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BILLITON AUSTRALIA

THE METALS DIVISION OF
THE SHELL COMPANY OF AUSTRALIA LIMITED

E.L. 50/87 - PORT SORELL

Annual Report for the 12 Month Period Ending
20th June, 1989

Author : J.P. Randell

Report No : 08.4171

Date : 14th April, 1989

Copy No :

Distribution:
1. Department of Mines, Hobart
2. Billiton, Melbourne
3. Billiton, Devonport

001

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SUMMARY

EL 50/87 of 71 sq kms is situated at Port Sorell on the north coast of Tasmania and tenure is held by The Shell Company of Australia.

Previous exploration and work by the Mines Department has identified a folded EoCambrian sequence of calcareous sediments and shales in faulted contact with a moderately deformed PreCambrian block of quartzites and shales, termed the Badger Head Block.

Potential is recognised for the development of a stratiform base metal sulphide deposit in the keel of the EoCambrian synclinal structure situated west of the Badger Head Block. Syngenetic sulphide has been drilled on the eastern limb of this proposed syncline but earlier reports indicated that this sulphide species is predominantly pyrite.

Exploration to date has included geological mapping, rock chip sampling and stream sediment sampling. Two weak stream sediment anomalies have been identified but rock chip sampling has not produced anomalous base metal responses.

Future work will concentrate on verification of the structure, follow up of the stream anomalies and sampling of the Branchs Creek pyrite deposit. Electrical geophysics will be employed if favourable geological and geochemical trends are indicated.

1. INTRODUCTION

This report is the first annual report on exploration completed within EL 50/87 by Billiton Australia.

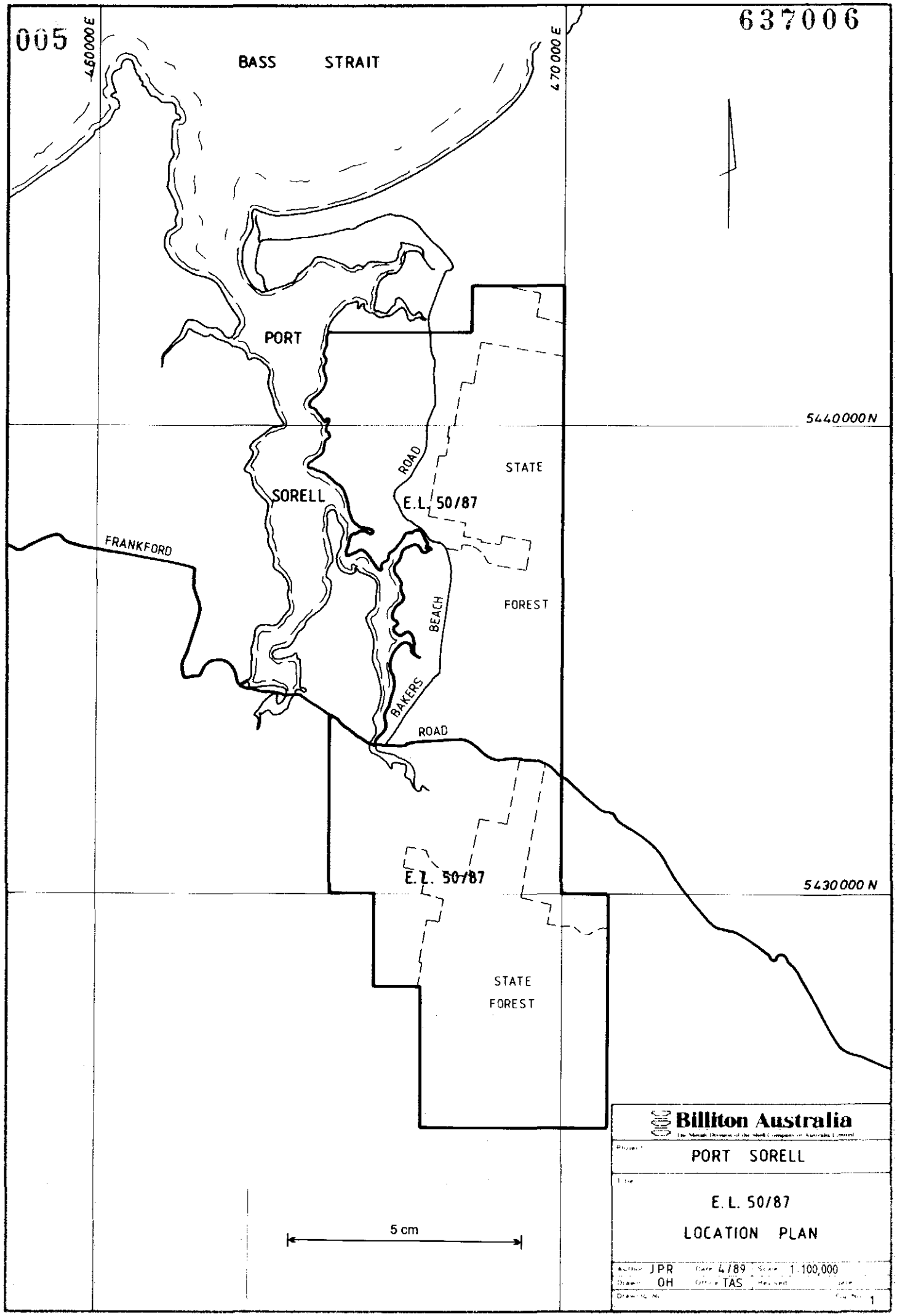
The tenement is situated at Port Sorell, 20 kms east of Devonport on the north coast of Tasmania. In detail the licence abuts the South East Arm of Port Sorell and the Asbestos Range National Park (Fig. 1).

