MOLYHIL WEST

EL 8165

EXPLORATION REPORT FOR PERIOD 16.7.1993-15.7.1994

Prepared for
Roebuck Resources NL

by

S.B. Warne

July, 1994

Technical Report No. 390

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SUMMARY

The Molyhil licence is one of the Box Hole-Molyhil group of tenements located on the Huckitta 1:250,000 Sheet area. The licence covers Lower Proterozoic Arunta Division One strata preserved within the Delny-Mt. Sainthill Fault Zone in faulted contact with Arunta Division Two rocks.

First pass stream and rock chip sampling has indicated anomalous gold, copper and molybdenum values associated with strongly faulted and fractured zones in the northern portion of the licence.

Further geochemical sampling is warranted.

CONCLUSIONS AND RECOMMENDATIONS

1. Anomalous gold, copper, molybdenum and arsenic values are associated with fractured, pyritic quartz veined zones in Division One Arunta strata north of Marshall River. Sampling completed has centred on one dominant structure along the northern boundary of the licence. Aerial photography shows other quartz veined fractures southwards have not been sampled.

   Further sampling of the hill outcrop areas north of Marshall River is recommended.

2. A small outcrop of Marshall Granite noted in the valley of Marshall River suggests the possibility for skarn mineralisation in the area.

   A review of aeromagnetic data is recommended and any anomalous expressions interpretable as magnetite bearing skarn should be ground evaluated.

1. INTRODUCTION

The Molyhil West tenement covers Lower Proterozoic rocks along and flanking the Delny-Mt. Sainthill Fault, a feature developed within a wide west-northwest trending tectonic zone. The area was secured to cover strata of probable volcanic affinity hosting a number of siliceous and some photo-interpreted gossanous outcrops.

No mineral occurrences have been previously reported in the area. Past company exploration has been confined to low density drainage samplings from which no anomalous values were documented.

2. LOCATION AND ACCESS

The tenement is one of the Box Hole-Molyhil group of tenements (Figure 1) located within the Huckitta 1:250,000 Sheet area centred some 230 kilometres northeast of Alice Springs (Figure 1). The location of E.L. 8165, in relation to adjacent tenements, is shown in Figure 2.

Access from Alice Springs to the area is by the Plenty River Highway to Huckitta Station, thence north by a graded station track to Halfway Dam located near the Marshall River. Country in the southern portion of the licence, south of Marshall River is open plains with some low rises. North of Marshall River hill country varies from undulating to rugged with limited vehicle access.

3. LAND TENURE

E.L. 8165 consists of 28 blocks (90 square kilometres) and was granted on 16 July, 1993, for a six year term.

4. GEOLOGY

A full description of Huckitta Sheet geology is given in Freeman, 1986.

Within EL 8165 a dominant alluvium covered fault of the Delny-Mt. Sainthill fault zone passes through the valley of the Marshall River. This feature separates Division One Arunta Strata (Kanandra Granulite) in the north from Division Two strata (Irindina Gneiss) southwards.

The Kanandra Granulite consists of garnet-bearing quartzo-felspathic gneiss, metasiltstones, mafic granulite and amphibolites. The strata is complexly faulted; mylonites and quartz vein invasions have developed along east-west and west-northwest trending fractures.

Irindina gneiss outcrops meagrely in the south. It consists of biotite-garnet gneisses and calc-silicate rocks.

One small outcrop of pink Marshall Granite occurs near the Marshall River in the centre of the licence.

5. EXPLORATION RESULTS

Drainage sampling, dominantly of an orientation nature, was completed over a portion of the area, together with selective rock sampling. The locations for samples are shown in Figure 3 and assays presented in Appendix I.

5.1 DRAINAGE SAMPLING

Three bank silt samples were taken in the area during a semi-regional orientation survey. These consisted of fine sand and silt deposited outside the main stream channel during flood-flow. Approximately 2 kg samples were bulk cyanide leached for extractable gold (0.1 ppb assay detection) and 50 gram portions assayed (AAS) for copper and lead.

This type of sample produced low results, in large part due to abundant Pleistocene loess deposits in the area being readily washed into streams and acting as a dilutant.

One sample (B6) was considered anomalous (0.7 ppb gold, 12 ppm copper). The anomaly was found to relate to small pyritic quartz veins locally cutting quartz-felspar-biotite gneisses and calc-silicate rocks of Irindina Gneiss near the southern boundary of the licence and not considered significant.

A series of stream samples were taken in the west of the licence and along an east-west sheared zone along the northern boundary. These were of two types; each taken from the stream bed at each sample site. One was a conventional minus 80 mesh sample and the other a sample of magnetic material. The latter was composed of magnetite bearing rock fragments one to five millimetres in size. The samples were designated "SS" and "M" respectively and a comparison of assay values for each is given in Figure 4. "M" samples yielded elevated zinc values due to incorporation of that element into the magnetite lattice and good responses for copper, molybdenum and gold compared to low, background type values from "SS" samples.

