> <li>Unless stated otherwise it is assumed that industry standard methods appropriate to the period were used. This would involve collecting a large bulk sample from the cyclone and 2 smaller splits collected in calico bags for submission to the laboratory.</li> <li>The majority of the drilling reported was completed by Consolidated Minerals which were considered a leader in the exploration and mining of manganese ores</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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>	
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Historic reports of results refer to industry standard assay procedures and methods used, appropriate to the period to which the data relate, and that this has resulted in appropriate levels of accuracy and precision in the data, especially in regard to the context in which the results have been reported.</li> <li>The author has not been able to view original document or assay files but is satisfied that the analysis was completed to an acceptable standard in the context in which the results have been reported</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Unless otherwise stated, the reported intersections from historic drilling have been repeated from the original technical reports as referenced in the text, and where possible verified from accompanying raw data, although in all cases this was not possible.</li> <li>No historic assay data has been adjusted.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Unless otherwise stated the accuracy and quality of location data for drill holes is assumed to be sufficient for the form and context in which the data has been reported.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <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) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Where relevant and material to the understanding of the results these have included in the body of the release.</li> <li>The results as presented are not intended to imply sufficient quality for the estimation of a Mineral Resources</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Where considered material to the understanding of the results reported, this information has been included in the body of the release.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>No information regarding sample security is reported, however given the Projects' locations this is not considered a high risk in the context in which the results are reported.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Other than internal review by Company geologists and in the preparation of the IGR (as part of the IPO), no audits have been completed.</li> <li>Beyond that completed to date, further audits are not considered to be required given the context in which the historic data is reported, or the stage of the Projects development.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and</b>	<ul style="list-style-type: none"> <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</li> </ul>	<ul style="list-style-type: none"> <li>The previous drill holes reported are located within the boundaries of the Black Canyon license E46/1116</li> <li>Black Canyon has a farm-in and joint venture agreement with Carawine Resources Ltd (ASX:CWX), giving Black</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>land tenure status</b>	<p>interests, historical sites, wilderness or national park and environmental settings.</p> <ul style="list-style-type: none"> <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>	<p>Canyon the right to earn an initial 51% interest and up to 75% in the Carawine Projects that includes E46/1116</p> <ul style="list-style-type: none"> <li>The tenements from which the drill holes were completed were and continue to be subject to a native title Heritage Agreement with the Njama! People and access has been previously provided.