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**ANNUAL REPORT E.L.35/85
PIEMAN RIVER, TASMANIA**

OPEN FILE

MICROFILMED

H. D. NOLAN
March 1989

Cominex,
P.O. Box 77,
Sorell, Tas. 7112

89-2934

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INTRODUCTION

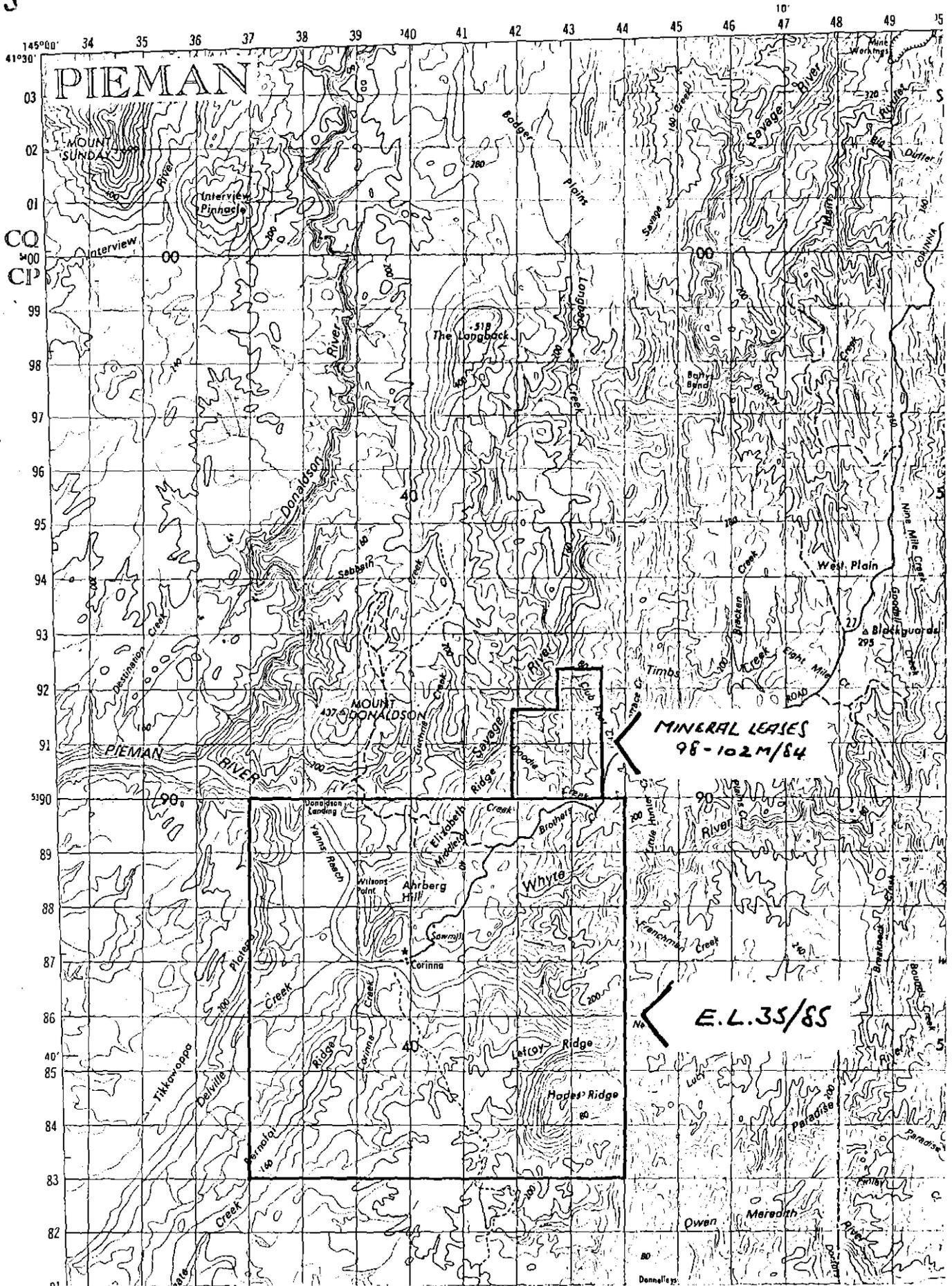
The Pieman River E.L.35/85 covers an area of 35 km² located southwest of Savage River township in western Tasmania (Fig. 1). Mineral leases 98-102M/84 of approximately 3 km² adjoin the northern boundary of E.L.35/85 and are being treated as forming part of the E.L. for exploration reporting purposes.

The Licence covers the Corinna alluvial goldfield which was worked in the 1890's. Work by Cominex during 1987/88 identified the presence of high silver bearing crystalline gold with an immediate bedrock source in Brookside Creek.

In March 1988 Cominex agreed to a joint venture proposal by Aberfoyle Resource Limited to further develop the Brookside prospect. As a consequence of legal and technical difficulties the finalisation of the Joint Venture was delayed until 14 March 1989 when final agreements were executed. Due to constant delays in finalising the agreement with Aberfoyle (which was expected to be completed by mid-1988) no systematic programme was carried out during the year. However the area was covered by a random geochemical sampling programme which concentrated on the most favourable target areas along the mudstone/dolomite contact.

Fig. 1 Locality map.

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SILICA FLOUR POTENTIAL

Previous exploration and research outlined in the 1986 annual report (Large, 1987) demonstrates that the high purity silica flour deposits of the region are the result of silicification and breakdown of Proterozoic dolomite under a protective blanket of Tertiary gravels. The key exploration criteria of Proterozoic dolomites and Tertiary gravels occur in the northeast portion of E.L.35/85.

Exploration work over the past 12 months has concentrated on the area of high potential identified by Large (1987) as outlined in Fig. 2.

Outside Mineral Lease 62M/85 held by Monier Limited only minor patchy occurrences of silica flour have been identified on the Corinna Dolomite bedrock in the northeast portion of the E.L., and these occurrences were visually contaminated by tertiary gravels and iron staining and would therefore not be suitable commercial material.

Further reconnaissance will be undertaken but it is considered that the potential for additional occurrences of high purity material in this area is low.