5.2 OUTCROP SAMPLING

Samples of siliceous outcrops within a sheared zone along the northern licence boundary returned weakly anomalous values for copper, gold and arsenic (200R-206R).

A petrographic examination (204R, Appendix 2) of one sample showed the outcrops to be silica flooded tectonic breccias cut by hydrothermal vein quartz carrying pyrite.

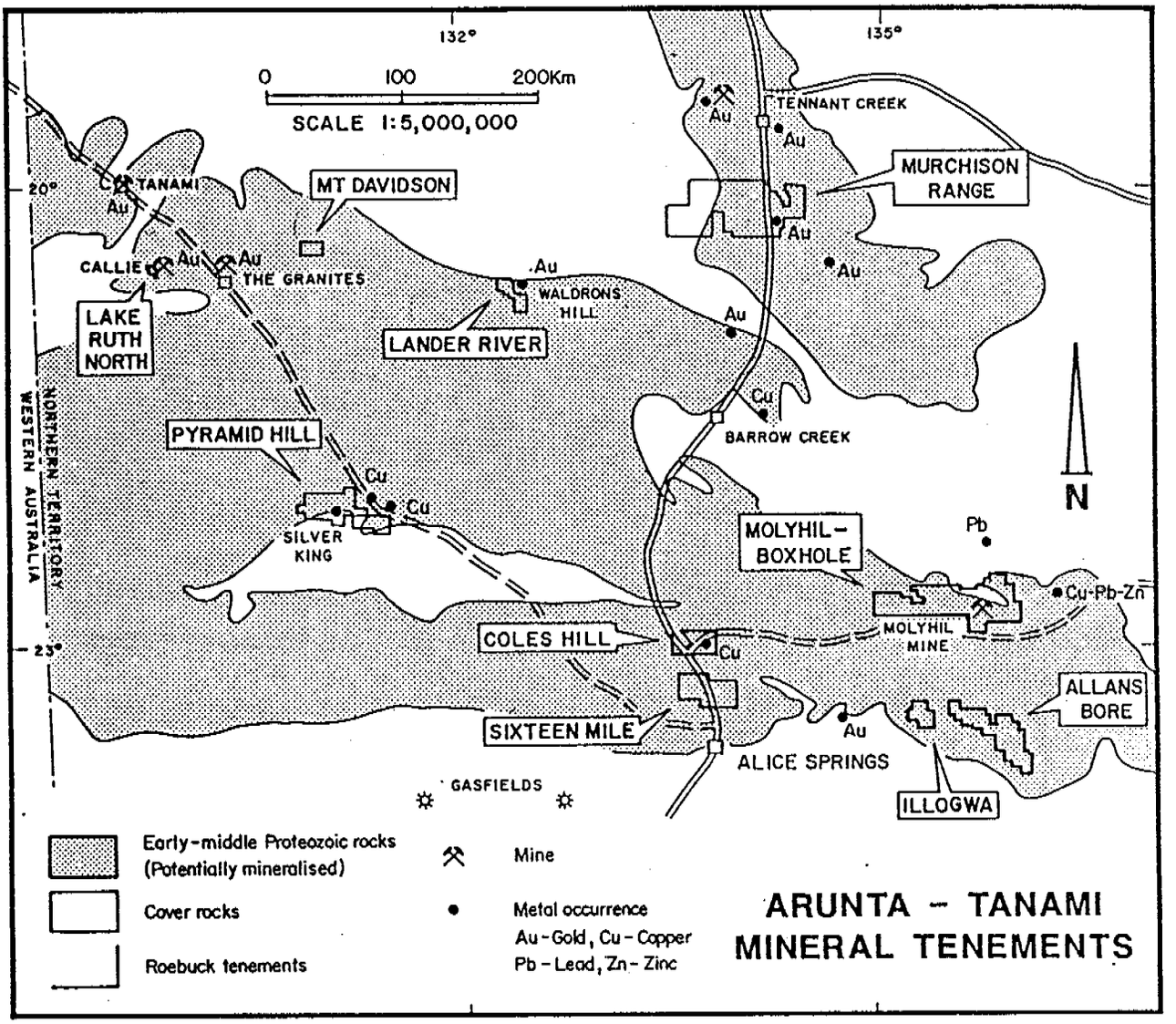
A maximum gold value of 29 ppb was obtained from a ferruginous chert and chloritic rock in contact with amphibolite (R206).

6. REFERENCES

Freeman, M.J., 1986 — 1:250,000 Geol. Map Series, Explanatory Notes, Huckitta SF53-11. N.T.G.S.

