



**Mt Lindsay – Webbs Creek  
Exploration Licence 21/2005**

**Annual Report for the period 22/08/2016 to 21/08/2017**

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# 1 Summary

Exploration Licence 21/2005 located in western Tasmania includes several skarn and greisen tin and tungsten prospects adjacent to the Mt Lindsay tin+tungsten+magnetite deposits. Activities during the 2017 tenement year were focussed on evaluating the Cruncher, Salmons-Pieman, and Eastern skarn targets close to Venture's proposed Mt Lindsay mine development within 7M/2012. Activities were focussed on the Cruncher, Salmons-Pieman and Eastern Skarn targets. Large and relatively high-magnitude boron-in-soil anomalies have been identified at the Cruncher and Salmons targets, and may indicate essentially concealed Sn mineralisation. Low-level Sn in soil anomalism is present at Cruncher, and up to 504 ppm Sn in soils at Salmons. Mapping shows the presence of an upper oolitic dolomite c. 25 m thick separated by c. 40 m of quartz-rich sandstone, siltstone, shale and minor thin bedded conglomerate from a lower 40 m thick silicified oolitic dolomite unit in the Pieman Road area. It is difficult to map separate dolomite units beyond the Pieman Road cuttings and a undifferentiated Stanley dolomite is used. The upper dolomite is overlain by a distinctive haematitic (weathered) locally pyrrhotite-rich conglomerate of the Red Rock Member. The Stanley dolomite and Red Rock Member are correlated with the Renison Mine Sequence.

Microprobe work on garnets from the Main Skarn show them to comprise a mixture of grossular and andradite molecules, with enrichment of Sn, Fe and to a lesser extent Mg proximal to high grade cassiterite mineralization, while Ca, Al, Si and Mn are enriched in relatively distal samples. Garnets from drill holes PH001, PH002 and PH004 into the Eastern Skarn have relatively low andradite component and show most affinity with cassiterite-distal garnets from the Main Skarn. The most encouraging results were from granite-proximal drill holes.

# 2 Introduction

Exploration Licence 21/2005 is located in the tin-tungsten province of western Tasmania and covers the south eastern contact metamorphic aureole of the Meredith Granite. The Meredith Granite is part of a suite of Devonian granites which is very important to tin-tungsten mineralization in Tasmania, and deposits associated with this suite include the world class Renison Bell tin mine (26 Mt at 1.46% Sn), Mount Bischoff (10.54 Mt at 1.1% Sn), Cleveland (12.4 Mt at 0.62% Sn, 0.25% Cu) and King Island (17 Mt at 0.85% WO<sub>3</sub>). Cleveland and Mount Bischoff are situated around the northern margin of the Meredith Granite, and Renison Bell is associated with the Pine Hill Granite c. 15 km to the southeast of the Meredith Granite.

Previous exploration activities mainly for tin within the area now covered by E21/2005 also indicated the presence of potentially economic magnetite skarns. There are currently two producing magnetite mines in Tasmania, the Kara magnetite-scheelite mine located near Hampshire approximately 55 km in a direct line northeast of EL21/2005 and the Savage River magnetite mine (371 Mt at 31.9% Fe in magnetite) situated c. 25 km directly north northwest of the Mt Lindsay magnetite-tin-tungsten skarns.

### 3 Location and Access

Exploration Licence 21/2005 currently covers c. 64 km<sup>2</sup> and is located approximately 130 km by road southwest of the port of Burnie, and c. 35 km by road from the nearest town Tullah. Exploration Licence 18/2012 and the southern part of EL33/2007 were amalgamated with EL21/2005 in February 2014. Mining Leases 3M/2012 and 7M/2012 covering the Livingstone, Reward, Main and No.2 Tin-Tungsten-Magnetite resources were granted to Venture in 2012 and 2014 respectively and excised from EL21/2005. The outline of EL21/2005 as it now stands is shown in Figure 1.

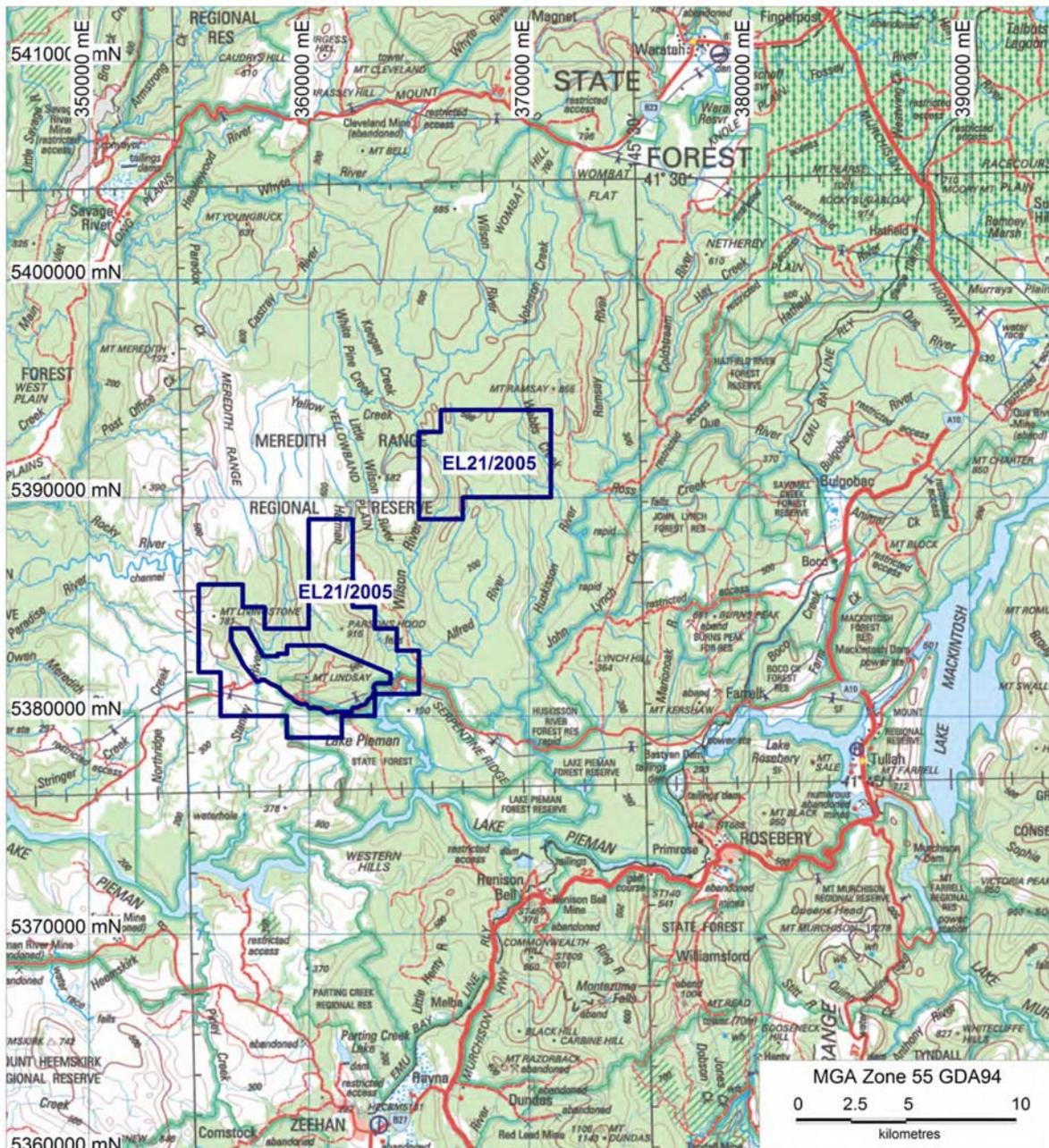


Figure 1: EL21/2005 Location Plan

Access to the licence is via the sealed (bitumen) Pieman Road which branches off the Murchison Highway c. 5 km north of Tullah, then approximately 3 km of 4WD vehicle track

to the drill site. The drill site is c. 3 km from Hydro Tasmania transmission lines (adjacent to the Pieman Road) and 21 km from the Bastyan hydroelectric powerhouse and Emu Bay Railway which connects with the port of Burnie.

Elevation within the licence ranges from 100 m above median sea level where Lake Pieman winds around the south western corner, to 913 m at the top of Parsons Hood at the southern end of the Meredith Range. Other highpoints include Mt Lindsay (579 m) on a spur branching southwest off Parsons Hood, and Mt Livingstone (781 m) beyond the western boundary. Average annual rainfall is approximately 2000 mm and vegetation is dominated by dense patches of dense sub-alpine scrub and button grass over granitic basement, dense regenerating forest and temperate rainforest.

## 4 Exploration and Mining History

Please refer to previous annual reports for reviews of past exploration and mining (e.g. Owen 2010).

## 5 Geological Setting

The Parsons Hood - Stanley River area in the south western part of EL21/2005 is underlain by northwest striking sedimentary and volcanic rocks of the Neoproterozoic – Early Cambrian Crimson Creek Formation, Success Creek Group and Oonah Formation, and the Devonian Meredith Granite (Figure 2). The Webbs Creek area in the north eastern corner of EL21/2005 (the Webbs Creek area) is underlain by Silurian to Devonian sedimentary rocks of the Eldon Group, the Ordovician Gordon Limestone, Crimson Creek Formation, and Meredith Granite (Figure 2). The sedimentary stratigraphy is largely steeply dipping to vertical.

The intrusive contact of the Meredith Granite dips away at a modest angle beneath the various sedimentary units, but in detail the granite margin is complicated by numerous irregular granitic dykes, shelves and apophyses which appear to stope the host meta-sedimentary and meta-igneous units. There are also large rafts of Crimson Creek and Success Creek rocks within the margins of the Meredith Granite. Preliminary interpretation suggests several phases of granite intrusion culminating in late stage quartz-tourmaline veining and the localised development of quartz+tourmaline±topaz and sericite±siderite greisens.

A broad contact metamorphic aureole is developed around the Meredith Granite, characterised by the development of fine grained amphibole, cordierite, biotite and pyroxene hornfels. Carbonate units are locally present within all of the enclosing sedimentary units and locally form the protolith to a variety of proximal contact skarns, greisenized skarns and more distal carbonate replacement bodies. The principal exploration targets for Venture within EL21/2005 are carbonate replacement, greisenized skarn, and vein and greisen style tin and tungsten mineralisation.

Potentially significantly mineralised skarns have been identified within the current EL21/2005 at Parsons Hood (Eastern Skarn) and in the Webbs Creek – Wilson River area (Webbs Skarns), and one potentially significant vein and endogreisen tin prospect named North Cashbolt is recognised within the Meredith Granite. The Eastern Skarn on Parsons Hood is hosted by the Crimson Creek Formation, Webbs Skarns by the Gordon and Eldon groups. More detailed descriptions of the alteration and mineralisation encountered in the various identified deposits can be found in previous annual reports (e.g. Owen 2011, Owen & Pfeifenberger 2012). Additional skarn targets have been identified in the Cruncher Creek and lower Harman River areas, as discussed further below.

## **6 2016-2017 Anniversary Year Exploration Activities**

Activities within EL21/2005 during the 2017 anniversary year were focussed on evaluating the Cruncher, Salmons-Pieman, and Eastern skarn targets.

### **6.1 Cruncher Prospect**

The Cruncher target is an overlapping NW-trending low-level tin (+10ppm, peak 26 ppm Sn), B (up to 1000 ppm), As (max. 81 ppm), Ce (max. 309 ppm), La (up to 124 ppm) and Rb (up to 170 ppm) soil anomaly within the Oonah Fm. about 800 m southwest of the intensely boron-metasomatised Livingstone skarn. The B anomaly is at least 1.1 km long and >500 m wide at the 150 ppm level (Figure 2), and at least partly coincident with magnetic and airborne EM conductivity highs. The Cruncher boron anomaly is similar in extent to the boron in soil anomaly adjacent to the Main and No.2 skarns at Mt Lindsay and the strongest currently known in the Mt Lindsay – Stanley area. The cerium and lanthanum levels are comparable with monazite-bearing zones within the Meredith Granite. Prospecting of the Cruncher target in the 2017 anniversary year shows the B anomaly pinches out along stratigraphic strike c. 600 m NW of the Pieman Road and approx. 1.7 km SE of Mt Livingstone. The B anomaly remains open across stratigraphic strike to the SW and NE, and this alignment with the Livingstone skarn to the NE may reflect the presence of an underlying NE trending fracture zone. Assays are given in Appendices A and B.

Broad spaced soil sampling and prospecting to the SW and NE is proposed follow-up this concept and support the identification of NE striking mineralising structures.

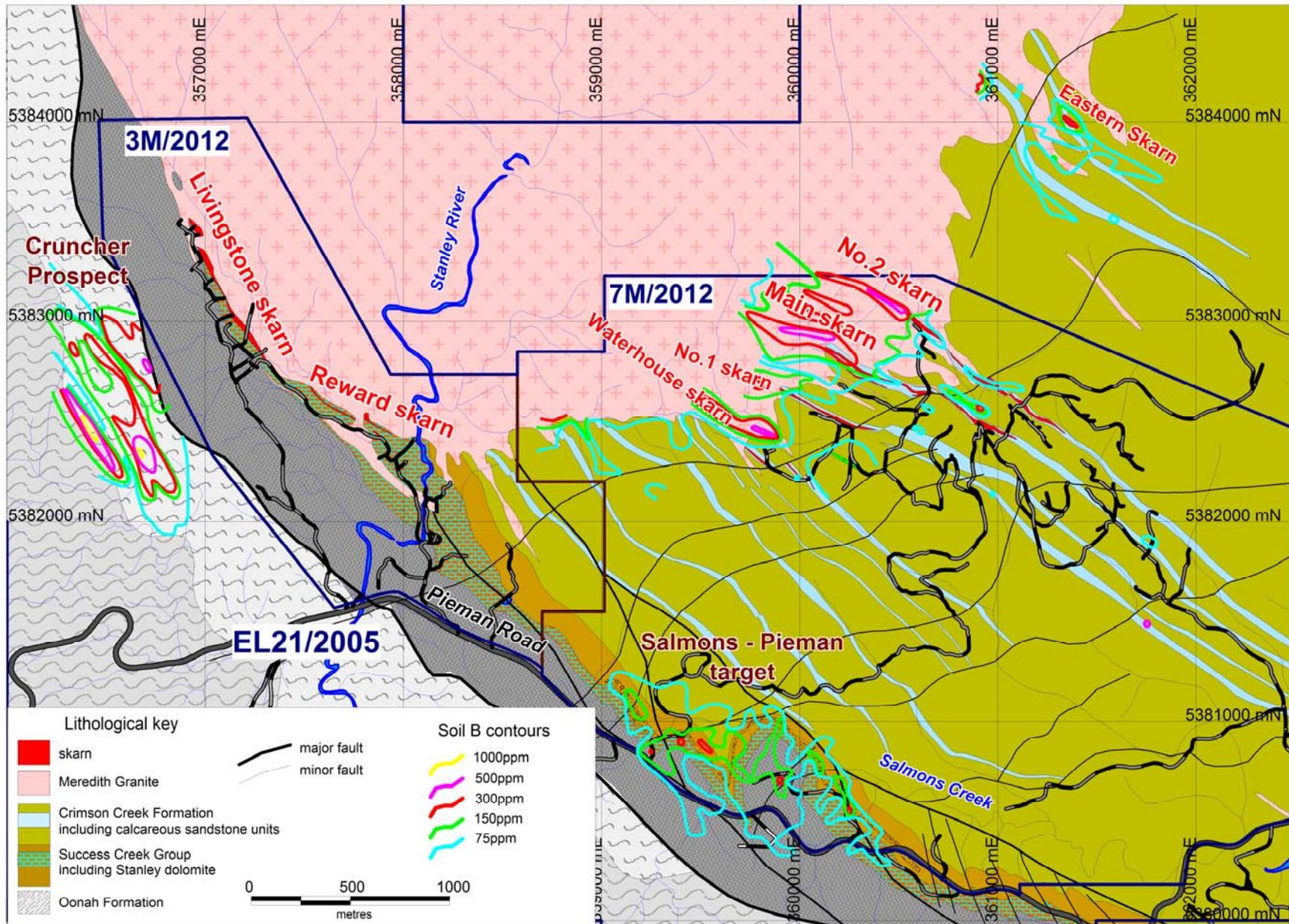


Figure 2: Lindsay – Stanley basement geology interpretation with soil boron contours.

## 6.2 Salmons – Pieman target area

The Salmons – Pieman Prospect is c. 2.5 km long Sn and B geochemical anomaly following the Stanley dolomite and Red Rock Member SE from the Reward skarn at the margin of the Meredith Granite in Stanley River – Salmons Creek area. Prospecting of the area in the 2017 anniversary year confirmed Waterhouse's (1914) observation that the Stanley River did not flow through this area and the sediments in Salmons Creek are locally derived. Tin anomalism peaks at 504 ppm adjacent to Salmons Creek near the western access road to Mt Lindsay where amphibole and pyrrhotite altered conglomerate crops out. Boron anomalism peaks at 760 ppm and is spatially associated with a distinctive fold and magnetic anomaly in the Success Creek Group. The Salmons B anomaly is the largest outside of the Meredith Granite and the Cruncher anomaly within EL21/2005, and of similar tenor to the B anomaly over the Main and No.2 skarns.

Mapping of the Salmons Creek – Pieman Road area indicates there are at least locally two dolomite horizons within the Stanley dolomite separated by up to c. 40 m of thin bedded – laminated quartz sandstone, shale and minor pebble conglomerate. As exposed in Pieman Road the upper dolomite horizon is approx. 25 m thick and comprises pale brown grey granular dolomite with relict dark grey ooids. The lower dolomite horizon is estimated to be 40 m thick, also oolitic but extensively silicified. The upper dolomite horizon is overlain by a distinctive thin to medium bedded haematitic pebble conglomerate unit (up to 18% Fe). Away from Pieman Road exposure is too poor to confidently map separate dolomite units, but exposures and subcrop of silicified oolite can be traced intermittently all the way to Stanley River. The haematitic conglomerate in Pieman Road above the upper dolomite can be reasonably correlated with exposures of pyrrhotite-rich conglomerate in Salmons Creek up to 1.6 km along strike to the NE. Assays are given in Appendix A and updated mapping in Figure 2. Follow-up sampling of the Salmons Sn soil anomaly and mapping of the prospective Stanley dolomite (especially south of Pieman Road) is proposed.

## 6.3 Eastern Skarn

The Eastern skarn is located about 1.2 km northeast of the Main and No.2 deposits (Figure 2). Previous drilling over c. 1.5 km strike extent and 300 m dip extent encountered a broad (>100 m true thickness) garnet + pyroxene and amphibole + titanite skarn including narrower magnetite zones (est. 10-20 m true thickness), but no significant cassiterite or scheelite mineralization. Narrow greisen alteration zones were identified overprinting amphibole + titanite + magnetite and garnet + pyroxene skarn in the most granite-proximal drill hole PH004. Relict prismatic quartz infill typical of the cassiterite zone in the Main and No.2 skarns was also observed within PH004.

The aim of the microprobe work is to find simple mineral geochemical vectors towards high grade cassiterite and scheelite mineralisation using the well-drilled Main Skarn at Mt Lindsay as a reference for poorly defined exploration targets. Initially garnet, pyroxene, vesuvianite and carbonates were selected for analysis, however at this stage only garnet has produced obvious spatial geochemical trends. The microprobe work on garnets from the Main Skarn show enrichment of Sn, Fe and to a lesser extent Mg proximal to high grade cassiterite mineralization, while Ca, Al, Si and Mn are enriched in relatively distal samples.