Silica Flour Research

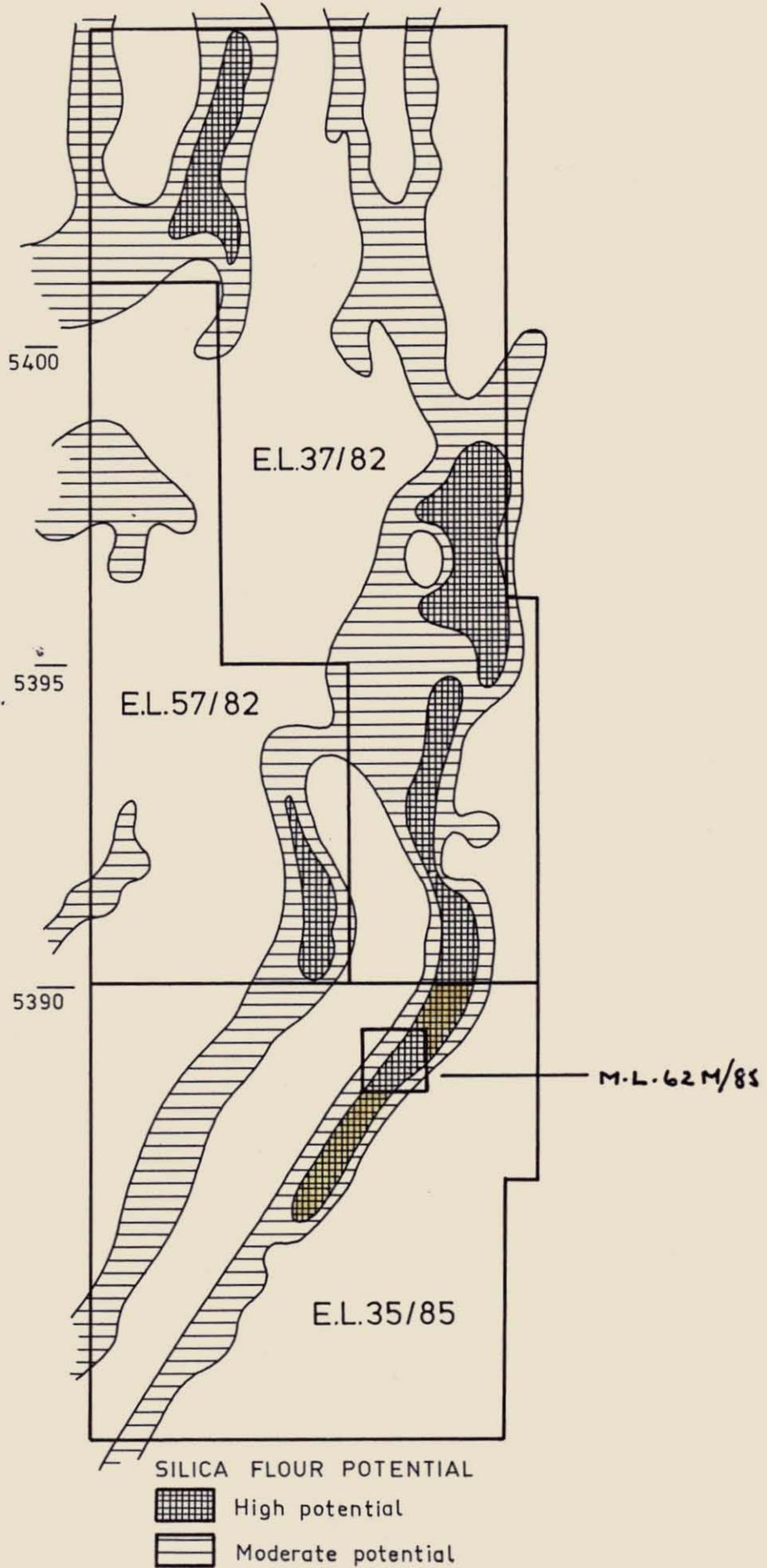
During 1988 Cominex has provided field and financial assistance to D. Piasczyk, a student from the University of Tasmania, who has undertaken research on the genesis of the Corinna silica deposits as his B.Sc. Honours project. His thesis on the subject is enclosed under separate cover.

Copy lodged with library of
Div. Mines Min. Res.

E.L.35/85

Fig. 2 Aeromagnetic lows in EL's 37/82, 57/83 and 35/85 indicating areas of good potential for dolomite bedrock and silica flour deposits.

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PRIMARY GOLD

Rock Chip and Soil Sampling

In the course of preliminary investigations of the Brookside prospect, Aberfoyle Resources collected one soil and eighteen rock chip samples. All samples were analysed for Cu, Pb, Zn, Ag, As and Au (see Appendix 1 and Fig. 3 for locations).

Sample numbers 427501–511 were taken from the immediate vicinity of the prospect. One sample from this group (427504) was further treated for the above elements after sizing and concentration (see Appendix 1).

Sample numbers 427512–519, all of which were rock chips of lacy agate, were collected from the vicinity of Sailor Creek some 4 km southwest of the Brookside prospect. In addition to geochemical analysis, six of the eight samples were provided to Chartered Mineral Services for petrological examination (see Appendix 2).

A significant aspect of their report is the recognition of moderate temperature (about 250°C) fluid inclusions showing evidence of a boiling system consistent with an epithermal origin for the lacy agate veins. However this conclusion is only based on one sample, and further work will be required for verification.