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The exploration data reported was primarily gathered and validated by Consolidated Minerals between 2003 and 2016</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The geology and mineralisation is described in the body of the release</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Where selected anomalous drill hole intervals are included, they are included to provide information relating to the tenor of the mineralisation as reported by the previous explorers, based on the opinion of the author of the historic report.</li> <li>They are not intended to represent an entire description of the mineralisation</li> <li>All of the drill information from within E46/1116 and drill intersects &gt; 5% Mn cut-off allowing for 1m of internal dilution (&lt;5% Mn) are presented in Appendix 1.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Only length (1m) weighted intervals are included in the text of this release.</li> <li>Manganese intervals have been reported at 5% Mn cut off allowing 1 m of dilution (&lt;5% Mn)</li> <li>No metal equivalent values are used.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Unless otherwise stated down hole widths are reported and noted in proximity to the result in the text of the release.</li> <li>The historic explorers overtime utilised a number of drill dip angles and azimuths at various prospects and the author considers the drill direction and dips to be appropriate for early-stage evaluation of surface or modelled IP targets</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>These have been included in the body of the release where relevant and material to the reader's understanding of the results in regard to the context in which they have been reported.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Information considered material to the reader's understanding of the Exploration Results has been reported. In the body of the text significant results have selectively reported to provide the reader with the potential tenor and widths of the mineralisation</li> <li>Appendix 1 shows the drill results and Mn and Fe grades for intervals &gt; 5% Mn allowing for 1m of dilution.</li> <li>A total of 234 drill holes for 20790m of RC drilling are presented in Appendix 1 which is all of the drilling completed in E46/1116 as gathered from historic records</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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,</li> </ul>	<ul style="list-style-type: none"> <li>All information considered material to the reader's understanding and context of the historic RC Exploration Results have been reported.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	
<b>Further work</b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Further work is planned to continue evaluating the prospects at Fig Tree that will involve more prospecting, geophysics and drilling</li> </ul>

### APPENDIX 3- Previous rock chip samples results from within the boundary of E46/1116

Sample ID	East (GDA94)	North (GDA94)	RL	Mn (%)	Fe (%)	Previous Company	Sample Date
PM102251	319095	7573100	400	41.3	7.5	Consolidated Minerals	9/10/2008
PM102252	319806	7573065	400	57.9	0.8	Consolidated Minerals	9/10/2008
PM102253	320733	7570774	400	15.3	25.7	Consolidated Minerals	9/10/2008
PM102254	321826	7570970	400	19.7	34.6	Consolidated Minerals	9/10/2008
PM102255	322300	7569570	400	55.2	3.3	Consolidated Minerals	9/10/2008
PM102256	322195	7567764	400	50.1	5.5	Consolidated Minerals	9/10/2008
PM102257	322326	7564550	400	55.3	1.3	Consolidated Minerals	9/10/2008
PM102258	325154	7562608	400	51.8	5.9	Consolidated Minerals	9/10/2008
PM102259	324370	7562940	400	54.9	2.3	Consolidated Minerals	9/10/2008
PM102260	322728	7566512	400	52.3	1.6	Consolidated Minerals	9/10/2008
PM102265	318290	7576730	400	34.2	4.9	Consolidated Minerals	10/10/2008
PM102335	320645	7570756	400	18.4	39.4	Consolidated Minerals	23/10/2008
FT-AP-01	324402	7563435	400	50.1	9.3	Consolidated Minerals	22/09/2011
FT-AP-02	324282	7563434	400	39.3	11.2	Consolidated Minerals	22/09/2011
FT-AP-03	324272	7563286	400	43.1	11.1	Consolidated Minerals	22/09/2011
FT-AP-04	324297	7563217	400	27.5	18.3	Consolidated Minerals	22/09/2011
FT-AP-05	324336	7563058	400	25.0	21.0	Consolidated Minerals	22/09/2011
FT-AP-06	324336	7562873	400	44.4	11.2	Consolidated Minerals	22/09/2011