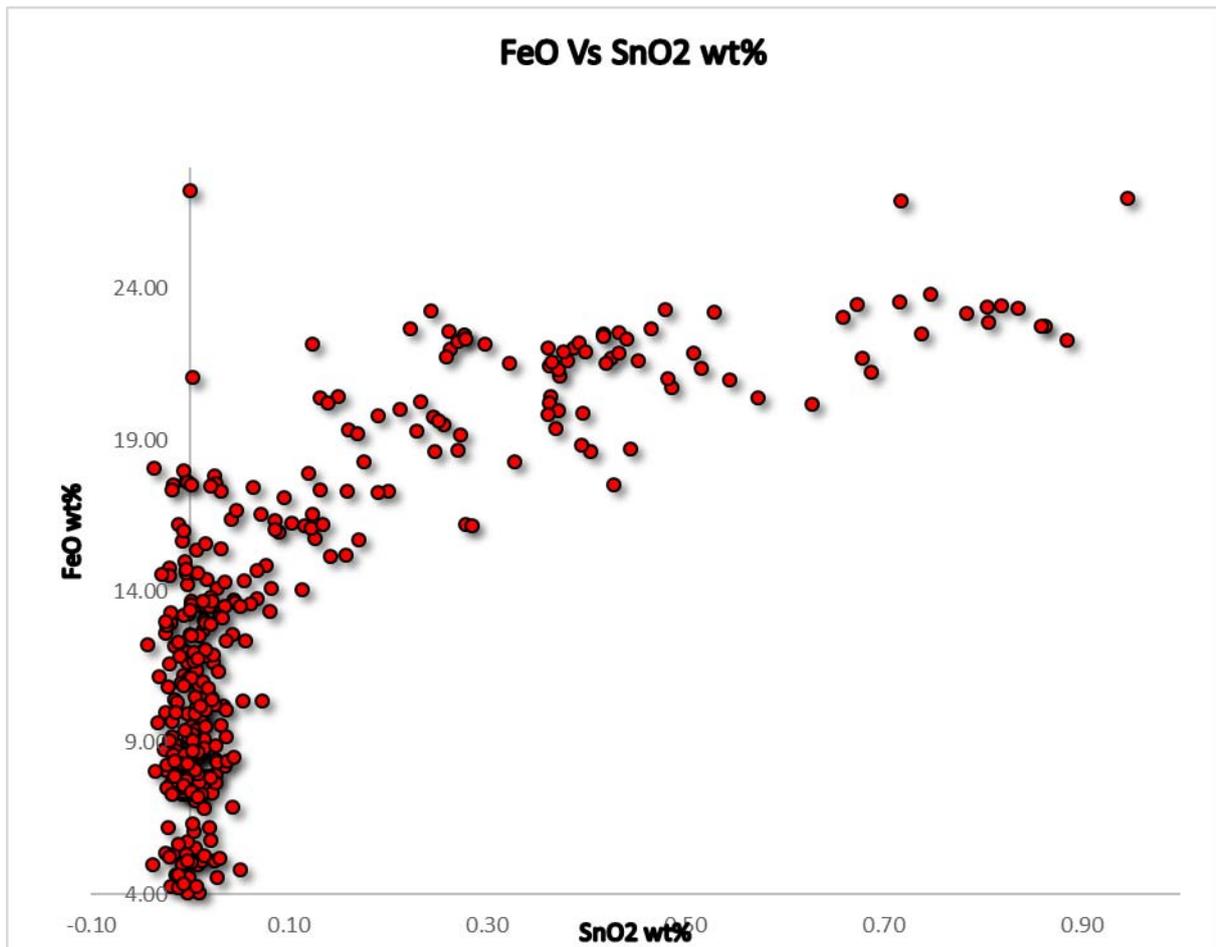


Figure 3: Main Skarn garnet FeO vs Sn<sub>2</sub>O



Figure 4: Main Skarn garnet alumina vs silica



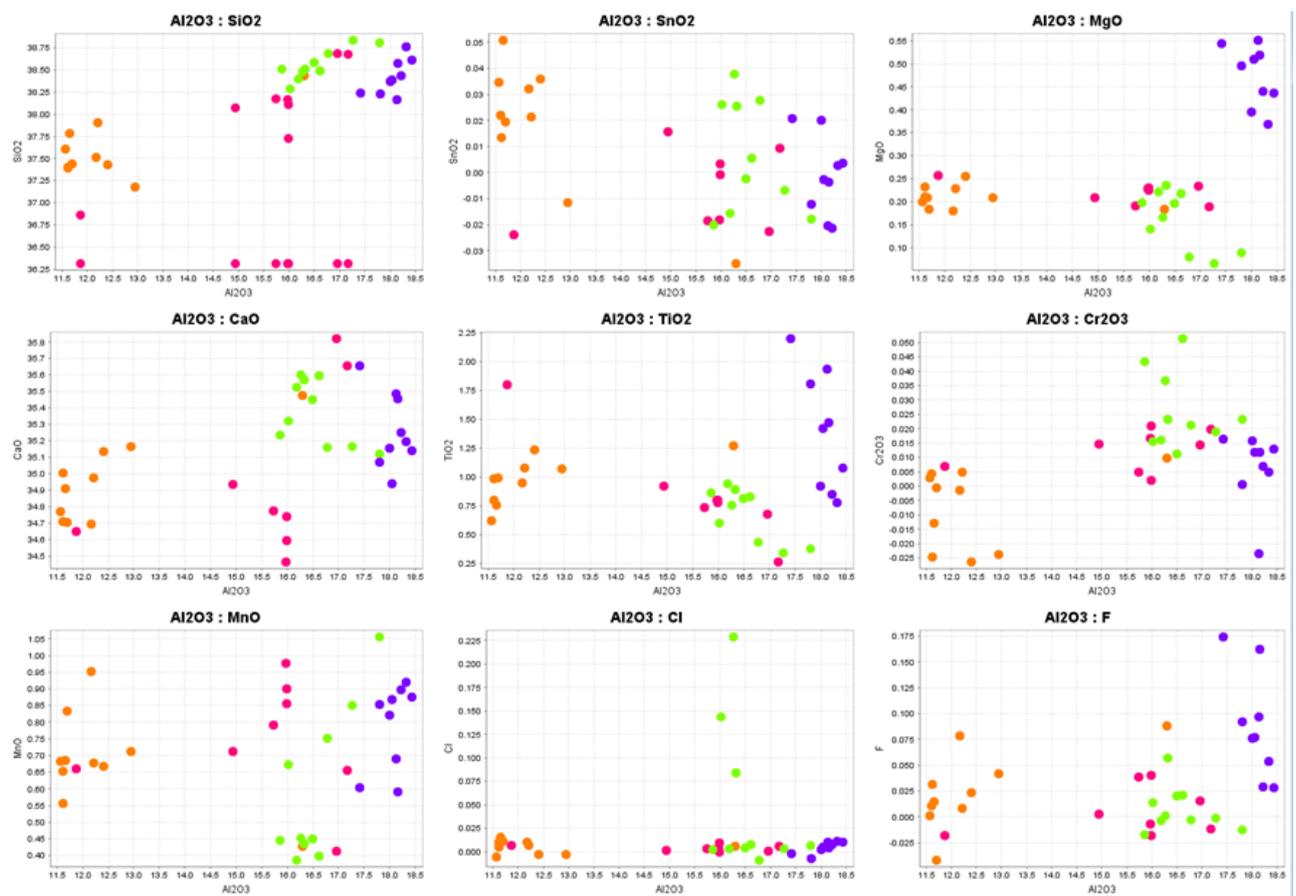
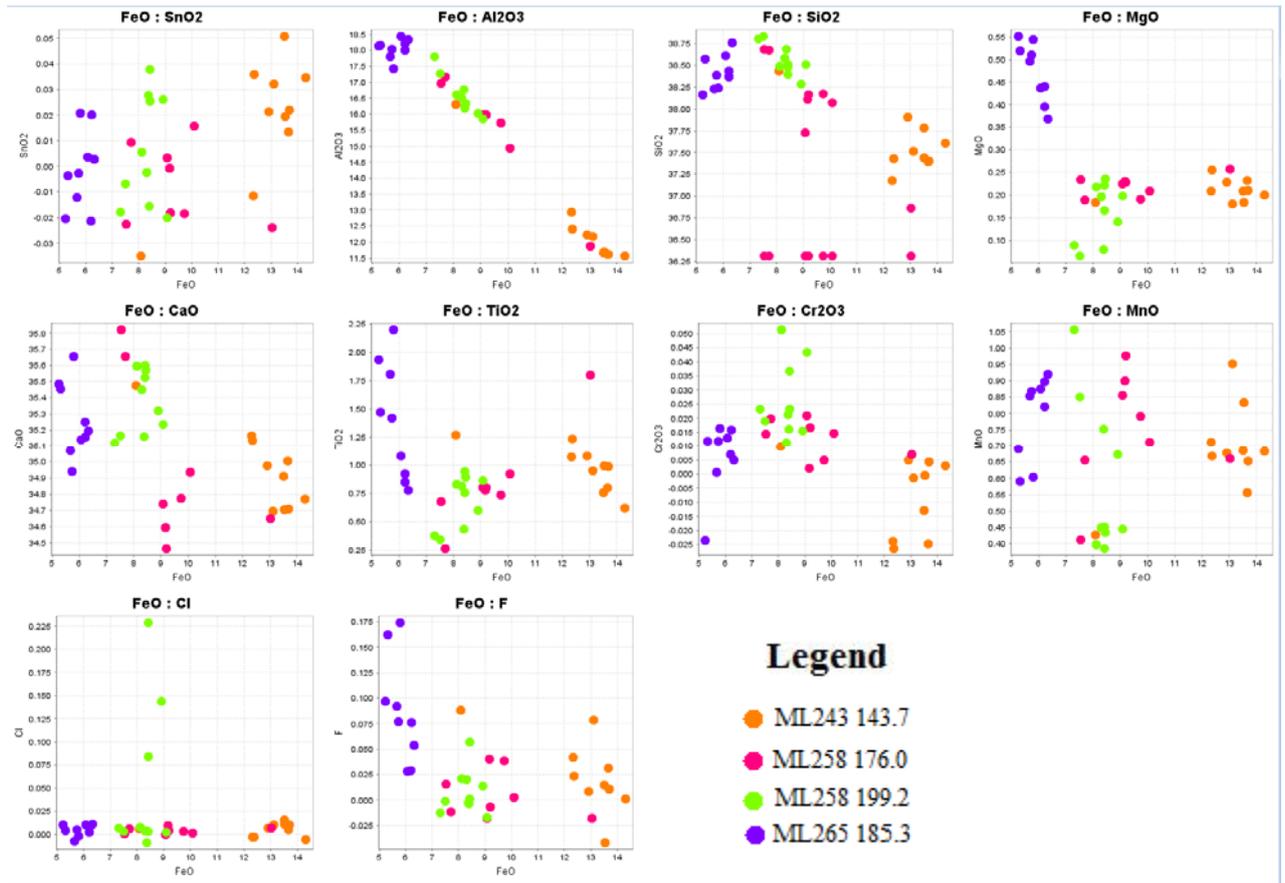


Figure 6: Main Skarn section ML134 garnet composition charts

Eleven samples as listed below from the Eastern Skarn drill holes PH001, PH002 and PH004 were selected for microprobe analysis of garnet, and were compared with garnet composition trends observed in the Main skarn.

Hole	From_m	To_m	Lith1	Lith2	Interval Description	Sample	Andradite	Grossular
PH001	303.8	313.7	gtZXS	gtZMRB	Well developed gtZXS with sections of gtZMRB inc. bands of well developed icg gtp. Small fold hinge at 312.8m. Minor bands of gn cb + spt-streaky am alt--weak alt after ccsST?	PH001_308.1m	29	70
PH001	303.8	313.7	gtZXS	gtZMRB	Well developed gtZXS with sections of gtZMRB inc. bands of well developed icg gtp. Small fold hinge at 312.8m. Minor bands of gn cb + spt-streaky am alt--weak alt after ccsST?	PH001_309.7m	33	65
PH001	313.7	317.7	pxZHF	amZHF	moderately developed pxZHF w/ sections of amZHF; gradational transitions between the two. Minor ax-tint to some px-lam + some px-alt mud ruc. Lgn weakly HCL-reactive cb band.	PH001_317.5m	40	59
PH002	338.8	353.5	gtpxZXS	pxZHF	medium to thick beds of fine to granular garnet & fg pyroxene skarn intercalated with grey calcareous siltstone & sandstone - pyroxene hornfels	PH002_341.9m	32	66
PH002	338.8	353.5	gtpxZXS	pxZHF	medium to thick beds of fine to granular garnet & fg pyroxene skarn intercalated with grey calcareous siltstone & sandstone - pyroxene hornfels	PH002_343.2m	26	72
PH002	353.5	363.9	btZHF	pxZHF	mixed ZHF, initially similar to previous interval but noncalcareous. Rapid appearance of btZHF to be dominant over lesser bands of pxZHF (ax-tinted in places) & amZHF. Dis wealy magnetic po. Trace px-alt mud ruc. Ctc alt assoc. Beds disturbed by numerous faults	PH002_352.8m	59	40
PH004	35.5	40	amZHF	pxZHF	ctc interval of mainly amZHF w/ significant sections of pxZHF (some am-tinted). Minor patchy sections of qzZHF. Dis po (mag) throughout and po veinlets. Minor section of hbr w/ cl-alteration and trace interstitial cc.	PH004_41.8m	40	57
PH004	134.4	140.4	gtveZXS	amZXS	Mas & pbl gtZXS. Gtp's commonly alt to ve. Aci am to 9mm long common throughout amZXS zones & gtveZXS. Patchy blt mtg throughout interval. Sig interstitial & blt cc in amZXS. Cc veins to 10mm wide. Mnr blebby po in gtveZXS.	PH004_135.2m	42	55

PH004	140.4	145.5	ammtZXS	gtZXS	AmmtZXS @ SOI. Blt mtg in aci am to 10mm. Sig interstitial & mnr blt cc. GtZXS w/ pbl & mas gt. Gt pbl's to 3mm. Gtp's rarely alt to ve. Pbl gtZXS zones commonly have blt mtg & interstitial cc. Zones amZXS w/ incr cc, decr mtg. Mas gt zones have rare blt	PH004_140.4m	55	42
PH004	151.3	160	gtZXS	gtZMRB	Mas gtZXS w/ common gt pbl upto 4mm. Significant sections of lpk gtZMRB w/ widespread rcz cc. Mnr amZHF bnds, rarely w/ px alt spt's. Mnr cc veins upto 10mm wide. gtZXS and gtZMRB form streaky interbands.	PH004_157.9m	21	75
PH004	270.4	340.1	btZHF	amZHF	Dom btZHF w/ common zones amZHF. Mnr wkly alt SST. BtZHF common in coarser grained ss. Patchy stk am veins. Rare angular ruc's. Common stk po veins. Rare blebby po. Rare blb px w/ dis po. Rare zones px alt laths in am(px)ZHF. Mnr zones stk strong px alt	PH004_339.1m	48	51

The Eastern Skarn samples were generally low in Sn and relatively grossular-rich consistent with cassiterite-distal samples from the Main Skarn. The most andraditic and prospective garnet samples obtained were from amphibole+magnetite zones in the upper part of granite-proximal PH004 and the deeper biotite and axinite bearing part of granite-distal PH002. Garnets from granite-distal PH003 and granite-proximal ML061 have not been analysed at this stage.

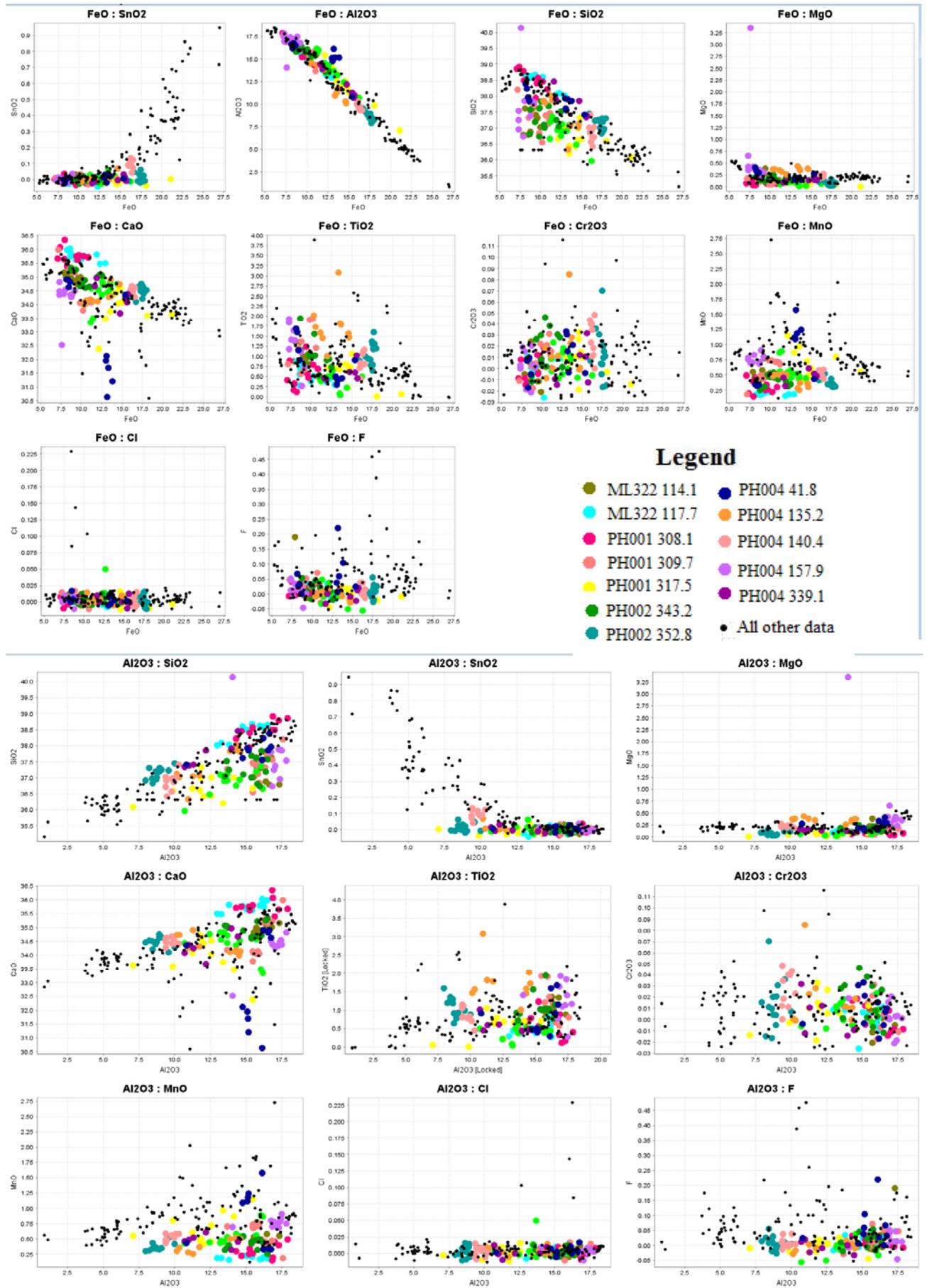


Figure 7: Eastern Skarn garnet composition scatter plots

## 7 Conclusions and Recommendations

The skarn targets assessed within EL21/2005 during 2017 are within a few kilometres of the Pieman Road and easy trucking distance of the proposed mine development at Mt Lindsay (within 7M/2012). Activities were focussed on the Cruncher, Salmons-Pieman and Eastern Skarn targets. Large and relatively high-magnitude boron-in-soil anomalies have been identified at the Cruncher and Salmons targets, the former with the Oonah Fm and the latter over a conspicuous fold zone within the Stanley dolomite and Red Rock Member of the uppermost Success Creek Group. The boron anomalism indicates metasomatism and potentially blind Sn mineralisation. Low-level Sn in soil anomalism is also identified at Cruncher, and up to 504 ppm Sn in soils at Salmons. Relevant assays are included in Appendices A and B. Extensional and infill sampling of Cruncher and Salmons-Pieman targets is recommended, along with detailed mapping of the prospective Stanley dolomite, especially south of Pieman Road.

Microprobe work on garnets from the Main Skarn show them to comprise a mixture of grossular and andradite molecules, with enrichment of Sn, Fe and to a lesser extent Mg proximal to high grade cassiterite mineralization, while Ca, Al, Si and Mn are enriched in relatively distal samples. Garnets from drill holes PH001, PH002 and PH004 into the Eastern Skarn have relatively low andradite component and show most affinity with cassiterite-distal garnets from the Main Skarn. The most encouraging results were from granite-proximal drill holes and analysis of garnets from holes PH003 and ML063 is recommended. Microprobe data is included in Appendix C.

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# **Appendix A**

## **Soil assays**



Appendix A: Soil Assays

H1000	Sample	E_MGA55	N_MGA55	Depth_cm	Colour	Horizon	Lith	Description	Batch	B	Al	Ag
H1001		m	m	cm						ppm	%	ppm
H1002		10	10	10						B-ICP69	ICP61	ICP61
D	CRCK036	356489	5382495	60	gy	B	na	gravelly clay.	AD15029688	200	3.11	-0.5
D	CRCK037	356508	5382502	15	gy	B	na	wet, gravelly. Moderate slope.	AD15029688	80	4.04	-0.5
D	CRCK038	356527	5382508	20	gy	B	na	gravelly clay.	AD15029688	150	4.63	-0.5
D	CRCK039	356546	5382515	40	bn	B	na	very steep cliffs. Outcrop of SS - looks a bit silicified - baked? Massive - no obvious bedding/f	AD15029688	380	3.5	-0.5
D	CRCK041	356274	5382628	60	gy	B	na	shallow slope. Sandy.	PH16042023	220	-999	-999
D	CRCK042	356293	5382635	50	gy	B	na	moderate slope. Sandy, gravelly.	PH16042023	350	-999	-999
D	CRCK043	356311	5382641	30	gy	B	na	shallow slope. Gravelly. Rocky base.	PH16042023	720	-999	-999
D	CRCK044	356330	5382648	40	gy	B	na	shallow slope. Sandy. Rocky base.	AD15029688	80	1.77	-0.5
D	CRCK045	356349	5382655	60	gy	B	na	shallow slope. Sandy. Gravelly.	AD15029688	70	1.08	-0.5
D	CRCK046	356368	5382662	60	gy-bn	B	na	moderate slope.	AD15029688	70	0.72	-0.5
D	CRCK047	356387	5382668	30	gy	B	na	rocky.	AD15029688	110	2.17	-0.5
D	CRCK048	356405	5382675	40	gy	B	na	thick bush! Rocky.	AD15029688	150	2.43	-0.5
D	CRCK049	356424	5382682	60	gy	B	na	sandy. Moderate slope.	AD15029688	220	1.38	-0.5
D	CRCK050	356443	5382689	60	gy	B	na	shallow slope. Gravelly clay.	AD15029688	140	3.27	-0.5
D	CRCK051	356462	5382695	40	gy	B	na	gravelly. Near top of ridge. Thick!	PH16042023	250	-999	-999
D	CRCK052	356481	5382702	40	gy-bn	B	na	thick! Gravelly, rocky base. Top of ridge.	PH16042023	110	-999	-999
D	CRCK053	356499	5382709	60	gy	B	na	flat. Wet, gravelly clay.	PH16042023	150	-999	-999
D	CRCK054	356518	5382716	30	gy	C	na	flat. Rocky. End of thick bauera.	PH16042023	140	-999	-999
D	CRCK055	356537	5382722	40	gy	B	na	flat. Sandy and rocky.	PH16042023	210	-999	-999
D	CRCK056	356556	5382729	30	bn-gy	B	na	shallow slope. Rocky base.	PH16042023	190	-999	-999
D	CRCK057	356575	5382736	40	bn-gy	B	na	moderate slope. Rocky base.	PH16042023	450	-999	-999
D	CRCK058	356593	5382743	40	gy-bn	B	na	near creek. Gravelly.	PH16042023	220	-999	-999
D	CRCK059	356612	5382749	20	gy-bn	B	na	near creek. Rocky and gravelly.	PH16042023	140	-999	-999
D	CRCK060	356631	5382756	20	gy	B	na	very steep. Near creek. Rocky.	PH16042023	290	-999	-999
D	CRCK061	356650	5382763	40	bn-gy	B	na	steep slope	PH16042023	480	-999	-999
D	CRCK062	356669	5382770	40	gy	B	na	steep slope. Sandy and rocky.	PH16042023	440	-999	-999
D	CRCK063	356687	5382776	60	gy-bn	B	na	steep slope. Rocky.	PH16042023	300	-999	-999
D	CRCK064	356706	5382783	30	gy-bn	B	na	steep slope. Gravelly.	PH16042023	640	-999	-999
D	CRCK065	356725	5382790	30	gy-bn	B	na	moderate steep slope. Rocky base.	PH16042023	350	-999	-999
D	CRCK066	356583	5382529	40	gy	B	na	steep slope. Thick! Sandy rocky base.	PH16042023	200	-999	-999
D	CRCK067	356602	5382535	30	bn	B	na	steep slope. Rocky base. Organics. Gravelly.	PH16042023	150	-999	-999
D	CRCK068	356621	5382542	15	gy	B	na	moderate slope. Sandy, rocky base.	PH16042023	190	-999	-999
D	CRCK069	356640	5382549	30	bn	B	na	SS-ST boulders. Rocky base.	PH16042023	250	-999	-999
D	CRCK070	356658	5382556	40	gy	B	na	flat top. Low scrub. Gravelly clay.	AD15029688	340	6.47	-0.5
D	CRCK071	356677	5382562	60	gy	B	na	gravelly. Moderate slope.	AD15029688	250	6.55	-0.5
D	CRCK072	356696	5382569	50	gy	B	na	moderate slope. Gravelly.	AD15029688	170	5.3	-0.5
D	CRCK073	356715	5382576	40	gy	B	na	moderate slope. Gravelly.	AD15029688	130	5.35	-0.5
D	CRCK074	356734	5382583	40	gy	B	na	moderate slope. Gravelly.	AD15029688	150	4.58	-0.5
D	CRCK075	356752	5382589	40	gy	B	na	shallow slope. Gravelly.	PH16042023	250	-999	-999
D	CRCK076	356771	5382596	35	gy	B	na	moderate slope. Gravelly.	PH16042023	200	-999	-999
D	CRCK077	356790	5382603	20	gy	B	na	moderate slope. Gravelly, wet.	PH16042023	150	-999	-999
D	CRCK082	356263	5382836	40	bn	B	na	moderate slope. Above small creek.	PH16042023	80	-999	-999
D	CRCK083	356282	5382843	30	gy	B	na	sandy. Bush opening up.	AD15029688	140	3.67	-0.5
D	CRCK084	356301	5382850	60	gy-bn	B	na	open bush. Open gully. Smooth clay.	AD15029688	90	7.21	-0.5
D	CRCK085	356320	5382856	20	gy-bn	B	na	sandy. Rocky base. Moderate slope.	AD15029688	210	4.07	-0.5
D	CRCK086	356338	5382863	30	bn	B	na	rocky base. Shallow slope.	PH16042023	300	-999	-999
D	CRCK087	356357	5382870	50	gy-bn	B	na	flat ground. Sandy.	PH16042023	220	-999	-999
D	CRCK088	356376	5382877	40	gy	B	na	gravelly. Rocky base. SST pieces.	PH16042023	110	-999	-999
D	CRCK089	356395	5382883	50	dgy	B	na	open bush. Flat ground.	PH16042023	120	-999	-999
D	CRCK090	356414	5382890	60	bn	B	na	gravelly. Flat. Wet.	PH16042023	390	-999	-999
D	CRCK091	356432	5382897	20	bn-gy	B	na	gravelly. Flat. Rocky base.	PH16042023	440	-999	-999
D	CRCK092	356451	5382904	50	gy	B	na	flat ground. Open bush. Gravelly.	PH16042023	230	-999	-999
D	CRCK093	356470	5382910	40	gy	B	na	flat. Gravelly.	PH16042023	170	-999	-999
D	CRCK094	356489	5382917	50	gy	B	na	thick bush	PH16042023	130	-999	-999
D	CRCK095	356508	5382924	20	dbn	B	na	rocky. Moderate slope. Organics. Foliated SST subcrop nearby.	PH16042023	320	-999	-999
D	CRCK096	356526	5382931	40	dgy-bn	B	na	moderate slope. Gravelly.	PH16042023	450	-999	-999
D	CRCK097	356545	5382937	60	gy	B	na	steep slope. Gravelly.	PH16042023	340	-999	-999
D	CRCK098	356564	5382944	70	bn-gy	B	na	steep slope. Gravelly.	PH16042023	330	-999	-999
D	CRCK099	356583	5382951	50	gy-bn	B	na	steep slope. Gravelly.	PH16042023	300	-999	-999
D	CRCK100	356602	5382958	40	gy	B	na	moderate slope. Gravelly.	PH16042023	240	-999	-999
D	CRCK101	356620	5382964	40	yw-gy	B	na	moderate slope. Smooth clay.	PH16042023	170	-999	-999
D	CRCK102	356639	5382971	50	gy	B	na	moderate slope. Gravelly	PH16042023	310	-999	-999