2. TENEMENT STATUS

Exploration licence 50/87, of 71 sq kms was granted to The Shell Company of Australia Limited on 20th June 1988 for a period of ten years, renewable every 12 months. The tenement includes the following land subdivisions:

viz	44.4 km²	State Forest (63%)
	22.2 km²	Private Property (31%)
	3.4 km²	Crown Land
	0.5 km²	Crown Land (subject to Lands Dept. approval)
Total	70.5 km²	

Within the tenement boundaries, two mining leases are current viz. 37M/76, 47M/85. Both are held by Industrial Sands Pty. Ltd. as quarrying leases and are excluded from EL 50/87 (see Fig. 2).


005
637006
460000 E
470 000 E
BASS STRAIT
PORT
5440000N
ROAD
STATE
SORELL
E.L. 50/87
FRANKFORD
FOREST
BEACH
BAKERS
ROAD
E.L. 50/87
5430000 N
STATE
FOREST
5 cm
Billiton Australia
PORT SORELL
E. L. 50/87
LOCATION PLAN
Author JPR
Date 4/89
Scale 1:100,000
Drawn OH
Office TAS
1

3. LAND HOLDINGS

State Forest covers 63% of the tenement and the majority of this is under pine plantation. Agreement has been reached with the Forestry Commission to obtain access to these areas.

Private land holdings cover 31% of the tenement and include a total of 11 landowners (see Fig. 2). Notification has been made to these property owners in regard to the company's exploration activities within the tenement.

4. PREVIOUS WORK

Limited exploration has been carried out over the licence area and this work can be summarized as follows:

1954-55: The Mines Department (T. Hughes) carried out geological mapping within the Asbestos Range area. This was accompanied by some detailed exploration at the Branchs Creek Pyrite deposit. Here, two costeans and five drill holes were completed on behalf of the Ben Lomond Mining Company. A resource of 0.75Mt @ 10% Sulphur was calculated by Hughes from the results of this drilling.

1965-67: EL 15/65 was pegged by BHP who carried out an airborne magnetic and stream sediment survey over the area north of the Frankford Road.

1968: EZ Co. of Aust. (EL 12/67) examined the Branchs Creek pyrite prospect as a potential source of sulphur. Geological mapping, rock chip sampling and metallurgical testing was completed but it was concluded that satisfactory recoveries could not be achieved.

1981-82: Peko Wallsend (EL 24/80) identified the source of the BHP aeromagnetic anomalies as Cambrian dolerite. A large (561 sample) stream sediment survey was completed and several weak base metal anomalies were delineated. No anomalous tin or tungsten geochemistry was identified. Soil and rock chip sampling was completed over several anomalous areas.

5. REGIONAL SETTING & MINERALIZATION

The licence covers the faulted contact of the Pre Cambrian Badger Head Block in the east with the folded EoCambrian sequence of siltstones, greywackes and cherts to the west. The local setting of the area as interpreted by the Geological Survey of Tasmania is shown in Fig. 3. Here the Pre Cambrian is interpreted to be in faulted contact with an open folded Cambrian sequence that forms a shallow south plunging synclinal sequence. This structure is offset in a NBE (i.e.

dextral) sense by a later displacement of 2 kilometres.

Mineralisation within the licence area is represented at three localities, details of which are summarized below:

viz Branchs Creek Pyrite: - AMG 5437650N 467900E
- bedded syngenetic pyrite within black shale.
- low base metal geochemistry (from previous workers)
- 5 drill holes have intersected the pyritiferous horizon.

Copper (Lead-Zinc) Show: - AMG 5430500N 468100E
- quartz veined pyritic black shale
- low base metal values
- adit 35m long.

Barite Prospect:
- AMG 5428400N 468000E
- now under pine plantation
- reportedly massive barite veins within strongly leached carbonate
- 5 costeans were apparently dug

6. EXPLORATION COMPLETED

6.1 Reconnaissance Mapping

Geological mapping (1:25,000 scale) has been completed over areas held under State Forest tenure (see Fig. 4) and essentially this has focussed on the PreCambrian - EoCambrian contact. Outcrop is poor in the plantation areas and hence the actual contact has not been observed. However, deformation within the PreCambrian rocks is more intense and characterized by crenulation cleavage and strongly fissile sediments. Rock types are predominantly quartzites, shales and siltstones that display dramatic variations in strike and dip of bedding (S 340° - 040° Mag D 25°W - 75°E).

