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952001

BILLITON AUSTRALIA
The Metals Division of the Shell Company of Australia

E.L. 31/85 MT. STEWART

Progress Report on Exploration For the Period 23/1/86 to 22/1/87

Author : D.B. Hall

Report No. : 08.3540

Date : January, 1987

Copy No. : 1

Distribution : 1. Tasmanian Mines Department
2. Billiton Australia Melbourne
3. Billiton Australia Devonport

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952002

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952003

SUMMARY

Exploration Licence 31/85, Mt. Stewart, was taken up by Billiton Australia to explore particular aeromagnetic anomalies that may relate to tin-tungsten bearing skarns associated with the Meredith Granite.

Two anomalies have been ground checked in detail, with a magnetite skarn being the source of Anomaly 'A', but only carrying low values for Sn and W.

Anomaly 'B' is related to a magnetic basic conglomerate and is of no further interest.

Stream sediment samples from Loughnan's Creek were collected for analyses of PGE, Au and Cr.

1. INTRODUCTION

E.L. 31/85 was granted to Billiton Australia on 23rd December 1985, and covers 89 km² southwest of Luina in NW Tasmania, (Fig. 1).

The aim of the exploration was to test particular aeromagnetic anomalies for tin/tungsten bearing skarn mineralization.

Topographically the area is typically 'West Coast' with deeply incised valleys, steep slopes, dense vegetation cover, and high rainfall.

Access to the EL is via the Waratah-Corinna road, and the access track to the old Mt. Stewart Mine. In the areas of interest, walking is the only means of access, and has required the cutting of tracks. A total of 10.8 km of access tracks and grid lines were cut over Anomalies A and B.

Ground magnetometer surveys were carried out on all access tracks and grid lines.

2. GEOLOGY

The EL is situated on the northern side of the Devonian Meredith Granite Batholith. It is underlain by the Eocambrian Success Creek Group and Crimson Creek Formation, the Mt. Stewart Ultramafic Complex and Silurio-Devonian sediments (Fig. 2).

The Cleveland Tin Mine is located 3.5 km north of the granite contact, and the mineralization (pyrrhotite-pyrite-cassiterite ±chalcopyrite) is regarded as replacement of dolomitic units in the Crimson Creek Formation. This is the major deposit in the area, but other smaller replacement deposits are present, usually tin and/or tungsten skarn mineralization, closer to the granite contact. Mt. Youngbuck is a scheelite bearing amphibole-magnetite-pyrrhotite skarn, drill tested by Aberfoyle.

The ultramafic intrusives have been exploited for Os-Ir mainly, but also explored for PGE, chromite, nickel and gold. The Mt. Stewart Ultramafic Complex is a Layered Dunite-Harzburgite succession, with the southern half being underlain by Meredith Granite, and the northern half in faulted contact with Success Creek Group sediments.

Ordovician-Silurian-Devonian sediments occupy an area south of Heazlewood and probably represent the disrupted northern part of the Gordon Limestone/Eldon Group correlates of the Huskinson Syncline.

3. EXPLORATION

During the evaluation of previous exploration in the region, carried out for the application of the tenement, it was apparent that several noteable aeromagnetic anomalies had not been ground checked (Fig. 3).

Two anomalies, A and B, were ground checked. Access was gained by cutting walking tracks to the interpreted centre of the anomalies, carrying out a ground magnetometer survey of the track to define the location of the magnetic high, then cutting a small grid over the anomaly.

Anomaly A is within 300 metres of the granite contact, and is close to the contact of the Siluro-Devonian sediments, and the Eocambrian Crimson Creek Formation. Outcrop is almost non-existant, but rare quartzite and white saccharoidal sandstone is present, presumably part of the Siluro-Devonian sequence. The ground magnetometer survey of the grid defined a magnetic peak on 2 lines, 200m apart (Fig. 4). Modelling of the response indicated a shallow, west-dipping tabular source (Fig. 5).

Ground investigation of line 9200N, discovered magnetite skarn at a shallow depth (<30cm). No indication of the full width of the skarn is available, and it will

require shallow pitting or trenching to trace it. Three samples were submitted for assay (sample numbers 3027, 3028 and 3029 - Appendix 1), with the best value being 289ppm Sn, with traces of Cu, Zn and W.

Anomaly B was more difficult to trace, due to a more complicated magnetic pattern in the area. Eventually the anomaly was detected, after extending the access track. A previously gridded area did not in fact cover the anomaly, but was related to magnetic basic flows in the Crimson Creek Formation.

The anomaly was eventually satisfactorily explained, and a grid was not required. Massive outcrop is present, and the rocks are strongly magnetic. Petrological report of the rocks show it to be a hornfelsed conglomerate, which consisted mainly of basaltic pebbles. The magnetite is directly related to the distribution and original composition of the basaltic clasts (Appendix II). Geochemical values were spectacularly low (Appendix I).

A review of exploration by previous explorers does not indicate that there are any areas requiring further testing.

Aeromagnetic Anomaly E, in the western part of the EL has yet to be ground checked.

The Os-Ir potential of the Mt. Stewart complex is being investigated. Substantial alluvial workings in Loughnan's Creek indicate significant production. The hardrock potential has yet to be investigated.

Research on the relationship of Os-Ir and Pt-Pd in ultramafic complexes in Tasmania and elsewhere, indicates that the two are probably mutually exclusive. Since the production history of the Tasmanian ultramafics is primarily Os-Ir, it appears unlikely that a significant hardrock Pt-Pd resource is present. A rapid reconnaissance survey is proposed to confirm this.