Appendix A: Soil Assays

H1000	Sample	E_MGA55	N_MGA55	Depth_cm	Colour	Horizon	Lith	Description	Batch	B	Al	Ag
H1001		m	m	cm						ppm	%	ppm
H1002		10	10	10						B-ICP69	ICP61	ICP61
D	CRCK103	356658	5382978	30	gy	B	na	thick! Moderate slope. Sandy.	PH16042023	250	-999	-999
D	CRCK109	356217	5383031	30	bn-gy	B	na	Thick! Moderate slope. Gravelly.	PH16042023	270	-999	-999
D	CRCK110	356236	5383038	40	bn-gy	B	na	moderate slope. Gravelly and rocky	PH16042023	150	-999	-999
D	CRCK111	356255	5383044	70	gy	B	na	moderate slope. Gravelly.	PH16042023	200	-999	-999
D	CRCK112	356273	5383051	60	gy	B	na	gravelly. Steep slope.	PH16042023	190	-999	-999
D	CRCK113	356292	5383058	50	gy	B	na	clay. Gravelly.	AD15029688	70	2.36	-0.5
D	CRCK114	356311	5383065	80	og	C	na	clay - smooth. Moderate slope.	AD15029688	10	12.65	-0.5
D	CRCK115	356330	5383071	70	og-rd	B	na	above creek. Smooth clay.	AD15029688	20	8.57	-0.5
D	CRCK116	356349	5383078	70	og-bn	B	na	other side of creek. Shallow slope. Smooth clay.	AD15029688	70	10.2	-0.5
D	CRCK117	356367	5383085	40	gy-og	B	na	close to creek. Gravelly clay.	AD15029688	30	8.15	-0.5
D	CRCK118	356386	5383092	70	bn	B	na	moderate slope. Smooth clay.	AD15029688	70	6.51	-0.5
D	CRCK137	356187	5383234	80	bn	B	na	thick,mod slope,organics,rocky base	PH16042023	50	-999	-999
D	CRCK138	356205	5383241	80	bn	B	na	thick,mod slope,organics,	PH16042023	10	-999	-999
D	CRCK139	356224	5383248	90	bn	B	na	thick,mod slope,organics,smooth soil	PH16042023	10	-999	-999
D	CRCK140	356243	5383255	40	gy	B	na	mod slope,gravelly,rocky base	PH16042023	100	-999	-999
D	CRCK141	356262	5383261	50	gy	B	na	mod slope,above creek,gravelly	AD15029688	160	3.17	-0.5
D	CRCK142	356281	5383268	50	og	B	na	smooth clay,between 2 creeks on ridge	AD15029688	20	5.52	-0.5
D	CRCK143	356299	5383275	35	gy-bn	B	na	other side of river,shallow slope,rocky	AD15029688	100	1.81	-0.5
D	CRCK144	356318	5383282	30	bn	B	na	mod slope,gravelly,	PH16042023	100	-999	-999
D	CRCK145	356337	5383288	25	gy	B	na	thick,mod slope,rocky base	PH16042023	100	-999	-999
D	CRCK146	356356	5383295	60	bn	B	na	mod slope,thick,rocky base	PH16042023	10	-999	-999
D	CRCK147	356375	5383302	40	bn	A	na	shallow slope,thick	PH16042023	50	-999	-999
D	CRCK148	356393	5383309	30	gy	B	na	sandy,rocky base,run off down hill	PH16042023	100	-999	-999
D	CRCK156	356564	5382522	30	bn	B	na	steep slope. Thick bush! Rocky base.	PH16042023	70	-999	-999
D	CRS001	356962	5381411	20	cm	C	qzSS	cm gravelly soil, o/c lgy qz sandstone with wt qz veinlets	PH17000986	10	-999	-999
D	CRS002	356981	5381449	20	cm	C	qzSS	cm sandy soil with qz sandstone frags	PH17000986	30	-999	-999
D	CRS003	357009	5381479	20	cmgy	C	qzSS	cm gy silty soil, o/c lgy qz sandstone with wt qz veinlets & trace ?tourmaline	PH17000986	120	-999	-999
D	CRS004	357030	5381508	20	lgy	C	qzSS	lgy sandy soil, o/c qz sandstone with wt qz veins to 30mm tk & lgy qz veins to 5mm tk	PH17000986	40	-999	-999
D	CRS005	357055	5381536	25	lbn	C	qzSS	lbn silty soil, s/c qz sandstone with wt qz veins to 30mm tk	PH17000986	30	-999	-999
D	CRS006	357081	5381565	40	gy	C	qzSS	gy sticky clay soil with lgy qz sandstone frags & sand	PH17000986	40	-999	-999
D	CRS007	357118	5381592	30	gy	C	qzSS	gy sticky clay soil with lgy qz sandstone frags & sand	PH17000986	50	-999	-999
D	CRS008	357138	5381626	25	lgy	C	qzSS	lgy sticky clay soil with lgy qz sandstone frags, float lgy qz sandstone & wt qz veins	PH17000986	50	-999	-999
D	CRS009	357167	5381660	30	bngy	C	qzSS	bngy sticky soil with lgy qz sandstone frags at bottom	PH17000986	30	-999	-999
D	CRS010	357198	5381693	20	bn	C	qzSS	bn humic soil with lgy qz sandstone frags	PH17000986	30	-999	-999
D	CRS011	357225	5381718	20	lbn	B	qzSS	lbn humic soil with cm & lgy qz sandstone grit & sand	PH17000986	20	-999	-999
D	CRS012	357249	5381743	20	gybn	C	qzSS	sticky gybn soil with lgy grit & pebbles	PH17000986	30	-999	-999
D	CRS013	357268	5381774	10	bngy	C	qzSS	bngy sticky humic soil with lgy qz sandstone & wt qz vein frags	PH17000986	20	-999	-999
D	CRS014	357294	5381803	10	gybn	C	qzSS	gybn sticky soil with lgy-cm qz sandstone frags, subcrop qz sandstone with wt-gy qz veinlets	PH17000986	20	-999	-999
D	CRS015	357325	5381831	40	bn	C	qzSS	sticky bn soil with cm qz sandstone frags at bottom of hole	PH17000986	120	-999	-999
D	CRS016	356849	5381660	40	bngy	C	qzSS	sticky bngy soil with cm qz sandstone frags at bottom	PH17000986	30	-999	-999
D	CRS017	356882	5381698	10	bn	C	qzSS	sandy bn soil with lgy qz sandstone & wt qz vein frags, subcrop qz sandstone with wt qz veinlets	PH17000986	30	-999	-999
D	CRS018	356906	5381719	10	bngy	C	qzSS	gravelly bngy soil with qz sandstone& wt qz vein frags, subcrop qz sandstone with wt qz veinlets	PH17000986	20	-999	-999
D	CRS019	356937	5381748	10	gy	C	qzSS	gravelly gy soil with qz sandstone & wt qz veinlet frags, subcrop wt qz vein & gy qz sandstone	PH17000986	30	-999	-999
D	CRS020	356965	5381776	10	bn	C	qzSS	gravelly soil with gy qz sandstone & wt qz vein frags, same subcrop	PH17000986	30	-999	-999
D	CRS021	356992	5381802	20	lbn	C	qzSS	lbn sandy-gravelly soil with gy qz sandstone & wt qz vein frags, same subcrop	PH17000986	40	-999	-999
D	CRS022	357024	5381831	20	gy	C	qzSS	sticky gy soil with qz sandstone & qz vein fragments	PH17000986	70	-999	-999
D	CRS023	357052	5381860	10	bn	C	qzSS	bn sandy-gravelly soil with qz sandstone & wt qz vein fragments & subcrop	PH17000986	10	-999	-999
D	CRS024	357081	5381889	10	gybn	C	qzSS	gravelly sticky gybn soil with qz sandstone & wt qz vein frags & outcrop	PH17000986	30	-999	-999
D	CRS025	357111	5381920	25	lgy	C	qzSS	lgy sandy-gravelly soil with qz sandstone & wt qz vein frags	PH17000986	70	-999	-999
D	CRS026	357135	5381946	20	lbn	C	qzSS	lbn sandy-gravelly soil with qz sandstone & wt qz vein frags	PH17000986	40	-999	-999
D	CRS027	356986	5382314	20	gybn	C	qzSS	sticky gybn soil with cm & gy qz sandstone & wt qz vein gravel at bottom	PH17000986	70	-999	-999
D	CRS028	356956	5382300	30	gybn	C	qzSS	30cm sticky gybn soil with cm qz sandstone frags at bottom	PH17000986	70	-999	-999
D	CRS029	356921	5382282	20	bngy	C	qzSS	sticky bngy soil with cm qz sandstone gravel at bottom	PH17000986	50	-999	-999
D	CRS030	356890	5382261	20	bn	C	qzSS	sticky bngy soil with lgy qz sandstone gravel at bottom	PH17000986	90	-999	-999
D	CRS031	356849	5382236	20	bn	C	qzSS	sticky bn soil with lgy qz sandstone gravel at bottom of hole	PH17000986	120	-999	-999
D	CRS032	356823	5382213	25	gybn	C	qzSS	sticky gybn soil with cm qz sandstone gravel at bottom of hole	PH17000986	370	-999	-999
D	CRS033	356786	5382193	30	bn	C	qzSS	bn sticky soil with lgy qz sandstone gravel at bottom	PH17000986	420	-999	-999
D	CRS034	356750	5382180	50	bn	C	qzSS	bn humic soil over lbngy sandy gravel	PH17000986	130	-999	-999
D	CRS035	356724	5382166	25	bn	C	qzSS	bn humic soil with lgy sandy gravel of qz sandstone at bottom	PH17000986	330	-999	-999
D	CRS036	356685	5382138	50	bn	C	qzSS	bn humic soil with lgy sandy gravel of qz sandstone at bottom	PH17000986	200	-999	-999
D	CRS037	356653	5382118	20	bn	C	qzSS	bn humic soil over gy sandy gravel of qz sandstone	PH17000986	40	-999	-999
D	CRS038	356616	5382088	30	lgy	C	qzSS	lgy gravelly sand with lgy qz sandstone frags	PH17000986	60	-999	-999

Appendix A: Soil Assays

H1000	Sample	E_MGA55	N_MGA55	Depth_cm	Colour	Horizon	Lith	Description	Batch	B	Al	Ag
H1001		m	m	cm						ppm	%	ppm
H1002		10	10	10						B-ICP69	ICP61	ICP61
D	CRS039	357047	5382110	20	bn	C	qzSS	bn sticky soil with cm qz sandstone fragments at bottom	PH17000986	140	-999	-999
D	CRS040	357022	5382088	20	bngy	C	qzSS	bn gy sticky soil with gravel of lgy qz sandstone at bottom	PH17000986	70	-999	-999
D	CRS041	356991	5382064	20	gy	C	SSM	gy sticky soil with gy qz sandstone gravel at bottom, outcrop dgy strongly foliated-?mylonitic sl	PH17000986	60	-999	-999
D	CRS042	356960	5382046	30	bn	B	qzSS	bn organic soil with sandy gravel of qz sandstone at bottom	PH17000986	40	-999	-999
D	CRS043	356930	5382021	20	bn	B	qzSS	bn organic soil over sandy gravel of qz sandstone at bottom	PH17000986	50	-999	-999
D	CRS044	356883	5382001	20	bn	B	qzSS	bn humic soil with gy qz sandstone fragments	PH17000986	110	-999	-999
D	CRS045	356862	5381971	30	bn	A	qzSS	bn humus over wt cm qz sandstone gravel	PH17000986	70	-999	-999
D	CRS046	356824	5381948	35	bn	B	qzSS	bn humic soil over lgy sandy gravel	PH17000986	110	-999	-999
D	CRS047	356796	5381926	20	bn	B	qzSS	bn humus over cm-lgy qz sandstone gravel	PH17000986	60	-999	-999
D	CRS048	356767	5381914	40	bn	A	qzSS	bn humus over cm-lgy qz sandstone gravel	PH17000986	20	-999	-999
EOF												







Appendix A: Soil Assays

H1000	Sample	As	Be	Bi	Ca	Cd	Co	Cu	Fe	Ga	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Ti	Tl	Zn	Sn	W	Ba	Ce	Cr
H1001		ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
H1002		ICP61	MS81	MS81	MS81	MS81	MS81																							
D	CRS039	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	10	4	-999	-999	-999
D	CRS040	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	5	3	-999	-999	-999
D	CRS041	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	3	3	-999	-999	-999
D	CRS042	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	2	2	-999	-999	-999
D	CRS043	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	2	3	-999	-999	-999
D	CRS044	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	10	3	-999	-999	-999
D	CRS045	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	4	4	-999	-999	-999
D	CRS046	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	3	2	-999	-999	-999
D	CRS047	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	2	2	-999	-999	-999
D	CRS048	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	1	5	-999	-999	-999
EOF																														







Appendix A: Soil Assays

H1000	Sample	Cs	Dy	Er	Eu	Ga	Gd	Hf	Ho	La	Lu	Nb	Nd	Pr	Rb	Sm	Sr	Ta	Tb	Th	Tm	U	V	Y	Yb	Zr
H1001		ppm																								
H1002		MS81																								
D	CRS039	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	81.9	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999
D	CRS040	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	74.5	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999
D	CRS041	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	41.5	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999
D	CRS042	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	14.5	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999
D	CRS043	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	43.3	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999
D	CRS044	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	43.8	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999
D	CRS045	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	108	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999
D	CRS046	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	30.4	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999
D	CRS047	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	9.7	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999
D	CRS048	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	6.3	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999
EOF																										

# **Appendix B**

## **Rock assays**

Appendix B: Rock Geochemistry

H0002	Version	3													
H0003	Date_generated	24/8/2017													
H0004	Reporting_period_end_date	21/8/2017													
H0005	State	TAS													
H0100	Tenement	EL21/2005													
H0101	Tenement_holder	Venture Minerals Ltd													
H0102	Project_name	Mt Lindsay													
H0106	Tenement_operator	Venture Minerals Ltd													
H0150	250K_map_sheet	SK5503 Burnie													
H0151	100K_map_sheet	7914 Pieman													
H0152	50K_map_sheet	na													
H0153	25K_map_sheet	3437 Stringer, 3438 Livingstone, 3637 Rosebury, 3638 Parsons, 3639 Ramsay													
H0200	Start_date_of_data_acquisition	22/8/2016													
H0201	End_date_of_data_acquisition	21/8/2017													
H0202	Data_format	SG3													
H0203	Number_of_data_records	9													
H0204	Date_of_metadata_update	24/8/2017													
H0500	Feature_Located	Sample Point													
H0501	Geodetic_datum	GDA94													
H0502	Vertical_datum	not applicable													
H0503	Projection	MGA													
H0531	Projection_zone	55													
H0532	Surveying_instrument	Garmin GPS64													
H0533	Surveying_Company	Venture Minerals Ltd													
H0600	Sample_code	ROCK													
H0601	Sample_type	rock													
H0602	Sample_description	see data													
H0700	Sample_preparation_code	PREP-21													
H0701	Sample_preparation_details	dry, crush, pulverised in ring mill to P80 75 microns													
H0702	Job_no	PH17000993													
H0800	Assay_code	ICP61,B-ICP69, MS81,F-IC881 (see H1002 field)													
H0801	Assay_company	ALS Global													
H0802	Assay_description1	MS85 = lithium metaborate/lithium tetraborate fusion at 1025°C followed by dissolution in nitric, hydrochloric and hydrofluoric acids with ICPMS finish													
H0803	Assay_description2	ICP61 = pulp digested by perchloric, nitric, hydrofluoric and hydrochloric acids & resulting solution analysed by ICP-AES													
H0804	Assay_description3	B-ICP69 = pulp subject to hydrofluoric & nitric acid digest at 200 degrees celsius & resulting solution analysed by ICP-AES													
H0805	Assay_description4	F-IC881 = 0.2g pulp is fused with potassium hydroxide in a nickel crucible, the resulting melt is dissolved in hot E-pure deionized water & topped up to 100 mL, resulting solution is then diluted & analysed by i													
H0900	Remarks:	- designates below Lower Limit of Detection													
H1000	Sample	E_MGA55	N_MGA55	Stype	Description	Sn	W	Ag	Al	As					
H1001		m	m			ppm	ppm	ppm	%	ppm					
H1002		10	10			MS85	MS85	ICP61	ICP61	ICP61					
D	THML056R	358650	5381610	outcrop	gn&ogrd&yw goethitic saprolite after ?skarn, mottled texture with irregular 2mm sized patches of ?chalcedony	2	12	-0.5	7.88	18					
D	THML062	360293	5380768	outcrop	thin wt prismatic qz veins to 20mm tk with few % pyrite+?biotite	3	4	-0.5	5.76	33					
D	THML063A	360320	5380760	outcrop	irregular wt qz+py+bt veins to 50mm tk	2	3	-0.5	5.04	15					
D	THML063B	360320	5380760	outcrop	pyritic qz veins with pyritic alteration in siltstone	2	2	-0.5	3.52	-5					
D	THML064	360362	5380730	outcrop	lgy-dgy pyritic lithic sandstone & siltstone	2	2	-0.5	6.1	-5					
D	THML065	360367	5380725	outcrop	dgnngy siltstone with irregular prismatic qz veinlets with minor pyrite	3	3	-0.5	6.5	5					
D					weakly to moderately pyritic lgy to bk bedded lithic sandstone & siltstone, pyrite disseminated & in amp altered fractures										
D	THML066	360393	5380703	outcrop		3	4	-0.5	7.43	-5					
D	THML078	360453	5380357	outcrop	fresh lbnm saccharoidal dolomite with ghosted dgy ooids, massive-poorly bedded unit est. 20-30m thick	-1	2	-0.5	0.4	-5					
D					rd hematitic sandstone & granule conglomerate, clasts mainly red mudstone (pellets?) with lesser gy chert & granular maghemite (?weathered magnetite) mainly in matrix, some vuggy zones after ?pyrite										
D	THML080	360525	5380350	outcrop		-1	1	-0.5	0.65	-5					
EOF															



Appendix B: Rock Geochemistry

H0002	Version								
H0003	Date_generated								
H0004	Reporting_period_end_date								
H0005	State								
H0100	Tenement								
H0101	Tenement_holder								
H0102	Project_name								
H0106	Tenement_operator								
H0150	250K_map_sheet								
H0151	100K_map_sheet								
H0152	50K_map_sheet								
H0153	25K_map_sheet								
H0200	Start_date_of_data_acquisition								
H0201	End_date_of_data_acquisition								
H0202	Data_format								
H0203	Number_of_data_records								
H0204	Date_of_metadata_update								
H0500	Feature_Located								
H0501	Geodetic_datum								
H0502	Vertical_datum								
H0503	Projection								
H0531	Projection_zone								
H0532	Surveying_instrument								
H0533	Surveying_Company								
H0600	Sample_code								
H0601	Sample_type								
H0602	Sample_description								
H0700	Sample_preparation_code								
H0701	Sample_preparation_details								
H0702	Job_no								
H0800	Assay_code								
H0801	Assay_company								
H0802	Assay_description1								
H0803	Assay_description2								
H0804	Assay_description3								
H0805	Assay_description4								
H0900	Remarks:								
H1000	Sample	Sr	Th	Ti	Tl	U	V	Zn	
H1001		ppm	ppm	%	ppm	ppm	ppm	ppm	
H1002		ICP61							
D	THML056R	1	-20	0.43	-10	-10	141	27	
D	THML062	118	-20	0.88	-10	-10	160	75	
D	THML063A	32	-20	0.21	10	-10	62	29	
D	THML063B	22	-20	0.15	-10	-10	43	33	
D	THML064	57	-20	1.47	-10	-10	296	141	
D	THML065	120	-20	0.85	-10	-10	140	101	
D									
D	THML066	143	-20	1.13	-10	-10	217	129	
D	THML078	108	-20	0.05	-10	-10	8	23	
D									
D	THML080	6	-20	0.12	-10	-10	42	109	
EOF									

# **Appendix C**

## **Microprobe analyses (garnets)**



Appendix C: Garnet Microprobe Analyses

H1000	Sample	Almandine	Andradite	Grossular	Pyrope	Spessartine	Uvarovite	SiO2	TiO2	SnO2	Al2O3	V2O3	Cr2O3	FeO
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%
D	ML200_361.5gt	0	49.00612444	47.75626541	0.455698328	2.694081351	0.087830469	36.3617	0.44448	0.200269	9.57074	0.005171	0.024617	17.3226
D	ML200_361.5gt	0	45.5569862	50.21968724	0.362620737	3.784353023	0.076352803	36.5598	0.607377	0.120022	10.378	0.02471	0.021728	17.9102
D	ML200_361.5gt	0	42.38163592	53.79784256	0.371746711	3.377991884	0.070782924	36.8497	0.425324	0.095143	11.241	0.083409	0.020612	17.1221
D	ML200_361.5gt	0	45.87411008	50.96211571	0.431923677	2.596192632	0.135657908	37.0576	0.314372	0.159143	10.4568	0.051494	0.039169	17.311
D	ML200_361.5gt	0	47.63942391	48.91576402	0.411113407	2.962972967	0.070725699	36.9177	0.387376	0.189679	9.94403	0.05604	0.020051	17.2581
D	ML200_361.5gt	0	56.18385864	40.25151234	0.577179101	2.635047504	0.352402424	36.4983	0.714539	0.273292	8.07193	0.057256	0.097567	19.1975
D	ML200_361.5gt	0	44.85134843	51.01251553	0.330270492	3.736904822	0.06896073	36.4441	0.698101	0.13164	10.5455	0.043989	0.019683	17.3729
D	ML205_262.0gt	0	36.9008478	59.57113979	0.817238435	2.669109265	0.041664707	37.4446	1.01971	0.068007	12.4373	0.073737	0.012251	13.7646
D	ML205_262.0gt	0	41.39257384	55.83840299	0.572598298	2.085823618	0.110601255	37.2118	0.609686	0.076258	11.4945	0.014834	0.032399	14.8814
D	ML205_262.0gt	0	27.311672	72.1216336	0.344368313	0.280238459	-0.057912372	38.2503	0.095935	0.003723	15.2512	-0.00108	-0.0181	11.0071
D	ML205_262.0gt	0	34.54705427	62.49903777	0.482236173	2.447632636	0.024039144	37.4857	0.626558	0.02685	13.3534	0.000252	0.007314	14.0932
D	ML205_262.0gt	0.274272656	20.45139746	76.37967478	0.447439068	2.405488595	0.04172744	38.476	0.638712	0.011171	16.9989	0.046611	0.0133	9.92023
D	ML205_262.0gt	0	31.99778784	64.61903006	0.794194579	2.250701339	0.338286185	36.7064	3.88529	0.07262	12.6459	0.10574	0.094252	10.4007
D	ML205_262.0gt	0	18.38482798	78.49258786	0.660869936	2.497357182	-0.035642963	37.9913	1.50549	0.013037	17.2565	0.06688	-0.01123	8.68835
D	ML205_262.0gt	0	36.0859239	58.61691549	2.175566953	2.720399261	0.401194399	37.3714	1.25047	0.043545	12.2821	0.060559	0.115659	12.5773
D	ML205_295.9gt	0	44.35870629	52.27087978	0.960009211	2.340496707	0.069908016	36.6944	1.26105	0.141233	10.6629	0.080908	0.019997	15.1807
D	ML205_295.9gt	0	50.19179687	46.12524471	1.449431899	2.309346585	-0.075820064	36.2239	2.38847	0.125715	9.14436	0.107496	-0.02072	15.7603
D	ML205_295.9gt	0	50.06393434	45.93797721	1.518245568	2.442908986	0.036933891	35.9408	2.58272	0.157926	9.09616	0.072896	0.010037	15.2239
D	ML205_295.9gt	0	51.10184081	45.1676878	1.418989328	2.264171815	0.047310242	35.8506	2.51984	0.170283	8.93081	0.096619	0.012894	15.7306
D	ML205_295.9gt	0	64.43825202	32.5366707	1.248842427	1.697798805	0.078436047	35.655	2.25882	0.229212	6.22144	0.102043	0.020502	19.2857
D	ML205_295.9gt	0	65.56624988	31.34094365	1.045974815	1.844994154	0.201837506	35.536	2.09338	0.159524	5.95171	0.166339	0.052315	19.3584
D	PH001_317.5	0	30.48501561	67.05225494	0.39510513	2.037283579	0.030340747	37.016	0.700109	-0.01898	14.1469	-999	0.009209	12.9623
D	PH001_317.5	0	39.79524828	58.6352602	0.291497757	1.227104201	0.050889557	37.3252	0.724338	-0.02125	11.8682	-999	0.014968	14.8024
D	PH001_317.5	0	61.6200368	36.96777141	0.03306691	1.429131093	-0.050006209	36.0856	0.060216	0.002742	7.09334	-999	-0.01376	21.0721
D	PH001_317.5	1.866278362	25.15319056	69.90682265	0.362932429	2.67133208	0.039443925	36.6658	0.713513	-0.00788	15.4367	-999	0.012134	12.1306
D	PH001_317.5	0	36.75131651	61.92747091	0.204406991	1.098815353	0.017990237	36.4441	0.691769	0.011519	12.5615	-999	0.005328	13.5161
D	PH001_317.5	0	38.89655439	59.75514703	0.306406647	1.005671945	0.036219981	36.4204	0.804585	-0.00231	12.0266	-999	0.010634	14.2414
D	PH001_317.5	0	33.95627715	63.61907415	0.129924156	2.275498317	0.019226227	36.2123	0.671092	0.035471	13.3744	-999	0.005806	13.5231
D	PH001_317.5	0	39.86368994	58.62385339	0.304722343	1.09602136	0.11171297	36.9959	0.634917	-0.0037	11.8406	-999	0.032852	14.6145
D	PH001_317.5	0	41.79185887	56.16942535	0.490462163	1.513094125	0.035159486	36.6571	1.05735	-0.00462	11.2428	-999	0.01013	15.0145
D	PH001_317.5	0	37.16962869	60.91775716	0.089559641	1.734114756	0.088939749	37.0032	0.223154	-0.02081	12.5663	-999	0.026556	14.5224
D	PH001_317.5	0	40.45168944	58.11863625	0.321147814	1.172473519	-0.063947021	36.6124	0.745709	-0.02818	11.7685	-999	-0.01882	14.573
D	PH001_317.5	0	48.94003352	48.88021893	0.20847822	1.981543177	-0.010273847	36.5926	0.008879	-0.03594	9.8699	-999	-0.00296	18.0758
D	PH002_341.9	1.192270682	23.8739107	72.39724513	0.435570349	2.026550388	0.074452745	37.3642	0.440001	0.028688	16.0178	-999	0.023377	11.3795
D	PH002_341.9	0	29.66514558	68.7302659	0.387185083	1.246408852	-0.029005414	36.941	0.505697	0.013861	14.5477	-999	-0.00894	12.0875
D	PH002_341.9	0	34.70910165	64.09876086	0.054340629	1.110566302	0.027230558	37.0907	0.037705	0.061381	13.2409	-999	0.008236	13.5886
D	PH002_341.9	0	25.78617608	72.73232398	0.215570411	1.273867422	-0.007937884	37.2027	0.385857	-0.00696	15.6964	-999	-0.00249	11.2217
D	PH002_341.9	0.086484217	23.9012793	73.53947345	0.443641308	2.000749366	0.028372365	36.6551	0.430336	0.002313	16.1511	-999	0.008769	11.1506
D	PH002_341.9	0	38.31916233	60.52620102	0.11636573	1.064635808	-0.026364888	36.4807	0.219447	0.017506	12.45	-999	-0.00793	14.4091
D	PH002_341.9	0	35.07707075	63.73918588	0.108380164	1.036996744	0.038366461	37.094	0.086181	0.015688	13.1945	-999	0.011631	13.5355
D	PH002_341.9	0	45.30476108	53.36174877	0.298755125	1.055077739	-0.020342708	35.9639	0.496054	-0.01199	10.699	-999	-0.00593	16.2271
D	PH002_341.9	0	30.71075528	67.5257456	0.439145157	1.340483672	-0.016129703	36.7602	0.534167	0.008774	14.2958	-999	-0.00496	12.5354
D	PH002_341.9	0	32.76354157	65.40506043	0.524871325	1.247278772	0.059247902	37.1231	0.647183	-0.02454	13.6696	-999	0.017973	12.647
D	PH002_341.9	0	33.09669872	65.35635962	0.329358673	1.219224626	-0.001641639	36.9133	0.376818	-0.00648	13.669	-999	-0.0005	13.2086
D	PH002_341.9	0	33.54425787	64.79921911	0.535313731	1.072937694	0.048271597	36.9054	0.495417	0	13.4527	-999	0.014578	12.5745
D	PH002_343.2	0	33.00894174	65.35872713	0.787547574	0.751380981	0.093402577	37.0438	0.927379	-0.01551	13.5258	-999	0.028153	12.2152
D	PH002_343.2	0	23.29710716	75.11804669	0.865890229	0.740411864	-0.021455939	36.8137	1.94517	-0.00141	15.7833	-999	-0.00658	8.69708
D	PH002_343.2	0	27.43244803	70.12818551	1.007861712	1.28008899	0.151415759	37.1108	1.5586	-0.01599	14.8013	-999	0.046137	10.4109
D	PH002_343.2	0	25.9997009	72.36850131	0.526356979	0.982340357	0.123100454	37.6866	0.531902	-0.00848	15.3595	-999	0.038154	10.9597
D	PH002_343.2	0	32.82908224	65.69664893	0.64861028	0.820772972	0.004885577	37.5228	0.724853	0.000937	13.6484	-999	0.00148	12.5349
D	PH002_343.2	0	31.90931143	66.26285466	0.795602877	0.930824851	0.101403305	37.2439	0.904671	0.015933	13.7773	-999	0.030633	11.9505
D	PH002_343.2	0	22.69081054	76.07311925	0.450042188	0.701878526	0.084149503	37.1851	0.772717	-0.00094	16.3726	-999	0.026384	9.29906
D	PH002_343.2	0	21.39402053	77.49846903	0.571422819	0.573281051	-0.037193438	37.5796	1.1474	0.001882	16.5095	-999	-0.01164	8.72598
D	PH002_343.2	0	24.03358073	74.18519862	0.612876321	1.142671504	0.025672822	36.7306	1.04721	0.004228	15.9426	-999	0.007951	9.85085

