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Fluids and mineralisation in the Scottish Dalradian

Minerals & Waste: Minerals for Development

Internal Report OR/09/054

BRITISH GEOLOGICAL SURVEY

MINERALS & WASTE: MINERALS FOR DEVELOPMENT

INTERNAL REPORT OR/09/054

Fluids and mineralisation in the Scottish Dalradian

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Exploration adit at Cononish, Tyndrum, Scotland.

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Summary

Fluid inclusion studies of orogenic vein-type gold deposits show a strong genetic association with high-temperature, low-salinity, and volatile-rich fluids. Although fluid models for this type of mineralisation are well established, they commonly ignore several important facts that indicate a role for low temperature fluids. Visible gold is invariably fracture-controlled and is hence related to fluid processes represented by later (secondary) fluid inclusions. In the limited number of cases where these have been studied, a multiple fluid history involving low-temperature brines (<250ºC) is commonly observed. Gold is often associated with a suite of minerals characterised by sulphosalts, tellurides, sulpho-tellurides and rare gold alloys. Some of these are only stable below 275ºC, indicating an association with low-temperature processes.

This study collates fluid inclusion and mineralogical data representing the major styles of mineralisation (e.g. Cononish and Calliachar Burn [Au–quartz]; Lagalochan [porphyry–Cu±Au]; Tomnadashan [igneous related Cu]; Tyndrum, Castleton and Inverneil [Pb–Zn]; Stronchullin and Corrie Buie [Pb–Zn±Au]) and regional fluids (e.g. Loch Lomond) in the Scottish Dalradian. Six fluid types are identified:

1. High-salinity (halite-bearing: NaCl>35 wt %) and high-temperature (>300ºC) fluid inclusions. These are typical of porphyry copper deposits world-wide and were recorded from samples at Lagalochan, Tomnadashan and Comrie.
2. High-temperature (250–400ºC), volatile-rich (major $CO_2+CH_4+N_2$: 15–25 wt % NaCl eq) and moderate salinity (7–10 wt % NaCl eq) fluids inclusions. In the Dalradian, this fluid is ubiquitous. It occurs in veins and breccias, associated with igneous intrusions. It is also one of the major fluid-types in regional metamorphic quartz-veins and is recorded at nearly all mineralised localities. Elsewhere, this fluid-type is associated with orogenic gold mineralisation. However, in the Scottish Dalradian, its presence is *not* indicative of gold mineralisation.
3. Moderate to high-temperature (200–350ºC) and moderate salinity (7–10 wt % NaCl eq) fluids containing volatiles (minor $CO_2+CH_4+N_2$: 10–15 wt %% NaCl eq). These have the same distribution and associations as Fluid 2.
4. Low to moderate-temperature (150–250ºC) low-salinity brines (<10 wt % NaCl eq) with little or no volatile component. This is analogous to fluids associated with epithermal gold mineralisation. It occurs in both igneous and metasedimentary rock-hosted mineralisation, and is present in a number of metamorphic quartz veins. Its presence as primary fluid inclusions in sphalerite, at Stronchullin, shows it plays a significant role in mineralisation.
5. Low-temperature (<150ºC) high-salinity (c. 20 wt % NaCl eq) brines. This fluid is typical of Mississippi Valley Type Pb–Zn deposits world-wide. It is present in most gold mineralised localities, but inclusions are low in abundance. Its role in Au metallogenesis is unclear, but a similar type of fluid is associated with gold-free base metal mineralisation (e.g. Tyndrum Pb–Zn).
6. A low temperature (monophase) aqueous fluid. This could be a low temperature equivalent of either Fluid 4 or Fluid 5. This fluid is sparsely distributed over a wide area.

Types 1 and 2 and possibly 3 represent prograde fluids, which have a deep crustal (magmatic and metamorphic) origin, and are probably responsible for introduction of metals into the system. Then initiation of extensional tectonics permitted a major ingress of meteoric–basinal fluids (Types 4, 5 and 6). Fluid 4 and/or 5 remobilises earlier Fe–Cu–(Mo)–As–Au–S mineralisation and results in a base metal–gold overprint at many of the localities. Late-stage (Devonian-Carboniferous?) basin development is a possible source for the high-salinity low-temperature brines (Type 5 fluid). Fluid 6 could be responsible for the localised dickite–kaolinite

mineralisation in the Highland Boundary Fault Zone and supergene alteration seen in mineralised localities (e.g. Calliachar Burn).

Although the volatile-rich fluids play a major role in metallogenesis in the Scottish Dalradian, it is clear that low-temperature brines played a significant role in gold mineralisation. In terms of understanding the deposit-scale distribution of gold, it is of prime importance to know how these late-stage fluids interacted with pre-existing mineralised structures. Also, for exploration, there is a need to develop new technologies to predict where and how these fluids have acted, as they are probably responsible for the erratic distribution of gold-grades that characterise many orogenic gold deposits.

1 Introduction

This report is part of a larger investigation of metallogenesis in extensional sedimentary basins. It collates previous mineralogical and fluid inclusion studies on a number of deposits, and presents new mineralogical and fluid inclusion information on a selected number of deposits (Figure 1). Apart from Earls et al. (1996) and Wilkinson et al. (1999), existing mineralogical and fluid inclusion data are of variable quality. Moreover, they tend to focus on an individual deposit or certain aspects of the mineralisation. Thus, in a number of cases, it was necessary to recast the data in terms of modern thinking about the evolution of mineralising fluids in orogenic belts (e.g. Boiron et al. 1992; Cathelineau et al. 1993; Wilkinson et al. 1995; O'Reilly 1997; Wilkinson 1999). Wherever possible the primary data sources are used rather than interpreted data.

Appendix 1 presents information on sample localities, petrological data for individual samples are given in Appendix 2, photomicrographs of typical mineralogical and fluid inclusion assemblages are presented in Appendix 3 and Appendix 4 collates all existing fluid inclusion data.

Mineralisation in the Scottish Dalradian has been extensively studied (see Smith et al. (2003) for details of individual localities and references). Based on this work, at least four distinct mineralising episodes can be recognised:

1. Mineralisation directly related to Caledonian magmatism (e.g. Lagalochan).

2. Mineralisation thought to be related to Caledonian deformation and metamorphism (e.g. Calliachar and Urlar Burns).

3. Syngenetic mineralisation (e.g. Aberfeldy and Meall Mor).

4. Late (Devonian? or Permo–Triassic?) mineralisation with affinities to Mississippi Valley Type (e.g. Tyndrum).

Regional metallogenic models for mineralisation in the Scottish Dalradian focus on orogenic gold (e.g. Plant et al. 1990; Plant et al. 1991; Plant et al. 1997; Simpson et al. 1989). Although, a role for magmatism is recognised (Rice, 2007) a unified model that links various styles of gold mineralisation within the overall regional metallogenesis is lacking.

2 Regional studies

In addition to studies of specific mineralised localities, several studies of regional magmatic and metamorphic fluids have also been undertaken (Craw, 1990; Craw and Chamberlain 1996; Skelton et al. 1995; Fein et al. 1994). The most important, in terms of mineralisation are Craw's studies of regional metamorphic fluids and the most relevant points in terms of metallogenesis are as outlined below.

2.1 METAMORPHIC FLUIDS

The regional metamorphic fluid is low salinity (1–5 wt % NaCl eq) and CO_2-bearing (3–16 wt % CO_2). Its composition varies slightly but is essentially uniform over several hundred km^2. Early quartz vein formation took place at 350±50°C and 200–300 MPa. Later quartz mineralisation took place at lower temperatures from compositionally similar fluids. In addition, to these carbonic metamorphic fluids a later fluid with a distinct chemistry has been recognised. This is a highly saline (c. 20 wt % NaCl eq) calcic brine with homogenisation temperatures between 110 and 120°C. Apart from recording its presence Craw and Chamberlain (1996), do not comment on its origin or significance. In addition to the fluid inclusion data, Craw and Chamberlain (1996) were able to document incursion of meteoric water into the system through stable isotope analysis.

Parnell et al. (2000) documented, through stable isotope analysis of dickites and kaolinites, an influx of low (<50ºC) temperature meteoric fluids along the Highland Boundary Fault. This was most probably associated with late Carboniferous–Permian magmatism. Some of their sampling was from Dalradian rocks, and they record the presence of dickite and kaolinite close to mineralised localities along the western side of Loch Fyne (Stronchullin and Inverneil mines).

2.2 MAGMATIC FLUIDS

Studies of magmatic fluids have concentrated on the genesis of porphyry and plutonic mineralising systems (Lowry et al 1995; Lowry et al. 1994; Lowry 1991; Kay 1995). Three distinct types of fluid were recognised:

1. A primary high-salinity (15–20 wt % NaCl eq) high-temperature (380–560°C) brine. This fluid boiled, giving rise to fluids with a large range in salinities (5–70 wt % NaCl eq). This fluid was identified from porphyry related veinlets from the Kilmelford and Lagalochan intrusives.

2. A low salinity CO_2-enriched fluid. Homogenisation temperatures for this fluid range from 150–400°C, salinities vary from 4–10 wt % NaCl eq and daughter minerals are absent. Final melting of the CO_2 phase in these inclusion indicates small (<12 mole %) but variable amounts of methane or other volatiles (e.g. N_2). This fluid was observed in quartz veins associated with the plutonic systems at Ballachulish, Arrochar and the Tomnadashan diorite. It is also a minor component (<1%) of the fluid inclusion population at Lagalochan (Kay 1985). Though this fluid is thought to be magmatic in origin it is chemically and thermally similar to the carbonic metamorphic fluids outlined above.

3. Peripheral to the Kilmelford complex, matrix quartz in the Arduaine breccia hosts a low CO_2 (<3.5 mol %), low-salinity (<10 wt % NaCl eq) and moderate temperature (240–480°C) fluid. This has compositional and thermal similarities to the some of the mineralising fluids at Tomnadashan (see below).

In addition, to the above studies of mineralised intrusions, BGS as part of the Monadhlaith mapping project in the early 1990's, undertook a fluid inclusion study of the fluid associated with appinitic magmatism at Cruach Innse. Here the secondary fluid inclusions in brecciated quartzite, at the contact with the appinite record magmatic fluid activity. Like the fluids at Arrochar, they are dominated by a CO_2-enriched fluid (see Figure 2 and Appendix 4).

Table 1. Summary of geological and mineralisation features for selected gold localities in the Scottish Dalradian—Map # in Column 1 corresponds to locations depicted in **Figure 1**.

Map #	Locality (superscript indicates locality staus)	Style	Stratigraphy & lithology of host	Host age – metamorphism	Associated minor intrusions	Regional structure	Regional geophysical features	Regional geochemical features	Stratigraphical, lithological & structural controls	Ore minerals	Gangue minerals	Ore/vein textures	Hydrothermal alteration
1	Cononish[1]	O	ApG and ArG: psammite, (pelite)	UP – GA	lamprophyre, qtz-porphyry, dolerite	NE-SW fault (Tyndrum-Glen Fyne)	NE-SW gravity lineation; local residual gravity low	strong As anomaly; sporadic Sb	vein best developed at psammite-pelite contacts. NE-SW 0.2–6 m wide vein, sub-vertical. Two main ore-shoots	el, py, cpy, gn, sph, hm, cv, te, Au, Ag	qtz, late ba, ca	multi-phase qtz veining and brecciation	chl, ser, sil & disseminated hm
2	Calliachar-Urlar Burn[2]	O	SHG: quartzite, psammite, andesitic volcanics, metabasic sills	UP – GA	Caledonian felsites; post-mineralisation qtz-dolerite	NE fault (Urlar Fault)	major NE gravity and minor ENE magnetic lineations; positive magnetic anomaly	widespread As anomalies; local Sb enrichment	14 steeply dipping quartz veins, trending 140-160°. veins pinch and swell, up to 2 m vein width greatest in quartzites, fine-grained metavolcanics and chlorite-quartz schists. poorly jointed rocks have little veining	el, py, gn, sph, cpy, asp, tt, te	qtz Fe-do, sd	vuggy, fractured milky qtz with intergrown sulphide clots; cut by py-gn veinlets	chl, ser and carb up to 20 m from veins
3	Corrie Buie[4]	O	LTL: limestone and calcareous schist	UP – GA	felsite dykes; qtz-dolerite	close to Loch Tay Fault	SE magnetic lineation; ENE gravity lineation	widespread As anomalies	18 parallel veins trending N-S; 3 barren veins trending E-W veins in underlying non-calcareous metasediments are barren.	el, gn, po, py, cpy, sulfsalts, Bi	qtz sd cc	—	—
4	Stronchullin[4]	O	ArG: phyllite, quartzite, metabasic sills	UP – GA	P-C & T dolerite; rare lamprophyre	close to axis of Ardrishaig Anticline (Tay Nappe)	E-W and NW magnetic lineations	strong As anomalies; locally coincident anomalous Sb and Bi	N-S vein,dips 70°W west. 40 cm wide; mined over 25 m length. Juxtaposition of pelite and psammite possibly important	gn, sph, cpy, py, cv, sulfsalts	qtz, ba, ca	white/milky coarsely crystalline qtz, locally vuggy; minor glassy qtz	minor local arg
5	Inverneil[4]	O	ArG: quartz-schist, phyllite, limestone	UP – G	P-C & T dolerite	close to axis of Ardrishaig Anticline (Tay Nappe)	E-W and NW magnetic lineations	weak As anomaly	linear in fault zones; main vein 30 cm wide trends 330°, dips to SW. sporadic mineralisation in zone 2 km wide; main locality has an adit & 4 shafts over 300 m strike length	gn, py, cpy	qtz, sd	veins, breccias, stockworks	—
6	Castleton[4]	O	ArG: mica-schists; quartz-schists; metabasite sheets	UP – G	T dolerite	close to axis of Ardrishaig Anticline (Tay Nappe)	E-W magnetic lineations	low tenor As anomalies	quartz veins, NE trend, dips 70° to NW. vein up to 2 m wide, traced for 1 km	py, cpy, gn	qtz	early brecciated glassy qtz minor; late white prismatic qtz	—
7	Glen Clova[3]	O	SHG: semipelite, grits, psammites, volcaniclastics, metabasic sheets	UP – EA	felsite; dolerite	ca. 10 km NW of Highland Boundary Fault	prominent SE gravity lineation from SW side of Lochnagar Granite; ca. 10 km SE of major NE gravity lineations	sporadic As, Sb, Bi, Pb, Cu, U stream sediment anomalies; sporadic Au, As, Sb, Pb, Cu, Ce anomalies in pan concentrates	lenticular quartz segregations in SE trending fault zone. 0.5-1 m wide, traced for 1.6 km	Au, py	qtz	shattered qtz segregations in red and green clay altered micaceous psammite host; ca, hm	clays, limonite

Map #	Locality (superscript indicates locality staus)	Style	Stratigraphy & lithology of host	Host age – metamorp hism	Associated minor intrusions	Regional structure	Regional geophysical features	Regional geochemical features	Stratigraphical, lithological & structural controls	Ore minerals	Gangue minerals	Ore/vein textures	Hydrothermal alteration
8	Lagalochan[2]	P	ArG: psammite, phyllite and metabasite intruded by porphyry, breccias, granodiorite and rhyolite.	~ 430 Ma – G	post-mineralisation porphyry dykes	NE/ENE fault (Glen Domhain Fault)	major ENE gravity lineation; minor NNE gravity lineations; positive magnetic anomaly	As, Cu and Mo anomalies	sub-volcanic intrusions and breccias. NNE/NE faults and their intersections with major faults; shear zones. irregularly distributed veins / disseminations in 2 main zones - North Hill and SE Quadrant. 1.5 x 3 km area with Au enrichmen	el, py, cpy, mo, gn, sph, asp, tn, fr, te	qtz, ca	veins, disseminations	ser, sil py and car widespread and intense; K-silicate minor; late arg/advanced arg
9	Rhynie[2]	E	RG: chert, sandstone, conglomerate, tuffs, andesitic lavas	LD – P	sporadic porphyrite, microdiorite and qtz-dolerite	N/NNE half-graben, faulted western margin; major E-W shear zones to S	N/NNE and E-W gravity lineations; N/NNE magnetic lineations	low tenor Ag anomaly	L. Devonian volcano-sedimentary sequence with alteration most intense in the sediments. Complex basin margin fault zone, NE-SW; local NW cross-faults. alteration focused along marginal fault zone. alteration traced for >1.5 km at surface	Au, py	qtz, cc	multi-phase veining and brecciation	sil, py, K-feldspar, hm, ser, chl
10	McPhun's Cairn[3]	S	ArG: phyllites, calcareous schists, quartzites, quartz-schist, metabasic sheets	UP – G	dolerite, lamprophyre, felsite, qtz-porphyry	close to (4 km) axis of Ardrishaig Anticline (Tay Nappe)	E-W and NW magnetic lineations	low tenor Bi anomaly	stratiform sulphides restricted to Ardrishaig Phyllite concordant with lithological boundaries. 6.5 m wide; strike length 7 m	py, gn, sph, po	qtz	fine-crse pyrite, subhedral to euhedral; galena and sphalerite interstitial to and in veinlets in pyrite	—
11	Invergeldie, Glen Lednock[2]	S	ApG: psammite, pelitic schist, metabasite	UP – G	microdiorite; porphyrite; quartz-dolerite	10 km from Highland Boundary Fault (HBF)	conspicuous N-S gravity lineation; magnetic and gravity lineations associated with HBF; E-W magnetic lineations	widespread As anomalies and local Sb enrichment	contact metasediment and metabasite. stratiform sulphide layers, dip 30-40° to SE. sulphide mineralisation at 2 localities in bands up to 0.75 m thick, traced for up to 150 m	py, asp, po, py, cpy	qtz	pyrite and arsenopyrite disseminations, blebs and veinlets	sil, pink K-feldspar, chl, jasper
12	Muness[3]	S	MP: phyllite, minor conglomerate	—	—	melange zone between ophiolite nappes	—	strong As and Au anomalies	Occurs in Muness Phyllite. conformable sulphidic bands. several occurrences in Muness area; largest is continuous for 125 m, 2-10 m thick	py, asp, cpy, gn	qtz	disseminated to locally massive pyritic bands; early grey concordant quartz veins, later cross-cutting quartz veins	—
13	Milton Burn, Comrie[2]	IR	SHG: psammites and metabasites intruded by Comrie diorite-granite complex	408 Ma – G	quartz-dolerite dykes	5 km from Highland Boundary Fault (HBF)	SE and ENE magnetic lineations; magnetic and gravity lineations associated with HBF	widespread As anomalies and local Sb enrichment	N-S shear zone in diorite with quartz and carbonate veining and brecciation. alteration zone 50-150 m wide; veining over few metres width, sporadic	py, cpy, gn, mo, Bi, te	qtz, ca	veinlets and disseminations; extensive brecciation, shearing and carbonate veining	K- feldspar, sil

Map #	Locality (superscript indicates locality staus)	Style	Stratigraphy & lithology of host	Host age – metamorp hism	Associated minor intrusions	Regional structure	Regional geophysical features	Regional geochemical features	Stratigraphical, lithological & structural controls	Ore minerals	Gangue minerals	Ore/vein textures	Hydrothermal alteration
14	Meall Mor[4]	SE	ArG: quartzite, psammite, quartz-mica schist, metabasic sheets	UP – EA	PC & T dolerite; rare lamprophyre	close to axis of Ardrishaig Anticline (Tay Nappe)	E-W and NW magnetic lineations	extensive high amplitude As anomalies; locally coincident anomalous Sb and Bi	restricted to Argyll Group, with epigenetic Cu mineralisation favouring epidotised metabasics. ca. 200 m thick horizon traced for 10 km in Knapdale	py, cpy, sph, bn, cv, mlc, az	qtz, cc	sulphide disseminations, blebs and laminae in stratiform type: blebs, clots and veinlets with quartz/calcite in epigenetic style	epidote and carb
15	Tomnadashan[4]	P	SHG: diorite and granite intruded into	UP	—	NE-SW Loch Tay Fault	SE and E-W magnetic lineations; positive magnetic anomaly	As anomalies to south	diorite-granite contact favoured site. disseminations, clots and veinlets.	py, cpy, tt, mo, Bi, bte, Au	qtz, cc, sd	—	ser, local arg, chl, talc, car, rutile, sphene, albite

List of abbreviations

1	deposit	RG		O	Orogenic vein	UP	Upper Precambrian	GA	garnet amphibolite	py	pyrite	el	electrum	ca	carbonate	hm	hematite
2	prospect	ArG	Argyll Group	P	porphyry	LD	Lower Devonian	EA	epidote amphibolite	asp	arsenopyrite	mo	molybdenite	do	dolomite	chl	chloritisation
3	occurrence	ApG	Appin Group	S	stratiform	P-C	Permo-Carboniferous	G	greenschist	po	pyrrhotine	sph	sphalerite	sd	siderite	ser	sericitistaion
4	old mine	MP		SE	stratiform and epigenetic	T	Tertiary	P	post-metamorphic	cpy	chalcopyrite	te	tellurides	ba	barite	arg	argillic
		SHG	Southern Highland Group	IR	intrusion related							tt	tetrahedrite	fr	freibergite	cc	calcite
		LTL	Loch Tay Limestone	E	epithermal							tn	tennantite	Cv	covelline	qtz	quartz
																car	carbonatisation

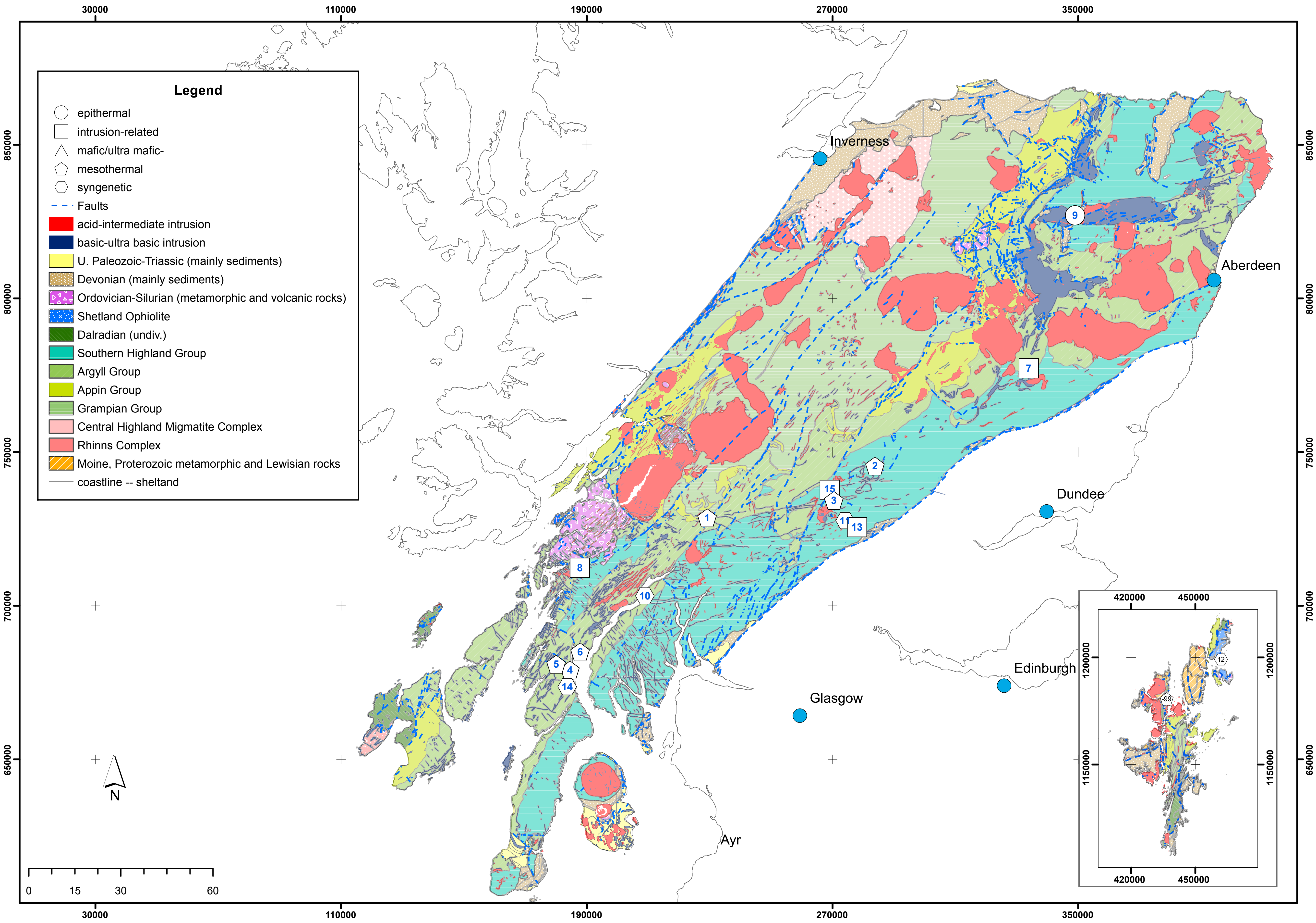

Figure 1. Locality map for gold mineralisation in the Scottish Dalradian; shaped symbols with numbers refer syle of mineralisation and the numbers are cross-referenced to localities described in **Table 1**.

3 Specific localities

3.1 INTRUSION-HOSTED MINERALISATION

3.1.1 Kilmelford–Lagalochan

3.1.1.1 GENERAL GEOLOGY

The Kilmelford intrusive suite is located 30 km south of Oban (Figure 1). It outcrops over an area of approximately 50 km^2. The main rock types are diorite, quartz-diorite, granodiorite, porphyrite and volcanic breccia, which outcrop in about ten small bodies. Magmatism is thought to have occurred in two stages. First, the diorite suite was intruded and this was followed by dacitic porphyrites. Major element geochemistry indicates the magmatism is calc-alkaline in origin and K–Ar dating (418±14 Ma) of fresh igneous material shows that magmatism post-dates regional deformation and metamorphism (Ellis et al, 1977). However, Zhou (1988) suggests a shoshonitic component to the magmatism.

It is thought that the Kilmelford–Lagalochan complex is the lower part of a diatreme structure, with the current level of exposure being approximately 1 km below the paleosurface (Harris et al, 1988, Kay, 1985).

3.1.1.2 MINERALOGY

The mineralisation at Lagalochan was investigated by BP Minerals (Harris et al. 1988; Zhou 1988; Zhou, 1985 and Kay, 1985). Three distinct styles were recognised. The first was a high temperature Cu–Au–(Mo) porphyry-breccia pipe-type mineralisation, the second peripheral Pb–Zn–Ag–Au–As–Sb mineralisation and the third late carbonate-hosted Pb–Zn mineralisation. Grain mounts of crushed drill-core show that native gold and electrum were mainly hosted in pyrite in a variety of sulphide-rich breccias and quartz-carbonate veins. Associated sulphides are nearly always galena and sulphosalts.

Petrographic examination of thin sections and fluid inclusion wafers of material collected from boreholes L1 and L3 (see Appendix 2) show that these divisions are broadly correct. However, at least five distinct types of quartz and/or carbonate veins are recognised.

1. Early (magmatic?) quartz developed within the host rock. This forms micro-vugs and, where the sample is mineralised, the vugs are infilled by sulphide (predominantly pyrite and chalcopyrite).

2. Early (magmatic?) quartz veins, that cut the host rock. Quartz in these veins tends to be anhedral to subhedral. It is characterised by the presence of multi-solid, liquid + vapour fluid inclusions (see fluid inclusion section below), and is commonly associated with pyrite.

3. Euhedral vein lining quartz, with or without vug-filling sulphides. This is commonly inclusion-free, but where observed the inclusions tend to be biphase (L+V) with low to moderate vapour fills (15 %<V<50 %) (see fluid inclusion section below).

4. Late chalcedonic quartz with associated fine grained sericite/kaolinite. This association is generally too fine-grained to examine the fluid inclusion petrography.

5. Carbonate (as veins and clots) that postdates quartz veining and silicification. This contains sulphides, which are probably the result of entrainment from pre-existing quartz veins. Locally, the carbonate contains biphase (L+V) with low vapour fills (5 %<V<15 %) (see fluid inclusion section below).

Sulphide mineralogy consists of two distinct mineral assemblages: early Fe–Cu–(Mo) mineralisation and later Pb–Zn–Cu–Sb mineralisation.

In the early mineralisation, sulphides comprise pyrite, chalcopyrite and molybdenite. They occur in three main associations. First, as microvug fills within the host rock. In addition, magmatic quartz commonly lines these vugs. In the second association, Fe–Cu–Mo sulphides occur as veins and stringers that cut the host rock, and early vein quartz. Lastly, pyrite and chalcopyrite occur as vug fills in euhedral quartz. In this association, molybdenite is absent.

Sulphides in the later base-metal mineralisation comprise galena, sphalerite, chalcopyrite and tetrahedrite. Their main occurrence is in the later vein-type mineralisation, where they line or fill quartz vugs or occur as stringers cutting earlier quartz veins. They also fill microvugs where they invariably overgrow earlier pyrite.

In a restricted number of samples a late (post-sulphide?) phase of barite mineralisation was recorded.

3.1.1.3 FLUID INCLUSIONS

Fluid inclusions at Lagalochan have been studied by Kay (1985) and three different fluid inclusion types are recognised. These comprise:

1. Hypersaline brines containing one or more daughter minerals.

2. Vapour-rich aqueous inclusions.

3. Liquid-rich aqueous inclusions.

4. Rare carbon dioxide-bearing fluid inclusions.

Petrographic examination of fluid inclusion wafers, polished thin sections (see Appendix 2) identified the following types of fluid inclusions:

1. Multi-solid L+V inclusions (15 %<V<25 %). These comprise halite (NaCl) and rarer sylvite (KCl). Locally, these inclusions contain a small opaque daughter-mineral (chalcopyrite). This inclusion-type is associated with the two types of magmatic quartz above, where they occur as primary and pseudosecondary inclusions.

2. Vapour-rich (V>80 %) inclusions. These, locally, contain solid phases (halite and chalcopyrite). Vapour-rich inclusions tend to be hosted in the two types of magmatic quartz and are often in close spatial association with multi-solid liquid-vapour inclusions.

3. Biphase (L + V) inclusions with moderate vapour fills (15 %<V<50 %). These inclusions are characterised by the lack of accompanying solid/daughter phases. The main association of this inclusion-type is with the later euhedral, base-metal-bearing, quartz veins, where the inclusion are primary or pseudo secondary in origin.

4. Biphase (L + V) inclusions with low to moderate vapour fills (5 %<V<15 %). Again these inclusions are characterised by the lack of accompanying solid/daughter phases, but inclusions with low vapour fills tend to be restricted to late-stage carbonate veins.

5. CO_2-rich (L_{H2O} + L_{CO2} V_{CO2}) inclusions were observed, but are rare in occurrence. When recorded they were restricted to the early magmatic quartz.

Fluid–mineral paragenesis clearly indicate that the early Fe–Cu–(Mo) mineralisation is related to high-salinity, high-temperature brines as evidenced by the presence of opaque daughter minerals. In addition, the common association of vapour-rich and multi solid inclusions suggests that boiling played a prominent role in sulphide deposition. However, the association of the base metal assemblages with a particular fluid is less clear. Though the correlation of base metal sulphides with euhedral quartz containing biphase inclusions suggests that the base-metal sulphide fluid had epithermal characteristics (e.g. sample TJS-L1-98-010).

3.1.2 Tomnadashan

3.1.2.1 GENERAL GEOLOGY

Tomnadashan mine is located on the southern side of Loch Tay (Figure 1), approximately 3.5 km south-west of the village of Ardtalnaig. The abandoned mine now comprises several vaulted galleries and small shafts. The mine was exploited for copper, though total production seems to be have been very small.

Sulphide mineralisation is hosted in a small diorite intrusion and is associated with small granodiorite lenses within the main diorite. The richest sulphide zones occur close to the granodiorite–diorite contact and close to fractures in the lenses.

3.1.2.2 MINERALOGY

The sulphide mineralogy at Tomnadashan has been studied by Pattrick (1984) and the salient points are detailed below.

The main sulphides are pyrite, chalcopyrite, tetrahedrite and molybdenite. The main gangue minerals are calcite, quartz and minor barite. Pyrite occurs as sub-idiomorphic aggregates containing blebs (30 µm) and thin (20 µm) veins of chalcopyrite. Tetrahedrite is commonly associated with chalcopyrite and molybdenite is quite abundant in samples rich in pyrite. It occurs as 50–200 µm grains and as hexagonal plates in pyrite. Late fractures in pyrite commonly contain a complex mineralogy comprising chalcopyrite, galena, and native bismuth and various Cu–Bi sulphosalts.

3.1.2.3 FLUID INCLUSIONS

Fluid inclusions at Tomnadashan have been studied by Smith (1996). He records biphase aqueous inclusions with homogenisation temperatures ranging between 110–250ºC with low to moderate salinities (5–10 wt % eq) and very rare aqueocarbonic fluid (L_{aq} + L_{CO2} + V_{CO2}) inclusions with high (>350ºC) homogenisation temperatures. Additional fluid inclusion petrography (samples, DRR024 and DRR026) identified the presence of high temperature (>300ºC) multisolid (halite, sylvite and opaque mineral) liquid–vapour inclusions. Smith (1996) did not record this inclusion-type, which indicates the presence of an early porphyry-type fluid similar to that observed at Lagalochan. Figure 2 presents the fluid inclusion data for Tomnadashan (modified from Smith 1996).

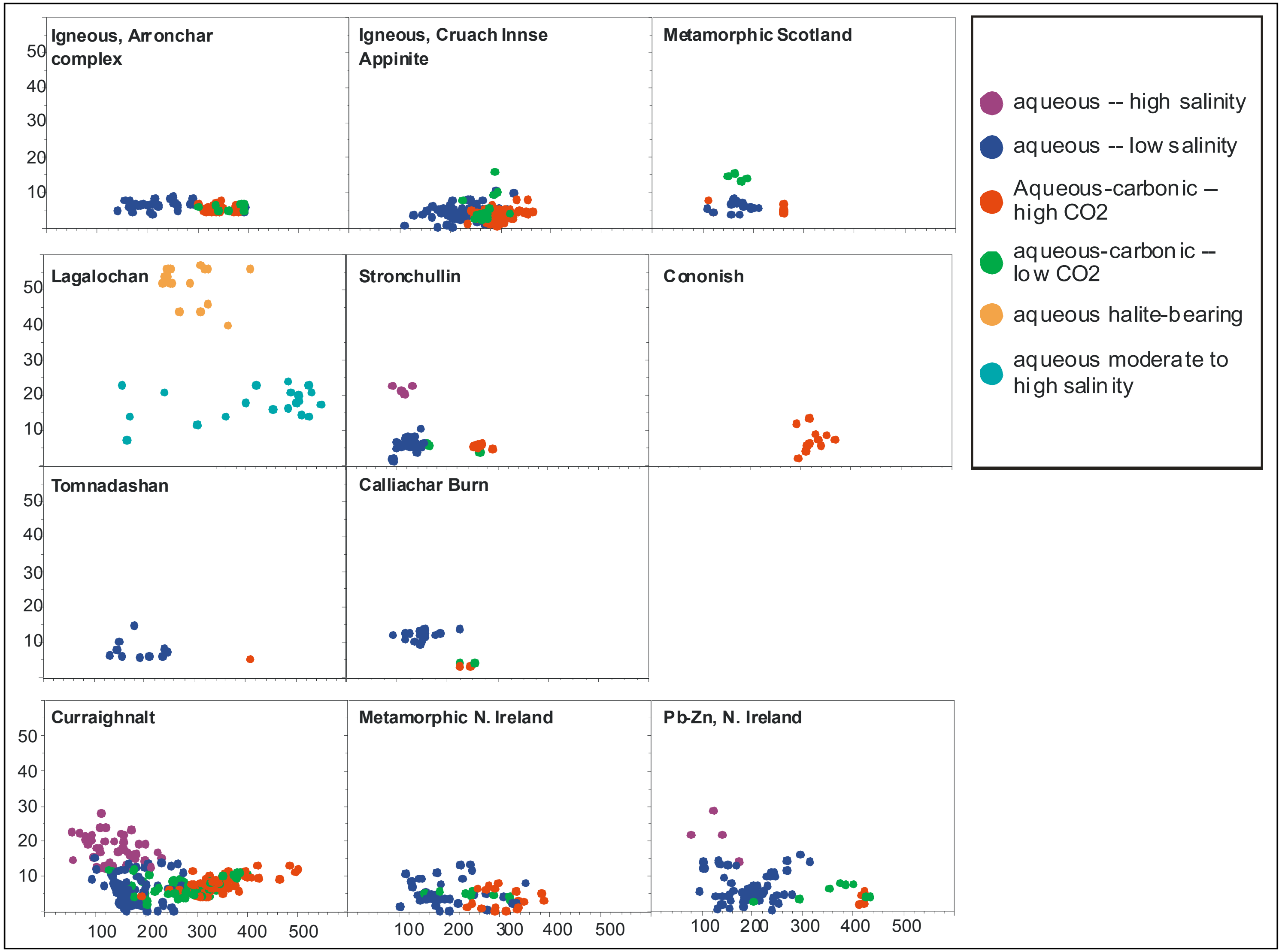

Figure 2. Compilation of fluid inclusion data for regional, magmatic and mineralising fluids in the Dalradian (data: this work and sources quoted in Appendix 4).

3.2 METASEDIMENT-HOSTED MINERALISATION

3.2.1 Calliachar–Urlar Burns

3.2.1.1 GENERAL GEOLOGY

The following summary is taken from Ixer et al (1997). The Calliachar–Urlar burn mineralisation is located 4 km from the Aberfeldy barite deposit. It comprises a series of steeply dipping quartz and quartz–carbonate veins hosted in gently dipping (<20°) quartzites, quartz-mica schists and amphibolites. Regional metamorphism in the area reaches garnet grade. Veins trend north-west and vary considerably in thickness from a few centimetres to multiple veins with a thickness of over 2 m. They are best developed in the more competent and well jointed lithologies (e.g. quartzites, chlorite-quartz schists and fine-grained amphibolites). A major left-lateral north-east fault (Urlar Fault) with a displacement of 1.5 km cuts the sequence along the Urlar Burn (1–2 km north-east of the Calliachar veins). The fault is locally occupied by Caledonian dykes (micro-diorite and pink felsite). Elsewhere, it comprises a 3 m wide zone of brecciated mica schist and quartzite cemented by carbonate, massive quartz and pyrite. Bleaching is seen in a 3 m wide zone either side of the fault and carbonatisation can be observed up to 20 m away. Silicification is also important and at least four generations of quartz veining, which predate carbonate, are present. The region is cut by a Permo–Carboniferous quartz dolerite.

3.2.1.2 MINERALOGY

The mineralogy of mineralisation in the Calliachar burn and its environs has been studied by Ixer et al (1997). The main features of their observations at Calliachar are as follows:

1. Early iron sulphides and sulpharsenides are shattered and re-cemented by copper, lead and zinc sulphides and minor sulphosalts.

2. Though some electrum is present in pyrite and arsenopyrite, most of the gold and silver was introduced with base-metal sulphides and galena as electrum and silver-bearing tellurides.

At Urlar Burn, the ores may differ in terms of individual minerals from those at Calliachar Burn, but overall the same broad paragenesis is observed. That is an early Fe–As–S–(Au) followed by a later base metal assemblage with accompanying gold, silver and tellurides.

3.2.1.3 FLUID INCLUSIONS

A minor amount of fluid inclusion work was undertaken by Ixer et al (1997). They describe the following:

1. An aqueocarbonic fluid (L_{aq} + L_{CO2} + V_{CO2}). These inclusions homogenise at approximately 300°C and have salinities ranging from 4–8 wt % NaCl eq. This type of inclusion is more abundant in the Urlar than the Calliachar veins. Laser Raman spectroscopy indicates small amounts of methane and nitrogen within this generation of inclusions.
2. Two phase (L_{aq} + V) comprise the dominant inclusion population. These homogenise between 120 and 270°C and have salinities varying between 2–13 wt % NaCl eq (average 8 wt % NaCl eq).

Fluid inclusion studies, under this project, were undertaken on mineralised float (sample DRR002) collected at the Colby Resources V3 site. The sample comprises deformed quartz with localised vugs infilled by galena. Two euhedral quartz crystals from one of these vugs were analysed microthermometrically. Two distinct types of inclusion were identified:

1. Primary/pseudosecondary three phase (L_{aq} + L_{CO2} + V_{CO2}) aqueocarbonic inclusions. These are relatively rare and exhibit homogenisation temperatures between 225 and

245°C. Clathrate melting temperatures indicate salinities ranging from 1.4–4.3 wt % NaCl eq. First melting temperatures at around –23°C indicate that the brine component is predominantly sodic in character.

2. Pseudosecondary/secondary biphase (L_{aq} + V) inclusions with no microthermometrically detectable dissolved gas (CO_2, CH_4, N_2). These homogenise between 91 and 175°C, and final ice melting indicates salinities ranging from 10.2–13.7 wt % NaCl eq. First melting, in these inclusions occurred between –33 and –48°C indicating a divalent cation component to the brine (Ca^{2+}, Mg^{2+}).

3.2.2 Stronchullin

Stronchullin mine is located close to Stronchullin Burn, approximately 2 km east of Loch Fyne and 10 km north of Tarbet on the Mull of Kintyre. It is hosted in the Erins Quartzite close to the contact with the Stronchullin Phyllite. Gunn et al. (1996) note that a galena bearing stockwork was extracted from a southerly orientated trench approximately 25 m in length. Along the excavation, the mineralised quartz reef dips at approximately 70º to the west. Mineralised material on the small mine tips includes vein quartz with pyrite, and vuggy vein-quartz with vugs infilled by base metal sulphides (galena, sphalerite and chalcopyrite and locally carbonate. Within the vicinity of the mine are a number of small quartz structures (sites DRR033–DRR036– see Appendix 1 for locality information). However, these veins were devoid of obvious sulphides.

3.2.2.1 MINERALOGY

Four samples were collected for mineralogical and fluid inclusion analysis from the dump material at Stronchullin mine. Sulphide mineralogy comprises early euhedral pyrite with localised inclusions of chalcopyrite and pyrrhotite followed by vug filling base metal sulphides (mainly sphalerite and galena) and localised vug filling carbonate. Sphalerite is colourless and is heavily infected by chalcopyrite disease. In addition, sphalerite is replaced along grain margins and fractures by tetrahedrite. Though no gold was observed in polished section, one sample containing abundant base metal sulphides (DRR032C) assayed at 11 ppm gold with over 2 wt % combined lead and zinc. Also, the vein quartz in the vicinity of the mine (locality DRR034) contains rare Pb–bismuth mineralisation (tellurides?), which is a good mineralogical indicator for gold.

3.2.2.2 FLUID INCLUSIONS

Two samples (DRR032C and DRR032D) collected from the mine dumps were analysed for fluid inclusions. Sample DRR032C consists of euhedral vuggy quartz filled with galena. Sample DRR032D comprises pale yellow sphalerite infilling a quartz vug. Microthermometric data were obtained on sphalerite and quartz.

In quartz, fluid inclusions are generally typical for orogenic gold mineralisation. That is the major fluid-inclusion type is a low to moderate salinity carbonic fluid (NaCl–H_2O–CO_2), which exhibits highly variable phase ratios indicative of heterogeneous trapping. The main microthermometric properties of this fluid are as follows:

AQUEOCARBONIC INCLUSIONS

1. First melting (in the aqueous phase) occurs at approximately –23°C, indicating that the brine contains mainly monovalent cations (Na, K).