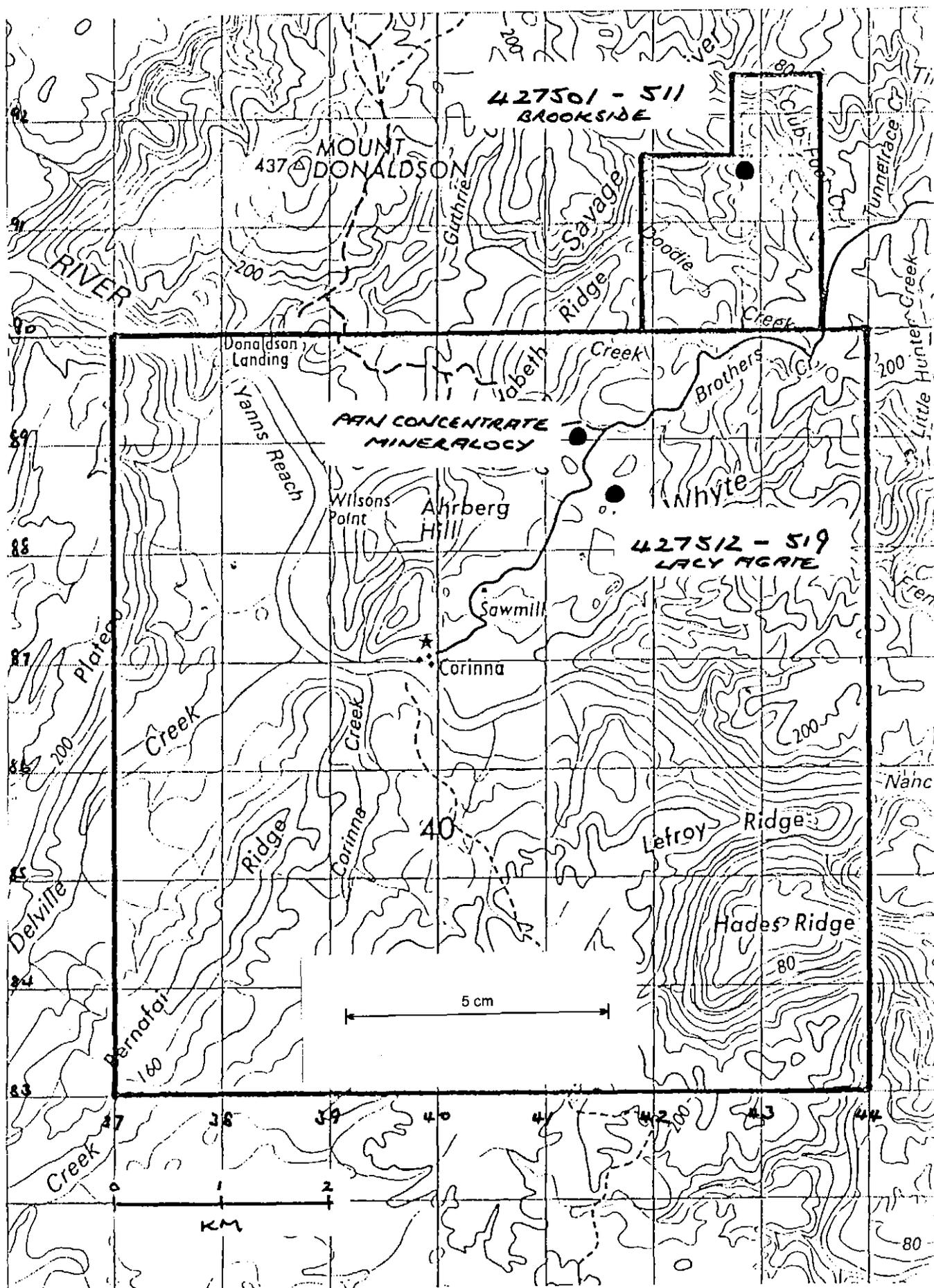
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Panned Concentrate Mineralogy

A selected pan concentrate sample taken by Cominex was provided for study to Central Mineralogical Services. The enclosed report by H.W. Fander (see Appendix 3) supports both crystalline gold and cassiterite. However this sample is 3 km from the known gold-bearing outcrops (see Fig. 3) at Brookside and therefore a separate source for gold is probable. This is the first time that crystalline tin of near source origin has been identified in the area, and further work will be required to evaluate the distribution of tin in the drainage system throughout this E.L. and the adjoining E.L.'s.

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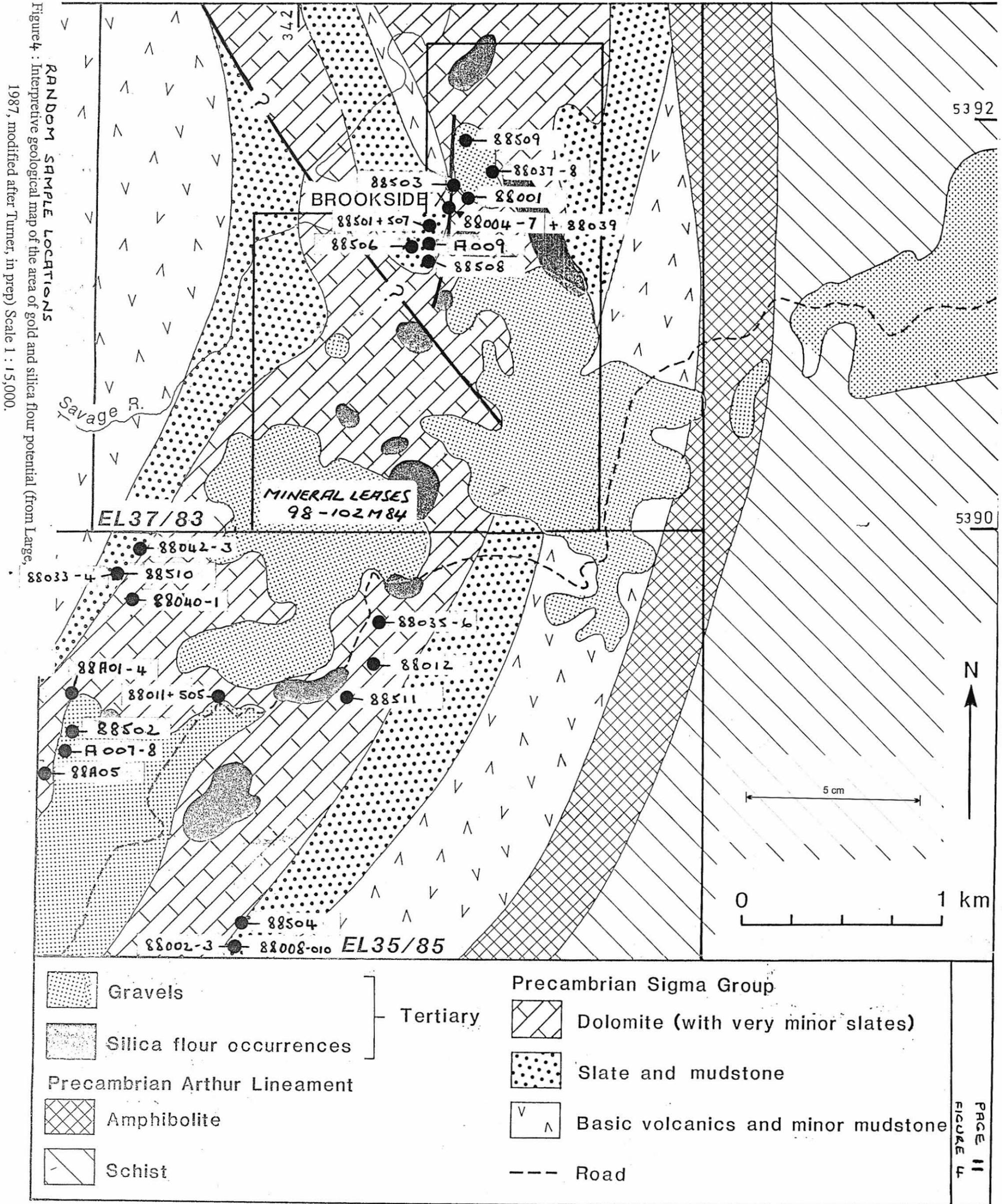
Fig. 3 Rock chip/soil geochemistry. Lacy agate - petrology. Pan concentrate - mineralogy.