Appendix C: Garnet Microprobe Analyses

H1000	Sample	Almandine	Andradite	Grossular	Pyrope	Spessartine	Uvarovite	SiO2	TiO2	SnO2	Al2O3	V2O3	Cr2O3	FeO
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%
D	PH002_343.2	0	23.25581112	74.98600532	0.686130131	1.062503741	0.009549682	37.8415	0.986935	-0.02498	16.0622	-999	0.00298	10.0301
D	PH002_343.2	0	25.78696929	72.42396055	0.732424982	1.05021837	0.006426811	37.0157	1.02055	0.021122	15.3665	-999	0.001984	10.5076
D	PH002_343.2	0	24.02521816	74.03713584	0.712927566	1.128080188	0.096638245	37.6162	1.02412	0.011278	15.7048	-999	0.029818	9.85425
D	PH004_157.9	0	19.14776062	77.89325316	0.91973425	2.028327398	0.010924573	37.8445	0.275359	-0.01275	17.4859	-999	0.003486	8.85805
D	PH004_157.9	0	18.18850344	78.49672468	1.501443095	1.872304687	-0.05897591	37.8465	1.39768	0.003766	17.4319	-999	-0.01872	8.02037
D	PH004_157.9	0	21.11170501	75.86038528	1.217002883	1.80776441	0.003142409	37.7911	0.765921	0.036227	16.7549	-999	0.000995	9.19845
D	PH004_157.9	0	17.94190857	78.55271407	1.696983227	1.79876099	0.009633143	36.9592	1.84064	-0.00802	17.3618	-999	0.003002	7.30755
D	PH004_157.9	0	18.81747437	76.76236855	2.631959171	1.788197912	0	37.2506	1.93169	-0.00614	16.9411	-999	0	7.3059
D	PH004_157.9	0	27.67869835	55.98994202	14.54360501	1.722138598	0.065616027	40.1398	1.41025	0.012748	14.0354	-999	0.019001	7.57749
D	PH004_157.9	0	17.22035793	79.67832338	1.402779854	1.695375971	0.003162859	37.5348	1.17065	-0.00189	17.798	-999	0.001001	7.31574
D	PH004_157.9	0	18.84359415	78.25957159	1.411737624	1.552104057	-0.067007418	37.887	1.13472	0.008945	17.2784	-999	-0.02125	8.63998
D	PH004_157.9	0	19.50423917	77.67305529	1.130485118	1.627393554	0.064826873	37.3742	1.10758	-0.01745	17.0502	-999	0.020429	8.71651
D	PH004_157.9	0	26.802461	69.83017348	1.69085803	1.626518755	0.049988734	36.7288	1.64192	-0.00755	16.8423	-999	0.015481	7.8472
D	PH001_309.7	0	33.46719384	64.52440973	0.230385169	1.707166145	0.070845116	36.8376	1.90625	0.01155	15.9135	-999	0.022005	9.82752
D	PH001_309.7	0	37.11958349	60.62390437	0.613451103	1.604300054	0.038760984	37.2738	0.511782	0.006468	13.6725	-999	0.012182	11.0291
D	PH001_309.7	0	28.66801742	69.79923667	0.529825524	1.025096378	-0.022175995	37.3295	1.19435	0.007872	16.3072	-999	-0.00698	8.53067
D	PH001_309.7	0	23.58705187	75.37343829	0.669689312	0.403938525	-0.034117995	38.2027	0.808894	0.008822	17.57	-999	-0.01099	7.18292
D	PH001_309.7	0	29.09551543	69.38898125	0.432671153	1.076631824	0.006200347	37.5669	0.577826	0.011587	16.8374	-999	0.001964	8.71294
D	PH001_309.7	0	37.37211421	60.4605293	0.537419006	1.580466607	0.049470876	37.4696	0.452888	-0.00185	15.4492	-999	0.015593	11.1363
D	PH001_309.7	0	37.60826858	60.38391075	0.46015707	1.546114073	0.001549521	37.4354	0.440855	-0.03107	15.5127	-999	0.000487	11.1745
D	PH001_309.7	0	35.6946491	62.13488828	0.471629073	1.632058403	0.066775142	37.4012	1.21075	0.010169	15.7149	-999	0.020986	10.6055
D	PH001_309.7	0	36.75339196	61.09781716	0.420561557	1.628537917	0.099691407	37.1209	0.48657	0.009248	15.8289	-999	0.031203	10.8755
D	PH001_309.7	0	35.01123282	63.06273965	0.214298567	1.705391767	0.006337196	36.5498	1.92483	0.034163	15.4712	-999	0.001953	10.2006
D	PH001_309.7	0	30.628828	67.83864145	0.534199294	0.982912212	0.015419046	37.7201	0.678016	0.004633	16.5101	-999	0.004904	9.20951
D	PH001_309.7	0	29.53339914	68.76881752	0.633929637	1.118990439	-0.05513674	37.5133	1.36221	0.01435	16.0757	-999	-0.01744	8.83145
D	ML322_114.1	0	32.96107609	65.18172793	0.859596136	1.063467693	-0.065867848	37.6316	0.800031	0.010643	15.7183	-999	-0.0209	9.88752
D	ML322_114.1	0	33.71182124	64.13631614	0.90530245	1.218363871	0.0281963	37.0312	0.994033	-0.00232	15.5345	-999	0.008804	9.95138
D	ML322_114.1	0	32.24941835	65.74776065	0.893165105	1.146034586	-0.036378698	37.3283	1.04778	0.031922	15.7265	-999	-0.01145	9.59607
D	ML322_114.1	0	32.02759506	65.98535954	0.922745695	1.073805932	-0.009506233	37.3029	0.796252	0.001852	15.9977	-999	-0.00299	9.52358
D	ML322_114.1	0	29.99475911	67.78405652	0.914918117	1.301629357	0.004636898	37.624	0.988769	-0.01532	16.4315	-999	0.001471	8.99588
D	ML322_114.1	0	26.80328563	71.19950699	0.737584206	1.275711111	-0.016087932	36.7858	0.877832	0.010662	17.3152	-999	-0.00499	7.85962
D	ML322_114.1	0	29.66389337	68.76000982	0.607737035	0.962044457	0.006315316	36.883	1.12893	-0.01439	16.3764	-999	0.001964	8.72143
D	ML322_114.1	0	28.89881802	69.47842029	0.608716681	0.996620771	0.017424245	36.7825	1.15797	-0.01532	16.5976	-999	0.005404	8.47334
D	ML322_114.1	0	26.9970854	71.18071584	0.744211205	1.050072412	0.027915143	37.6166	1.34653	-0.02416	16.8012	-999	0.008854	8.09524
D	ML322_114.1	0	31.54728471	65.21768404	1.529350746	1.741938268	-0.036257758	37.4201	0.95327	0.005553	15.7318	-999	-0.01144	9.41023
D	ML322_114.1	0	28.71313091	69.58888235	0.682453247	0.940046832	0.075486661	37.8106	1.35385	0.004631	16.26	-999	0.024066	8.65421
D	PH004_140.4	0	55.50444311	42.24581181	0.82885177	1.291562934	0.129330374	36.5653	0.786499	0.11605	9.78339	-999	0.039874	16.1782
D	PH004_140.4	0	56.50824245	41.38561739	1.094378897	1.011761263	0	36.7143	1.15689	0.07197	9.3625	-999	0	16.5379
D	PH004_140.4	0	54.11236687	43.46186253	0.966437241	1.319193552	0.1401398	37.0175	0.712552	0.089972	10.065	-999	0.043741	15.9675
D	PH004_140.4	0	56.38312425	41.45819758	0.982815808	1.116426564	0.059435793	36.4182	1.11339	0.042182	9.45399	-999	0.018251	16.3682
D	PH004_140.4	0	53.93528714	43.94478558	0.725234255	1.321574178	0.073118853	37.4114	0.445678	0.122161	10.2925	-999	0.023065	16.0846
D	PH004_140.4	0	55.17434532	42.7572061	0.8702948	1.087043413	0.111110365	36.9148	0.82752	0.134417	9.42256	-999	0.034584	16.2357
D	PH004_140.4	0	55.16599481	42.5495644	0.964516534	1.284489247	0.035435004	36.9736	0.7998	0.102786	9.80491	-999	0.011047	16.2591
D	PH004_140.4	0	55.85739404	42.03258582	0.9568776	1.114364955	0.038777585	36.7165	1.05802	0.086199	9.35599	-999	0.012005	16.3484
D	PH004_140.4	0	54.59939622	43.12767189	0.933341138	1.211222227	0.128368526	36.8633	0.832388	0.086288	9.94107	-999	0.0399	16.0441
D	PH004_140.4	0	56.05599097	41.56982593	0.875304568	1.3436496	0.155228932	37.0208	0.80887	0.123351	9.36239	-999	0.048455	16.5425
D	PH004_41.8	0	46.03735366	50.48263043	0.777828775	2.600701966	0.101485171	37.6192	0.4761	0.014308	14.7398	-999	0.030476	13.0701
D	PH004_41.8	0	48.020299	47.3829228	0.650931162	3.892553491	0.053293541	37.5531	0.299236	0.030482	16.1107	-999	0.015454	13.1645
D	PH004_41.8	0	49.9075104	46.36786072	0.629063374	3.023014161	0.072551348	37.8524	0.462359	0.021229	15.1704	-999	0.02123	13.8065
D	PH004_41.8	0	27.92035456	70.16426972	1.138326823	0.746228838	0.030820061	37.9583	1.15216	0	16.7396	-999	0.009829	8.41802
D	PH004_41.8	0	27.23879334	70.76199117	1.309794742	0.742053614	-0.052632862	38.2304	1.59699	-0.02277	16.1908	-999	-0.01695	8.29304
D	PH004_41.8	0	45.96461023	50.5072842	0.7451611	2.67124655	0.11169792	37.934	0.504654	0.016156	15.0951	-999	0.033378	12.9853
D	PH004_41.8	0	51.53720356	46.39990552	1.096959101	0.978484963	-0.012553144	37.413	0.908517	0.005976	10.8201	-999	-0.00396	15.3701
D	PH004_41.8	0	26.6761031	70.96115877	1.575526108	0.765887516	0.021324499	38.3816	1.68082	-0.00139	16.6273	-999	0.006887	8.14492

Appendix C: Garnet Microprobe Analyses

H1000	Sample	Almandine	Andradite	Grossular	Pyrope	Spessartine	Uvarovite	SiO2	TiO2	SnO2	Al2O3	V2O3	Cr2O3	FeO
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%
D	PH004_41.8	0	28.54352076	69.55587639	1.163492227	0.752712254	-0.015601627	37.8564	0.909822	0.006954	16.5259	-999	-0.00498	8.61351
D	PH004_41.8	0	47.42656995	48.94486521	0.786298807	2.853910743	-0.011644706	37.9117	0.410878	-0.01992	15.1368	-999	-0.00346	13.3224
D	PH004_135.2	0	46.21782	51.45411341	1.400445605	0.837698882	0.089922103	37.0876	1.77821	0.001382	11.7278	-999	0.02812	13.6638
D	PH004_135.2	0	45.99468816	51.77455594	1.570324795	0.587274711	0.073156398	37.0523	1.8139	0.001842	11.275	-999	0.0228	13.552
D	PH004_135.2	0	50.68079006	47.07526338	1.532045361	0.708744686	0.003156511	37.1241	1.46694	0.068091	10.1343	-999	0.000967	14.6783
D	PH004_135.2	0	46.27782603	50.99308445	1.796000315	0.65521636	0.277872851	36.326	3.08604	0	10.9556	-999	0.084917	13.3701
D	PH004_135.2	0	50.14341549	47.47709461	1.559945466	0.822755698	-0.003211259	37.0297	1.56063	0.007362	10.3109	-999	-0.00099	14.6146
D	PH004_135.2	0	38.09603765	59.44436098	1.275934492	1.185248607	-0.001581721	37.8637	1.45534	0.006011	14.284	-999	-0.0005	11.385
D	PH004_135.2	0	35.18490316	62.22901816	1.481073137	1.131712665	-0.026707119	37.799	1.72696	0.005088	14.5967	-999	-0.00846	10.5369
D	PH004_135.2	0	37.22288257	60.20731825	1.398984318	1.136933428	-0.033881434	38.0398	1.58521	0.000925	14.2962	-999	-0.01074	11.1549
D	PH004_135.2	0	40.27324989	57.51131167	1.049186846	1.13072666	0.035524929	37.8352	1.00711	-0.00278	13.8772	-999	0.011196	11.9994
D	PH004_135.2	0	34.75589056	62.60733847	1.47894109	1.098847657	0.058982226	37.8622	2.02136	-0.013	14.4946	-999	0.018592	10.3573
D	PH004_339.1	0	52.59151964	45.59736647	0.644425421	1.065186253	0.101502213	37.3406	1.01545	0.015182	10.6976	-999	0.031808	15.5808
D	PH004_339.1	0	38.66280963	60.01680474	0.330708155	1.019430593	-0.02975311	38.4631	0.460758	-0.02089	14.4233	-999	-0.00945	11.6093
D	PH004_339.1	0	50.17934935	47.8360838	0.542487864	1.403174298	0.038904686	37.8478	0.611065	-0.0037	12.1782	-999	0.012074	14.7227
D	PH004_339.1	0	39.32129103	59.51006974	0.485393086	0.728395782	-0.045149639	37.9046	0.430831	-0.01021	13.9512	-999	-0.01443	11.881
D	PH004_339.1	0	52.62941682	45.73500926	0.570581345	1.104267864	-0.039275289	37.3836	0.453077	-0.00786	10.9819	-999	-0.01238	15.6835
D	PH004_339.1	0	51.70668673	46.49143368	0.582242118	1.185960809	0.033676672	37.4046	0.598929	0.030852	11.3012	-999	0.01061	15.4009
D	ML152_215.1	0	79.18173279	18.73039782	0.580489989	1.575723726	-0.068344321	36.3373	-0.02963	0.738223	4.21068	-999	-0.02054	22.4976
D	ML152_215.1	0	80.90334584	17.18671269	0.90506778	0.943221979	0.061651705	36.3919	0.308014	0.862824	3.80165	-999	0.018356	22.7726
D	ML152_215.1	0	70.74719052	26.88050963	1.142746781	1.209113553	0.020439511	36.3722	0.708505	0.62841	5.91347	-999	0.006164	20.1704
D	ML152_215.1	0	74.72411492	22.77389545	1.247945293	1.263946817	-0.009902484	36.1574	1.32155	0.5451	5.03577	-999	-0.00294	20.9738
D	ML152_215.1	0	74.22666267	23.76604193	0.843004021	1.094052828	0.07023855	36.4154	0.482185	0.68789	5.22112	-999	0.02127	21.2503
D	ML152_215.1	0	81.66275715	16.28304362	0.470241862	1.504302576	0.07965479	35.6534	0.042945	0.783932	3.88909	-999	0.023946	23.2091
D	ML152_215.1	0	81.6584175	16.06635511	0.746830968	1.486636101	0.041760325	36.2281	0.00305	0.818553	3.72578	-999	0.012675	23.4314
D	ML152_215.1	0	79.44494823	18.80173677	0.864436476	0.966292268	-0.077413746	36.1484	0.279381	0.859861	4.19597	-999	-0.02347	22.7706
D	ML322_117.7	0	26.71369772	72.05079761	0.807651865	0.39430109	0.033551711	38.646	0.87461	-0.00798	16.4926	-999	0.010933	8.22947
D	ML322_117.7	0	28.56102124	70.32634256	0.748003919	0.377006905	-0.012374628	38.6236	0.839441	-0.02533	15.9546	-999	-0.00403	8.79346
D	ML322_117.7	0	32.43434557	66.47584585	0.568734725	0.501282922	0.019790936	38.5023	0.380838	0.004675	15.0514	-999	0.006425	9.95463
D	ML322_117.7	0	27.96848583	71.00216893	0.628119286	0.398177897	0.003048051	38.5984	0.556545	-0.01736	16.1297	-999	0.000992	8.60541
D	ML322_117.7	0	42.55996856	56.64192954	0.34834601	0.422224573	0.027531319	38.0161	0.296856	-0.02383	12.9638	-999	0.008825	12.8974
D	ML322_117.7	0	39.17648997	59.97245072	0.478355129	0.34665248	0.026051702	38.0447	0.36895	0.015387	13.7906	-999	0.008357	11.881
D	ML322_117.7	0	40.36061628	58.69634054	0.504372081	0.411156825	0.027514272	38.1	0.434873	-0.043	13.2745	-999	0.008839	12.2579
D	ML322_117.7	0	33.37466927	65.73461308	0.472986487	0.498005735	-0.080274567	38.6048	0.511335	0.024299	14.767	-999	-0.02613	10.2705
D	ML322_117.7	0	28.05800302	71.05614442	0.471135634	0.44256421	-0.027847282	38.5856	0.279879	-0.00563	16.2248	-999	-0.00906	8.63009
D	ML322_117.7	0	30.22968336	68.66920631	0.634025114	0.454911431	0.012173782	38.6746	0.708941	0.002806	15.4026	-999	0.003962	9.30113
D	ML322_117.7	0	28.22969915	70.76131035	0.591214729	0.440989054	-0.023213287	38.5736	0.705748	0.008427	16.1934	-999	-0.00755	8.6802
D	PH002_352.8	0	61.20282828	37.66774565	0.363030882	0.715758002	0.050637191	36.913	1.59749	-0.00418	7.9383	-999	0.015466	17.6723
D	PH002_352.8	0	53.83448213	44.75497261	0.436816884	0.952102965	0.021625411	37.4591	0.883755	-0.00698	10.0005	-999	0.006794	15.9895
D	PH002_352.8	0	60.86001554	38.11778997	0.362539719	0.707408271	-0.047753507	37.31	1.19634	-0.00697	8.21847	-999	-0.01493	17.9887
D	PH002_352.8	0	59.43143105	39.44794735	0.312810346	0.776983988	0.030827258	37.1909	1.18451	-0.00186	8.64461	-999	0.009667	17.6192
D	PH002_352.8	0	59.45989178	38.63347478	0.674454911	1.006449708	0.225728823	36.8292	1.36174	0.063338	8.43523	-999	0.070097	17.4562
D	PH002_352.8	0	59.49984563	39.39693625	0.302053251	0.853896223	-0.052731352	36.9529	1.29349	0.000925	8.63619	-999	-0.01643	17.5266
D	PH002_352.8	0	60.40951652	38.60233887	0.176927484	0.775574367	0.035642757	36.9777	1.31056	0.0245	8.42973	-999	0.011113	17.8065
D	PH002_352.8	0	56.29171615	41.93602282	0.474969209	1.182927538	0.114364284	37.2238	0.992595	0.046305	9.55448	-999	0.035839	16.6772
D	PH002_352.8	0	58.95818548	40.07027588	0.128724127	0.7767096	0.066104914	37.2975	0.788044	-0.01626	8.9605	-999	0.020789	17.529
D	PH002_352.8	0	59.71150519	39.27608319	0.158994297	0.788294084	0.065123236	36.9528	0.638855	0.026368	8.71503	-999	0.020291	17.5889
D	PH002_352.8	0	58.64260729	40.41940424	0.131340069	0.792702739	0.013945661	37.0109	0.915042	0.031458	8.73411	-999	0.004352	17.3012
D	PH002_352.8	0	58.77657241	40.31396218	0.154174478	0.742985175	0.012305757	37.2881	0.794687	0.021289	8.92337	-999	0.003869	17.4706
D	PH002_352.8	0	58.55053161	40.55720307	0.138573039	0.769569928	-0.015877646	37.1983	0.780234	-0.01859	8.91634	-999	-0.00498	17.3615
D	PH002_352.8	0	57.51024372	41.40739809	0.195395179	0.789851086	0.09711193	37.2508	0.936571	-0.0093	9.0529	-999	0.030502	17.0771
D	ML120_206.4	0	60.51348384	36.4826316	0.76109558	2.161695249	0.081093732	36.3136	0.276917	0.428225	8.55501	-999	0.02483	17.5168
D	ML120_206.4	0	66.23282998	28.57420134	0.269317722	4.975779972	-0.052129017	36.1855	0.299886	0.175725	11.0624	-999	-0.01521	18.2699
D	ML120_206.4	0	54.47148159	42.91481634	0.730707963	1.863179121	0.019814987	37.3423	0.19113	0.278557	10.2125	-999	0.006239	16.2145