4. CONCLUSIONS

Anomaly A is due to a magnetite skarn of unknown dimensions, but with low Sn/W values.

Anomaly B is not due to a skarn or sulphide replacement deposit, and no further work is required.

The Mt. Youngbuck skarn is of insufficient size and grade to develop a sufficiently large resource under present economic scenarios.

The hardrock potential for Os-Ir has not been investigated.

5. RECOMMENDATIONS

Complete ground checking of Anomaly A by auger sampling and/or pitting, together with detailed creek mapping and sampling.

Reconnaissance sampling of Mt. Stewart Ultramafic Complex to identify the distribution of any PGE's.

Ground check Anomaly E in areas of easiest access.

APPENDIX I

Sample Record Sheets

SAMPLE RECORD

Shell METALS DIVISION

SAMPLE TYPE: STREAM/Rock Chip LOCATION / PROJECT: Mt. Stewart. SAMPLER: D. HALL DATE: 6-8-86 & Oct. 86 MAP / PHOTO REF: 011

ASSAY LAB: COMLABS / ANALABS SAMPLE DESPATCH ORDER NO: 11552 ASSAY REPORT NOS: SAMPLE STORAGE:

SAMPLE No.	LOCATION E	LOCATION N	INTER'L (m)	ANALYSES Cu	Pb	Zn	Ag	Bi	Sn	W	Au	Mn	Ni	As	Mo	DESCRIPTION
3004	Loughnan	Ck	St. Sed.													Coarse st. sed
3005	"		"													"
3006	"		"													"
3007	'B' Acc. Tk	20 Lm	Rk. ch.	20	10	160	<5		15							Mica. sst. / gw.
3008	"	40 Lm	"	20	10	80			13							"
3010	"	485 m	"	15	15	70			6							Gy. fg. marl. sst.
3011	"	495 m	"	60	15	125			6							F. mg. mica. gw.
3012	"	"	"	75	20	80			9							Gy. fg. carbonate! <5% Py.
3013	"	650 m	"	70	10	100			10							Gy. f-mg. gw. Tr. Py.
3014	"	695 m	"	15	10	25			3							Gy. chert, laminated
3015	"	705 m	"	15	<5	25			<3							Dk. red, lam. ch.
3016	10.000 E	9580N	"	30	10	120			14							Dk. gy., mas. sst.
3017	"	9735	"	65	5	90			5							Gy.-gy. carb!
3018	"	9525	"	75	10	50			<3							Gy. gy. volc. Tr. Py lpc!
3019	"	9525	"	35	10	45			4							Gy. gy. sed. (carb!)
3020	"	9400	"	40	<5	25			8							Gy. wthrd. carb!
3021	"	9270	"	5	<5	60			8							Gy. f-mg. carb.
3022	"	9255	"	<5	<5	40			4							Gy. carb. dty. incls. <2 cm. Tr. mlb.
3023	10.400	10.152	"	<5	<5	<5			3							Q. hematite. + Py.
3024	10.400	10.152	"	75	10	80			8							Purple dusty shale
3025	10.550	10.200	"	100	10	90			9							Red ch. Tr. Py.
3026	10.150	9.400	Float	15	<5	15	0.5		12	<10	<0.003					Q. tourmaline vein.
3027	10.150	9.200	"	300	100	115	<0.5		185	39	0.020					Lim. mag. stain. V. magnetic
3028	"	"	"	165	40	690	<0.5		278	15	0.030					"
3029			"	155	45	545	<0.5		239	25	0.040					"
3040	C. Jasper M.		"	15400	0.010	0.010	21	<10	4	<10	0.400	355	30	30	5	Ves. basalt. Alunitop. Bleached. Gy. mod. b
3041	"	"	"	9400	0.013	0.017	3	<10	<3	<10	0.480	405	35	25	<5	"
3042	Mt. St. Mine		"	425	0.058	1.920	8200	10	261	<10	0.020	23000	230	190	131	Mass. sul. ore in greenstone.
3043	Hazelwood M.		"	50	1.010	9.320	88	<10	754	<10	0.010	3200	620	270	5	Bani rock + only Sp. Gn. Py.
3044	"	"	"	25	0.690	2.300	34	30	318	<10	0.010	35000	630	670	20	Gr. fine lithic! barii. Carb. mn. Tuff.
3045	Mt. St.	M.	"	400	1.540	4.670	163	10	321	30	<0.008	51500	20	18	106	Banded galleton. ml. Sp. Gn. Mo
3046	Track to Mt. St.		"	25	0.205	0.020	<2	<10	16	<10	0.010	405	410	76	14	laterite.
3009	B' Acc. Tk.	40 Lm.	"	15	15	130	<5		6							Gy. fg. sst.