2. T_{mCO2} varies from –56.7 to –57.1°C, indicating small amounts of other gases (CH_4, N_2).

3. CO_2 always exhibited bubble-point homogenisation (L_{CO2}+V_{CO2}->L_{CO2}) always between 24 and 28.3°C.

4. Salinity, calculated from clathrate melting, varies between 4.4 and 8.0 wt % NaCl eq.

5. Total homogenisation occurs between 252 and 290°C.

The majority of aqueocarbonic inclusions contain liquid CO_2 at room temperature indicating carbon dioxide contents in excess of 15 wt %. Locally, the presence of carbon dioxide is only indicated by clathrate disassociation at approximately 8°C, and here CO_2 contents are much lower (5–10 wt %).

In addition to the aqueocarbonic inclusions, there are two significant sub-types of inclusion. These are aqueous and show no evidence (e.g. clathrate melting) for the presence of dissolved gas (CO_2, CH_4). The main microthermometric properties of these inclusions are as follows:

LOW SALINITY AQUEOUS INCLUSIONS

1. The first observation of aqueous liquid in the inclusions occurs between –30 and –6°C indicating a mainly monovalent cation brine (Na, K), though the depression of a few values below –28°C may indicate a Ca/Mg component.

2. Last ice melting occurs between –5.3 and –2.4°C and indicates salinities between 3.9 and 8.2 wt % NaCl eq.

MODERATE TO HIGH-SALINITY AQUEOUS INCLUSIONS

1. First melting in these inclusions is always easy to observe and occurs at temperatures between –30 and –44°C, indicating a significant divalent cation component to the brine (Ca, Mg).

2. Last ice melting occurs between –22.0 and –17.3°C and indicates salinities between 20.4 and 23.7 wt % NaCl eq.

In sample DRR032D inclusions in sphalerite were analysed. However, only the aqueous types were recorded, though aqueocarbonic inclusions were observed in quartz. The majority of inclusions exhibit similar microthermometric properties to the quartz-hosted low-salinity aqueous inclusions in sample DRR032C.

3.2.3 Corrie Buie

3.2.3.1 GENERAL GEOLOGY

The Corrie Buie mines are located approximately 4 km south-east of Tomnadashan. Mineralisation is hosted in a series of north and east quartz–carbonate veins that cut a flat lying inlier of meta-limestones and calcareous schists. When they traverse the underlying non-calcareous metasediments they no longer carry metal sulphides. The scale of the abandoned workings indicates extensive mineralisation. However, little evidence of the mineralisation remains. A limited amount of material is left on the mine dumps, and careful examination of old stopes and galleries reveals a small amount of material *in situ*.

3.2.3.2 MINERALOGY

Pattrick (1984) studied the mineralised veins at Corrie Buie. The main type of sulphide present is galena and this occurs as cubes in quartz. Generally, the galena is devoid of any inclusions. However, Pattrick (1984) recorded inclusions when the galena was associated with pyrrhotite. Here, galena contains various Pb–Bi–Ag sulphosalts. Pattrick (1984) also recorded the presence electrum (65–36 wt % Au) in fractures in galena, and noted that this occurrence was commonly associated with dolomite.

3.2.3.3 FLUID INCLUSIONS

No microthermometric analyses of fluid inclusions were undertaken for samples from Corrie Buie. However, fluid inclusion petrography shows that in quartz there are two spatial distributions of inclusion. These are:

1. A randomly distributed network of inclusions. This hosts three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %). For this type of inclusion, this information indicates carbon dioxide contents greater than 15 wt % and homogenisation temperatures between 275 and 375ºC. The second type are two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %).

2. Inclusions hosted in secondary trails. These are mainly host biphase aqueous inclusions with low degrees of vapour fill (V/[L+V]<10 %).

Fluid inclusions in late stage carbonate comprise monophase (L-only) and biphase (L+V) inclusion with small vapour fills (V/[L+V]~1 %). This is indicative of low temperatures (<150ºC).

3.2.4 Tom Buie

3.2.4.1 GENERAL GEOLOGY

The Tom Buie quartz veins are located close to the veins in the Calliachar–Urlar Burn area. They are hosted in the Ben Ledi Grits close to a contact with epidiorite and hornblende schist. Close to the mineralisation (0.5–1 km), late-stage felsite minor intrusives cut the host metamorphic rocks.

3.2.4.2 MINERALOGY

Mineralisation consists of vein quartz with varying amount of pyrite, galena, chalcopyrite and pyrrhotite. Locally small sphalerite grains are included in chalcopyrite. Electrum, galena chalcopyrite and pyrite are recorded in one sample (Smith 1996).

3.2.4.3 FLUID INCLUSIONS

Smith (1996) studied the fluid inclusions assemblages at Tom Buie. However, data presentation is not in the standard format for fluid inclusion microthermometry. Thus, to give a more standard presentation it was necessary to re-interpret the data in the form given below. In addition, no mineral–fluid paragenetic information is given.

1. CO_2-rich aqueocarbonic inclusions, where liquid carbon-dioxide is present at room temperature or indicated by the presence of solid carbon-dioxide on freezing. CO_2 melting temperatures range between –55.5 and –60.8ºC indicating the presence of other volatiles (CH_4, N_2). Data for first melting in the aqueous phase are not presented, but this type of inclusion, elsewhere in Dalradian quartz veins, typically comprises sodi–potassic brine. Clathrate decomposition temperatures indicate salinities between 3.3–15 wt % NaCl eq. with the majority between 5 and 11 wt % NaCl eq. Liquid CO_2 exhibits both dew and bubble point homogenisation indicating variable carbon-dioxide densities.

2. CO_2-poor aqueocarbonic inclusions, where the presence of carbon dioxide is only indicated by clathrate melting. This mainly occurs between +5 and +7ºC. No other data are provided for this inclusion type.

3. Aqueous brines where CO_2 is not detectable microthermometrically. Generally, first melting in these inclusions is between –25 and –10ºC indicating sodi–potassic brine. However, a small number of these inclusions are below –30ºC indicating the presence of divalent cations (Mg, Ca). Final ice melting temperatures indicate salinities in the range 2–14 wt % NaCl eq.

In one sample, there are a number of homogenisation temperatures above 425ºC. This is close to the critical point for a 6 wt % NaCl fluid yet no critical behaviour was recorded. Therefore, these homogenisation temperatures should be regarded with suspicion, and are probably the result of post-trapping modifications (e.g. necking). These inclusions aside, generally, homogenisation temperatures occur between 150 and 250ºC with a few outliers at 120ºC. In addition, one sample shows a strong trend of increasing salinity (3–14 wt % NaCl eq) at relatively constant homogenisation temperature, a trend that is indicative of boiling.

3.2.5 Cononish–Tyndrum region

3.2.5.1 GENERAL GEOLOGY

The Cononish–Tyndrum area is the most extensively studied region of Dalradian-hosted mineralisation (Curtis et al 1993; Clifford et al 1990; Pattrick et al 1988; Fortey and Smith 1986; Pattrick 1985; Pattrick et al 1983). In spite of this research, individual studies focus on either the Pb–Zn (Tyndrum) or the Au-mineralisation (Cononish), with no synthesis of the how the two styles may be inter-related.

The rocks in the Tyndrum–Cononish area are Dalradian metasedimentary rocks and subsidiary metamorphosed volcanics. Within the region there are no exposed major Caledonian intrusive rocks. However, a Permian dyke cuts the mineralisation at Cononish. These rocks are cut by the Tyndrum Fault, and fracture systems related to this fault host the mineralisation. In addition, this fault has a long history of movement from the late Silurian to Permian.

3.2.5.2 MINERALOGY

According to Pattrick (1985) the mineralogy of the Pb–Zn mineralisation at Tyndrum comprises brecciated and vein ores. Angular fragments of quartzite are the main clast type in the breccia ores. These are rimmed by euhedral and acicular quartz with an infill of sphalerite and/or galena. Textures indicate mainly hydraulic brecciation with some injection breccias. In addition, there is significant replacement of quartzite by cryptocrystalline silica. In the vein ores, successive mineral growth is perpendicular to the vein wall.

The main sulphide minerals are sphalerite, galena and chalcopyrite. Other sulphide and gangue minerals associated with the breccia and vein ores include pyrite, marcasite, tetrahedrite, barite and calcite. Mineral textures indicate an early phase of sphalerite breccia followed by a mixed sulphide ore (sphalerite and galena). After this galena and chalcopyrite are the main sulphide minerals. This is then followed by a distinctive steel ore where galena and chalcopyrite precipitate with little or no associated quartz. In addition to the main sulphide ores Pattrick (1985) recognised a phase of late vein-uranium mineralisation that cuts the main sulphide mineralisation. It comprises calcite, uraninite and chalcopyrite with associated minor dolomite, argentite, native silver, bornite and safflorite.

Concerning the Au-quartz mineralisation at Cononish (Eas Anie), Parker et al. (1989) record two distinct types of quartz-sulphide veining, which comprise an early mottled quartz and later vuggy quartz.

White quartz, displaying a hexagonal crystal form makes up the mottled quartz. In addition, it is commonly brecciated and resealed by separate generations of later quartz. Vugs are locally present and these are usually filled with later generations of quartz and sulphide. The sulphides, in order of decreasing abundance, consist of coarse-grained pyrite, galena, chalcopyrite and sphalerite. Commonly, the sulphides are intimately intergrown, with galena and gold occurring within microfractures in pyrite. This type of quartz-sulphide mineralisation is the main host to mineralisation with an average gold grade of 10–30 g/t. In addition, Curtis et al. (1993) and Pattrick et al. (1988) record a phase of telluride mineralisation associated with a gold-bearing structure 2 km north-north-east of Eas Anie (Halliday's vein). Telluride minerals comprise hessite (Ag_2Te), petzite (Au_3AgTe_2), sylvanite ($AuAgTe_4$) and rare Ag–Te–S minerals. These occur as inclusions in the coarse galena and in galena that replaces and veins pyrite. They also note the presence of chlorite and sericite as alteration minerals when galena replaces pyrite. In general, they note that gold and electrum are late in the paragenesis and commonly occur in microfractures in pyrite.

Vuggy quartz at Eas Anie, cross-cuts the mottled quartz and is clearly later (Parker et al. 1989). Clear euhedral quartz lines the vugs or they are filled by barite carbonate and/or base-metal sulphides. Galena is the most abundant sulphide and is associated with less common chalcopyrite and sphalerite. Pyrite is generally rare or absent from the sulphide assemblage here.

3.2.5.3 Fluid inclusions

Systematic fluid-inclusion data that relate fluids to the complex mineral parageneses in the Cononish–Tyndrum region are lacking. However, there are studies focusing on individual aspects of the mineralisation. Curtis et al. (1993) record the presence of primary and secondary carbon dioxide-rich inclusions (9–70 mol % CO_2) with salinities ranging from 6–7 wt % NaCl eq. These inclusions homogenise between 275 and 369ºC. In addition, they note the presence of secondary aqueous biphase (L+V) inclusions. These have salinities in the range 2.5–6.5 wt % NaCl eq. However, no homogenisation data are recorded. In the late-vuggy base metal-bearing quartz Curtis et al. (1993) record two secondary fluid inclusion types. These are: (i) a dilute (~ 2 wt % NaCl eq.) fluid with homogenisation temperatures around 150ºC and (ii) a saline (~ 15 wt % NaCl NaCl eq.) fluid. No homogenisation data are presented for inclusion either type.

At Tyndrum main mine and the nearby (1 km west) sub-parallel Mother Reef Pattrick (1985) describes three inclusion types:

1. Primary high-salinity (c. 18 wt % NaCl eq) inclusions with low to high homogenisation temperatures (100–400ºC). However, inclusions hosted in sphalerite show a narrow temperature range (100–140ºC).

2. Primary and secondary dilute (<1 wt % NaCl eq) inclusions also exhibiting a wide range in homogenisation temperatures (100–300ºC). As with high salinity inclusions, homogenisation temperatures for sphalerite-hosted inclusions show a narrow range (120–135ºC).

3. At the Mother Reef inclusions have moderate salinities (c. 5–7 wt % NaCl eq) and moderate homogenisation temperatures (175–200ºC).

3.2.6 Meall Mor

3.2.6.1 General geology

Mineralisation at the Abhainn Srathain copper mine is hosted in one of several tabular metabasite (epidiorite) bodies. These can be up to 250 m thick and extend for several kilometres. These appear to be interbedded with quartzite and quartz-chlorite schist (Mohammed, 1987).

3.2.6.2 Mineralogy

Two styles of mineralisation are evident. The first comprises pyrite and chalcopyrite hosted in fresh and altered metabasite (epidiorite). This occurs as clots (1–2 cm in diameter) and as disseminations in the host metabasite. The second is related to quartz veins, some of which are folded (localities: DRR037, 038, 040) and boudinaged. Again sulphide mineralisation comprises pyrite and chalcopyrite.

The metabasite is rich in amphibole (hornblende) and, locally, contains porphyroblasts of garnet and magnetite, with the magnetite commonly rimmed by hematite. Sulphides, with annealed textures, occur interstitially to the main silicate minerals and are commonly associated with the development of quartz, carbonate and more rarely chlorite. In the vein material, sulphides are concentrated along annealed grain boundaries, microfractures and rare vugs. Pyrite is, locally, veined and replaced by chalcopyrite and in one sample was observed as relict flames in chalcopyrite.

Textures and the distribution of the sulphides suggest localised remobilisation from metabasite-hosted mineralisation. In addition, the association of sulphides with quartz, carbonate and chlorite suggests that remobilisation took place during a regressive metamorphic phase.

3.2.6.3 FLUID INCLUSIONS

The deformed nature of the host rocks and cross-cutting quartz veins means that only late secondary fluid inclusions in the cross-cutting quartz veins are preserved. These are probably unrelated to the mineralisation. The secondary inclusions comprise mainly monophase aqueous inclusions with rare biphase (L+V) variants.

4 Summary of fluid types and associated mineralisation

4.1 FLUIDS

Though the exact compositions and temperatures of the fluids may vary from deposit to deposit, throughout the belt there are five major fluid types:

Fluid 1 – High salinity–high temperature: this fluid type has a restricted geographical distribution and was only recorded associated with the Cu–Au–Mo mineralisation at Lagalochan and Cu mineralisation at Tomnadashan. It is compositionally similar to fluids associated with porphyry copper mineralisation from around the world and is probably magmatic in origin.

Fluid 2 – Low to moderate salinity–moderate to high temperature and carbon dioxide-bearing: this fluid type has a wide geographical distribution. It is most commonly associated with metamorphic quartz veins, though it has been recorded as a minor fluid type associated with magmatic activity and high temperature porphyry style mineralisation (Lagalochan and Arrochar). Additionally, it could also be a major fluid type associated with appinitic/lamprophyric magmatism (e.g. Cruach Innse).

Fluid 3 – Low to moderate salinity–low to moderate temperature and gas-free: this fluid also has a wide geographical distribution. It is associated with metamorphic quartz veins and quartz veins hosted in igneous rocks. Its abundance is high and in some samples it is the major inclusion type. It occurs as primary inclusions in late euhedral quartz and as secondary inclusions in earlier generations and there is evidence that it is associated with base metal (gold?) mineralisation.

Fluid 4 – Moderate to high salinity–low to moderate temperature and gas-free: this fluid has a wide geographical distribution. It is present in a number of mineralised and un-mineralised metamorphic quartz veins. However, its abundance in any one sample is generally low. Its occurrence is restricted to secondary fluid inclusion arrays and it does not appear to be related to the precipitation of significant amounts of quartz or other minerals.

Fluid 5 – Low temperature monophase aqueous: this is probably the latest fluid type. Its monophase nature indicates that it is low temperature (<80ºC–Roedder, 1984). It occurs mainly as secondary inclusions. However, in a few samples it is clearly associated with the low temperature deposition of quartz. Its salinity is unknown as it is not possible to undertake accurate salinity measurements in inclusions where there is no vapour. Thus, it could be a low temperature equivalent of either Fluid 4 or Fluid 5.

4.2 MINERALOGY

In metamorphic-hosted mineralisation (e.g. Cononish, Calliachar–Urlar Burns and Stronchullin), with the exception of Meall Mor, two distinct assemblages of sulphide mineralisation can be observed:

1. Early Fe–(Cu)–As–S mineralisation comprising mainly pyrite and/or arsenopyrite.

2. Late base-metal sulphides (Pb, Zn, Cu) associated with various exotic Cu-, Bi-, Au-, Ag-, Hg-sulphides, antimonides and tellurides.

In the igneous-hosted mineralisation (e.g. Lagalochan and Tomnadashan) two distinct sulphide assemblages are also evident:

1. Early Fe–Cu±Mo mineralisation comprising pyrite, chalcopyrite and minor molybdenite.

2. Late base-metal Pb–Zn–Cu±(Au, Sb) mineralisation comprising galena, sphalerite, chalcopyrite and tetrahedrite.

5 Data synthesis and implication for metallogenic models

5.1 CURRENT GENETIC MODELS FOR OROGENIC GOLD MINERALISATION

5.1.1 Archaean greenstones and Proterozoic rocks

In Archaean greenstone terrains, research into gold mineralisation has established the main geological environments where vein-type gold deposits are likely to occur. This type of deposit is spatially associated with deep crustal lineaments or shear zones. Because of their transcrustal dimension it is generally accepted that the shear zones have acted as conduits for high temperature (>300°C) fluids migrating from the lower to the upper crust. Controversy surrounds the origin of these fluids, but they are typically volatile-rich (H_2O–CO_2–N_2) aqueous fluids and produce extensive quartz vein systems enriched in gold (i.e. orogenic quartz vein gold deposits). This knowledge has been derived from numerous multidisciplinary studies (geology, structure, ore mineralogy, fluid inclusions and isotope geochemistry) that relate the distribution and formation of mineral deposits to specific geological conditions.

Thus, these studies have established a strong genetic association with moderate temperature (250–400°C), low-salinity (1–10 wt % dissolved salts) and volatile-rich (CO_2, CH_4 N_2) fluids. Precipitation of gold is attributed to the destabilisation of gold–bisulphide complexes (e.g. Bowers, 1991 and Naden and Shepherd, 1989), especially in response to phase-separation or reaction with iron-rich rocks (e.g. Groves et al., 1987).

Detailed analysis of the scientific literature concerning orogenic gold reveals several important facets to the mineralisation in addition to those described above.

1. Fluid inclusions selected for analysis are commonly primary or pseudosecondary in origin, and hence document the fluids responsible for depositing the vein quartz. However, it is commonly observed that micro- or macroscopically visible gold is fracture controlled, i.e. it is deposited after quartz mineralisation. Therefore, fluid inclusion studies of this nature may not correctly document the physicochemical conditions responsible for visible gold.

2. Low temperature, volatile poor (<0.01 mole fraction CO_2) secondary fluid inclusions of varying salinity are a common feature in most deposits (e.g. Boer et al. 1995; Dill et al. 1995; Broman et al. 1994; Marcoux and Lescuyer, 1994; Åberg and Fallick, 1993; Cathelineau et al., 1993; Couto et al., 1993; Gebremarium, et al. 1993; Lu and Seccombe, 1993; Seccombe et al. 1993; Ansdell and Kyser, 1992; Boiron et al., 1989; Touray et al. 1989).

3. Mineralogically, gold is late in the paragenesis, and is commonly associated with a suite of sulphosalts, tellurides, sulphotellurides and base metal sulphides (galena, sphalerite) (e.g. Boiron et al., 1996; Fayek and Kyser, 1995; Couto et al., 1990; Curtis et al. 1993; Gebremarium, et al. 1993; Dill et al. 1995; Ayora et al., 1992; Neiva and Neiva, (1990); Castroviejo, 1990; Garcia-Iglesias and Loredo, 1990; Janatka, 1990; Bouchot et al. 1989; Touray et al. 1989). On some occasions, it is possible to use co-existing mineral assemblages to estimate the temperature of mineralisation. When this is the case, the mineralogy can document lower temperatures than given by the fluid inclusions. An example of this is the Clogau Mine in north Wales. Bottrell et al. (1988) show that fluid inclusions document mineralisation at approximately 320°C, while the presence of native bismuth and co-existing pyrite and bismuthinite indicate temperatures between approximately 150 and 270°C (Naden, 1988). In addition, petrographic observations frequently show the gold-bearing assemblages to be associated with microfracturing, brecciation and re-cementation of earlier iron and iron-arsenic sulphides.

4. Many quartz veins that have fluid characteristics indicating their potential for orogenic gold do not carry economic values. However, these veins are generally enriched compared to their surrounding rocks (e.g. Craw, 1990 and Craw and Chamberlain 1996).

The ubiquitous association of low-salinity (1–10 wt % dissolved salts) and volatile-rich (CO_2, CH_4 N_2) fluids show, without doubt, that these fluids play an integral role in the genesis of orogenic gold mineralisation. However, the association does not explain all aspects of the origin of these deposits.

5.1.2 Phanerozoic granite-hosted and metasedimentary rock-hosted gold

On a regional and a local scale, there are many similarities between Archaean and Phanerozoic-hosted orogenic gold mineralisation. For example, they share an association with transcrustal structural features and are spatially associated with volatile-rich fluids. However, other features play in important role in the location of gold in Phanerozoic-hosted mineralisation. This is exemplified by studies of gold mineralisation in Curraghinalt, Northern Ireland and the Iberian Peninsula (Wilkinson et al. 1999; Cathelineau et al. 1993; Boiron et al. 1992, 1996). These features are outlined below.

5.1.2.1 Curraghinalt, Northern Ireland

Wilkinson et al. (1999) documented, through cathodoluminescence textural studies combined with microthermometric analysis of fluid inclusions and laser fluorination determination of quartz oxygen-isotope composition, the remobilisation of gold by late low temperature brines. At Curraghinalt, they recorded a range of fluid types that are broadly similar to Fluids 2 to 4 seen in the Scottish Dalradian. Volumetrically important gold mineralisation is related to low–moderate temperature low-salinity, and low-temperature high-salinity brines (Fluids 3 and 4 above). Wilkinson et al (1999) concluded: *Although the gold transport mechanism is unclear, our results suggest that low-temperature brine transport of gold is possible and this process could be responsible for … gold mineralisation in hitherto unexpected environments.*

5.1.2.2 Iberian Peninsula

Boiron et al. (1996) describe Hercynian fluid penetration and the origin of granite-hosted gold-bearing quartz veins in four deposits in north-western Iberia. They observed three stages of quartz deposition and four fluid events, and were able to demonstrate clearly the fluids responsible for gold deposition. The earliest generation of quartz is characterised by $NaCl–H_2O–CO_2–CH_4–(N_2)$ fluids. Salinity–temperatures estimates for this fluid are approximately 2 wt % NaCl eq. and 300–410°C. This quartz contains massive pyrite and arsenopyrite±pyrrhotite. This is followed by quartz containing $NaCl–H_2O–CO_2–(CH_4)$ fluid inclusions. Salinities for these inclusions are approximately 2 wt % NaCl eq, and they homogenise between 320 and 380°C. Euhedral arsenopyrite crystallised on this quartz prior to deposition of the final phase of quartz. This last phase of quartz growth is documented by NaCl–H_2O–CO_2–CH_4–(N_2) fluids where the aqueous phase makes up over 87% of the inclusion volume. These inclusions homogenise between 220 and 330°C. These three inclusion types correspond to the typical orogenic fluids described by other workers (Fluid 2 above). The last fluid type observed by Boiron et al.(1996) is not associated with quartz precipitation, but occurs as secondary inclusions in all three generations of quartz. Moreover, where pre-existing sulphides are cut by individual planes of fluid inclusions, gold, sulphosalts, bismuth/bismuthinite and chalcopyrite are hosted within micro-fissured Fe–As sulphides. The fluids associated with this last phase of mineralisation are low salinity (0.3–10 wt % NaCl eq) moderate temperature (140–300°C), CO_2-free brines (Fluid 4 above). Boiron et al. (1996) concluded that the latest generation of fluids, which were responsible for deposition of particulate gold, were …*probably related of a general meteoric fluid influx affecting the basement at the end of the Variscan orogenesis*.

5.2 REGIONAL FLUID MODELS FOR OTHER PHANEROZOIC TERRANES

Two studies of regional fluid evolution during orogenesis have shown that there are consistent patterns to changes in fluid chemistry over periods of hundreds of millions of years.

5.2.1 Galway granite

O'Reilly et al. (1997), in a study of 200 Ma years of fluid evolution in the Galway Granite, identified three periods of fluid activity. The first comprised a magmatic H_2O–CO_2–NaCl fluid of moderate salinity (4–10 wt % NaCl eq.) that unmixed between 305 and 390°C. These fluids are analogous, in compositional and P–T terms, to the fluids that document orogenic gold mineralisation, but here they are locally associated with molybdenum mineralisation. This is equivalent to Fluid 2 above. The second generation fluid was of low to moderate salinity (0–10 wt % NaCl eq) and of moderate temperature (270–340°C), related to meteoric influx during, and possibly after, post-consolidation uplift of the granite. This fluid type is compositionally analogous to gold-bearing epithermal fluids, but here it is responsible for widespread alteration of the granite. This is equivalent to Fluid 3 above. The last fluid was a low temperature (125–205°C) and variable salinity (8–28 wt % NaCl eq) H_2O–NaCl–$CaCl_2$–KCl brine. It is associated with veins containing quartz, fluorite, calcite, barite, galena chalcopyrite, sphalerite and pyrite. This is fluid is similar to Fluid 4 above. This fluid is compositionally analogous to basinal brines and geochronological evidence suggests it significantly post-dates granite intrusion by about 200 Ma. In conclusion, O'Reilly et al. (1997) state that …*this sequence of events may be the general case for collisional granitoids and underlines the polygenetic* [remobilised] *nature of mineralisation spatially related to them*.

5.2.2 Cornubian Batholith

Wilkinson et al. (1995) undertook a fluid inclusion and isotope study of quartz vein systems associated with the Variscan orogeny in southwest England. This was done through the complete cycle of (i) foreland thrust-belt development and low-grade regional metamorphism, (ii) S-type granite emplacement and associated hydrothermal system, and (iii) post-orogenic collapse and low-temperature fluid flow in regional fractures. The total duration for these event was in the order of 100 Ma. They documented changes in fluid chemistry and isotopic composition and were able to correlate fluid composition with mineralising and geological events. Broadly speaking their fluid data fall into three categories:

1. Low-salinity weakly carbonic aqueous fluids associated with un-mineralised fracture systems that were developed during regional metamorphism (T = 290–330°C; salinity 1–7 wt % eq.).

2. Complex systems comprising low salinity aqueocarbonic fluids (H_2O–CO_2–N_2±CH_4) and high salinity Na–K–Ca–Fe-brines associated with granite intrusion. These fluids were responsible for early W–Sn-oxide mineralisation (T = 200–400°C; salinity 1–46 wt % eq.). These are equivalent to Fluids 1 and 2 above.

3. Fluids associated with extensional and strike–slip faulting associated with basin development. These comprise low-salinity sodic brines (T = 150–250°C; salinity 0–6 wt % eq.) and high salinity sodi-calcic brines (T = 110–150°C; salinity 23–28 wt % eq.). These fluids were responsible for late Sn–Cu–Zn–Pb and Pb–Zn mineralisation. It is also of note that minor occurrences of vein gold at Hopes Nose and Lolliswell (Clarke and Criddle, 1982; Stanley et al. 1990) are associated with this phase of late extension. This is equivalent to Fluid 4 above.

Recently, Gleeson et al. (2000) have shown that the sodi–calcic brines have their origins in Permo–Triassic strata in the offshore Western Approaches basin.

6 Conclusions and implications for Dalradian gold metallogenesis

6.1 MINERALOGICAL STUDIES

In mineralisation hosted by metamorphic rocks (e.g. Cononish, Calliachar–Urlar Burns and Stronchullin), two distinct assemblages of metal mineralisation are present:

1. Early Fe–(Cu)–As–S mineralisation comprising mainly pyrite and/or arsenopyrite.

2. Late base-metal sulphides (Pb, Zn, Cu) associated with various exotic Cu-, Bi-, Au-, Ag-Hg-sulphides, antimonides and tellurides.

In the mineralisation hosted by igneous rocks (e.g. Lagalochan and Tomnadashan) two distinct sulphide assemblages are also evident.

1. Early Fe–Cu±Mo–S mineralisation comprising pyrite, chalcopyrite and minor molybdenite.

2. Late base Pb–Zn–Cu±(Au, Sb) mineralisation comprising galena, sphalerite, chalcopyrite and tetrahedrite.

One of the key issues for the location of gold is the overprinting and re-mobilisation of early Fe–Cu–As mineralisation by later base-metal mineralisation.

6.2 FLUID INCLUSION STUDIES

Six fluid inclusion types were identified:

1. High salinity (halite-bearing–wt % NaCl>35 wt %) and high temperature (>300ºC) fluid inclusions. These are typical of porphyry copper deposits worldwide. They are restricted in occurrence and were only observed at Lagalochan, Tomnadashan and Comrie.

2. High temperature (250–400ºC), volatile-rich (major CO_2+CH_4+N_2 ~ 15–25 wt % NaCl eq) and moderate salinity (c. 7–10 wt % NaCl eq) fluid inclusions. This type of fluid is thought to be responsible for forming most of the world's Archaean gold deposits. In the Dalradian, this fluid is ubiquitous. It occurs in veins and breccias, associated with igneous activity (e.g. the Arrochar Complex and minor appinite intrusions), and in some cases the fluid is undoubtedly of magmatic origin. Additionally, it is one of the major fluid types in nearly all

metasedimentary rock-hosted quartz veins and is present at nearly all mineralised localities. However, in the Dalradian, its presence is NOT indicative of gold mineralisation.

3. Moderate to high-temperature (200–350ºC) with moderate salinity (7–10 wt % NaCl eq) inclusions containing volatiles (minor CO_2+CH_4+N_2 ~ 10–15 wt %).

4. Low to moderate temperature (150–250ºC) low salinity brines (<10 wt % NaCl eq) with little or no volatile component. This fluid is analogous to fluids associated with epithermal gold mineralisation. Although its thermal characteristics are similar, its salinity tends to be higher than true volcanic rock-hosted epithermal mineral deposits. It is a major fluid type in both igneous and metasedimentary rock-hosted mineralisation, and is present in a number of metamorphic quartz veins. Its presence as primary fluid inclusions in sphalerite clearly shows that it plays a significant role in mineralisation.

5. Fluid inclusions representing low temperature (<150ºC) high salinity (c. 20 wt % NaCl eq) brines. This type of fluid is typical of Mississippi Valley Type Pb–Zn deposits worldwide. However, in the Dalradian inclusions are low in abundance, but are generally present at most mineralised localities. It was recorded at Stronchullin, in Dalradian-hosted Pb–Zn deposits in Northern Ireland and at Curraghinalt.

6. Fluid inclusions that comprise only an aqueous liquid. These represent a low temperature aqueous fluid. On account of the monophase nature of the inclusions it is not possible to undertake accurate salinity measurements. This could be a low temperature equivalent of either Fluid 4 or Fluid 5.

The fluid inclusions document fluid activity associated with orogenesis and subsequent collapse of the orogen. Types 1 and 2 (and 3?) above represent the prograde fluids and have a deep crustal (magmatic and metamorphic) origin. They are probably responsible for introduction of metals into the system. Subsequent collapse of the orogen and the initiation of extensional tectonics permit a major ingress of meteoric-basinal fluids (Types 4, 5 and 6). Fluid 4 probably remobilises early Fe–Cu–(Mo)–As–S mineralisation and results in the base metal–gold overprint. Late stage (Devonian–Carboniferous?) basin development is a possible source for the high-salinity low temperature brines (Type 5 fluid). Fluid 6 could be responsible for the localised formation of dickite and kaolinite recorded by Parnell et al. (2000), and for the supergene alteration recorded by Ixer et al. (1997) at Calliachar and Urlar Burns.

Appendix 1 Sample localities and field information

This Appendix documents all the samples that were collected during the course of the Dalradian metallogenesis project which ran from 1997–2000. Not every sample listed here is pertinent to the preceding discussion and analysis. However, they are provided to document the physical materials and field information collected during the project. The samples are stored at the National Geosciences Data Centre and at the time of publication were available for research via the BGS enquiries service. In addition, there are a number of unpublished geochemical and isotopic data. This information may be accessed via the BGS enquiries service.

Table A1.1 Sample localities and field descriptions

Sample number	Locality	Easting	Northing	Field description/notes
DRR001	Calliachar Burn	284	745	Quartz vein samples from discontinuous outcrop. Steep structure trending 161°. Vein is against fault with one side containing clay gouge and thin (10 cm) alteration zone. Trench previously taken at this site (1.5 m thick).
DRR002	Calliachar Burn	284	745	Various quartz float samples. Suite contains one sample with galena.
DRR003	Calliachar Burn	284	745	SW wall of structure contains silicified zone with stock work of millimetre–centimetre sized quartz veinlets. Age relationship of structure not known, suite of quartz samples taken. Many veinlets are flat-lying.
DRR004	Calliachar Burn	284	745	5.5 m long quartz vein, 0.3 m thick, off-set by jogs. Quartz fine grained & homogeneous with no vugs and no sulphides, but has Fe-stained fractures. Vein trends 160° and cross cutting jogs 060–040°.
DRR005	Calliachar Burn	283	745	Zone of syn-tectonic quartz veins, folded and within foliation. Quartz glassy and recrystallised. Localised clots of carbonate nucleated around wallrock fragments.
DRR006	Calliachar Burn	283	745	Late cross-cutting carbonate (calcite) vein, some minor Fe-carbonate and rare pyrite. Vein direction 159°, sub vertical
DRR007	Calliachar Burn	283	745	Variety of quartz–sulphide samples. Galena and pyrite (2 bags).
DRR007A	Calliachar Burn	283	745	Barren quartz samples from metamorphic sweat-outs to coarse crystalline vuggy quartz. Main type milk white quartz with no sulphides.
DRR007B	Calliachar Burn	283	745	3 cm quartz vein, coarse grained quartz with hydrofractured wallrock, sample contains both hanging and footwall wallrock.
DRR008	Urlar Burn	283	746	Collection of quartz and sulphide (pyrite, galena, and chalcopyrite) samples from float.
DRR009	Urlar Burn	283	746	Sample of flat lying boudin quartz from outcrop.
DRR010	Urlar Burn	283	745	Quartz-carbonate vein with euhedral quartz. Vein trends 100° and dips 75°N.
DRR010A	Urlar Burn	283	745	Flat lying quartz boudins. Boudin has vertical fractures with neo-formed euhedral quartz similar to underlying quartz carbonate vein most northeasterly of three excavated veins.
DRR011	Urlar Burn	283	745	Quartz float samples collected from small dump above numerous foliation parallel quartz sweat-outs source of boulders uncertain, no obvious excavation. Located between middle and most NE excavation.
DRR011A	Urlar Burn	283	745	Large quartz breccia sample. Stockwork comprises mainly carbonate with minor sulphides. Also collected sample of large (2 cm) euhedral quartz infilled by carbonate and galena.
DRR012	Urlar Burn	283	745	Steep vertical quartz vein, localised vugs infilled with sulphides and some carbonate. Vein trends 130°. Sampled for geochemistry. Vein 5–15 cm wide, exposed over c. 2.5 m vertically. Sporadic clots of galena. Southwesternmost excavation along stream bank.
DRR012A	Urlar Burn	283	745	Sampled for mineralogy – sample contains wallrock.
DRR013	Urlar Burn	283	745	Steep vertical quartz vein with galena, malachite staining. Galena quite massive. Sample slightly oxidised. Vein trends 120° and dip is vertical, approx. 20 cm wide.
DRR014	Comrie	278	725	Micro-diorite, with pink feldspar phenocrysts, disseminated pyrite, possibly arsenopyrite, and rare chalcopyrite.
DRR015	Comrie	277920	725550	Sheared monomictic tectonic breccia. Variation in clast size cemented by pinkish carbonate. Sample weakly sulphidic, sheared material adjacent to basaltic dyke.
DRR015A	Comrie	277920	725550	Hand specimen of DRR015; Note 015A and 015 combined at analytical stage; only 015 exists.

Sample number	Locality	Easting	Northing	Field description/notes
DRR016	Comrie	277	725	Adjacent to coarse grained diorite 50:50 felsic to mafics (unmineralised). Sampled breccia. More evidence of silicification at this location – grey silica + carbonate. Pyritic clots in breccia clasts + rare chalcopyrite. Breccia zone trends 040° Sheared, slickensided.
DRR017	Invergeldie	2731	7293	Selection of psammitic material with large porphyroblasts of arsenopyrite (up to 1 cm) no obvious relationship between arsenopyrite crystals and metamorphic fabric.
DRR018	Corrie Buie	270615	733930	Coarsely crystalline quartz from possible E–W structure hosted in schists below Loch Tay limestone. Complete vein approximately 10 cm thick – collected from associated tips located below to the SE.
DRR019	Corrie Buie	270580	733985	*In situ* sample of flat lying vein containing galena – not typical metamorphic sweat-out as terminations appear replacive against limestone and appear to be linked by vertical fractures.
DRR020	Corrie Buie	270620	733930	Collapsed open pit trending 325°. Abundant white massive quartz on tips with traces of galena, rare carbonate. Veins contorted but seem to be interconnected with flat lying veins 2–5 cm thick. Galena *in situ*. Limestone brown in colour possibly dolomitised. No other sulphide minerals apart from galena. Collected a suite of samples from the tip for mineralogy and geochemistry.
DRR021	Corrie Buie	270575	734000	Fallen block with thin sub-vertical (1 cm) quartz vein containing galena and pyrite.
DRR022	Corrie Buie	270360	734040?	TJS has notes for this locality and sample.
DRR023	Tomnadashan	269	737	Mineralisation hosted in igneous intrusion. Excavations suggest mineralised body comprised several breccia pipes, veinlets of chalcopyrite and other sulphides observed, localised quartz pods. Alteration in places appears argillic. Entrance to workings mineralised fault exposed lower surface regular trending 020° dipping 60°E. Barren quartz pod, mineralisation hosted in diorite 5 m west of granite contact.
DRR023A	Tomnadashan	269	737	Quartz with sulphides, mineralisation hosted in diorite 5 m west of granite contact.
DRR023B	Tomnadashan	269	737	Carbonate pod with disseminated mineralisation in altered wallrock, mineralisation hosted in diorite 5 m west of granite contact.
DRR024	Tomnadashan	269	737	Unaltered diorite, localised pyrite on fractures.
DRR025	Tomnadashan	269	737	Quartz vein in diorite away from main mineralisation.
DRR026	Tomnadashan	269	737	Various dump samples.
DRR027	Kilmartin	181970	700150	Massive pink (Fe?)-carbonate vein 40 cm thick, locally crustiform, and no obvious sulphides. Trends 135° and dips 55°E. Coarsely crystalline centimetre sized veining extends into footwall. 0.5 m calcite vein present in roof of adit showing original worked structure. Two carbonate samples, coarse grained milky carbonate plus finer-grained pink carbonate.
DRR027A	Kilmartin	181970	700150	Carbonate stringer on footwall.
DRR027B	Kilmartin	181970	700150	Composite geochemical sample of locality.
DRR028	Kilmartin	181980	700165	Small (2x3 m) trial. Extremely coarse carbonate (4–6 cm). Structure trends 360º and dips 70ºE. 30–40 cm thick vein margins, massive calcite. Centre has coarse carbonate fill.
DRR028A	Kilmartin	181980	700165	Sub-parallel carbonate splay to DRR028
DRR029	Kilmartin	181978	700162	Loose block in collapsed adit, immediately (2–3 m) adjacent to DRR028. Block contains brecciated quartz cemented by carbonate.
DRR030	Kilmartin West	181100	700400	Sequence (3–4) of mainly foliation parallel veins hosted in schists/limestone. Veins approximately 30 cm thick. Quartz coarse grained with no sulphides. Foliation trends 010°. Veins traceable for about 10 m but are locally disrupted.
DRR031	Kilmartin West	181120	700430	40x30 cm quartz pod in graphitic schists close to small intrusion. Pod contains large euhedral quartz, but no obvious sulphides.

Sample number	Locality	Easting	Northing	Field description/notes
DRR032	Stronchullin	184460	679130	Geochemical sample of glassy orogenic quartz, with pyrite and pink secondary (As?) mineral. Trend of adit 020°.
DRR032A	Stronchullin	184460	679130	Barren coarse grained euhedral quartz.
DRR032B	Stronchullin	184460	679130	Quartz–carbonate samples.
DRR032C	Stronchullin	184460	679130	Coarse-grained euhedral quartz with sulphides (galena, sphalerite, pyrite).
DRR032D	Stronchullin	184460	679130	Possible mixed orogenic and euhedral quartz containing coarse pyrite.
DRR033	Stronchullin	184430	679080	3–4 10 cm thick white quartz veins, barren and locally brecciated. Trends 065°and dips 55°SE. Discordant to foliation. Veins not sampled.
DRR033	Stronchullin	184430	679080	Massive milky white quartz vein trending 060° dip 60°S.
DRR034	Stronchullin	183760	679282	Generally massive quartz vein 20 cm thick, locally quartz is euhedral and contains sporadic pyrite Strike 050. Minor coarse prismatic quartz.
DRR035	Stronchullin	183762	679282	Quartz generally barren of sulphides, but euhedral across width of vein (7 cm thick), crystals up to 3 cm long. Trends 020° and dips 68°E.
DRR036	Stronchullin	183760	679270	10 cm thick quartz vein. Fe-stained, locally vuggy with vugs infilled by Fe-oxides. Trend 015°.
DRR036 not sampled	Stronchullin			Adit (A) with one wall comprising brecciated quartz. 10 m downstream 30–40 cm thick quartz vein (B). (A) trends 035°, (B) trends 030° Two other veins with similar trend noted to the east in N bank of stream over a 40 m section upstream of the ford.
DRR037	Meall Mor	184525	673830	Zone of quartz veining 20 m wide. Contains around 2 m of quartz veining in 5–6 separate veins. Veins appear to be folded, with thinning in the limbs and thickening in the hinges, with localised blowouts. Folded by D3. In addition to folded veins, steep vuggy centimetre sized veins cutting earlier folded veins. Collected massive white quartz in blow-out.
DRR038	Meall Mor	184560	673840	Possible late euhedral quartz in nose of fold (photographed 2.2 and 2.3).
DRR039	Meall Mor	184540	673828	Loose block with euhedral quartz – possible steep structure.
DRR040	Meall Mor	184540	673830	Steep vein *in situ*, euhedral quartz, looks crack seal in places. Vein trends 030º and dips 70ºE.
DRR041	Meall Mor	183715	673720	Fracture controlled sulphide mineralisation hosted in psammite
DRR041A	Meall Mor	183715	673720	Syngenetic sulphides hosted in psammite.
DRR041B	Meall Mor	183715	673720	Two quartz samples, one with attached wallrock – Appear to be metamorphic sweat-outs.
DRR042	Meall Mor	183600	673680	Fine-grained massive epidiorite with finely disseminated pyrite. Localised carbonate-coated fractures.
DRR042A	Meall Mor	183600	673680	Epidiorite with clots of chalcopyrite and local epidote. Dump material sampled.
DRR042B	Meall Mor	183600	673680	Mineralised quartz boudins: chalcopyrite, pyrite. Contact with the wallrock has a selvedge of carbonate and amphibole laths Dump material sampled.
DRR043	Meall Mor	183600	673670	Highly discordant vertical quartz vein perpendicular to foliation. Glassy quartz with clots (2 cm) of sulphide (chalcopyrite?) Quartz vein c. 30 cm thick, trends 305. *In situ* material sampled.
DRR044	Meall Mor	183600	673675	Chalcopyrite-rich sample from dumps
DRR045	Meall Mor	183560	673470	*In situ* mineralised boudin hosted in quartzite.
DRR046	Meall Mor	183460	673470	Zone of deformed epidiorite and schists. Two types of quartz: syn-tectonic and folded – generally unmineralised. Also cross-cutting quartz pods with carbonate and mineralised. Sampled selection of late vuggy quartz from fallen blocks.