FT-AP-07	324404	7562917	400	43.9	8.7	Consolidated Minerals	22/09/2011
FT-AP-08	324284	7563614	400	48.1	4.9	Consolidated Minerals	22/09/2011
FT-AP-09	324217	7563683	400	38.1	6.0	Consolidated Minerals	22/09/2011
FT-AP-10	324202	7563636	400	46.7	8.6	Consolidated Minerals	22/09/2011
FT-AP-11	324111	7563600	400	51.1	8.7	Consolidated Minerals	22/09/2011
FT-AP-12	323995	7563538	400	48.1	5.0	Consolidated Minerals	22/09/2011
FT-AP-13	323915	7563386	400	40.0	10.2	Consolidated Minerals	22/09/2011
FT-AP-14	323802	7563484	400	50.6	5.1	Consolidated Minerals	22/09/2011
FT-AP-15	324770	7563593	400	44.8	14.0	Consolidated Minerals	22/09/2011
FT-AP-16	323619	7563705	400	45.9	10.1	Consolidated Minerals	22/09/2011
FT-AP-17	323654	7563878	400	52.9	5.8	Consolidated Minerals	22/09/2011
FT-AP-18	324208	7563775	400	41.0	2.4	Consolidated Minerals	22/09/2011
FT-AP-19	324131	7563863	400	37.3	11.6	Consolidated Minerals	22/09/2011
FT-AP-20	324032	7563949	400	32.2	20.4	Consolidated Minerals	22/09/2011
FT-AP-21	323977	7563818	400	51.7	4.1	Consolidated Minerals	22/09/2011
FT-AP-22	323794	7563786	400	38.0	17.3	Consolidated Minerals	22/09/2011

FT-AP-23	323721	7563776	400	40.2	8.4	Consolidated Minerals	22/09/2011
FT-AP-24	323932	7563620	400	24.3	25.1	Consolidated Minerals	22/09/2011
FT-AP-25	324068	7563647	400	45.4	5.2	Consolidated Minerals	22/09/2011
FT-AP-26	324707	7562983	400	45.3	6.8	Consolidated Minerals	22/09/2011
FT-AP-27	324844	7562877	400	34.5	13.1	Consolidated Minerals	22/09/2011
FT-AP-28	323939	7562933	400	21.6	23.4	Consolidated Minerals	22/09/2011
FT-AP-29	323690	7563010	400	23.4	10.4	Consolidated Minerals	22/09/2011
FT-AP-30	323698	7563417	400	26.6	19.5	Consolidated Minerals	22/09/2011
FT-AP-31	323835	7563355	400	56.6	2.1	Consolidated Minerals	22/09/2011
FT-AP-32	324046	7563193	400	46.1	10.2	Consolidated Minerals	22/09/2011
FT-AP-33	324299	7563655	400	28.9	24.2	Consolidated Minerals	26/09/2011
FT-AP-34	324425	7563486	400	33.9	14.0	Consolidated Minerals	26/09/2011
FT-AP-35	324195	7563872	400	34.2	4.7	Consolidated Minerals	26/09/2011
FT-AP-36	324125	7563955	400	28.3	22.0	Consolidated Minerals	26/09/2011
FT-AP-37	323951	7564051	400	57.5	2.3	Consolidated Minerals	26/09/2011
FT-AP-38	323541	7563623	400	47.4	8.1	Consolidated Minerals	26/09/2011
FT-AP-39	323946	7563335	400	54.5	3.8	Consolidated Minerals	26/09/2011
FT-GV-01	322995	7563252	400	12.3	27.6	Consolidated Minerals	5/05/2011
FT-GV-02	322930	7563296	400	15.9	23.3	Consolidated Minerals	4/05/2011
FT-GV-03	322879	7563403	400	25.0	4.0	Consolidated Minerals	4/05/2011
FT-GV-04	322898	7563471	400	21.6	8.2	Consolidated Minerals	4/05/2011
FT-GV-05	322908	7563562	400	33.4	12.8	Consolidated Minerals	4/05/2011
FT-GV-06	322854	7563621	400	45.4	3.0	Consolidated Minerals	4/05/2011
FT-GV-07	322879	7563686	400	52.6	4.6	Consolidated Minerals	4/05/2011
FT-GV-08	323067	7563460	400	21.1	26.9	Consolidated Minerals	4/05/2011
FT-GV-09	322688	7563350	400	55.2	3.2	Consolidated Minerals	4/05/2011
FT-GV-10	322780	7562910	400	59.5	0.4	Consolidated Minerals	5/05/2011
FT-GV-11	322962	7562788	400	15.2	19.7	Consolidated Minerals	5/05/2011
FT-GV-12	323067	7562702	400	7.3	21.4	Consolidated Minerals	5/05/2011
FT-GV-13	323133	7563035	400	54.1	3.8	Consolidated Minerals	5/05/2011
FT-GV-14	323251	7562832	400	48.3	6.8	Consolidated Minerals	5/05/2011
FT-GV-15	323472	7562952	400	45.7	4.0	Consolidated Minerals	5/05/2011
FT-GV-16	323566	7562994	400	41.7	3.4	Consolidated Minerals	5/05/2011
FT-GV-17	323692	7563011	400	28.1	10.9	Consolidated Minerals	5/05/2011
FT-GV-18	323090	7563228	400	40.7	7.5	Consolidated Minerals	5/05/2011
FT-GV-19	322798	7563345	400	25.8	14.9	Consolidated Minerals	5/05/2011
FT-GV-20	322605	7563247	400	46.2	13.0	Consolidated Minerals	21/09/2011
FT-GV-21	322650	7563325	400	52.3	4.6	Consolidated Minerals	21/09/2011
FTMB001	321662	7570861	400	29.2	26.5	Consolidated Minerals	23/02/2009
FTMB002	321633	7570861	400	16.0	37.2	Consolidated Minerals	23/02/2009
FTMB003	320313	7571506	400	18.7	22.6	Consolidated Minerals	23/02/2009
FTMB004	320375	7571501	400	55.5	1.9	Consolidated Minerals	23/02/2009
FTMB005	320395	7571463	400	23.4	17.7	Consolidated Minerals	23/02/2009
FTMB006	320358	7571433	400	57.0	2.3	Consolidated Minerals	23/02/2009