Freytag, I.B., 1993 — Review of Past Mineral Exploration, Jinka and Dneiper 1:100,000 Sheet Areas, Huckitta, N.T. Roebuck Resources N.L. Technical Report No. 314 (Unpub.)

Shaw, R.D., 1990 — Arunta Block - regional geology and mineralisation, in Geology of the Mineral Deposits of Australia and Papua New Guinea (Ed. F.E. Hughes), Aus.I.M.M.



LOCATION PLAN

FIGURE 1

135° 30'

136° 00'

22° 45'

23° 00'

EL 8144

EL 8165

EL(A) 8127

EL 8384

DULCIE RANGE

PLENTY RIVER

Scale 1:250 000

0 5 10km

ROEBUCK RESOURCES N.L.		
HUCKITTA 1:250 000 SHEET TENEMENT AREAS		
Author:	Date: JUNE 1994	FIGURE 2

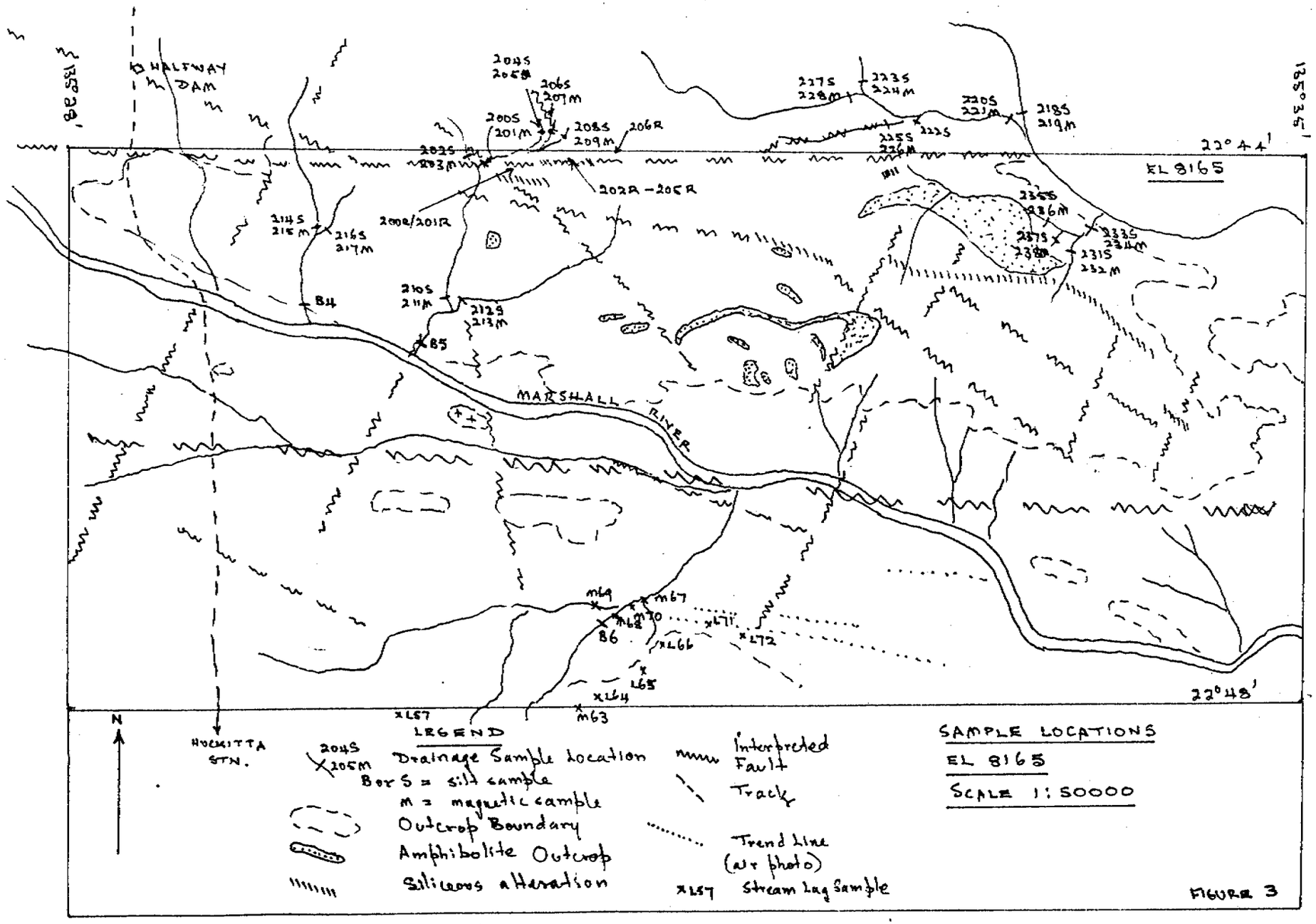
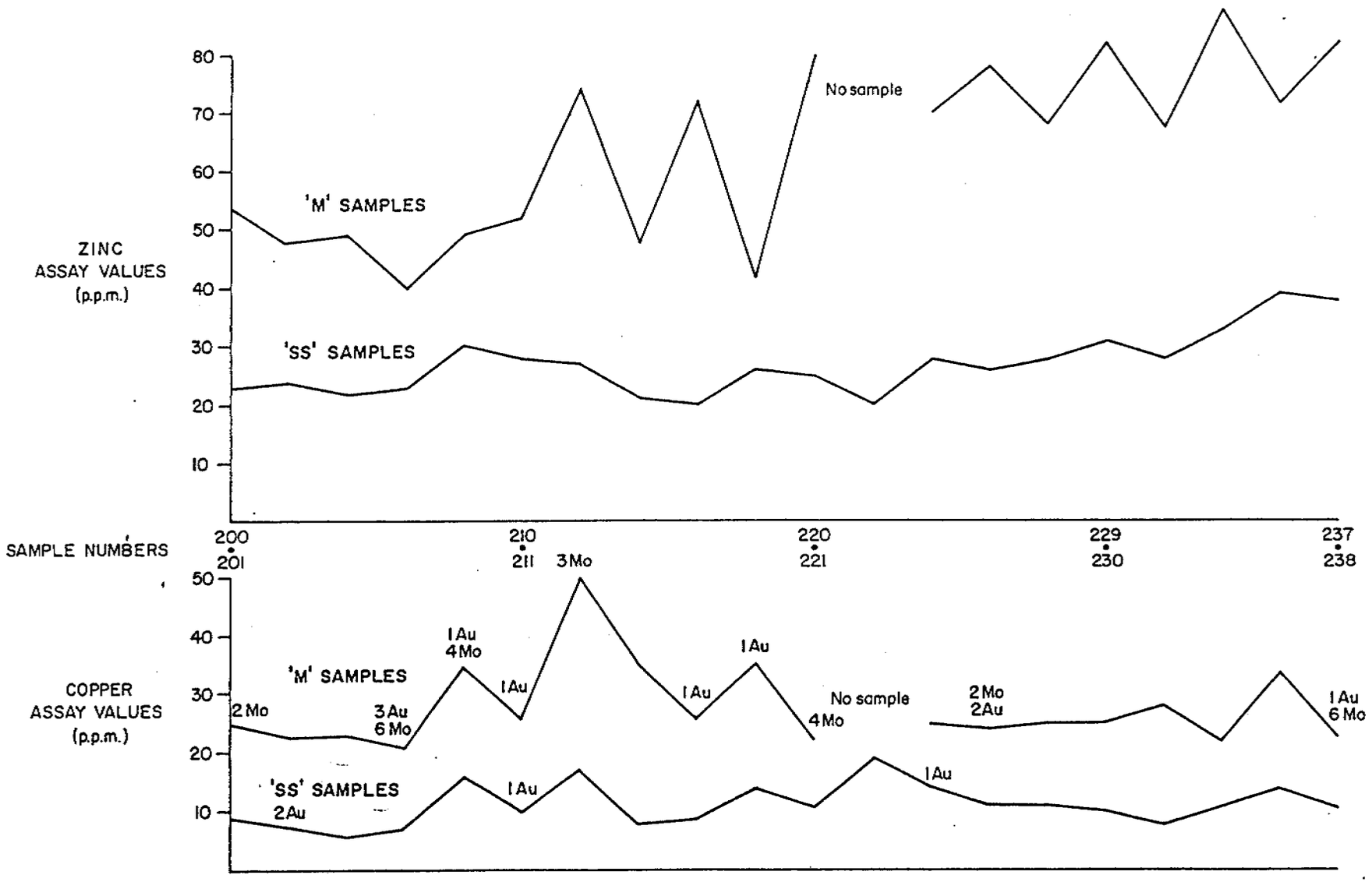