Appendix C: Garnet Microprobe Analyses

H1000	Sample	Almandine	Andradite	Grossular	Pyrope	Spessartine	Uvarovite	SiO2	TiO2	SnO2	Al2O3	V2O3	Cr2O3	FeO
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%
D	ML120_206.4	0	63.57314996	33.86117916	0.951836045	1.595404934	0.018429901	36.7896	0.528254	0.404095	7.5769	-999	0.005717	18.6437
D	ML120_206.4	0	65.13277192	32.38008648	0.807900476	1.641933904	0.03730722	36.3166	0.331655	0.395294	8.0191	-999	0.011424	18.8555
D	ML120_206.4	0	62.8305307	34.52706075	0.898827504	1.772310873	-0.02872983	36.5334	0.374775	0.327843	8.44088	-999	-0.00885	18.2976
D	ML120_206.4	0	55.02687672	41.99836403	1.006816965	1.958680483	0.009261803	36.866	0.375431	0.285295	10.0237	-999	0.002879	16.1709
D	ML120_206.4	0	63.12017143	34.16263477	0.621408393	2.142936008	-0.047150599	37.1404	0.167957	0.269869	8.39167	-999	-0.01475	18.6675
D	ML120_206.4	0	63.28683757	33.89865011	0.685953845	2.114808457	0.013750021	37.1402	0.186857	0.246565	8.43277	-999	0.004285	18.6455
D	ML120_206.4	0	66.92954747	30.29741965	0.866342378	1.919426881	-0.012736377	36.5954	0.459375	0.25665	7.42923	-999	-0.00393	19.5244
D	ML258_176.0	0	30.13509717	66.96151841	0.898886583	1.998407971	0.006089867	38.1121	0.779605	-0.00093	15.9883	-999	0.001957	9.15522
D	ML258_176.0	0	30.28290728	66.60124694	0.892145818	2.171938411	0.051761549	38.168	0.795969	-0.01808	15.9745	-999	0.016627	9.19639
D	ML258_176.0	0	33.22779639	64.32547688	0.819667875	1.581444825	0.04561404	38.0751	0.920649	0.015698	14.9376	-999	0.014644	10.085
D	ML258_176.0	0	31.9698532	65.5113752	0.746065116	1.757526732	0.015179747	38.1741	0.735852	-0.01853	15.7327	-999	0.004886	9.72843
D	ML258_176.0	0	24.98871047	72.78715824	0.728177354	1.435670199	0.060283732	38.6799	0.26535	0.009269	17.1685	-999	0.019661	7.70482
D	ML258_176.0	0	30.14913422	66.97677631	0.887185813	1.920770448	0.066133212	37.7227	0.800898	0.003235	15.986	-999	0.021035	9.0659
D	ML258_176.0	0	44.34393159	53.08142128	1.038222907	1.514625772	0.021798449	36.8607	1.79883	-0.02397	11.8734	-999	0.006775	13.0296
D	ML258_176.0	0	24.42287184	73.72982964	0.901485895	0.902073754	0.04373887	38.6825	0.675124	-0.02275	16.9617	-999	0.014266	7.53086
D	ML258_176.0	0	21.76569019	61.11337055	16.61201698	0.46004365	0.048878634	36.0566	3.53575	-0.00557	12.7567	-999	0.011889	5.00509
D	ML258_176.0	0	22.01426237	60.53385994	16.97462264	0.53367167	-0.056416624	35.7926	3.91642	-0.00834	12.5083	-999	-0.01348	4.97279
D	ML112_172.0	0	34.98382927	58.12149233	0.545557402	6.376648716	-0.027527723	38.3021	0.271007	0.036028	16.9854	-999	-0.00841	10.1043
D	ML112_172.0	0	37.61427766	57.64583516	0.47945027	4.136899695	0.123537221	38.3674	0.563456	0.012459	15.6468	-999	0.038366	11.0437
D	ML112_172.0	0	39.44683603	56.20482971	0.488497482	3.866159112	-0.006322334	37.9619	0.663493	0.004608	14.5486	-999	-0.00198	11.6792
D	ML112_172.0	0	37.4555657	57.84276586	0.372408395	4.28506137	0.044198673	38.0535	0.527045	-0.00648	15.7116	-999	0.013598	10.8942
D	ML112_172.0	0	36.88182233	58.33830187	0.494484615	4.228902982	0.056488202	38.0181	0.534136	0.017992	15.4894	-999	0.017486	10.7934
D	ML112_172.0	0	39.90085412	56.92210119	0.42549268	2.726978486	0.024573526	38.0346	0.471553	0.023964	14.2301	-999	0.007759	11.9106
D	ML112_172.0	0	34.04242718	61.63728343	0.426295702	3.889300117	0.004693566	38.3305	0.376633	-0.01436	16.68	-999	0.001461	10.018
D	ML112_172.0	0	40.4654658	56.3580239	0.270246485	2.907827725	-0.01563912	37.5124	0.362232	0.004147	14.3697	-999	-0.00049	11.9862
D	ML112_172.0	0	40.57707979	56.21718465	0.393377722	2.789291705	0.023066126	37.7736	0.308767	0.015667	14.113	-999	0.007269	12.0891
D	ML112_172.0	0	39.6198483	56.94423595	0.346597589	3.116080451	-0.026762297	37.8765	0.446372	0.007837	14.7047	-999	-0.00841	11.7706
D	PH001_308.1	0	25.69426257	73.28970556	0.160843616	0.881299981	-0.02611173	38.7852	0.16746	-0.01586	17.2828	-999	-0.0085	7.90738
D	PH001_308.1	0	22.92763684	75.70974307	0.317546917	1.071109478	-0.026036305	38.8548	0.407425	0.004658	17.8873	-999	-0.00851	7.08472
D	PH001_308.1	0	25.94691014	73.36498851	0.410952468	0.321859379	-0.0447105	38.4891	0.327845	0.008374	16.814	-999	-0.01451	7.9608
D	PH001_308.1	0	23.85953202	75.15667279	0.537722401	0.421967427	0.024105362	38.9173	0.886545	-0.00699	16.8808	-999	0.00791	7.40181
D	PH001_308.1	0	26.87659537	72.00811753	0.154955014	0.99585556	-0.035523474	38.4986	0.118501	0.035351	16.998	-999	-0.01149	8.21849
D	PH001_308.1	0	31.10652144	67.8199447	0.474693427	0.560446275	0.038394156	37.945	1.23546	-0.00558	15.2113	-999	0.012284	9.40891
D	PH001_308.1	0	35.58850365	63.42916006	0.258851331	0.670334529	0.05315043	38.2235	0.690598	-0.02183	14.2851	-999	0.01713	10.8436
D	PH001_308.1	0	31.11110879	67.85577703	0.287710122	0.759270225	-0.01386617	38.4034	0.569368	0.015316	15.2395	-999	-0.00449	9.52398
D	PH001_308.1	0	33.36176211	65.7120713	0.377852823	0.490847955	0.057465809	38.4509	0.792655	0.010199	14.6538	-999	0.018631	10.2256
D	PH001_308.1	0	31.41570794	67.71476633	0.252898605	0.580392245	0.036234883	38.5762	0.469872	-0.03257	15.4352	-999	0.011786	9.6605
D	ML109_112.0	0	75.05531206	22.79382571	0.734411517	1.497529383	-0.081078676	36.4347	0.612234	0.362774	5.07884	-999	-0.02453	21.4677
D	ML109_112.0	0	74.92552425	22.36479117	1.009892393	1.602694204	0.097097988	35.8314	0.821201	0.516213	5.05805	-999	0.029313	21.3842
D	ML109_112.0	0	75.53303956	22.26418523	0.903088223	1.255854131	0.043832852	36.0507	0.52831	0.322032	4.94703	-999	0.013236	21.5629
D	ML109_112.0	0	75.27924857	22.66350969	0.841965376	1.256157739	-0.040881375	36.3925	0.509868	0.372321	4.98116	-999	-0.01226	21.3429
D	ML109_112.0	0	77.25673591	20.50961126	1.019344438	1.143456469	0.070851925	36.1989	0.509798	0.377015	4.56283	-999	0.021257	21.9129
D	ML109_112.0	0	72.16319201	25.48003629	0.889120378	1.537110465	-0.06945914	36.0274	0.549564	0.486045	5.74364	-999	-0.0211	20.7244
D	ML109_112.0	0	71.03165382	26.18985292	0.920295528	1.845743337	0.012454394	36.1333	0.693174	0.363987	5.91695	-999	0.003794	20.4569
D	ML109_112.0	0	67.77710317	29.60396281	0.650383929	1.902405182	0.066144906	36.645	0.659935	0.245637	6.65946	-999	0.020421	19.7823
D	ML109_112.0	0	70.61691125	26.84585676	0.805071479	1.785634425	-0.05347391	36.4173	0.636096	0.363078	5.982	-999	-0.0162	20.2253
D	ML109_112.0	0	70.02161883	27.12044067	0.913095446	1.852078365	0.092766692	36.1779	0.650088	0.371309	6.05039	-999	0.027998	19.9793
D	ML265_185.3	0	17.30371492	79.3543317	2.007947836	1.297436724	0.036568814	38.5742	1.47312	-0.00373	18.1538	-999	0.011894	5.32071
D	ML265_185.3	0	18.75995542	77.30937588	1.977246575	1.916747501	0.036674622	38.3853	1.42205	-0.00279	18.0429	-999	0.01187	5.74024
D	ML265_185.3	0	19.7476181	76.61095822	1.681889614	1.920055846	0.039478226	38.6154	1.07668	0.003717	18.4303	-999	0.012854	6.07867
D	ML265_185.3	0	17.2358335	79.15285723	2.151362351	1.532950137	-0.073003218	38.1611	1.93148	-0.02048	18.128	-999	-0.02349	5.24308
D	ML265_185.3	0	19.10335123	77.37114889	2.130535725	1.344112347	0.050851807	38.2357	2.19584	0.020872	17.415	-999	0.01633	5.79966
D	ML265_185.3	0	20.30067899	76.3042325	1.53292695	1.813287071	0.048874494	38.3742	0.920791	0.019977	17.9975	-999	0.015814	6.20988
D	ML265_185.3	0	18.60143837	77.56962441	1.935773501	1.891627953	0.001535758	38.2263	1.8074	-0.0121	17.7994	-999	0.000495	5.66816

**Appendix C: Garnet Microprobe Analyses**

H1000	Sample	Almandine	Andradite	Grossular	Pyrope	Spessartine	Uvarovite	SiO2	TiO2	SnO2	Al2O3	V2O3	Cr2O3	FeO
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%
D	ML265_185.3	0	20.24904602	76.05045696	1.703636097	1.975515803	0.021345116	38.4381	0.847792	-0.02141	18.2177	-999	0.006918	6.2044
D	ML265_185.3	0	20.48744523	76.06750739	1.419152281	2.01078462	0.015110471	38.7651	0.774453	0.002788	18.3232	-999	0.004939	6.33085
D	ML243_143.7	0	45.12833289	52.53295717	0.831594008	1.547840778	-0.04072484	37.7818	0.759034	0.050701	11.6587	-999	-0.01289	13.5038
D	ML243_143.7	0	45.31800652	52.06983506	0.728733754	1.885008493	-0.001583825	37.4406	0.987901	0.019353	11.6984	-999	-0.0005	13.5253
D	ML243_143.7	0	47.71387837	49.94451956	0.793241914	1.539209112	0.009151041	37.6103	0.621228	0.034548	11.5729	-999	0.002902	14.3049
D	ML243_143.7	0	41.61740517	56.00124309	0.835935646	1.621442535	-0.076026434	37.174	1.07044	-0.01157	12.9424	-999	-0.02383	12.3324
D	ML243_143.7	0	45.95136567	51.72183772	0.836408329	1.476555736	0.013832544	37.3993	0.984628	0.022125	11.6122	-999	0.004362	13.6992
D	ML243_143.7	0	42.85668638	54.7068754	0.901923981	1.519276955	0.01523728	37.9081	1.07988	0.021222	12.2176	-999	0.004858	12.9176
D	ML243_143.7	0	41.48070677	56.07677448	1.016172477	1.50974807	-0.083401803	37.4316	1.23523	0.03598	12.4055	-999	-0.02632	12.3757
D	ML243_143.7	0	45.84567378	52.0505427	0.924637699	1.257768863	-0.078623039	37.3944	0.796106	0.013362	11.6227	-999	-0.02479	13.6659
D	ML243_143.7	0	26.36534825	71.95400791	0.710069426	0.940186404	0.030388005	38.4388	1.26655	-0.03488	16.2982	-999	0.009849	8.07861
D	ML243_143.7	-999	-999	-999	-999	-999	-999	37.5083	0.945366	0.032259	12.175	-999	-999	13.119
D	ML258_199.2	-999	-999	-999	-999	-999	-999	38.4894	0.829946	0.005474	16.6153	-999	-999	8.11873
D	ML258_199.2	-999	-999	-999	-999	-999	-999	38.509	0.89023	0.025532	16.3212	-999	-999	8.43438
D	ML258_199.2	-999	-999	-999	-999	-999	-999	38.5836	0.815788	-0.00229	16.4983	-999	-999	8.31001
D	ML258_199.2	-999	-999	-999	-999	-999	-999	38.3963	0.938757	-0.01554	16.1788	-999	-999	8.40831
D	ML258_199.2	-999	-999	-999	-999	-999	-999	38.6887	0.431272	0.027821	16.7747	-999	-999	8.3721
D	ML258_199.2	-999	-999	-999	-999	-999	-999	38.8331	0.341781	-0.00686	17.2646	-999	-999	7.50583
D	ML258_199.2	-999	-999	-999	-999	-999	-999	38.479	0.753488	0.037854	16.2684	-999	-999	8.4106
D	ML258_199.2	-999	-999	-999	-999	-999	-999	38.2885	0.601879	0.025984	16.0192	-999	-999	8.91195
D	ML258_199.2	-999	-999	-999	-999	-999	-999	38.5115	0.861601	-0.0201	15.8592	-999	-999	9.08366
D	ML258_199.2	-999	-999	-999	-999	-999	-999	38.809	0.378858	-0.01785	17.7988	-999	-999	7.30606
EOF														



Appendix C: Garnet Microprobe Analyses

H1000	Sample	MnO	MgO	CaO	Na2O	K2O	P2O5	Cl	F	CO2	O	H2O	Total	Si	Ti	Sn	Al
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
D	ML200_361.5gt	1.05723	0.101615	33.0175	0.016476	-0.00354	0.008644	-0.00543	0.176294	0	-0.07302	0	98.225346	16.9965	0.266465	0.157741	5.06527
D	ML200_361.5gt	1.50784	0.082099	31.7813	0.006372	0.001243	0.005965	0.017136	0.388005	0	-0.16726	0	99.244537	17.0891	0.364122	0.094535	5.49251
D	ML200_361.5gt	1.37727	0.086125	32.3019	0.0162	-0.00089	0.024937	0.003985	0.261051	0	-0.11083	0	99.797036	17.2247	0.254982	0.074939	5.94926
D	ML200_361.5gt	1.04955	0.099219	33.2784	-0.00536	-0.00355	0.001518	-0.00125	0.101678	0	-0.04253	0	99.867253	17.3218	0.188466	0.125348	5.53419
D	ML200_361.5gt	1.17613	0.092728	33.138	0.007123	0.000551	0.005447	-0.00418	0.13344	0	-0.05525	0	99.266965	17.2564	0.232232	0.149399	5.26284
D	ML200_361.5gt	1.02146	0.127135	33.4611	0.016902	0.006728	0.013305	0.003897	0.21785	0	-0.09262	0	99.686141	17.0604	0.428366	0.215257	4.27203
D	ML200_361.5gt	1.49338	0.074998	32.0806	0.00662	0.005382	-0.00062	-0.0023	0.4594	0	-0.19293	0	99.180443	17.0351	0.418511	0.103685	5.58118
D	ML205_262.0gt	1.09885	0.19118	33.9232	0.007263	-0.00162	0.000572	0.006435	0.121083	0	-0.05244	0	100.114728	17.5027	0.611314	0.053566	6.58238
D	ML205_262.0gt	0.855496	0.133448	34.4603	-0.01964	-0.00265	0.016975	-0.00021	0.011577	0	-0.00483	0	99.771343	17.3939	0.365507	0.060064	6.08343
D	ML205_262.0gt	0.122632	0.085629	35.7028	-0.00884	0.000826	0.005108	-0.00125	-0.00263	0	0.001381	0	100.494734	17.8794	0.057513	<0.026	8.07163
D	ML205_262.0gt	1.04268	0.116731	34.0227	-0.00454	0.000275	0.013058	-0.00771	0.061376	0	-0.02411	0	100.813734	17.522	0.375621	<0.027	7.06721
D	ML205_262.0gt	1.0735	0.113463	34.1757	-0.00502	0	0.012492	-0.00732	0.072149	0	-0.02874	0	101.511148	17.9848	0.382907	<0.025	8.99659
D	ML205_262.0gt	0.877997	0.176045	34.1073	0.018458	0.017404	-0.00335	0.103342	0.196369	0	-0.106	0	99.298467	17.1577	0.232923	0.057199	6.69279
D	ML205_262.0gt	1.10168	0.165658	34.0576	0.024462	0.008292	0.028286	0.001879	0.152561	0	-0.06467	0	100.986075	17.7583	0.902543	<0.025	9.13291
D	ML205_262.0gt	1.09806	0.498985	33.5829	-0.01162	-0.00118	0.025457	0.006214	0.136191	0	-0.05875	0	98.97729	17.4685	0.749655	0.034298	6.50026
D	ML205_295.9gt	0.937378	0.218476	34.1995	0.024192	0.00424	0.01372	0.007132	0.077028	0	-0.03405	0	99.488804	17.1521	0.755999	0.111241	5.64331
D	ML205_295.9gt	0.883616	0.315133	34.0855	-0.02725	0	0.022344	0.001213	0.078629	0	-0.03339	0	99.055316	16.9321	1.43189	0.099018	4.83961
D	ML205_295.9gt	0.929512	0.328255	34.1743	0.003515	0.003817	0.028201	-0.00228	0.08942	0	-0.03714	0	98.602039	16.7998	1.54834	0.124389	4.8141
D	ML205_295.9gt	0.863994	0.307682	34.2167	-0.00999	-0.00367	0.011426	-0.00228	0.07973	0	-0.03307	0	98.742168	16.7576	1.51065	0.134122	4.72659
D	ML205_295.9gt	0.621349	0.259704	34.0406	-0.00205	0.000407	0.014925	0.001649	0.063061	0	-0.02694	0	98.745422	16.6662	1.35416	0.180537	3.29267
D	ML205_295.9gt	0.669558	0.215693	33.9379	-0.01915	-0.00745	0.020643	-0.00062	0.12626	0	-0.05302	0	98.207482	16.6106	1.25498	0.125648	3.14992
D	PH001_317.5	0.865778	0.095409	33.4787	-999	-999	-999	0.001211	-0.00953	-999	0.003742	0	99.2509	17.3024	0.419715	<0.02	7.48718
D	PH001_317.5	0.505342	0.068212	34.5778	-999	-999	-999	-0.00246	-0.00159	-999	0.001225	0	99.8624	17.4469	0.43424	<0.02	6.28121
D	PH001_317.5	0.550599	0.007239	33.6367	-999	-999	-999	-0.00325	-0.00925	-999	0.004627	0	98.487	16.8675	0.0361	<0.02	3.75412
D	PH001_317.5	1.15059	0.088826	32.3808	-999	-999	-999	0.004852	-0.0449	-999	0.017818	0	98.5488	17.1387	0.42775	<0.02	8.16981
D	PH001_317.5	0.455639	0.048163	34.5377	-999	-999	-999	0.002816	0.003998	-999	-0.00231	0	98.2764	17.0351	0.414715	<0.02	6.64814
D	PH001_317.5	0.413403	0.071571	34.4176	-999	-999	-999	0.00201	0.017683	-999	-0.0079	0	98.4157	17.024	0.482348	<0.02	6.36504
D	PH001_317.5	0.962118	0.031215	33.7524	-999	-999	-999	-0.00205	0.02646	-999	-0.01068	0	98.5816	16.9267	0.402319	0.027939	7.07834
D	PH001_317.5	0.45128	0.071294	34.6314	-999	-999	-999	0.002011	0.016833	-999	-0.00754	0	99.2802	17.293	0.380632	<0.02	6.26657
D	PH001_317.5	0.610382	0.112425	34.0845	-999	-999	-999	0.009245	-0.02223	-999	0.007271	0	98.7788	17.1346	0.633879	<0.02	5.95022
D	PH001_317.5	0.724959	0.021275	34.0517	-999	-999	-999	0.015708	0.006686	-999	-0.00636	0	99.1347	17.2964	0.133781	<0.02	6.65066
D	PH001_317.5	0.483138	0.075196	34.7382	-999	-999	-999	-0.01227	-0.02144	-999	0.011803	0	98.9271	17.1137	0.447052	<0.02	6.22841
D	PH001_317.5	0.799339	0.047787	33.5961	-999	-999	-999	-0.01021	-0.02138	-999	0.011303	0	98.9312	17.1045	<0.01	<0.02	5.2236
D	PH002_341.9	0.890911	0.108807	33.4831	-999	-999	-999	-0.00041	-0.00945	-999	0.00407	0	99.7306	17.4652	0.263378	<0.02	8.47737
D	PH002_341.9	0.537883	0.094944	34.5297	-999	-999	-999	0.000404	0.037426	-999	-0.01585	0	99.2713	17.2673	0.303165	<0.02	7.69928
D	PH002_341.9	0.470298	0.013076	34.5664	-999	-999	-999	0.003628	0.00102	-999	-0.00124	0	99.0808	17.3373	0.022604	0.048346	7.0077
D	PH002_341.9	0.559484	0.053799	34.5836	-999	-999	-999	0.004446	0.048557	-999	-0.02145	0	99.7257	17.3897	0.231321	<0.02	8.30723
D	PH002_341.9	0.865797	0.109088	33.3432	-999	-999	-999	0.007686	-0.03235	-999	0.011898	0	98.7036	17.1337	0.257986	<0.02	8.54789
D	PH002_341.9	0.44835	0.027846	34.7723	-999	-999	-999	-0.00246	-0.05058	-999	0.021851	0	98.7861	17.0522	0.131558	<0.02	6.58909
D	PH002_341.9	0.440161	0.02614	34.8253	-999	-999	-999	0.003224	-0.00559	-999	0.001629	0	99.2283	17.3388	0.051665	<0.02	6.9831
D	PH002_341.9	0.430625	0.069287	34.4391	-999	-999	-999	0.002007	-0.05526	-999	0.022812	0	98.2767	16.8106	0.297384	<0.02	5.6624
D	PH002_341.9	0.577146	0.107437	34.3575	-999	-999	-999	-0.00246	0.00283	-999	-0.00063	0	99.1712	17.1828	0.320233	<0.02	7.56599
D	PH002_341.9	0.529761	0.126675	34.7204	-999	-999	-999	0.049181	0.001868	-999	-0.01189	0	99.4963	17.3525	0.387986	<0.02	7.23459
D	PH002_341.9	0.51993	0.079809	34.4385	-999	-999	-999	-0.00574	-0.00708	-999	0.00428	0	99.1903	17.2544	0.225902	<0.02	7.23424
D	PH002_341.9	0.45368	0.128619	34.8326	-999	-999	-999	0.013301	-0.01519	-999	0.003387	0	98.859	17.2507	0.297002	<0.02	7.11979
D	PH002_343.2	0.317099	0.188857	35.0711	-999	-999	-999	0.011861	0.010162	-999	-0.00696	0	99.317	17.3154	0.555963	<0.02	7.15849
D	PH002_343.2	0.317922	0.211267	35.2299	-999	-999	-999	0.003278	0.054074	-999	-0.02352	0	99.0241	17.2078	1.16613	<0.02	8.35324
D	PH002_343.2	0.546119	0.244326	34.8812	-999	-999	-999	-0.00417	0.045049	-999	-0.01804	0	99.6063	17.3467	0.934378	<0.02	7.83354
D	PH002_343.2	0.426296	0.129793	34.649	-999	-999	-999	-0.00501	0.022249	-999	-0.00824	0	99.7815	17.6159	0.318875	<0.02	8.12894
D	PH002_343.2	0.348127	0.156322	35.0601	-999	-999	-999	0.00491	-0.01914	-999	0.00695	0	99.9906	17.5393	0.434549	<0.02	7.22335
D	PH002_343.2	0.393708	0.191216	34.984	-999	-999	-999	0.003682	0.010347	-999	-0.00519	0	99.5006	17.4089	0.54235	<0.02	7.29156
D	PH002_343.2	0.30812	0.112262	35.2668	-999	-999	-999	-0.00334	0.010273	-999	-0.00357	0	99.3454	17.3814	0.463243	<0.02	8.66513
D	PH002_343.2	0.251202	0.142277	35.3381	-999	-999	-999	0.000821	0.001561	-999	-0.00085	0	99.6858	17.5658	0.687868	<0.02	8.7376
D	PH002_343.2	0.495494	0.151012	34.686	-999	-999	-999	0.011892	-0.01759	-999	0.00473	0	98.9149	17.169	0.627804	<0.02	8.43753