Sample number	Locality	Easting	Northing	Field description/notes
DRR046A	Meall Mor	183460	673470	*In situ* cross-cutting quartz pod.
DRR047	Meall Mor	183460	673480	Chalcopyrite-rich epidiorite with local coarse carbonate, but carbonate mainly in wispy patches. Sample has no segregation fabric
DRR048	Meall Mor	183720	674460	Stratiform chalcopyrite, with localised veinlets. In addition, 2 cm thick quartz vein – trends 025° and dips 80°E. 1 m downhill from site DRR048, vertical stringers of chalcopyrite in quartzite, trend 030–040° and dip >80°W. Bedding 027° and dips 75°W. Veinlets of chalcopyrite 1 cm thick, with 2 cm alteration halo. Sampled fracture controlled chalcopyrite.
DRR048A	Meall Mor	183720	674460	Mineralogical sample of DRR048; samples 048A and 048 combined at analytical stage; only 048 exists.
DRR049	Meall Mor	183721	674461	*In situ* vuggy quartz (photo 2.10). Two bags of material with one specimen containing large sulphide crystals marked float.
DRR049 not sampled	Meall Mor	183	674	Open space veins trend 032° and dip 80°E, these contain some sulphides. In total at this locality there are 4–5, 2–3 cm thick steep quartz veins over c. 8 m quartzite outcrop.
DRR050	Inverniel	182	681	Paragenetic relationships indicate at least two generations of quartz, early glassy quartz commonly brecciated and cemented by carbonate/sulphides. Later quartz tends to be more euhedral with sulphides infilling vugs.
DRR050	Inverniel	182	681	Locally, 1 mm veinlets of galena observed in wallrock. Generally quartz veining is thin (only 2–3 cm thick veins observed in dump material). Veins vary in direction, but have a general parallel trend in hand specimen – indicating a stockwork mineralisation. Geochemical sample taken.
DRR050A	Inverniel	182	681	Locally 1 mm veinlets of galena observed in wallrock. Generally quartz veining is thin (only 2–3 cm thick veins observed in dump material). Veins vary in direction, but have a general parallel trend in hand specimen – indicating a stockwork mineralisation. Mineralogical sample taken.
DRR051	Inverniel	182	681	Walking uphill from zone 2 quartz more abundant in float. At main working at top of hill dumps contain specimens of large (up to 5 cm) euhedral quartz, sulphides appear in vugs and fractures within the quartz. One hand specimen sample of quartz breccia cemented by sulphides (galena + pyrite), locally siderite infills vugs. Trend of open pit 335°. Geochemical sample taken.
DRR051A	Inverniel	182	681	Mineralogical sample. Note one sample has platy voids possibly after barite/anhydrite.
DRR052	Inverniel	182	681	Breccia ore – quartz, siderite, galena. Dump by old shaft.
DRR053	Inverniel	182	681	Breccia ore, quartz-rich breccia, subordinate carbonate and minor galena.
DRR053A	Inverniel	182	681	Carbonate-rich breccia ore, with chalcopyrite as main sulphide, and polymict angular clasts.
DRR054	Castleton	187420	684640	Thick vein of quartz exposed. Locally, up to 3 m thick. Where vein is thick it contains large wallrock inclusions, quartz is generally massive, but locally brecciated and cemented with iron stained silica (pyrite-rich?). Vein trends 051° and dips 62°N and has a prominent set of steep fractures (trending 130° and dipping 78°E). Locally sulphides are present, mainly pyrite but some galena. Also, quartz is locally vuggy (crystals>1 cm). Extent of exposure at least 40 m between two outcrops. Trend between outcrops 055°. Coarse vuggy quartz with pods infilled by Fe-oxide.
DRR055	Castleton	187420	684635	Brecciated quartz cemented by Fe-stained silica.
DRR056	Castleton	187420	684638	General sample of massive quartz.
DRR057	Castleton	187420	684639	Float material containing galena and other sulphides.
DRR058	Castleton	187660	684905	Sampled large block with paragenetic information and sulphides. 15 m S of walled shaft.
DRR059	Castleton	187660	684920	sulphidic sample collected from wall surrounding shaft – mainly pyrite cementing brecciated quartz.

Sample number	Locality	Easting	Northing	Field description/notes
DRR101	Inversnaid	23405	70952	No sample details
DRR102	Inversnaid	23403	70957	No sample details
DRR103	Inversnaid	23418	70958	Fine to medium grained porphyritic hornblende diorite.
DRR104	Inversnaid	23403	70957	Medium grained porphyritic hornblende diorite.
DRR105	Beinn Ducteach-Glen Gyle	23456	71496	Breccia.
DRR106	Beinn Ducteach-Glen Gyle	23550	71506	Lamprophyre.
DRR107	Beinn Ducteach-Glen Gyle	23523	71519	Lamprophyre.
DRR108	Beinn Ducteach-Glen Gyle	23438	71546	Felsic hornblende diorite.
DRR109	Beinn Ducteach-Glen Gyle	23454	71526	Medium grained hornblende diorite.
DRR110	Beinn Ducteach-Glen Gyle	23430	71504	Banded hornblende diorite.
DRR111	Stob na Eighrach-GlenGyle	23415	71471	Coarse appinite.
DRR112	Stob na Eighrach-GlenGyle	23525	71463	Sulphide-bearing felsic hornblende diorite.
DRR113	Stob na Eighrach-GlenGyle	23427	71450	Breccia.
DRR114	Lochan Dubh-Glen Gyle	23429	71418	Porphyritic hornblende diorite.
DRR115	Lochan Dubh-Glen Gyle	23419	71431	Leucocratic hornblende diorite.
DRR116	Allt Dubh Choirein-Glen Artney	26712	71495	Medium grained hornblende diorite.
DRR117	Allt Dubh Choirein–Glen Artney	26715	71491	Felsite dyke.
DRR118	Allt Dubh Choirein–Glen Artney	26719	71489	Fine grained diorite.
DRR119	Allt Dubh Choirein–Glen Artney	26727	71482	Grit.

Sample number	Locality	Easting	Northing	Field description/notes
DRR120.1	Allt Dubh Choirein–Glen Artney	26718	71482	Medium-grained hornblende diorite.
DRR120.2	Allt Dubh Choirein–Glen Artney	26718	71482	Medium-grained hornblende diorite.
DRR121	Meall Odhar–Glen Artney	26389	71515	Fine grained diorite.
DRR122	Lagalochan	18795	71196	Porphyry with abundant sulphide.
DRR123.1	Lagalochan	18789	71219	Red porphyry with abundant sulphide.
DRR123.2	Lagalochan	18789	71219	Red porphyry with abundant sulphide.
DRR124.1	Lagalochan	18774	71225	Megacrystic porphyry (for zircon dating).
DRR124.2	Lagalochan	18761	71220	Fine-grained intrusive breccia.
DRR125	Lagalochan	18721	71266	Welded sulphidic breccia.
DRR126	Lagalochan	18719	71253	Sparsely porphyritic microdiorite.
DRR127	Ardunie	17925	71058	Fine grained granite.
DRR128	Garabal Hill–GlenFyne	22591	71360	Faulted gabbro.
DRR129.1	Garabal Hill–GlenFyne	22593	71358	Gabbro.
DRR129.2	Garabal Hill–GlenFyne	22593	71358	Gabbro.
DRR129.3	Garabal Hill–GlenFyne	22593	71358	No sample details.
DRR130	Garabal Hill–GlenFyne	22582	71366	Very fine-grained ultrabasic.
DRR131	Garabal Hill–GlenFyne	22582	71368	Coarse hornblende-biotite diorite – enclave in ultrabasic.
DRR132	Garabal Hill–GlenFyne	22582	71371	Fine-grained ultrabasic.
DRR133	Garabal Hill–GlenFyne	22576	71383	Coarse gabbro.
DRR134	Garabal Hill–GlenFyne	22546	71402	Porphyritic granite/granodiorite.
DRR135	Garabal Hill–GlenFyne	22561	71393	Quartz-feldspar vein.

Sample number	Locality	Easting	Northing	Field description/notes
DRR136	Garabal Hill–GlenFyne	22675	71377	Coarse feldspathic hornblende gabbro (appinite).
DRR137.1	Garabal Hill–GlenFyne	22676	71379	Coarse hornblende melagabbro, pyrite interstitial and in veins.
DRR137.2	Garabal Hill–GlenFyne	22676	71379	Coarse hornblende melagabbro, pyrite interstitial and in veins.
DRR138	Garabal Hill–GlenFyne	22839	71557	Coarse, sparsely porphyritic biotite diorite.
DRR139.1	Garabal Hill–GlenFyne	22710	71458	Granodiorite.
DRR139.2	Garabal Hill–GlenFyne	22710	71458	No sample details.
DRR140	Garabal Hill–GlenFyne	22720	71451	No sample details.
DRR141	Arrochar	22409	70649	No sample details.
DRR142	Arrochar	2428	70602	Breccia.
DRR143	Arrochar	22424	70603	No sample details.
DRR144.1	Arrochar	22862	70894	Coarse crystalline vuggy carbonate vein.
DRR144.2	Arrochar	22862	70894	Coarse crystalline vuggy carbonate vein.
DRR144.3	Arrochar	22862	70894	Contact between carbonate vein and diorite.
DRR145	Arrochar	22854	70898	Medium/coarse equigranular granite.
DRR146.1	Arrochar	22902	70909	Breccia.
DRR146.2	Arrochar	22902	70909	Breccia.
DRR146.3	Arrochar	22902	70909	Microgranite vein.
DRR146.4	Arrochar	22902	70909	Medium/coarse porphyritic hornblende biotite diorite.
DRR146.5	Arrochar	22902	70909	Medium/fine diorite with disseminated sulphide.
DRR147	Craignure	299470	701100	Green chloritic psammite with quartz veins and sporadic pyrrhotite and/or chalcopyrite blebs.
DRR148	Craignure	299470	701093	Buff quartzite with pyrrhotite and/or chalcopyrite blebs.
DRR149	Craignure	299530	701060	Pyrrhotite and/or chalcopyrite ore fragments (<5 cm), mainly veins and segregations in psammitic quartzite.
DRR149A	Craignure	299530	701060	Pyrrhotite and/or chalcopyrite ore fragments (<5 cm), mainly veins and segregations in psammitic / quartzite – Duplicate of 149; split in lab prior to sample prep.
DRR150	Craignure	299490	701070	Pyrite / chalcopyrite veinlets and segregations parallel to schistosity of phyllite host-rock.
DRR151	Coille Bhraghad	207500	708180	Metabasic rock, dark green, variably foliated.
DRR152	Coille Bhraghad	207510	708130	Shallow-dipping, irregular quartz vein, 2–10 cm wide.

Sample number	Locality	Easting	Northing	Field description/notes
DRR152	Coille Bhraghad	207510	708130	Shallow-dipping, irregular quartz vein 2–10 cm wide.
DRR153	Coille Bhraghad	207540	708110	Dark green chlorite schist with pyrite disseminated and stringers parallel to schistosity.
DRR154	Coille Bhraghad	207545	708130	Quartzite (?) with fine disseminations of pyrite, stringers of pyrite/chalcopyrite and late white quartz veinlets.
DRR155	Comrie	277190	725580	Fine to medium-grained pink biotite granite/granodiorite.
DRR156	Comrie	278380	724640	Massive weathered, blocky jointed, medium to coarse-grained mica-pyroxene-diorite.
DRR157	Comrie	277890	724370	Coarse-grained diorite, with 1–2 cm biotite clots; sporadic blebs pyrite/pyrrhotite with a trace of chalcopyrite.
DRR158	Comrie	277930	724400	Medium to coarse-grained leucocratic diorite.
DRR159	Comrie	278330	726280	Pink fine-grained granite/granodiorite with 0.5–1 cm spotty biotite. Sporadic trace of pyrite and chalcopyrite.
DRR160	Comrie	278340	726290	Pink fine-grained granodiorite, rare blebs of molybdenite and occasional fracture coatings of pyrite/pyrrhotite/chalcopyrite.
DRR161	Comrie	279230	724360	Medium to coarse-grained dark grey diorite.
DRR162	Comrie	279230	724390	Medium to coarse-grained moderately leucocratic diorite.
DRR163	Glen Turret, NE side of Carn Chois	279420	728380	Irregular fractured quartz vein with included wallrock fragments.
DRR163	Glen Turret, NE side of Carn Chois	279420	728380	Irregular fractured quartz vein with included wallrock fragments from aureole of Comrie diorite, zone of alteration found by Colby Resources.
DRR164	Ardtalnaig	270840	739260	Complex quartz vein breccia with abundant clots of galena and sphalerite and clasts of felsite. Collected from upper northern dump.
DRR165	Ardtalnaig	270840	739210	Multiphase quartz vein breccia, with late barite. Clasts of pink felsite, minor sulphide. Collected from lower southern dump.
DRR166	SW side of Scar Hill, Cushnie	348020	810910	Quartz vein, up to a 10 cm wide, euhedral quartz; in Fe-stained metasediment host. Collected from northern zone of trenching by Navan, Towie area.
DRR167	The Socach, Cushnie	348580	810360	2–3 cm wide quartz vein, near planar, discordant to fabric in silicic host. Fe-stained and cavities after pyrite. Collected from northern end of main zone of trenching, Navan, Towie area.
DRR168	The Socach, Cushnie	348560	810380	Fe-stained quartz vein. Composite geochemical sample from outcrop. Vein trends c.155º.
DRR169	Cushnie	349630	810400	Fine, massive glassy quartz vein with sporadic coarse blebs pyrite, about 200 m from granite contact.
DRR170	Cushnie	349980	810120	Quartz vein, crystalline, up to few cm thick.
DRR171	Cushnie	350040	810090	Medium-grained, pink biotite granite.
DRR201	Glen More River	18913	81735	Mica lamprophyre dyke.
DRR202	Glen More River	18913	81735	Contact of dyke and diorite.
DRR203	Glen More River	18914	81735	Medium-grained mesocratic xenolithic diorite with slight planar fabric.
DRR204	Glen More River	18910	81740	Sulphide-carbonate vein cutting diorite.
DRR205	Glen More River	18900	81740	E–W trending quartz–galena–chalcopyrite carbonate vein in diorite.
DRR206	Glen More River	18885	81789	Massive coarse-grained hornblendite.
DRR207	Glen More River	18875	81775	Mesocratic medium-grained hornblende-diorite.

Sample number	Locality	Easting	Northing	Field description/notes
DRR208	Glen More River	18869	81770	Mica lamprophyre dyke.
DRR209	Glen More River	18864	81762	Massive coarse-grained hornblendite.
DRR210	Glen More River	18881	81756	Mesocratic medium-grained biotite-hornblende-diorite.
DRR211	Glen More River	18879	81755	Medium to coarse-grained hornblende-diorite.
DRR212	Glen More River	18878	81755	Mica lamprophyre dyke.
DRR213	Glen More River	18878	81755	Massive coarse-grained hornblendite to melanocratic hornblende diorite.
DRR214	Glen More River	18869	81760	Medium to coarse-grained hornblende-diorite.
DRR215	Glen More River	18868	81760	Hornblende diorite cut by carbonate veins.
DRR216	Glen More River	18868	81760	Excess vein material from the above.
DRR217	Kintail Lodge Rd cutting	19382	81970	Carbonate veinlet in monzonite.
DRR218	Kintail Lodge Rd cutting	19383	81971	Sulphidic quartz veinlet in monzonite.
DRR219	Kintail Lodge Rd cutting	19395	81985	5–8 cm wide quartz–sulphide–carbonate vein.
DRR220	Kintail Lodge Rd cutting	19395	81985	5–8 cm wide quartz–sulphide–carbonate vein.
DRR221	Kintail Lodge Rd cutting	19395	81985	5–8 cm wide quartz–sulphide–carbonate vein.
DRR222	Glen Shee Complex	31381	76903	Fine to medium-grained granodiorite.
DRR223	Glen Shee Complex	31374	76901	Fine to medium-grained granodiorite.
DRR224	Glen Shee Complex	31426	76971	Medium to coarse-grained biotite-hornblende diorite.
DRR225	Glen Shee Complex	31426	76971	Medium to coarse-grained biotite-hornblende diorite.
DRR226	Glen Shee Complex	31428	76922	Sulphidic metasediment.
DRR227	Tomnadashan	269100	737700	Fine grained mafic diorite.
DRR228	Tomnadashan	269100	737700	Porphyritic granite.
DRR229	Tomnadashan	269100	737700	Hornblende-phyric dyke.
DRR230	Tom Buie, Kenmore	27880	74507	Massive white quartz vein, pyrite and galena.
DRR231	Tom Buie, Kenmore	27881	74506	White quartz with massive to columnar black mineral.
DRR232	Tom Buie, Kenmore	27882	74506	White quartz with pyrite, chalcopyrite and galena.
DRR233	Tom Buie, Kenmore	27882	74506	White quartz with sphalerite or specular haematite.
DRR234	Tom Buie, Kenmore	27882	74506	White vein quartz with coarse galena.
DRR235	Tom Buie, Kenmore	27858	74489	White quartz with pyrite, chalcopyrite and galena.

Sample number	Locality	Easting	Northing	Field description/notes
DRR236	Allt Odhar, Fortingal	27390	74851	1–3.5 cm wide massive pyrite–carbonate vein.
DRR236	Allt Odhar, Fortingal	27381	74857	Carbonate veins in limestone from crush zone of Loch Tay Fault.
DRR238	Allt Odhar, Fortingal	27381	74857	Buff and massive carbonate veins in limestone from crush zone of Loch Tay Fault.
DRR239	Allt Odhar, Fortingal	27381	74857	Massive pyrite in limestone.
DRR240	Allt Odhar, Fortingal	27381	74857	Massive pyrite in limestone.
DRR241	Allt Odhar, Fortingal	27379	74861	Red–brown weathering carbonate rock.
DRR242	Allt Odhar, Fortingal	27379	74861	Quartz with pink ?carbonate.
DRR243	Allt Odhar, Fortingal	27379	74861	Brown carbonate rock with anastomising quartz veins.
DRR244	Allt Odhar, Fortingal	27374	74865	White quartz vein with pyrite.
DRR245	Allt Coire Peiginn	27511	75068	Fine-grained siliceous carbonate rock with veinlets of disseminated pyrite.
DRR246	Allt Coire Peiginn	27511	75068	Fine-grained siliceous carbonate rock with veinlets of disseminated pyrite.
DRR247	Allt Coire Peiginn	27512	75066	Network of carbonate veining. Possibly two generations.
DRR248	Allt Coire Peiginn	27512	75066	Network of carbonate veining. Possibly two generations.
DRR249	Allt Coire Peiginn	27510	75065	Carbonate veins with inclusions of brecciated country rock.
DRR250	Allt Coire Peiginn	27510	75065	Carbonate veins with inclusions of brecciated country rock.
DRR251	Allt Coire Peiginn	27509	75063	Fragments of dark-grey schist in white carbonate cut by a later generation of carbonate veinlets.
DRR252	Allt Coire Peiginn	27509	75063	Fragments of dark-grey schist in white carbonate cut by a later generation of carbonate veinlets.
DRR253	West side of Glen Turret	28015	72710	White quartz vein cutting micaceous psammite.
DRR254	West side of Glen Turret	28012	72708	White quartz vein with specular haematite and boxwork texture.
DRR255	West side of Glen Turret	28012	72708	White quartz vein with specular haematite and boxwork texture.
DRR256	West side of Glen Turret	27991	72695	Strongly haematised and ?hornfelsed Dalradian rock.

Sample number	Locality	Easting	Northing	Field description/notes
DRR257	West side of Glen Turret	27991	72695	Breccia - Dalradian rock fragments in hematite and white ?carbonate.
DRR258	West side of Glen Turret	27996	72699	White vein quartz with specular haematite rare sulphide.
DRR259	West side of Glen Turret	28007	72714	Quartz vein with haematite.
DRR260	West side of Glen Turret	28007	72769	Quartz vein with sulphides.
DRR261	West side of Glen Turret	28003	72768	Quartz vein with goethite.
DRR262	River Almond, Dalriech	27805	73329	Breccia with disseminated sulphide.
DRR263	River Almond, Dalriech	27805	73329	Sulphidic breccia.
DRR264	River Almond, Dalriech	27805	73329	Carbonate veinlet cutting breccia.
DRR265	River Almond, Dalriech	27805	73329	Pelitic metasediment with disseminated sulphide and carbonate.
DRR266	River Almond, Dalriech	27805	73329	Pale greenish-grey felsite with disseminated sulphide.
DRR267	River Almond, Dalriech	27805	73329	Pale greenish-grey felsite with disseminated sulphide.
DRR268	River Almond, Dalriech	27805	73329	Purplish-brown felsite with disseminated sulphide.
DRR269	River Almond, Dalriech	27805	73329	Purplish-brown felsite with disseminated sulphide.

Appendix 2 Mineralogical and fluid inclusion descriptions

During the Dalradian Metallogenesis project a range of polished thin sections, polished blocks and fluid inclusion wafers were made. The main part of the report summarises observations data obtained from this material. Below are the descriptions of the individual sections. The locations of the samples are given in Appendix 1.

Table A2.1 Mineralogical and fluid inclusion descriptions (FIW is a description of a fluid inclusion wafer, PTS a polished thin section and PBL a polished block)

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
DRR001	FIW	Calliachar Burn	Two types of vein quartz: 1. Annealed and recrystallised (anhedral with sutured grain boundaries) 2. Euhedral vug lining quartz this overgrows and is later than the annealed quartz. No sulphides present.	Two distinct inclusion types: 1. Three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %), these are mainly primary/pseudosecondary in origin. This inclusion type is more abundant in regions of deformed quartz 2. Two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %), These types of inclusion are secondary when seen in the annealed quartz, but primary when observed in the late euhedral quartz.
DRR002	FIW	Calliachar Burn	Coarsely-crystalline subhedral vuggy vein quartz (1–5 mm), which is undeformed and relatively unstrained. Locally, vugs filled by galena (only sulphide present). Galena is free of inclusions of other sulphides, sulphosalts or tellurides. Rarely, galena occurs as trails of small (<100 µm) inclusions in quartz. No other gangue mineral present.	Two main inclusion types: 1. Three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %), these are mainly primary/pseudosecondary in origin. 2. Two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %). These are almost exclusively secondary in origin. This type of inclusion is the most abundant.
DRR003	FIW	Calliachar Burn	Thin (5 mm) quartz vein in metasediment. Quartz recrystallised and annealed with sutured grain boundaries. No sulphides or other gangue mineral present.	No primary inclusions preserved. However, locally grain boundaries are decorated with vapour-rich (black) inclusions. Quartz contains long (>1 mm) trails of secondary inclusions that contain biphase (L+V) or monophase (L) aqueous inclusions.
DRR004	FIW	Calliachar Burn	Part of a quartz vein attached to schistose wallrock. No sulphides are present in this sample.	Two main inclusion types: 1. Three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %), these are mainly primary/pseudosecondary in origin. 2. Two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %), these are mainly secondary in origin. Generally, paragenetic relationship between fluids is difficult to establish
DRR007	PTS	Calliachar Burn	Coarsely crystalline subhedral to euhedral vein quartz (1–5 mm) Locally stained with undulose extinction and development of subgrains. Relatively abundant euhedral arsenopyrite (no inclusions of other sulphides) with rare euhedral pyrite. Also contains a late stage oxidation assemblage possibly after pyrite. In addition, carbonate is associated with arsenopyrite.	Fluid inclusions too small for accurate petrographic description

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
DRR007	FIW	Calliachar Burn	Two generations of quartz: 1. Coarsely crystalline subhedral to euhedral vein quartz (1–5 mm) Locally stained with undulose extinction and development of subgrains. 2. Fine grained (<1 mm) late vug lining and vein quartz. Coarse-grained quartz contains minor subhedral to euhedral arsenopyrite (0.5–2 mm). Pyrite is the most abundant sulphide. Arsenopyrite grows epitaxially on, or is included within pyrite. Pyrite is locally fractured and veined by quartz 2. No other gangue minerals present.	Fluid inclusions are generally very small (<4 µm) and hosted in fractures. Main inclusion type is two phase (L+V) inclusions with low to moderate degrees of vapour fill (V/[L+V] 5–15 %). Three phase carbonic inclusions are rare.
DRR007	PBL	Calliachar Burn	Moderately coarse grained quartz (1–10 mm) with euhedral and locally brecciated pyrite plus arsenopyrite. Arsenopyrite is heavily fractured and altered to oxidic minerals. It contains rare inclusions (<50 µm) of chalcopyrite and pyrite (<10 µm). Pyrite is inclusion-free. Both sulphides are locally veined and brecciated with a quartz fill.	Fluid inclusions not observed as sample prepared as polished block.
DRR007A.1	FIW	Calliachar Burn	Coarsely crystalline subhedral vuggy vein quartz (1–5 mm), which is undeformed and relatively unstrained. No sulphides present, though large (5 mm) vugs are filled with iron oxides.	The major inclusion population is two phase (L+V) with low degrees of vapour fill (V/[L+V]<10 %), these are pseudosecondary and secondary in origin. Three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %) are relatively uncommon.
DRR007A.2	FIW	Calliachar Burn	Coarsely crystalline subhedral to anhedral vein quartz (1–5 mm) Locally deformed with the development of subgrains. No sulphides present. Rare vugs. No other gangue minerals present.	Inclusion population dominated by three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %), these are mainly primary/pseudosecondary in origin. Vug lining quartz dominated by two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %), these are primary/pseudosecondary in origin.
DRR007B	FIW	Calliachar Burn	Coarsely crystalline subhedral vuggy vein quartz (1–5 mm), which is undeformed and relatively unstrained. No sulphides present, though large (5 mm) vugs are filled with iron oxides.	Inclusions are dominated by two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %), these are pseudosecondary and secondary in origin. Three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %) are relatively uncommon.
DRR008.1	PTS	Urlar Burn	Quartz-carbonate vein with oxidised wallrock inclusion. Quartz is moderately coarse grained and generally anhedral. It exhibits annealed textures with significant development of triple point boundaries. Against carbonate it is euhedral and the carbonate infills large (10 mm) vugs/voids. The carbonate is relatively coarse-grained (5–10 mm) and undeformed.	Quartz generally has low fluid inclusion abundance. Three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %) are relatively uncommon, these occur as isolated inclusions or as short trails that do not cross crystal boundaries. The majority of the inclusions are secondary and comprise two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %) and monophase aqueous inclusions.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
DRR008.2	FIW	Urlar Burn	Coarsely crystalline subhedral to anhedral vein quartz (1–5 mm) Locally deformed with development of subgrains. Quartz is heavily microfractured and sulphides are present in an irregular vug. These comprise galena, chalcopyrite, sphalerite and pyrite. The galena contains relatively abundant inclusions of tellurides (hessite Ag_2Te) and native gold. Pyrite is euhedral and enclosed by chalcopyrite. Contacts between galena and chalcopyrite are irregular and sinuous, and the paragenetic relationship between them is difficult to determine. However, local small (<50 µm) inclusions of chalcopyrite in galena suggest that galena replaces chalcopyrite. Sphalerite is intimately associated with chalcopyrite. It occurs as isolated small (<40 µm) blebby inclusions or as larger (>1 mm) anhedral grains with chalcopyrite disease. Telluride inclusions are small (<40 µm) and only occur in galena. They are commonly associated with native gold. Galena is moderately altered along cleavage planes to oxidic minerals and covellite (Cu_2S). In addition, white electrum was seen associated with the supergene alteration.	Two main inclusion types: 1. Three phase carbonic inclusions ($L_{CO2} + L_{H2O} + V_{CO2}$) with moderate degrees of vapour fill (V/[L+V]>15 %), these are mainly primary/pseudosecondary in origin. This inclusion type is more abundant in regions of deformed quartz 2. Two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %), these are almost exclusively secondary in origin. This type of inclusion is the most abundant in the quartz adjacent to the sulphide filled vugs Generally, paragenetic relationship between fluids and sulphides difficult to establish.
DRR009	FIW	Urlar Burn	Moderately coarse-grained anhedral quartz (<5 mm). Annealed and recrystallised, grain contacts are commonly sutured. No sulphides or other gangue minerals present.	Deformation and annealing has resulted in most of the quartz grains being devoid of primary inclusions. Commonly grain boundaries are decorated by vapour-rich fluid inclusions. Locally, some primary/pseudosecondary inclusions are preserved within quartz crystals. Here, the inclusions here are three phase and carbonic ($L_{CO2} + L_{H2O} + V_{CO2}$). The degrees of vapour fill vary considerably from less than 10 % to greater than 90 %. Quartz also contains late secondary inclusions hosted in micro-fractures, these are two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %).
DRR010	FIW	Urlar Burn	Comprises (>10 mm) euhedral quartz crystals. These are locally fractured and recemented by a later generation of quartz. Large central vug filled by iron oxides–no relict sulphides or other gangue minerals.	Two spatial distributions of fluid inclusion: 1. Randomly distributed network of inclusions. This hosts rare three phase carbonic inclusions ($L_{CO2} + L_{H2O} + V_{CO2}$) with moderate degrees of vapour fill (V/[L+V]>15 %), and two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %). 2. Long (>1 mm) trails that cut crystal boundaries. These host mainly monophase aqueous inclusion with rarer biphase variants.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
DRR010A	FIW	Urlar Burn	Two generations of quartz: 1. Moderately coarse-grained anhedral quartz (<5 mm), which is annealed and recrystallised. 2. Fine grained (<1 mm) euhedral quartz. This occur in veins and microvugs. No sulphides or other gangue minerals are present in this sample.	Three main inclusion types: 1. Three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %), these are mainly primary/pseudosecondary in origin. 2. Two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %), these are mainly secondary in origin. 3. Monophase aqueous inclusions. The carbonic inclusion tend to occur as random networks or as short pseudosecondary arrays, whilst the aqueous inclusions are generally, but not exclusively restricted to long secondary arrays. These only occur in Type 1 quartz. Type 2 quartz only hosts monophase inclusions.
DRR011	FIW	Urlar Burn	Two types of vein quartz: 1. Annealed and recrystallised (anhedral with sutured grain boundaries). 2. Euhedral vug lining quartz this overgrows and is later than the annealed quartz. Contains fracture related and vug filling galena and chalcopyrite. Galena is inclusion-free and locally replaces chalcopyrite. Chalcopyrite locally contains inclusion of pyrite and thin (<100 µm) veins of covellite. Galena also shows alteration along cleavage planes to oxidic material. The vugs also contain rare small (<1 mm) euhedral carbonate, and a box work of iron oxides after pyrite.	Three spatial distributions of fluid inclusion: 1. Randomly distributed network of inclusions. This hosts three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %), and two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %). 2. Long (>1 mm) trails that cut crystal boundaries. These host mainly monophase aqueous inclusion with rarer biphase variants. 3. inclusions that decorate the contact of annealed quartz veins. No direct association between inclusion type and sulphide mineral.
DRR012	PBL	Urlar Burn	Vug/void filling chalcopyrite (10–20 mm) in quartz. Chalcopyrite heavily altered to iron oxides. Rare inclusions (<100 µm) of pyrite in chalcopyrite.	Fluid inclusions not observed as sample prepared as polished block.
DRR012	FIW	Urlar Burn	Coarsely crystalline subhedral to euhedral vein quartz (1–5 mm) locally strained with undulose extinction and development of subgrains. Local development of vugs. Contains siliceous inclusion of metasediment. No sulphides or other gangue minerals present.	Two spatial distributions of fluid inclusion: 1. Randomly distributed network of inclusions. This hosts three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %), and two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %). 2. Long (>1 mm) trails that cut crystal boundaries. These host mainly biphase and monophase aqueous inclusions.
DRR012A	FIW	Urlar Burn	Coarsely crystalline subhedral to euhedral vein quartz (1–5 mm) Locally strained with undulose extinction and development of subgrains. Vein is attached to a piece of schistose wallrock. Development of Fe-oxide (after sulphide) at the contact between vein and wallrock.	Two spatial distributions of fluid inclusion: 1. Randomly distributed network of inclusions. This hosts three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %), and two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %). 2. Long (>1 mm) trails that cut crystal boundaries. These host mainly biphase and monophase aqueous inclusions.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
DRR013	FIW & PTS	Urlar Burn	Two types of vein quartz: 1. Annealed and recrystallised (anhedral with sutured grain boundaries). 2. Euhedral vug and vein lining quartz, this overgrows and is later than the annealed quartz. Contains fracture related and vug filling galena. Galena contains inclusion of telluride (Bi?).	Two main types of inclusion: 1. Three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %), these are mainly primary/pseudosecondary in origin. 2. Two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %), these are mainly secondary in origin.
DRR014	PTS	Comrie	Microgranite/quartz diorite with localised myrmekitic textures, quartz is late in the paragenesis. Mafic minerals (biotite?) chloritised and feldspars sericitised. Late-stage anhedral pyrite associated with mariolitic cavities.	Late-stage quartz contains mainly secondary inclusions these are mainly vapour-rich (V>90 %) or monophase aqueous with localised biphase variants. Primary/pseudosecondary inclusions are rare, but these tend to be multisolid–liquid–vapour inclusions.
DRR017.1	PTS	Invergeldie	Quartz-mica-schist with thin (2 mm) quartz vein. Quartz undeformed and subhedral.	Quartz vein contains abundant pseudosecondary biphase (vapour rich V>85 %) inclusions, and less common biphase (liquid-rich V<15 %) secondary inclusions.
DRR017.1	PBL	Invergeldie	Large (1–2 cm) arsenopyrite porphyroblasts hosted in metasediment. Arsenopyrite free of sulphide inclusions, but contains abundant silicate inclusions (<100 µm). Sample cut by thin (1–2 mm) quartz vein, which appears to post date arsenopyrite.	Fluid inclusions not observed as sample prepared as polished block.
DRR017.2	PTS	Invergeldie	Quartz-mica schist with post-deformational porphyroblasts of arsenopyrite. Rare intra-granular chalcopyrite.	No suitable gangue minerals for fluid inclusion observations.
DRR018	FIW	Corrie Buie	Coarsely crystalline subhedral to euhedral vein quartz (5–20 mm). Locally strained with undulose extinction and development of subgrains. Sporadic development of vugs. No sulphides or other gangue minerals present.	Two spatial distributions of fluid inclusion: 1. Randomly distributed network of inclusions. This hosts three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %), and two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %). 2. Secondary trails of inclusions, which host mainly biphase aqueous inclusions.
DRR019	FIW	Corrie Buie	Coarsely crystalline subhedral to euhedral vein quartz (1–5 mm) locally strained with undulose extinction and development of subgrains. Local development of vugs. Contains siliceous inclusion of metasediment. No other gangue minerals present. Rare vug filling galena.	Two spatial distributions of fluid inclusion: 1. Randomly distributed network of inclusions. This hosts three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %), and two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %). 2. Secondary trails of inclusions, which host mainly biphase aqueous inclusions.
DRR020	PTS	Corrie Buie	20 mm quartz vein in siliceous meta-limestone. Quartz subhedral and coarse-grained (1–10 mm). Vuggy cavities infilled by galena. Wallrocks contain disseminated pyrite, pyrrhotite, and rare chalcopyrite and galena. Galena does not contain inclusions of sulphosalts or tellurides.	No primary inclusions were observed, inclusions either secondary or pseudosecondary in origin. No three phase carbonic inclusions. Inclusions show a highly variable range in vapour to liquid ratios from 100 % liquid to 100 percent vapour. Paragenetic relationships difficult to establish.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
DRR020.2	FIW	Corrie Buie	Quartz-carbonate vein with wallrock inclusion. Quartz and carbonate are coarsely crystalline (>5 mm). Quartz is locally strained with undulose extinction and the development of subgrains. No sulphides are present in this sample.	In quartz, there are two spatial distributions of fluid inclusion: 1. Randomly distributed network of inclusions. This hosts three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %), and two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %) 2. Secondary trails of inclusions, which host mainly biphase aqueous inclusions In carbonate, only the biphase and monophase aqueous inclusions are present.
DRR021	FIW	Corrie Buie	10 mm quartz vein in siliceous meta-limestone. Quartz subhedral and coarse-grained (1–10 mm). Vuggy cavities infilled by galena. Wallrocks contain minor, pyrrhotite. Galena does not contain inclusions of sulphosalts or tellurides. Also rutile needles.	No primary inclusions were observed. Inclusion either secondary or pseudosecondary in origin. No three phase carbonic inclusions. Inclusions show a highly variable range in vapour to liquid ratios from 100 % liquid to 100 percent vapour. Paragenetic relationships difficult to establish.
DRR022	FIW	Corrie Buie	Coarsely crystalline subhedral to euhedral vein quartz (>5 mm), locally strained with undulose extinction and development of subgrains. No sulphides or other gangue minerals present.	Randomly distributed network of inclusions. This hosts three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %), and two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %). Also there are secondary trails of mainly biphase aqueous inclusions.
DRR023B.1	PTS	Tomnadashan	Highly carbonatised and sericitised rock with disseminated and vein sulphides. Sulphides comprise early anhedral to subhedral pyrite with minor chalcopyrite.	No inclusions in relict quartz or carbonate.
DRR023B.2	PTS	Tomnadashan	Highly carbonatised and sericitised rock with disseminated and vein sulphides. Also thin (2-3 mm) quartz veins. Sulphides comprise early subhedral to euhedral pyrite cemented by tetrahedrite and minor chalcopyrite.	Vein quartz has only a few pseudosecondary/secondary inclusions these mainly comprise three phase CO2-rich (>50 vol. %) inclusion with biphase variants.
DRR024	PTS	Tomnadashan	Relatively unaltered diorite (hornblende and biotite) minor quartz. Late disseminated sulphides (pyrite) and oxides (magnetite).	Hypersaline halite bearing inclusions in quartz and three phase CO_2-bearing inclusions.
DRR026	PTS	Tomnadashan	Carbonate pod with localised euhedral quartz and sulphides (pyrite, chalcopyrite, and tetrahedrite). Pyrite is euhedral and fractured. Fractures are filled by carbonate, quartz, tetrahedrite and chalcopyrite. Locally, pyrite is mantled by euhedral fine-grained (<0.5 mm) quartz. Euhedral quartz crystals are also cemented by tetrahedrite.	Euhedral quartz generally devoid of fluid inclusions. Carbonate contains local primary biphase (L+V) inclusions with about 10–15 % vapour.
DRR026	FIW	Tomnadashan	Brecciated quartz cemented by carbonate. Locally carbonate-filled fractures are lined by euhedral quartz. No sulphides are present in this sample.	Quartz hosts a variety of inclusion types. These are all secondary in origin and occur hosted in a random network of healed fractures. The major inclusion types are monophase aqueous inclusions with minor biphase variants. A significant inclusion type is multiphase solid inclusions. These usually comprise two/three solids (halite, sylvite and opaque mineral) and have varying proportions of liquid to solid to vapour.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
DRR032	FIW	Stronchullin	Variably deformed quartz vein containing localised euhedral pyrite (1–2 mm). Quartz is locally coarse grained (>5 mm), but anhedral with sutured grain boundaries an incipient sub-grain development. Elsewhere it is annealed and granoblastic (<1 mm). Pyrite contains localised inclusions of chalcopyrite (and pyrrhotite).	Majority of inclusions pseudosecondary/secondary in origin and located at irregular subgrain boundaries and in short sub parallel healed fractures. Dominant inclusion population comprises three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with varying degrees of vapour fill (V/[L+V]>15 %). Rare biphase variants are also present..
DRR032C	FIW	Stronchullin	Coarse-grained subhedral to euhedral quartz with vug filling sulphides (chalcopyrite, sphalerite and pyrite) and rare vug filling carbonate. Sphalerite is iron poor (colourless), has severe chalcopyrite disease, and is locally replaced and veined by tetrahedrite.	Vein quartz contains a variety of pseudosecondary and secondary inclusions varying from three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with varying degrees of vapour fill (V/[L+V]>15 %) through biphase (L+V) inclusions to monophase aqueous inclusions. Sphalerite mainly hosts biphase (L+V) inclusions with rarer monophase variants. These are located in the same spatial association as the chalcopyrite disease or as fractures (similar spatial association to tetrahedrite).
DRR032C	PTS	Stronchullin	Coarse-grained subhedral to euhedral quartz with vug filling sulphides (chalcopyrite, sphalerite and pyrite) and rare vug filling carbonate. Sphalerite is iron poor (colourless), has severe chalcopyrite disease, and is locally replaced and veined by tetrahedrite.	Vein quartz contains a variety of pseudosecondary and secondary inclusions varying from three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with varying degrees of vapour fill (V/[L+V]>15 %) through biphase (L+V) inclusions to monophase aqueous inclusions. Sphalerite mainly hosts biphase (L+V) inclusions with rarer monophase variants. These are located in the same spatial association as the chalcopyrite disease or as fractures (similar spatial association to tetrahedrite).
DRR032D	FIW	Stronchullin	Coarse-grained subhedral to euhedral quartz with vug filling sulphides (chalcopyrite, galena).	Vein quartz contains a variety of pseudosecondary and secondary inclusions varying from three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with varying degrees of vapour fill (V/[L+V]>15 %) to biphase (L+V) inclusions. Three phase inclusions tend to occur in random networks within quartz crystals, whilst the biphase inclusions tend to be associated with fractures.
DRR032D	PTS	Stronchullin	Coarse-grained subhedral quartz. Quartz has significant development of subgrains and sutured contacts. Sulphides fill vugs (chalcopyrite, sphalerite and tetrahedrite and galena).	Vein quartz contains a variety of pseudosecondary and secondary inclusions varying from three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with varying degrees of vapour fill (V/[L+V]>15 %) to biphase (L+V). Three phase inclusions tend to occur in random networks within quartz crystals, whilst the biphase inclusions tend to be associated with fractures
DRR033	FIW	Stronchullin	Coarse-grained (1–5 mm) anhedral quartz. Quartz has significant development of subgrains and sutured contacts. No sulphides present in this sample.	Vein quartz contains a variety of pseudosecondary and secondary inclusions varying from three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with varying degrees of vapour fill (V/[L+V]>15 %) to biphase (L+V). Three phase inclusions tend to occur in random networks within quartz crystals, whilst the biphase inclusions tend to be associated with fractures