FTMB007	320317	7571540	400	27.6	13.9	Consolidated Minerals	23/02/2009
FTMB008	320347	7571589	400	46.7	8.2	Consolidated Minerals	23/02/2009

FTMB009	320380	7571607	400	42.6	11.0	Consolidated Minerals	23/02/2009
FTMB010	320427	7571618	400	38.0	13.8	Consolidated Minerals	23/02/2009
FTMB011	322467	7568792	400	32.1	8.6	Consolidated Minerals	24/10/2009
FTMB012	322470	7568799	400	18.7	18.2	Consolidated Minerals	24/10/2009
FTMB013	322476	7568802	400	39.1	10.5	Consolidated Minerals	24/10/2009
FTMB014	322480	7568789	400	11.1	8.5	Consolidated Minerals	24/10/2009
FTMB015	322465	7568835	400	8.3	15.9	Consolidated Minerals	24/10/2009
FTMB016	322461	7568815	400	18.6	8.3	Consolidated Minerals	24/10/2009
FTMB017	322446	7568829	400	18.7	12.8	Consolidated Minerals	24/10/2009
FTMB018	322431	7568897	400	40.5	7.5	Consolidated Minerals	24/10/2009
FTMB019	322437	7568889	400	51.0	3.6	Consolidated Minerals	24/10/2009
FTMB020	322486	7568915	400	7.9	21.2	Consolidated Minerals	24/10/2009
FTMB021	322404	7568919	400	39.1	5.6	Consolidated Minerals	24/10/2009
FTMB022	322534	7568914	400	12.6	15.2	Consolidated Minerals	24/10/2009
FTMB023	322727	7569004	400	30.2	7.3	Consolidated Minerals	24/10/2009
FTMB024	322704	7569006	400	22.1	25.9	Consolidated Minerals	24/10/2009
FTMB025	322639	7569039	400	36.0	12.2	Consolidated Minerals	24/10/2009
FTMB026	322632	7569039	400	18.6	22.3	Consolidated Minerals	24/10/2009
FTMB027	322708	7568947	400	32.1	7.8	Consolidated Minerals	24/10/2009
FTMB028	322644	7568897	400	37.0	13.9	Consolidated Minerals	24/10/2009
FTMB029	322633	7568891	400	13.5	20.8	Consolidated Minerals	24/10/2009
FTMB030	322391	7569524	400	13.9	32.3	Consolidated Minerals	25/10/2009
FTMB031	322388	7569528	400	9.3	37.7	Consolidated Minerals	25/10/2009
FTMB032	322380	7569523	400	37.5	13.6	Consolidated Minerals	25/10/2009
FTMB033	322449	7569551	400	38.7	8.1	Consolidated Minerals	25/10/2009
FTMB034	322454	7569583	400	51.3	2.7	Consolidated Minerals	25/10/2009
FTMB035	322372	7569599	400	27.3	12.9	Consolidated Minerals	25/10/2009
FTMB036	322326	7569602	400	39.6	12.8	Consolidated Minerals	25/10/2009
FTMB037	322382	7569604	400	35.1	14.5	Consolidated Minerals	25/10/2009
FTMB038	322337	7569604	400	45.7	7.6	Consolidated Minerals	25/10/2009
FTMB039	322354	7569587	400	40.7	12.1	Consolidated Minerals	25/10/2009
FTMB040	322604	7569700	400	33.0	16.2	Consolidated Minerals	25/10/2009
FTMU01	323660	7561463	400	39.5	9.3	Consolidated Minerals	22/09/2011
FTMU02	323771	7561495	400	38.4	10.6	Consolidated Minerals	22/09/2011
FTMU03	323815	7561523	400	37.1	5.9	Consolidated Minerals	22/09/2011
FTMU04	323801	7561440	400	34.5	2.1	Consolidated Minerals	22/09/2011
FTMU05	323744	7561220	400	12.4	36.5	Consolidated Minerals	22/09/2011
FTMU06	323508	7561607	400	19.5	3.0	Consolidated Minerals	22/09/2011
FTMU07	323468	7562034	400	42.1	10.3	Consolidated Minerals	22/09/2011
FTMU08	323224	7561938	400	19.3	16.5	Consolidated Minerals	22/09/2011
FTMU09	323496	7561940	400	3.7	37.4	Consolidated Minerals	22/09/2011
FTMU10	323433	7561780	400	25.8	9.1	Consolidated Minerals	22/09/2011
FTMU11	323345	7561335	400	18.3	27.0	Consolidated Minerals	22/09/2011
FTMU12	323365	7561289	400	45.8	5.2	Consolidated Minerals	22/09/2011
FTMU13	323290	7561126	400	41.1	7.3	Consolidated Minerals	22/09/2011
FTMU14	323207	7561202	400	19.0	3.3	Consolidated Minerals	22/09/2011

FTMU15	322895	7561955	400	2.2	31.2	Consolidated Minerals	22/09/2011
FTMU16	323943	7561438	400	2.0	5.8	Consolidated Minerals	22/09/2011
FTMU17	324000	7561276	400	35.5	4.0	Consolidated Minerals	22/09/2011
FT-MU-18	323323	7562139	400	20.0	32.6	Consolidated Minerals	23/10/2011
FT-MU-19	323251	7561842	400	42.8	8.9	Consolidated Minerals	23/10/2011
FTNJ001	318937	7573200	400	46.9	3.7	Consolidated Minerals	2/04/2010
FTNJ002	318902	7573241	400	39.6	10.1	Consolidated Minerals	2/04/2010
FTNJ003	318973	7573194	400	50.1	3.7	Consolidated Minerals	2/04/2010
FTNJ004	319011	7573190	400	21.3	12.5	Consolidated Minerals	13/04/2010
FTNJ005	319016	7573207	400	49.4	7.7	Consolidated Minerals	13/04/2010
FTNJ006	319053	7573200	400	8.9	7.7	Consolidated Minerals	13/04/2010
FTNJ007	319058	7573192	400	20.3	17.0	Consolidated Minerals	13/04/2010