REMARKS:

Shell METALS DIVISION

SAMPLE RECORD

SAMPLE TYPE: ROCK CHIP **LOCATION / PROJECT:** MT STEWART **SAMPLER:** D. HALL **DATE:** OCT '86 **MAP / PHOTO REF:**

ASSAY LAB: ANALABS **SAMPLE DESPATCH** **ASSAY REPORT Nos:** 204.0.08.03939

ORDER No:

SAMPLE STORAGE:

ANOMALY '8'

012

SAMPLE No.	LOCATION		INTER'L (m)	ANALYSES												DESCRIPTION
	N	E		Cu	Pb	Zn	Ag	Ni	Bi	Sn	W					
3050	9100	10000		90	<5	55	<0.5	50	<10	<3	<10					Green grey fresh. Mg Qtz amphibole ± epidote skarnified?. Mag. fg magnetite
3051	9100	10000		145	25	75	0.5	45	<10	<3	<10					Green grey fresh magnetic Mg Qtz-amphib fragmental rock. Qtz/epid. vein?
3052	9100	10000		40	<5	60	<0.5	85	10	<3	<10					Dk rock. fragmental Qtz amph-sk? fg magn tite Qtz epid. fracture fill.
3053	9100	10000		45	<5	70	<0.5	55	<10	<3	<10					Dark f mg, skarnified pebble congl. Qtz a

REMARKS:

6031

APPENDIX II

Petrological Reports

Geochempet Services

PETROLOGICAL and GEOCHEMICAL CONSULTANTS

REGISTERED IN QUEENSLAND

Principal : A.S. Joyce B.Sc.(Hons), Ph.D.
200 Chapel Hill Road
Chapel Hill, Qld. 4069

Telephone: (07) 375 5258
A/H 378 6467

PETROLOGICAL REPORT

ON FOUR HORNFELS SAMPLES

FROM NEAR THE NORTHERN CONTACT

OF THE MEREDITH GRANITE, TASMANIA

prepared for

BILLITON AUSTRALIA

Order No. : 11557

Ref : LD12/D.B. Hall

Stan Joyce

A. S. Joyce, B.Sc.(Hons), Ph.D.

7th November, 1986

SUMMARY COMMENTS

1. Three samples are confidently interpreted to represent hornfelsed conglomerate which consisted mainly of basaltic pebbles, but with a few siliceous clasts of quartz or quartzite. They have been converted to metamorphic assemblages of mainly actinolite, albite and magnetite (with minor chlorite, epidote and quartz).

   The distribution and abundance of magnetite is directly related to the distribution and original composition of the basaltic clasts.

2. Sample 3053 is a generally similar but more sandy and quartzose rock. Its pebbles include basaltic and volcaniclastic rock types and quartz is prominent in the sandy matrix. The rock has an actinolitic hornfelsic assemblage and its magnetite distribution and content is plainly controlled by the distribution and original composition of basaltic and possibly intermediate clasts.

3. Rare grains of pyrite were seen, but the sulphide content of the rocks seems trivial.

016

952017

Sample Number : 3050

Identification : Hornfelsed basaltic conglomerate with a siliceous clast

Description :

The sample is a superficially weathered, hard specimen of medium dark grey to greenish grey, finely crystalline rock with subtle conglomeratic textures.

A cobaltinitrite staining test revealed no K-feldspar.

In thin section the sample displays finely crystalline, hornfelsic textures, but there are quite distinct remnant conglomeratic textures involving well rounded pebbles about 5 to 30mm in size.

The rock now consists mainly of decussate, acicular actinolite, untwinned anhedral plagioclase (probably albite) and fine magnetite, but there are modal and textural variations from one pebble to another and some pebbles retain plainly recognisable remnants of previously porphyritic basaltic textures. The coarsest actinolite is about 0.5mm, but much of it is about 0.1mm. The plagioclase is about 0.02 to 0.05mm. Magnetite is about 0.01 to 0.05mm in grainsize and occurs as disseminated grains with abundances varying from pebble to pebble.

Minor and trace components are chlorite and epidote. There are rare grains and small aggregates of pyrite (up to 0.5mm) with chlorite. A single 4mm pebble consists of quartz and actinolite.

An approximate mode is :

60-70%	actinolite
20-30%	albite
4-6%	magnetite
2-4%	chlorite
0.2-0.3%	quartz
tr	epidote
rare	pyrite

Comments and Interpretations :

This sampleis interpreted to represent hornfelsed conglomerate which previously consisted mainly of pebbles of basalt. The rock has been converted to a greenstone assemblage. Its magnetite content relates to its originally basaltic composition and not to metasomatism.

The sulphide content seems trivial.

017

Sample Number : 3051

Identification : Hornfelsed basaltic conglomerate with a few siliceous clasts

Description :

The sample is a superficially weathered, hard specimen of medium dark grey to greenish grey, finely crystalline rock with ghosted conglomeratic textures.

A cobaltinitrite staining test revealed no K-feldspar.

In thin section the sample displays finely crystalline, hornfelsic textures superimposed on distinct conglomeratic textures involving well rounded pebbles about 4 to 15mm in size and an interstitial sandy matrix.

There are textural and modal variations from clast to clast, but most have been converted to assemblages of decussate, acicular actinolite, anhedral, untwinned plagioclase (probably albite) and fine magnetite. Remnant porphyritic basaltic textures are recognisable in places. Chlorite replaces some sand grains and some former mafic phenoclasts. Actinolite varies from about 0.5mm grainsize in a few clasts to more common grainsizes of 0.1 to 0.2mm. Plagioclase is generally less than 0.05mm. Magnetite is generally subhedral to euhedral and less than about 0.05mm; there are a few coarser grains. Magnetite distribution is related to the original clasts, but there are a few examples of local mobilization. There are rare disseminated grains of fine pyrite.

There are a few sand grains which consist of single grains of quartz and some pebbles which now have fine quartzite textures.

An approximate mode is :

60-70%	actinolite
20-30%	albite
5-7%	magnetite
3-4%	quartz
1-2%	chlorite
rare	pyrite

Comments and Interpretations :

This sample is interpreted to represent hornfelsed conglomerate which previously consisted of pebbles of basalt and a few sand grains and pebbles of quartz or quartzite. Its magnetite content relates to the originally basaltic clasts and not to metasomatism.