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
DRR034	FIW	Stronchullin	Coarse grained (1–5 mm) anhedral quartz. Quartz has significant development of subgrains and sutured contacts. No sulphides present in the sample.	Vein quarts contains a variety of pseudosecondary and secondary inclusions varying from three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with varying degrees of vapour fill (V/[L+V]>15 %) through biphase (L+V) inclusions to monophase aqueous inclusions. These are hosted in sub-parallel microfractured arrays and decorating the boundaries between sub-grains. Three phase inclusions are relatively rare and the majority comprise biphase and monophase aqueous inclusions
DRR036	FIW	Stronchullin	Two types of quartz: 1. Annealed and recrystallised (anhedral with sutured grain boundaries)–fine grained (c. 1 mm). 2. Relatively coarse-grained (up to 5 mm) subhedral quartz this overgrows and is later than the annealed quartz. Locally the quartz contains micro (<1 mm) vugs. No sulphides were observed in this sample.	Vein quartz contains a variety of pseudosecondary and secondary inclusions varying from three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with varying degrees of vapour fill (V/[L+V]>15 %) through biphase (L+V) inclusions to monophase aqueous inclusions. Paragenetic relationships between various inclusion types are difficult to establish
DRR042A	PTS	Meall Mor	Clots (1-2 mm) of sulphide in garnet-bearing metabasite (mainly amphibole). Localised blasts of magnetite are rimmed and partially replaced by hematite. Sulphides (chalcopyrite, pyrite) commonly associated with quartz and carbonate, no obvious alteration of host rock	Garnet contains very rare vapour-rich (>40%) biphase inclusions.
DRR042B.1	FIW	Meall Mor	Annealed and recrystallised quartz (anhedral with sutured grain boundaries) containing clots of chalcopyrite. Quartz against chalcopyrite is anhedral. Locally, chalcopyrite is fractured, with fractures infilled by small (<100 µm) laths of hematite	Inclusions restricted to late fractures and subgrain boundaries. Majority are monophase aqueous with bi phase variants
DRR043	FIW	Meall Mor	Annealed and recrystallised quartz (anhedral with sutured grain boundaries) containing a clot of oxidised (goethitic) chalcopyrite. Quartz against chalcopyrite is anhedral. Quartz contains thin (<1 mm) goethite-filled fractures.	Inclusions restricted to late fractures and subgrain boundaries. Majority are monophase aqueous with biphase variants.
DRR044.1	PTS	Meall Mor	Interstitial clots of sulphide (pyrite and chalcopyrite) hosted in chloritised and carbonatised amphibolite. Sulphides comprise about 50 % of sample. Sulphide clots associated with chlorite, carbonate and quartz. Chalcopyrite veins and replaces pyrite.	No fluid inclusions.
DRR044.1	PBL	Meall Mor	Interstitial clots of sulphide (pyrite and chalcopyrite) hosted in amphibolite. Sulphides comprise about 50 % of sample. Chalcopyrite commonly encloses pyrite. In addition, the pyrite appears as flames within chalcopyrite.	Fluid inclusions not observed as sample prepared as polished block.
DRR044.2	PTS	Meall Mor	Granoblastic strain-free quartz with abundant sulphides (50 % of sample) developed as clots and stringers along quartz grain boundaries. Sulphides comprise mainly anhedral chalcopyrite with minor pyrite.	Quartz is generally devoid of inclusions, but three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with varying degrees of vapour fill (V/[L+V]>15 % were observed. Additionally, there appear to be a number of melt-like fluid inclusions where a vapour bubble is associated with green glass.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
DRR049	PBL	Meall Mor	Coarse grained (1–10 mm) subhedral to euhedral quartz with large (10–20 mm) euhedral pyrite crystal. Pyrite contains euhedral quartz and is oxidised to goethite at crystal edges and along fractures. No other sulphides or gangue minerals present.	Fluid inclusions not observed as sample prepared as polished block.
DRR053	PBL	Cruach Mheadhonach	Coarse grained (1–10 mm) subhedral to euhedral quartz with localised stringers (<1 mm thick) and microvug filling galena and associated carbonate. Galena is inclusion-free. Quartz is veined by thin (1–2 mm) carbonate veins that locally replace it.	Fluid inclusions not observed as sample prepared as polished block.
DRR059	PBL	Cruach Mheadhonach	Vein quartz cut by carbonate. Vein quartz contains 1–2 mm euhedral pyrite free of inclusions of other minerals. Galena occurs as very rare microvug (<100 µm) infills. Against carbonate, quartz is locally corroded and commonly euhedral.	Fluid inclusions not observed as sample prepared as polished block.
TJS-L1-98-003	PTS	Lagalochan	Highly altered felsic rock. Now comprises fine grained (<0.1 mm) quartz, sericite and disseminated pyrite and chalcopyrite. Ghost phenocrysts (now sericite and carbonate) remain, as do isolated coarse magmatic quartz grains. Rock contains thin quartz stringers, with the development of a large sulphide clot. Rock also cut by carbonate veins (1–2 mm) and locally develops carbonate patches. Carbonate post-dates other gangue, alteration and sulphide minerals and is locally observed veining aggregates of pyrite. The sulphide clot comprises fine (<0.5 mm) to coarse grained (2–3 mm) pyrite. Rare galena and sphalerite occur in the vugs between amalgamated fine grained euhedral pyrite. Pyrite also occurs as thin (<0.2 mm) stringers and as disseminations in the host rock. No other sulphides were observed. Vein quartz is relatively coarse grained (0.5–0.1 mm) and strain-free.	Vein quartz hosts a variety of inclusion types: Multisolid liquid-vapour inclusions are common. The solids comprise one or more of the following halite, sylvite and an opaque phase. Vapour-rich (V>80 %) inclusions (± solids) are also relatively common as are biphase inclusion with moderate vapour fills (15 %<V<50 %). These are pseudosecondary or secondary in origin. Carbonate hosts rare primary biphase inclusion with low to moderate vapour fills (5 %<V<15 %).
TJS-L1-98-003	PBL	Lagalochan	Highly altered felsic rock. Now comprises fine grained (<0.1 mm) quartz, sericite and disseminated pyrite and chalcopyrite. Ghost phenocrysts (now sericite and carbonate) remain, as do isolated coarse magmatic quartz grains. Rock contains thin quartz stringers, with the development of a large sulphide clot. Rock also cut by carbonate veins (1–2 mm) and locally develops carbonate patches. Carbonate post-dates other gangue, alteration and sulphide minerals and is locally observed veining aggregates of pyrite. The sulphide clot comprises fine (<0.5 mm) to coarse grained (2–3 mm) pyrite. Rare galena in the vugs between amalgamated fine-grained euhedral pyrite. Pyrite also occurs as thin (<0.2 mm) stringers and as disseminations in the host rock. No other sulphides were observed.	Fluid inclusions not observed as sample prepared as polished block.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
TJS-L1-98-007	PBL	Lagalochan	1 cm quartz vein in altered felsic rock. Vein cut by thin (<100 µm) sulphide stringers and carbonate veins. Disseminated sulphides in host rock. The vein quartz locally contains microvugs (<500 µm) filled by sulphides. The main sulphides are pyrite and chalcopyrite in approximate equal abundance. Pyrite tends to be euhedral and commonly contains inclusions of chalcopyrite. Locally, it is veined by chalcopyrite and rare galena. In the host rock, chalcopyrite infills microvugs, which are commonly lined with phyllosilicate (sericite?). Vein carbonate is generally free of sulphides but locally entrains sulphide grains where it replaces quartz.	Fluid inclusions not observed as sample prepared as polished block.
TJS-L1-98-009	PTS	Lagalochan	Contains three generations of quartz: (i) vein quartz with silicified and sericitised wallrock inclusions. Quartz is mainly equigranular and anhedral. It is unstrained but has sutured grain boundaries. (ii) Euhedral quartz, which is locally broken and brecciated and (iii) chalcedonic quartz associated with sericite, this cements the euhedral-brecciated quartz. Sulphides occur in two main spatial associations: (i) as rare isolated grains in the anhedral quartz where it occurs in microvugs/voids associated with sericite. Here the sulphide is pyrite. (ii) Associated with the euhedral quartz–chalcedony–quartz intergrowths. Here the sulphides comprise pyrite, tetrahedrite, chalcopyrite, colourless sphalerite and galena, which infill vugs. More rarely, at the edge of euhedral quartz crystals, sulphides are included as epitaxial inclusions showing that sulphide and euhedral quartz precipitation are closely linked in time. They are also closely associated with the chalcedonic quartz and sericite. Pyrite is euhedral to subhedral (<0.5 mm) and is locally broken and recemented by other sulphides. Tetrahedrite contains inclusions of pyrite and is locally veined and replaced by chalcopyrite. It is also locally replaced by galena. Sphalerite is locally veined and replaced by the other base-metal sulphides. Thin (<0.1 mm) carbonate stringers cut the anhedral quartz.	The anhedral vein quartz contains a wide variety of inclusion types: Multisolid liquid-vapour inclusions are common. The solids comprise one or more of the following halite, sylvite and an opaque phase. Vapour-rich (V>80 %) inclusions (± solids) are also common as are biphase inclusions with moderate vapour fills (25 %<V<50 %). These are mainly pseudosecondary and occur as random networks or short arrays within quartz crystals. Additionally, secondary fluid inclusion arrays that cut crystal boundaries tend to contain biphase inclusions with low to moderate vapour fills (10 %<V<25 %). Euhedral quartz contains relatively few inclusions these are restricted to biphase types with low (5 %) to moderate (20 %) vapour fills. Multisolid inclusions are absent.
TJS-L1-98-009	FIW	Lagalochan	Quartz veins attached to highly altered felsic wallrock. Wallrock highly silicified and sericitised and contains weakly disseminated sulphides (<0.5 mm)–these comprise pyrite and rare galena, which occupy microvugs/voids. Vein quartz only contains minor amounts of sulphides (pyrite), these occur in small (<0.1 mm) microvugs and along grain contacts. It is medium grained (<1 mm), anhedral and equigranular.	Quartz hosts abundant vapour-rich (V>80 %) fluid inclusions that are pseudo secondary or secondary in origin. These sometimes contain small daughter minerals (halite?). In addition, the vapour-rich inclusions are locally associated with multisolid–liquid–vapour inclusions (V~25 %). The solid phases comprise mainly halite occasionally sylvite and more rarely a triangular opaque phase (chalcopyrite). Phase ratios within and between the two inclusion types are highly variable suggesting heterogeneous trapping.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
TJS-L1-98-009	PBL	Lagalochan	Quartz veins attached to highly altered felsic wallrock. Wallrock highly silicified and sericitised and contains weakly disseminated sulphides (<0.5 mm)–These comprise pyrite plus rare sphalerite, galena and chalcopyrite and occupy microvugs/voids. Vein quartz generally contains minor amounts of sulphides (pyrite, sphalerite, galena and chalcopyrite), these occur in small (<0.1 mm) microvugs and along grain contacts. Quartz is medium grained (<1 mm), anhedral and equigranular. However, in one zone (2 mm thick) quartz contains abundant sulphides filling fractures and vugs. Here, the sulphides comprise euhedral pyrite, which is brecciated and veined (on a 100 µm scale) by various base metal sulphides (chalcopyrite, tetrahedrite, sphalerite and galena). Sphalerite is the earliest of these sulphides as it is veined and replaced by the others. Chalcopyrite veins and replaces tetrahedrite and galena veins and/or replaces other sulphides	Fluid inclusions not observed as sample prepared as polished block.
TJS-L1-98-010	PTS	Lagalochan	Highly altered felsic rock. Now comprises fine grained (<0.5 mm) quartz, sericite and disseminated pyrite with localised phenocrysts of plagioclase feldspar. The disseminated pyrite is anhedral and infills microvugs. Locally, it is associated with colourless sphalerite. Rock is cut by composite quartz–carbonate–sulphide vein. Vein lined by euhedral (1 mm) pyrite and quartz. Pyrite is veined, brecciated and replaced by chalcopyrite and galena. Locally the chalcopyrite is euhedral, and is in turn veined and replaced by galena. The central portion of the vein is filled by two types of carbonate–coarse dolomite? (0.5 mm) and fine (<50 µm) grained calcite? Associated with the fine grained carbonate is chalcedonic quartz. Also the fine grained carbonate hosts small (<50 µm) hexagonal plates of pyrite, whilst the coarser grained material has no mineral inclusions. Locally chalcopyrite is intergrown with tetrahedrite. Colourless sphalerite can be seen epitaxially overgrowing euhedral quartz and is in turn veined by chalcopyrite. Galena is very late in the paragenesis and can be seen to replace and vein the coarse grained carbonate.	No inclusions were observed in carbonate. Euhedral quartz hosts biphase aqueous inclusion with moderate degree of vapour fill (20–30 %)–typical of the epithermal regime. These are secondary and pseudosecondary in origin. Quartz within the wallrock also hosts biphase epithermal fluid inclusions. However, vapour-rich (V>90 %) and hypersaline multisolid inclusions were observed.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
TJS-L1-98-012	PTS	Lagalochan	Highly altered felsic rock, which comprises fine grained (<0.1 mm) quartz, sericite and disseminated pyrite and chalcopyrite. Ghost phenocrysts (now sericite and carbonate) remain as do isolated coarse magmatic quartz grains. Rock contains thin quartz stringers, with the development of a large sulphide clot in the space between a bifurcating vein. Sulphides also occur as disseminations within the host rock infilling micro-vugs/voids and as thin (<75 µm) short (1–2 mm) stringers. They comprise chalcopyrite, which includes euhedral textured pyrite and rare molybdenite. Vein quartz is relatively coarse grained (0.5–1 mm) and subhedral to anhedral. It is relatively strain-free with only a few suture contacts–sulphides occur at grain contacts and in vugs.	Vein quartz is poor in inclusions, the main type being biphase aqueous with moderate vapour fills (15 %<V<50 %). Rarer vapour rich (V>80 %) and multisolid liquid–vapour inclusion also occur. All inclusions are pseudosecondary or secondary in origin. Magmatic quartz hosts the same inclusion types but the vapour-rich and multisolid types are more abundant.
TJS-l1-98-012	PBL	Lagalochan	Highly altered felsic rock with ghost phenocrysts (now poorly polished areas). Rock contains thin quartz stringers, with the development of a bifurcating sulphide vein (2 mm thick). Sulphides also occur as disseminations within the host rock infilling micro-vugs/voids and as thin (<75 µm) short (1–2 mm) stringers. Disseminated rutile is also common in the wallrock. Disseminated sulphides comprise chalcopyrite, which includes euhedral-textured pyrite and rare molybdenite. Vein quartz is relatively coarse-grained (0.5–1 mm) and subhedral to anhedral. The sulphide veins comprise chalcopyrite and pyrite. Chalcopyrite is the most coomon and contains abundant sub-rounded pyrite crystals. Where pyrite is, locally, more common, it occurs as aggregates of subhedral to euhedral crystals with interstitial chalcopyrite, which locally veins it.	Fluid inclusions not observed as sample prepared as polished block.
TJS-L1-98-013	PTS	Lagalochan	Highly altered felsic rock. Now comprises fine grained (<0.1 mm) quartz, sericite and disseminated pyrite and chalcopyrite. Ghost phenocrysts (now areas where minerals have been plucked out during polishing) remain. Host rock cut by 2 mm sulphide (pyrite, chalcopyrite and molybdenite stringer) and localised thin (<1 mm) impersistent quartz stringers. Pyrite in the sulphide stringer is anhedral and annealed (triple point boundaries) and locally fractured. It generally not associated with other sulphides. Chalcopyrite is relatively common in the host rock occurring as Micro-vug (<100 µm) infills. In it rarer in the pyrite veinlets, but where observed it veins and replaces pyrite. No coarse quartz is associated with the sulphide vein. Also disseminated rutile occurs in the altered host rock.	Identifiable inclusions are restricted to relict magmatic quartz and comprise vapour-rich (V>80 %) fluid inclusions that are pseudo secondary or secondary in origin. These sometimes contain small daughter minerals (halite?). In addition, the vapour-rich inclusions are locally associated with multisolid–liquid–vapour inclusions (V~25 %). The solid phases comprise mainly halite occasionally sylvite and more rarely a triangular opaque phase (chalcopyrite). Phase ratios within and between the two inclusion types are highly variable suggesting heterogeneous trapping.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
TJS-L1-98-013	PBL	Lagalochan	Highly altered felsic rock in which ghost phenocrysts (now sericite and carbonate) remain, as do isolated coarse magmatic quartz grains. Host rock is cut by 2 mm sulphide (pyrite, chalcopyrite and molybdenite stringer) and localised thin (<1 mm) impersistent quartz stringers. Pyrite in the sulphide stringer is anhedral and annealed (triple point boundaries) and locally fractured. It generally not associated with other sulphides. However, rare chalcopyrite occurs along fractures. Molybdenite occurs in the same fracture but with no other sulphides. It forms a mat of bent and deformed laths. No coarse quartz is associated with the sulphide vein. However, mats of sericite and fine-grained quartz overprint the sulphide minerals.	Fluid inclusions not observed as sample prepared as polished block.
TJS-L1-98-014	PTS	Lagalochan	Relatively unaltered felsic rock and many primary igneous textures are still preserved. Rock comprises interlocking laths of feldspar with localised interstitial quartz. Alteration mainly consists of a ubiquitous dusting of sericite. However, locally there are intense patches of carbonatisation. Rock contains thin quartz and carbonate stringers, with the development of a large sulphide clot in the space between a bifurcating vein. Sulphides are generally restricted to this large patch and thin (<1 mm) quartz stringers. They comprise chalcopyrite, which includes atoll textured pyrite. The chalcopyrite also contains uncommon small (100 µm) inclusions of sphalerite. Vein quartz is relatively coarse grained (0.5–1 mm) and subhedral to anhedral. It is relatively strain-free with only a few sutured contacts–sulphides occur at grain contacts and in vugs. Carbonate is late and veins and replaces quartz, it is generally free of any sulphides. In the host rock it occurs as carbonate only veins.	Interstitial quartz in the host rock hosts vapour-rich (V>80 %) fluid inclusions that are pseudo secondary or secondary in origin. These sometimes contain small daughter minerals (halite?). In addition, the vapour-rich inclusions are locally associated with multisolid–liquid–vapour inclusions (V~25 %). The solid phases comprise mainly halite occasionally sylvite and more rarely a triangular opaque phase (chalcopyrite). Phase ratios within and between the two inclusion types are highly variable suggesting heterogeneous trapping. The vein quartz is relatively free of inclusions, but where observed they tend to be biphase and aqueous and secondary in origin. Locally, it does, however, host multisolid vapour-liquid inclusions. These appear to be pseudosecondary or secondary in origin.
TJS-L1-98-014	PBL	Lagalochan	Sample is a silicified igneous rock. Locally there are intense patches of carbonatisation. Rock contains thin quartz and carbonate stringers, with the development of a large sulphide clot in the space between a bifurcating vein. Sulphides are generally restricted to this large patch and thin (<1 mm) quartz stringers. They comprise chalcopyrite, which includes atoll textured pyrite. The chalcopyrite also contains uncommon small (100 µm) inclusion of sphalerite. Vein quartz is relatively coarse grained (0.5–1 mm) and subhedral to anhedral. Sulphides occur at grain contacts and in vugs. Carbonate is late and veins and replace quartz, it is generally free of any sulphides. In the host rock it occurs as carbonate only veins.	Fluid inclusions not observed as sample prepared as polished block.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
L1-98-015	PBL	Lagalochan	1–2 cm quartz vein adhering to altered wallrock. The quartz vein is cut by a 2 mm sulphide stringer, which is in turn cut by a 2 mm carbonate vein. Sulphides comprise pyrite with minor chalcopyrite. In the wallrock subhedral sparse disseminated pyrite and rarer chalcopyrite occur. These occupy microvugs (<100 µm) and are locally associated with carbonate. The sulphide stringer comprises a subhedral aggregate of pyrite crystals (<100 µm) with interstitial chalcopyrite which locally veins it. Vein quartz contains weakly disseminated pyrite and chalcopyrite associated with microvugs, short (<500 µm) veinlets and quartz crystal boundaries. Vein carbonate is free of sulphides.	Fluid inclusions not observed as sample prepared as polished block.
TJS-L1-98-017	PTS	Lagalochan	Highly altered felsic rock, which now comprises fine-grained (<0.5 mm) quartz, sericite and disseminated pyrite, with localised phenocrysts of plagioclase feldspar. The Rock is cut by intersecting thin (1–2 mm) quartz–carbonate stringers. These contain pyrite, with uncommon inclusions of chalcopyrite, and molybdenite. In the stringers, quartz and carbonate are fine-grained (<0.5 mm). The quartz is annealed and has sutured grain boundaries. Pyrite within the stringers is anhedral and post-dates quartz. This can be clearly seen where it infills the central part of the stringers. Locally, it cements and envelopes laths of molybdenite. Molybdenite is restricted to the quartz–carbonate stringers where it posts dates quartz and predates pyrite. Carbonate in the stringers replaces quartz. In the host rock pyrite is anhedral and appears to fill microvugs.	Due to the annealed and recrystallised nature of the quartz it is difficult to elucidate a fluid paragenesis.
TJS-L1-98-017	PBL	Lagalochan	Highly altered felsic rock, which now comprises fine-grained (<0.5 mm) quartz, sericite and disseminated pyrite, with localised phenocrysts of plagioclase feldspar. Intersecting thin (1–2 mm) quartz–carbonate stringers cut the rock. These contain pyrite, with uncommon inclusions of chalcopyrite, and molybdenite. In the stringers, quartz and carbonate are fine-grained (<0.5 mm), and the quartz is annealed and has sutured grain boundaries. Pyrite within the stringers is anhedral and post-dates quartz. This can be clearly seen where it infills the central part of the stringers. Locally, it cements and envelopes laths of molybdenite. Molybdenite is restricted to the quartz-carbonate stringers where it posts dates quartz and predates pyrite. Carbonate in the stringers replaces quartz. In the host rock pyrite is anhedral and fills microvugs.	Fluid inclusions not observed as sample prepared as polished block.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
TJS-L3-98-001	FIW	Lagalochan	Highly altered felsic rock, which now comprises fine-grained (<0.5 mm) quartz, sericite and disseminated pyrite. No original textures remain. Rock is cut by a 10 mm thick quartz vein, which is in turn cut by thin (<1 mm) carbonate veins. Sulphides are present in both the quartz vein and host rock. These comprise chalcopyrite with minor pyrite. In the host rock sulphides occur in micro-vugs/voids and as short (2–3 mm), thin (<0.5 mm) stringers. Where chalcopyrite and pyrite occur together pyrite is euhedral against chalcopyrite and is locally replaced by it. In the quartz vein sulphides occur in micro-vugs and voids. Vein quartz is fine-grained (<0.5 mm), anhedral and exhibits annealed textures. Carbonate is later than quartz. It veins replaces and infills microvugs. Paragenetically it is later than the sulphides as both pyrite and chalcopyrite are euhedral against it.	Quartz hosts abundant vapour-rich (V>80 %) fluid inclusions that are pseudo secondary or secondary in origin. These sometimes contain small daughter minerals (halite?). In addition, the vapour-rich inclusions are locally associated with multisolid–liquid–vapour inclusions (V~25 %). The solid phases comprise mainly halite occasionally sylvite and more rarely a triangular opaque phase (chalcopyrite). Phase ratios within and between the two inclusion types are highly variable suggesting heterogeneous trapping.
TJS-L3-98-002	PTS	Lagalochan	Highly altered felsic rock, which now comprises fine-grained (<0.5 mm) quartz, sericite and disseminated pyrite with localised phenocrysts of plagioclase feldspar. Rock is cut by a thin (1–2 mm) quartz–carbonate stringer. This contains pyrite, with rare molybdenite. In the stringer, quartz and carbonate are fine-grained (<0.5 mm), and the quartz is annealed and has sutured grain boundaries. Pyrite within the stringers is anhedral and post-dates quartz. This can be clearly seen where it infills the central part of the stringer. Molybdenite is restricted to the quartz–carbonate stringers where it posts dates quartz and predates pyrite. Carbonate in the stringers replaces quartz. In the host rock pyrite is anhedral and appears to fill micro-vugs and voids.	Due to the annealed and recrystallised nature of the quartz it is difficult to elucidate a fluid paragenesis. However, in restricted areas quartz hosts abundant vapour-rich (V>80 %) inclusions co-existing with hypersaline multisolid inclusions in a random network suggesting boiling at high temperature (>250ºC).
TJS-L3-98-011	PTS	Lagalochan	Carbonate–quartz–sulphide vein. Quartz is euhedral (5 mm) and locally the outermost parts of the crystal are intergrown with pyrite. It is overgrown by two types of carbonate. Dolomite, which occurs as subhedral rhombs and is intergrown with pyrite. Remaining space is then infilled by coarse (5 mm) anhedral calcite. Pyrite is generally free of other sulphide inclusions, and occurs as small (<100 µm) euhedra and subhedra. Locally, these crystals amalgamate to give large masses (5 mm) of polycrystalline pyrite.	Quartz only contains fracture hosted secondary inclusions and these comprise predominantly biphase inclusions with low (<5 %) to moderate (<10 %) vapour fills indicating temperatures in the region of 100–200ºC. The same inclusion population is observed in both types of carbonate where they occur as rare primary inclusions.
TJS-L3-98-011	PBL	Lagalochan	Carbonate–quartz–sulphide vein. Quartz is euhedral (5 mm) and locally the outermost parts of the crystal are intergrown with pyrite. It is overgrown by two types of carbonate. Dolomite, which occurs as subhedral rhombs and is intergrown with pyrite. Remaining space is then infilled by coarse (5 mm) anhedral calcite. Pyrite is generally free of other sulphide inclusions, and occurs as small (<100 µm) euhedra and subhedra. Locally, these crystals amalgamate to give large masses (5 mm) of polycrystalline pyrite.	Fluid inclusions not observed as sample prepared as polished block.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
TJS-L3-98-014	PTS	Lagalochan	Highly altered felsic rock, which now comprises fine-grained (<0.1 mm) chalcedonic quartz, sericite and disseminated pyrite and chalcopyrite. Ghost phenocrysts (now sericite and carbonate) and coarse muscovite (1–2 mm) remain, as do isolated coarse (1–2 mm) magmatic quartz grains. Rock contains thin (<2 mm) and impersistent quartz and quartz–carbonate stringers. Rare patches of radiating platy barite also occur and locally these infill vug in patches of quartz. Sulphides (pyrite, sphalerite, galena and chalcopyrite) occur associated with the quartz stringers and as disseminations within the host rock. Pyrite in veins and stringers tends to be euhedral whilst other sulphides infill microvugs (in host rock) and vuggy cavities in the quartz veins. Quartz in the stringers is medium grained (1–2 mm) and euhedral to subhedral. The location of sulphides is not restricted. All sulphides occur in both the host rock and the quartz stringers. However pyrite is more abundant in the host-rock and the base metal sulphides more common in the quartz stringers. A clear paragenetic sequence is seen of euhedral pyrite being overgrown and locally replaced by base-metal sulphides. Sphalerite is next, it veins and replaces chalcopyrite, and galena is last occurring as anhedral vug infillings and replacing other sulphides. Stringer associated carbonate is late in the paragenetic sequence and infills vuggy cavities. In one instance barite was observed to post-date galena.	Establishing a precise mineral–fluid paragenesis is difficult. However, the following inclusion types were observed: Multisolid liquid vapour inclusions are present. The solids comprise one or more of the following halite, sylvite and an opaque phase. Generally, these have relatively low vapour fills (<10 %). Vapour-rich (V>80 %) inclusions (± solids) also occur as do biphase inclusions with varying vapour fills (5 %<V<50 %). These are mainly pseudosecondary and occur as random networks or short arrays within quartz crystals. Additionally, secondary fluid inclusion arrays containing monophase aqueous inclusions also occur.
DRR102	PTS	Inversnaid	Moderately altered hornblende-microdiorite with free quartz, minor biotite and accessory magnetite/ilmenite. Feldspars are partially altered to sericite, but good igneous textures remain. Space between interlocking laths of feldspar filled by quartz. Sample is cut by 10 mm quartz vein. Host rock at the margins of the vein altered to epidote (<1 mm thick). Quartz is anhedral with sutured grain boundaries. No sulphides present either in host rock or quartz vein.	The inclusion population is dominated by biphase and monophase carbonic inclusions (L_{CO2} + V_{CO2}; L_{CO2}). These occur in pseudosecondary or secondary arrays. The next most abundant inclusion type are biphase aqueous inclusions with low to moderate vapour fills (5 %<V<30 %). These also occur in pseudosecondary or secondary arrays. Multisolid liquid–vapour inclusions are generally absent.
DRR105	PTS	Beinn Ducteach–Glen Gyle	Rock is a quartz-breccia. The groundmass comprises fine grained (<<0.1 mm) quartz, sericite, chlorite, pyrite and rutile. Locally the pyrite develops into millimetric patches. Here, it is anhedral and infills voids in the breccia matrix. Clasts comprise polycrystalline anhedral quartz with sutured grain boundaries. They are 1–10 mm in size and are angular. Locally, pyrite and carbonate vein them.	Quartz clasts host two main inclusion types: 1. Three phase carbonic inclusions (L_{CO2} + L_{H2O} + V_{CO2}) with moderate degrees of vapour fill (V/[L+V]>15 %), these are mainly primary/pseudosecondary in origin. 2. Two phase (L+V) inclusions with low degrees of vapour fill (V/[L+V]<10 %), these are almost exclusively secondary in origin. This type of inclusion is the most abundant. No inclusions were observed in the fine-grained breccia-matrix.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
DRR113	PTS	Stob na Eighrach–Glen Gyle	Rock is a muscovite-cordierite-schist with thin (<5 mm) foliation parallel quartz veins/segregations. Quartz is anhedral with sutured grain boundaries. Rare pyrite is the only sulphide present in the sample. However foliation parallel rutile needles are common. The schistose material is in contact with a quartz breccia. The groundmass comprises fine-grained (<<0.1 mm) quartz, sericite, chlorite, pyrite and rutile. Clasts comprise poly- and mono crystalline anhedral quartz with sutured grain boundaries. They are 1–10 mm in size and are angular. Sulphides are restricted to rare pyrite.	In the quartz segregations, the inclusion population is dominated by biphase and monophase carbonic inclusions (L_{CO2} + V_{CO2}; L_{CO2}). These occur in pseudosecondary or secondary arrays. The next most abundant inclusion type are biphase aqueous inclusions with low to moderate vapour fills (5 %<V<30 %). These also occur in pseudosecondary or secondary arrays. Where present, the quartz clasts contain the same types of fluid inclusions as the quartz segregations.
DRR120.3	FIW	Allt Dubh Choirein–Glen Artney	Coarsely crystalline (1–10 mm) zoned vein-carbonate. Locally there are inclusion of euhedral quartz and a second carbonate. Also there is rare late chalcopyrite and bornite.	Fluid inclusions were only observed in the euhedral quartz. These are biphase aqueous with low vapour fills (<5 %).
DRR120.2	FIW	Allt Dubh Choirein–Glen Artney	Alternating bands of coarse and fine grained carbonate with localised euhedral, partially, corroded quartz and rare sulphides (pyrite, chalcopyrite) and oxides (hematite). Locally, in the coarse grained carbonate there are vuggy cavities and these are sometimes partially filled with hematite. Pyrite and chalcopyrite occur at the contact between coarse and fine grained carbonate.	Fluid inclusions were only observed in the euhedral quartz and decorating growth zones in the coarse-grained carbonate. These are biphase and aqueous with low vapour fills (<5 %).
DRR124.2	FIW	Lagalochan	Polymictic breccia containing clasts of quartz, altered igneous rock and metasediment in a silicified matrix comprising mainly fine grained quartz (<<0.1 mm) sericite and pyrite. Locally clasts are weakly mineralised with pyrite.	Not possible to establish mineral–fluid relationships though occasional quartz clast contains biphase (10 %<V<30 %) aqueous inclusions were observed.
DRR135	FIW	Garaball Hill–Glen Fyne	Medium to coarse grained vein quartz. No sulphides or other gangue minerals present. Quartz is sub- to euhedral with straight (unsutured) grain contacts. Internally the grains are heavily fractured in a polygonal pattern.	Quartz contains abundant primary and pseudosecondary inclusions these are biphase and aqueous with moderate vapour fills (15–30 %). Locally, carbon dioxide inclusions occur (liquid CO_2>80 %). These have the same spatial association as the aqueous inclusions. No multisolid liquid–vapour inclusions were observed.
DRR141	FIW	Arrochar	Coarse-grained altered igneous rock. Feldspar is cloudy, and mafic minerals (amphibole?) now comprise varying mixtures of chlorite, carbonate and rutile. Skeletal magnetite and ilmenite remain, but these are now variably altered to rutile. Rare chalcopyrite also occurs. Quartz is interstitial and myrmekitically intergrown with feldspar.	Quartz hosts three inclusion types: 1. Biphase aqueous with varying vapour fills (5–40 %). 2. Carbon dioxide-rich inclusions (liquid CO_2>80 %). 3. Monophase aqueous inclusions. These occur in pseudosecondary and secondary trails. Multi solid liquid–vapour inclusions are generally absent.
DRR142	FIW	Arrochar	Polymictic breccia containing sub-rounded clasts of mainly quartz and altered igneous rock in a silicified matrix comprising fine grained quartz (<<0.1 mm) sericite and pyrite and rare chalcopyrite. Locally polycrystalline quartz clasts are veined by sericite and pyrite along grain boundaries.	Not possible to establish mineral–fluid relationships though quartz clast locally contain abundant inclusions comprising the following types: 1. Biphase aqueous with varying vapour fills (5–40 %). 2. Carbon dioxide-rich inclusions (liquid CO_2>80 %). 3. Monophase aqueous inclusions.

Sample Number	Sect. Type	Location	Mineralogy	Fluid inclusions
DRR143	FIW	Arrochar	Carbonate cemented breccia containing clasts of polycrystalline quartz and altered igneous rock.	The quartz clasts are generally free of inclusions but locally contain: 1. Biphase aqueous with varying vapour fills (5–40 %). 2. Carbon dioxide-rich inclusions (liquid CO_2>80 %). Rare inclusions were observed in carbonate and they are biphase and aqueous with vapour fills around 20 %.
DRR144.1	FIW	Arrochar	Coarsely crystalline vuggy carbonate. No sulphides present in this sample.	Carbonate locally contains primary biphase aqueous inclusions with low to moderate (5 %<V<15 %) vapour fill.
DRR146.1	PTS	Arrochar	Fine to moderately coarse dolomite with localised vugs infilled by sparry calcite. No sulphides present in this sample.	Primary inclusion were observed in the sparry calcite and these comprise biphase aqueous inclusions with low to moderate (5 %<V<15 %) degrees of vapour fill.

Appendix 3 Photomicrographs of typical fluid inclusion and mineralogical associations

Appendix 3 complements Appendix 2 and presents photomicrographs of typical fluids inclusions and mineralogical associations. The locations of the samples are given in Appendix 1.

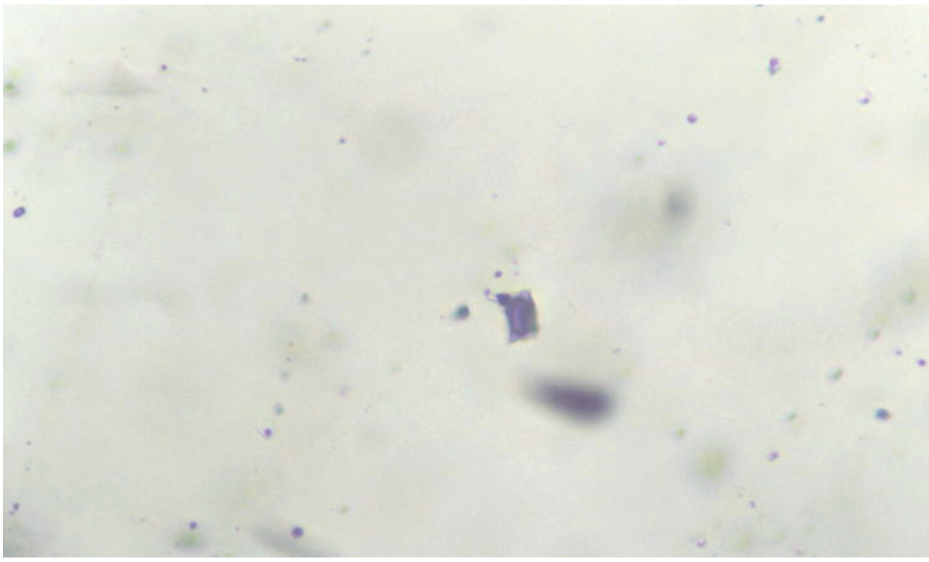

Plate A3.1 Isolated vapour-rich inclusion with small triangular daughter mineral hosted in vein quartz(Lagalochan, FOV 165 µm; sample L1-98-009).

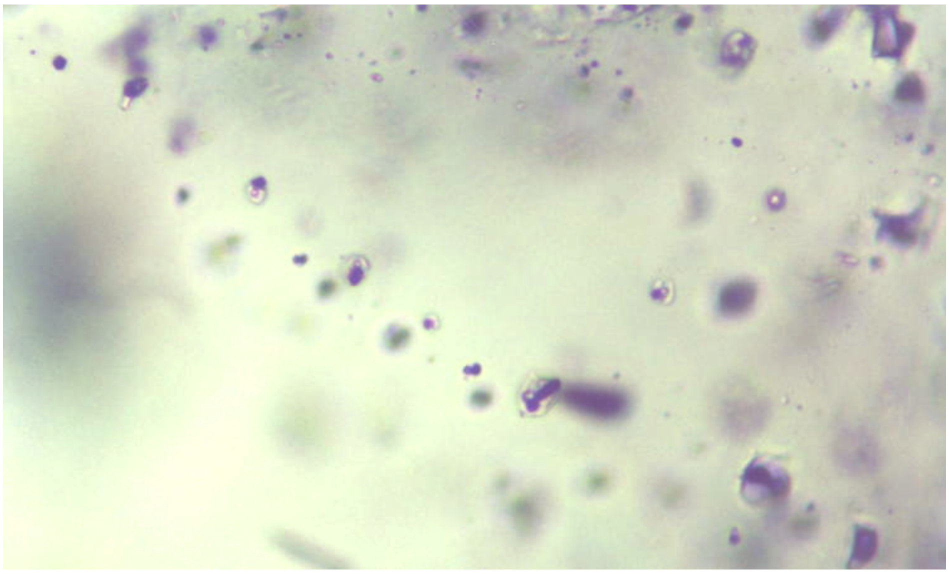

Plate A3.2 Trail of secondary high-salinity high-temperature inclusions with halite daughter minerals hosted in vein quartz(Lagalochan, FOV 165 µm; sample L1-98-009).

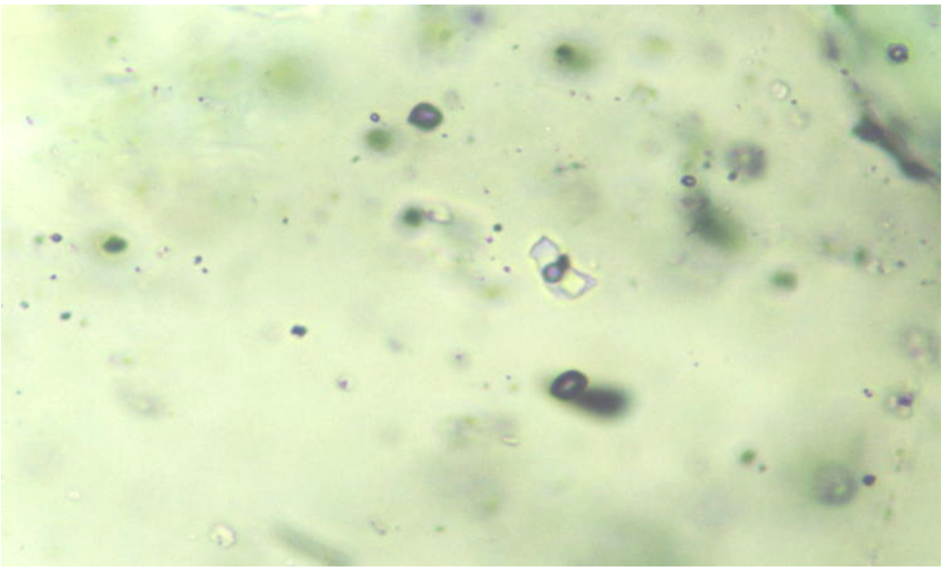

Plate A3.3 Isolated high-salinity inclusion with halite daughter mineral hosted in vein quartz (Lagalochan, FOV 165 μm; sample L1-98-009).

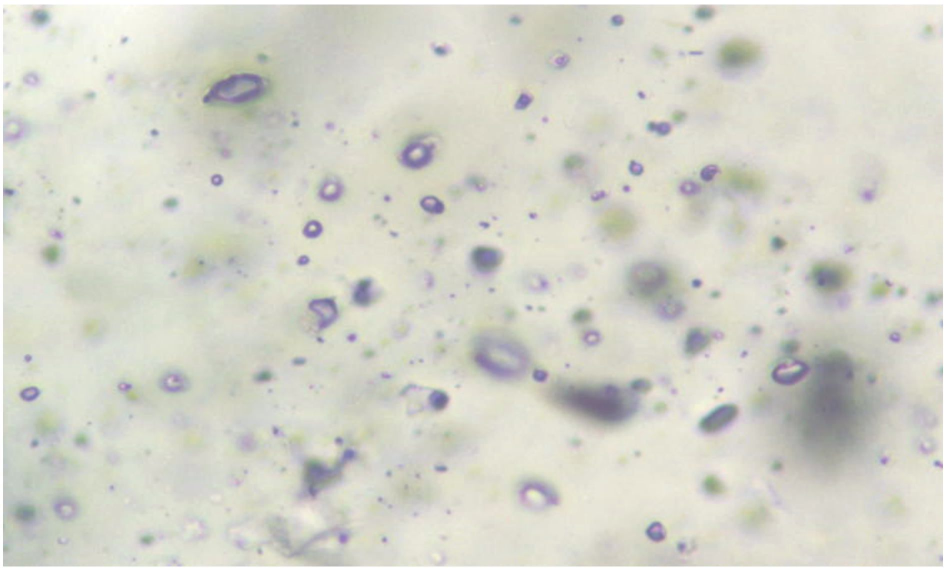

Plate A3.4 Dense cluster of vapour-rich inclusions with variable vapout to liquid ratios hosted in quartz. Localised liquid-rich inclusions with halite daughter mineral. Possible boiling assembleage (Lagalochan, FOV 165 μm; sample L1-98-009).

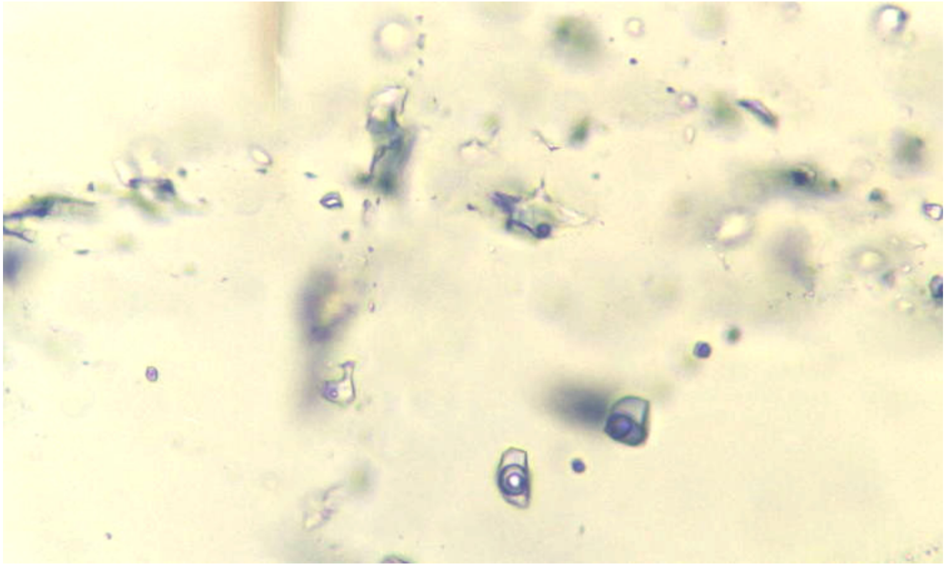

Plate A3.5 Typical carbonic inclusions with liquid carbon-dioxide in igneous quartz. Note close spatial association with fracture controlled low-temperature L+V inclusions (Arrochar, FOV 250 µm; sample DRR141).