135°28'
HALFWAY DAM
135°35'
22°44'
EL 8165
MARSHALL RIVER
22°48'
N
HUCKITTA STN.
LEGEND
Drainage Sample location
B or S = silt sample
M = magnetic sample
Outcrop Boundary
Amphibolite Outcrop
Siliceous alteration
Interpreted Fault
Track
Trend Line (air photo)
Stream Lag Sample
SAMPLE LOCATIONS
EL 8165
SCALE 1:50000

FIGURE 3



ROEBUCK RESOURCES N.L.

YAM CREEK AREA

COMPARISON OF ZINC AND COPPER VALUES FOR 'M' AND 'SS' SAMPLES

FIGURE 4

APPENDIX I

Sampling Logs and Assays

SS - STREAM SEDIMENT SAMPLE.
M - MAGNETIC ROCK SAMPLE

AREA : MONYHIL SHEET PROSPECT : YAMCK AREA

	DESCRIPTION	Au ppb	Cu B/AAS	Cu A/AAS	Zn B/AAS	Zn A/AAS	Mo B/AAS	Mo A/MS	Pb B/AAS	Pb A/AAS				GRID REFERENCE NORTH	GRID REFERENCE EAST
200 SS	STREAM - 12M WIDE	x	9		23		x		6					7485870	551960
	GRANITE SAND	x	25		54		2		9						
201 M	MAGNETIC ROCK SAMPLE														
202 SS	STREAM - 10M WIDE.	2	8		24		x		5					7485880	551850
	GRANITE SAND	x	23		48		x		9						
203 M	MAGNETIC ROCK SAMPLE														
204 SS	STREAM - 2M WIDE.	x	6		22		x		4					7486020	552630
	SAND.	x	23		49		x		10						
205 M	MAGNETIC ROCK SAMPLE														
206 SS	STREAM - 1M WIDE	x	7		23		x		5					7485950	552810
	GRANITE SAND	3	21		40		6		10						
207 M															
208 SS	STREAM - 2M WIDE	x	16		30		x		6					7486000	552940
	GRANITE SAND	1	35		48		4		7						
209 M															
210 SS	STREAM - 15M WIDE	1	10		28		x		7					7484500	551550
	GRANITE SAND.	1	26		52		x		10						
211 M															
212 SS	STREAM - 4M WIDE	x	17		27		x		8					7484500	551570
	GRANITE SAND.	x	50	48	74	78	x	3.0	8	8					
213 M															
214 SS	STREAM - 5M WIDE	x	8		21		x		5					7485260	550200
	SAND	1	36		48		x		9						
215 M															

SS - STREAM SEDIMENT SAMPLE.

M - MAGNETIC ROCK SAMPLE

2816

PROSPECT : YAM CR AREA

SAMPLE NO.	DESCRIPTION	Au ppb	Cu ppm B/AAS	Cu ppm A/AAS	Zn ppm B/AAS	Zn ppm A/AAS	Mo ppm B/AAS	Mo ppm A/AAS	Pb ppm B/AAS	Pb ppm A/AAS	COORDINATES NORTH	COORDINATES EAST
151 - 216 SS	STREAM - 1M WIDE	x	9		20		x		5		7485260	550240
217M		1	26		72		x		6			
218 SS	STREAM - 20M WIDE	x	14		26		x		6		7485200	557950
	GRAVEL											
219M		1	35		42		x		9			
220 SS	STREAM - 15M WIDE	x	11		25		x		5		7485000	558000
	GRAVEL											
221M		x	22	20	80	86	4	3.5	6	14		
222 SS	STREAM - 2M WIDE	x	19	110	20	21	x	2.5	3	4	7485100	557130
	SAND											
223 SS	STREAM - 2M WIDE	1	14		28		x		6		7485310	556750
	SAND.											
224M		x	25	18	70	78	x	5.5	6	16		
225 SS	STREAM - 2M WIDE	x	11		26		x		6		7485220	556660
	GRAVEL											
226M		2	24	22	78	88	2	4.0	6	16		
227 SS	STREAM - 8M WIDE	x	11		28		x		9		7485300	556700
	GRAVEL											
228 M		x	25		68		x		7			
229 SS	STREAM - 2M WIDE	x	10	11	31	44	x	2.5	10	26	7784700	558640
	SAND											
230M		x	25	16	82	86	x	3.5	5	10		

MOLYHILL WEST — YAM LK. AREA

SAMPLE NO.	DESCRIPTION	Au ppb	Cu ppm B/AAS	Cu ppm A/AAS	Zn ppm B/AAS	Zn ppm A/AAS	Mo ppm B/AAS	Mo ppm A/AAS	Pb ppm B/AAS	Pb ppm A/AAS	COORDINATES NORTHING	COORDINATES EASTING
231SS	STREAM - 3 M WIDE SAND.	x	8	11	28	30	x	3.0	10	12	7483600	558300
232M		x	18	13	68	74	x	3.0	3	18		
233SS	STREAM - 1M WIDE SAND	x	11		33		x		6		7483650	558330
234M		x	22	16	88	92	x	3.5	3	10		
235SS	STREAM - 1M WIDE.	x	14		39		x		5		7483800	557600
236M		x	34	27	72	74	x	3.5	3	10		
237SS	STREAM - 0.5M WIDE	x	16		38		x		4		7483800	557600
238M		1	23	18	82	76	6	3.5	2	4		

Samples collected C. Heinrich / B. Baxton.
(951-200 to 951-238)