Appendix C: Garnet Microprobe Analyses

H1000	Sample	MnO	MgO	CaO	Na2O	K2O	P2O5	Cl	F	CO2	O	H2O	Total	Si	Ti	Sn	Al
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
D	PH002_343.2	0.464223	0.170343	34.7269	-999	-999	-999	0.002873	0.026551	-999	-0.01183	0	100.278	17.6883	0.591667	<0.02	8.50087
D	PH002_343.2	0.453936	0.179887	34.6068	-999	-999	-999	0.00123	-0.00483	-999	0.001747	0	99.1721	17.3023	0.611822	<0.02	8.13262
D	PH002_343.2	0.487347	0.175011	34.706	-999	-999	-999	0.004514	0.030577	-999	-0.01389	0	99.63	17.5829	0.613962	<0.02	8.31169
D	PH004_157.9	0.906212	0.233494	34.3843	-999	-999	-999	0.006995	-0.04525	-999	0.017479	0	99.9577	17.6896	0.165077	<0.02	9.25433
D	PH004_157.9	0.832102	0.379167	34.5455	-999	-999	-999	0.006167	0.014514	-999	-0.0075	0	100.451	17.6906	0.837906	<0.02	9.22575
D	PH004_157.9	0.80144	0.306579	34.51	-999	-999	-999	0.000411	0.001148	-999	-0.00058	0	100.167	17.6647	0.459169	0.028534	8.86748
D	PH004_157.9	0.784847	0.420737	34.4971	-999	-999	-999	-0.00042	0.046933	-999	-0.01968	0	99.1937	17.2759	1.10346	<0.02	9.18865
D	PH004_157.9	0.778892	0.651422	34.3633	-999	-999	-999	0.003288	0.050864	-999	-0.02215	0	99.2488	17.412	1.15805	<0.02	8.96603
D	PH004_157.9	0.698238	3.35065	32.5211	-999	-999	-999	0.00909	-0.00684	-999	0.000824	0	99.7678	18.7626	0.845443	<0.02	7.42818
D	PH004_157.9	0.751258	0.353211	34.8183	-999	-999	-999	0.002056	0.012351	-999	-0.00566	0	99.7498	17.5449	0.701805	<0.02	9.41949
D	PH004_157.9	0.689169	0.356189	34.3531	-999	-999	-999	0.007814	0.012799	-999	-0.00715	0	100.34	17.7095	0.680262	<0.02	9.1445
D	PH004_157.9	0.718048	0.283431	34.2765	-999	-999	-999	-0.01087	0.014231	-999	-0.00354	0	99.5292	17.4698	0.663994	<0.02	9.02374
D	PH004_157.9	0.705269	0.416605	34.3988	-999	-999	-999	0.002463	0.034193	-999	-0.01495	0	98.6106	17.1681	0.984329	<0.02	8.91371
D	PH001_309.7	0.742431	0.056932	34.0604	-999	-999	-999	0.002422	0.026244	-999	-0.0116	0	99.3953	17.219	1.1428	<0.02	8.42217
D	PH001_309.7	0.705957	0.153389	34.1846	-999	-999	-999	0.003631	-0.02937	-999	0.011543	0	97.5355	17.4229	0.306813	<0.02	7.23609
D	PH001_309.7	0.451758	0.132677	35.2886	-999	-999	-999	0.006867	0.003939	-999	-0.0032	0	99.2432	17.4489	0.71601	<0.02	8.63049
D	PH001_309.7	0.182179	0.171624	35.9926	-999	-999	-999	0.014169	0.04823	-999	-0.02351	0	100.148	17.8571	0.484932	<0.02	9.29886
D	PH001_309.7	0.477487	0.109037	35.2208	-999	-999	-999	0.002831	0.029923	-999	-0.01324	0	99.5355	17.5599	0.346406	<0.02	8.91114
D	PH001_309.7	0.697484	0.134767	34.1483	-999	-999	-999	0.004445	-0.00296	-999	0.000237	0	99.5039	17.5144	0.271506	<0.02	8.1764
D	PH001_309.7	0.680365	0.115061	34.0891	-999	-999	-999	0.00202	-0.00348	-999	0.001011	0	99.4169	17.4984	0.264292	<0.02	8.21001
D	PH001_309.7	0.718157	0.117925	34.0539	-999	-999	-999	-0.01109	0.070695	-999	-0.02727	0	99.8858	17.4825	0.725845	<0.02	8.31703
D	PH001_309.7	0.713683	0.104727	34.1394	-999	-999	-999	0.00404	0.012122	-999	-0.00602	0	99.3203	17.3514	0.291698	<0.02	8.37737
D	PH001_309.7	0.735865	0.052543	33.7797	-999	-999	-999	0.00242	0.035447	-999	-0.01547	0	98.7731	17.0845	1.15394	0.026909	8.18808
D	PH001_309.7	0.4377	0.135172	35.168	-999	-999	-999	0.001213	0.052634	-999	-0.02243	0	99.8996	17.6315	0.40647	<0.02	8.73791
D	PH001_309.7	0.495565	0.159528	35.1857	-999	-999	-999	0.016965	0.0219	-999	-0.01305	0	99.6462	17.5349	0.816647	<0.02	8.50799
D	ML322_114.1	0.472461	0.216999	34.984	-999	-999	-999	-0.00575	0.005039	-999	-0.00082	0	99.6992	17.5902	0.479618	<0.02	8.31886
D	ML322_114.1	0.53264	0.224891	34.8268	-999	-999	-999	0.001615	-0.01074	-999	0.004158	0	99.097	17.3095	0.595922	<0.02	8.22156
D	ML322_114.1	0.505039	0.223656	34.9751	-999	-999	-999	0.011306	0.014198	-999	-0.00853	0	99.4399	17.4484	0.628145	0.025143	8.32319
D	ML322_114.1	0.472887	0.230906	34.8821	-999	-999	-999	-0.00534	0.029832	-999	-0.01135	0	99.2183	17.4365	0.477353	<0.02	8.46671
D	ML322_114.1	0.578151	0.230918	34.8642	-999	-999	-999	0.000809	-0.00471	-999	0.001804	0	99.6974	17.5866	0.592766	<0.02	8.69628
D	ML322_114.1	0.554015	0.182013	35.1742	-999	-999	-999	0.001617	0.190653	-999	-0.08065	0	98.8659	17.1948	0.52626	<0.02	9.16399
D	ML322_114.1	0.4189	0.150367	34.962	-999	-999	-999	0	0.02236	-999	-0.00942	0	98.6416	17.2402	0.676795	<0.02	8.66714
D	ML322_114.1	0.432773	0.150199	35.1431	-999	-999	-999	0.006868	0.037912	-999	-0.01751	0	98.7548	17.1932	0.694199	<0.02	8.78422
D	ML322_114.1	0.466324	0.187796	35.0241	-999	-999	-999	0.010921	0.031203	-999	-0.01561	0	99.5491	17.5831	0.807246	<0.02	8.89198
D	ML322_114.1	0.769532	0.383904	34.7688	-999	-999	-999	0.005252	-0.01217	-999	0.003948	0	99.4287	17.4913	0.571484	<0.02	8.326
D	ML322_114.1	0.419616	0.1731	35.1716	-999	-999	-999	0.007275	0.034581	-999	-0.01621	0	99.8972	17.6738	0.811634	<0.02	8.60552
D	PH004_140.4	0.557537	0.203309	34.6722	-999	-999	-999	0.003606	0.003855	-999	-0.00244	0	98.9074	17.0917	0.471506	0.091406	5.17782
D	PH004_140.4	0.438533	0.269534	34.6107	-999	-999	-999	0.014417	-0.01314	-999	0.002277	0	99.1659	17.1614	0.693555	0.056687	4.95506
D	PH004_140.4	0.576507	0.239989	34.4309	-999	-999	-999	-0.00612	0.038951	-999	-0.01502	0	99.1615	17.3031	0.427175	0.070866	5.32685
D	PH004_140.4	0.479996	0.240105	34.6291	-999	-999	-999	-0.00897	0.003315	-999	0.003349	0	98.7546	17.023	0.667476	0.033224	5.00348
D	PH004_140.4	0.583693	0.182009	34.4223	-999	-999	-999	0.001204	0.004729	-999	-0.00226	0	99.571	17.4872	0.267184	0.09622	5.44724
D	PH004_140.4	0.473736	0.215515	34.4647	-999	-999	-999	0.008016	0.037188	-999	-0.01747	0	98.7512	17.2551	0.496098	0.105872	4.98685
D	PH004_140.4	0.560675	0.239228	34.4177	-999	-999	-999	0.00842	-0.00288	-999	-0.00068	0	99.1737	17.2826	0.47948	0.080959	5.1892
D	PH004_140.4	0.483034	0.235683	34.5255	-999	-999	-999	-0.00163	0.011174	-999	-0.00433	0	98.8266	17.1624	0.63428	0.067894	4.95162
D	PH004_140.4	0.527117	0.230805	34.5414	-999	-999	-999	0.005213	0.003932	-999	-0.00283	0	99.1127	17.231	0.499016	0.067964	5.26127
D	PH004_140.4	0.587247	0.217378	34.2781	-999	-999	-999	-0.00612	0.015565	-999	-0.00518	0	98.9933	17.3046	0.484917	0.097157	4.955
D	PH004_41.8	1.09349	0.185836	32.1155	-999	-999	-999	0.006468	0.007139	-999	-0.00446	0	99.3539	17.5844	0.285422	<0.02	7.80097
D	PH004_41.8	1.58041	0.150173	30.6378	-999	-999	-999	0.010131	0.22085	-999	-0.09528	0	99.6776	17.5535	0.179392	<0.02	8.52653
D	PH004_41.8	1.23855	0.14645	31.2056	-999	-999	-999	0.002428	0.104181	-999	-0.04441	0	99.987	17.6934	0.277184	<0.02	8.02888
D	PH004_41.8	0.333209	0.288824	34.6337	-999	-999	-999	0.016598	0.032385	-999	-0.01738	0	99.5653	17.7429	0.690716	<0.02	8.85937
D	PH004_41.8	0.334593	0.335588	34.9136	-999	-999	-999	-0.00041	0.02282	-999	-0.01178	0	99.8713	17.87	0.957396	<0.02	8.5689
D	PH004_41.8	1.11763	0.177156	31.9451	-999	-999	-999	-0.00616	0.038105	-999	-0.01465	0	99.8258	17.7315	0.30254	<0.02	7.98903
D	PH004_41.8	0.432181	0.275311	34.3641	-999	-999	-999	0.001607	0.025161	-999	-0.01096	0	99.6011	17.4879	0.544655	<0.02	5.72649
D	PH004_41.8	0.346326	0.404825	34.9098	-999	-999	-999	0.003238	0.066924	-999	-0.0289	0	100.542	17.9407	1.00765	<0.02	8.7999

Appendix C: Garnet Microprobe Analyses

H1000	Sample	MnO	MgO	CaO	Na2O	K2O	P2O5	Cl	F	CO2	O	H2O	Total	Si	Ti	Sn	Al
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
D	PH004_41.8	0.336401	0.29547	34.8214	-999	-999	-999	0.004047	0.000746	-999	-0.00123	0	99.3644	17.6952	0.545438	<0.02	8.74625
D	PH004_41.8	1.18729	0.185877	31.6905	-999	-999	-999	-0.00288	0.059169	-999	-0.02427	0	99.8541	17.7211	0.246321	<0.02	8.0111
D	PH004_135.2	0.36678	0.348422	34.3176	-999	-999	-999	-0.00573	-0.007	-999	0.004234	0	99.3112	17.3359	1.06604	<0.02	6.20687
D	PH004_135.2	0.256267	0.38937	34.9149	-999	-999	-999	0.001206	0.003782	-999	-0.00187	0	99.2815	17.3194	1.08743	<0.02	5.96724
D	PH004_135.2	0.304003	0.373406	34.7411	-999	-999	-999	0.009642	-0.02842	-999	0.009792	0	98.8822	17.3529	0.879427	0.053631	5.36355
D	PH004_135.2	0.280351	0.436662	34.2774	-999	-999	-999	0.006425	0.016361	-999	-0.00834	0	98.8315	16.9799	1.85008	<0.02	5.79822
D	PH004_135.2	0.35514	0.382613	34.7462	-999	-999	-999	0.007634	-0.0165	-999	0.005226	0	99.0025	17.3088	0.935594	<0.02	5.45702
D	PH004_135.2	0.524588	0.320892	34.1274	-999	-999	-999	0	0.000833	-999	-0.00036	0	99.967	17.6987	0.872478	<0.02	7.55976
D	PH004_135.2	0.501936	0.373259	34.1453	-999	-999	-999	-0.00247	-0.00342	-999	0.001999	0	99.6728	17.6684	1.03531	<0.02	7.72521
D	PH004_135.2	0.504599	0.352814	34.1958	-999	-999	-999	0.005254	0.007067	-999	-0.00416	0	100.149	17.781	0.950332	<0.02	7.56618
D	PH004_135.2	0.498949	0.263071	34.1227	-999	-999	-999	0.004039	0.015854	-999	-0.00758	0	99.6244	17.6853	0.603761	<0.02	7.34445
D	PH004_135.2	0.484966	0.370891	33.9898	-999	-999	-999	0.013746	-0.00875	-999	0.000587	0	99.5923	17.6979	1.21181	<0.02	7.67121
D	PH004_339.1	0.467364	0.160666	34.0924	-999	-999	-999	0.012468	0.012149	-999	-0.00794	0	99.4185	17.4541	0.608764	<0.02	5.66165
D	PH004_339.1	0.453342	0.083567	34.6802	-999	-999	-999	0.009706	-0.03181	-999	0.011204	0	100.132	17.9788	0.276224	<0.02	7.63348
D	PH004_339.1	0.609719	0.133946	33.6823	-999	-999	-999	-0.00041	-0.00817	-999	0.003529	0	99.7891	17.6912	0.366333	<0.02	6.44526
D	PH004_339.1	0.325948	0.123423	34.9652	-999	-999	-999	-0.00041	0.000167	-999	0.000023	0	99.5574	17.7178	0.258283	<0.02	7.38361
D	PH004_339.1	0.487354	0.14309	34.3867	-999	-999	-999	-0.00164	0.02005	-999	-0.00808	0	99.5093	17.4742	0.271619	<0.02	5.81212
D	PH004_339.1	0.523149	0.145942	34.255	-999	-999	-999	-0.01024	-0.02198	-999	0.011566	0	99.6506	17.484	0.359058	<0.02	5.98113
D	ML152_215.1	0.663051	0.138798	33.2389	-999	-999	-999	-0.00122	0.121616	-999	-0.05094	0	97.8439	16.9851	<0.01	0.581456	2.22848
D	ML152_215.1	0.393202	0.21439	33.6591	-999	-999	-999	0.011928	0.039753	-999	-0.01943	0	98.4542	17.0107	0.184654	0.679597	2.01201
D	ML152_215.1	0.510538	0.274178	33.9707	-999	-999	-999	0.021113	0.085175	-999	-0.04063	0	98.6203	17.0015	0.424748	0.494963	3.12968
D	ML152_215.1	0.525413	0.294774	33.7658	-999	-999	-999	-0.01093	0.083384	-999	-0.03265	0	98.6564	16.9011	0.792268	0.429345	2.66516
D	ML152_215.1	0.463873	0.203101	33.8992	-999	-999	-999	0.003185	0.097685	-999	-0.04185	0	98.7033	17.0217	0.28907	0.541812	2.76325
D	ML152_215.1	0.633177	0.112469	33.3133	-999	-999	-999	0.013509	0.174091	-999	-0.07635	0	97.7726	16.6655	0.025745	0.617459	2.05829
D	ML152_215.1	0.631768	0.180342	33.4261	-999	-999	-999	-0.00849	0.098967	-999	-0.03976	0	98.5085	16.9341	<0.01	0.644728	1.97185
D	ML152_215.1	0.410178	0.208506	33.8797	-999	-999	-999	0.007949	0.052293	-999	-0.02381	0	98.7656	16.8969	0.167489	0.677264	2.2207
D	ML322_117.7	0.179896	0.209382	35.9897	-999	-999	-999	0.002451	0.027224	-999	-0.01202	0	100.642	18.0643	0.524328	<0.02	8.72862
D	ML322_117.7	0.171906	0.193806	35.8065	-999	-999	-999	0	0.025173	-999	-0.0106	0	100.369	18.0538	0.503244	<0.02	8.44391
D	ML322_117.7	0.227855	0.146895	35.6504	-999	-999	-999	0.00979	0.024077	-999	-0.01235	0	99.947	17.9971	0.228312	<0.02	7.96591
D	ML322_117.7	0.181441	0.162638	36.0231	-999	-999	-999	0.007757	0.003377	-999	-0.00317	0	100.249	18.0421	0.333649	<0.02	8.53656
D	ML322_117.7	0.189496	0.088836	35.5098	-999	-999	-999	-0.00828	-0.01647	-999	0.008804	0	99.9312	17.7699	0.177965	<0.02	6.86101
D	ML322_117.7	0.155696	0.122083	35.8176	-999	-999	-999	-0.00207	0.03498	-999	-0.01427	0	100.223	17.7833	0.221185	<0.02	7.29863
D	ML322_117.7	0.184936	0.12891	35.4907	-999	-999	-999	-0.00497	-0.01049	-999	0.005539	0	99.8277	17.8091	0.260706	<0.02	7.02546
D	ML322_117.7	0.226968	0.12249	35.7819	-999	-999	-999	-0.00456	-0.00477	-999	0.003029	0	100.277	18.045	0.306545	<0.02	7.81538
D	ML322_117.7	0.2016	0.12195	35.753	-999	-999	-999	0.008171	0.021361	-999	-0.01083	0	99.8009	18.0361	0.167787	<0.02	8.58692
D	ML322_117.7	0.207293	0.164167	35.6303	-999	-999	-999	0.004081	0.035846	-999	-0.01601	0	100.12	18.0777	0.42501	<0.02	8.15173
D	ML322_117.7	0.20082	0.152984	35.8824	-999	-999	-999	0.001633	0.002979	-999	-0.00162	0	100.393	18.0305	0.423096	<0.02	8.57029
D	PH002_352.8	0.306086	0.088215	34.4602	-999	-999	-999	-0.00205	0.014341	-999	-0.00557	0	98.9937	17.2542	0.957696	<0.02	4.20131
D	PH002_352.8	0.418807	0.109182	34.2904	-999	-999	-999	0.003241	0.005739	-999	-0.00315	0	99.1568	17.5095	0.529811	<0.02	5.29272
D	PH002_352.8	0.309666	0.090178	34.5263	-999	-999	-999	-0.00123	0.026016	-999	-0.01067	0	99.6319	17.4398	0.717205	<0.02	4.34959
D	PH002_352.8	0.341144	0.078042	34.4022	-999	-999	-999	0.015362	-0.01924	-999	0.004631	0	99.4691	17.3841	0.71011	<0.02	4.57512
D	PH002_352.8	0.437596	0.166631	34.2169	-999	-999	-999	0.007274	0.056147	-999	-0.02528	0	99.0749	17.2151	0.81636	0.049888	4.46431
D	PH002_352.8	0.372514	0.074876	34.4905	-999	-999	-999	0.003233	0.018432	-999	-0.00849	0	99.3447	17.2729	0.775444	<0.02	4.57067
D	PH002_352.8	0.338573	0.043888	34.5178	-999	-999	-999	-0.01069	0.009322	-999	-0.00152	0	99.4574	17.2845	0.785682	<0.02	4.4614
D	PH002_352.8	0.51903	0.118419	34.1107	-999	-999	-999	0.008501	0.010476	-999	-0.00633	0	99.291	17.3995	0.59506	0.036471	5.05667
D	PH002_352.8	0.342001	0.032207	34.6476	-999	-999	-999	-0.00535	-0.02592	-999	0.012119	0	99.5822	17.434	0.472432	<0.02	4.74231
D	PH002_352.8	0.343894	0.039413	34.4654	-999	-999	-999	-0.00905	0.030425	-999	-0.01077	0	98.8015	17.2728	0.382993	<0.02	4.61239
D	PH002_352.8	0.346361	0.032609	34.4957	-999	-999	-999	0.001617	0.006484	-999	-0.00309	0	98.8768	17.3	0.548567	<0.02	4.62249
D	PH002_352.8	0.327069	0.038565	34.6406	-999	-999	-999	0.013751	0.000064	-999	-0.00312	0	99.5188	17.4296	0.476414	<0.02	4.72265
D	PH002_352.8	0.337956	0.034579	34.7581	-999	-999	-999	0.009706	-0.00995	-999	0.001995	0	99.3651	17.3876	0.46775	<0.02	4.71893
D	PH002_352.8	0.347352	0.048827	34.66	-999	-999	-999	-0.00041	0.001609	-999	-0.00058	0	99.3954	17.4121	0.561474	<0.02	4.79121
D	ML120_206.4	0.926729	0.185404	33.8658	-999	-999	-999	0.007998	-0.00965	-999	0.002254	0	98.0939	16.974	0.166011	0.337288	4.5277
D	ML120_206.4	2.03273	0.062518	30.6011	-999	-999	-999	0.00763	0.475701	-999	-0.20204	0	98.9559	16.9142	0.179781	0.138408	5.85475
D	ML120_206.4	0.821381	0.183044	34.3142	-999	-999	-999	-0.01347	0.038296	-999	-0.01308	0	99.5756	17.4549	0.114582	0.219403	5.40494

Appendix C: Garnet Microprobe Analyses

H1000	Sample	MnO	MgO	CaO	Na2O	K2O	P2O5	Cl	F	CO2	O	H2O	Total	Si	Ti	Sn	Al
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
D	ML120_206.4	0.692923	0.234908	33.9218	-999	-999	-999	0.001599	0.024854	-999	-0.01083	0	98.8135	17.1966	0.316688	0.318282	4.01004
D	ML120_206.4	0.703963	0.196822	33.99	-999	-999	-999	0.003596	-0.00815	-999	0.002628	0	98.8184	16.9755	0.198827	0.311351	4.24407
D	ML120_206.4	0.764397	0.220281	34.1092	-999	-999	-999	-0.00447	0.057111	-999	-0.02303	0	99.0891	17.0768	0.224677	0.258223	4.4673
D	ML120_206.4	0.852469	0.248993	34.2028	-999	-999	-999	0.01403	0.070233	-999	-0.03274	0	99.08	17.2323	0.225071	0.224711	5.30502
D	ML120_206.4	0.938605	0.154658	33.6679	-999	-999	-999	0	0.024419	-999	-0.01028	0	99.3978	17.3605	0.10069	0.21256	4.44125
D	ML120_206.4	0.922757	0.170072	33.5271	-999	-999	-999	0.010006	0.050581	-999	-0.02356	0	99.3131	17.3605	0.112021	0.194205	4.46301
D	ML120_206.4	0.829253	0.21268	33.6653	-999	-999	-999	-0.0061	0.041009	-999	-0.01589	0	98.9874	17.1058	0.275395	0.202149	3.93189
D	ML258_176.0	0.899158	0.229815	34.5926	-999	-999	-999	0.00969	0.040558	-999	-0.01926	0	99.7888	17.8147	0.467373	<0.02	8.46173
D	ML258_176.0	0.976839	0.227999	34.4649	-999	-999	-999	0.004442	-0.00695	-999	0.001926	0	99.8025	17.8409	0.477183	<0.02	8.45442
D	ML258_176.0	0.71086	0.209358	34.9364	-999	-999	-999	0.001209	0.00237	-999	-0.00127	0	99.9077	17.7974	0.551929	<0.02	7.90568
D	ML258_176.0	0.792063	0.191054	34.7717	-999	-999	-999	0.003229	0.038418	-999	-0.01691	0	100.137	17.8437	0.441143	<0.02	8.32648
D	ML258_176.0	0.655585	0.188944	35.6562	-999	-999	-999	0.006065	-0.01172	-999	0.003555	0	100.346	18.0801	0.159077	<0.02	9.08633
D	ML258_176.0	0.855396	0.224506	34.7388	-999	-999	-999	-0.00041	-0.01834	-999	0.007816	0	99.4075	17.6327	0.480138	<0.02	8.46053
D	ML258_176.0	0.65911	0.256723	34.6488	-999	-999	-999	0.006816	-0.01833	-999	0.006184	0	99.1046	17.2298	1.0784	<0.02	6.28393
D	ML258_176.0	0.411951	0.233929	35.8201	-999	-999	-999	0.000808	0.015654	-999	-0.00677	0	100.317	18.0814	0.404737	<0.02	8.97691
D	ML258_176.0	0.156673	3.21469	35.6756	-999	-999	-999	0.406164	0.82533	-999	-0.43919	0	97.1997	16.8539	2.11968	<0.02	6.75142
D	ML258_176.0	0.178536	3.22681	35.5287	-999	-999	-999	0.359653	0.723021	-999	-0.38562	0	96.7993	16.7305	2.34789	<0.02	6.61995
D	ML112_172.0	2.72764	0.132604	31.4744	-999	-999	-999	-0.00658	-0.02325	-999	0.011276	0	100.006	17.9035	0.162469	0.028377	8.98945
D	ML112_172.0	1.79884	0.118463	32.7875	-999	-999	-999	0.011311	0.024554	-999	-0.01289	0	100.4	17.9341	0.337792	<0.02	8.28101
D	ML112_172.0	1.69526	0.121714	33.1541	-999	-999	-999	0.001613	0.022916	-999	-0.01001	0	99.8414	17.7445	0.397764	<0.02	7.69976
D	ML112_172.0	1.84583	0.091154	32.4667	-999	-999	-999	0.008485	0.037075	-999	-0.01752	0	99.6251	17.7873	0.315963	<0.02	8.31531
D	ML112_172.0	1.83286	0.12178	32.6441	-999	-999	-999	0.00525	0.038963	-999	-0.0176	0	99.4959	17.7708	0.320214	<0.02	8.19769
D	ML112_172.0	1.20556	0.106886	33.8464	-999	-999	-999	0.001612	0.024206	-999	-0.01055	0	99.8527	17.7785	0.282696	<0.02	7.53124
D	ML112_172.0	1.69507	0.105572	32.9666	-999	-999	-999	-0.00082	0.029755	-999	-0.01234	0	100.176	17.9168	0.225791	<0.02	8.82781
D	ML112_172.0	1.27562	0.067365	33.5771	-999	-999	-999	0.001209	-0.05218	-999	0.021702	0	99.1251	17.5344	0.217158	<0.02	7.6051
D	ML112_172.0	1.23073	0.098628	33.7706	-999	-999	-999	0.01249	-0.02512	-999	0.007767	0	99.4024	17.6565	0.185106	<0.02	7.46924
D	ML112_172.0	1.37104	0.086654	33.5779	-999	-999	-999	-0.00697	0.013756	-999	-0.00422	0	99.8357	17.7046	0.2676	<0.02	7.78237
D	PH001_308.1	0.401676	0.041656	35.6549	-999	-999	-999	-0.00124	-0.00291	-999	0.001499	0	100.214	18.1294	0.100392	<0.02	9.14684
D	PH001_308.1	0.490177	0.082575	35.6749	-999	-999	-999	0.007314	-0.00649	-999	0.001087	0	100.48	18.1619	0.244251	<0.02	9.46679
D	PH001_308.1	0.146249	0.106106	36.3423	-999	-999	-999	-0.00371	0.031711	-999	-0.01251	0	100.196	17.991	0.196543	<0.02	8.89872
D	PH001_308.1	0.19387	0.140382	36.069	-999	-999	-999	-0.00991	0.041452	-999	-0.01522	0	100.507	18.1911	0.531483	<0.02	8.93408
D	PH001_308.1	0.450993	0.039875	35.3886	-999	-999	-999	0	0.000433	-999	-0.00018	0	99.7371	17.9954	0.071041	0.027844	8.9961
D	PH001_308.1	0.25106	0.120831	35.7509	-999	-999	-999	0.000809	0.019399	-999	-0.00835	0	99.942	17.7366	0.740658	<0.02	8.05049
D	PH001_308.1	0.30249	0.066373	35.7127	-999	-999	-999	0.001213	0.031497	-999	-0.01354	0	100.139	17.8668	0.414013	<0.02	7.56035
D	PH001_308.1	0.344235	0.07412	35.6185	-999	-999	-999	0.009313	0.00513	-999	-0.00426	0	99.7941	17.9509	0.341336	<0.02	8.06545
D	PH001_308.1	0.222814	0.097463	35.76	-999	-999	-999	0.000809	-0.0013	-999	0.00037	0	100.232	17.9731	0.475196	<0.02	7.75547
D	PH001_308.1	0.26432	0.065445	35.8055	-999	-999	-999	0.000405	0.000452	-999	-0.00029	0	100.257	18.0317	0.281688	<0.02	8.169
D	ML109_112.0	0.634359	0.176775	33.912	-999	-999	-999	0.005182	-0.0036	-999	0.000343	0	98.6568	17.0307	0.367034	0.285737	2.68796
D	ML109_112.0	0.677438	0.242558	33.8699	-999	-999	-999	0.004378	0.018694	-999	-0.00886	0	98.4444	16.7487	0.492309	0.406592	2.67695
D	ML109_112.0	0.530964	0.216959	34.0678	-999	-999	-999	-0.00081	0.041921	-999	-0.01748	0	98.2636	16.8512	0.316722	0.253646	2.61819
D	ML109_112.0	0.527446	0.200886	34.1024	-999	-999	-999	0.009961	0.005653	-999	-0.00463	0	98.4283	17.011	0.305666	0.293256	2.63626
D	ML109_112.0	0.480329	0.243311	34.1992	-999	-999	-999	0.001194	0.006855	-999	-0.00315	0	98.5104	16.9204	0.305624	0.296953	2.41486
D	ML109_112.0	0.653773	0.214884	34.0337	-999	-999	-999	0.001594	0.051567	-999	-0.02207	0	98.4434	16.8403	0.329464	0.38283	3.0398
D	ML109_112.0	0.787254	0.223045	33.9071	-999	-999	-999	0.009173	0.024312	-999	-0.01231	0	98.5067	16.8898	0.415558	0.286692	3.13152
D	ML109_112.0	0.822342	0.15975	33.6657	-999	-999	-999	-0.00325	0.008869	-999	-0.00301	0	98.6631	17.129	0.395631	0.193475	3.52449
D	ML109_112.0	0.757416	0.194043	33.8221	-999	-999	-999	0.016353	0.012216	-999	-0.00884	0	98.4008	17.0225	0.381339	0.285976	3.16595
D	ML109_112.0	0.782642	0.219251	33.7929	-999	-999	-999	0.00678	0.010668	-999	-0.00602	0	98.0632	16.9106	0.389727	0.292459	3.20214
D	ML265_185.3	0.590843	0.519589	35.454	-999	-999	-999	0.004054	0.162235	-999	-0.06923	0	100.191	18.0307	0.883133	<0.02	9.6078
D	ML265_185.3	0.868598	0.509139	34.9373	-999	-999	-999	0.004863	0.07679	-999	-0.03344	0	99.9627	17.9424	0.852516	<0.02	9.54912
D	ML265_185.3	0.875313	0.435681	35.14	-999	-999	-999	0.010545	0.028489	-999	-0.01437	0	100.693	18.05	0.64547	<0.02	9.75417
D	ML265_185.3	0.690618	0.550738	35.4845	-999	-999	-999	0.010124	0.096714	-999	-0.04301	0	100.209	17.8376	1.15792	<0.02	9.59418
D	ML265_185.3	0.604344	0.544326	35.6568	-999	-999	-999	-0.00206	0.174062	-999	-0.07283	0	100.588	17.8725	1.31641	<0.02	9.21682
D	ML265_185.3	0.821476	0.394613	35.157	-999	-999	-999	0.002027	0.076202	-999	-0.03255	0	99.9569	17.9373	0.552014	<0.02	9.52508
D	ML265_185.3	0.853664	0.496395	35.0698	-999	-999	-999	-0.007	0.0921	-999	-0.0372	0	99.9575	17.8681	1.08354	<0.02	9.42027