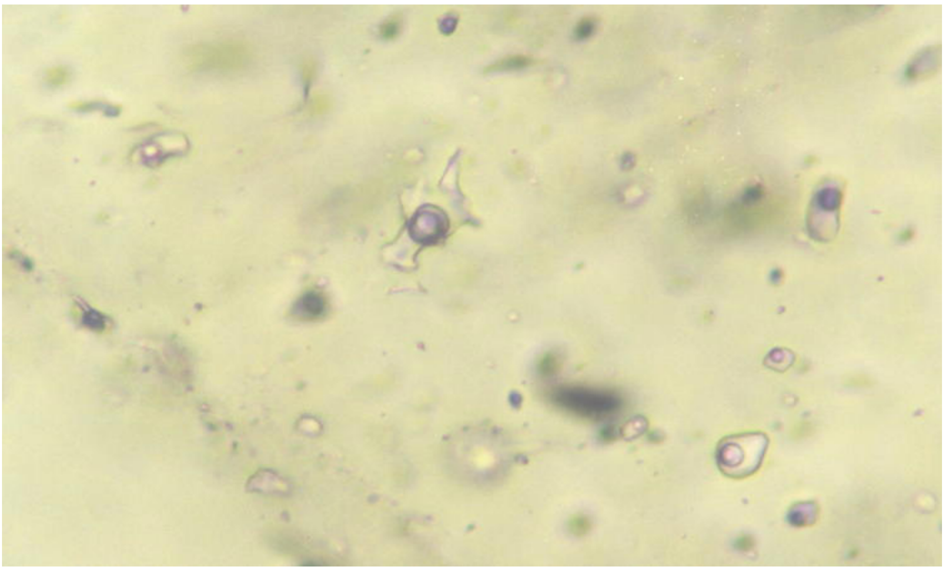

Plate A3.6 Typical carbonic inclusions with liquid carbon-dioxide. (Stronchullin, FOV 250 µm; sample DRR032).

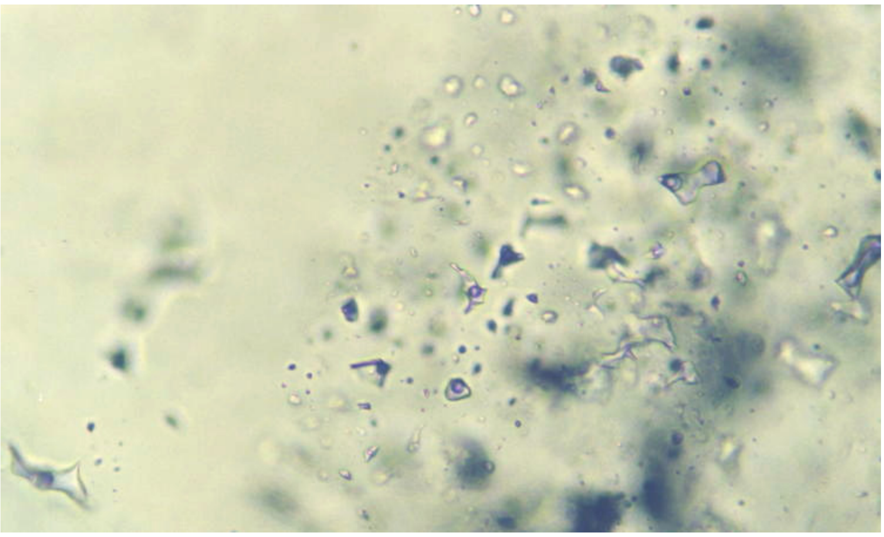

Plate A3.7 Dense cluster of carbonic inclusions with liquid carbon-dioxide, note the low-temperature L+V inclusions hosed in the clear quartz of left-hand-side of the picture (Stronchullin, FOV FOV 250 µm; sample DRR032).

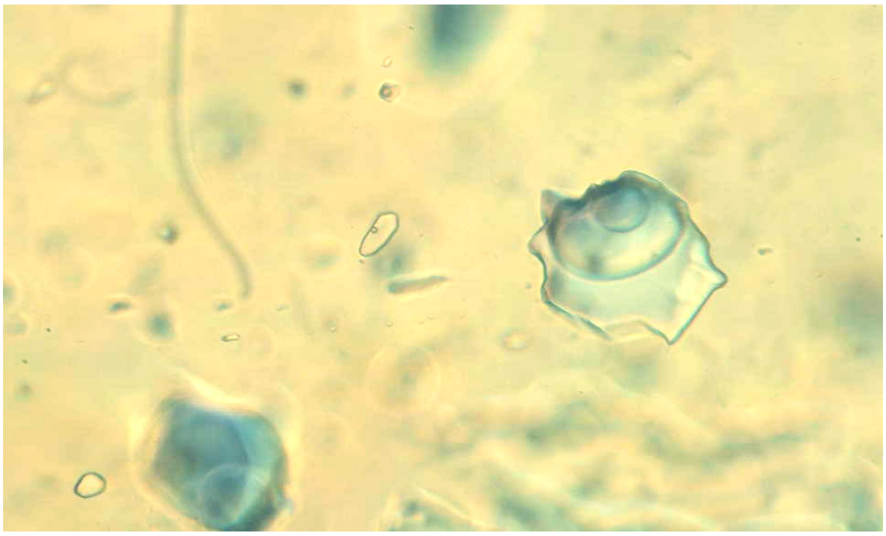

Plate A3.8 Large carbonic inclusion with liquid carbon-dioxide in close proximity low temperature biphase inclusion (Stronchullin, FOV 165 µm; sample DRR032C).

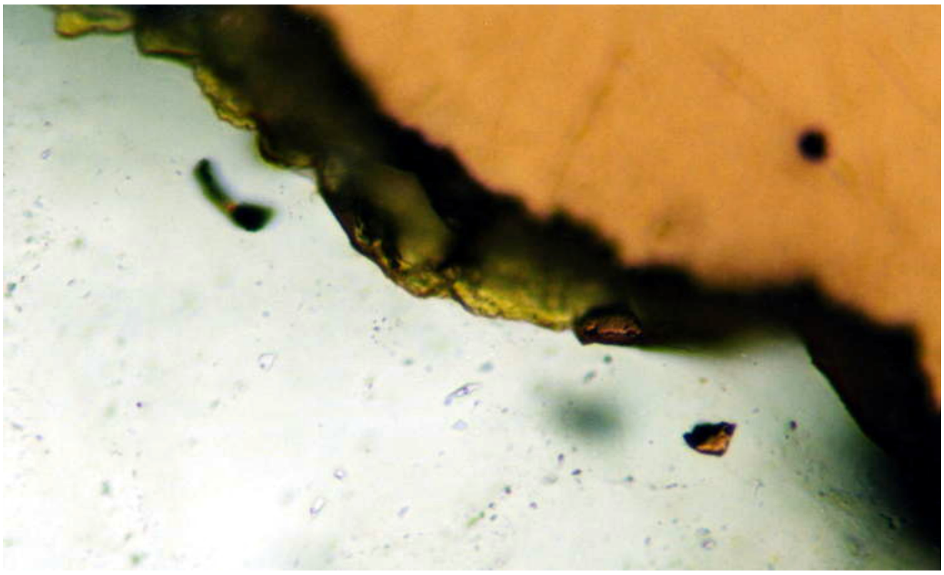

Plate A3.9 Low-temperature L+V fluid inclusion adjacent to vug-filling galena (Calliachar Burn, FOV 165 µm; sample DRR008).

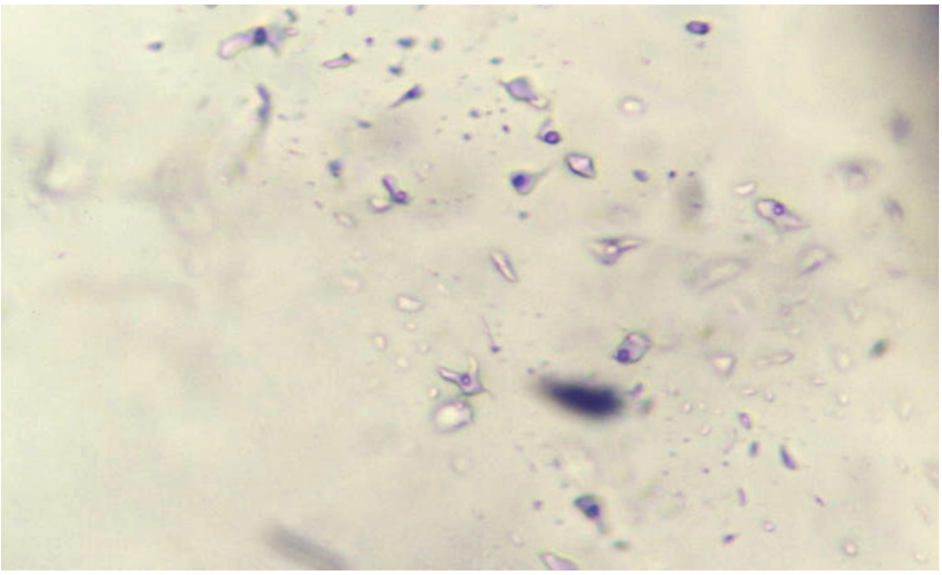

Plate A3.10Cluster of low-temperature L+V inclusions hosted in euhedral quartz (Stronchullin Burn, FOV 165 µm; sample DRR032).

Plate A3.11Large low-temperature L+V inclusion hosted in euhedral quartz (Stronchullin, FOV 165 µm; sample DRR032).

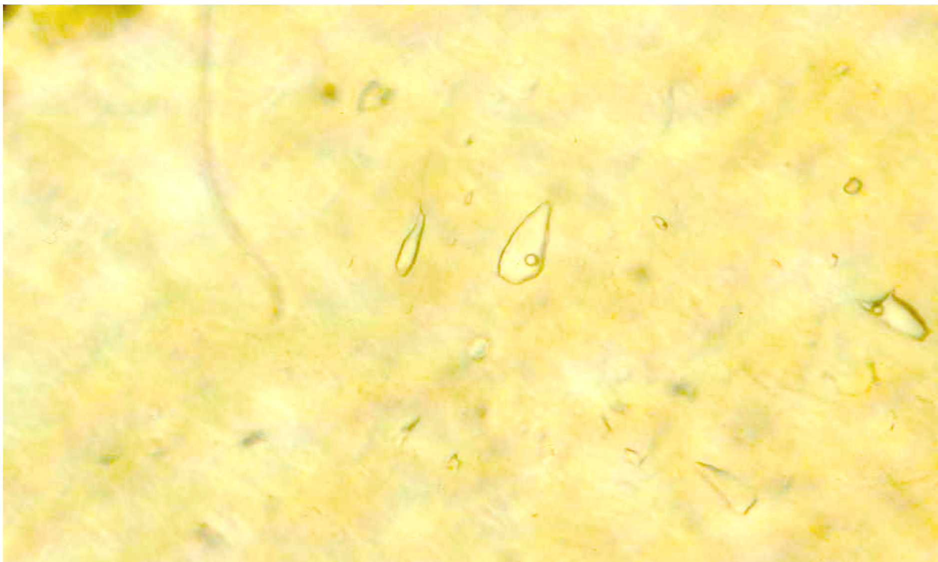

Plate A3.12Low-temperature L+V and L-only inclusions hosted in euhedral quartz (Stronchullin, FOV 165 µm; sample DRR032).

Plate A3.13Late quartz overgrowths lining a fracture, vein mineralised with ironoxy-hydroxide minerals (Urlar Burn, FOV 500 µm; sample DRR013).

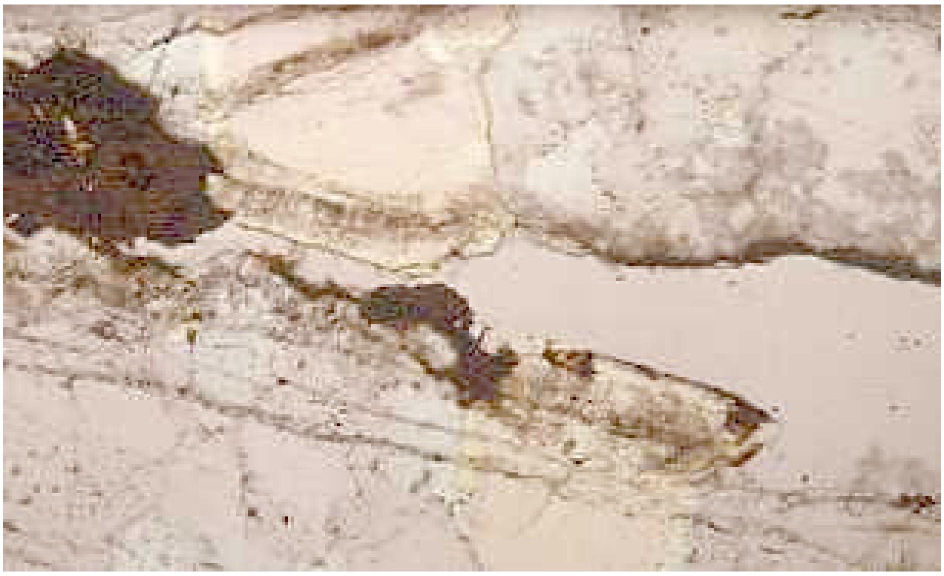

Plate A3.14Late quartz overgrowths lining a fracture, vein mineralised with iron (Urlar Burn, FOV 500 µm; sample DRR013).

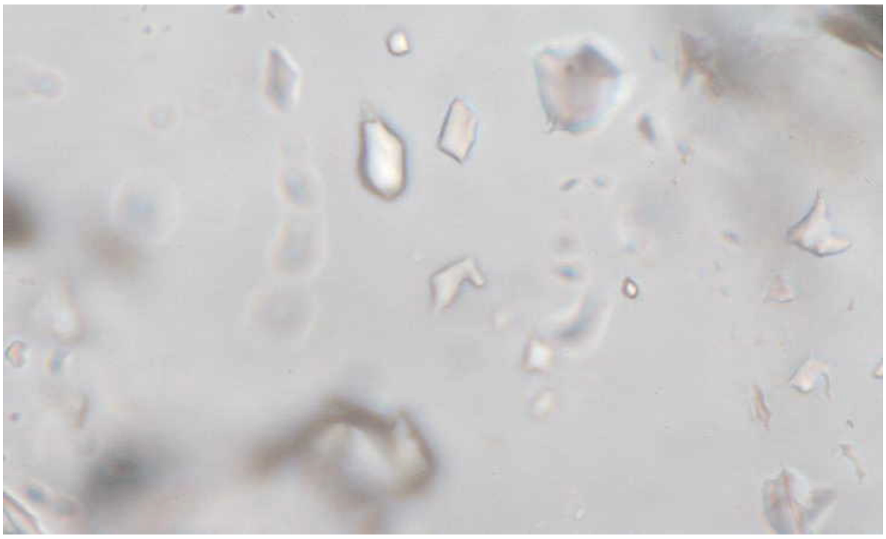

Plate A3.15L-only inlcusions hosted in late quartz (Urlar Burn, FOV 250 µm; sample DRR013).

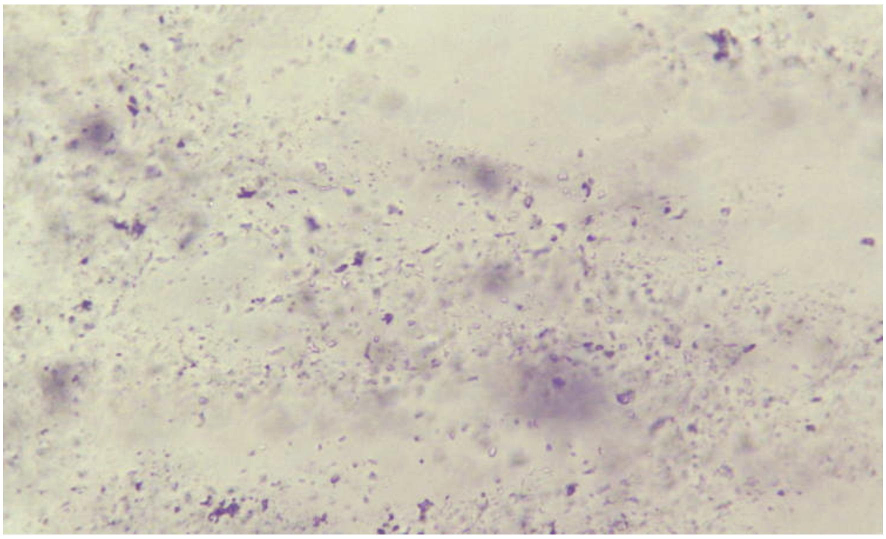

Plate A3.16Dense cluster of L-only inlcusions hosted in late quartz (Arrochar FOV 200 µm; sample DRR146).

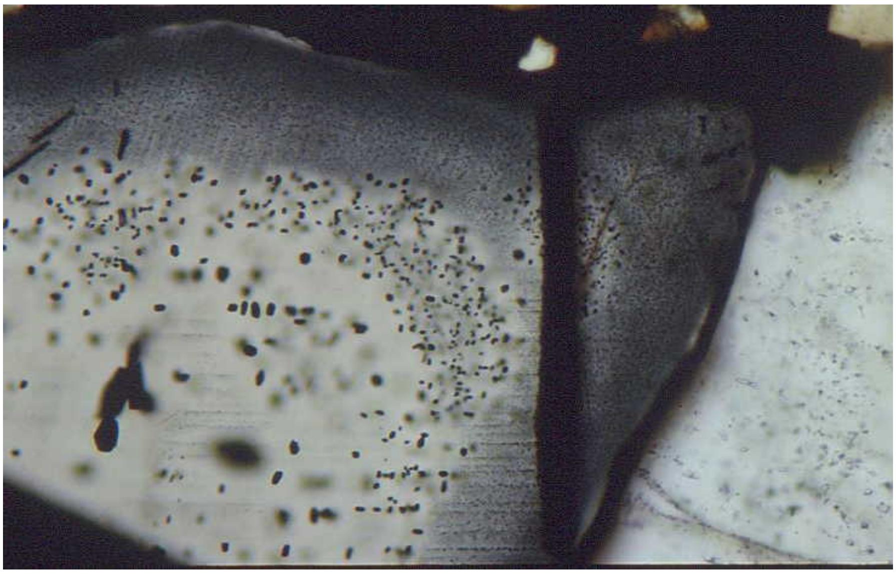

Plate A3.17Clear sphalerite in quartz vug, black specks are chalcopyrite (Stronchullin, FOV 250 µm, transmitted light, Sample No DRR032C).

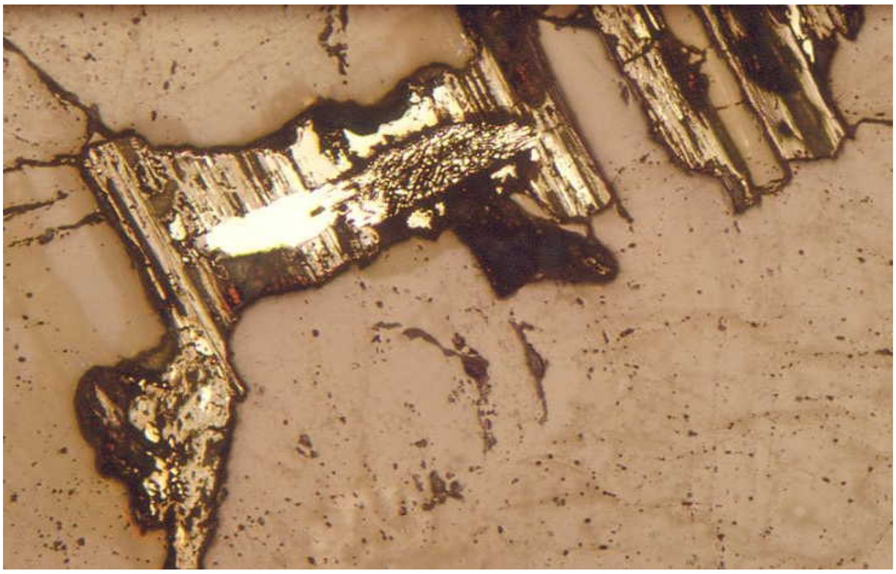

Plate A3.17Native bismuth and oxidised bismuth telluride infilling late fracture in vein quartz (Stronchullin, FOV 200 µm, reflected light, Sample No DRR032).

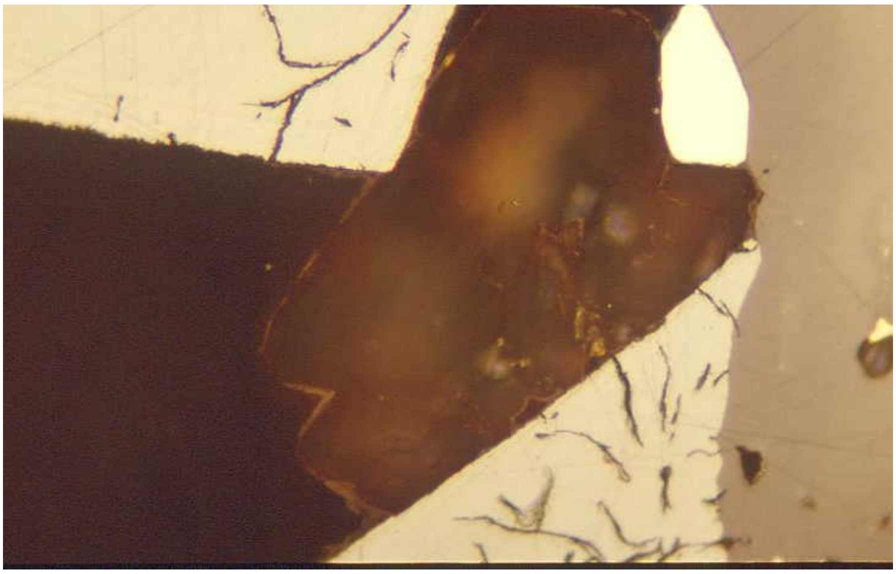

Plate A3.19Native gold (Calliachar burn, FOV 165 µm, reflected light, Sample No DRR008).

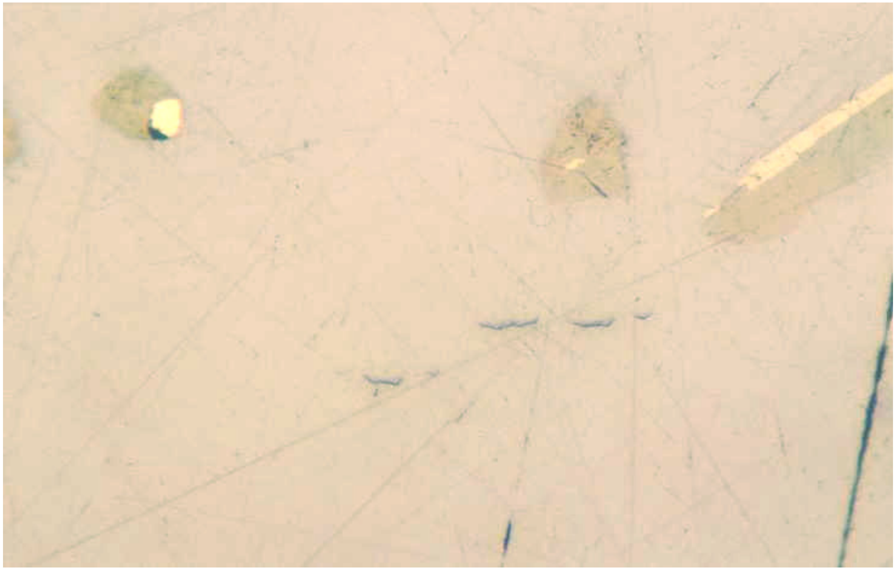

Plate A3.20Native gold (yellow) and hessite (olive grey) in galena (Calliachar Burn, FOV 165 µm, reflected light, Sample No DRR008).

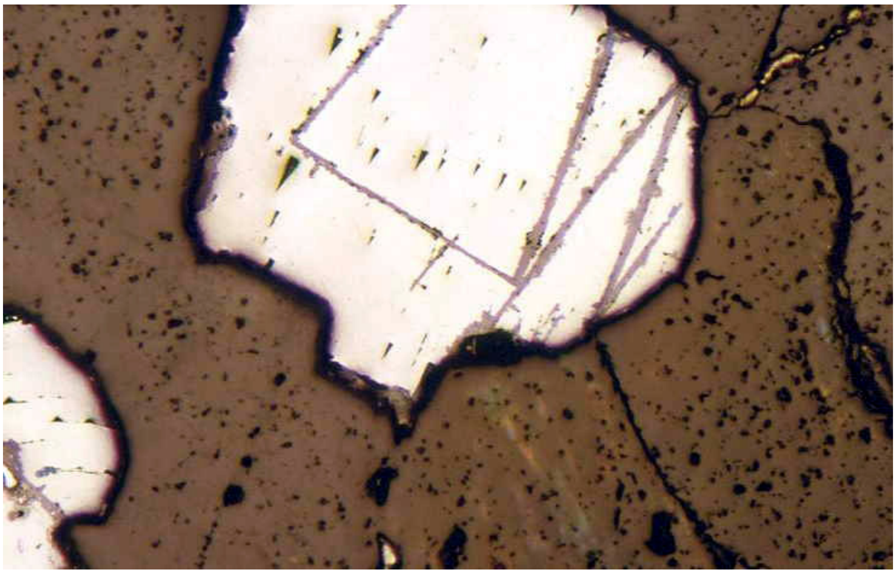

Plate A3.21Vug-filling galena in quartz (Urlar Burn, FOV 500 μm micron, reflected light, Sample No DRR012).

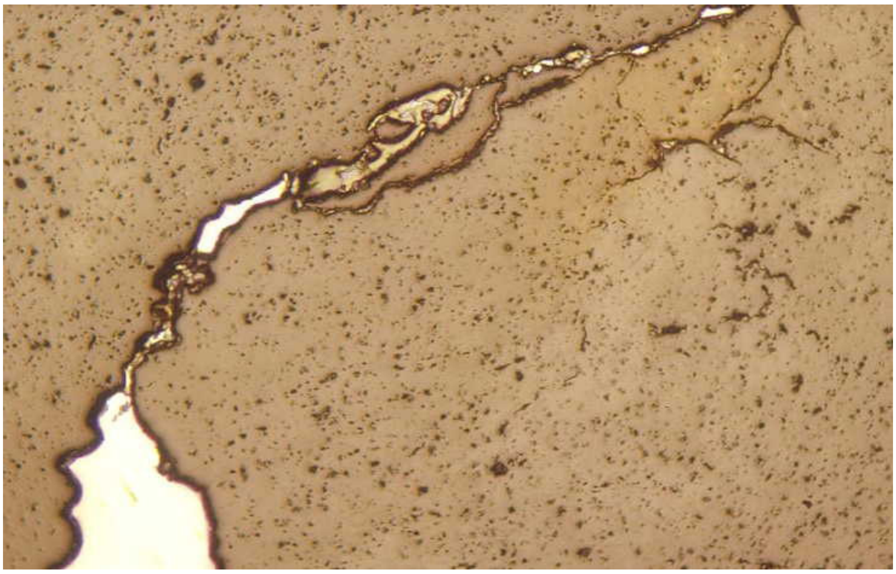

Plate A3.21Fracture filling galena in quartz (Urlar Burn, FOV 500 μm, reflected light, Sample No DRR012).

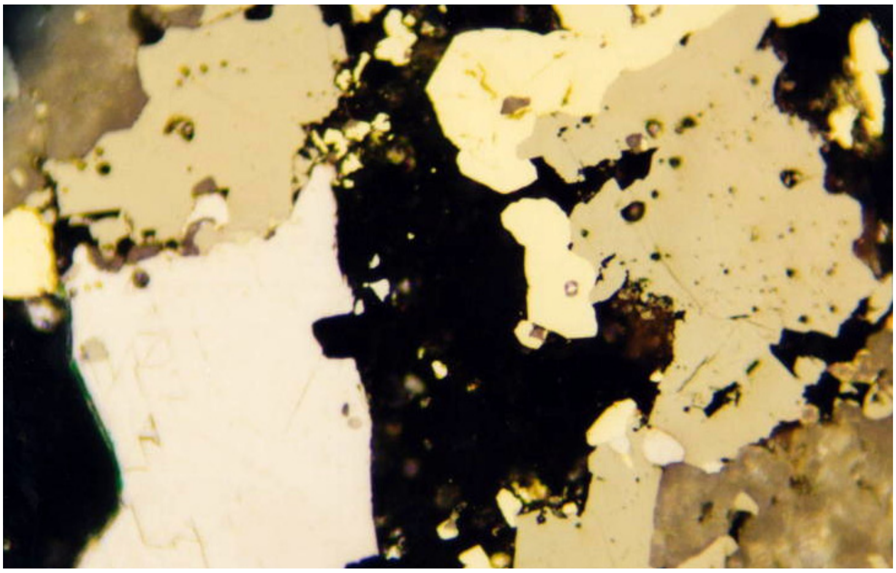

Plate A3.22Complex intergrowth of galena (white–grey), chalcopyrite (yellow), tetrahedrite (olive green) (Lagalochan, FOV 200 µm, reflected light, Sample No L1-98-010).

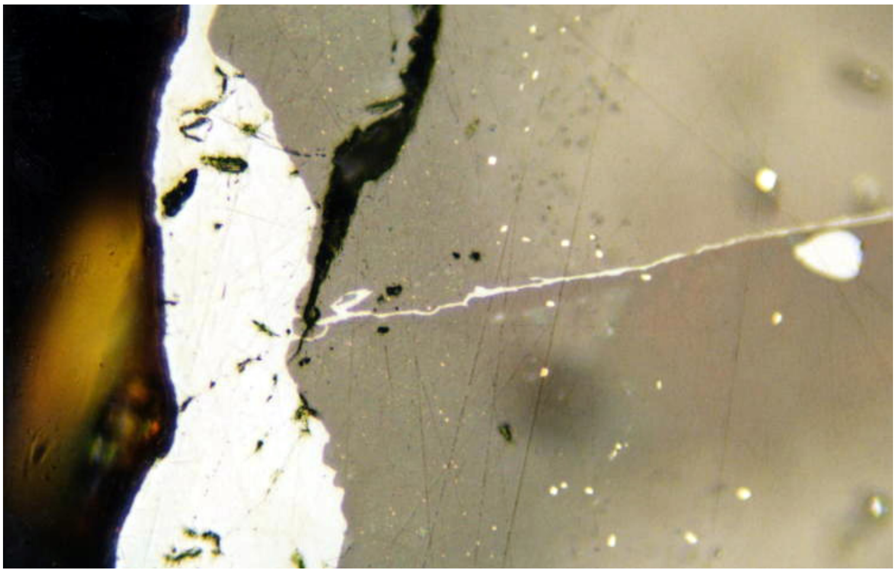

Plate A3.24Sphalerite cut and veined by sulphosalts (Stronchullin, FOV 250 µm, reflected light, Sample No DRR032).

Plate A3.25Contact between sphalerite–sulphosalt intergrowth (mid and light grey) and vein quartz (dark grey). Note that the quartz closest to the sulphides is free of polishing defects and represents a later generation of quartz overgrowth (Stronchullin, FOV 500 µm, reflected light, Sample No DRR032).

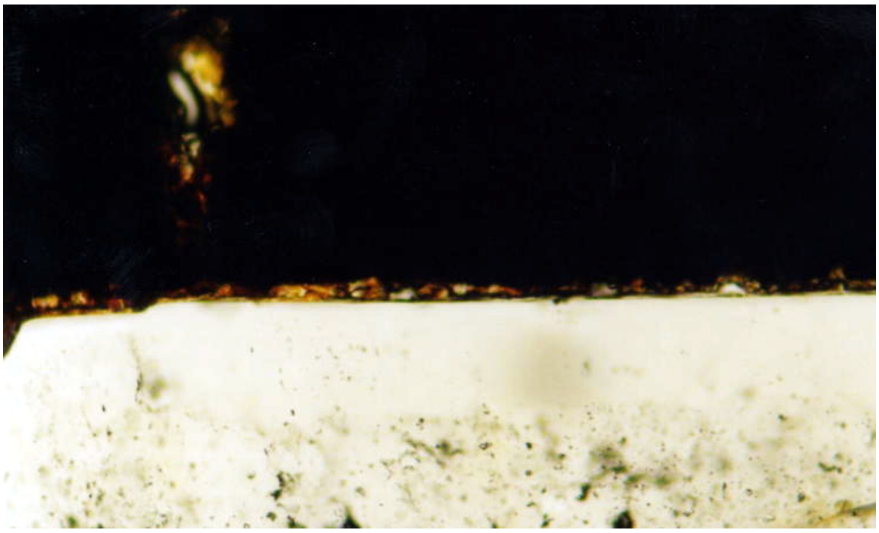

Plate A3.26Contact between sulphide and quartz. Note the euhedral overgrowth of clear quartz (Stronchullin, FOV 250 µm, transmitted light, Sample No DRR032).

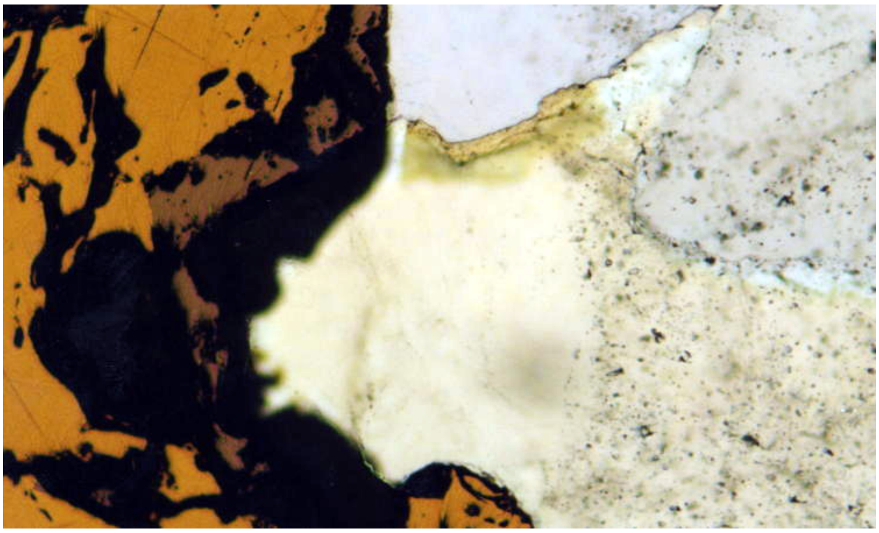

Plate A3.27Contact between chalcopyrite and quartz. Note the euhedral overgrowth of clear quartz adjacent to the chalcopyrite (Stronchullin, FOV 250 µm, mixed transmitted and reflected light, Sample No DRR032).

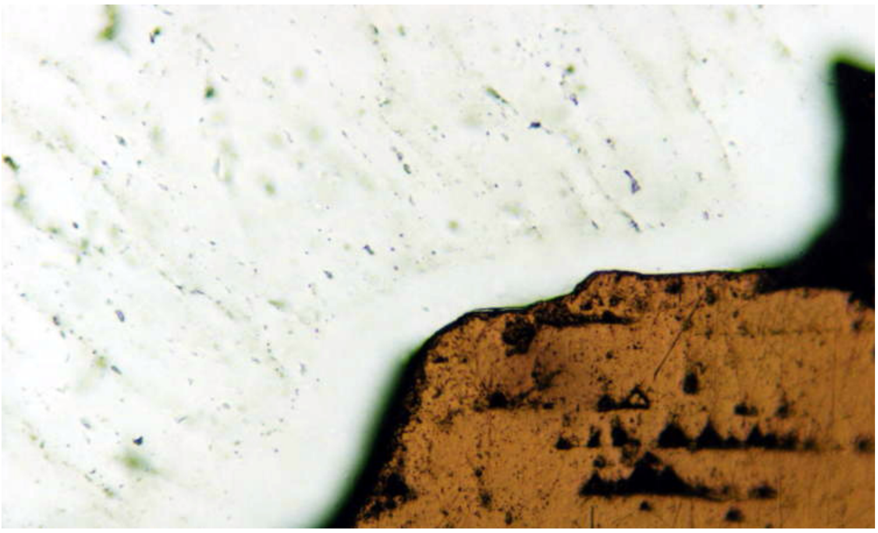

Plate A3.28Contact between galena and quartz. Note overgrowth of clear quartz adjacent to the galena and that the triangular pits in the galena show no evidence of deformation. This shows that the clear rind is not a pressure shadow and is a later generation of quartz (Urlar Burn, FOV 165 µm, mixed transmitted and reflected light, Sample No DRR013).

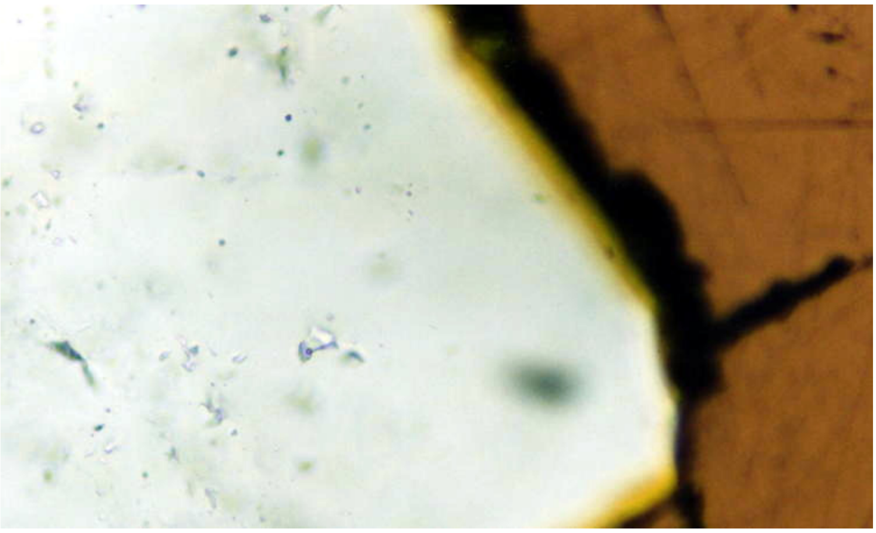

Plate A3.29Contact between galena and quartz with a low temperature L+V inclusion hosted in the clear quartz overgrowth (Calliachar Burn, FOV 165 µm, mixed transmitted and reflected light, Sample No DRR008).

Appendix 4 Fluid inclusion data

This appendix presents fluid inclusion microthermometric data for mineralisation in the Dalradian. In addition to analyses undertaken during the project, it collates information from the published literature (Curtis et al, 1993; Craw, 1990; Craw and Chamberlain, 1996), open file reports (Earls et al, 1996) and theses (Kay, 1985; Lowry, 1995; Smith 1996). Sample locations for material collected during the course of the project are given in Appendix 1. Detailed location information for other samples is to be found in the original source material.