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Random Rock Chip/Soil Sampling

Samples of rock chip or soil were taken throughout the E.L. at locations close to the target contact area between the Corinna dolomite and the mudstones. These samples were analysed for Cu, Pb, Zn, Ag, As and Au, and the results are reported in Appendix 4. The sample locations are shown in Fig.4. Due to extensive overburden along the target contact, this sampling was not complete and does not provide adequate coverage to allow full evaluation of the contact zones. Depending on future results at Brookside it is anticipated that Aberfoyle will continue this sampling programme in a more systematic manner.



A P P E N D I X 1

ROCK CHIP/SOIL ANALYSIS (ABERFOYLE)

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FILE NOTE:

20th January, 1988

Samples collected on visit to Brookside Au prospect 18.1.88.

<u>Sample No.</u>	<u>Description</u>	<u>Location</u>
427501	Lacy agate (colloform qtz) with dolomite weathered out.	Top of sluice face at Brookside workings.
427502	Black fissile shale with syngenetic pyrite//to bedding and some apparent cross cutting epigenetic pyrite.	From gravels between Brookside waterfall and confluence of creeks.
427503	As for 427502 with a 1 cm quartz vein.	As above.
427504	Orange brown to grey soil above dolomite boulder. Previously reported 0.5 g/t (See photo).	Base of Brookside sluice face.
427505	Tertiary white quartz gravel (See photo).	As above (NO GEOCHEM)
427506	Dolomite boulders to 2 m with minor carbonate (calcite) veining.	As above
427507	Weathered mudstone with abundant limonite clots after pyrite.	Near As anomaly.
427508	As above but more Fe rich.	As above
427509	Weathered shaly material from within slate near sample 427507 area.	
427510	Weathered bedded mudstone with abundant limonite casts after pyrite. Bedding dips 45° to 275° Mag.	As Anomaly zone.
427511	Grey mudstone with minor limonite after pyrite.	As above
427512 427519	Lacy agate from tributary of Sailor Creek. Gravel boulders, not outcrop.	



D. B. WALLACE.

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ANALYTICAL DATA

663014

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

		23.3.08.05078				28/01/88		2676		1 OF 1	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	As				
1	427501	10	5	15	<0.5	<0.008	1				✓
2	427502	55	<5	35	<0.5	<0.008	4				✓
3	427503	20	5	25	<0.5	<0.008	2			427504	②
4	427506	30	5	30	<0.5	<0.008	1				✓
5	427507	105	10	30	<0.5	<0.008	19				✓
6	427508	435	70	160	<0.5	<0.008	20				✓
7	427509	260	<5	30	<0.5	<0.008	10				✓
8	427510	195	60	145	<0.5	<0.008	790				✓
9	427511	60	5	80	<0.5	<0.008	8				✓
10	427512	<5	<5	10	<0.5	<0.008	2				✓
11	427513	<5	<5	5	<0.5	<0.008	2				✓
12	427514	<5	<5	5	<0.5	<0.008	1				✓
13	427515	<5	<5	5	<0.5	<0.008	<1				✓
14	427516	<5	<5	5	<0.5	<0.008	<1				✓
15	427517	<5	<5	5	<0.5	<0.008	<1				✓
16	427518	<5	<5	10	<0.5	<0.008	<1				✓
17	427519	<5	<5	5	<0.5	<0.008	<1				✓
18											
19											
20											
21											
22											
23	DETECTION LIMIT	5	5	5	0.5	0.008	1				
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM				
25	METHOD	101	101	101	101	309	114				

Results in ppm unless otherwise specified
 T = element present but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

AUTHORISED OFFICER

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663015

BROOKSIDE AU PROSPECT

SIZINGS AND CONCENTRATE WORK ON SAMPLE NO. 427504

427529	Head	
427530	+3.35mm	920 g
427531	+1.18mm	675 g
427532	+300um mids.	134 g
427533	+300um tail	560 g
427534	+20um con. 2	34 g
427535	+20um mids.	153 g
427536	+20um tail	645 g
427537	-20um slimes	236 g

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ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

663016

ANALYTICAL DATA

SAMPLE PREFIX		REPORT NUMBER				REPORT DATE		CLIENT ORDER No.		PAGE	
		23.3.08.05203				08/03/88		3022		1 OF 1	
TUBE No.	SAMPLE No.	Cu	Cu	Pb	Zn	Ag	Ag	As	Au		
1	427529	4450	-	70	270	1.5	-	260	1.400		
2	427530	1100	-	40	190	0.5	-	71	0.110		
3	427531	2300	-	40	320	1.0	-	200	0.230		
4	427532	1700	-	80	430	1.0	-	170	0.826		
5	427533	3850	-	80	600	2.5	-	330	0.556		
6	427534	-	3400	345	660	-	9	900	5.450		
7	427535	640	-	75	320	2.0	-	130	1.930		
8	427536	3250	-	80	205	1.5	-	200	0.615		
9	427537	8000	-	110	385	2.5	-	310	0.570		
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23	DETECTION	5	25	5	5	0.5	2	1	0.008		
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM		
25	METHOD	101	104	101	101	101	104	114	309		

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

AUTHORISED OFFICER

Don Collier

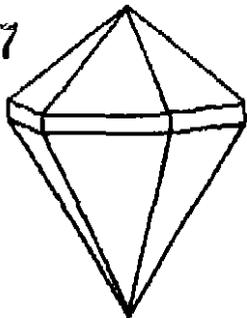
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APPENDIX 2

PETROLOGY REPORTS - C.M.S.