FTNJ008	319090	7573214	400	1.1	4.9	Consolidated Minerals	13/04/2010
FTNJ009	319167	7573257	400	35.3	7.7	Consolidated Minerals	13/04/2010
FTNJ010	319168	7573272	400	1.6	1.0	Consolidated Minerals	13/04/2010
FTNJ011	318957	7573339	400	40.4	11.9	Consolidated Minerals	13/04/2010
FTNJ012	318932	7573295	400	24.6	9.7	Consolidated Minerals	13/04/2010
FTNJ013	319058	7573053	400	41.1	10.7	Consolidated Minerals	14/04/2010
FTNJ014	319078	7573023	400	2.5	25.9	Consolidated Minerals	14/04/2010
FTNJ015	319119	7573110	400	8.2	6.7	Consolidated Minerals	14/04/2010
FTNJ016	319113	7573170	400	11.0	26.6	Consolidated Minerals	14/04/2010
FTNJ017	319148	7573154	400	28.3	19.7	Consolidated Minerals	14/04/2010
FTNJ018	319190	7573074	400	40.3	8.0	Consolidated Minerals	14/04/2010
FTNJ019	319186	7573096	400	43.6	12.4	Consolidated Minerals	14/04/2010
FTNJ020	319200	7573092	400	48.6	9.6	Consolidated Minerals	14/04/2010
FTNJ021	321048	7568575	400	24.9	21.0	Consolidated Minerals	15/04/2010
FTNJ022	319976	7571755	400	32.7	17.2	Consolidated Minerals	16/04/2010
FTNJ023	320103	7571735	400	39.1	8.3	Consolidated Minerals	16/04/2010
FTNJ024	320126	7571778	400	20.3	19.4	Consolidated Minerals	16/04/2010
FTNJ025	320104	7571901	400	26.0	6.6	Consolidated Minerals	16/04/2010
FTNJ026	320129	7571938	400	5.6	7.9	Consolidated Minerals	16/04/2010
FTNJ027	320165	7571861	400	21.9	18.0	Consolidated Minerals	16/04/2010
FTNJ028	318005	7573417	400	0.8	0.9	Consolidated Minerals	17/04/2010
FTNJ029	318950	7573368	400	0.8	0.5	Consolidated Minerals	17/04/2010
FTNJ030	319050	7573452	400	37.2	11.5	Consolidated Minerals	17/04/2010
FTNJ031	319028	7573415	400	17.1	11.6	Consolidated Minerals	17/04/2010
FTNJ032	319046	7573311	400	23.1	2.0	Consolidated Minerals	17/04/2010
FTNJ033	319061	7573303	400	39.5	18.0	Consolidated Minerals	17/04/2010
FTNJ034	319094	7573300	400	27.7	8.8	Consolidated Minerals	17/04/2010
FTNJ035	319288	7573176	400	26.8	13.9	Consolidated Minerals	17/04/2010
FTNJ036	319312	7573070	400	7.3	22.4	Consolidated Minerals	17/04/2010
FTNJ037	319318	7573109	400	20.0	17.5	Consolidated Minerals	17/04/2010
FTNJ038	319393	7573138	400	45.5	9.4	Consolidated Minerals	17/04/2010
FTNJ039	319405	7573051	400	45.3	5.2	Consolidated Minerals	17/04/2010
FTNJ040	319349	7573031	400	18.9	7.6	Consolidated Minerals	17/04/2010
FTNJ041	319795	7573144	400	51.4	1.0	Consolidated Minerals	17/04/2010

FTNJ042	319839	7573111	400	51.8	1.0	Consolidated Minerals	17/04/2010
FTNJ043	319890	7573176	400	53.8	3.2	Consolidated Minerals	17/04/2010
FTNJ044	319828	7573080	400	53.9	5.1	Consolidated Minerals	17/04/2010
FT-PR-01	321928	7567223	400	56.9	2.6	Consolidated Minerals	11/04/2011
FT-PR-02	321764	7567387	400	49.2	7.2	Consolidated Minerals	11/04/2011
FT-RA-01	325021	7562715	400	25.3	2.3	Consolidated Minerals	22/09/2011
FT-RA-02	324925	7562729	400	47.9	5.5	Consolidated Minerals	22/09/2011
FT-RA-03	325072	7562694	400	45.2	2.6	Consolidated Minerals	22/09/2011
FT-RA-04	325156	7562597	400	27.0	5.3	Consolidated Minerals	22/09/2011
FT-RA-05	324850	7563440	400	5.3	45.1	Consolidated Minerals	22/09/2011
FT-RA-06	324937	7563103	400	1.2	48.2	Consolidated Minerals	22/09/2011
FT-RA-07	324950	7563083	400	47.1	4.9	Consolidated Minerals	22/09/2011
FT-RA-08	324930	7562974	400	53.2	2.5	Consolidated Minerals	22/09/2011
FT-RA-09	325211	7562593	400	51.6	3.4	Consolidated Minerals	22/09/2011
FT-SU-40	322981	7567058	400	40.3	7.6	Consolidated Minerals	11/04/2011
FT-TU01	322680	7564186	400	2.5	0.9	Consolidated Minerals	3/03/2011
FT-TU02	322746	7564087	400	1.4	1.3	Consolidated Minerals	3/03/2011
FT-TU03	322764	7563997	400	8.0	7.5	Consolidated Minerals	3/03/2011
FT-TU04	322774	7563825	400	0.5	8.7	Consolidated Minerals	3/03/2011
FT-TU05	322522	7563581	400	48.9	6.4	Consolidated Minerals	3/03/2011
FT-TU06	322417	7563866	400	33.2	7.2	Consolidated Minerals	3/03/2011
FT-TU07	322499	7564087	400	52.8	3.6	Consolidated Minerals	3/03/2011
FT-TU08	321919	7564526	400	27.8	7.6	Consolidated Minerals	5/03/2011
FT-TU09	321912	7564595	400	2.4	1.3	Consolidated Minerals	5/03/2011
FT-TU10	322298	7564986	400	2.0	48.3	Consolidated Minerals	5/03/2011
FT-TU11	322419	7564929	400	24.6	11.8	Consolidated Minerals	5/03/2011