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BM01			1	-56.7				7.0	30.9		312	5.7		5.7		Blackmount	quartz-pyrite-molybdenite			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993
BM01			2	-57.6				6.1	30.0		331	7.2		7.2		Blackmount	quartz-pyrite-molybdenite			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993
BM01			3	-55.0				8.8	26.9		293	2.4		2.4		Blackmount	quartz-pyrite-molybdenite			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993
BN			2				-5.3				159	8.2		8.2		Loch Lomond	vuggy quartz with hematite			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
BN			3				-4.1				179	6.5		6.5		Loch Lomond	vuggy quartz with hematite			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
BN			2	-56.8			-3.5	7.4	19.0	l + v -> v	260	5.0		5.0		Loch Lomond	vuggy quartz with hematite			P L1+L2+V car		aqueous-carbonic -- high CO2	Craw 1990; Craw & Chamberlain 1996
BN			3	-58.9			-2.6	10.4	25.0	l + v -> l	260	4.2		4.2		Loch Lomond	vuggy quartz with hematite			P L1+L2+V car		aqueous-carbonic -- high CO2	Craw 1990; Craw & Chamberlain 1996
BQ1	1		16								338				l + v -> v	Cruach Innse appinite	brecciated quartzite		80	not known		aqueous -- low salinity	This project
BQ1	1		17								344				l + v -> l/c	Cruach Innse appinite	brecciated quartzite		80	not known		aqueous -- low salinity	This project
BQ1	1		12		-23		-2.7				241	4.4		4.4	l + v -> l	Cruach Innse appinite	brecciated quartzite		1	S L+V aq		aqueous -- low salinity	This project
BQ1	1		14		-22		-2.7				241	4.4		4.4	l + v -> l	Cruach Innse appinite	brecciated quartzite		1	S L+V aq		aqueous -- low salinity	This project
BQ1	1		15		-22		-2.4				144	3.9		3.9	l + v -> l	Cruach Innse appinite	brecciated quartzite		1	S L+V aq		aqueous -- low salinity	This project
BQ1	1		11		-20		-2.2				128	3.6		3.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		1	S L+V aq		aqueous -- low salinity	This project
BQ1	1		13		-21		-0.5				108	0.8		0.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		1	S L+V aq		aqueous -- low salinity	This project
BQ1	1		1	-56.3				7.2	23.3	l + v -> l	289	5.3		5.3	l + v -> d	Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	1		3	-56.6				7.2	22.4	l + v -> l	289	5.3		5.3	l + v -> d	Cruach Innse appinite	brecciated quartzite		60	S L1+L2+V car		aqueous-carbonic -- high CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ1	1		5	-56.6				7.4	20.7	l + v -> l	289	5.0		5.0	l + v -> d	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	1		7	-56.5	-19			7.7	27.4	l + v -> l	306	4.4		4.4	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	1		4	-56.6				7.8	23.1	l + v -> l	347	4.3		4.3	l + v -> v	Cruach Innse appinite	brecciated quartzite		60	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	1		2	-55.9				7.9	26.0	l + v -> l		4.1		4.1		Cruach Innse appinite	brecciated quartzite		80	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	1		8	-56.7				7.9	24.4	l + v -> l	289	4.1		4.1	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	1		9	-56.7	-21			7.9	26.5	l + v -> l		4.1		4.1		Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	1		10	-57.3				7.9	26.0	l + v -> l	300	4.1		4.1	l + v -> d	Cruach Innse appinite	brecciated quartzite		60	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	1		6	-56.5	-18			8.0	25.6	l + v -> l	289	3.9		3.9	l + v -> d	Cruach Innse appinite	brecciated quartzite		80	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	2		2		-22		-4.2				200	6.7		6.7	l + v -> l	Cruach Innse appinite	brecciated quartzite		1	S L+V aq		aqueous -- low salinity	This project
BQ1	2		6		-25		-3.6				222	5.8		5.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L+V aq		aqueous -- low salinity	This project
BQ1	2		13		-25		-3.3				312	5.3		5.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L+V aq		aqueous -- low salinity	This project
BQ1	2		16		-24		-3.3				206	5.3		5.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		1	S L+V aq		aqueous -- low salinity	This project
BQ1	2		12		-25		-3.2				175	5.2		5.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	2		14				-2.4				198	3.9		3.9	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	2		17				-2.2				194	3.6		3.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	2		1		-23		-2.1				224	3.4		3.4	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ1	2		9		-23		-2.1				211	3.4		3.4	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	2		11		-22		-2.0				162	3.3		3.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		1	S L+V aq		aqueous -- low salinity	This project
BQ1	2		3		-22		-1.9				218	3.1		3.1	l + v -> l	Cruach Innse appinite	brecciated quartzite		1	S L+V aq		aqueous -- low salinity	This project
BQ1	2		10		-20		-1.8				204	3.0		3.0	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	2		4		-22		-1.7				222	2.8		2.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	2		5		-22		-1.7				216	2.8		2.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	2		7		-23		-1.7				221	2.8		2.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	2		15				-1.7				212	2.8		2.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	2		18				-1.6				208	2.6		2.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	2		8		-23		-1.5				218	2.5		2.5	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ1	3		13													Cruach Innse appinite	brecciated quartzite			not known			This project
BQ1	3		9		-13		-3.4					5.5		5.5		Cruach Innse appinite	brecciated quartzite			S L+V aq		aqueous -- low salinity	This project
BQ1	3		3	-57.3				6.2	28.0	l + v -> l		7.0		7.0		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	3		4	-57.2				6.5	29.1	l + v -> l		6.5		6.5		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	3		5	-57.2				6.8	29.2	l + v -> l		6.0		6.0		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	3		7	-57.3				6.8	29.1	l + v -> l		6.0		6.0		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ1	3		8	-57.2				6.8	29.1	l + v -> l		6.0		6.0		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	3		18	-56.4				6.8	28.7	l + v -> v		6.0		6.0		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	3		2	-57.2				6.9	28.9	l + v -> v		5.9		5.9		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	3		6	-57.2	-22			6.9	28.9	l + v -> l		5.9		5.9		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	3		11	-57.2				6.9	28.0	l + v -> l		5.9		5.9		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	3		14		-28			6.9				5.9		5.9		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	3		15	-56.6	-19			6.9				5.9		5.9		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	3		12	-57.3				7.0	29.2	l + v -> l		5.7		5.7		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	3		1	-57.0				7.1	29.1	l + v -> v		5.5		5.5		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	3		16	-56.3				7.2	29.3	l + v -> v		5.3		5.3		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	3		17	-58.5				7.6	35.5	l + v -> v		4.6		4.6		Cruach Innse appinite	brecciated quartzite			S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	3		10						26.7	l + v -> l						Cruach Innse appinite	brecciated quartzite		100	S V-only car		carbonic	This project
BQ1	5		12		-18		-5.3				239	8.2		8.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ1	5		13		-16		-5.2				234	8.1		8.1	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ1	5		14		-22		-5.0				203	7.8		7.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ1	5		5		-20		-4.4				244	7.0		7.0	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ1	5		7		-22		-4.4				251	7.0		7.0	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L+V aq		aqueous -- low salinity	This project
BQ1	5		15		-25		-3.9				281	6.2		6.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ1	5		6		-21		-3.7				253	5.9		5.9	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ1	5		1		-23		-3.6				295	5.8		5.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	5		3		-25		-3.6				274	5.8		5.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ1	5		11		-26		-3.5				242	5.6		5.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	5		9		-18		-3.3				244	5.3		5.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L+V aq		aqueous -- low salinity	This project
BQ1	5		16		-21		-3.1				307	5.0		5.0	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ1	5		8		-24		-2.9				233	4.7		4.7	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L+V aq		aqueous -- low salinity	This project
BQ1	5		10		-20		-2.9				195	4.7		4.7	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	5		2		-21		-2.7				182	4.4		4.4	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	5		4		-22		-2.6				271	4.2		4.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ1	6		20		-15			5.6			224	8.0		8.0	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V car		aqueous-carbonic -- low CO2	This project
BQ1	6		9	-56.7				7.8			317	4.3		4.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		50	S L+V car		aqueous-carbonic -- low CO2	This project
BQ1	6		2	-56.3				6.4	29.6	l + v -> c	282	6.7		6.7	l + v -> d	Cruach Innse appinite	brecciated quartzite		5	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		17	-56.3				7.2	29.0	l + v -> l/c	308	5.3		5.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ1	6		11	-56.4				7.3	29.9	l + v -> c	307	5.2		5.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		4	-56.4				7.5	29.9	l + v -> l/c	333	4.8		4.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		10	-56.4				7.6	27.9	l + v -> l	307	4.6		4.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		18	-56.3				7.6	28.9	l + v -> c	291	4.6		4.6	l + v -> d	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		1	-56.2				7.7	29.8	l + v -> l/c		4.4		4.4		Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		7	-56.7				7.7	27.8	l + v -> l	310	4.4		4.4	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		8	-56.6				7.8	27.5	l + v -> l	307	4.3		4.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		13	-56.3				7.8	29.6	l + v -> l/c	318	4.3		4.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		40	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		15	-56.2				7.8	29.4	l + v -> l	285	4.3		4.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		19	-56.1	-19			7.9	27.4	l + v -> v/c	326	4.1		4.1	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		3	-56.5	-19			8.0	28.5	l + v -> c	320	3.9		3.9	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		6	-56.5				8.0	27.8	l + v -> l	310	3.9		3.9	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		16	-56.4				8.0	28.7	l + v -> c	295	3.9		3.9	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		5	-56.6				8.1	28.2	l + v -> l	318	3.7		3.7	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ1	6		14	-56.5				8.1	28.2	l + v -> l	314	3.7		3.7	l + v -> l	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ1	6		12	-56.4				8.2	28.2	l + v -> c	307	3.5		3.5	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		8	-56.6				7.4	28.5	l + v -> l	304	5.0		5.0	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		16	-56.4				7.5	27.9	l + v -> l	304	4.8		4.8	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		30	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		7	-56.3				7.7	28.6	l + v -> l	276	4.4		4.4	l + v -> c	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		4	-56.5				7.8	27.9	l + v -> l	316	4.3		4.3	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		9	-56.4				7.9	28.2	l + v -> l	289	4.1		4.1	l + v -> c	Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		15	-56.3				7.9	29.0	l + v -> l	316	4.1		4.1	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		6	-56.3				8.1	28.7	l + v -> l	316	3.7		3.7	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		13	-56.6				8.1	28.7	l + v -> l	302	3.7		3.7	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		10	-56.4				8.2	27.8	l + v -> l	248	3.5		3.5	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		5	-56.2				8.3	28.2	l + v -> l	323	3.3		3.3	l + v -> c	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		1	-56.5	-16			8.6	28.1	l + v -> l	285	2.8		2.8	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		2	-56.4				8.7	28.1	l + v -> l	300	2.6		2.6	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		11	-56.4				8.7	26.8	l + v -> l	287	2.6		2.6	l + v -> c	Cruach Innse appinite	brecciated quartzite		30	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		3	-56.3				8.8	28.1	l + v -> l	300	2.4		2.4	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		30	S L1+L2+V car		aqueous-carbonic -- high CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ2	1		14	-56.5				8.8	28.6	l + v -> l/c	285	2.4		2.4	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	1		12	-56.4				9.1	28.9	l + v -> l/c	287	1.8		1.8	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	2		13		-22		-0.6				193	1.0		1.0	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ2	2		14				-0.5				192	0.8		0.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ2	2		17		-19		-0.2				173	0.3		0.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ2	2		15				-0.1				204	0.2		0.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ2	2		16				0.0				210	0.0		0.0	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ2	2		18		-16		0.0				191	0.0		0.0	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ2	2		2	-57.8				7.3	27.6	l + v -> l	290	5.2		5.2	l + v -> c	Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	2		4	-57.5				7.3	28.1	l + v -> l	277	5.2		5.2	l + v -> c	Cruach Innse appinite	brecciated quartzite		80	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	2		7	-57.5				7.6	28.0	l + v -> l		4.6		4.6	l + v -> d	Cruach Innse appinite	brecciated quartzite		80	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	2		11	-57.4				7.6	27.4	l + v -> l	304	4.6		4.6	l + v -> c	Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	2		12	-57.6				7.9	27.9	l + v -> l	295	4.1		4.1	l + v -> c	Cruach Innse appinite	brecciated quartzite		80	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	2		5	-57.3				8.0	27.9	l + v -> l	290	3.9		3.9	l + v -> c	Cruach Innse appinite	brecciated quartzite		80	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	2		9	-57.5	-16			8.0	28.8	l + v -> l	323	3.9		3.9	l + v -> c	Cruach Innse appinite	brecciated quartzite		30	S L1+L2+V car		aqueous-carbonic -- high CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ2	2		6	-57.6				8.1	28.3	l + v -> l		3.7		3.7	l + v -> d	Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	2		3	-57.5				8.3	28.2	l + v -> l	289	3.3		3.3	l + v -> c	Cruach Innse appinite	brecciated quartzite		80	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	2		8	-57.4				8.5	28.0	l + v -> l	277	3.0		3.0	l + v -> d	Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	2		10	-57.3				8.6	28.5	l + v -> l	299	2.8		2.8	l + v -> c	Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	2		1	-57.3				8.9	27.6	l + v -> l	300	2.2		2.2	l + v -> c	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	3		1		-21		-3.2				272	5.2		5.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		15	S L+V aq		aqueous -- low salinity	This project
BQ2	3		3		-12		-2.5				270	4.1		4.1	l + v -> l	Cruach Innse appinite	brecciated quartzite		15	S L+V aq		aqueous -- low salinity	This project
BQ2	3		2		-20		-1.6				272	2.6		2.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		15	S L+V aq		aqueous -- low salinity	This project
BQ2	3		10								279				l + v -> l	Cruach Innse appinite	brecciated quartzite		15	S L+V aq		aqueous -- low salinity	This project
BQ2	3		11					7.1			277	5.5		5.5	l + v -> l	Cruach Innse appinite	brecciated quartzite		15	S L+V car		aqueous-carbonic -- low CO2	This project
BQ2	3		8					7.6			269	4.6		4.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		15	S L+V car		aqueous-carbonic -- low CO2	This project
BQ2	3		5					7.8			261	4.3		4.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		15	S L+V car		aqueous-carbonic -- low CO2	This project
BQ2	3		9					7.8			269	4.3		4.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		15	S L+V car		aqueous-carbonic -- low CO2	This project
BQ2	3		4					7.9			261	4.1		4.1	l + v -> l	Cruach Innse appinite	brecciated quartzite		15	S L+V car		aqueous-carbonic -- low CO2	This project
BQ2	3		6					8.0			267	3.9		3.9	l + v -> l	Cruach Innse appinite	brecciated quartzite		15	S L+V car		aqueous-carbonic -- low CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (μm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ2	3		7	-57.9	-35			10.9	10.3	l + v -> c	211				l + v ->	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		5	-56.5	-9			7.1	24.6	l + v -> l		5.5		5.5		Cruach Innse appinite	brecciated quartzite		60	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		11	-57.0	-23			7.2	27.8	l + v -> l	318	5.3		5.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		3	-56.3				7.6	26.6	l + v -> l	280	4.6		4.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		60	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		6	-56.7				7.8	24.4	l + v -> l		4.3		4.3		Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		16	-57.0				7.8	28.7	l + v -> l	299	4.3		4.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		18	-56.5				7.9	27.9	l + v -> l	293	4.1		4.1	l + v -> d	Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		2	-56.3	-20			8.1	26.8	l + v -> l	284	3.7		3.7	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		10	-56.8				8.1	27.2	l + v -> l	304	3.7		3.7	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		14	-56.8				8.2	26.7	l + v -> l	310	3.5		3.5	l + v -> c	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		17	-56.6				8.3	28.2	l + v -> l	274	3.3		3.3	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		4	-56.4				8.7	26.8	l + v -> l	290	2.6		2.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		8	-56.7				8.7	27.4	l + v -> l	295	2.6		2.6	l + v -> d	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		12	-56.9				9.0	27.2	l + v -> l	296	2.0		2.0	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		15	-56.8				9.1	28.0	l + v -> l	271	1.8		1.8	l + v -> d	Cruach Innse appinite	brecciated quartzite		30	S L1+L2+V car		aqueous-carbonic -- high CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (μm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ2	4		13	-56.8				9.2	26.9	l + v -> l	297	1.6		1.6	l + v -> c	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		1	-56.5	-19			9.4	26.2	l + v -> l	233	1.2		1.2	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		9	-56.8				9.4	27.6	l + v -> l		1.2		1.2		Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	4		7	-56.7				9.8	24.7	l + v -> l	291	0.4		0.4	l + v -> c	Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	5		17		-23		-5.0				263	7.8		7.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L+V aq		aqueous -- low salinity	This project
BQ2	5		18		-19		-2.0				253	3.3		3.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L+V aq		aqueous -- low salinity	This project
BQ2	5		16		-15		-1.1				253	1.8		1.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ2	5		6	-56.0	-13			7.6	28.0	l + v -> l	276	4.6		4.6	l + v -> d	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	5		5	-56.0	-25			8.0	28.5	l + v -> l	312	3.9		3.9	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	5		9	-56.1				8.4	27.7	l + v -> l	299	3.1		3.1	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	5		1	-56.0				8.7	27.9	l + v -> l	269	2.6		2.6	l + v -> d	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	5		14	-58.5				8.7	28.4	l + v -> l	320	2.6		2.6	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	5		15	-55.8				8.7	28.8	l + v -> l	324	2.6		2.6	l + v -> c	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	5		13	-55.9				8.8	27.9	l + v -> l	263	2.4		2.4	l + v -> d	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	5		12	-56.1				9.0	27.7	l + v -> l	269	2.0		2.0	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ2	5		3	-56.1				9.1	28.3	l + v -> l	299	1.8		1.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	5		4	-55.9				9.2	28.0	l + v -> l	303	1.6		1.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	5		7	-55.8				9.2	28.8	l + v -> l	307	1.6		1.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	5		8	-55.9				9.2	28.7	l + v -> l	289	1.6		1.6	l + v -> c	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	5		10	-56.0				9.2	28.3	l + v -> l	271	1.6		1.6	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	5		11	-56.0				9.3	27.7	l + v -> l	289	1.4		1.4	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	5		2	-56.1				9.4	28.1	l + v -> l	297	1.2		1.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	7		6		-23		-7.0				289	10.5		10.5	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ2	7		5		-24		-6.7				325	10.1		10.1	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ2	7		4		-23		-6.6					10.0		10.0		Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ2	7		1		-23		-6.2				284	9.5		9.5	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ2	7		9		-32		-4.0				164	6.4		6.4	l + v -> l	Cruach Innse appinite	brecciated quartzite		1	S L+V aq		aqueous -- low salinity	This project
BQ2	7		11				-3.7				282	5.9		5.9	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ2	7		10				-3.3				262	5.3		5.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ2	7		2		-23		-7.0	4.2			293	10.2		10.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V car		aqueous-carbonic -- low CO2	This project
BQ2	7		3		-23		-8.7	4.6			286	9.6		9.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V car		aqueous-carbonic -- low CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ2	7		7	-56.8	-16			5.4	26.8	l + v -> v	331	8.3		8.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	7		8	-56.8				5.4	25.5	l + v -> v	353	8.3		8.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ2	9		8		-49						263				l + v -> l	Cruach Innse appinite	brecciated quartzite		5	not known			This project
BQ2	9		9								263				l + v -> l	Cruach Innse appinite	brecciated quartzite		5	not known			This project
BQ2	9		10								254				l + v -> l	Cruach Innse appinite	brecciated quartzite		5	not known			This project
BQ2	9		11								287				l + v -> l	Cruach Innse appinite	brecciated quartzite		10	not known			This project
BQ2	9		1				-3.2				264	5.2		5.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ2	9		6		-20		-3.2				265	5.2		5.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ2	9		2		-18		-2.9				254	4.7		4.7	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ2	9		5		-20		-2.5				182	4.1		4.1	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ2	9		4		-20		-0.8				267	1.3		1.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ2	9		3		-20			-0.4			287	16.0		16.0	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V car		aqueous-carbonic -- low CO2	This project
BQ2	9		7	-56.6				7.5	29.4	l + v -> l	363	4.8		4.8	l + v -> v	Cruach Innse appinite	brecciated quartzite		60	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	1		2	-57.0	-42			7.9	26.1	l + v -> l	272	4.1		4.1	l + v -> d	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	1		15	-56.7				7.9	29.0	l + v -> l	305	4.1		4.1	l + v -> c/l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	1		6	-57.0				8.0	26.3	l + v -> l	300	3.9		3.9	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ3	1		7	-56.8				8.0	27.4	l + v -> l	264	3.9		3.9	l + v -> d	Cruach Innse appinite	brecciated quartzite		15	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	1		1	-57.0	-52			8.3	27.0	l + v -> l	272	3.3		3.3	l + v -> d	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	1		4	-57.0				8.3	25.2	l + v -> l		3.3		3.3	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	1		5	-57.2				8.3	27.3	l + v -> l	272	3.3		3.3	l + v -> d	Cruach Innse appinite	brecciated quartzite		15	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	1		14	-56.7				8.3	27.6	l + v -> l	293	3.3		3.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	1		3	-57.0				8.4	26.7	l + v -> l	305	3.1		3.1	l + v -> c	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	1		8	-57.2				8.4	27.1	l + v -> l	294	3.1		3.1	l + v -> c	Cruach Innse appinite	brecciated quartzite		30	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	1		9	-57.2				8.4	27.1	l + v -> l	300	3.1		3.1	l + v -> c	Cruach Innse appinite	brecciated quartzite		30	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	1		10	-57.2				8.4	27.1	l + v -> l	294	3.1		3.1	l + v -> c	Cruach Innse appinite	brecciated quartzite		30	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	1		13	-56.9				8.4	27.7	l + v -> l	279	3.1		3.1	l + v -> d	Cruach Innse appinite	brecciated quartzite		30	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	1		11	-56.8				8.5	28.4	l + v -> l	269	3.0		3.0	l + v -> d	Cruach Innse appinite	brecciated quartzite		40	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	1		12	-56.7				8.9	27.7	l + v -> l	290	2.2		2.2	l + v -> c/l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	2		5	-56.8				7.2	25.7	l + v -> l	275	5.3		5.3	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	2		8	-56.8				7.2	25.6	l + v -> l	268	5.3		5.3	l + v -> d	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	2		6	-56.8				7.3	24.0	l + v -> l	296	5.2		5.2	l + v -> c	Cruach Innse appinite	brecciated quartzite		30	S L1+L2+V car		aqueous-carbonic -- high CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ3	2		3	-56.9				7.4	26.2	l + v -> l	337	5.0		5.0	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	2		4	-56.8				7.4	22.7	l + v -> l	242	5.0		5.0	l + v -> d	Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	2		9	-56.8				7.5	26.5	l + v -> l	350	4.8		4.8	l + v -> v/c	Cruach Innse appinite	brecciated quartzite		75	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	2		1	-56.7				7.6	25.4	l + v -> l	253	4.6		4.6	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	2		7	-56.8				7.6	25.6	l + v -> l	297	4.6		4.6	l + v -> c	Cruach Innse appinite	brecciated quartzite		30	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	2		10	-56.9				7.7	25.5	l + v -> l	300	4.4		4.4	l + v -> c	Cruach Innse appinite	brecciated quartzite		50	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	2		13	-57.1				7.9	22.4	l + v -> l	276	4.1		4.1	l + v -> d	Cruach Innse appinite	brecciated quartzite		30	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	2		2	-57.0				8.0	28.7	l + v -> l	259	3.9		3.9	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	2		11	-57.3				8.0	23.7	l + v -> l	253	3.9		3.9	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	2		12	-56.9				8.1	27.4	l + v -> l	253	3.7		3.7	l + v -> d	Cruach Innse appinite	brecciated quartzite		30	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	2		15	-57.1				8.2	27.6	l + v -> l	253	3.5		3.5	l + v -> d	Cruach Innse appinite	brecciated quartzite		30	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	2		14	-57.1				8.5	26.0	l + v -> l	253	3.0		3.0	l + v -> d	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	3		12				-3.2				251	5.2		5.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L+V aq		aqueous -- low salinity	This project
BQ3	3		13				-2.2				235	3.6		3.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ3	3		5	-57.1				7.8			273	4.3		4.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L+V car		aqueous-carbonic -- low CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ3	3		8	-57.0				8.3			273	3.3		3.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L+V car		aqueous-carbonic -- low CO2	This project
BQ3	3		3					8.5			258	3.0		3.0	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L+V car		aqueous-carbonic -- low CO2	This project
BQ3	3		9	-57.0				8.5			262	3.0		3.0	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L+V car		aqueous-carbonic -- low CO2	This project
BQ3	3		2	-57.2				8.6			258	2.8		2.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		15	S L+V car		aqueous-carbonic -- low CO2	This project
BQ3	3		6	-57.0				8.6				2.8		2.8		Cruach Innse appinite	brecciated quartzite		20	S L+V car		aqueous-carbonic -- low CO2	This project
BQ3	3		1	-56.9	-22			8.7			273	2.6		2.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L+V car		aqueous-carbonic -- low CO2	This project
BQ3	3		11					8.7			248	2.6		2.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L+V car		aqueous-carbonic -- low CO2	This project
BQ3	3		4	-56.9	-14			8.8			262	2.4		2.4	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L+V car		aqueous-carbonic -- low CO2	This project
BQ3	3		7	-57.0				7.6	31.3	l + v -> c	262	4.6		4.6	l + v -> d	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	3		10	-56.9				8.1	31.5	l + v -> c/v	263	3.7		3.7	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	3		14	-56.8				8.8	32.0	l + v -> l/c	281	2.4		2.4	l + v -> l/c	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	3		15	-56.9				8.9	30.4	l + v -> l	279	2.2		2.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	4		13								227				l + v -> l	Cruach Innse appinite	brecciated quartzite		5	not known			This project
BQ3	4		1		-22		-3.5				235	5.6		5.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ3	4		3		-22		-3.4				185	5.5		5.5	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ3	4		15		-26		-3.0				153	4.9		4.9	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ3	4		10		-25		-2.8				218	4.5		4.5	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L+V aq		aqueous -- low salinity	This project
BQ3	4		12		-22		-2.7				230	4.4		4.4	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ3	4		6		-21		-2.6				214	4.2		4.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ3	4		11		-23		-2.5				230	4.1		4.1	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ3	4		2		-21		-2.4				230	3.9		3.9	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ3	4		4		-21		-2.3				225	3.8		3.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ3	4		5		-18		-2.1				218	3.4		3.4	l + v -> l	Cruach Innse appinite	brecciated quartzite		2	S L+V aq		aqueous -- low salinity	This project
BQ3	4		14		-23		-2.0				230	3.3		3.3	l + v -> l	Cruach Innse appinite	brecciated quartzite		5	S L+V aq		aqueous -- low salinity	This project
BQ3	4		9					8.0			253	3.9		3.9	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L+V car		aqueous-carbonic -- low CO2	This project
BQ3	4		8		-20			8.1			256	3.7		3.7	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L+V car		aqueous-carbonic -- low CO2	This project
BQ3	4		7	-56.8				8.5	29.3	l + v -> l	256	3.0		3.0	l + v -> d	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	6		1	-57.1				8.0	29.4	l + v -> l	353	3.9		3.9	l + v -> v	Cruach Innse appinite	brecciated quartzite		40	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	6		11	-57.2				8.4	28.4	l + v -> l	304	3.1		3.1	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	6		3	-56.8				8.7	29.4	l + v -> l	284	2.6		2.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	6		4	-56.8				8.7	28.6	l + v -> l	292	2.6		2.6	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
BQ3	6		8	-57.0				8.7	29.3	l + v -> l	305	2.6		2.6	l + v -> d	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	6		2	-56.8				8.8	29.4	l + v -> l	292	2.4		2.4	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	6		5	-56.9				8.9	28.8	l + v -> l	299	2.2		2.2	l + v -> l	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	6		12	-57.2				9.0	28.9	l + v -> l	304	2.0		2.0	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	6		9	-57.0				9.1	28.8	l + v -> l	305	1.8		1.8	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	6		10	-57.2				9.1	29.0	l + v -> l	304	1.8		1.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	6		13	-57.2				9.1	28.3	l + v -> l	273	1.8		1.8	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	6		14	-57.2				9.1	28.8	l + v -> l	305	1.8		1.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	6		15	-57.1				9.1	28.8	l + v -> l	301	1.8		1.8	l + v -> l	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	6		7	-56.8				9.3	27.7	l + v -> l	279	1.4		1.4	l + v -> d	Cruach Innse appinite	brecciated quartzite		20	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
BQ3	6		6	-56.8				9.4	29.9	l + v -> l		1.2		1.2	l + v ->	Cruach Innse appinite	brecciated quartzite		10	S L1+L2+V car		aqueous-carbonic -- high CO2	This project
C1	1		1	-57.7				4.5	25.0	l + v -> v	373	9.7		9.7	l + v -> l	Curraghinalt	pre-vug bladed quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C1	1		2	-57.6				5.2			356	8.7		8.7	l + v -> l	Curraghinalt	pre-vug bladed quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C1	1		3	-57.6					28.0	l + v -> v	356				l + v -> v	Curraghinalt	pre-vug bladed quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C1	1		4	-57.5					27.5	l + v -> v	305				l + v -> l	Curraghinalt	pre-vug bladed quartz					aqueous-carbonic -- high CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C1	1		5	-57.4							402				l + v -> v	Curraghinalt	pre-vug bladed quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C1	1		6					4.8			267	9.3		9.3	l + v -> l	Curraghinalt	pre-vug bladed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C1	1		7				-3.0	5.5			332	8.2		8.2	l + v -> l	Curraghinalt	pre-vug bladed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C1	1		8				-2.6				268	4.2		4.2	l + v -> l	Curraghinalt	pre-vug bladed quartz					aqueous -- low salinity	Earls et al 1996
C1	1		9								268				l + v -> l	Curraghinalt	pre-vug bladed quartz					aqueous -- low salinity	Earls et al 1996
C1	1		10				-2.6	4.0			400	10.5		10.5	l + v -> l	Curraghinalt	pre-vug bladed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C1	1		11								129				l + v -> l	Curraghinalt	pre-vug bladed quartz					aqueous -- low salinity	Earls et al 1996
C1	1		12								349				l + v -> l	Curraghinalt	pre-vug bladed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C1	1		13								376				l + v -> l	Curraghinalt	pre-vug bladed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C1	2		14		-21		-1.8				181	3.0		3.0	l + v -> l	Curraghinalt	late quartz with sulphide			S		aqueous -- low salinity	Earls et al 1996
C1	2		15				-2.5				197	4.1		4.1	l + v -> l	Curraghinalt	late quartz with sulphide			S		aqueous -- low salinity	Earls et al 1996
C1	2		16		-30		-3.8				144	6.1		6.1	l + v -> l	Curraghinalt	late quartz with sulphide			PS		aqueous -- low salinity	Earls et al 1996
C1	2		17				-4.0				178	6.4		6.4	l + v -> l	Curraghinalt	late quartz with sulphide			PS		aqueous -- low salinity	Earls et al 1996
C1	2		18	-58.6					20.0	l + v -> v	330				l + v -> v	Curraghinalt	late quartz with sulphide			PS		aqueous-carbonic -- high CO2	Earls et al 1996
C1	2		19	-58.0				5.2	15.5	l + v -> v	335	8.7		8.7	l + v -> v	Curraghinalt	late quartz with sulphide			PS		aqueous-carbonic -- high CO2	Earls et al 1996
C1	2		20				-2.4				188	3.9		3.9	l + v -> l	Curraghinalt	late quartz with sulphide			S		aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C1	2		21				-3.6				159	5.8		5.8	l + v -> l	Curraghinalt	late quartz with sulphide			PS		aqueous -- low salinity	Earls et al 1996
C1	2		22				-4.8				137	7.5		7.5	l + v -> l	Curraghinalt	late quartz with sulphide					aqueous -- low salinity	Earls et al 1996
C1	2		23				-4.2				243	6.7		6.7	l + v -> l	Curraghinalt	late quartz with sulphide			PS		aqueous -- low salinity	Earls et al 1996
C1	2		24				-5.0				136	7.8		7.8	l + v -> l	Curraghinalt	late quartz with sulphide			PS		aqueous -- low salinity	Earls et al 1996
C1	2		25					6.7			338	6.2		6.2	l + v -> l	Curraghinalt	late quartz with sulphide			PS		aqueous-carbonic -- low CO2	Earls et al 1996
C1	2		26								186				l + v -> l	Curraghinalt	late quartz with sulphide			S		aqueous -- low salinity	Earls et al 1996
C10	1		1					6.0			255	7.4		7.4	l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C10	1		2					5.2			331	8.7		8.7	l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C10	1		3	-57.5											l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C10	1		4	-57.3							381				l + v -> v	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C10	1		5	-57.2							391				l + v -> v	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C10	1		6								379				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C10	1		7								219				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous -- low salinity	Earls et al 1996
C10	1		8								442				l + v -> c	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C10	1		9								258				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- low CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C10	1		10								273				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C10	1		11								250				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C10	1		12								302				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C10	1		13								291				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C10	1		14								297				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C10	1		15								311				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C10	1		16								399				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C10	2		17	-22.1			-0.1				222	0.2		0.2	l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous -- low salinity	Earls et al 1996
C10	2		18	-29.1			-24.5				53		22.6	22.6	l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous -- high salinity	Earls et al 1996
C10	2		19		-55	-35.1	-10.6				55	2.3	12.3	14.7	l + v -> l	Curraghinalt	interstitial carbonate					aqueous -- high salinity	Earls et al 1996
C10	2		20			-35.1	-19.6				80	3.3	17.4	20.6	l + v -> l	Curraghinalt	interstitial carbonate					aqueous -- high salinity	Earls et al 1996
C10	2		21		-55	-35.1	-19.4				90	3.3	17.3	20.5	l + v -> l	Curraghinalt	interstitial carbonate					aqueous -- high salinity	Earls et al 1996
C10	2		22			-35.6	-18.6				118	3.0	17.0	20.1	l + v -> l	Curraghinalt	interstitial carbonate					aqueous -- high salinity	Earls et al 1996
C10	2		23			-37.1	-22.8				150	2.9	19.3	22.2	l + v -> l	Curraghinalt	interstitial carbonate					aqueous -- high salinity	Earls et al 1996
C10	2		24	-56.9												Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous-carbonic -- high CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C10	2		25								42				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous -- high salinity	Earls et al 1996
C10	2		26								125				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous -- high salinity	Earls et al 1996
C10	2		27								70				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous -- high salinity	Earls et al 1996
C10	2		28								47				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous -- high salinity	Earls et al 1996
C10	2		29								201				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous -- low salinity	Earls et al 1996
C10	2		30								76				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous -- high salinity	Earls et al 1996
C10	2		31								58				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous -- high salinity	Earls et al 1996
C10	2		32								102				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous -- high salinity	Earls et al 1996
C10	2		33								116				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous -- high salinity	Earls et al 1996
C10	2		34								131				l + v -> l	Curraghinalt	Fracture-hosted quartz and chalcopyrite					aqueous -- high salinity	Earls et al 1996
C12	1		1		-28	-22.7	-1.2				173	1.6	0.4	2.0	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		2				-1.2				153	2.0		2.0	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		3				-8.2				137	11.9		11.9	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- high salinity	Earls et al 1996
C12	1		4								124				l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- high salinity	Earls et al 1996
C12	1		5		-50	-38.1	-10.5				196	1.7	12.8	14.6	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- high salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C12	1		6				-1.3				173	2.1		2.1	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		7				-3.5				141	5.6		5.6	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		8				-4.6	8.0			276	3.9		3.9	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C12	1		9					8.1			261	3.7		3.7	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C12	1		10				-0.1				202	0.2		0.2	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		11					7.6			325	4.6		4.6	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C12	1		12		-20		-1.7				160	2.8		2.8	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		13				-1.6				182	2.6		2.6	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		14				-3.5				163	5.6		5.6	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		15				-2.1				169	3.4		3.4	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		16				-1.8				188	3.0		3.0	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		17				-2.1				197	3.4		3.4	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		18				-4.8				156	7.5		7.5	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		19				-4.7				160	7.4		7.4	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		20		-29	-27.6	-4.6				148	3.3	4.6	7.9	l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C12	1		21								138				l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		22								167				l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		23								169				l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		24								175				l + v -> l	Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		25				-2.1					3.4		3.4		Curraghinalt	Eu. quartz cementing early quartz & pyrite					aqueous -- low salinity	Earls et al 1996
C12	1		26								412				l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C12	2		27								97				l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C12	2		28								135				l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C12	2		29				-1.9				190	3.1		3.1	l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C12	2		30				-1.9				191	3.1		3.1	l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C12	2		31				-2.1				191	3.4		3.4	l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C12	2		32				-2.4				175	3.9		3.9	l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C12	2		33			-48.1	-8.9				162	0.8	12.4	13.1	l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C12	2		34		-50		-10.0				128	14.0		14.0	l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C12	2		35			-46.1	-8.4				159	0.9	11.8	12.6	l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C12	2		36				-11.0				177	15.0		15.0	l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- high salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C12	2		37				-9.6				160	13.5		13.5	l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C12	2		38				-9.3				117	13.2		13.2	l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C12	2		39				-1.8				232	3.0		3.0	l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C12	2		40				-5.6				193	8.7		8.7	l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C12	2		41								109				l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C12	2		42								121				l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C12	2		43								135				l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C12	2		44								116				l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C12	2		45								147				l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C12	2		46								159				l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C12	2		47								148				l + v -> l	Curraghinalt	clear quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C13	1		1	-56.5			-12.1	6.2	30.8	l + v -> v	328	7.0		7.0	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		2	-56.5	-30	-23.1		6.4	30.8	l + v -> c	283	6.7		6.7	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		3	-56.5				6.4			307	6.7		6.7	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		4	-56.6				6.7	29.5	l + v -> v	297	6.2		6.2	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		5	-56.5				6.9	30.0	l + v -> v	293	5.9		5.9	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (μm)	% vapour	inclusion type	comment	Fluid type	Data Source
C13	1		6	-56.5				6.0	30.5	l + v -> v	376	7.4		7.4	l + v -> l/c	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		7	-56.5				6.6	39.6	l + v -> v	298	6.4		6.4	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		8	-56.5				7.1	30.2	l + v -> v	303	5.5		5.5	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		9	-56.5				6.3	30.6	l + v -> v	303	6.9		6.9	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		10	-56.5				6.4			300	6.7		6.7	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		11	-56.5				6.4	30.9	l + v -> v	306	6.7		6.7	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		12	-56.6				6.7			291	6.2		6.2	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		13	-56.5				6.2	30.5	l + v -> v	294	7.0		7.0	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		14	-56.8				6.8			293	6.0		6.0	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		15	-56.8				6.9			294	5.9		5.9	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		16					7.1	30.8	l + v -> v	296	5.5		5.5	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		17				-8.7				117	12.5		12.5	l + v -> l	Curraghinalt	euhedral quartz					aqueous -- high salinity	Earls et al 1996
C13	1		18	-56.5				6.0	30.8	l + v -> v	308	7.4		7.4	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		19					6.7	31.1	l + v -> c	301	6.2		6.2	l + v -> l	Curraghinalt	euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C13	1		20			-31.1	-8.3				104	3.2	9.2	12.5	l + v -> l	Curraghinalt	euhedral quartz					aqueous -- high salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C13	1		21				-8.8				100	12.6		12.6	l + v -> l	Curraghinalt	euhedral quartz					aqueous -- high salinity	Earls et al 1996
C13	1		22				-1.7				158	2.8		2.8	l + v -> l	Curraghinalt	euhedral quartz					aqueous -- low salinity	Earls et al 1996
C13	1		23				-1.7				160	2.8		2.8	l + v -> l	Curraghinalt	euhedral quartz					aqueous -- low salinity	Earls et al 1996
C13	1		24				-1.7				161	2.8		2.8	l + v -> l	Curraghinalt	euhedral quartz					aqueous -- low salinity	Earls et al 1996
C13	1		25				-1.6				145	2.6		2.6	l + v -> l	Curraghinalt	euhedral quartz					aqueous -- low salinity	Earls et al 1996
C13	1		26				-1.6				161	2.6		2.6	l + v -> l	Curraghinalt	euhedral quartz					aqueous -- low salinity	Earls et al 1996
C13	1		27								95				l + v -> l	Curraghinalt	euhedral quartz					aqueous -- high salinity	Earls et al 1996
C13	1		28								150				l + v -> l	Curraghinalt	euhedral quartz					aqueous -- low salinity	Earls et al 1996
C13	1		29								153				l + v -> l	Curraghinalt	euhedral quartz					aqueous -- low salinity	Earls et al 1996
C13	2		30		-30	-22.1	-8.9				179	11.4	1.4	12.8	l + v -> l	Curraghinalt	vuggy quartz					aqueous -- low salinity	Earls et al 1996
C13	2		31			-35.1	-9.6				262	2.2	11.6	13.8	l + v -> l	Curraghinalt	vuggy quartz					aqueous -- low salinity	Earls et al 1996
C13	2		32				-3.0				152	4.9		4.9	l + v -> l	Curraghinalt	vuggy quartz					aqueous -- low salinity	Earls et al 1996
C13	2		33		-21		0.1				167				l + v -> l	Curraghinalt	vuggy quartz					aqueous -- low salinity	Earls et al 1996
C13	2		34		-50	-22.7	-10.8					12.1	2.7	14.7		Curraghinalt	vuggy quartz					aqueous -- high salinity	Earls et al 1996
C13	2		35				-9.3				133	13.2		13.2	l + v -> l	Curraghinalt	vuggy quartz					aqueous -- high salinity	Earls et al 1996
C13	2		36				-9.1					13.0		13.0		Curraghinalt	vuggy quartz					aqueous -- high salinity	Earls et al 1996
C13	2		37		-30	-23.0	-23.0				109	18.9	5.1	24.0	l + v -> l	Curraghinalt	vuggy quartz					aqueous -- high salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (μm)	% vapour	inclusion type	comment	Fluid type	Data Source
C13	2		38			-20.0	-22.7				120	19.9	4.3	24.1	l + v -> l	Curraghinalt	vuggy quartz					aqueous -- high salinity	Earls et al 1996
C13	2		39				-16.9				84	20.1		20.1	l + v -> l	Curraghinalt	vuggy quartz					aqueous -- high salinity	Earls et al 1996
C13	2		40				-19.0				79	21.7		21.7	l + v -> l	Curraghinalt	vuggy quartz					aqueous -- high salinity	Earls et al 1996
C13	2		41				-13.5				144	17.3		17.3	l + v -> l	Curraghinalt	vuggy quartz					aqueous -- high salinity	Earls et al 1996
C13	2		42				-11.4				230	15.4		15.4	l + v -> l	Curraghinalt	vuggy quartz					aqueous -- high salinity	Earls et al 1996
C13	2		43				-11.8					15.8		15.8		Curraghinalt	vuggy quartz					aqueous -- high salinity	Earls et al 1996
C13	2		44				-9.4				120	13.3		13.3	l + v -> l	Curraghinalt	vuggy quartz					aqueous -- high salinity	Earls et al 1996
C13	2		45								126				l + v -> l	Curraghinalt	vuggy quartz					aqueous -- high salinity	Earls et al 1996
C13	2		46								131				l + v -> l	Curraghinalt	vuggy quartz					aqueous -- high salinity	Earls et al 1996
C14	1		1		-45		-16.0				185	19.4		19.4	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C14	1		2				-17.0				136	20.2		20.2	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C14	1		3												l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C14	1		4				-12.6				180	16.5		16.5	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C14	1		5				-23.0				91		21.9	21.9	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C14	1		6				-15.8				85	19.3		19.3	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C14	1		7				-17.2				92	20.4		20.4	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C14	1		8				-12.0				169	16.0		16.0	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- high salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C14	1		9		-44		-13.0				223	16.9		16.9	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C14	1		10	-57.0				7.9	30.1	l + v -> v	321	4.1		4.1	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C14	1		11	-57.0				5.7	30.7	l + v -> v	324	7.9		7.9	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C14	1		12	-57.1				5.6	30.9	l + v -> v	329	8.0		8.0	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C14	1		13	-56.9				4.8	30.3	l + v -> l		9.3		9.3	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C14	1		14	-56.9				5.9	30.2	l + v -> v	316	7.5		7.5	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C14	1		15	-56.7				6.0	30.8	l + v -> v	323	7.4		7.4	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C14	1		16		-30	-23.7	-5.2				193	6.1	2.4	8.5	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C14	1		17				-4.7				171	7.4		7.4	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C14	1		18			0.1	-25.2				110	18.1	9.9	28.0	l + v -> l	Curraghinalt	late carbonate					aqueous -- high salinity	Earls et al 1996
C14	2		19		-27	-23.3	-9.7				165	10.3	3.3	13.7	l + v -> l	Curraghinalt	late carbonate					aqueous -- low salinity	Earls et al 1996
C14	2		20		-51		-26.0				171		23.2	23.2	l + v -> l	Curraghinalt	late carbonate					aqueous -- high salinity	Earls et al 1996
C14	2		21				-23.2				155		22.0	22.0	l + v -> l	Curraghinalt	late carbonate					aqueous -- high salinity	Earls et al 1996
C14	2		22								157				l + v -> l	Curraghinalt	late carbonate					aqueous -- high salinity	Earls et al 1996
C14	2		23				-16.3				156	19.7		19.7	l + v -> l	Curraghinalt	late carbonate					aqueous -- high salinity	Earls et al 1996
C14	2		24				-12.9				162	16.8		16.8	l + v -> l	Curraghinalt	late carbonate					aqueous -- high salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C14	2		25								166				l + v -> l	Curraghinalt	late carbonate					aqueous -- high salinity	Earls et al 1996
C14	2		26				-14.0				155	17.8		17.8	l + v -> l	Curraghinalt	late carbonate					aqueous -- high salinity	Earls et al 1996
C14	2		27				-14.1				152	17.9		17.9	l + v -> l	Curraghinalt	late carbonate					aqueous -- high salinity	Earls et al 1996
C15	1		1		-54	-32.1	-11.6				95	3.5	12.0	15.5	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- high salinity	Earls et al 1996
C15	1		2				-1.9				179	3.1		3.1	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- low salinity	Earls et al 1996
C15	1		3				-0.9				189	1.5		1.5	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- low salinity	Earls et al 1996
C15	1		4	-56.6				4.1			381	10.3		10.3	l + v -> v	Curraghinalt	quartz with pyrite			S		aqueous-carbonic -- high CO2	Earls et al 1996
C15	1		5				-1.3				147	2.1		2.1	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- low salinity	Earls et al 1996
C15	1		6				-1.1				233	1.8		1.8	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- low salinity	Earls et al 1996
C15	1		7				-0.9				192	1.5		1.5	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- low salinity	Earls et al 1996
C15	1		8	-56.6					29.5	l + v -> v	326				l + v -> v	Curraghinalt	quartz with pyrite			S		aqueous-carbonic -- high CO2	Earls et al 1996
C15	1		9				-1.2				181	2.0		2.0	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- low salinity	Earls et al 1996
C15	1		10				-0.8				251	1.3		1.3	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- low salinity	Earls et al 1996
C15	1		11				-1.0				171	1.7		1.7	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- low salinity	Earls et al 1996
C15	1		12	-56.7				2.4				12.7		12.7	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- low salinity	Earls et al 1996
C15	1		13				-38.1						27.5	27.5	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous-carbonic -- high CO2	Earls et al 1996
C15	1		14	-56.6				4.9			360	9.1		9.1	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C15	1		15				-15.7				198	19.2		19.2	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- high salinity	Earls et al 1996
C15	1		16				-4.6				223	7.3		7.3	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- low salinity	Earls et al 1996
C15	1		17				-1.0				167	1.7		1.7	l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- low salinity	Earls et al 1996
C15	1		18								121				l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- high salinity	Earls et al 1996
C15	1		19								152				l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- low salinity	Earls et al 1996
C15	1		20								205				l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous -- low salinity	Earls et al 1996
C15	1		21								342				l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous-carbonic -- low CO2	Earls et al 1996
C15	1		22								376				l + v -> l	Curraghinalt	quartz with pyrite			S		aqueous-carbonic -- low CO2	Earls et al 1996
C15	2		23	-57.3				3.5	29.9	l + v -> l		11.2		11.2		Curraghinalt	post pyrite quartz			PS		aqueous-carbonic -- high CO2	Earls et al 1996
C15	2		24	-57.2				5.8	30.6	l + v -> l/c	313	7.7		7.7	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C15	2		25	-57.3				4.2			359	10.2		10.2	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C15	2		26				-8.1				150	11.8		11.8	l + v -> l	Curraghinalt	post pyrite quartz					aqueous -- low salinity	Earls et al 1996
C15	2		27					4.9			346	9.1		9.1	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C15	2		28	-57.3				5.4	30.8	l + v -> v/c	330	8.3		8.3	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C15	2		29	-57.3				6.8	30.0	l + v -> l/c		6.0		6.0	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C15	2		30	-57.2				4.3	30.6	l + v -> v		10.0		10.0	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C15	2		31		-50		-20.0				68	22.4		22.4	l + v -> l	Curraghinalt	post pyrite quartz					aqueous -- high salinity	Earls et al 1996
C15	2		32	-57.2				4.7	30.3	l + v -> v	349	9.4		9.4	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C15	2		33	-57.4				4.9			322	9.1		9.1	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C15	2		34	-57.4				5.2	30.8	l + v -> v	332	8.7		8.7	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C15	2		35	-57.0					30.5	l + v -> v	346				l + v -> v	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C15	2		36	-57.3				4.7	29.5	l + v -> v	356	9.4		9.4	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C15	2		37	-57.3				6.3			332	6.9		6.9	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C15	2		38	-57.1				5.4			334	8.3		8.3	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C15	2		39				-4.0				251	6.4		6.4	l + v -> l	Curraghinalt	post pyrite quartz					aqueous -- low salinity	Earls et al 1996
C15	2		40				-8.8				197	12.6		12.6	l + v -> l	Curraghinalt	post pyrite quartz					aqueous -- low salinity	Earls et al 1996
C15	2		41								114				l + v -> l	Curraghinalt	post pyrite quartz					aqueous -- low salinity	Earls et al 1996
C15	2		42								160				l + v -> l	Curraghinalt	post pyrite quartz					aqueous -- low salinity	Earls et al 1996
C15	2		43								326				l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C16	1		1	-57.4				6.9	29.6	l + v -> v	383	5.9		5.9	l + v -> v/c	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	1		2	-57.5				6.0	29.7	l + v -> v		7.4		7.4	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C16	1		3	-57.3				6.3	30.7	l + v -> l/c	312	6.9		6.9	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	1		4	-57.4				6.1	31.0	l + v -> l/c	333	7.2		7.2	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	1		5				-10.6				199	14.6		14.6	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- high salinity	Earls et al 1996
C16	1		6				-5.8					8.9		8.9	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- high salinity	Earls et al 1996
C16	1		7	-57.2				6.1	30.4	l + v -> l	321	7.2		7.2	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	1		8		-29		-6.6				183	10.0		10.0	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996
C16	1		9			-22.7	-9.8				203	11.3	2.5	13.8	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996
C16	1		10		-32	-22.2	-10.0				229	12.2	1.7	13.9	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996
C16	1		11				-8.9	8.9			202	2.2		2.2	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C16	1		12				0.2								l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996
C16	1		13				-2.2				187	3.6		3.6	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996
C16	1		14				-2.3				179	3.8		3.8	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996
C16	1		15				-2.6				150	4.2		4.2	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996
C16	1		16	-57.2				6.1	30.8	l + v -> v/c	328	7.2		7.2	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	1		17	-57.1				4.5	30.9	l + v -> l/c		9.7		9.7	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	1		18								158				l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C16	1		19								160				l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996
C16	1		20								184				l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996
C16	1		21								215				l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996
C16	1		22								213				l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996
C16	1		23								251				l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996
C16	1		24								321				l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C16	1		25	-57.5					25.3	l + v -> l					l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		26	-57.5					24.1	l + v -> l					l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		27	-57.3				6.7	30.0	l + v -> v	244	6.2		6.2	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		28	-57.5					25.4	l + v -> l					l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		29	-57.2				6.0	28.3	l + v -> l	311	7.4		7.4	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		30	-57.5					3.0	l + v -> l					l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		31	-57.2				6.8	29.7	l + v -> l	285	6.0		6.0	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		32	-57.1					28.6	l + v -> l					l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		33	-57.4				6.7	29.6	l + v -> l	291	6.2		6.2	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C16	2		34					5.3			275	8.5		8.5	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C16	2		35			-22.1	-13.2				108	15.0	1.9	16.9	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- high salinity	Earls et al 1996
C16	2		36					4.8	29.6	l + v -> l	318	9.3		9.3	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		37					7.3			196	5.2		5.2	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C16	2		38					5.5	30.5	l + v -> v		8.2		8.2	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		39				-4.9				200	7.7		7.7	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996
C16	2		40					6.5	26.7	l + v -> l	325	6.5		6.5	l + v -> v	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		41					6.9	28.7	l + v -> l	319	5.9		5.9	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		42					7.8	29.6	l + v -> l	311	4.3		4.3	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		43					7.9	30.2	l + v -> l	317	4.1		4.1	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		44					5.2	29.0	l + v -> v		8.7		8.7	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		45					7.3	29.7		321	5.2		5.2	l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		46						28.5						l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C16	2		47								72				l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- high salinity	Earls et al 1996