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CMS
Chartered Mineral Services

CMS 168
2004/2

PETROLOGY REPORT

**PETROLOGY OF SIX QUARTZ VEIN SAMPLES
FROM PROTEROZOIC DOLOMITES OF WESTERN TASMANIA**

**FOR
ABERFOYLE RESOURCES LTD**

MARCH 1988

**BY
JOHN M ALLEN
ALLEN GEOLOGICAL CONSULTANTS LTD**

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663019

SUMMARY

- 1 Quartz veins record three generations of quartz deposition:
 - I. Banded quartz (without relict colloform textures)
 - II. Coarse drusy quartz
 - III. Fine grained quartz cavity filling and veinlets.
2. Generation II drusy quartz was deposited from a boiling fluid at about 250°C, i.e. epithermal conditions.
3. The absence of accessory minerals apart from minor carbonate derived from solution of the host dolomite in the hydrothermal fluid, and particularly of metallic oxides and sulphides, indicates that the sampled area may be barren of metals of economic interest.
4. Sealing of the rocks without extensive fracturing and polyphasal quartz veining, suggests that the sampled part of the epithermal system was not highly active compared to classic epithermal systems which are characterised by repeated silicification, refracturing and brecciation, and resealing.
5. The samples could be from the periphery of a more active epithermal system, and further field investigation may be warranted.

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INTRODUCTION

Six samples of quartz veined Proterozoic dolomite from western Tasmania were submitted to CMS with a request that petrological studies be carried out to determine whether the banded quartz has been deposited as a result of epithermal activity. Thin section petrography was carried out on each sample, and fluid inclusion homogenisation temperatures determined for one sample. Summary petrographic and fluid inclusion data are listed in Table 1.

RESULTS

PETROGRAPHY

All six samples contain quartz as the major mineral, with trace amounts of carbonate present in 427514, 427518 and 427522, and hematite in 427522. There are no accessory minerals present which are indicative of conditions of formation of the veins.

Three generations of quartz deposition appear to be present (based on study of thin sections and outcrops only). The earliest generation, of poor to well banded quartz, is present in all six samples. Alternating layers up to 5mm wide are of fine grained mosaic quartz with a grain size of 0.01-0.2mm, and coarser grained subhedral prismatic quartz with a grain size up to 4mm. Relict textures indicative of recrystallization from colloform banded quartz are not present.

The second generation is of coarse grained quartz 5mm to 1cm in size, present in samples 427514, 427515, and 427522. A cockscomb texture is formed by the radial arrangement of quartz crystal about growth centres on a substrate of banded generation I quartz. Zonally arranged fluid and carbonate inclusions preserve a euhedral crystal form, and indicate that the quartz crystals grew in drusy cavities which have been completely sealed by progressive crystal growth. In samples 427515 and 427522 the generation II quartz is deposited conformably on generation I quartz and indicates cessation of cyclical conditions attending deposition of banded quartz. In sample 427514 coarse generation II quartz transects generation I banded quartz at a high angle, indicating fracturing at the cessation of banded quartz deposition.

Generation III quartz is fine grained, deposited interstitially to coarse drusy quartz of generation II, and in veinlets crosscutting both generations I and II quartz. It is present in

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samples 427514, 427515, 42751718 (as veins up to 1cm thick), and 427522.

Carbonate is a trace accessory in generations II and III quartz only.

FLUID INCLUSIONS

Fluid inclusion homogenisation temperatures were measured in generation II quartz in sample 427522. Liquid and vapour-rich inclusions are present, indicative of trapping from a boiling fluid. Homogenisation temperatures of liquid-rich inclusions indicate a fluid temperature of about 250°C.

INTERPRETATION

The banded generation I quartz was deposited under cyclically varying temperatures. Periodic influx of relatively hot fluid would result in initial deposition of fine grained quartz, followed by coarser quartz as the fluid cooled. Boiling is not a necessary condition of the fluid, but if it did occur would act to decrease the solubility of silica, enhancing the rapid, initial deposition of finer grained quartz.

Coarse generation II quartz was precipitated from a boiling fluid at about 250°C, and can be termed epithermal. However, the total absence of accessory minerals apart from minor carbonate derived from solution of the host dolomite in the hydrothermal fluid, and particularly of metallic oxides and sulphides, indicates that the sampled part of the system may be barren of metals of economic interest.

Silicification has sealed the rocks and porosity and permeability are low. Together with the apparent lack of extensive fracturing and polyphased quartz veining, this suggests that the epithermal system was not highly active compared to classic epithermal systems which are characterised by repeated silicification, refracturing and brecciation, and resealing. It is possible that the samples are from the periphery or distal outflow region of a more active epithermal system.

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TABLE 1
SUMMARY OF PETROLOGICAL DATA

SAMPLE NUMBER	LITHOLOGY	DEPOSITION			FLUID INCLUSIONS
		I:banded Q	II:drusy Q	III:fine Q	
427514	Banded quartz vein	Q	Q	Q,Cb	Inclusions too small
427515	Banded quartz vein	Q	Q	Q	
427517	Banded quartz vein	Q			
427518	Banded quartz vein	Q		Q,Cb	
427521	Banded quartz vein	Q			
427522	Banded quartz vein	Q	Q,Cb,Hm	Q	1* = 240, 275, 285°C 1* CO2 = 310, 313°C

Abbreviations: Q quartz
 Cb carbonate
 Hm hematite

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APPENDIX 1
PETROGRAPHY

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J.M.Allen, Auckland, New Zealand
March 1988

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COMPANY Aberfoyle Resources Ltd
LOCATION Western Tasmania
SAMPLE NUMBER 427514
ROCK NAME Banded quartz vein

OFFCUT DESCRIPTION

White and grey banded quartz, with parallel layers 1-3mm thick, cut by a coarse white quartz vein +2cm thick.

THIN SECTION DESCRIPTION

LITHOLOGY: PRIMARY MINERALOGY, TEXTURES

None

ALTERATION
REPLACEMENT

None

DEPOSITION

Alternating bands of fine grained ($\approx 0.05-0.2\text{mm}$) and coarse grained (up to 2mm) quartz. Banding is truncated by a vein of coarser subhedral-anhedral prismatic quartz with grain size of up to 1cm, with interstitial fine grained quartz. Late fine grained quartz occurs in veinlets throughout the sample. Very fine grained carbonate and secondary fluid inclusions occur along healed fractures.