There are rare grains of pyrite which seem trivial.

018

952019

Sample Number : 3052

Identification : Hornfelsed basaltic conglomerate with some siliceous clasts and a few veinlets of quartz and epidote

Description :

The sample is a superficially weathered and etched, dark greenish grey, hard, finely crystalline rock with remnant pebbly and sandy textures.

A cobaltinitrite staining test revealed no K-feldspar.

In thin section the sample displays finely crystalline, hornfelsic textures, but there are quite distinct remnant conglomeratic textures involving rounded pebbles, about 5 to 50mm in size, set in sandy matrix. One of the largest pebbles has remnant basaltic textures but now consists of decussate acicular actinolite (about 0.1 to 0.2mm long), anhedral albite (less than 0.05mm), subhedral magnetite (about 0.1mm and less), patches of chlorite and traces of epidote. Another large pebble consists of similar rock, but shows major conversion to epidote and albite in a large marginal patch. Smaller pebbles and sand grains show similar minerals and hornfelsic textures, but there are also several clasts with quartzite textures.

Epidote and quartz form some irregular, short, probably mobilized veins. The thickest is about 2mm wide, but some are about 0.03mm wide.

An approximate mode is :

50-60%	actinolite
20-30%	albite
6-8%	epidote
5-7%	quartz
5-7%	magnetite
0.3-0.4%	chlorite

Comments and Interpretations :

This sample is interpreted to represent hornfelsed conglomerate which previously consisted mainly of basaltic pebbles and sand, but with some quartz or quartzite clasts. The magnetite content relates to the originally basaltic clasts and not to metasomatism.

Some quartz and epidote has been mobilized as irregular, short veins. No sulphides were detected.

019

952020

Sample Number : 3053

Identification : Hornfelsed pebbly sandstone rich in basaltic to andesitic clasts, but with quartzose sand

Description :

The sample is a superficially weathered, hard specimen of medium dark grey to greenish grey, finely crystalline rock with ghosted pebbly and sandy textures. There are a few specks of silvery sulphide.

A cobaltinitrite staining test revealed no K-feldspar.

In thin section the sample displays finely crystalline hornfelsic textures superimposed on quite distinct sedimentary textures which involved numerous well rounded coarse sand grains and small pebbles, about 2 to 9mm in size, scattered through a sandy matrix involving poorly sorted subangular and subrounded clasts, about 0.05 to 2mm.

Some pebbles show remnant basaltic textures of varied grainsize : they have been converted to fine-grained assemblages of decussate acicular actinolite, anhedral albite and fine equant to platy magnetite. Several of the most coarse-grained basaltic or andesitic clasts retain lightly sericitized plagioclase and display prominent chlorite. Some other pebbles have intermediate to basic, finely volcaniclastic primary textures with moderately sorted plagioclase and quartz and abundant hornfelsic chlorite, magnetite and actinolite. Within the sandy matrix there are many subangular to subrounded grains of quartz as well as many actinolitic, hornfelsed mafic lithic clasts. Some very fine magnetite (less than 0.01mm) occurs between clasts, but much of it shows sharp variations in abundance and grainsize from one clast to another.

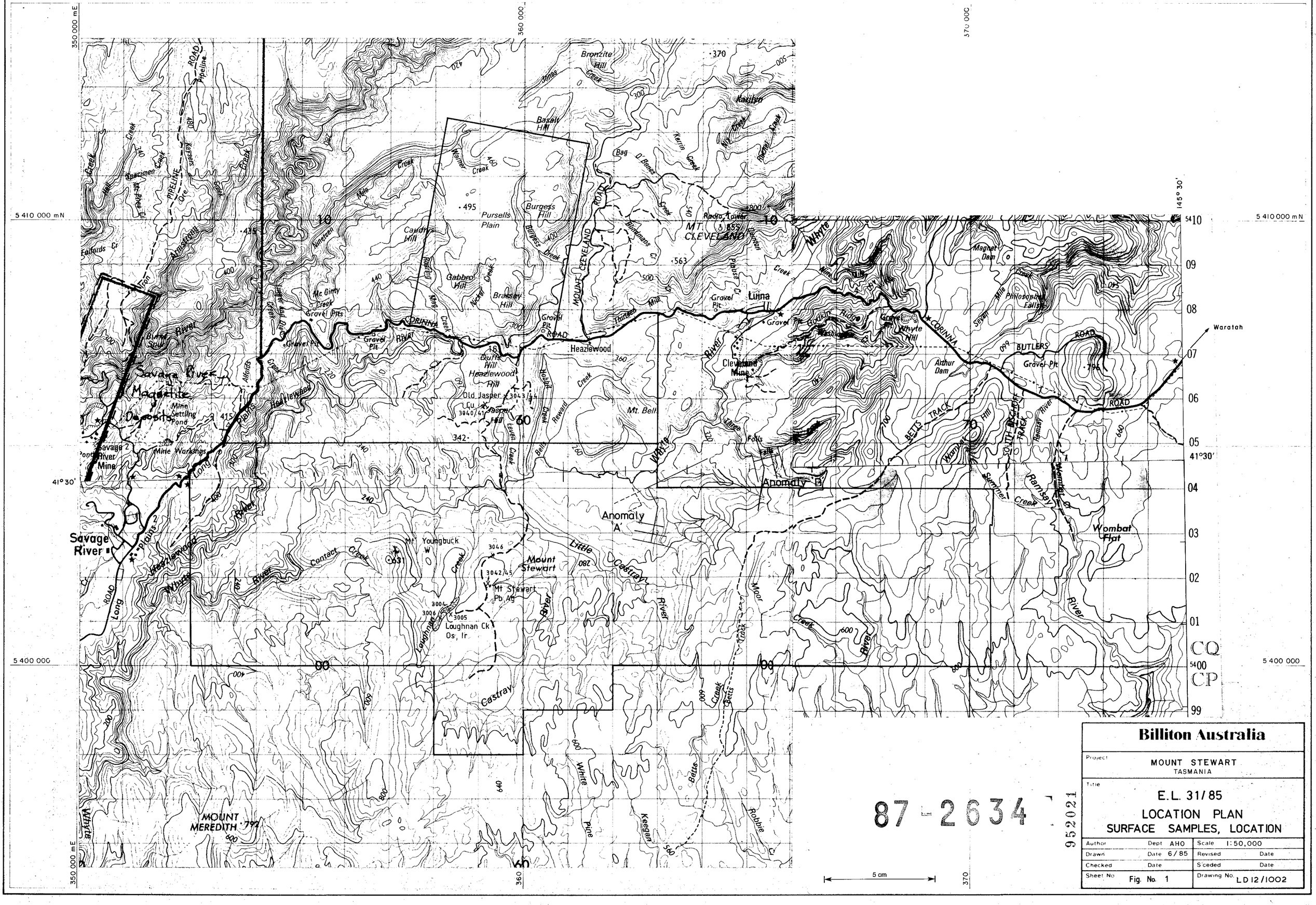
An approximate mode is :