C16	2		48								207				l + v -> l	Curraghinalt	early sub-anhedral quartz					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C17	1		1	-57.5				6.5	30.8	l + v -> v	299	6.5		6.5	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C17	1		2	-57.6				7.2	29.9	l + v -> v	298	5.3		5.3	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C17	1		3	-57.6				7.2			299	5.3		5.3	l + v -> l/c	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C17	1		4	-57.4				4.8	29.3	l + v -> v	373	9.3		9.3	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C17	1		5	-57.3				6.8		l + v -> v	301	6.0		6.0	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C17	1		6	-57.5	-22			6.7	29.8	l + v -> v	302	6.2		6.2	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C17	1		7	-57.4				6.6	30.1	l + v -> v	311	6.4		6.4	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C17	1		8	-57.4				5.9	30.1	l + v -> v	329	7.5		7.5	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C17	1		9	-57.5				6.8	29.9		306	6.0		6.0	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C17	1		10				-0.2				160	0.3		0.3	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	1		11				-7.3					10.9		10.9	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	1		12				-0.5				157	0.8		0.8	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	1		13				0.0				165	0.0		0.0	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	1		14								148				l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	1		15								168				l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	1		16								173				l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C17	1		17								219				l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	1		18				-0.2				254	0.3		0.3	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	1		19					6.2			302	7.0		7.0	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C17	1		20								330				l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C17	1		21								332				l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C17	1		22				-1.6				167	2.6		2.6	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	2		23				-9.1				249	13.0		13.0	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	2		24				-11.4				98	15.4		15.4	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	2		25		-23		-6.7				181	10.1		10.1	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	2		26					8.3	9.2	l + v -> v	201	3.3		3.3	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C17	2		27				-8.4				100	12.2		12.2	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	2		28				-5.3				317	8.2		8.2	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	2		29				-4.8				269	7.5		7.5	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	2		30	-57.0											l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C17	2		31	-57.1				6.7			307	6.2		6.2	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C17	2		32					7.1			285	5.5		5.5	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C17	2		33				-2.4				153	3.9		3.9	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	2		34					7.4			273	5.0		5.0	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C17	2		35				-2.7				172	4.4		4.4	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	2		36					7.3			267	5.2		5.2	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C17	2		37					6.9	29.8	l + v -> v	296	5.9		5.9	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C17	2		38					6.9			291	5.9		5.9	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C17	2		39	-57.2				7.0	29.0	l + v -> v	294	5.7		5.7	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C17	2		40								163				l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	2		41								236				l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C17	2		42					7.2			278	5.3		5.3	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C17	2		43					7.0			295	5.7		5.7	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C18	1		1					3.1			133	11.7		11.7	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C18	1		2	-57.3				5.0	26.5	l + v -> l	317	9.0		9.0	l + v -> d	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C18	1		3	-57.3				4.6	27.4	l + v -> v	423	9.6		9.6	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C18	1		4	-57.4					24.6	l + v -> l					l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C18	1		5	-57.3				3.7	30.9	l + v -> v/c	358	10.9		10.9	l + v -> v	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C18	1		6	-57.4				4.5			400	9.7		9.7	l + v -> l/c	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C18	1		7	-57.3				4.2			396	10.2		10.2	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C18	1		8	-57.3				3.2			363	11.6		11.6	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C18	1		9				-2.7				169	4.4		4.4	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C18	1		10					5.9			282	7.5		7.5	l + v -> l/d	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C18	1		11				-2.7				163	4.4		4.4	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C18	1		12				-14.5				106	18.2		18.2	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C18	1		13				-8.4	5.1			253	8.8		8.8	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C18	1		14				-7.6				272	11.2		11.2	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C18	1		15					4.9			255	9.1		9.1	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C18	1		16				-14.6				101	18.3		18.3	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C18	1		17						31.0	l + v -> v/c					l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C18	1		18								75				l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- high salinity	Earls et al 1996
C18	1		19								358				l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C18	1		20								388				l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C19	1		1	-57.8				5.3			325	8.5		8.5	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	1		2	-57.8				6.0	29.8	l + v -> v	307	7.4		7.4	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	1		3	-57.8				4.9			337	9.1		9.1	l + v -> d	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	1		4	-57.7				3.4				11.3		11.3	l + v -> c	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	1		5	-57.6				3.4	29.8	l + v -> v	495	11.3		11.3	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	1		6	-57.5							331				l + v -> v	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	1		7	-57.6				4.8	29.6	l + v -> v	464	9.3		9.3	l + v -> c	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	1		8	-57.6				2.8			500	12.2		12.2	l + v -> v	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	1		9	-57.7				4.4	27.8	l + v -> v	408	9.9		9.9	l + v -> v	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	1		10	-57.6				3.2			397	11.6		11.6	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	1		11	-57.7				6.3			363	6.9		6.9	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	1		12					5.4			322	8.3		8.3	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C19	1		13					5.9			312	7.5		7.5	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C19	1		14					4.5			377	9.7		9.7	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C19	1		15					5.2	30.9	l + v -> v		8.7		8.7	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C19	1		16								377				l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C19	1		17								495				l + v -> v	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C19	1		18	-56.8				2.0	30.3	l + v -> l	484	13.2		13.2	l + v -> v	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	2		19	-56.8				1.9	30.8	l + v -> v/c	421	13.3		13.3	l + v -> v	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	2		20				-8.1				157	11.8		11.8	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C19	2		21				-6.1				92	9.3		9.3	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C19	2		22				-7.3				130	10.9		10.9	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C19	2		23	-56.9				5.6	29.8	l + v -> v	329	8.0		8.0	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	2		24	-56.9				6.3	29.3	l + v -> l		6.9		6.9	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	2		25	-56.8				5.8			317	7.7		7.7	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	2		26	-56.8				5.9			319	7.5		7.5	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	2		27					3.8			356	10.8		10.8	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	2		28				-3.0				162	4.9		4.9	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996
C19	2		29				-2.0				173	3.3		3.3	l + v -> l	Curraghinalt	quartz with pyrite					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C19	2		30					4.7			380	9.4		9.4	l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C19	2		31						30.3	l + v -> l	383				l + v -> c	Curraghinalt	quartz with pyrite					aqueous-carbonic -- high CO2	Earls et al 1996
C19	2		32								336				l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C19	2		33								358				l + v -> l	Curraghinalt	quartz with pyrite					aqueous-carbonic -- low CO2	Earls et al 1996
C22	1		1	-56.9				5.1	28.6	l + v -> l		8.8		8.8	l + v -> d	Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		2	-56.9				5.4	29.5	l + v -> l		8.3		8.3	l + v -> d	Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		3	-56.9				5.1	28.7	l + v -> l		8.8		8.8	l + v -> d	Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		4	-56.8				5.4	28.3	l + v -> l		8.3		8.3	l + v -> d	Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		5	-56.8				6.3	29.5	l + v -> l	343	6.9		6.9		Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		6	-56.9				6.0	26.7	l + v -> l		7.4		7.4	l + v -> d	Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		7	-56.9				5.6	27.9	l + v -> l		8.0		8.0	l + v -> d	Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		8	-56.9				4.6	24.0	l + v -> l		9.6		9.6	l + v -> d	Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		9	-56.8				3.1	28.8	l + v -> l	292	11.7		11.7	l + v -> d	Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		10	-56.8				4.8	27.9	l + v -> l		9.3		9.3		Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		11	-56.8				5.5	30.1	l + v -> l	323	8.2		8.2	l + v -> l	Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C22	1		12	-56.8				5.4	29.8	l + v -> l		8.3		8.3		Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		13	-56.8				5.5	28.2	l + v -> l	306	8.2		8.2	l + v -> l	Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		14	-56.8				5.1	25.3	l + v -> l	361	8.8		8.8	l + v -> d	Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		15	-56.9				5.7	26.8	l + v -> l	290	7.9		7.9	l + v -> l	Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		16	-56.8				6.0	26.4	l + v -> l		7.4		7.4		Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		17				-3.4				194	5.5		5.5	l + v -> l	Curraghinalt	clear quartz					aqueous -- low salinity	Earls et al 1996
C22	1		18	-56.8												Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		19				-7.8				143	11.5		11.5	l + v -> l	Curraghinalt	clear quartz					aqueous -- low salinity	Earls et al 1996
C22	1		20		-23		-7.2				206	10.7		10.7	l + v -> l	Curraghinalt	clear quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C22	1		21		-23		-5.4	7.8			175	4.3		4.3	l + v -> l	Curraghinalt	clear quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C22	1		22				-1.2				152	2.0		2.0	l + v -> l	Curraghinalt	clear quartz					aqueous -- low salinity	Earls et al 1996
C22	1		23		-28		-6.9				132	10.4		10.4	l + v -> l	Curraghinalt	clear quartz					aqueous -- low salinity	Earls et al 1996
C22	1		24					5.8	26.5	l + v -> l	294	7.7		7.7	l + v -> l	Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		25						5.0	l + v -> l						Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		26						12.6	l + v -> l						Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C22	1		27						15.2	l + v -> l						Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		28						15.1	l + v -> l						Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		29						10.8	l + v -> l						Curraghinalt	clear quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C22	1		30								300				l + v -> l	Curraghinalt	clear quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C22	1		31								325				l + v -> l	Curraghinalt	clear quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C22	1		32								294				l + v -> l	Curraghinalt	clear quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C22	1		33								288				l + v -> l	Curraghinalt	clear quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C3	1		1								235				l + v -> l	Curraghinalt	vuggy quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C3	1		2												l + v -> l	Curraghinalt	vuggy quartz					aqueous -- low salinity	Earls et al 1996
C3	1		3								286				l + v -> l	Curraghinalt	vuggy quartz					aqueous -- low salinity	Earls et al 1996
C3	1		4												l + v -> l	Curraghinalt	vuggy quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C3	1		5	-56.7				5.9	29.3	l + v -> l	356	7.5		7.5	l + v -> l/c	Curraghinalt	vuggy quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C3	1		6	-56.9				6.8	30.9	l + v -> l	265	6.0		6.0	l + v -> l	Curraghinalt	vuggy quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C3	1		7								143				l + v -> l	Curraghinalt	vuggy quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C3	1		8					6.9			216	5.9		5.9	l + v -> l	Curraghinalt	vuggy quartz					aqueous-carbonic -- low CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (μm)	% vapour	inclusion type	comment	Fluid type	Data Source
C3	1		9				-4.4				198	7.0		7.0	l + v -> l	Curraghinalt	vuggy quartz					aqueous -- low salinity	Earls et al 1996
C3	1		10	-56.8				7.3			301	5.2		5.2	l + v -> c	Curraghinalt	vuggy quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C3	1		11				-4.7				115	7.4		7.4	l + v -> l	Curraghinalt	vuggy quartz					aqueous -- low salinity	Earls et al 1996
C3	1		12								191				l + v -> l	Curraghinalt	vuggy quartz					aqueous -- low salinity	Earls et al 1996
C3	1		13								188				l + v -> l	Curraghinalt	vuggy quartz					aqueous -- low salinity	Earls et al 1996
C3	1		14								245				l + v -> l	Curraghinalt	vuggy quartz					aqueous -- low salinity	Earls et al 1996
C3	2		15								299				l + v -> l	Curraghinalt	vuggy quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C3	2		16	-56.9				7.2			313	5.3		5.3	l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C3	2		17	-56.9				7.1			279	5.5		5.5	l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C3	2		18	-56.9				7.7			299	4.4		4.4	l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C3	2		19	-56.7				7.5			301	4.8		4.8	l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C3	2		20	-56.8					29.1	l + v -> l					l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C3	2		21					6.2			224	7.0		7.0	l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C3	2		22					7.2			301	5.3		5.3	l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C3	2		23					7.5			293	4.8		4.8	l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous-carbonic -- low CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C3	2		24					8.0			272	3.9		3.9	l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C3	2		25						31.0	l + v -> v	300				l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C3	2		26								276				l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous -- low salinity	Earls et al 1996
C3	2		27								222				l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous -- low salinity	Earls et al 1996
C3	2		28								219				l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous -- low salinity	Earls et al 1996
C3	2		29								216				l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous -- low salinity	Earls et al 1996
C3	2		30								233				l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous -- low salinity	Earls et al 1996
C3	2		31								234				l + v -> l	Curraghinalt	pre-sulphide euhedral quartz					aqueous -- low salinity	Earls et al 1996
C4	1		1				-4.0				164	6.4		6.4	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous -- low salinity	Earls et al 1996
C4	1		2	-56.9				7.9	28.2	l + v -> v	317	4.1		4.1	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C4	1		3	-56.9				7.2	29.6	l + v -> v	351	5.3		5.3	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C4	1		4	-56.9				6.9	28.1	l + v -> v	325	5.9		5.9	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C4	1		5				-5.3				142	8.2		8.2	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous -- low salinity	Earls et al 1996
C4	1		6				-5.4				160	8.4		8.4	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous -- low salinity	Earls et al 1996
C4	1		7				-5.6				137	8.7		8.7	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous -- low salinity	Earls et al 1996
C4	1		8				-5.3				134	8.2		8.2	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C4	1		9				-4.3				138	6.8		6.8	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous -- low salinity	Earls et al 1996
C4	1		10				-3.8				155	6.1		6.1	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous -- low salinity	Earls et al 1996
C4	1		11	-57.0				6.8	30.3	l + v -> v/c	322	6.0		6.0	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C4	1		12				-5.9				189	9.1		9.1	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous -- low salinity	Earls et al 1996
C4	1		13					5.6	28.7	l + v -> v	346	8.0		8.0	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C4	1		14					6.6	28.0	l + v -> v	326	6.4		6.4	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C4	1		15					7.6	29.5	l + v -> v	311	4.6		4.6	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C4	1		16				-9.5	7.1	29.5	l + v -> v	278	5.5		5.5	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C4	1		17	-57.1					29.1	l + v -> l						Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C4	1		18	-57.0				6.1	29.8	l + v -> v		7.2		7.2		Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C4	1		19	-57.0				6.0	29.7	l + v -> v	321	7.4		7.4	l + v -> v	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C4	1		20	-57.0				6.5	29.3	l + v -> l	329	6.5		6.5	l + v -> v	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C4	1		21	-57.0				7.1	30.1	l + v -> v/c		5.5		5.5		Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C4	1		22	-56.9				7.2	29.3	l + v -> l		5.3		5.3		Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C4	1		23					7.8	30.5	l + v -> l/c	306	4.3		4.3	l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- high CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C4	1		24						24.8	l + v -> l	302				l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C4	1		25								100				l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous -- low salinity	Earls et al 1996
C4	1		26								125				l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous -- low salinity	Earls et al 1996
C4	1		27								159				l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous -- low salinity	Earls et al 1996
C4	1		28								274				l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C4	1		29								278				l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C4	1		30								305				l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C4	1		31								341				l + v -> l	Curraghinalt	overgrowth on early quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C5	1		1	-57.3				7.6	6.2		190	4.6		4.6	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C5	1		2	-57.2				4.2			326	10.2		10.2	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C5	1		3	-57.3					25.0							Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C5	1		4	-57.1				7.6	31.0			4.6		4.6		Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C5	1		5	-57.2												Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C5	1		6					7.4			243	5.0		5.0	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C5	1		7					7.5			296	4.8		4.8	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C5	1		8	-57.3				3.6				11.1		11.1		Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C5	1		9				-9.1	2.8			176	12.2		12.2	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C5	1		10				-7.8	2.9			125	12.0		12.0	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C5	1		11	-57.2				5.4			342	8.3		8.3	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C5	1		12		-29		-9.6	3.2			173	11.6		11.6	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C5	1		13					5.1			327	8.8		8.8	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C5	1		14	-57.2				5.3			321	8.5		8.5	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C5	1		15					5.4			328	8.3		8.3	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C5	1		16	-57.2				5.2			331	8.7		8.7	l + v -> d	Curraghinalt	post pyrite quartz					aqueous-carbonic -- high CO2	Earls et al 1996
C5	1		17					3.9			373	10.6		10.6	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C5	1		18								147				l + v -> l	Curraghinalt	post pyrite quartz					aqueous -- low salinity	Earls et al 1996
C5	1		19				-8.8				209	12.6		12.6	l + v -> l	Curraghinalt	post pyrite quartz					aqueous -- high salinity	Earls et al 1996
C5	1		20								212				l + v -> l	Curraghinalt	post pyrite quartz					aqueous -- high salinity	Earls et al 1996
C5	1		21					7.3			257	5.2		5.2	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C5	1		22								259				l + v -> l	Curraghinalt	post pyrite quartz					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
C5	1		23					7.4			256	5.0		5.0	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C5	1		24					4.2			351	10.2		10.2	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C5	1		25					3.4			380	11.3		11.3	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996
C5	1		26					3.5			385	11.2		11.2	l + v -> l	Curraghinalt	post pyrite quartz					aqueous-carbonic -- low CO2	Earls et al 1996
CW1	1		1				-0.9				183	1.5		1.5	l + v -> l	Cavanacaw	early quartz					aqueous -- low salinity	Earls et al 1996
CW1	1		2		-52		-23.1				140		22.0	22.0	l + v -> l	Cavanacaw	late carbonate					aqueous -- high salinity	Earls et al 1996
CW1	1		3								135				l + v -> l	Cavanacaw	late carbonate					aqueous -- high salinity	Earls et al 1996
CW1	1		4								143				l + v -> l	Cavanacaw	late carbonate					aqueous -- high salinity	Earls et al 1996
CW1	1		5								132				l + v -> l	Cavanacaw	late carbonate					aqueous -- high salinity	Earls et al 1996
CW1	1		6								141				l + v -> l	Cavanacaw	early carbonate					aqueous -- low salinity	Earls et al 1996
CW1	1		7								122				l + v -> l	Cavanacaw	early carbonate					aqueous -- low salinity	Earls et al 1996
CW4/3	1		1		-22		-9.7				136	13.6		13.6	l + v -> l	Cavanacaw	late quartz with sulphide					aqueous -- low salinity	Earls et al 1996
CW4/3	1		2				-9.9					13.8		13.8	l + v -> l	Cavanacaw	late quartz with sulphide					aqueous -- low salinity	Earls et al 1996
CW4/3	1		3				-9.7				151	13.6		13.6	l + v -> l	Cavanacaw	late quartz with sulphide					aqueous -- low salinity	Earls et al 1996
CW4/3	1		4				-10.9				133	14.9		14.9	l + v -> l	Cavanacaw	late quartz with sulphide					aqueous -- low salinity	Earls et al 1996
CW4/3	1		5				-9.3				169	13.2		13.2	l + v -> l	Cavanacaw	late quartz with sulphide					aqueous -- low salinity	Earls et al 1996
CW4/3	1		6		-22		0.3				218				l + v -> l	Cavanacaw	late quartz with sulphide					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
CW4/3	1		7		-22		-12.4				296	16.3		16.3	l + v -> l	Cavanacaw	late quartz with sulphide					aqueous - - low salinity	Earls et al 1996
CW4/3	1		8		-22		-10.6				269	14.6		14.6	l + v -> l	Cavanacaw	late quartz with sulphide					aqueous - - low salinity	Earls et al 1996
CW4/3	1		9								303				l + v -> l	Cavanacaw	late quartz with sulphide					aqueous - - low salinity	Earls et al 1996
CW4/3	1		10				-10.3				314	14.3		14.3	l + v -> l	Cavanacaw	late quartz with sulphide					aqueous - - low salinity	Earls et al 1996
CW4/3	1		11				-10.0					14.0		14.0	l + v -> l	Cavanacaw	late quartz with sulphide					aqueous - - low salinity	Earls et al 1996
CW4/3	1		12		-22		-10.4				133	14.4		14.4	l + v -> l	Cavanacaw	late quartz with sulphide					aqueous - - low salinity	Earls et al 1996
CW4/3	1		13		-22		-8.2				270	11.9		11.9	l + v -> l	Cavanacaw	late quartz with sulphide					aqueous - - low salinity	Earls et al 1996
CW5	1		1		-23		-3.9					6.2		6.2	l + v -> l	Cavanacaw	quartz					aqueous - - low salinity	Earls et al 1996
CW5	1		2		-22		-3.8				205	6.1		6.1	l + v -> l	Cavanacaw	quartz					aqueous - - low salinity	Earls et al 1996
CW5	1		3		-23		-3.4				179	5.5		5.5	l + v -> l	Cavanacaw	quartz					aqueous - - low salinity	Earls et al 1996
CW5	1		4				-3.3					5.3		5.3	l + v -> l	Cavanacaw	quartz					aqueous - - low salinity	Earls et al 1996
CW5	1		5				-3.2					5.2		5.2	l + v -> l	Cavanacaw	quartz					aqueous - - low salinity	Earls et al 1996
CW7	1		1				-2.8				127	4.5		4.5	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		2		-22		-3.9				163	6.2		6.2	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		3		-22		-1.4				252	2.3		2.3	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		4				-3.7				223	5.9		5.9	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		5				-4.8				229	7.5		7.5	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
CW7	1		6		-22		-6.4				144	9.7		9.7	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		7		-22		-5.3				158	8.2		8.2	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		8		-22		-8.7					12.5		12.5	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		9		-22		-6.8					10.2		10.2	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		10												l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		11												l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		12		-22		-1.7				184	2.8		2.8	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		13				-0.6				156	1.0		1.0	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		14				-2.1				186	3.4		3.4	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		15				-9.4				152	13.3		13.3	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		16								205				l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		17				-2.1				213	3.4		3.4	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		18				-2.0				213	3.3		3.3	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		19				-2.8				151	4.5		4.5	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		20				-8.7				103	12.5		12.5	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		21				-8.6				107	12.4		12.4	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996
CW7	1		22								159				l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous - - low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
CW7	1		23		-22		-2.0				157	3.3		3.3	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous -- low salinity	Earls et al 1996
CW7	1		24				-1.7				241	2.8		2.8	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous -- low salinity	Earls et al 1996
CW7	1		25				-2.9				248	4.7		4.7	l + v -> l	Cavanacaw	late euhedral quartz in sulphide					aqueous -- low salinity	Earls et al 1996
CW7	2		1		-52		-10.2				174	14.2		14.2	l + v -> l	Cavanacaw	late carbonate					aqueous -- high salinity	Earls et al 1996
CW7	2		2		-52		-43.7				124		28.9	28.9	l + v -> l	Cavanacaw	late carbonate					aqueous -- high salinity	Earls et al 1996
CW7	2		3		-52						167				l + v -> l	Cavanacaw	late carbonate					aqueous -- high salinity	Earls et al 1996
CW8	1		1								149				l + v -> l	Cavanacaw	late quartz					aqueous -- low salinity	Earls et al 1996
DRR032C	1	7	26		-25		-3.5				149	5.6		5.6	l + v -> l	Stronchullin	early quartz		10	P/PS L+V aq		aqueous -- low salinity	This project
DRR032C	1	7	25		-21		-2.4				141	3.9		3.9	l + v -> l	Stronchullin	early quartz		10	P/PS L+V aq		aqueous -- low salinity	This project
DRR032C	1	4	15	-57.1				8.0			266	3.9		3.9	l + v -> l	Stronchullin	early quartz	8	40	P/PS L+V car	Tclath approx. (±1 °C)	aqueous-carbonic -- low CO2	This project
DRR032C	1	4	16					8.0			263	3.9		3.9	l + v -> l	Stronchullin	early quartz	8	40	P/PS L+V car	Tclath approx. (±1 °C)	aqueous-carbonic -- low CO2	This project
DRR032C	1	5	18	-56.9				6.6			269	6.4		6.4	l + v -> l	Stronchullin	early quartz		30	P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032C	1	5	17	-57.0				6.7			260	6.2		6.2	l + v -> l	Stronchullin	early quartz		40	P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032C	1	5	20	-57.1				6.8			267	6.0		6.0	l + v -> l	Stronchullin	early quartz		40	P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032C	1	5	19	-56.9				6.9			266	5.9		5.9	l + v -> l	Stronchullin	early quartz		30	P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032C	1	6	23	-56.7				6.9			255	5.9		5.9	l + v -> l	Stronchullin	early quartz		25	P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
DRR032C	1	6	24	-56.9				7.1			252	5.5		5.5	l + v -> l	Stronchullin	early quartz		25	P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032C	1	6	22	-56.9				7.4			260	5.0		5.0	l + v -> l	Stronchullin	early quartz		35	P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032C	1	6	21	-56.9	-23		-10.0	7.5			290	4.8		4.8	l + v -> d	Stronchullin	early quartz		25	P/PS L1+L2+V car	Tice approx. (±1° C)	aqueous-carbonic -- high CO2	This project
DRR032C	1	3	12		-30		-22.0				108		21.5	21.5	l + v -> l	Stronchullin	sphalerite	15		PS/S L+V aq		aqueous -- high salinity	This project
DRR032C	1	3	9		-41		-21.4				113		21.2	21.2	l + v -> l	Stronchullin	sphalerite	12		PS/S L+V aq		aqueous -- high salinity	This project
DRR032C	1	3	14		-33		-20.3				131	22.6		22.6	l + v -> l	Stronchullin	sphalerite	20		PS/S L+V aq		aqueous -- high salinity	This project
DRR032C	1	3	13		-44		-17.3				116	20.4		20.4	l + v -> l	Stronchullin	sphalerite	15		PS/S L+V aq		aqueous -- high salinity	This project
DRR032C	1	2	8		-6		-5.3				122	8.2		8.2	l + v -> l	Stronchullin	sphalerite	10		PS/S L+V aq		aqueous -- low salinity	This project
DRR032C	1	2	5		-16		-5.0				118	7.8		7.8	l + v -> l	Stronchullin	sphalerite	5		PS/S L+V aq		aqueous -- low salinity	This project
DRR032C	1	2	6		-13		-5.0				118	7.8		7.8	l + v -> l	Stronchullin	sphalerite	5		PS/S L+V aq		aqueous -- low salinity	This project
DRR032C	1	1	1		-26		-4.4				123	7.0		7.0	l + v -> l	Stronchullin	sphalerite	5		PS/S L+V aq		aqueous -- low salinity	This project
DRR032C	1	3	11		-30		-4.4				118	7.0		7.0	l + v -> l	Stronchullin	sphalerite	8		PS/S L+V aq		aqueous -- low salinity	This project
DRR032C	1	1	3		-26		-4.3				121	6.8		6.8	l + v -> l	Stronchullin	sphalerite	10		PS/S L+V aq		aqueous -- low salinity	This project
DRR032C	1	2	7		-21		-4.0				102	6.4		6.4	l + v -> l	Stronchullin	sphalerite	5		PS/S L+V aq		aqueous -- low salinity	This project
DRR032C	1	1	2								123				l + v -> l	Stronchullin	sphalerite	8		PS/S L+V aq		aqueous -- low salinity	This project
DRR032C	1	2	4								120				l + v -> l	Stronchullin	sphalerite	8		PS/S L+V aq		aqueous -- low salinity	This project
DRR032C	1	3	10								118				l + v -> l	Stronchullin	sphalerite	8		PS/S L+V aq		aqueous -- low salinity	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
DRR032D	1	1	3		-33		-4.5				119	7.1		7.1	l + v -> l	Stronchullin	vuggy quartz with late galena	20		PS/S L+V aq	Tfm not in presence of vapour	aqueous - - low salinity	This project
DRR032D	1	1	4		-39		-4.3				99	6.8		6.8	l + v -> l	Stronchullin	vuggy quartz with late galena	25		PS/S L+V aq		aqueous - - low salinity	This project
DRR032D	1	1	6		-39		-3.7					5.9		5.9		Stronchullin	vuggy quartz with late galena	10		PS/S L+V aq	Tfm not in presence of vapour; metastable Tice: L+ice->L	aqueous - - low salinity	This project
DRR032D	1	2	11		-35		-3.6				132	5.8		5.8	l + v -> l	Stronchullin	vuggy quartz with late galena	10		PS/S L+V aq	Tfm not in presence of vapour	aqueous - - low salinity	This project
DRR032D	1	2	12		-35		-3.6				131	5.8		5.8	l + v -> l	Stronchullin	vuggy quartz with late galena	20		PS/S L+V aq	Tfm not in presence of vapour	aqueous - - low salinity	This project
DRR032D	1	2	13		-36		-3.5					5.6		5.6		Stronchullin	vuggy quartz with late galena	8		PS/S L+V aq	Tfm not in presence of vapour	aqueous - - low salinity	This project
DRR032D	1	2	14		-36		-3.5					5.6		5.6		Stronchullin	vuggy quartz with late galena	5		PS/S L+V aq	Tfm not in presence of vapour; metastable Tice: L+ice->L	aqueous - - low salinity	This project
DRR032D	1	1	8		-37		-3.1				99	5.0		5.0	l + v -> l	Stronchullin	vuggy quartz with late galena	20		PS/S L+V aq	Tfm not in presence of vapour	aqueous - - low salinity	This project
DRR032D	1	2	10		-28		-2.5					4.1		4.1		Stronchullin	vuggy quartz with late galena	5		PS/S L+V aq	Tfm not in presence of vapour; metastable Tice: L+ice->L	aqueous - - low salinity	This project
DRR032D	1	1	5		-43		-1.2				94	2.0		2.0	l + v -> l	Stronchullin	vuggy quartz with late galena	20		PS/S L+V aq	Tfm not in presence of vapour; metastable Tice: L+ice->L	aqueous - - low salinity	This project
DRR032D	1	2	15		-36		-1.2				92	2.0		2.0	l + v -> l	Stronchullin	vuggy quartz with late galena	15		PS/S L+V aq	Tfm not in presence of vapour; metastable Tice: L+ice->L	aqueous - - low salinity	This project
DRR032D	1	2	16		-50		-0.7				94	1.2		1.2	l + v -> l	Stronchullin	vuggy quartz with late galena	20		PS/S L+V aq	Tfm not in presence of vapour; metastable Tice: L+ice->L	aqueous - - low salinity	This project
DRR032D	1	2	18	-57.0	-17		-7.0	7.2	26.8	l + v -> l		5.3		5.3		Stronchullin	vuggy quartz with late galena	12		PS/S L1+L2+V car	Tice approx. (±1 °C)	aqueous-carbonic -- high CO2	This project
DRR032D	1	1	2	-56.9	-16		-8.0	7.5	28.1	l + v -> l		4.8		4.8		Stronchullin	vuggy quartz with late galena	8		PS/S L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032D	1	1	1	-57.1	-19		-7.1	7.5	27.2	l + v -> l		4.8		4.8		Stronchullin	vuggy quartz with late galena	12		PS/S L1+L2+V car		aqueous-carbonic -- high CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
DRR032D	1	1	7	-56.9	-16		-6.0	7.5	27.8	l + v -> l		4.8		4.8		Stronchullin	vuggy quartz with late galena	5		PS/S L1+L2+V car	Tice approx. (±2 °C)	aqueous-carbonic -- high CO2	This project
DRR032D	1	2	17	-56.9	-18		-7.8	7.6	28.3	l + v -> l		4.6		4.6		Stronchullin	vuggy quartz with late galena	10		PS/S L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032D	1	1	9	-57.0	-16		-9.0	7.7	26.9	l + v -> l		4.4		4.4		Stronchullin	vuggy quartz with late galena	6		PS/S L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032D	2	3	20		by -20		-7.7					11.3		11.3		Stronchullin	vuggy quartz with late galena	30		P L+V aq		aqueous -- low salinity	This project
DRR032D	2	1	1		by -20		-7.3					10.9		10.9		Stronchullin	vuggy quartz with late galena	8		P L+V aq		aqueous -- low salinity	This project
DRR032D	2	1	2		by -20		-7.3					10.9		10.9		Stronchullin	vuggy quartz with late galena	20		P L+V aq		aqueous -- low salinity	This project
DRR032D	2	1	3		by -20		-7.3					10.9		10.9		Stronchullin	vuggy quartz with late galena	25		P L+V aq		aqueous -- low salinity	This project
DRR032D	2	1	4		by -20		-7.3					10.9		10.9		Stronchullin	vuggy quartz with late galena	30		P L+V aq		aqueous -- low salinity	This project
DRR032D	2	1	5		by -20		-7.3					10.9		10.9		Stronchullin	vuggy quartz with late galena	25		P L+V aq		aqueous -- low salinity	This project
DRR032D	2	1	6		by -20		-7.3					10.9		10.9		Stronchullin	vuggy quartz with late galena	10		P L+V aq		aqueous -- low salinity	This project
DRR032D	2	1	7		by -20		-7.3					10.9		10.9		Stronchullin	vuggy quartz with late galena	15		P L+V aq		aqueous -- low salinity	This project
DRR032D	2	1	8		by -20		-7.3					10.9		10.9		Stronchullin	vuggy quartz with late galena	15		P L+V aq		aqueous -- low salinity	This project
DRR032D	2	3	21		by -20		-7.1					10.6		10.6		Stronchullin	vuggy quartz with late galena	20		P L+V aq		aqueous -- low salinity	This project
DRR032D	2	3	22		by -20		-6.5					9.8		9.8		Stronchullin	vuggy quartz with late galena	25		P L+V aq		aqueous -- low salinity	This project
DRR032D	2	2	11	-56.8	-18		-7.7	6.4				6.7		6.7		Stronchullin	vuggy quartz with late galena	10		P/PS L+V car		aqueous-carbonic -- low CO2	This project
DRR032D	2	2	15		-19		-7.0	6.5				6.5		6.5		Stronchullin	vuggy quartz with late galena	8		P/PS L+V car	Tice approx. (±1 °C)	aqueous-carbonic -- low CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
DRR032D	2	2	17		-22		-5.9	6.5			159	6.5		6.5	l + v -> l	Stronchullin	vuggy quartz with late galena	15		P/PS L+V car	Tclath approx. (±1 °C)	aqueous-carbonic -- low CO2	This project
DRR032D	2	2	14	-57.0	-21		-7.6	6.6				6.4		6.4		Stronchullin	vuggy quartz with late galena	12		P/PS L+V car		aqueous-carbonic -- low CO2	This project
DRR032D	2	2	12		-20		-7.3	6.8				6.0		6.0		Stronchullin	vuggy quartz with late galena	8		P/PS L+V car		aqueous-carbonic -- low CO2	This project
DRR032D	2	2	13	-57.1	-22		-7.7	6.9				5.9		5.9		Stronchullin	vuggy quartz with late galena	15		P/PS L+V car		aqueous-carbonic -- low CO2	This project
DRR032D	2	2	19		-21		-5.8	7.0			164	5.7		5.7	l + v -> l	Stronchullin	vuggy quartz with late galena	15		P/PS L+V car		aqueous-carbonic -- low CO2	This project
DRR032D	2	2	10		by -15		-7.3					10.9		10.9		Stronchullin	vuggy quartz with late galena	12		P/PS L+V car	possible clathrate melting at +9 °C	aqueous-carbonic -- low CO2	This project
DRR032D	2	2	18	-57.1	-19		-7.5	5.6	27.6	l + v -> c/l		8.0		8.0		Stronchullin	vuggy quartz with late galena	12		P/PS L1+L2+V car	Tice approx. (±1 °C)	aqueous-carbonic -- high CO2	This project
DRR032D	2	2	16	-57.0	-21		-7.5	5.9	27.6	l + v -> c		7.5		7.5		Stronchullin	vuggy quartz with late galena	20		P/PS L1+L2+V car	Tice approx. (±1 °C)	aqueous-carbonic -- high CO2	This project
DRR032D	2	2	9	-57.1	-20		-7.1	6.2	26.3	l + v -> v		7.0		7.0		Stronchullin	vuggy quartz with late galena	18		P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032D	3	1	4	-57.1	-21		-7.9	6.4	27.3	l + v -> l		6.7		6.7		Stronchullin	vuggy quartz with late galena	10		P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032D	3	1	2	-57.1	-21		-8.7	6.7	24.0	l + v -> v		6.2		6.2		Stronchullin	vuggy quartz with late galena	20		P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032D	3	1	11	-56.9	-18		-7.4	6.8	26.8	l + v -> l		6.0		6.0		Stronchullin	vuggy quartz with late galena	8		P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032D	3	1	5	-57.0	-22		-7.9	7.1	27.3	l + v -> l		5.5		5.5		Stronchullin	vuggy quartz with late galena	15		P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032D	3	1	6	-56.9	-22		-7.5	7.1	27.1	l + v -> l		5.5		5.5		Stronchullin	vuggy quartz with late galena	10		P/PS L1+L2+V car	Tice approx. (±1 °C)	aqueous-carbonic -- high CO2	This project
DRR032D	3	1	1		-21		-7.5	7.2				5.3		5.3		Stronchullin	vuggy quartz with late galena	18		P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
DRR032D	3	1	10	-57.1	-21		-8.2	7.4	26.9	l + v -> l		5.0		5.0		Stronchullin	vuggy quartz with late galena	20		P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032D	3	1	9	-56.9	-22		-7.8	7.5	27.1	l + v -> l		4.8		4.8		Stronchullin	vuggy quartz with late galena	35		P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032D	3	1	7	-56.9	-22		-7.9	7.6	27.9	l + v -> l		4.6		4.6		Stronchullin	vuggy quartz with late galena	15		P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032D	3	1	8	-57.0	-20		-7.2	7.7	27.6	l + v -> l		4.4		4.4		Stronchullin	vuggy quartz with late galena	25		P/PS L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032D	4	2	5		-51.0		-20.7				91	22.8		22.8	l + v -> l	Stronchullin	vuggy quartz with late galena	15		S L+V aq	possible salt dissolution at +45 °C	aqueous -- high salinity	This project
DRR032D	4	1	3								116				l + v -> l	Stronchullin	vuggy quartz with late galena	4		S L+V aq		aqueous -- high salinity	This project
DRR032D	4	2	4								111				l + v -> l	Stronchullin	vuggy quartz with late galena	10		S L+V aq		aqueous -- high salinity	This project
DRR032D	4	2	6								111				l + v -> l	Stronchullin	vuggy quartz with late galena	8		S L+V aq		aqueous -- high salinity	This project
DRR032D	4	2	7				-12.3					16.2		16.2		Stronchullin	vuggy quartz with late galena	12		S L-only aq	metastable Tice: L+ice->L	aqueous -- high salinity	This project
DRR032D	5	1	2		-21		-7.0				147	10.5		10.5	l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L+V aq		aqueous -- low salinity	This project
DRR032D	5	1	9		by -12		-5.5				134	8.5		8.5	l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L+V aq	Tclath approx. (±1 °C)	aqueous -- low salinity	This project
DRR032D	5	1	10		by -12		-4.9				133	7.7		7.7	l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L+V aq	Tclath approx. (±1 °C)	aqueous -- low salinity	This project
DRR032D	5	1	11		-43		-4.2				153	6.7		6.7	l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L+V aq		aqueous -- low salinity	This project
DRR032D	5	1	4		-38		-4.1				138	6.5		6.5	l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L+V aq		aqueous -- low salinity	This project
DRR032D	5	1	5		-48		-3.7				120	5.9		5.9	l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L+V aq		aqueous -- low salinity	This project
DRR032D	5	1	6		-23		-3.7				138	5.9		5.9	l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L+V aq		aqueous -- low salinity	This project
DRR032D	5	1	8		-44		-3.7				134	5.9		5.9	l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L+V aq		aqueous -- low salinity	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
DRR032D	5	1	14		-38		-3.6				125	5.8		5.8	l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L+V aq		aqueous -- low salinity	This project
DRR032D	5	1	13		-46		-3.4				109	5.5		5.5	l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L+V aq		aqueous -- low salinity	This project
DRR032D	5	1	16		-37		-3.4				133	5.5		5.5	l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L+V aq		aqueous -- low salinity	This project
DRR032D	5	1	12		-46		-3.3				148	5.3		5.3	l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L+V aq		aqueous -- low salinity	This project
DRR032D	5	1	3		-44		-3.2				125	5.2		5.2	l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L+V aq		aqueous -- low salinity	This project
DRR032D	5	1	7		-23		-1.1				89	1.8		1.8	l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L+V aq		aqueous -- low salinity	This project
DRR032D	5	1	1	-57.0	-23		-8.0		28.1	l + v -> c		11.7		11.7		Stronchullin	vuggy quartz with late galena			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032D	5	1	17	-57.1					24.9	l + v -> l					l + v -> l	Stronchullin	vuggy quartz with late galena			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR032D	5	1	15		-42		0.0					0.0		0.0		Stronchullin	vuggy quartz with late galena			PS/S L-only aq	metastable Tice: L+ice->L	aqueous -- low salinity	This project
DRR002	1	na	1		-33		-9.3				145	13.2		13.2	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	1	na	7		-28		-9.3				145	13.2		13.2	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	1	na	13		-38		-9.3				145	13.2		13.2	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	1	na	3		-38		-8.8				125	12.6		12.6	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	1	na	5		-28		-8.8				155	12.6		12.6	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	1	na	9		-33		-8.8				185	12.6		12.6	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	1	na	11		-38		-8.8				115	12.6		12.6	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	1	na	2		-38		-8.3				145	12.1		12.1	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
DRR002	1	na	6		-28		-8.3				175	12.1		12.1	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	1	na	10		-38		-8.3				91	12.1		12.1	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	1	na	14		-23		-7.8				155	11.5		11.5	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	1	na	4		-28		-7.3				115	10.9		10.9	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	1	na	12		-38		1.5				115				l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	1	na	8		-18		-6.5	8.3	25.7	l + v -> l	245	3.3		3.3	l + v -> l	Calliachar Burn	quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR002	2	na	7		-23			7.8			225	4.3		4.3	l + v -> l	Calliachar Burn	quartz			P/PS L+V car		aqueous-carbonic -- low CO2	This project
DRR002	2	na	13		-48			7.8			255	4.3		4.3	l + v -> l	Calliachar Burn	quartz			P/PS L+V car		aqueous-carbonic -- low CO2	This project
DRR002	2	na	5		-23		-7.8	9.3				1.4		1.4		Calliachar Burn	quartz			P/PS L+V car		aqueous-carbonic -- low CO2	This project
DRR002	2	na	10		-28		-10.3					14.3		14.3		Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	2	na	8		-48		-9.8				155	13.7		13.7	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	2	na	14		-28		-9.8				225	13.7		13.7	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	2	na	9		-48		-9.3				145	13.2		13.2	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	2	na	4		-23		-8.8				115	12.6		12.6	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	2	na	15		-48		-6.8				135	10.2		10.2	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	2	na	19		-28		-6.8				150	10.2		10.2	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	2	na	20		-23		-6.3				145	9.6		9.6	l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
DRR002	2	na	3		-43						175				l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	2	na	6		-43											Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	2	na	11		-48						145				l + v -> l	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	2	na	12		-48										l + v ->	Calliachar Burn	quartz			PS/S L+V aq		aqueous -- low salinity	This project
DRR002	2	na	17	-57.0	-23			7.8	26.5	l + v -> v		4.3		4.3		Calliachar Burn	quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR002	2	na	1		-23		-6.3	8.3	25.0	l + v -> v	225	3.3		3.3	l + v -> l	Calliachar Burn	quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR002	2	na	2		-38			8.3	15.0	l + v -> v	225	3.3		3.3	l + v -> l	Calliachar Burn	quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR002	2	na	18	-57.0	-23			8.3	27.5	l + v -> v		3.3		3.3		Calliachar Burn	quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	This project
DRR002	2	na	16	-57.0	-23			9.8	26.7	l + v -> l		0.4		0.4		Calliachar Burn	quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	This project
EA05			1	-57.1				6.9	29.4		340	5.9		5.9		Cononish / Tyndrum	gold-bearing quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993
EA05			2	-58.0				6.0	28.5		369	7.4		7.4		Cononish / Tyndrum	gold-bearing quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993
EA05			3	-56.2				7.8	30.3		311	4.3		4.3		Cononish / Tyndrum	gold-bearing quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993
EA451			1	-59.7				7.0	29.7		312	5.7		5.7		Cononish / Tyndrum	gold-bearing quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993
EA451			2	-61.7				5.0	27.7		329	9.0		9.0		Cononish / Tyndrum	gold-bearing quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993
EA451			3	-57.7				9.0	31.7		295	2.0		2.0		Cononish / Tyndrum	gold-bearing quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
FP03			1	-56.7				5.9	26.8		334	7.5		7.5		Cononish / Tyndrum	gold-bearing quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993
FP03			2	-57.4				5.2	26.1		351	8.7		8.7		Cononish / Tyndrum	gold-bearing quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993
FP03			3	-56.0				6.6	27.5		317	6.4		6.4		Cononish / Tyndrum	gold-bearing quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993
FPh			2				-2.4				155	3.9		3.9		Loch Lomond	late anhedral quartz with hematite			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
FPh			3				-2.4				172	3.9		3.9		Loch Lomond	late anhedral quartz with hematite			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
FPp			2				-2.2	0.6			150	14.9		14.9		Loch Lomond	early anhedral quartz with pyrite			P L+V car		aqueous-carbonic -- low CO2	Craw 1990; Craw & Chamberlain 1996
FPp			3				-1.8	1.7			175	13.6		13.6		Loch Lomond	early anhedral quartz with pyrite			P L+V car		aqueous-carbonic -- low CO2	Craw 1990; Craw & Chamberlain 1996
Gamma 14 (mqv)	1		1	-58.8				5.2	3.8	l + v -> l		8.7		8.7		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		2	-58.2				5.0	13.6	l + v -> l		9.0		9.0		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		3	-58.5				5.6	15.3	l + v -> l		8.0		8.0		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		4	-58.3				5.6	7.7	l + v -> l		8.0		8.0		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		5	-58.3				5.4	16.9	l + v -> l	298	8.3		8.3	l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		6	-58.3				5.6	14.0	l + v -> l		8.0		8.0		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		7	-58.6				6.6	16.5	l + v -> l	272	6.4		6.4	l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		8	-58.2				5.2	13.3	l + v -> l		8.7		8.7		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
Gamma 14 (mqv)	1		9	-58.5				5.0	12.1	l + v -> l		9.0		9.0		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		10	-58.0				4.6	18.8	l + v -> l		9.6		9.6		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		11	-58.1				5.8	14.3	l + v -> l		7.7		7.7		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		12	-58.3				4.8	22.6	l + v -> l		9.3		9.3		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		13	-58.6				6.4	16.7	l + v -> l	257	6.7		6.7	l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		14	-58.6				6.0	18.2	l + v -> l	279	7.4		7.4	l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		15	-58.2					19.6	l + v -> l						metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		16					5.6	13.1	l + v -> l		8.0		8.0		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		17					7.3			152	5.2		5.2	l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- low CO2	Earls et al 1996
Gamma 14 (mqv)	1		18								99				l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous -- low salinity	Earls et al 1996
Gamma 14 (mqv)	1		19				-7.3				114	10.9		10.9	l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous -- low salinity	Earls et al 1996
Gamma 14 (mqv)	1		20	-58.1				5.2	5.8	l + v -> l		8.7		8.7		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		21	-58.2					7.4	l + v -> l						metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		22	-58.5				4.7	20.3	l + v -> l		9.4		9.4		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 14 (mqv)	1		23								123				l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
Gamma 14 (mqv)	1		24								375				l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- low CO2	Earls et al 1996
Gamma 5 (mqv)	1		1	-58.2				8.5	16.1	l + v -> l		3.0		3.0		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 5 (mqv)	1		2	-58.1				9.6	20.5	l + v -> l	334	0.8		0.8	l + v -> v/c	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 5 (mqv)	1		3	-57.8				8.4	27.7	l + v -> l	337	3.1		3.1	l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 5 (mqv)	1		4	-57.9				9.4	18.9	l + v -> l	235	1.2		1.2	l + v -> l/c	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 5 (mqv)	1		5	-57.9				9.4	19.3	l + v -> l		1.2		1.2		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 5 (mqv)	1		6	-58.1				8.8	16.9	l + v -> l		2.4		2.4		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 5 (mqv)	1		7	-58.1				9.4	19.5	l + v -> l		1.2		1.2		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 5 (mqv)	1		8	-57.8				9.3	21.2	l + v -> l		1.4		1.4		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 5 (mqv)	1		9	-58.0				9.5	15.3	l + v -> l		1.0		1.0		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 5 (mqv)	1		10	-57.5				8.8	25.7	l + v -> l/c	244	2.4		2.4	l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 5 (mqv)	1		11	-58.1				5.1	24.2	l + v -> l		8.8		8.8		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 5 (mqv)	1		12	-57.7				8.4	18.6	l + v -> l	386	3.1		3.1	l + v -> v	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 5 (mqv)	1		13								160				l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous -- low salinity	Earls et al 1996
Gamma 5 (mqv)	1		14	-57.9				8.9	22.0	l + v -> l		2.2		2.2		metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
Gamma 5 (mqv)	1		15	-58.2					15.1	l + v -> l						metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
Gamma 5 (mqv)	1		16								351				l + v -> v/c	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- low CO2	Earls et al 1996
Gamma 5 (mqv)	1		17								353				l + v -> v/c	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- low CO2	Earls et al 1996
Gamma 5 (mqv)	1		18								383				l + v -> v	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- low CO2	Earls et al 1996
Glenlark Stratiform	1		1				-1.3				138	2.1		2.1	l + v -> l	Glenlark Lodge	quartz					aqueous -- low salinity	Earls et al 1996
Glenlark Stratiform	1		2				-2.5				185	4.1		4.1	l + v -> l	Glenlark Lodge	quartz					aqueous -- low salinity	Earls et al 1996
Glenlark Stratiform	1		3				-19.5				78	22.0		22.0	l + v -> l	Glenlark Lodge	quartz					aqueous -- high salinity	Earls et al 1996
Glenlark Stratiform	1		4				-11.7					15.7		15.7	l + v -> l	Glenlark Lodge	quartz					aqueous -- high salinity	Earls et al 1996
Glenlark Stratiform	1		5				-0.4				131	0.7		0.7	l + v -> l	Glenlark Lodge	quartz					aqueous -- low salinity	Earls et al 1996
Glenlark Stratiform	1		6												l + v -> l	Glenlark Lodge	quartz					aqueous -- low salinity	Earls et al 1996
Glenlark Stratiform	1		7				-1.3				141	2.1		2.1	l + v -> l	Glenlark Lodge	quartz					aqueous -- low salinity	Earls et al 1996
Glenlark Stratiform	1		8								157				l + v -> l	Glenlark Lodge	quartz					aqueous -- low salinity	Earls et al 1996
Glenlark Stratiform	1		9				-2.4				241	3.9		3.9	l + v -> l	Glenlark Lodge	quartz					aqueous -- low salinity	Earls et al 1996
Glenlark Stratiform	1		10								115				l + v -> l	Glenlark Lodge	quartz					aqueous -- low salinity	Earls et al 1996
Glenlark Stratiform	1		11								110				l + v -> l	Glenlark Lodge	quartz					aqueous -- low salinity	Earls et al 1996
LL12h			2				-4.9				166	7.7		7.7		Loch Lomond	late anhedral quartz with hematite			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
LL12h			3				-3.5				194	5.6		5.6		Loch Lomond	late anhedral quartz with hematite			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
LL12p			2				-4.3				155	6.8		6.8		Loch Lomond	early anhedral quartz with pyrite			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
LL12p			3				-3.7				210	5.9		5.9		Loch Lomond	early anhedral quartz with pyrite			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
LL14			2				-4.6	-0.1			162	15.6		15.6		Loch Lomond	late anhedral quartz with hematite			P L+V car		aqueous-carbonic -- low CO2	Craw 1990; Craw & Chamberlain 1996
LL14			3				-4.0	1.1			186	14.3		14.3		Loch Lomond	late anhedral quartz with hematite			P L+V car		aqueous-carbonic -- low CO2	Craw 1990; Craw & Chamberlain 1996
LL21			2		-40		-3.4				108	5.5		5.5		Loch Lomond	quartz			S L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
LL21			3		-40		-2.8				120	4.5		4.5		Loch Lomond	quartz			S L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
LL21h			2				-2.2	0.6			150	14.9		14.9		Loch Lomond	late anhedral quartz with hematite			P L+V car		aqueous-carbonic -- low CO2	Craw 1990; Craw & Chamberlain 1996
LL21h			3				-1.8	1.7			175	13.6		13.6		Loch Lomond	late anhedral quartz with hematite			P L+V car		aqueous-carbonic -- low CO2	Craw 1990; Craw & Chamberlain 1996
LL21p			2				-5.1		5.0		110	8.0		8.0		Loch Lomond	early anhedral quartz with pyrite			P L1+L2+V car		aqueous-carbonic -- high CO2	Craw 1990; Craw & Chamberlain 1996
LL21p			3				-2.8		6.0		120	4.5		4.5		Loch Lomond	early anhedral quartz with pyrite			P L1+L2+V car		aqueous-carbonic -- high CO2	Craw 1990; Craw & Chamberlain 1996
LL24a			2	-56.8			-3.4	7.5	20.0	l + v -> v	260	4.8		4.8		Loch Lomond	vuggy quartz with hematite			P L1+L2+V car		aqueous-carbonic -- high CO2	Craw 1990; Craw & Chamberlain 1996
LL24a			3	-57.5			-2.7	10.3	29.0	l + v -> l	260	4.4		4.4		Loch Lomond	vuggy quartz with hematite			P L1+L2+V car		aqueous-carbonic -- high CO2	Craw 1990; Craw & Chamberlain 1996
LL24b			2				-4.5				166	7.1		7.1		Loch Lomond	vuggy quartz with hematite			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
LL24b			3				-3.9				194	6.2		6.2		Loch Lomond	vuggy quartz with hematite			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
LL34			2				-4.8				165	7.5		7.5		Loch Lomond	vuggy quartz with rutile			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
LL34			3				-3.8				192	6.1		6.1		Loch Lomond	vuggy quartz with rutile			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
LL34			2	-56.6			-4.5	7.1	25.0	l + v -> v	260	5.5		5.5		Loch Lomond	vuggy quartz with rutile			P L1+L2+V car		aqueous-carbonic -- high CO2	Craw 1990; Craw & Chamberlain 1996
LL34			3	-58.0			-3.1	11.0	28.0	l + v -> l	260	5.0		5.0		Loch Lomond	vuggy quartz with rutile			P L1+L2+V car		aqueous-carbonic -- high CO2	Craw 1990; Craw & Chamberlain 1996
LL38			2				-5.5				160	8.5		8.5		Loch Lomond	vuggy quartz with rutile			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
LL38			3				-3.9				180	6.2		6.2		Loch Lomond	vuggy quartz with rutile			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
LL38			2	-56.9			-2.9	6.3	22.0	l + v -> v	260	6.9		6.9		Loch Lomond	vuggy quartz with rutile			P L1+L2+V car		aqueous-carbonic -- high CO2	Craw 1990; Craw & Chamberlain 1996
LL38			3	-57.9			-3.0	10.0	30.0	l + v -> l	260	0.0		0.0		Loch Lomond	vuggy quartz with rutile			P L1+L2+V car		aqueous-carbonic -- high CO2	Craw 1990; Craw & Chamberlain 1996
LL41			2				-4.6				178	7.3		7.3		Loch Lomond	vuggy quartz with hematite			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
LL41			3				-3.6				194	5.8		5.8		Loch Lomond	vuggy quartz with hematite			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
LL41			2	-56.6			-4.0	7.5	26.0	l + v -> v	260	4.8		4.8		Loch Lomond	vuggy quartz with hematite			P L1+L2+V car		aqueous-carbonic -- high CO2	Craw 1990; Craw & Chamberlain 1996
LL41			3	-57.1			-2.8	10.0	29.0	l + v -> l	260	0.0		0.0		Loch Lomond	vuggy quartz with hematite			P L1+L2+V car		aqueous-carbonic -- high CO2	Craw 1990; Craw & Chamberlain 1996
LL42			2				-5.1				165	8.0		8.0		Loch Lomond	vuggy quartz with hematite			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
LL42			3				-3.6				200	5.8		5.8		Loch Lomond	vuggy quartz with hematite			P L+V aq		aqueous -- low salinity	Craw 1990; Craw & Chamberlain 1996
LL42			2	-56.6			-4.5	7.5	26.0	l + v -> v	260	4.8		4.8		Loch Lomond	vuggy quartz with hematite			P L1+L2+V car		aqueous-carbonic -- high CO2	Craw 1990; Craw & Chamberlain 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
LL42			3	-57.6			-3.2	7.9	29.0	l + v -> l	260	4.1		4.1		Loch Lomond	vuggy quartz with hematite			P L1+L2+V car		aqueous-carbonic -- high CO2	Craw 1990; Craw & Chamberlain 1996
N/A											235	52.0		52.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											240	54.0		54.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											245	56.0		56.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											245	54.0		54.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											245	53.0		53.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											250	56.0		56.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											250	52.0		52.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											255	52.0		52.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											270	44.0		44.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											290	52.0		52.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											310	57.0		57.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											320	56.0		56.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											310	44.0		44.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											325	46.0		46.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											325	56.0		56.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											365	40.0		40.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
N/A											410	56.0		56.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous halite-bearing	Lowry 1995; Kay 1985
N/A											140	5.0		5.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											155	8.0		8.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											162	6.0		6.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											167	6.0		6.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											165	5.8		5.8	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											165	6.2		6.2	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											170	4.5		4.5	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											180	6.5		6.5	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											175	7.0		7.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											170	6.0		6.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											185	6.7		6.7	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											165	8.0		8.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											205	4.5		4.5	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											210	4.0		4.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											200	6.5		6.5	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											190	7.0		7.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
N/A											210	7.0		7.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											215	8.5		8.5	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											220	6.0		6.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											220	6.5		6.5	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											250	9.0		9.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											260	5.0		5.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											260	6.0		6.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											260	6.5		6.5	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											255	7.5		7.5	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											250	7.2		7.2	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											245	8.5		8.5	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											290	7.0		7.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											285	7.0		7.0	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											290	8.5		8.5	l + v -> l	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											390	4.5		4.5	l + v -> c	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											395	6.0		6.0	l + v -> c	Arrochar	quartz			not known		aqueous low salinity	Lowry 1995
N/A											165	7.5		7.5	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (μm)	% vapour	inclusion type	comment	Fluid type	Data Source
N/A											170	14.0		14.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											155	23.0		23.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											240	21.0		21.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											305	11.5		11.5	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											360	14.0		14.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											400	18.0		18.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											455	16.0		16.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											420	23.0		23.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											485	24.0		24.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											490	21.0		21.0	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											505	18.5		18.5	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											550	17.5		17.5	l + v -> l	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											485	16.5		16.5	l + v -> v	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											500	18.0		18.0	l + v -> v	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											510	14.5		14.5	l + v -> v	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
N/A											505	20.0		20.0	l + v -> v	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											525	14.0		14.0	l + v -> v	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											525	23.0		23.0	l + v -> v	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											530	21.0		21.0	l + v -> v	Kilmelford / Lagalochan	quartz			not known		aqueous moderate to high salinity	Lowry 1995; Kay 1985
N/A											300	7.0		7.0	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											310	5.0		5.0	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											315	5.0		5.0	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											320	6.0		6.0	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											315	5.5		5.5	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											325	5.0		5.0	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											327	4.5		4.5	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											330	6.5		6.5	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											335	7.0		7.0	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											337	7.2		7.2	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											340	5.0		5.0	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
N/A											337	5.2		5.2	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											335	4.7		4.7	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											342	4.7		4.7	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											345	5.2		5.2	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											342	7.0		7.0	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											345	8.0		8.0	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											315	4.5		4.5	l + v -> v	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											320	6.0		6.0	l + v -> v	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											325	5.0		5.0	l + v -> v	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											350	5.5		5.5	l + v -> v	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											370	4.5		4.5	l + v -> v	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											372	5.5		5.5	l + v -> v	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											375	6.5		6.5	l + v -> v	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											375	5.0		5.0	l + v -> v	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995
N/A											380	4.5		4.5	l + v -> v	Arrochar	quartz			not known		aqueous-carbonic -- high CO2	Lowry 1995