FLUID INCLUSIONS

Inclusions are too small to measure homogenisation temperatures.

COMMENTS

Polyphasal quartz vein with no accessory minerals indicative of conditions of formation. Early banded quartz fractured and overgrown by coarse quartz.

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J.M.Allen, Auckland, New Zealand
March 1988

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COMPANY Aberfoyle Resources Ltd

LOCATION Western Tasmania

SAMPLE NUMBER 427515

ROCK NAME Banded quartz vein

OFFCUT DESCRIPTION

Cavities in fine grained white quartz infilled and sealed with grey cockscomb quartz.

THIN SECTION DESCRIPTION

LITHOLOGY: PRIMARY MINERALOGY, TEXTURES

None

ALTERATION
REPLACEMENT

None

DEPOSITION

Rounded areas of fine grained quartz with a grain size of ≈ 0.1 mm form a substrate for the later growth of coarse grained (up to 5mm) radiating crystals of subhedral to anhedral prismatic quartz (cockscomb structure). Zonally arranged primary fluid inclusions, and inclusions of very fine grained carbonate in the coarse quartz record progressive growth of euhedral quartz crystals. Original drusy quartz cavities have thus been completely sealed by progressive crystal growth. Late fine grained quartz occurs interstitially to the coarse quartz. Abundant secondary fluid inclusions occur along healed fractures.

COMMENTS

Banded quartz vein with no accessory minerals indicative of conditions of formation.

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J.M.Allen, Auckland, New Zealand
March 1988

COMPANY Aberfoyle Resources Ltd

LOCATION Western Tasmania

SAMPLE NUMBER 427517

ROCK NAME Banded quartz vein

OFFCUT DESCRIPTION

Moderately well defined bands of fine to coarse grained, white to gray quartz, 1mm to 2cm thick.

THIN SECTION DESCRIPTION

LITHOLOGY: PRIMARY MINERALOGY, TEXTURES

None

ALTERATION
REPLACEMENT

None

DEPOSITION

Alternating bands of fine grained quartz ~0.05 to 0.2mm in grain size, and of coarse subhedral to anhedral prismatic quartz up to 5mm in grain size. Abundant primary fluid inclusions, and secondary fluid inclusions along healed fractures in coarse quartz.

COMMENTS

Banded quartz vein with no accessory minerals indicative of conditions of formation.

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J.M.Allen, Auckland, New Zealand
March 1988

COMPANY Aberfoyle Resources Ltd

LOCATION Western Tasmania

SAMPLE NUMBER 427518

ROCK NAME Banded quartz vein

OFFCUT DESCRIPTION

Fine grained grey quartz with a poor banded and cockscomb structure, is cut by veins of white fine grained quartz up to 1cm thick.

THIN SECTION DESCRIPTION

LITHOLOGY: PRIMARY MINERALOGY, TEXTURES

None

ALTERATION
REPLACEMENT

None

DEPOSITION

Two phases of quartz deposition are recognised:

1. Medium to coarse grained, poorly banded quartz with a grain size of up to ~3mm. The coarser quartz crystals have a poor to moderately well preserved radiating prismatic habit (cockscomb structure) and abundant primary and secondary fluid inclusions.
2. Fine grained mosaic quartz in crosscutting veins and veinlets.

COMMENTS

Banded quartz vein with no secondary minerals indicative of conditions of formation.
Trace carbonate (calcite or dolomite).

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J.M.Allen, Auckland, New Zealand
March 1988

COMPANY Aberfoyle Resources Ltd

LOCATION Western Tasmania

SAMPLE NUMBER 427521

ROCK NAME Banded quartz vein

OFFCUT DESCRIPTION

Wavy bands of fine grained white quartz 1-5mm thick, alternating with bands of prismatic quartz ≈ 1-4mm thick.

THIN SECTION DESCRIPTION

LITHOLOGY: PRIMARY MINERALOGY, TEXTURES

None

ALTERATION
REPLACEMENT

None

DEPOSITION

Alternating bands of mosaic quartz with grain size of ≈ 0.05-0.2mm, and of subhedral to anhedral prismatic quartz crystals (up to 4mm in length) with cockscomb structure.

COMMENTS

Banded quartz vein with no accessory minerals indicative of conditions of formation.

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J.M.Allen, Auckland, New Zealand
March 1988

663029

COMPANY Aberfoyle Resources Ltd
LOCATION Western Tasmania
SAMPLE NUMBER 427522
ROCK NAME Banded quartz vein

OFFCUT DESCRIPTION

Crystals of coarse grained, grey quartz up to about 1cm in length, radiating from (in cockscomb structure) and growing around centres of fine grained, white, granular quartz. The coarse grained quartz contains zonally arranged, concentric inclusions of purple iron oxide. Fine grained white quartz occurs in the interstices between coarse quartz crystals.

THIN SECTION DESCRIPTION

LITHOLOGY: PRIMARY MINERALOGY, TEXTURES

None

ALTERATION

REPLACEMENT

None

DEPOSITION

Three phases of quartz deposition can be recognised:

1. Fine grained mosaic quartz, $\approx 0.05\text{mm}$ in average grain size
2. Coarse grained subhedral to anhedral, prismatic quartz crystals up to 1cm in size, with concentric inclusions of hematite and very minor carbonate and primary fluid inclusions, formed at intermediate stages of crystal growth and recording euhedral form. Original drusy cavities have been completely sealed by crystal growth.
3. Fine grained mosaic quartz interstitial to and as veinlets in coarse quartz crystals. Secondary fluid inclusions follow healed fractures in coarse quartz.

FLUID INCLUSIONS

Primary fluid-rich inclusion homogenisation temperatures = 240, 275, 285°C.
Secondary CO₂-rich inclusion homogenisation temperatures = 310, 313°C.

COMMENTS

Banded quartz vein with no accessory minerals indicative of conditions of formation. Similar to sample 427515.