40-50%	actinolite
15-20%	plagioclase
15-20%	chlorite
7-8%	magnetite
7-8%	quartz

Comments and Interpretations :

This sample is interpreted to represent a hornfelsed pebbly sandstone, originally composed of basaltic and possibly andesitic clasts of lava and volcaniclastic arenite along with quartz sand.

Very fine magnetite is distributed in a fashion consistent with fundamental control by the primary composition of the clasts. It is of metamorphic origin, not metasomatic.



Billiton Australia

Project	MOUNT STEWART TASMANIA
Title	E.L. 31/85 LOCATION PLAN SURFACE SAMPLES, LOCATION
Author	Dept AHO
Drawn	Date 6/85
Checked	Date
Sheet No	Fig. No. 1
Scale	1:50,000
Revised	Date
S'ceded	Date
Drawing No.	LD12/1002

87-2634

952021

5 cm

021

350 000 mE

360 000

370 000

5 410 000 mN

5 400 000

Savage River

Heazlewood River

Whyte River

CORINNA ROAD

Heazlewood

Luina

MT. CLEVELAND

CLEVELAND MINE

MT YOUNGBUCK

MT STEWART

Savage River

Anomaly 'A'

Anomaly 'B'

Anomaly 'C'

Appln. 8459

LEGEND

SILURO-DEVONIAN	S-Du	Eldon Group and correlates
		Disconformity
ORDOVICIAN	Θl	Gordon Limestone Sub-Group and correlates
	Θo	Owen Formation and correlates, including Moina Sandstone
	?	Disconformity
EOCAMBRIAN	€cc	Crimson Creek Formation
	€ccu	Undifferentiated sediments
	€ccb	Basic lava flows
	€ccc	Chert, argillite, limestone
	€sc	Success Creek Group and correlates
		Landscape unconformity
PRECAMBRIAN	p€ws	Whyte Schist and correlates, including Concert Schist

Igneous Rocks

TERTIARY	Tb	Alkali Olivine and Tholeiitic Basalt, with associated sediment
DEVONIAN	Dg	Granitoids
CAMBRIAN	€g	Granite
?	€bm	Low - Titanium Tholeiite
€bu	€ba	High-Magnesian Andesite, and associated coarse-grained pyroxenite
EOCAMBRIAN	€t	Tonalite and associated rocks
?	€s	Serpentinized ultramafic - mafic rocks, tectonic melange €sm indicated.

5 cm

Bedding, dip and strike facing known, facing unknown, overturned

Geological contact - interpreted

Syncline (as per Cleveland Tin Ltd, 79-1391)

Fault

Joint direction

952022

86-2634

Billiton Australia

Project	MOUNT STEWART TASMANIA		
Title	**GEOLOGY**		
Author	Dept. AHO	Scale	1:50,000
Drawn	Date 6/85	Revised	Date
Checked	Date	Sceded	Date
Sheet No.	FIG. 2	Drawing No.	MT 24/1087

020

350 000 mE

5 410 000 mN

5 400 000

360 000

370

CLEVELAND

Appln. 8459

A
B
C
D
E

Mt. Bischoff - Cleveland - Savage River
Aeromagnetic Trend

Dighem Coverage

Flight line separation	500 m
Flight line direction	E-W
Mean sensor height	135 m
Base contour interval	5 nT

(A) Aeromagnetic anomalies discussed in text of application

Major mine

Workings, old mines

952023
86-2634

Billiton Australia

Project: MOUNT STEWART
TASMANIA

Title:

AEROMAGNETIC CONTOURS

(TASMANIAN MINES DEPT. SURVEY)

Author	Dept AHO	Scale 1:50,000	
Drawn	Date 6/85	Revised	Date
Checked	Date	Sheeded	Date
Sheet No. FIG. 3		Drawing No. MT 24/1088	