**Appendix C: Garnet Microprobe Analyses**

H1000	Sample	MnO	MgO	CaO	Na2O	K2O	P2O5	Cl	F	CO2	O	H2O	Total	Si	Ti	Sn	Al
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
D	ML265_185.3	0.896461	0.439288	35.2501	-999	-999	-999	0.007703	0.029364	-999	-0.0141	0	100.302	17.9671	0.508251	<0.02	9.64163
D	ML265_185.3	0.920228	0.369046	35.1951	-999	-999	-999	0.010949	0.053418	-999	-0.02496	0	100.725	18.12	0.464284	<0.02	9.69746
D	ML243_143.7	0.685944	0.209409	34.9086	-999	-999	-999	0.015296	0.014795	-999	-0.00969	0	99.5655	17.6603	0.45504	0.039935	6.17032
D	ML243_143.7	0.833192	0.18303	34.7049	-999	-999	-999	0.010867	-0.04173	-999	0.015125	0	99.3764	17.5008	0.592246	<0.02	6.19133
D	ML243_143.7	0.683429	0.200135	34.771	-999	-999	-999	-0.00573	0.001296	-999	0.00074	0	99.7975	17.5802	0.372426	0.027212	6.1249
D	ML243_143.7	0.711159	0.20846	35.1638	-999	-999	-999	-0.00287	0.042038	-999	-0.01706	0	99.5899	17.3763	0.641727	<0.02	6.84973
D	ML243_143.7	0.651932	0.209842	34.7081	-999	-999	-999	0.010065	0.011022	-999	-0.00691	0	99.3058	17.4816	0.590284	<0.02	6.1457
D	ML243_143.7	0.678197	0.228776	34.977	-999	-999	-999	0.00685	0.008204	-999	-0.005	0	100.043	17.7194	0.647387	<0.02	6.46611
D	ML243_143.7	0.667089	0.255134	35.1339	-999	-999	-999	-0.00287	0.02361	-999	-0.0093	0	99.5252	17.4966	0.740521	0.02834	6.56555
D	ML243_143.7	0.55526	0.231947	35.0027	-999	-999	-999	0.00523	0.031466	-999	-0.01442	0	99.2799	17.4793	0.477265	<0.02	6.15125
D	ML243_143.7	0.426651	0.183097	35.4759	-999	-999	-999	0.006072	0.088379	-999	-0.03858	0	100.199	17.9674	0.759293	<0.02	8.62573
D	ML243_143.7	0.952427	0.179487	34.6922	-999	-999	-999	0.010466	0.078288	-999	-0.03532	0	99.6559	17.5325	0.566746	<0.02	6.44354
D	ML258_199.2	0.398571	0.21785	35.5983	-999	-999	-999	0.007562	0.021295	-999	-0.01067	0	100.343	17.9911	0.497552	<0.02	8.79356
D	ML258_199.2	0.433986	0.234764	35.57	-999	-999	-999	0.084326	0.056886	-999	-0.04298	0	100.541	18.0003	0.533692	<0.02	8.63792
D	ML258_199.2	0.448968	0.196457	35.4521	-999	-999	-999	0.003981	0.020315	-999	-0.00945	0	100.329	18.0351	0.489064	<0.02	8.73163
D	ML258_199.2	0.386276	0.221586	35.5248	-999	-999	-999	0.002785	-0.00334	-999	0.000778	0	100.056	17.9476	0.562784	<0.02	8.56258
D	ML258_199.2	0.751914	0.079171	35.1585	-999	-999	-999	-0.00891	-0.00311	-999	0.003311	0	100.297	18.0843	0.258548	<0.02	8.87794
D	ML258_199.2	0.850092	0.065666	35.1656	-999	-999	-999	0.00279	-0.0011	-999	-0.00017	0	100.04	18.1518	0.204897	<0.02	9.13722
D	ML258_199.2	0.451872	0.166481	35.6024	-999	-999	-999	0.228705	0.000999	-999	-0.05203	0	100.385	17.9863	0.451716	0.029815	8.60995
D	ML258_199.2	0.672895	0.139871	35.3198	-999	-999	-999	0.143585	0.01357	-999	-0.03811	0	100.115	17.8972	0.360826	<0.02	8.47808
D	ML258_199.2	0.445638	0.197367	35.235	-999	-999	-999	0.001989	-0.01716	-999	0.006775	0	100.209	18.0014	0.516529	<0.02	8.39339
D	ML258_199.2	1.05514	0.089283	35.1205	-999	-999	-999	0.00638	-0.01281	-999	0.003956	0	100.561	18.1405	0.227125	<0.02	9.41994
EOF																	



Appendix C: Garnet Microprobe Analyses

H1000	Sample	V	Cr	Fe	Mn	Mg	Ca	Na	K	P	Cl	F	C	O	H	Total
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
D	ML200_361.5gt	<0.026	<0.023	13.465	0.818773	0.061277	23.5974	<0.022	<0.008	<0.011	<0.013	0.176294	0	37.5927	0	98.19742
D	ML200_361.5gt	<0.024	<0.021	13.9216	1.16775	0.049508	22.7139	<0.023	<0.008	<0.011	0.017136	0.388005	0	37.9062	0	99.204366
D	ML200_361.5gt	0.056698	<0.023	13.3091	1.06663	0.051936	23.0859	<0.025	<0.008	0.010883	<0.013	0.261051	0	38.4216	0	99.767679
D	ML200_361.5gt	0.035003	0.026799	13.4559	0.812826	0.059832	23.7838	<0.023	<0.008	<0.012	<0.013	0.101678	0	38.429	0	99.874642
D	ML200_361.5gt	0.038093	<0.022	13.4148	0.910851	0.055918	23.6835	<0.024	<0.008	<0.011	<0.014	0.13344	0	38.1118	0	99.249273
D	ML200_361.5gt	0.03892	0.066755	14.9223	0.791068	0.076666	23.9145	<0.023	<0.007	<0.012	<0.013	0.21785	0	37.6542	0	99.658312
D	ML200_361.5gt	0.029902	<0.021	13.504	1.15655	0.045226	22.9278	<0.023	<0.008	<0.012	<0.013	0.4594	0	37.8989	0	99.160254
D	ML205_262.0gt	0.050123	<0.021	10.6993	0.851008	0.115287	24.2447	<0.021	<0.008	<0.011	<0.012	0.121083	0	39.2642	0	100.095661
D	ML205_262.0gt	<0.022	0.022167	11.5674	0.66254	0.080473	24.6286	<0.024	<0.008	<0.011	<0.013	<0.031	0	38.8953	0	99.759381
D	ML205_262.0gt	<0.024	<0.022	8.55588	0.094972	0.051637	25.5166	<0.024	<0.008	<0.012	<0.013	<0.030	0	40.285	0	100.512632
D	ML205_262.0gt	<0.025	<0.021	10.9547	0.807506	0.070392	24.3158	<0.023	<0.007	<0.010	<0.013	0.061376	0	39.618	0	100.792605
D	ML205_262.0gt	0.031684	<0.022	7.71104	0.831374	0.068421	24.4251	<0.024	<0.007	<0.012	<0.013	0.072149	0	40.9947	0	101.498765
D	ML205_262.0gt	0.071877	0.064486	8.0845	0.679966	0.10616	24.3762	<0.022	0.014448	<0.011	0.103342	0.196369	0	39.3519	0	99.286167
D	ML205_262.0gt	0.045462	<0.022	6.75349	0.853193	0.099896	24.3407	<0.020	<0.007	0.012345	<0.013	0.152561	0	40.9051	0	100.9565
D	ML205_262.0gt	0.041165	0.079133	9.7764	0.85039	0.300901	24.0015	<0.025	<0.008	<0.011	<0.013	0.136191	0	39.0312	0	98.969593
D	ML205_295.9gt	0.054998	<0.022	11.8	0.725953	0.131747	24.4422	<0.022	<0.007	<0.010	<0.012	0.077028	0	38.546	0	99.440576
D	ML205_295.9gt	0.073071	<0.023	12.2505	0.684317	0.190034	24.3607	<0.026	<0.008	<0.010	<0.013	0.078629	0	38.1388	0	99.078669
D	ML205_295.9gt	0.049551	<0.022	11.8336	0.719861	0.197947	24.4241	<0.024	<0.007	0.012307	<0.014	0.08942	0	37.9782	0	98.591615
D	ML205_295.9gt	0.065677	<0.022	12.2275	0.669121	0.185541	24.4545	<0.025	<0.008	<0.011	<0.013	0.07973	0	37.9301	0	98.741131
D	ML205_295.9gt	0.069364	<0.021	14.9909	0.481205	0.156609	24.3286	<0.025	<0.008	<0.011	<0.012	0.063061	0	37.1411	0	98.724406
D	ML205_295.9gt	0.113069	0.035794	15.0474	0.51854	0.130068	24.2552	<0.027	<0.008	<0.010	<0.014	0.12626	0	36.852	0	98.219479
D	PH001_317.5	-999	<0.01	10.0757	0.670503	0.057534	23.927	-999	-999	-999	<0.01	<0.03	-999	39.3278	0	99.267832
D	PH001_317.5	-999	<0.01	11.506	0.391362	0.041134	24.7125	-999	-999	-999	<0.01	<0.03	-999	39.0596	0	99.872946
D	PH001_317.5	-999	<0.01	16.3795	0.426412	<0.01	24.0399	-999	-999	-999	<0.01	<0.03	-999	36.9988	0	98.502332
D	PH001_317.5	-999	<0.01	9.42917	0.891073	0.053564	23.1423	-999	-999	-999	<0.01	<0.03	-999	39.3344	0	98.586767
D	PH001_317.5	-999	<0.01	10.5062	0.35287	0.029043	24.6839	-999	-999	-999	<0.01	<0.03	-999	38.587	0	98.256968
D	PH001_317.5	-999	<0.01	11.0699	0.32016	0.043159	24.598	-999	-999	-999	<0.01	<0.03	-999	38.4879	0	98.390507
D	PH001_317.5	-999	<0.01	10.5116	0.745113	0.018823	24.1226	-999	-999	-999	<0.01	<0.03	-999	38.7198	0	98.553234
D	PH001_317.5	-999	0.022477	11.3599	0.349495	0.042992	24.7508	-999	-999	-999	<0.01	<0.03	-999	38.7984	0	99.264266
D	PH001_317.5	-999	<0.01	11.6708	0.472711	0.067795	24.3599	-999	-999	-999	<0.01	<0.03	-999	38.4985	0	98.788405
D	PH001_317.5	-999	0.018169	11.2883	0.561445	0.012829	24.3365	-999	-999	-999	0.015708	<0.03	-999	38.8306	0	99.144392
D	PH001_317.5	-999	<0.01	11.3277	0.374167	0.045345	24.8271	-999	-999	-999	<0.01	<0.03	-999	38.6324	0	98.995874
D	PH001_317.5	-999	<0.01	14.0504	0.619049	0.028817	24.0109	-999	-999	-999	<0.01	<0.03	-999	37.9506	0	98.987866
D	PH002_341.9	-999	<0.01	8.84532	0.689967	0.065614	23.9301	-999	-999	-999	<0.01	<0.03	-999	39.9645	0	99.701851
D	PH002_341.9	-999	<0.01	9.39568	0.416564	0.057254	24.6781	-999	-999	-999	<0.01	0.037426	-999	39.4112	0	99.265969
D	PH002_341.9	-999	<0.01	10.5625	0.364223	<0.01	24.7044	-999	-999	-999	<0.01	<0.03	-999	39.0155	0	99.062573
D	PH002_341.9	-999	<0.01	8.72267	0.433293	0.032443	24.7167	-999	-999	-999	<0.01	0.048557	-999	39.8465	0	99.728414
D	PH002_341.9	-999	<0.01	8.66741	0.670518	0.065783	23.8302	-999	-999	-999	<0.01	<0.03	-999	39.5469	0	98.720387
D	PH002_341.9	-999	<0.01	11.2003	0.347225	0.016792	24.8516	-999	-999	-999	<0.01	<0.03	-999	38.6422	0	98.830965
D	PH002_341.9	-999	<0.01	10.5212	0.340883	0.015763	24.8894	-999	-999	-999	<0.01	<0.03	-999	39.0695	0	99.210311
D	PH002_341.9	-999	<0.01	12.6134	0.333498	0.041782	24.6134	-999	-999	-999	<0.01	<0.03	-999	37.971	0	98.343464
D	PH002_341.9	-999	<0.01	9.7438	0.446971	0.064788	24.5551	-999	-999	-999	<0.01	<0.03	-999	39.2876	0	99.167282
D	PH002_341.9	-999	<0.01	9.83057	0.410274	0.076388	24.8144	-999	-999	-999	0.049181	<0.03	-999	39.3456	0	99.501489
D	PH002_341.9	-999	<0.01	10.2671	0.40266	0.048127	24.613	-999	-999	-999	<0.01	<0.03	-999	39.1632	0	99.208629
D	PH002_341.9	-999	<0.01	9.77419	0.351353	0.077561	24.8946	-999	-999	-999	0.013301	<0.03	-999	39.0857	0	98.864197
D	PH002_343.2	-999	0.019262	9.49496	0.245577	0.113886	25.0651	-999	-999	-999	<0.01	<0.03	-999	39.3386	0	99.307238
D	PH002_343.2	-999	<0.01	6.76028	0.246215	0.1274	25.1786	-999	-999	-999	<0.01	0.054074	-999	39.9328	0	99.026539
D	PH002_343.2	-999	0.031567	8.09245	0.422942	0.147335	24.9294	-999	-999	-999	<0.01	0.045049	-999	39.8397	0	99.623061
D	PH002_343.2	-999	0.026105	8.51903	0.330146	0.078269	24.7634	-999	-999	-999	<0.01	<0.02	-999	39.9903	0	99.770965
D	PH002_343.2	-999	<0.01	9.74343	0.269608	0.094266	25.0572	-999	-999	-999	<0.01	<0.03	-999	39.6414	0	100.003103
D	PH002_343.2	-999	0.020959	9.28917	0.304908	0.115308	25.0028	-999	-999	-999	<0.01	<0.03	-999	39.4981	0	99.474055
D	PH002_343.2	-999	0.018052	7.2282	0.238624	0.067697	25.2049	-999	-999	-999	<0.01	<0.03	-999	40.0719	0	99.339146
D	PH002_343.2	-999	<0.01	6.78274	0.194543	0.085797	25.2559	-999	-999	-999	<0.01	<0.03	-999	40.3797	0	99.689948
D	PH002_343.2	-999	<0.01	7.65711	0.383736	0.091064	24.7899	-999	-999	-999	<0.01	<0.03	-999	39.7558	0	98.911944

Appendix C: Garnet Microprobe Analyses

H1000	Sample	V	Cr	Fe	Mn	Mg	Ca	Na	K	P	Cl	F	C	O	H	Total
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
D	PH002_343.2	-999	<0.01	7.79641	0.359518	0.102721	24.8191	-999	-999	-999	<0.01	<0.03	-999	40.4075	0	100.266086
D	PH002_343.2	-999	<0.01	8.16757	0.351551	0.108477	24.7332	-999	-999	-999	<0.01	<0.03	-999	39.7502	0	99.15774
D	PH002_343.2	-999	0.020402	7.65975	0.377427	0.105536	24.8042	-999	-999	-999	<0.01	0.030577	-999	40.1102	0	99.616644
D	PH004_157.9	-999	<0.01	6.8854	0.701817	0.140803	24.5742	-999	-999	-999	<0.01	<0.03	-999	40.5923	0	100.003527
D	PH004_157.9	-999	<0.01	6.23427	0.644422	0.228648	24.6894	-999	-999	-999	<0.01	<0.03	-999	40.8896	0	100.440596
D	PH004_157.9	-999	<0.01	7.15	0.620676	0.184876	24.6641	-999	-999	-999	<0.01	<0.03	-999	40.5249	0	100.164435
D	PH004_157.9	-999	<0.01	5.68019	0.607826	0.253716	24.6549	-999	-999	-999	<0.01	0.046933	-999	40.3869	0	99.198475
D	PH004_157.9	-999	<0.01	5.67891	0.603214	0.392825	24.5592	-999	-999	-999	<0.01	0.050864	-999	40.4292	0	99.250293
D	PH004_157.9	-999	<0.01	5.89002	0.540751	2.02053	23.2426	-999	-999	-999	<0.01	<0.03	-999	41.0124	0	99.742524
D	PH004_157.9	-999	<0.01	5.68656	0.581812	0.212996	24.8844	-999	-999	-999	<0.01	<0.03	-999	40.7042	0	99.736163
D	PH004_157.9	-999	<0.01	6.7159	0.533727	0.214791	24.552	-999	-999	-999	<0.01	<0.03	-999	40.776	0	100.32668
D	PH004_157.9	-999	<0.01	6.77538	0.556093	0.170917	24.4972	-999	-999	-999	<0.01	<0.03	-999	40.3685	0	99.525624
D	PH004_157.9	-999	<0.01	6.09966	0.546196	0.251224	24.5846	-999	-999	-999	<0.01	0.034193	-999	40.0214	0	98.603412
D	PH001_309.7	-999	<0.01	7.63898	0.574976	0.034331	24.3428	-999	-999	-999	<0.01	<0.03	-999	39.9675	0	99.342557
D	PH001_309.7	-999	<0.01	8.57293	0.546729	0.092498	24.4315	-999	-999	-999	<0.01	<0.03	-999	38.9384	0	97.54786
D	PH001_309.7	-999	<0.01	6.63093	0.349864	0.080008	25.2205	-999	-999	-999	<0.01	<0.03	-999	40.1542	0	99.230902
D	PH001_309.7	-999	<0.01	5.58331	0.141089	0.103494	25.7237	-999	-999	-999	0.014169	0.04823	-999	40.8934	0	100.148284
D	PH001_309.7	-999	<0.01	6.77261	0.369791	0.065752	25.172	-999	-999	-999	<0.01	0.029923	-999	40.2946	0	99.522122
D	PH001_309.7	-999	<0.01	8.65632	0.540167	0.081268	24.4055	-999	-999	-999	<0.01	<0.03	-999	39.8476	0	99.493161
D	PH001_309.7	-999	<0.01	8.68598	0.526909	0.069385	24.3633	-999	-999	-999	<0.01	<0.03	-999	39.8242	0	99.442476
D	PH001_309.7	-999	<0.01	8.2437	0.556177	0.071112	24.3381	-999	-999	-999	<0.01	0.070695	-999	40.0694	0	99.874559
D	PH001_309.7	-999	0.021349	8.45357	0.552712	0.063153	24.3992	-999	-999	-999	<0.01	<0.03	-999	39.7864	0	99.296852
D	PH001_309.7	-999	<0.01	7.92897	0.569891	0.031685	24.1422	-999	-999	-999	<0.01	0.035447	-999	39.6078	0	98.769422
D	PH001_309.7	-999	<0.01	7.1586	0.338978	0.081512	25.1343	-999	-999	-999	<0.01	0.052634	-999	40.3494	0	99.891304
D	PH001_309.7	-999	<0.01	6.86472	0.383791	0.096199	25.147	-999	-999	-999	0.016965	<0.03	-999	40.2568	0	99.625012
D	ML322_114.1	-999	<0.01	7.68561	0.365898	0.130856	25.0029	-999	-999	-999	<0.01	<0.03	-999	40.132	0	99.705942
D	ML322_114.1	-999	<0.01	7.73525	0.412504	0.135615	24.8905	-999	-999	-999	<0.01	<0.03	-999	39.8011	0	99.101951
D	ML322_114.1	-999	<0.01	7.45907	0.391128	0.134871	24.9965	-999	-999	-999	<0.01	<0.03	-999	40.0159	0	99.422347
D	ML322_114.1	-999	<0.01	7.40272	0.366228	0.139243	24.93	-999	-999	-999	<0.01	<0.03	-999	39.9757	0	99.194454
D	ML322_114.1	-999	<0.01	6.99254	0.44775	0.13925	24.9172	-999	-999	-999	<0.01	<0.03	-999	40.34	0	99.712386
D	ML322_114.1	-999	<0.01	6.10932	0.429058	0.109759	25.1388	-999	-999	-999	<0.01	0.190653	-999	39.9968	0	98.85944
D	ML322_114.1	-999	<0.01	6.77921	0.324417	0.090676	24.9871	-999	-999	-999	<0.01	<0.03	-999	39.8636	0	98.629138
D	ML322_114.1	-999	<0.01	6.58636	0.335161	0.090574	25.1165	-999	-999	-999	<0.01	0.037912	-999	39.9181	0	98.756226
D	ML322_114.1	-999	<0.01	6.29246	0.361145	0.113246	25.0315	-999	-999	-999	<0.01	0.031203	-999	40.4392	0	99.55108
D	ML322_114.1	-999	<0.01	7.31461	0.595965	0.231505	24.849	-999	-999	-999	<0.01	<0.03	-999	40.0593	0	99.439164
D	ML322_114.1	-999	<0.01	6.72696	0.324972	0.104384	25.1369	-999	-999	-999	<0.01	0.034581	-999	40.4511	0	99.869851
D	PH004_140.4	-999	0.027282	12.5754	0.431785	0.122601	24.78	-999	-999	-999	<0.01	<0.03	-999	38.1304	0	98.8999
D	PH004_140.4	-999	<0.01	12.855	0.339622	0.162536	24.7361	-999	-999	-999	0.014417	<0.03	-999	38.2048	0	99.179177
D	PH004_140.4	-999	0.029928	12.4116	0.446477	0.14472	24.6076	-999	-999	-999	<0.01	0.038951	-999	38.3604	0	99.167667
D	PH004_140.4	-999	<0.01	12.7231	0.371734	0.14479	24.7492	-999	-999	-999	<0.01	<0.03	-999	38.0383	0	98.754304
D	PH004_140.4	-999	<0.01	12.5027	0.452041	0.109756	24.6014	-999	-999	-999	<0.01	<0.03	-999	38.5856	0	99.549341
D	PH004_140.4	-999	0.023662	12.6201	0.366886	0.129961	24.6317	-999	-999	-999	<0.01	0.037188	-999	38.0899	0	98.743317
D	PH004_140.4	-999	<0.01	12.6382	0.434216	0.144261	24.5981	-999	-999	-999	<0.01	<0.03	-999	38.3135	0	99.160516
D	PH004_140.4	-999	<0.01	12.7077	0.374086	0.142123	24.6752	-999	-999	-999	<0.01	<0.03	-999	38.0936	0	98.808903
D	PH004_140.4	-999	0.027299	12.4712	0.408226	0.139182	24.6865	-999	-999	-999	<0.01	<0.03	-999	38.3119	0	99.103557
D	PH004_140.4	-999	0.033153	12.8586	0.454794	0.131085	24.4983	-999	-999	-999	<0.01	<0.03	-999	38.1663	0	98.983906
D	PH004_41.8	-999	0.020851	10.1594	0.846851	0.112064	22.9527	-999	-999	-999	<0.01	<0.03	-999	39.5664	0	99.329058
D	PH004_41.8	-999	<0.01	10.2329	1.22395	0.090558	21.8966	-999	-999	-999	<0.01	0.22085	-999	39.7087	0	99.63298
D	PH004_41.8	-999	<0.01	10.7319	0.959196	0.088313	22.3025	-999	-999	-999	<0.01	0.104181	-999	39.7679	0	99.953454
D	PH004_41.8	-999	<0.01	6.54337	0.258054	0.174169	24.7525	-999	-999	-999	0.016598	0.032385	-999	40.4886	0	99.558662
D	PH004_41.8	-999	<0.01	6.44621	0.259126	0.202368	24.9526	-999	-999	-999	<0.01	<0.03	-999	40.6165	0	99.8731
D	PH004_41.8	-999	0.022837	10.0935	0.865553	0.10683	22.831	-999	-999	-999	<0.01	0.038105	-999	39.8384	0	99.819295
D	PH004_41.8	-999	<0.01	11.9473	0.334703	0.16602	24.5598	-999	-999	-999	<0.01	<0.03	-999	38.8055	0	99.572368
D	PH004_41.8	-999	<0.01	6.33108	0.268212	0.244121	24.9498	-999	-999	-999	<0.01	0.066924	-999	40.927	0	100.535387