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
N/A											390	7.0		7.0	l + v -> v	Arrochar	quartz			not known		aqueous-carbonic -- low CO2	Lowry 1995
N/A											300	6.0		6.0	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- low CO2	Lowry 1995
N/A											340	5.0		5.0	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- low CO2	Lowry 1995
N/A											335	6.5		6.5	l + v -> l	Arrochar	quartz			not known		aqueous-carbonic -- low CO2	Lowry 1995
N/A											360	5.0		5.0	l + v -> v	Arrochar	quartz			not known		aqueous-carbonic -- low CO2	Lowry 1995
N/A											385	7.0		7.0	l + v -> v	Arrochar	quartz			not known		aqueous-carbonic -- low CO2	Lowry 1995
N/A											390	5.0		5.0	l + v -> c	Arrochar	quartz			not known		aqueous-carbonic -- low CO2	Lowry 1995
Navan	1		1			-21.6	-13.4	1.0			259	14.4		14.4	l + v -> l	Navan	quartz					aqueous-carbonic -- low CO2	Earls et al 1996
RP035			1	-60.2				2.9	25.3		292	12.0		12.0		Cononish / Tyndrum	early quartz and feldspar			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993
RP035			2	-61.4				1.7	24.1		317	13.6		13.6		Cononish / Tyndrum	gold-bearing quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993
RP035			3	-59.0				4.1	26.5		267	10.3				Cononish / Tyndrum	gold-bearing quartz			PS/S L1+L2+V car		aqueous-carbonic -- high CO2	Curtis et al. 1993
SP10 (mqv)	1	1	1				-5.1				184	8.0		8.0	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous -- low salinity	Earls et al 1996
SP10 (mqv)	1	1	2					7.0			332	5.7		5.7	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous-carbonic -- high CO2	Earls et al 1996
SP10 (mqv)	1	1	3					7.0			181	5.7		5.7	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous-carbonic -- low CO2	Earls et al 1996
SP10 (mqv)	1	1	4								195				l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous-carbonic -- low CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
SP10 (mqv)	1	1	5					7.9				4.1		4.1		metamorphic vein (NI)	deformed quartz			S		aqueous-carbonic -- low CO2	Earls et al 1996
SP10 (mqv)	1	1	6						22.2	l + v -> l						metamorphic vein (NI)	deformed quartz			S		aqueous-carbonic -- high CO2	Earls et al 1996
SP10 (mqv)	1	1	7				-6.2				226	9.5		9.5	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous -- low salinity	Earls et al 1996
SP10 (mqv)	1	1	8				-4.5				127	7.1		7.1	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous -- low salinity	Earls et al 1996
SP10 (mqv)	1	1	9				-5.6	7.6			243	4.6		4.6	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous-carbonic -- low CO2	Earls et al 1996
SP10 (mqv)	1	1	10					7.5			287	4.8		4.8	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous-carbonic -- low CO2	Earls et al 1996
SP10 (mqv)	1	1	11					7.3			232	5.2		5.2	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous-carbonic -- low CO2	Earls et al 1996
SP10 (mqv)	1	1	12								257				l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous-carbonic -- low CO2	Earls et al 1996
SP10 (mqv)	1	1	13					6.5			290	6.5		6.5	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous-carbonic -- high CO2	Earls et al 1996
SP10 (mqv)	1	1	14				-5.6				125	8.7		8.7	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous -- low salinity	Earls et al 1996
SP10 (mqv)	1	1	15					6.9			245	5.9		5.9	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous-carbonic -- low CO2	Earls et al 1996
SP10 (mqv)	1	1	16					8.5			347	3.0		3.0	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous-carbonic -- high CO2	Earls et al 1996
SP10 (mqv)	1	1	17				-2.2				200	3.6		3.6	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous -- low salinity	Earls et al 1996
SP10 (mqv)	1	1	18				-2.3				190	3.8		3.8	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous -- low salinity	Earls et al 1996
SP18 (mqv)	1	1	1	-57.7				10.3	12.6	l + v -> l	270				l + v -> l	metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
SP18 (mqv)	1	1	2					9.7				0.6		0.6		metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- low CO2	Earls et al 1996
SP18 (mqv)	1	1	3					10.4	12.8	l + v -> l	303				l + v -> l	metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	4	-58.0				9.9	13.0	l + v -> l	312	0.2		0.2	l + v -> l	metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	5	-57.7				10.2	12.4	l + v -> l	307				l + v -> l	metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	6	-57.7				10.3	11.2	l + v -> l						metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	7	-58.0				10.2	13.2	l + v -> l						metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	8	-58.1				10.2	11.9	l + v -> l	307				l + v -> l	metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	9	-57.3				9.3			291	1.4		1.4	l + v -> l	metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	10					9.9				0.2		0.2		metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- low CO2	Earls et al 1996
SP18 (mqv)	1	1	11	-58.5				10.0	6.8	l + v -> l		0.0		0.0		metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	12	-58.5				9.7	7.8	l + v -> l		0.6		0.6		metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	13	-58.5				9.7	7.8	l + v -> l		0.6		0.6		metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	14	-58.4				9.5			264	1.0		1.0	l + v -> l	metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	15	-58.5				9.7	7.6	l + v -> l		0.6		0.6		metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	16	-58.6				10.1	6.3	l + v -> l		0.0		0.0		metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
SP18 (mqv)	1	1	17	-58.5				9.7	11.5	l + v -> l		0.6		0.6		metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	18	-58.6				9.9	8.6	l + v -> l	290	0.2		0.2	l + v -> l	metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	19	-58.3				9.3	7.8	l + v -> v		1.4		1.4		metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	20								317				l + v -> l	metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- low CO2	Earls et al 1996
SP18 (mqv)	1	1	21								316				l + v -> l	metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- low CO2	Earls et al 1996
SP18 (mqv)	1	1	22	-58.5				9.4	6.6	l + v -> l	336	1.2		1.2	l + v -> l	metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	23	-58.4				9.5	7.2	l + v -> l		1.0		1.0		metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	24	-58.5				9.5	7.4	l + v -> l		1.0		1.0		metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- high CO2	Earls et al 1996
SP18 (mqv)	1	1	25													metamorphic vein (NI)	deformed quartz			PS/S		aqueous-carbonic -- low CO2	Earls et al 1996
SP18 (mqv)	1	2	26				-2.2				182	3.6		3.6	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous -- low salinity	Earls et al 1996
SP18 (mqv)	1	2	27								181				l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous -- low salinity	Earls et al 1996
SP18 (mqv)	1	2	28				-2.3				154	3.8		3.8	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous -- low salinity	Earls et al 1996
SP18 (mqv)	1	2	29								151				l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous -- low salinity	Earls et al 1996
SP18 (mqv)	1	2	30				-2.3				169	3.8		3.8	l + v -> l	metamorphic vein (NI)	deformed quartz			S		aqueous -- low salinity	Earls et al 1996
SP19 (mqv)	1	1	1				-1.1				174	1.8		1.8	l + v -> l	metamorphic vein (NI)	deformed quartz			PS/S		aqueous -- low salinity	Earls et al 1996
SP19 (mqv)	1	1	2				-1.5				326	2.5		2.5		metamorphic vein (NI)	deformed quartz			PS/S		aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
SP19 (mqv)	1	1	3								132					metamorphic vein (NI)	deformed quartz			PS/S		aqueous -- low salinity	Earls et al 1996
SP19 (mqv)	1	1	4								127					metamorphic vein (NI)	deformed quartz			PS/S		aqueous -- low salinity	Earls et al 1996
SP19 (mqv)	1	1	5				-1.5				216	2.5		2.5		metamorphic vein (NI)	deformed quartz			PS/S		aqueous -- low salinity	Earls et al 1996
SP19 (mqv)	1	1	6				-1.4				332	2.3		2.3		metamorphic vein (NI)	deformed quartz			PS/S		aqueous -- low salinity	Earls et al 1996
SP19 (mqv)	1	1	7				-0.2				182	0.3		0.3		metamorphic vein (NI)	deformed quartz			PS/S		aqueous -- low salinity	Earls et al 1996
SP19 (mqv)	1	1	8								128					metamorphic vein (NI)	deformed quartz			PS/S		aqueous -- low salinity	Earls et al 1996
SP19 (mqv)	1	1	9								128					metamorphic vein (NI)	deformed quartz			S		aqueous -- low salinity	Earls et al 1996
SP19 (mqv)	1	1	10								131					metamorphic vein (NI)	deformed quartz			S		aqueous -- low salinity	Earls et al 1996
SP19 (mqv)	1	1	11				-9.6				223	13.5		13.5		metamorphic vein (NI)	deformed quartz			S		aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	1	1	-56.4				7.3			383	5.2		5.2	l + v -> l	metamorphic vein (NI)	deformed quartz			S L+V		aqueous-carbonic -- high CO2	Earls et al 1996
SP2 (mqv)	1	1	2				-0.2				200	0.3		0.3	l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	1	3				-3.2				273	5.2		5.2	l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	1	4					8.4			321	3.1		3.1	l + v -> v	metamorphic vein (NI)	deformed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
SP2 (mqv)	1	1	5								295				l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
SP2 (mqv)	1	1	6								297				l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	1	7								123				l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	1	8				-3.0				176	4.9		4.9	l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
SP2 (mqv)	1	1	9				-3.0				146	4.9		4.9	l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	1	10								139				l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	1	11				-3.1				165	5.0		5.0	l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	1	12				-2.8				153	4.5		4.5	l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	1	13				-3.0				249	4.9		4.9	l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	1	14				-2.9				137	4.7		4.7	l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	1	15				-1.0				103	1.7		1.7	l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	1	16				-3.5				154	5.6		5.6	l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	1	17				-5.2				351	8.1		8.1	l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	2	18				-6.6					10.0		10.0		metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	2	19								251				l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous -- low salinity	Earls et al 1996
SP2 (mqv)	1	2	20					7.7			320	4.4		4.4	l + v -> l	metamorphic vein (NI)	deformed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
SP26	1		1				-3.6				95	5.8		5.8	l + v -> l	Glenlark Lodge	sphalerite					aqueous -- low salinity	Earls et al 1996
SP26	1		2				-6.6				228	10.0		10.0	l + v -> l	Glenlark Lodge	sphalerite					aqueous -- low salinity	Earls et al 1996
SP26	1		3				-7.1				243	10.6		10.6	l + v -> l	Glenlark Lodge	sphalerite					aqueous -- low salinity	Earls et al 1996
SP26	1		4								240				l + v -> l	Glenlark Lodge	sphalerite					aqueous -- low salinity	Earls et al 1996
SP26	1		5				-10.4				103	14.4		14.4	l + v -> l	Glenlark Lodge	sphalerite					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
SP26	1		6				-6.6				236	10.0		10.0	l + v -> l	Glenlark Lodge	sphalerite					aqueous -- low salinity	Earls et al 1996
SP26	1		7								238				l + v -> l	Glenlark Lodge	sphalerite					aqueous -- low salinity	Earls et al 1996
SP26	1		8				-6.6				244	10.0		10.0	l + v -> l	Glenlark Lodge	sphalerite					aqueous -- low salinity	Earls et al 1996
SP26	1		9								249				l + v -> l	Glenlark Lodge	sphalerite					aqueous -- low salinity	Earls et al 1996
SP26	1		10				-7.6				243	11.2		11.2	l + v -> l	Glenlark Lodge	sphalerite					aqueous -- low salinity	Earls et al 1996
SP26	1		11				-7.7				237	11.3		11.3	l + v -> l	Glenlark Lodge	sphalerite					aqueous -- low salinity	Earls et al 1996
SP26	1		12								238				l + v -> l	Glenlark Lodge	sphalerite					aqueous -- low salinity	Earls et al 1996
SP37	1	1	1				-1.9				142	3.1		3.1	l + v -> l	metamorphic vein (NI)	early quartz					aqueous -- low salinity	Earls et al 1996
SP37	1	1	2				-2.2				155	3.6		3.6	l + v -> l	metamorphic vein (NI)	early quartz					aqueous -- low salinity	Earls et al 1996
SP37	1	1	3								289				l + v -> l	metamorphic vein (NI)	early quartz					aqueous -- low salinity	Earls et al 1996
SP37	1	1	4								115				l + v -> l	metamorphic vein (NI)	early quartz					aqueous -- low salinity	Earls et al 1996
SP37	1	1	5								227				l + v -> l	metamorphic vein (NI)	early quartz					aqueous -- low salinity	Earls et al 1996
SP37	1	1	6								141				l + v -> l	metamorphic vein (NI)	early quartz					aqueous -- low salinity	Earls et al 1996
SP37	1	1	7								100				l + v -> l	metamorphic vein (NI)	early quartz					aqueous -- low salinity	Earls et al 1996
SP37	1	2	8				-9.6				242	13.5		13.5	l + v -> l	metamorphic vein (NI)	late quartz					aqueous -- low salinity	Earls et al 1996
SP37	1	2	9								379				l + v -> l	metamorphic vein (NI)	late quartz					aqueous -- low salinity	Earls et al 1996
SP37	1	2	10		-40.1		-4.1					6.5		6.5		metamorphic vein (NI)	late quartz					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
SP37	1	3	11		-16.1		-6.2				141	9.5		9.5	l + v -> l	metamorphic vein (NI)	late carbonate					aqueous - - low salinity	Earls et al 1996
SP37	1	3	12								145				l + v -> l	metamorphic vein (NI)	late carbonate					aqueous - - low salinity	Earls et al 1996
SP37	1	3	13		-22.6		-6.3				145	9.6		9.6	l + v -> l	metamorphic vein (NI)	late carbonate					aqueous - - low salinity	Earls et al 1996
SP37	1	3	14								145				l + v -> l	metamorphic vein (NI)	late carbonate					aqueous - - low salinity	Earls et al 1996
SP37	2	1	15				-8.1				244	11.8		11.8	l + v -> l	metamorphic vein (NI)	euhedral quartz					aqueous - - low salinity	Earls et al 1996
SP37	2	1	16				-7.5					11.1		11.1		metamorphic vein (NI)	euhedral quartz					aqueous - - low salinity	Earls et al 1996
SP37	2	1	17				-8.9					12.7		12.7		metamorphic vein (NI)	euhedral quartz					aqueous - - low salinity	Earls et al 1996
SP37	2	1	18				-9.7					13.6		13.6		metamorphic vein (NI)	euhedral quartz					aqueous - - low salinity	Earls et al 1996
SP37	2	1	19								450				l + v -> l	metamorphic vein (NI)	euhedral quartz					aqueous - - low salinity	Earls et al 1996
SP37	2	1	20								237				l + v -> l	metamorphic vein (NI)	euhedral quartz					aqueous - - low salinity	Earls et al 1996
SP37	2	1	21				-11.1					15.1		15.1		metamorphic vein (NI)	euhedral quartz					aqueous - - low salinity	Earls et al 1996
SP37	2	1	22								405				l + v -> l	metamorphic vein (NI)	euhedral quartz					aqueous - - low salinity	Earls et al 1996
SP37	2	1	23				-10.7					14.7		14.7		metamorphic vein (NI)	euhedral quartz					aqueous - - low salinity	Earls et al 1996
SP37	2	1	24				-7.6				176	11.2		11.2	l + v -> l	metamorphic vein (NI)	euhedral quartz					aqueous - - low salinity	Earls et al 1996
SP37	2	1	25				-9.2				222	13.1		13.1	l + v -> l	metamorphic vein (NI)	euhedral quartz					aqueous - - low salinity	Earls et al 1996
SP37	2	1	26				-10.8					14.8		14.8		metamorphic vein (NI)	euhedral quartz					aqueous - - low salinity	Earls et al 1996
SP7	1		1				-0.3				275	0.5		0.5	l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous - - low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
SP7	1		2	-58.9				10.2			312				l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
SP7	1		3	-58.8				11.3	-1.3	l + v -> l						metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
SP7	1		4				-2.5				307	4.1		4.1	l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous -- low salinity	Earls et al 1996
SP7	1		5	-57.8					24.3	l + v -> l						metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
SP7	1		6	-57.8				10.9			352				l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
SP7	1		7	-58.4												metamorphic vein (NI)	metamorphic quartz					aqueous-carbonic -- high CO2	Earls et al 1996
SP7	1		8													metamorphic vein (NI)	metamorphic quartz					aqueous -- low salinity	Earls et al 1996
SP7	1		9								250				l + v -> l	metamorphic vein (NI)	metamorphic quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	2	1	-60.6				8.9			411	2.2		2.2	l + v -> l	Strabane	early deformed quartz					aqueous-carbonic -- high CO2	Earls et al 1996
ST1	1	1	1		-22		-4.3				203	6.8		6.8	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	2	2	-59.0			-5.9	8.7			420	2.6		2.6	l + v -> l	Strabane	early deformed quartz					aqueous-carbonic -- high CO2	Earls et al 1996
ST1	1	1	2		-22		-4.4				199	7.0		7.0	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	2	3					7.8			433	4.3		4.3	l + v -> l	Strabane	early deformed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
ST1	1	1	3		-22		-3.4				193	5.5		5.5	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	2	4	-59.9				8.8			421	2.4		2.4	l + v -> l	Strabane	early deformed quartz					aqueous-carbonic -- high CO2	Earls et al 1996
ST1	1	1	4		-22		-3.4				190	5.5		5.5	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
ST1	1	2	5					7.8	5.7	l + v -> l	434	4.3		4.3	l + v -> l	Strabane	early deformed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
ST1	1	1	5		-22		-3.3				199	5.3		5.3	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	2	6					7.9			424	4.1		4.1	l + v -> l	Strabane	early deformed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
ST1	1	1	6				-3.7				199	5.9		5.9	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	7		-22		-3.9				206	6.2		6.2	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	8		-22		-3.7				202	5.9		5.9	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	9				-3.1				156	5.0		5.0	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	10								204				l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	11		-22		-4.4					7.0		7.0		Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	12		-23		-4.2				191	6.7		6.7	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	13													Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	14								191				l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	15				-2.8				140	4.5		4.5	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	16				-3.0				196	4.9		4.9	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	17		-23		-3.1				263	5.0		5.0	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	18				-3.0				278	4.9		4.9	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	19				-2.9				202	4.7		4.7	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
ST1	1	1	20								278				l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	21		-23		-2.8				211	4.5		4.5	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	22				-4.6				210	7.3		7.3	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	23				-4.6				202	7.3		7.3	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	24								207				l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	25								271				l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	26								262				l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	27		-23		-3.0					4.9		4.9		Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	28		-23		-2.8				205	4.5		4.5	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	1	1	29		-23		-4.2				205	6.7		6.7	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	2	1	1		-23		-3.5				187	5.6		5.6	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	2	1	2		-23		-3.2				221	5.2		5.2	l + v -> l	Strabane	late quartz					aqueous -- low salinity	Earls et al 1996
ST1	2	2	3	-60.0				6.9			422	5.9		5.9	l + v -> l	Strabane	early deformed quartz					aqueous-carbonic -- high CO2	Earls et al 1996
ST1	2	2	4	-59.2				7.8	14.7	l + v -> l		4.3		4.3		Strabane	early deformed quartz					aqueous-carbonic -- high CO2	Earls et al 1996
ST1	2	2	5					5.7			400	7.9		7.9	l + v -> l	Strabane	early deformed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
ST1	2	2	6					5.5			374	8.2		8.2	l + v -> l	Strabane	early deformed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
ST1	2	2	7								235				l + v -> l	Strabane	early deformed quartz					aqueous -- low salinity	Earls et al 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
ST1	2	2	8								422				l + v -> l	Strabane	early deformed quartz					aqueous -- low salinity	Earls et al 1996
ST1	2	2	9	-60.1				7.5			416	4.8		4.8	l + v -> l	Strabane	early deformed quartz					aqueous-carbonic -- high CO2	Earls et al 1996
ST1	2	2	10				-1.8				201	3.0		3.0	l + v -> l	Strabane	early deformed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
ST1	2	2	11				-2.2				293	3.6		3.6	l + v -> l	Strabane	early deformed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
ST1	2	2	12				-0.3				239	0.5		0.5	l + v -> l	Strabane	early deformed quartz					aqueous -- low salinity	Earls et al 1996
ST1	2	2	13				0.1				206				l + v -> l	Strabane	early deformed quartz					aqueous -- low salinity	Earls et al 1996
ST1	2	2	14				1.3				202				l + v -> l	Strabane	early deformed quartz					aqueous -- low salinity	Earls et al 1996
ST1	2	2	15					6.5			353	6.5		6.5	l + v -> l	Strabane	early deformed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
ST1	2	2	16					5.8			385	7.7		7.7	l + v -> v	Strabane	early deformed quartz					aqueous-carbonic -- low CO2	Earls et al 1996
TOM4			1	-55.5				7.2			409	5.3		5.3	l + v -> d	Tomnadasahan	quartz			P L1+L2+V car		aqueous-carbonic -- high CO2	Smith 1996
TOM4			2	-55.7				7.2			409	5.3		5.3	l + v -> d	Tomnadasahan	quartz			P L1+L2+V car		aqueous-carbonic -- high CO2	Smith 1996
TOM4			12				-10.9				180	14.9		14.9		Tomnadasahan	quartz					aqueous -- low salinity	Smith 1996
TOM4			3				-6.9				150	10.4		10.4		Tomnadasahan	quartz					aqueous -- low salinity	Smith 1996
TOM4			4				-5.3				240	8.2		8.2		Tomnadasahan	quartz					aqueous -- low salinity	Smith 1996
TOM4			5				-5.0				145	7.8		7.8		Tomnadasahan	quartz					aqueous -- low salinity	Smith 1996
TOM4			6				-4.8				245	7.5		7.5		Tomnadasahan	quartz					aqueous -- low salinity	Smith 1996

Sample No.	Area / wafer	FIA	FI #	TmCO2	Tfm	Thyd	Tice	Tclath	ThCO2	mode of ThCO2	Thtot	wt % NaCl eq	wt % CaCl2 eq	bulk salin. (wt % salt eq)	mode of ThTOT	Locality	mineral / paragenesis	size (µm)	% vapour	inclusion type	comment	Fluid type	Data Source
TOM4			7				-4.0				130	6.4		6.4		Tomnadasahan	quartz					aqueous - - low salinity	Smith 1996
TOM4			8				-3.9				155	6.2		6.2		Tomnadasahan	quartz					aqueous - - low salinity	Smith 1996
TOM4			9				-3.8				210	6.1		6.1		Tomnadasahan	quartz					aqueous - - low salinity	Smith 1996
TOM4			10				-3.8				235	6.1		6.1		Tomnadasahan	quartz					aqueous - - low salinity	Smith 1996
TOM4			11				-3.6				190	5.8		5.8		Tomnadasahan	quartz					aqueous - - low salinity	Smith 1996

7 References

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