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APPENDIX 2
FLUID INCLUSION DATA

FLUID INCLUSION WORK SHEET

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PROJECT NO:

DATE:

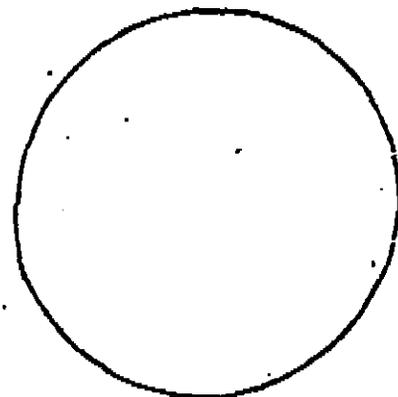
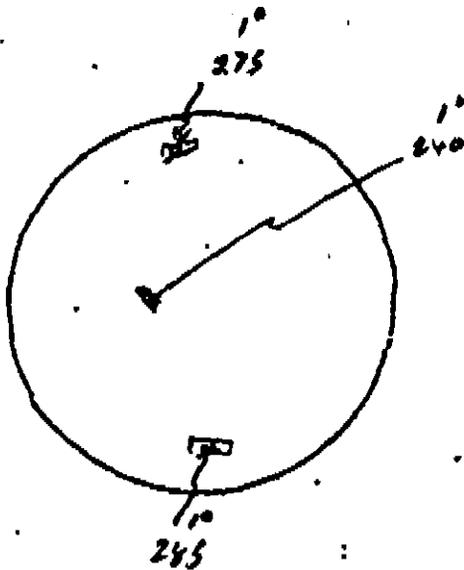
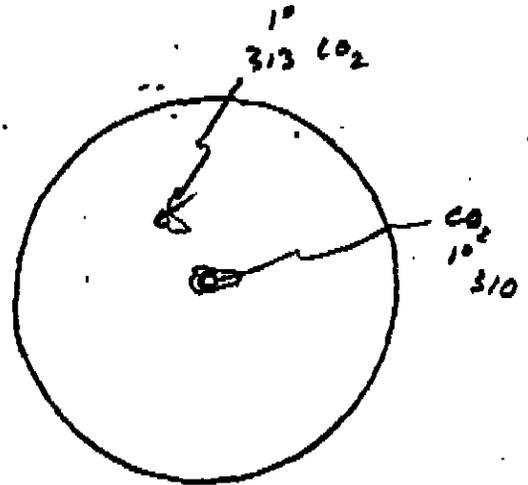
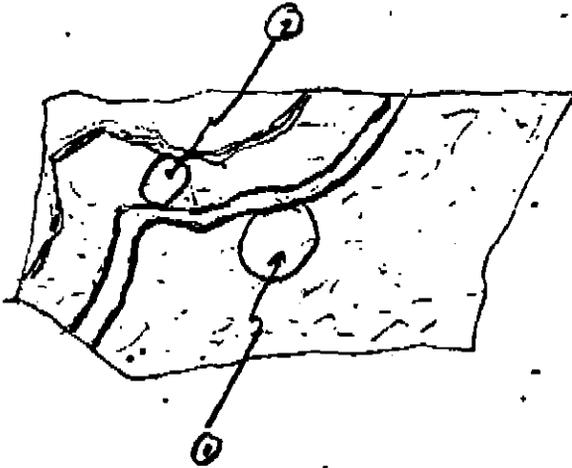
CLIENT:

OPERATOR:

SPECIMEN ID: *LP 27522*

SHEET NO:

NOTES:



A P P E N D I X 3

PANNED CONCENTRATE MINERALOGY - FANDER

032 **Aberfoyle Resources Limited**

Incorporated in Victoria

EXPLORATION DIVISION

ABERFOYLE RESOURCES LIMITED

EXPLORATION DIVISION

39 RIVER ROAD WIVENHOE

(P.O. BOX 952 BURNIE)

TASMANIA 7320

PHONE (004) 31 6333

**1st Floor
123 Camberwell Road
Hawthorn East
Victoria 3123
Australia
Telephone: (03) 882 2226
Facsimile: (03) 813 1086
Telex: AA38646**

663033

19th January, 1989

Mr. H. W. Fander,
Central Mineralogical Services,
39 Beulah Road,
NORWOOD. S.A. 5067

Dear Wally,

Please find attached selected pan concentrate grains from the Corrinna area in western Tasmania.

Would you please describe the mineral species present and comment on the unusual habit of the native copper. Of particular interest is the silver mineral which is soft but has a brittle fracture. Any comments on the nature of the gold grains would be welcome but I suspect they are too water worn to tell us anything.

Yours faithfully,

D. B. Wallace,
Regional Manager.

Encl.

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Central Mineralogical Services

39 Beulah Road, Norwood, South Australia 5067
Telephone (08) 42 5659 Fax (08) 363 1820
International: Telephone + 618 42 5659 Fax + 618 363 1820



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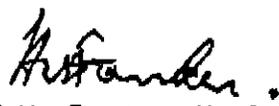
Mr. D. B. Wallace
Regional Manager
Aberfoyle Resources Ltd.
Exploration Division
P.O. Box 952
BURNIE / TAS. 7320

1st February, 1989

REPORT CMS 89/1/17

YOUR REFERENCE:	Letter dated 19.1.1989
DATE RECEIVED:	23rd January, 1989
SAMPLE NOS.:	Corrinna
SUBMITTED BY:	D.B. Wallace
WORK REQUESTED:	Mineralogy

Copy to:
Mr. H. Skey
Exploration Manager
Aberfoyle Resources Ltd.
Exploration Division
123, Camberwell Road
HAWTHORN EAST / Vic. 3123


H.W. Fander, M. Sc.

CENTRAL MINERALOGICAL SERVICES

034

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

Job No. CMS 89/1/17 Date Received: 23.1.1989

Reference Letter dated 19.1.1989 - D.B. Wallace

Sample No. Corrinna

Nature of Sample: Panned Concentrate

DESCRIPTION SECTION No.

a. Hand Specimen:

IDENTIFICATION

663035

b. Microscopic:

The "copper" grains and sulphide grains were hand-picked, briquetted and polished for identification, and the sample as a whole was examined under the stereobinocular microscope. The following results were obtained:

1. Brown angular grains of cassiterite, sometimes intergrown with quartz; they show little or no abrasion and are from a nearby source, probably of greisen- or vein-cassiterite.
2. Large grains of gold with irregular shapes and frosted surfaces, showing little or no abrasion or polishing, and containing embedded quartz grains; protected cavities have bright to splendid surfaces. It is believed that the source was quite nearby.
3. Sulphide grains with good cleavage and silver colour on fresh surfaces are galena.
4. The globular grains of metallic "copper" are actually brass with Cu-rich surfaces due to removal of Zn by leaching. Thus, this is an artificial phase.
5. A single, abraded grain consisted of an aggregate of fine reddish rutile needles, intergrown with quartz.