Appendix C: Garnet Microprobe Analyses

H1000	Sample	V	Cr	Fe	Mn	Mg	Ca	Na	K	P	Cl	F	C	O	H	Total
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
D	PH004_41.8	-999	<0.01	6.69532	0.260526	0.178177	24.8867	-999	-999	-999	<0.01	<0.03	-999	40.35	0	99.357611
D	PH004_41.8	-999	<0.01	10.3555	0.919496	0.112089	22.649	-999	-999	-999	<0.01	0.059169	-999	39.8013	0	99.875075
D	PH004_135.2	-999	0.01924	10.621	0.284053	0.210108	24.5266	-999	-999	-999	<0.01	<0.03	-999	39.0532	0	99.323011
D	PH004_135.2	-999	<0.01	10.5341	0.198466	0.234801	24.9534	-999	-999	-999	<0.01	<0.03	-999	38.9647	0	99.259537
D	PH004_135.2	-999	<0.01	11.4095	0.235436	0.225174	24.8292	-999	-999	-999	<0.01	<0.03	-999	38.5515	0	98.900318
D	PH004_135.2	-999	0.0581	10.3927	0.217118	0.263319	24.4978	-999	-999	-999	<0.01	<0.03	-999	38.7516	0	98.808837
D	PH004_135.2	-999	<0.01	11.36	0.275038	0.230726	24.8329	-999	-999	-999	<0.01	<0.03	-999	38.6063	0	99.006378
D	PH004_135.2	-999	<0.01	8.84962	0.406268	0.193506	24.3907	-999	-999	-999	<0.01	<0.03	-999	39.9909	0	99.961932
D	PH004_135.2	-999	<0.01	8.19039	0.388725	0.225086	24.4034	-999	-999	-999	<0.01	<0.03	-999	40.0439	0	99.680421
D	PH004_135.2	-999	<0.01	8.67079	0.390787	0.212757	24.4395	-999	-999	-999	<0.01	<0.03	-999	40.1175	0	100.128846
D	PH004_135.2	-999	<0.01	9.32718	0.386412	0.158639	24.3873	-999	-999	-999	<0.01	<0.03	-999	39.706	0	99.599042
D	PH004_135.2	-999	<0.01	8.05081	0.375582	0.223657	24.2923	-999	-999	-999	0.013746	<0.03	-999	40.0616	0	99.598615
D	PH004_339.1	-999	0.021763	12.111	0.096886	0.096886	24.3656	-999	-999	-999	<0.01	<0.03	-999	38.7002	0	99.381913
D	PH004_339.1	-999	<0.01	9.02399	0.351091	0.050393	24.7857	-999	-999	-999	<0.01	<0.03	-999	40.0777	0	100.177378
D	PH004_339.1	-999	<0.01	11.444	0.472197	0.080773	24.0725	-999	-999	-999	<0.01	<0.03	-999	39.22	0	99.792263
D	PH004_339.1	-999	<0.01	9.23518	0.252431	0.074427	24.9894	-999	-999	-999	<0.01	<0.03	-999	39.6645	0	99.575631
D	PH004_339.1	-999	<0.01	12.1909	0.377432	0.086287	24.5759	-999	-999	-999	<0.01	<0.03	-999	38.7171	0	99.505558
D	PH004_339.1	-999	<0.01	11.9712	0.405153	0.088007	24.4818	-999	-999	-999	<0.01	<0.03	-999	38.8809	0	99.651248
D	ML152_215.1	-999	<0.01	17.4875	0.5135	0.083699	23.7556	-999	-999	-999	<0.01	0.121616	-999	36.1199	0	97.876851
D	ML152_215.1	-999	<0.01	17.7012	0.304516	0.129283	24.0559	-999	-999	-999	<0.01	0.039753	-999	36.3121	0	98.429713
D	ML152_215.1	-999	<0.01	15.6786	0.395387	0.165337	24.2786	-999	-999	-999	0.021113	0.085175	-999	36.941	0	98.616103
D	ML152_215.1	-999	<0.01	16.303	0.406907	0.177756	24.1322	-999	-999	-999	<0.01	0.083384	-999	36.7783	0	98.66942
D	ML152_215.1	-999	<0.01	16.518	0.359247	0.122475	24.2275	-999	-999	-999	<0.01	0.097685	-999	36.7449	0	98.685639
D	ML152_215.1	-999	<0.01	18.0405	0.490364	0.067822	23.8088	-999	-999	-999	0.013509	0.174091	-999	35.7941	0	97.75618
D	ML152_215.1	-999	<0.01	18.2134	0.489274	0.108751	23.8894	-999	-999	-999	<0.01	0.098967	-999	36.1561	0	98.50657
D	ML152_215.1	-999	<0.01	17.6997	0.317662	0.125735	24.2136	-999	-999	-999	<0.01	0.052293	-999	36.4024	0	98.773743
D	ML322_117.7	-999	<0.01	6.3968	0.13932	0.126263	25.7216	-999	-999	-999	<0.01	<0.03	-999	40.9101	0	100.611331
D	ML322_117.7	-999	<0.01	6.83519	0.133133	0.11687	25.5907	-999	-999	-999	<0.01	<0.03	-999	40.6892	0	100.366047
D	ML322_117.7	-999	<0.01	7.73778	0.176462	0.088582	25.4791	-999	-999	-999	<0.01	<0.03	-999	40.2317	0	99.904946
D	ML322_117.7	-999	<0.01	6.68903	0.140517	0.098075	25.7455	-999	-999	-999	<0.01	<0.03	-999	40.6653	0	100.250731
D	ML322_117.7	-999	<0.01	10.0252	0.146755	0.053571	25.3786	-999	-999	-999	<0.01	<0.03	-999	39.5558	0	99.968801
D	ML322_117.7	-999	<0.01	9.23518	0.120579	0.07362	25.5986	-999	-999	-999	<0.01	0.03498	-999	39.8413	0	100.207374
D	ML322_117.7	-999	<0.01	9.52813	0.143224	0.077736	25.365	-999	-999	-999	<0.01	<0.03	-999	39.6617	0	99.871056
D	ML322_117.7	-999	<0.01	7.98327	0.175776	0.073865	25.5731	-999	-999	-999	<0.01	<0.03	-999	40.3119	0	100.284836
D	ML322_117.7	-999	<0.01	6.70821	0.156129	0.073539	25.5524	-999	-999	-999	<0.01	<0.02	-999	40.5009	0	99.781985
D	ML322_117.7	-999	<0.01	7.22981	0.160539	0.098997	25.4647	-999	-999	-999	<0.01	0.035846	-999	40.4663	0	100.110632
D	ML322_117.7	-999	<0.01	6.74716	0.155525	0.092253	25.6449	-999	-999	-999	<0.01	<0.03	-999	40.7233	0	100.387024
D	PH002_352.8	-999	<0.01	13.7368	0.237049	0.053196	24.6285	-999	-999	-999	<0.01	<0.03	-999	37.9053	0	98.974051
D	PH002_352.8	-999	<0.01	12.4287	0.324346	0.06584	24.5071	-999	-999	-999	<0.01	<0.03	-999	38.4907	0	99.148717
D	PH002_352.8	-999	<0.01	13.9827	0.239821	0.05438	24.6757	-999	-999	-999	<0.01	<0.03	-999	38.1636	0	99.622796
D	PH002_352.8	-999	<0.01	13.6955	0.264199	0.047061	24.587	-999	-999	-999	0.015362	<0.03	-999	38.2047	0	99.483152
D	PH002_352.8	-999	0.04796	13.5687	0.338897	0.100483	24.4546	-999	-999	-999	<0.01	0.056147	-999	37.9553	0	99.067745
D	PH002_352.8	-999	<0.01	13.6235	0.288494	0.045152	24.6501	-999	-999	-999	<0.01	<0.03	-999	38.1073	0	99.33356
D	PH002_352.8	-999	<0.01	13.841	0.262208	0.026466	24.6696	-999	-999	-999	<0.01	<0.03	-999	38.101	0	99.431856
D	PH002_352.8	-999	0.024521	12.9633	0.401964	0.07141	24.3787	-999	-999	-999	<0.01	<0.03	-999	38.3445	0	99.272096
D	PH002_352.8	-999	<0.01	13.6254	0.264863	0.019421	24.7624	-999	-999	-999	<0.01	<0.03	-999	38.2913	0	99.612126
D	PH002_352.8	-999	<0.01	13.672	0.266329	0.023767	24.6322	-999	-999	-999	<0.01	0.030425	-999	37.8831	0	98.776004
D	PH002_352.8	-999	<0.01	13.4483	0.268239	0.019664	24.6539	-999	-999	-999	<0.01	<0.03	-999	37.9798	0	98.84096
D	PH002_352.8	-999	<0.01	13.58	0.253299	0.023256	24.7574	-999	-999	-999	0.013751	<0.03	-999	38.243	0	99.49937
D	PH002_352.8	-999	<0.01	13.4951	0.26173	0.020852	24.8414	-999	-999	-999	<0.01	<0.03	-999	38.19	0	99.383362
D	PH002_352.8	-999	0.020869	13.2741	0.269007	0.029444	24.7713	-999	-999	-999	<0.01	<0.03	-999	38.272	0	99.401504
D	ML120_206.4	-999	0.016988	13.6159	0.717706	0.111804	24.2037	-999	-999	-999	<0.01	<0.03	-999	37.4244	0	98.095497
D	ML120_206.4	-999	<0.01	14.2013	1.57425	0.0377	21.8704	-999	-999	-999	<0.01	0.475701	-999	37.7122	0	98.95869
D	ML120_206.4	-999	<0.01	12.6036	0.636119	0.110381	24.5241	-999	-999	-999	<0.01	0.038296	-999	38.4785	0	99.584821

Appendix C: Garnet Microprobe Analyses

H1000	Sample	V	Cr	Fe	Mn	Mg	Ca	Na	K	P	Cl	F	C	O	H	Total
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
D	ML120_206.4	-999	<0.01	14.4918	0.536635	0.141656	24.2437	-999	-999	-999	<0.01	<0.03	-999	37.5278	0	98.783201
D	ML120_206.4	-999	<0.01	14.6565	0.545185	0.118689	24.2924	-999	-999	-999	<0.01	<0.03	-999	37.4727	0	98.815222
D	ML120_206.4	-999	<0.01	14.2228	0.591988	0.132835	24.3776	-999	-999	-999	<0.01	0.057111	-999	37.6903	0	99.099634
D	ML120_206.4	-999	<0.01	12.5697	0.660195	0.150149	24.4445	-999	-999	-999	0.01403	0.070233	-999	38.1822	0	99.078109
D	ML120_206.4	-999	<0.01	14.5103	0.726903	0.093263	24.0622	-999	-999	-999	<0.01	<0.03	-999	37.8758	0	99.383466
D	ML120_206.4	-999	<0.01	14.4933	0.71463	0.102558	23.9616	-999	-999	-999	<0.01	0.050581	-999	37.8479	0	99.300305
D	ML120_206.4	-999	<0.01	15.1764	0.642216	0.128252	24.0604	-999	-999	-999	<0.01	0.041009	-999	37.4327	0	98.996211
D	ML258_176.0	-999	<0.01	7.1164	0.696353	0.138584	24.7231	-999	-999	-999	<0.01	0.040558	-999	40.3197	0	99.778498
D	ML258_176.0	-999	<0.01	7.1484	0.756514	0.137489	24.6318	-999	-999	-999	<0.01	<0.03	-999	40.3612	0	99.807906
D	ML258_176.0	-999	<0.01	7.83915	0.550526	0.126249	24.9688	-999	-999	-999	<0.01	<0.03	-999	40.1419	0	99.881634
D	ML258_176.0	-999	<0.01	7.56195	0.613414	0.115211	24.8511	-999	-999	-999	<0.01	0.038418	-999	40.3536	0	100.145016
D	ML258_176.0	-999	<0.01	5.98899	0.507718	0.113938	25.4833	-999	-999	-999	<0.01	<0.03	-999	40.9115	0	100.330953
D	ML258_176.0	-999	<0.01	7.04697	0.662462	0.135383	24.8276	-999	-999	-999	<0.01	<0.03	-999	40.1636	0	99.409383
D	ML258_176.0	-999	<0.01	10.1279	0.510448	0.154811	24.7632	-999	-999	-999	<0.01	<0.03	-999	38.9818	0	99.130289
D	ML258_176.0	-999	<0.01	5.85377	0.319036	0.141066	25.6004	-999	-999	-999	<0.01	<0.03	-999	40.9318	0	100.309119
D	ML258_176.0	-999	<0.01	3.89048	0.121335	1.93854	25.4971	-999	-999	-999	0.406164	0.82533	-999	38.792	0	97.195949
D	ML258_176.0	-999	<0.01	3.86537	0.138268	1.94585	25.3921	-999	-999	-999	0.359653	0.723021	-999	38.6925	0	96.815102
D	ML112_172.0	-999	<0.01	7.8541	2.11242	0.079964	22.4945	-999	-999	-999	<0.01	<0.03	-999	40.4172	0	100.04198
D	ML112_172.0	-999	0.02625	8.58434	1.39311	0.071436	23.433	-999	-999	-999	<0.01	<0.03	-999	40.2933	0	100.354338
D	ML112_172.0	-999	<0.01	9.07828	1.31289	0.073397	23.695	-999	-999	-999	<0.01	<0.03	-999	39.8129	0	99.814491
D	ML112_172.0	-999	<0.01	8.46811	1.4295	0.054968	23.2037	-999	-999	-999	<0.01	0.037075	-999	40.0005	0	99.612426
D	ML112_172.0	-999	<0.01	8.38978	1.41946	0.073437	23.3305	-999	-999	-999	<0.01	0.038963	-999	39.9237	0	99.464544
D	ML112_172.0	-999	<0.01	9.25815	0.933646	0.064455	24.1898	-999	-999	-999	<0.01	<0.03	-999	39.7642	0	99.802687
D	ML112_172.0	-999	<0.01	7.787	1.31275	0.063663	23.561	-999	-999	-999	<0.01	<0.03	-999	40.4625	0	100.157314
D	ML112_172.0	-999	<0.01	9.31693	0.987903	0.040623	23.9974	-999	-999	-999	<0.01	<0.03	-999	39.4736	0	99.173114
D	ML112_172.0	-999	<0.01	9.39689	0.953141	0.059476	24.1357	-999	-999	-999	0.01249	<0.03	-999	39.5418	0	99.410343
D	ML112_172.0	-999	<0.01	9.1493	1.0618	0.052255	23.9979	-999	-999	-999	<0.01	<0.03	-999	39.8126	0	99.828425
D	PH001_308.1	-999	<0.01	6.14645	0.311078	0.025119	25.4823	-999	-999	-999	<0.01	<0.03	-999	40.8949	0	100.236479
D	PH001_308.1	-999	<0.01	5.50699	0.379618	0.049795	25.4966	-999	-999	-999	<0.01	<0.03	-999	41.1754	0	100.481344
D	PH001_308.1	-999	<0.01	6.18797	0.113263	0.063984	25.9736	-999	-999	-999	<0.01	0.031711	-999	40.7461	0	100.202891
D	PH001_308.1	-999	<0.01	5.75346	0.150143	0.084654	25.7783	-999	-999	-999	<0.01	0.041452	-999	41.0523	0	100.516972
D	PH001_308.1	-999	<0.01	6.38827	0.024046	25.292	-999	-999	-999	-999	<0.01	<0.02	-999	40.6006	0	99.744573
D	PH001_308.1	-999	<0.01	7.31359	0.194434	0.072865	25.5509	-999	-999	-999	<0.01	<0.03	-999	40.2582	0	99.917737
D	PH001_308.1	-999	<0.01	8.42874	0.234263	0.040025	25.5236	-999	-999	-999	<0.01	0.031497	-999	40.0438	0	100.143088
D	PH001_308.1	-999	<0.01	7.40303	0.266593	0.044697	25.4563	-999	-999	-999	<0.01	<0.03	-999	40.2424	0	99.770706
D	PH001_308.1	-999	<0.01	7.94837	0.172559	0.058773	25.5575	-999	-999	-999	<0.01	<0.03	-999	40.2707	0	100.211668
D	PH001_308.1	-999	<0.01	7.50915	0.204703	0.039465	25.59	-999	-999	-999	<0.01	<0.03	-999	40.4479	0	100.273606
D	ML109_112.0	-999	<0.01	16.6869	0.49128	0.1066	24.2367	-999	-999	-999	<0.01	<0.03	-999	36.7791	0	98.672011
D	ML109_112.0	-999	0.020056	16.6221	0.524642	0.146269	24.2066	-999	-999	-999	<0.01	<0.03	-999	36.5773	0	98.421518
D	ML109_112.0	-999	<0.01	16.761	0.411206	0.130832	24.348	-999	-999	-999	<0.01	0.041921	-999	36.5227	0	98.255417
D	ML109_112.0	-999	<0.01	16.59	0.408481	0.12114	24.3728	-999	-999	-999	<0.01	<0.03	-999	36.6826	0	98.421203
D	ML109_112.0	-999	<0.01	17.033	0.371991	0.146723	24.442	-999	-999	-999	<0.01	<0.03	-999	36.5563	0	98.487851
D	ML109_112.0	-999	<0.01	16.1092	0.506315	0.129581	24.3236	-999	-999	-999	<0.01	0.051567	-999	36.7436	0	98.456257
D	ML109_112.0	-999	<0.01	15.9012	0.60969	0.134502	24.2332	-999	-999	-999	<0.01	<0.03	-999	36.8684	0	98.470562
D	ML109_112.0	-999	<0.01	15.3769	0.636864	0.096334	24.0606	-999	-999	-999	<0.01	<0.03	-999	37.2303	0	98.643594
D	ML109_112.0	-999	<0.01	15.7212	0.586582	0.117013	24.1724	-999	-999	-999	0.016353	<0.03	-999	36.9303	0	98.399613
D	ML109_112.0	-999	0.019156	15.53	0.606118	0.132214	24.1515	-999	-999	-999	<0.01	<0.03	-999	36.8117	0	98.045614
D	ML265_185.3	-999	<0.01	4.13581	0.457579	0.313326	25.3388	-999	-999	-999	<0.01	0.162235	-999	41.2528	0	100.182183
D	ML265_185.3	-999	<0.01	4.46191	0.672687	0.307025	24.9694	-999	-999	-999	<0.01	0.07679	-999	41.12	0	99.951848
D	ML265_185.3	-999	<0.01	4.72498	0.677887	0.262727	25.1143	-999	-999	-999	<0.01	<0.03	-999	41.413	0	100.642534
D	ML265_185.3	-999	<0.01	4.07547	0.53485	0.33211	25.3605	-999	-999	-999	<0.01	0.096714	-999	41.242	0	100.231344
D	ML265_185.3	-999	<0.01	4.5081	0.468034	0.328243	25.4837	-999	-999	-999	<0.01	0.174062	-999	41.1946	0	100.562469
D	ML265_185.3	-999	<0.01	4.82697	0.636193	0.237962	25.1265	-999	-999	-999	<0.01	0.076202	-999	41.0102	0	99.928421
D	ML265_185.3	-999	<0.01	4.40589	0.661121	0.299339	25.0641	-999	-999	-999	<0.01	0.0921	-999	41.0791	0	99.97356

**Appendix C: Garnet Microprobe Analyses**

H1000	Sample	V	Cr	Fe	Mn	Mg	Ca	Na	K	P	Cl	F	C	O	H	Total
H1001		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
D	ML265_185.3	-999	<0.01	4.82271	0.694265	0.264903	25.193	-999	-999	-999	<0.01	<0.03	-999	41.1855	0	100.277359
D	ML265_185.3	-999	<0.01	4.92099	0.712672	0.222545	25.1537	-999	-999	-999	<0.01	0.053418	-999	41.3635	0	100.708569
D	ML243_143.7	-999	<0.01	10.4965	0.53123	0.126279	24.949	-999	-999	-999	0.015296	<0.03	-999	39.1156	0	99.5595
D	ML243_143.7	-999	<0.01	10.5133	0.645267	0.110372	24.8034	-999	-999	-999	<0.01	<0.03	-999	39.0357	0	99.392415
D	ML243_143.7	-999	<0.01	11.1192	0.529282	0.120687	24.8506	-999	-999	-999	<0.01	<0.03	-999	39.0755	0	99.800007
D	ML243_143.7	-999	<0.01	9.58603	0.551091	0.125707	25.1313	-999	-999	-999	<0.01	0.042038	-999	39.3143	0	99.618223
D	ML243_143.7	-999	<0.01	10.6485	0.50489	0.12654	24.8056	-999	-999	-999	<0.01	<0.03	-999	38.9613	0	99.264414
D	ML243_143.7	-999	<0.01	10.0409	0.525231	0.137958	24.9978	-999	-999	-999	<0.01	<0.03	-999	39.4734	0	100.008186
D	ML243_143.7	-999	<0.01	9.6197	0.516628	0.153853	25.11	-999	-999	-999	<0.01	<0.03	-999	39.2913	0	99.522492
D	ML243_143.7	-999	<0.01	10.6226	0.430021	0.13987	25.0162	-999	-999	-999	<0.01	0.031466	-999	38.9331	0	99.281072
D	ML243_143.7	-999	<0.01	6.27954	0.330421	0.110412	25.3544	-999	-999	-999	<0.01	0.088379	-999	40.6976	0	100.213175
D	ML243_143.7	-999	<0.01	10.1975	0.737608	0.108235	24.7943	-999	-999	-999	<0.01	0.078288	-999	39.1624	0	99.621117
D	ML258_199.2	-999	0.035095	6.31073	0.308674	0.131369	25.4418	-999	-999	-999	<0.01	<0.02	-999	40.7999	0	100.30978
D	ML258_199.2	-999	<0.01	6.55608	0.336101	0.141569	25.4217	-999	-999	-999	0.084326	0.056886	-999	40.736	0	100.504574
D	ML258_199.2	-999	<0.01	6.45941	0.347704	0.118469	25.3374	-999	-999	-999	<0.01	<0.02	-999	40.78	0	100.298777
D	ML258_199.2	-999	<0.01	6.53582	0.299152	0.133622	25.3893	-999	-999	-999	<0.01	<0.03	-999	40.6265	0	100.057358
D	ML258_199.2	-999	<0.01	6.50767	0.58232	0.047742	25.1275	-999	-999	-999	<0.01	<0.03	-999	40.7863	0	100.27232
D	ML258_199.2	-999	<0.01	5.83431	0.658354	0.039598	25.1326	-999	-999	-999	<0.01	<0.03	-999	40.8723	0	100.031079
D	ML258_199.2	-999	0.025137	6.5376	0.349953	0.100393	25.4448	-999	-999	-999	0.228705	<0.03	-999	40.6192	0	100.383569
D	ML258_199.2	-999	<0.01	6.9273	0.521124	0.084346	25.2428	-999	-999	-999	0.143585	<0.03	-999	40.4147	0	100.069961
D	ML258_199.2	-999	0.029716	7.06077	0.345125	0.119018	25.1823	-999	-999	-999	<0.01	<0.03	-999	40.5917	0	100.239948
D	ML258_199.2	-999	<0.01	5.67903	0.817152	0.05384	25.1004	-999	-999	-999	<0.01	<0.03	-999	41.1272	0	100.565187
EOF																