FT-TU12	322428	7564872	400	52.7	2.6	Consolidated Minerals	5/03/2011
FT-TU13	322479	7564833	400	30.8	3.8	Consolidated Minerals	5/03/2011
FT-TU14	322392	7564783	400	51.3	5.1	Consolidated Minerals	5/03/2011
FT-TU15	322273	7565119	400	27.2	16.6	Consolidated Minerals	29/03/2011
FT-TU16	322347	7565198	400	5.3	32.1	Consolidated Minerals	29/03/2010
FT-TU17	322385	7565220	400	55.4	2.1	Consolidated Minerals	29/03/2011
FT-TU18	322446	7565182	400	26.0	11.3	Consolidated Minerals	29/03/2011
FT-TU19	322525	7565145	400	57.0	1.1	Consolidated Minerals	29/03/2011
FT-TU20	322490	7564885	400	19.5	17.7	Consolidated Minerals	29/03/2011
FT-TU21	322323	7564555	400	33.1	14.7	Consolidated Minerals	29/03/2011
FT-TU22	322425	7564536	400	51.8	5.9	Consolidated Minerals	29/03/2011
FT-TU23	322615	7564529	400	52.4	4.3	Consolidated Minerals	29/03/2011
FT-TU24	322702	7564457	400	51.0	2.7	Consolidated Minerals	29/03/2011
FT-TU25	322824	7564251	400	50.3	6.3	Consolidated Minerals	29/03/2011
FT-TU26	322798	7564230	400	43.2	8.3	Consolidated Minerals	29/03/2011
FT-TU27	322944	7564044	400	52.2	5.2	Consolidated Minerals	29/03/2011
FT-TU28	323013	7563992	400	55.4	4.7	Consolidated Minerals	29/03/2011
FT-TU29	322520	7563483	400	25.5	19.8	Consolidated Minerals	30/03/2011
FT-TU30	322446	7563497	400	4.2	0.9	Consolidated Minerals	30/03/2011
FT-TU31	322596	7563772	400	38.8	9.3	Consolidated Minerals	30/03/2011

FT-TU-32	322540	7563968	400	50.8	4.6	Consolidated Minerals	30/03/2011
FT-TU-33	322379	7564097	400	39.1	2.4	Consolidated Minerals	31/03/2011
FT-TU-34	322479	7564088	400	41.2	9.9	Consolidated Minerals	31/03/2011
FT-TU-35	322384	7564135	400	31.5	11.8	Consolidated Minerals	31/03/2011
FT-TU-36	322352	7564109	400	31.5	11.9	Consolidated Minerals	31/03/2011
FT-TU-37	322372	7564080	400	38.3	1.6	Consolidated Minerals	31/03/2011
FT-TU-38	322318	7563985	400	41.5	2.2	Consolidated Minerals	31/03/2011
FT-TU-39	322266	7564244	400	11.3	38.1	Consolidated Minerals	31/03/2011
FT-TU-40	321916	7564337	400	40.0	10.0	Consolidated Minerals	1/04/2011
FT-TU-41	322103	7564810	400	1.5	50.8	Consolidated Minerals	1/04/2011
FT-TU-42	322037	7564810	400	10.3	36.8	Consolidated Minerals	1/04/2011
FT-TU-43	321600	7564735	400	43.2	4.6	Consolidated Minerals	1/04/2011
GMMC001	317728	7573532	400	32.7	17.0	Consolidated Minerals	6/06/2010
GMMC002	317792	7573017	400	8.1	28.6	Consolidated Minerals	6/06/2010
GMMC003	317821	7572954	400	5.8	25.1	Consolidated Minerals	6/06/2010
GMMC004	318017	7573799	400	26.5	3.7	Consolidated Minerals	6/06/2010
HAD001	319249	7576411	400	53.9	1.8	Consolidated Minerals	16/04/2010
HAD002	319252	7576402	400	55.6	1.7	Consolidated Minerals	16/04/2010
HAD003	319243	7576401	400	56.0	1.1	Consolidated Minerals	16/04/2010
HAD004	319238	7576407	400	54.6	1.3	Consolidated Minerals	16/04/2010
HAD005	319226	7576406	400	57.5	1.2	Consolidated Minerals	16/04/2010
HAD006	319215	7576423	400	57.3	0.8	Consolidated Minerals	16/04/2010
HAD007	319225	7576428	400	52.7	0.8	Consolidated Minerals	16/04/2010
HAD008	319214	7576431	400	53.5	0.4	Consolidated Minerals	16/04/2010
HAD009	319225	7576432	400	55.3	0.8	Consolidated Minerals	16/04/2010
HAD010	319221	7576448	400	53.3	6.4	Consolidated Minerals	16/04/2010
HAD011	319162	7576512	400	37.1	12.8	Consolidated Minerals	16/04/2010
HAD012	319161	7576498	400	57.0	1.1	Consolidated Minerals	16/04/2010
HAD013	319174	7576492	400	57.6	0.9	Consolidated Minerals	16/04/2010
HAD014	319151	7576502	400	50.2	7.2	Consolidated Minerals	16/04/2010
KFT001	322286	7566333	400	46.6	7.8	Consolidated Minerals	28/07/2009
KFT002	322301	7566421	400	39.1	11.6	Consolidated Minerals	28/07/2009
KFT004	322330	7564422	400	54.2	3.3	Consolidated Minerals	28/07/2009
KFT007	322386	7564386	400	42.2	10.4	Consolidated Minerals	28/07/2009
KFT010	322318	7564499	400	34.8	17.8	Consolidated Minerals	28/07/2009
MMKMC001	320139	7572045	400	37.6	15.0	Consolidated Minerals	19/04/2010
MMKMC003	320209	7571884	400	38.7	5.8	Consolidated Minerals	19/04/2010
MMKMC004	320150	7571904	400	36.5	14.0	Consolidated Minerals	19/04/2010
NDMMC001	321633	7570859	400	34.2	21.0	Consolidated Minerals	19/04/2010
NDMMC002	321762	7570685	400	11.8	23.4	Consolidated Minerals	19/04/2010
NDMMC003	321845	7570594	400	9.6	39.8	Consolidated Minerals	19/04/2010