H.W. Fander, M. Sc.

A P P E N D I X 4

ROCK CHIP/SOIL ANALYSIS (COMINEX)

036

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HY 4

663037

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

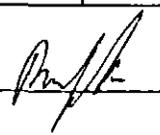
CLIENT ORDER No.

PAGE

		PT: 01.08.08072				02/02/		10000		1 OF 1	
TUBE No.	SAMPLE No.	Cu	Pb	Pb	Zn	Zn	Ag	Ag	As	Hg	
1	88001	<5	<5	-	10	-	<0.5		1	0.008	
2	88501	710	-	1400	-	2750		8	32	0.008	
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22											
23	DETECTION	5	5	25	5	25	100	2	1	0.008	
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	
25	METHOD	101	101	104	101	104	101	104	114	101	

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

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037

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663038

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

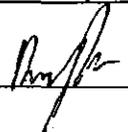
SAMPLE PREFIX		REPORT NUMBER				REPORT DATE	CLIENT ORDER No.		PAGE	
		999.01.08.05100				03/02/88	18560		1 OF 1	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	As	Au			
1	B8002	30	<5	1250	<0.5	6	<0.008			
2	B8003	5	<5	20	<0.5	3	<0.008			
3	B8004	990	5	80	<0.5	110	0.110			
4	B8005	10	<5	15	<0.5	4	0.050			
5	B8006	195	<5	80	<0.5	33	<0.008			
6	B8007	10	<5	45	<0.5	8	<0.008			
7	B8502	60	15	170	<0.5	4	<0.008			
8	B8503	500	105	275	<0.5	50	0.010			
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22										
23	DETECTION	5	5	5	0.5	1	0.008			
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM			
25	METHOD	101	101	101	101	114	309			

Results in ppm unless otherwise specified

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

		999.01.08.05154				24/02/88		18561		1 of 1	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	As	Au				
1	88008	90	5	455	<0.5	6	<0.005				
2	88009	85	45	65	<0.5	5	<0.005				
3	88010	15	<5	35	<0.5	<1	<0.005				
4	88011	130	10	580	<0.5	<1	<0.005				
5	88012	25	30	3100	<0.5	2	<0.005				
6											
7											
8	88504	70	20	530	<0.5	24	<0.005				
9	88505	90	10	175	<0.5	<1	<0.005				
10	88506	90	130	30	<0.5	22	0.010				
11											
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16											
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18											
19											
20											
21											
22											
23	DETECTION	5	5	5	0.5	1	0.005				
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM				
25	METHOD	101	101	101	101	114	313				

Results in ppm unless otherwise specified
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663040

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No

PAGE

SAMPLE PREFIX		REPORT NUMBER				REPORT DATE		CLIENT ORDER No		PAGE	
		999.01.08.05233				17/03/88		18562		1 OF 1	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	As	Au				
1											
2											
3											
4											
5											
6	B8507	1450	60	215	<0.5	110	0.065				
7	B8508	630	30	155	<0.5	24	0.025				
8	B8509	100	5	35	<0.5	9	0.010				
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20											
21											
22											
23	DETECTION	5	5	5	0.5	1	0.005				
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM				
25	METHOD	101	101	101	101	114	313				

Results in ppm unless otherwise specified

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Cheryl Cathie

040

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663041

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

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PAGE

999.01.08.05564

05/07/88

18565

1 OF 1

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	As	Au	AuChk		
1	88510	65	15	455	<0.5	15	<0.005	<0.005		
2	88511	115	45	800	<0.5	11	<0.005	-		
3	88033	115	5	275	<0.5	7	<0.005	-		
4	88034	30	15	405	<0.5	55	0.005	-		
5	88035	110	95	2400	<0.5	12	0.005	-		
6	88036	15	10	70	0.5	5	<0.005	-		
7	88037	5	<5	15	1.0	11	<0.005	-		
8	88038	5	<5	25	0.5	3	<0.005	-		
9	88039	575	30	260	1.0	4	0.020	0.025		
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20										
21										
22										
23	DETECTION	5	5	5	0.5	1	0.005	0.005		
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM		
25	METHOD	101	101	101	101	114	313	313		

Results in ppm unless otherwise specified
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663042

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

SAMPLE PREFIX		REPORT NUMBER				REPORT DATE		CLIENT ORDER No.		PAGE	
		999.01.08.05620				08/08/88		18566		1 OF 1	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	As	Au				
1	88040	15	35	60	0.5	13	<0.005				
2	88041	310	25	75	0.5	80	<0.005				
3	88042	40	10	25	1.0	7	<0.005				
4	88043	55	5	80	0.5	2	0.006				
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22											
23	DETECTION	5	5	5	0.5	1	0.005				
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM				
25	METHOD	101	101	101	101	114	313				

Results in ppm unless otherwise specified

T = element present: but concentration too low to measure

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

999.01.08.05676

31/10/88

23951

1 OF 1

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	As	Au	AuChk		
1										
2										
3										
4										
5										
6	BBA 01	155	25	65	<0.5	90	0.008	-		
7	BBA 02	25	<5	25	<0.5	100	<0.005	-		
8	BBA 03	200	35	80	<0.5	90	0.009	-		
9	BBA 04	25	30	560	<0.5	90	<0.005	-		
10	BBA 05	100	15	145	<0.5	4	<0.005	-		
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18										
19										
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22										
23	DETECTION	5	5	5	0.5	1	0.005	0.005		
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM		
25	METHOD	101	101	101	101	114	313	313		

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

		999.01.08.05844				24/11/88		18570		1 OF 1	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	As	Au				
1	A 007	10	10	20	<0.5	2	<0.005				
2	A 008	45	5	365	<0.5	15	<0.005				
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22											
23	DETECTION	5	5	5	0.5	1	0.005				
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM				
25	METHOD	101	101	101	101	114	313				

Results in ppm unless otherwise specified
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 — = element not determined

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663045

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

SAMPLE PREFIX		REPORT NUMBER				REPORT DATE		CLIENT ORDER No.		PAGE	
		999.01.03.05956				02/02/65		1873		1 OF 1	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	As	Au				
1	A009	480	1100	1450	<0.5	37	0.010				
2											
3											
4											
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21											
22											
23	DETECTION	5	5	5	0.5	1	0.005				
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM				
25	METHOD	101	101	101	101	114	313				

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