SAMPLING LOG

L = LAG
M = MAGNETIC LAG

PROSPECT/TENEMENT : MOLLY HILL

SAMPLED BY : B. BARTON / C. HEINRICH

DATE : 20.5.93

SAMPLE LOCATION CODE AND PREFIX : 951

SAMPLE NO.	SITE COORDINATES LOCAL OR AMG GRID EASTING	NORTHING	SAMPLE SIZE	UP SLOPE DIRECTION	SLOPE GRADIENT	SURFACE TYPE	REMARKS	AERIAL PHOTO RUN NO.	AERIAL PHOTO FRAME NO.
L0057	550743	7480573					STREAM. Rock FRAG 100%.		
L0058	551200	7480320					STREAM Rock FRAGS – 100%.		
L0059	551370	7480240					STEAM Rock FRAGS – 100%.		
L0060	551675	7480155					STEAM Rock FRAGS – 100%.		
L0061	551935	7480020					STREAM Rock FRAGS – 100%.		
L0062	552195	7480020					STREAM Rock FRAGS – 100%.		
M0063	552555	7480470					STREAM Rock FRAGS – 10%. Mag Lag		
L0064	552640	7480525					STREAM Rock FRAGS – 100%.		
L0065	553185	7480845					STREAM Rock FRAGS – 100%.		
L0066	553400	7481045					STREAM Rock FRAGS – 100%.		
M0067	553228	7481440					STREAM Mag Lag Rock FRAGS – 10%		
M0068	552936	7481400					STREAM Mag Lag Rock FRAGS – 0%.		
M0069	552830	7481200					STREAM Mag Lag Rock FRAGS – 0%		
M0070	553135	7481352					STREAM Mag Lag Rock FRAGS – 0%		
L0071	553895	7481050					STREAM Rocks FRAGS – 100%.		

SAMPLING LOG (L = LAG, M = MAGNETIC LAG.)

PROSPECT/TENEMENT : MOLLY HILL

DATE : 20.5.93

SAMPLED BY : B. BARTON / C. HENDRICH.

SAMPLE LOCATION CODE AND PREFIX : 95

SAMPLE NO.	SITE COORDINATES LOCAL OR AMG GRID EASTING	NORTHING	SAMPLE SIZE (KG)	UP SLOPE DIRECTION	SLOPE GRADIENT	SURFACE TYPE	REMARKS	AERIAL PHOTO RUN NO.	AERIAL PHOTO FRAME NO.
L 0 7 2	554265	7480905					STREAM Rock fragments 100%		
L 0 7 3	554653	7480730					STREAM Rock frag 100%		
L 0 7 4	554795	7480530					STREAM Quartz 10%. Rock frag 90 %.		
M 0 7 5	554845	7479810	✓				NEAR OUTCROP. STREAM Rock frag 0%		
L 0 7 6	554500	7479375					STREAM Rock frag 100%.		
L 0 7 7	554470	7479140					STREAM Rock frag 100%.		
L 0 7 8	553370	7478250					STREAM Rock frag 100%.		

... RELATIVE TO GRID NORTH

BOUNDARY — ELA 8127 / EL 8166 — YAM CREEK —

AREA : MOLYHILL — PROSPECT : BLOOD HILL AREA

SAMPLE NO.	DESCRIPTION	Au ppb	Cu ppm	Pb ppm	Zn ppm	As ppm	Mo ppm							COORDINATES NORTH	COORDINATES EAST
151-200R	Fe oxide coated fragments from scree, S side of 'siliceous knolls'.	x	56	16	84	x	2								
51-201R	Narrow, 8m wide o/c of qtz. breccia. Intricately qtz. vnd. fine disseem. py. in thin qtz vns. but most in earlier silica matrix. Best py. along 2m wide footwall zone. Dip 60° S	1	11	1	1	x	2							K7485793	53 555353
51-202R	Top of hill, yellow stained boxwork o/c. Breccia of pink qtz. cut by 1–3mm. clear qtz. vns. Py. disseem. throughout pink qtz. and within later veins.	8	4	9	1	5	x							7485635	53 554306
51-203R	Top of hill beneath mulga tree. Dk o/c, strongly Fe stained. Dk. bluish qtz. with irreg. breccia fragments, disseem. py, cross hatched vns of Fe ox.	4	15	10	9	20	2							~7485835	53 554306
151-204R	Hanging wall breccia. Ferrug. and yellow stained with 3 vol. % sulphide. Some areas leached py. leaving yellow stained voids.	9	11	5	1	10	x							~7485836	53 554306
151-205R	Hangwall, red stained o/c, yellow powder on fractures, red silica cut by 2mm clear qtz veins with + 3% vol. pyrite.	5	50	3	x	5	x							~7485825	53 554306
151-206R	Hill of apple green, well banded, drag folded chert. Downslope to N, toward creek, sample from band of black, ferruginous chert and chloritic rock in contact with amphibolite.	26 Repeat 29	10	6	13	15	2							K7485891	53 554524

GENALYSIS LABORATORY SERVICES PTY. LTD.