023

86-2634

952024

SHELL COMPANY OF AUSTRALIA

METALS DIVISION

R.O.C.S. - PROTEM

N.W. TASMANIA
MT. STEWART
GROUND MAGNETICS
ANOMALY A
SCALE 1 : 5000

FIG No : 4	LEGEND
DATE : 8/86	BASE 62000 nT
AUTHOR :	50 nT/cm
OFFICE :	
DRAWN :	

MINES DEPARTMENT AEROMAGNETICS

5 cm

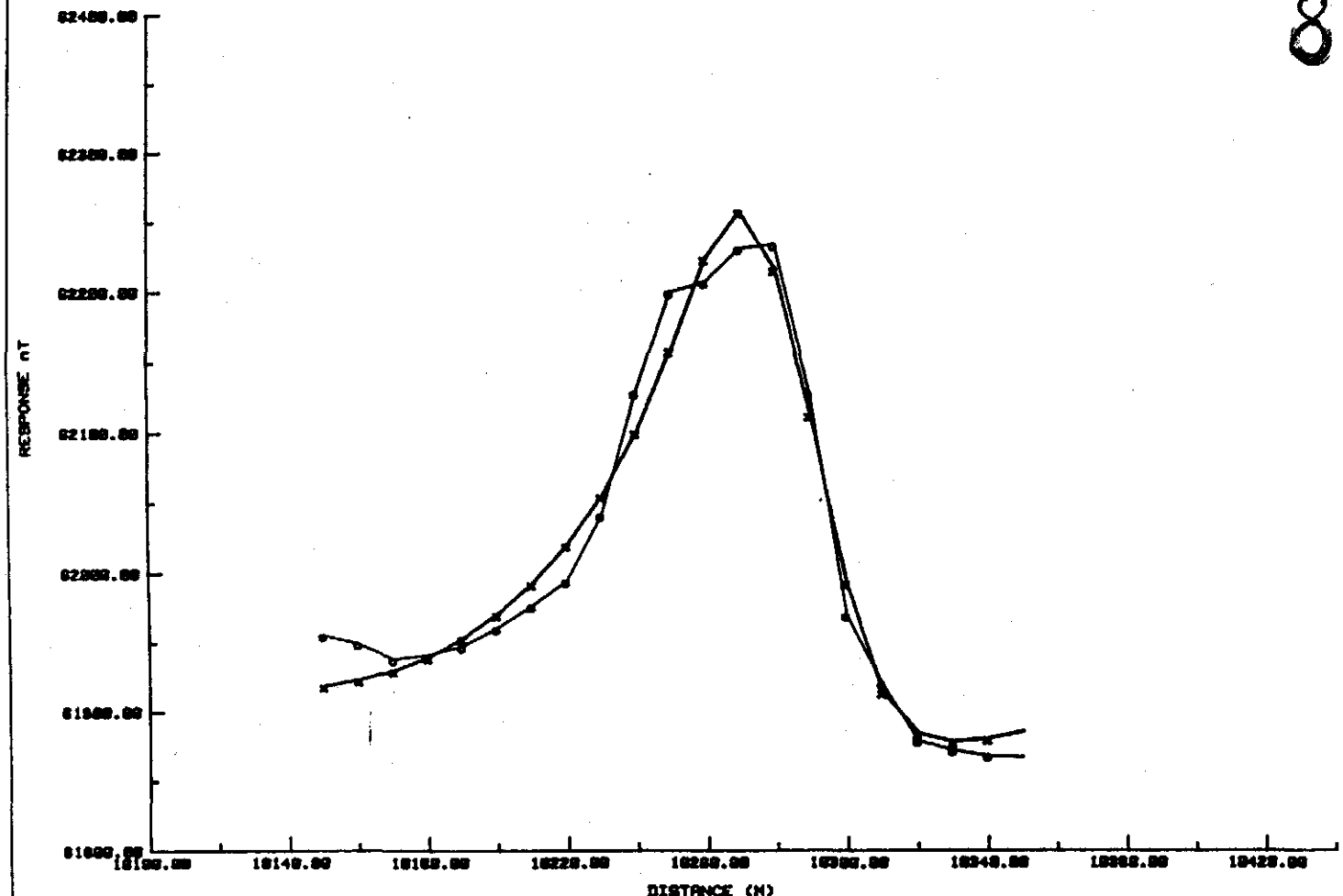
10600N
10400N
10200N
10000N
9800N
9600N
9400N
9200N
9000N

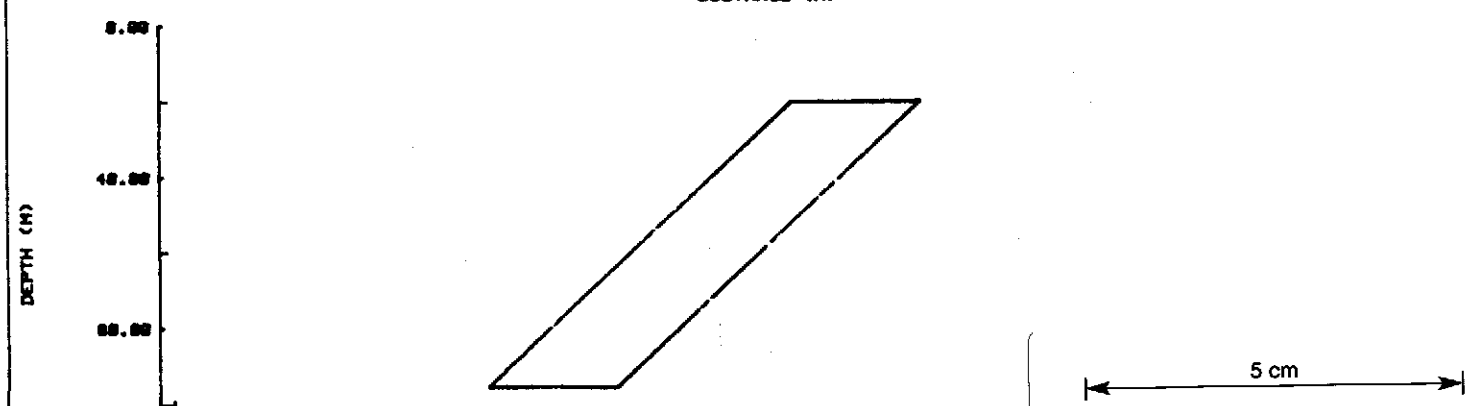
NORTHING (M)