NDMMC004	321789	7570765	400	18.0	36.7	Consolidated Minerals	19/04/2010
NDMMC005	322228	7571285	400	2.2	27.6	Consolidated Minerals	19/04/2010
PM106826	319244	7576407	400	52.8	1.4	Consolidated Minerals	27/01/2009
WS07877	323561	7563102	400	45.7	9.6	Consolidated Minerals	5/10/2009
WS07878	322604	7563245	400	54.8	2.7	Consolidated Minerals	5/10/2009

WS07879	324851	7562888	400	9.5	42.0	Consolidated Minerals	6/10/2009
WS07880	324840	7562837	400	22.9	2.7	Consolidated Minerals	6/10/2009
WS07881	324331	7562864	400	58.0	1.2	Consolidated Minerals	6/10/2009
WS07965	324336	7563054	400	29.3	27.8	Consolidated Minerals	
WS07966	324295	7563251	400	29.6	28.1	Consolidated Minerals	6/10/2009
WS07967	324314	7563112	400	54.5	2.8	Consolidated Minerals	
WS07968	324714	7562986	400	40.7	8.4	Consolidated Minerals	
WS07969	324415	7562919	400	51.0	3.8	Consolidated Minerals	
WS07970	322671	7563340	400	50.6	4.2	Consolidated Minerals	
WS07971	322656	7563329	400	46.3	6.8	Consolidated Minerals	
WS07972	322659	7563321	400	53.4	2.9	Consolidated Minerals	
WS07973	322685	7563333	400	55.0	1.6	Consolidated Minerals	
WS07974	322663	7563313	400	55.1	3.0	Consolidated Minerals	
ZLTMCO01	322323	7569601	400	50.3	3.6	Consolidated Minerals	19/04/2010
2762632	328839	7556087	400	2.4	1.2	CRA	
2762885	322643	7565422	400	0.1	8.2	CRA	
2762893	320962	7563515	400	0.1	3.6	CRA	
2762994	328573	7556442	400	8.1	0.7	CRA	
2763002	328573	7556445	400	4.6	1.0	CRA	
2763003	328573	7556445	400	2.6	1.1	CRA	
2763008	328595	7556409	400	1.5	1.8	CRA	
3681743	327716	7558322	400	4.8	0.8	CRA	

**APPENDIX 4- JORC Table 1 for previous rock chip samples results from within the boundary of E46/1116**

**Section 1 Sampling Techniques and Data**

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

Criteria	JORC Code explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>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</i></li> </ul>	<ul style="list-style-type: none"> <li>Point surface samples consisting of rock chips of outcropping bedrock, to a nominal 0.5- 2kg weight.</li> <li>Each sample was described at the site and time of collection to ensure accurate records of sampled material. Samples were selected based on mineralisation / alteration zones, or to distinguish low level alteration indicating potential mineralisation at depth.</li> <li>The samples are selective but representative of the outcrop from which they were taken.</li> <li>Rock chip sampling is an industry wide field technique for establishing metal content to understand potential tenor of the underlying mineralisation.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i>	
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>• 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).</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <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 intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>• All samples have been logged at the time and location of collection, enabling them to be placed in geological context.</li> <li>• All surface samples have been logged to high detail.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <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 sub-sampling 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 style="list-style-type: none"> <li>• Samples were collected dry and consisted of multiple chips dislodged and fractured by a geological pick.</li> <li>• Samples were between a nominal 0.5-2kg weight and placed directly in to numbered calico bags at the collection point.</li> <li>• Appropriate assay techniques were designated at the point of collection based on the perspective commodity.</li> <li>• Single point samples.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Assays for the PMPL/CML rock chip samples were analysed at the Woodie Woodie mine laboratory. No detailed information is provided on the quality of the analysis, but the mine relied upon the data for grade control management, so it is assumed to be robust with the insertion of internal laboratory standards and checks to ensure the data can pass control thresholds.</li> <li>• The assay data has sufficient quality for the reporting of Exploration Results.