LABORATORY REPORT

COMMENTS : ATTENTION : S WARNE/ P ALLCHURCH.....
COMMENTS : SOIL....

JOB INFORMATION

JOB CODE	:269.0/931538
NO. SAMPLES	:13
ELEMENTS	:3
CLIENT O/N	:NOTE 6/4
DATE RECEIVED	:14/04/93
DATE COMPLETED	:27/04/93

LEGEND

'X' = LESS THAN DETECTION LIMIT
'N/L' = SAMPLE NOT RECEIVED
'*' = RESULTS CHECKED
'( )' = RESULTS STILL TO COME
'I/S' = INSUFFICIENT SAMPLE FOR ANALYSIS
'E6' = RESULT x 1,000,000

269.0/931538 /i

Please note the Cu & Pb analyses were carried out on -177um screened and unground sample.

869.0/931538 GENALYSIS (27/04/93) Part 1 / Page 1

ELEMENTS		Au	Cu	Pb
UNITS		ppb	ppm	ppm
DETECTION		0.1	1	5
METHOD		CN2/E	C/AAS	C/AAS
SAMPLE NUMBERS				
1	950:B001	0.1	8	10
2	950:B002	X	11	15
3	950:B003	X	4	5
4	950:B004 ELBIBC	X	6	5
5	950:B005 ELBIBE	0.1	9	X
6	950:B006 ELBIBF	0.7	12	5
7	950:B007	0.1	6	5
8	950:B008	X	6	X
9	950:B009	0.1	6	5
10	950:B101	X	9	5
11	950:B102	X	9	5
12	950:B103	X	9	10
13	950:B104	X	7	5
	Ch.0001(950:B001)	I/S	7	5
STD:	NGL.1	1.8		
STD:	SYN7		106	70

Sheet 6

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<< END OF REPORT >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

GENALYSIS LABORATORY SERVICES PTY. LTD.

LABORATORY REPORT

COMMENTS : ATTENTION : W WARNE/ P ALLCHURCH....
COMMENTS : ST....

JOB INFORMATION

JOB CODE	:E69.0/935889
NO. SAMPLES	:39
ELEMENTS	:9
CLIENT O/N	:0713
DATE RECEIVED	:02/11/93
DATE COMPLETED	:26/11/93

LEGEND

'X' = LESS THAN DETECTION LIMIT
'N/L' = SAMPLE NOT RECEIVED
'*' = RESULTS CHECKED
'( )' = RESULTS STILL TO COME
'I/S' = INSUFFICIENT SAMPLE FOR ANALYSIS
'E6' = RESULT x 1,000,000

269.0/935889 GENALYSIS (26/11/93) Part 1 / Page 1

ELEMENTS	Au	Cu	Cu	Zn	Zn	Mo	Mo	Pb	Pb
UNITS	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION	1	1	1	1	1	2	0.5	1	2
METHOD	B/ETA	B/AAS	A/AAS	B/AAS	A/AAS	B/AAS	A/AS	B/AAS	A/AAS
SAMPLE NUMBERS									
1 951:200SS	X	9		23		X		6	
2 951:201M	X	25		54		2		9	
3 951:202SS	2	6		24		X		5	
4 951:203M	X	23		48		X		9	
5 951:204SS	X	6		22		X		4	
6 951:205M	X	23		49		X		10	
7 951:206SS	X	7		23		X		5	
8 951:207M	3	21		40		6		10	
9 951:208SS	X	16		30		X		6	
10 951:209M	1	35		48		4		7	
11 951:210SS	1	10		28		X		7	
12 951:211M	1	26		52		X		10	
13 951:212SS	X	17		27		X		8	
14 951:213M	X	50	48	74	78	X	3.0	8	8
15 951:214SS	X	8		21		X		5	
16 951:215M	1	35		48		X		9	
17 951:216SS	X	9		20		X		5	
18 951:217M	1	26		72		X		6	
19 951:218SS	X	14		26		X		6	
20 951:219M	X	35		42		X		9	
21 951:220SS	X	11		25		X		5	
22 951:221M	X	22	20	80	86	4	3.5	6	14
23 951:222SS	X	19	40	20	21	X	2.5	3	4
24 951:223SS	1	14		28		X		6	
25 951:224M	X	25	18	70	78	X	5.5	6	16
26 951:225SS	X	11		26		X		6	
27 951:226M	2	24	22	78	88	2	4.0	6	16
28 951:227SS	X	11		28		X		9	
29 951:228M	X	25		68		X		7	
30 951:229SS	X	10	11	31	44	X	2.5	10	26
31 951:230M	X	25	16	82	86	X	3.5	5	10
32 951:231SS	X	8	4	28	30	X	3.0	10	12
33 951:232M	X	18	13	68	74	X	3.0	3	18
34 951:233SS	X	11		33		X		6	
35 951:234M	X	22	15	88	92	X	3.5	3	10
36 951:235SS	X	14		39		X		5	
37 951:236M	X	34	27	72	74	X	3.5	3	10
38 951:237SS	X	10		38		X		4	
39 951:238M	1	23	18	82	76	6	3.5	2	4
Ch.0001(951:200SS)	1	10		25		X		5	