9500E
9700E
9900E
10100E
10300E
10500E

EASTING (M)

87-2634 024





R.O.C.S.

GEOPHYSICS SYSTEM - MAGMOD

MODEL : TAB 2

CALCULATED RESPONSE : x
OBSERVED DATA : o

		KEY
MAGNETIZN	221.7885	1
DIP	136.7853	1
BASE LEVEL	81833.8188	2
BASE SLOPE	0.0000	0
POSITION	18282.9887	1
HALF WIDTH	18.8183	1
HALF LNGTH	200.0000	0
DEPTH	28.8688	1
THICKNESS	74.8687	1
INCLINATN	-71.0000	0
DECLINATN	92.0000	0
FIELD	0.0000	0
ORIENTATN	180.0000	0

SCALE

DISTANCE	20.00	M/CM
FIELD	50.00	nT/CM
DEPTH	20.00	M/CM

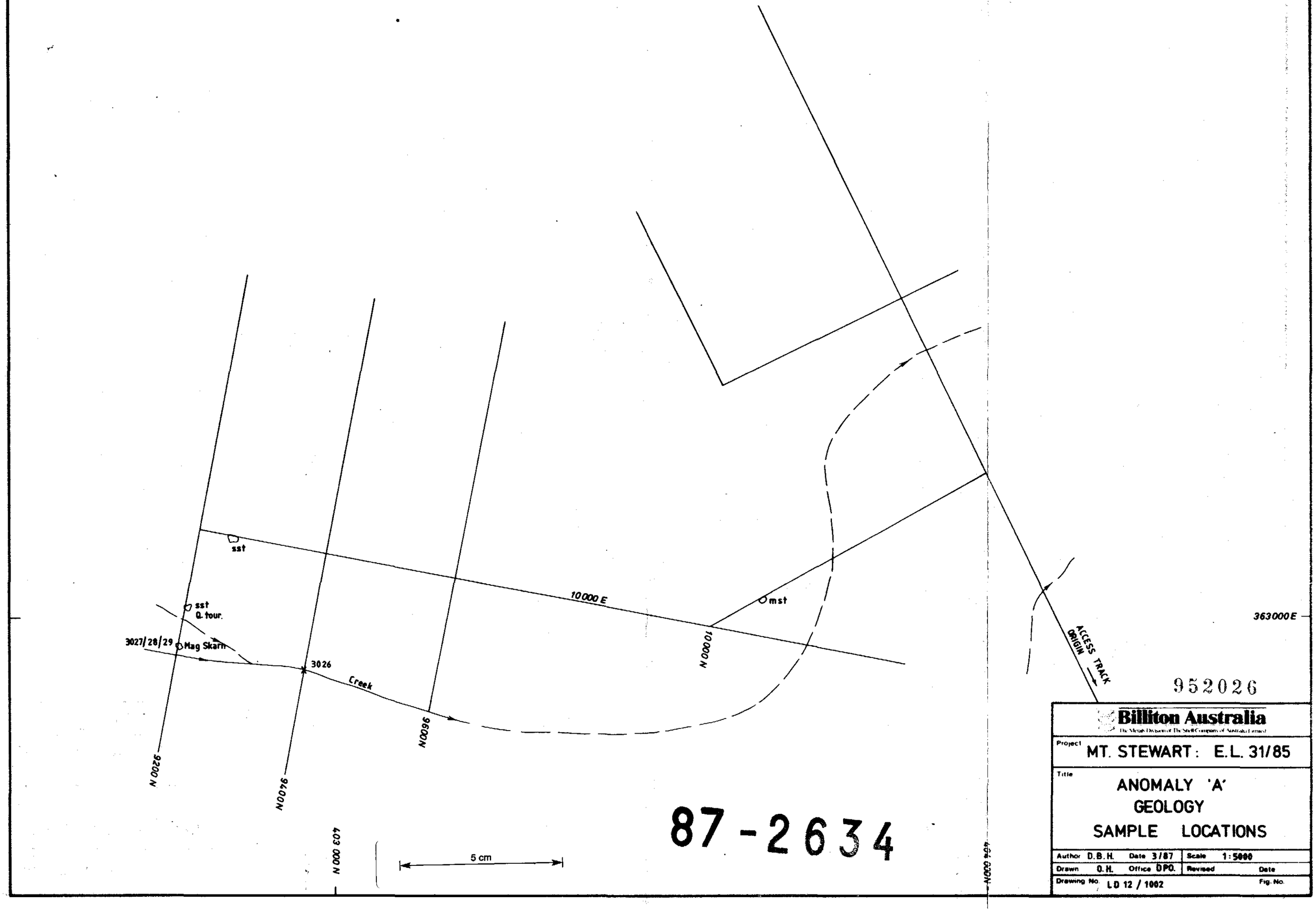
SHELL COMPANY OF AUSTRALIA
METALS DIVISION