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Assay results summarised in the context of this report have been rounded appropriately.</li> <li>• No assay data has been adjusted.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Location of data points</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Sample locations were assumed to be surveyed by a hand held GPS +/-5m, at the time of sample collection.</li> <li>RL was not recorded and is not relevant to surface point samples.</li> <li>Coordinates reported are GDA Zone 51.</li> <li>Location data is considered to be of sufficient quality for reporting of exploration results at this early stage.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <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) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Selective sampling based on field observation and outcrops identified as hosting potential for mineralisation.</li> <li>Should not be considered representative of the rock mass as a whole but an indication of the local grade at surface</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Samples are representative only of the material sampled and based on surface outcrops it is unknown if the samples have a bias related to orientation of structures or mineralised horizons.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>The samples are placed in a calico bag and then secured in a polyweave bag that is zip locked.</li> <li>The analysing laboratories will normally report any tampering or missing samples.</li> <li>This is not considered a high risk given the Project location.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable at this early stage of exploration</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The rock chip samples were taken across tenement E46/1116</li> <li>Black Canyon has a farm-in and joint venture agreement with Carawine Resources Ltd (ASX:CWX), giving Black Canyon the right to earn an initial 51% interest and up to 75% in the Carawine Projects that includes E46/1116.</li> <li>The tenement is subject to Native title and forms part of a Heritage Agreement with the Njamal People</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The exploration data reported was primarily gathered and validated by Consolidated Minerals between 2003 and 2016</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The geology and mineralisation is described in the body of the release</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Not applicable to rock chips results</li> <li>Rock chip locations and analysis for Mn and Fe are provided in Appendix 3.</li> </ul>

• Criteria	• JORC Code explanation	• Commentary
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• All sample results are listed in Appendix 3.</li> <li>• Those considered significant in terms of grade and potential to indicate potential mineralisation are highlighted in the body of the release.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• No drill widths or intervals reported</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• See body of the release for geology and tabulation of surface sample assays.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• All information considered material to the reader's understanding and context of the Exploration Results have been reported.</li> <li>• All rock chip data has been reported in Appendix 3</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Information relating to the most advanced data from the primary prospects on the tenement have been reported.</li> <li>• Surface mapping has been conducted at this tenement and is summarised in the plan within the body of the release.</li> <li>• All information considered material to the reader's understanding and context of the Exploration Results has been reported.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out 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 style="list-style-type: none"> <li>• Further work is planned to continue evaluating the prospects at Fig Tree that will involve more prospecting, geophysics and drilling</li> </ul>