269.0/932494 GENALYSIS (16/06/93) Part 1 / Page 2

ELEMENTS		Au	Cu	As	Sn	Pb
UNITS		ppb	ppm	ppm	ppm	ppm
DETECTION		1	1	2	1	2
METHOD		B/ETA	A/AAS	A/MS	A/MS	A/AAS
62	062L	X	15	8	7	80
63	063M	X	16	6	6	48
64	064M shown as 64L on plan 3	X	15	6	7	54
65	065M " " 65C "	X	20	6	6	80
66	066M " " 66L "	X	20	6	5	94
67	067M	X	49	4	3	22
68	068L shown as 68Q "	X	56	8	5	64
69	069L " " 69Q "	X	290	10	4	104
70	070M	X	29	8	7	60
71	071L	X	31	6	5	90
72	072L	X	30	10	6	70

CR94/683

269.0/935809 GENALYSIS (26/11/93) Part 1 / Page 2

ELEMENTS	Au	Cu	Cu	Zn	Zn	Mo	Mo	Pb	Pb
UNITS	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION	1	1	1	1	1	2	0.5	1	7
METHOD	D/ETA	B/AAS	A/AAS	B/AAS	A/AAS	B/AAS	A/MS	B/AAS	A/AAS
Ch.0026(951:2255S)	X	12		30		X		7	
	49								
STD: AE05		170		47		6		26	
STD: AE05									

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<< END OF REPORT >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

APPENDIX II

Petrology

Pontifex & Associates Pty. Ltd.

TELEPHONE (08) 332 6744
FAX (08) 332 5062

26 KENSINGTON ROAD, ROSE PARK
SOUTH AUSTRALIA 5067
A.C.N. 007 521 084

P.O. BOX 91, KENT TOWN
SOUTH AUSTRALIA 5071

MINERALOGICAL REPORT NO. 6523

December 22nd, 1993

TO : Roebuck Resources
c/- Mr S. B. Warne
25 Nashwark Crescent
MOANA SA 5169

COPY TO : Dr. P.D. Allchurch
Roebuck Resources N.L.
PO Box 690
WEST PERTH WA 6872

YOUR REFERENCE : Order No. 0718

MATERIAL : Rock and drill chip samples; Arunta area

IDENTIFICATION : ~~Various DS Series~~ : 951 ~~and 955 Series~~.
~~Also JUR-1~~
951 - 2048

WORK REQUESTED : Thin section preparation and petrographic descriptions.

SAMPLES & SECTIONS : Returned to the above Moana address by APD.

PONTIFEX & ASSOCIATES PTY. LTD.

INDIVIDUAL DESCRIPTIONS

951-204R

(Tectonic) breccia of partly recrystallised chert or silicified (and potash felspathised) siltstone or shale. Cut by random quartz stringers, flooded (healed) by sparry hydrothermal vein quartz with rare pyrite. All of these components including pyrite, cut by later vein quartz vein(s) more densely clouded with fluid inclusions.

This is a complex aggregate of quartz veins and siliceous/silicified breccia fragments, with several generations of each.

The oldest component is seen as angular, chaotic tectonic breccia fragments to 20mm, of cryptocrystalline to patchy microcrystalline (microsparry) quartz with a subequal amount of scattered extremely fine k-spar (see stained offcut) all variably clouded by indefinite 'dust' and 'clays'. Locally there are smaller fragments within larger fragments. There are no existing or relict textures diagnostic of a specific genesis, but partly recrystallised chert, or silicified shale or siltstone would have to be possibilities.

These fragments are cut by numerous random stringers and veins of quartz (mostly relatively clear and microsparry) and they contain minor scattered small cubic crystals of pyrite.

Areas between these fragments are occupied by (healed by) hydrothermal vein quartz, as aggregates of randomly interlocking sparry crystals, mixed with finer sparry quartz ('matrix'), relatively clear but locally dusted by fluid inclusions, some in zones. It is this generation of quartz veins which permeate the siliceous fragments. Sparse pyrite crystals occur in this vein quartz.

One continuous vein, cutting all other components, including several subsidiary veinlets, consists of fine to medium sparry quartz, very densely clouded by fluid inclusions, including zoned crystals, (which produces the relatively white colour seen in handspecimen). This generation quartz vein lacks pyrite.