N.W.TASMANIA
MT.STEWART

ANOMALY A, GROUND MAG
LINE 9400N

FIG.NO: 5	REPT.NO:
ENCL.NO:	DRG.NO:
DATE: 8/86	AUTHOR:
DRAWN:	OFFICE: AHO

952025



952026

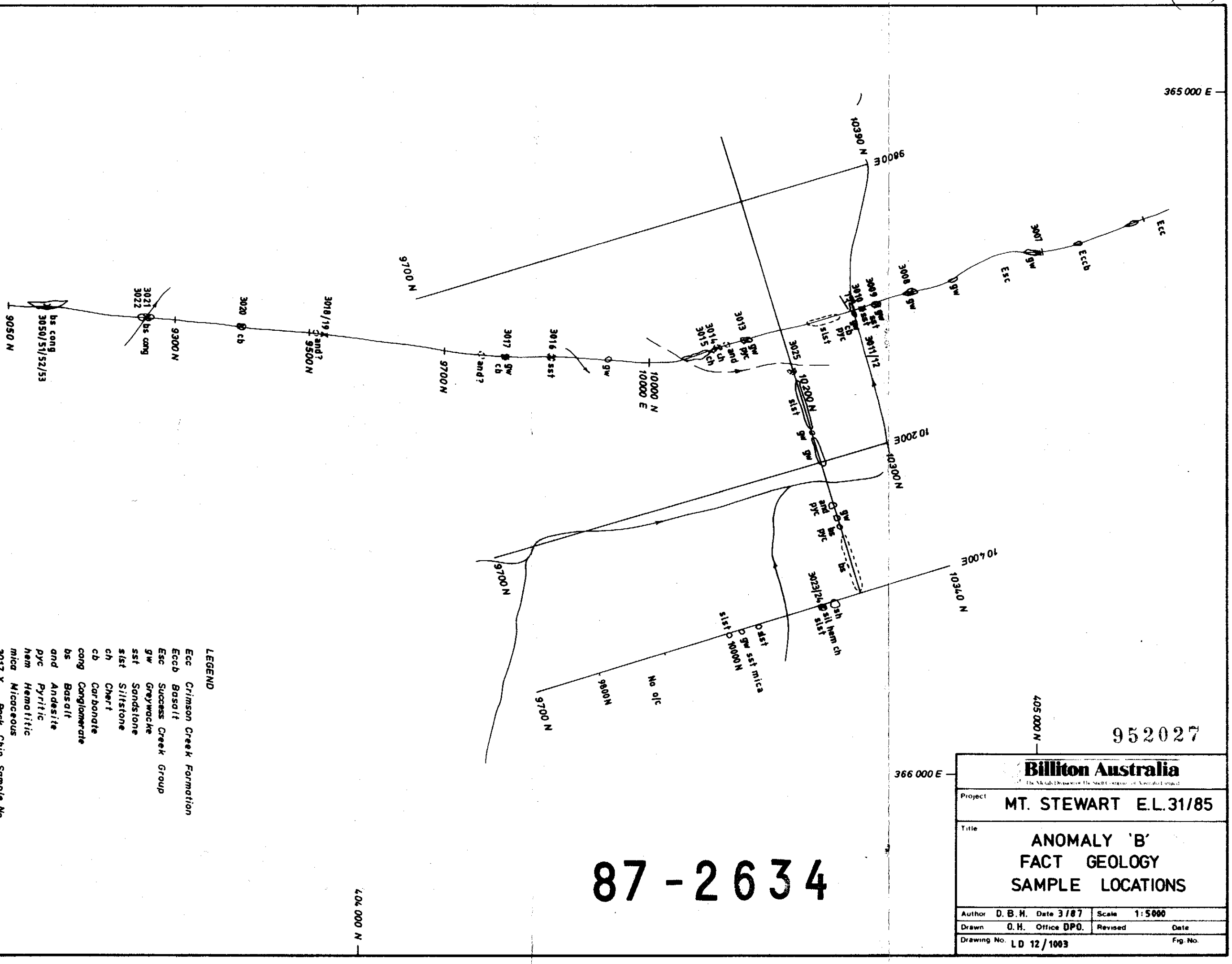
87-2634

Billiton Australia
The Metals Division of The Shell Company of Australia Limited

Project: MT. STEWART: E.L. 31/85

Title: ANOMALY 'A'
GEOLOGY
SAMPLE LOCATIONS

Author D.B.H.	Date 3/87	Scale 1:5000	
Drawn O.H.	Office DPO.	Revised	Date
Drawing No. LD 12 / 1002			Fig. No.



LEGEND

Ecc Crimson Creek Formation
Eccb Basalt
Esc Success Creek Group
gw Greywacke
sst Sandstone
slst Siltstone
ch Chert
cb Carbonate
cong Conglomerate
bs Basalt
and Andesite
pyc Pyritic
hem Hematitic
mica Micaceous
3017 X Rock Chip Sample No.
Creek: direction of flow

5 cm

952027

87-2634

Billiton Australia

Project	MT. STEWART E.L.31/85
Title	ANOMALY 'B' FACT GEOLOGY SAMPLE LOCATIONS
Author D.B.H. Date 3/87	Scale 1:5000
Drawn O.H. Office DPO.	Revised Date
Drawing No. LD 12/1003	Fig. No.