Eo-Cambrian lithologies are represented by massive siltstones, often calcareous, laminated pyritic black shales and minor intermediate dykes. Bedding orientation varies from 340° - 010° Mag whilst dips are predominantly to the east at 60-70°.

Selective rock chip sampling of ferruginous material has been carried out but the poor base metal values tend to support derivation from carbonate facies. A total of fourteen samples of "gossanous" material were collected but maximum assays are low.

viz

Cu	40ppm	
Pb	13ppm	
Zn	92ppm	
Ba	370ppm	(See Appendix 1)
As	140ppm	
Ag	1ppm	
Au	0.01ppm	

6.2 Stream Sediment Survey

A total of 45 sample sites were selected for bulk 5kg sampling but of these only 36 sites were in practice sampled. The remainder were unsuitable for reasons of contaminations from road works or insufficient sediment. Collection of the bulk samples (5kg) was carried out by:

- collecting all -1/4" material without sieving.
- selecting non-trap sites
- avoiding organic and bank material.

These samples were later allowed to settle then excess water was decanted off. Samples were then freighted to Classic Comlabs, Adelaide for cyanide leaching and assay for gold.

The -80# samples were collected in the field using a 1mm sieve and collecting approx. 2kg of sediment. The samples were later dried in Devonport then sieved to -80# to obtain at least 150gms of sediment. Samples were then despatched to Classic Comlabs, Adelaide for analysis of Cu Zn Ag (AAS), Pb As Ba (XRF), Au (F.A.).

Results are tabulated below and presented in Appendix 1.

viz	Element	Max	Min	Threshold	Anomalous Level	Anomalous Samples
	Cu(ppm)	50	2	20	30	16104, 16140
	Zn	60	7	43	59	16108, 16138 16140
	Ag	<1	<1	N/A	N/A	N/A
	Pb	28	2	16	22	16102, 16104 16116
	As	32	7	16	20	16106, 16164
	Ba	330	50	245	315	16102, 16108 16164
	Au(ppb)	1.45	<0.05	0.4	0.6	16101, 16103

Sample sites of interest are:

16101/02 : Au Pb Ba (1.45, 24, 320)
16103/04 : Au Cu Pb (0.60, 28, 230)
16106 : As
16108 : Zn Ba
16116 : Pb
16138 : Zn
16140 : Cu Zn
16164 : As Ba

Sample sites 16101/02, 16103/04 appear to be of most interest even though empirically the values aren't startling. The sample sites occur in approximately the same are of the licence (i.e. SW corner) but the source of the anomalies has not been identified to date. By comparison with other areas of Tasmania, the BCL values would be considered marginally anomalous at best.

7. CONCLUSIONS & RECOMMENDATIONS

Exploration to date has been at a grass roots level only and has established the presence of an EoCambrian sequence of calcareous silts and shales indicative of quite shallow marine or lagoonal conditions at the time of deposition. The sequence is in faulted contact with the PreCambrian Badger Head Block and this structural zone may provide a channelway through which metalliferous brines could pass.

The synclinal fold structure proposed by earlier workers has not been verified to date but future work should concentrate on resolving this interpretation. Additional rock chip sampling should also be completed to add to the small data base collected to date. Currently, only low base and precious metal values have been recorded from ferruginous outcrops.

A stream sediment survey completed over the entire licence has identified two weakly anomalous sample sites in the south west quadrant which require follow up sampling and mapping.

It is recommended that rock chip sampling be carried out at the Branchs Creek pyrite deposit to identify any anomalous levels of base, precious metals or indicator elements (As, Ba, Cd, Sb). Stratiform base metal sulphide deposits are typically pyritiferous and base metal anomalous within the mineralized sequence laterally distant from the deposit itself. However, it is considered that most potential may be in the recognition of a stratiform sulphides in the proposed synclinal keel of the EoCambrian sequence west of the Badger Head Block.

APPENDIX 1

Rock Chip & Stream Sediment Assays

637015

CLASSIC COMLABS LTD
Analytical Laboratories (INC. IN W.A.)
014
305 South Road, Mile End South, South Australia, 5031
Telephone: (08) 43 5722 Fax: (08) 234 0321 Telex: LABCOM AA89323

Mr. Jeff Randell
Billiton Australia Ltd
30 Mersey Main Road
Spreyton
Devonport
TAS 7310 Australia

JOB NUMBER: 9AD0091

Your Reference: 11645/LD54/JPR

Date Received: 18-JAN-1989 Turnaround 14 days
Date Relayed: 1-FEB-1989
Date Reported: 1-FEB-1989

Number of Samples: 76

Report Analyte Codes
N.A. - Not Analysed.
L.N.R. - Listed But Not Received.
I.S. - Insufficent Sample for Analysis.

Report Comprising: Cover Sheet
Pages 1 to 6

Comments:

Report Dist'n: Carbon Copies(CC),Electronic Media(EM),Magnetic Media(MM)

Type	Recipient	Location	Date	Copies
MM	Mr. Jeff Randell	Devonport	1-FEB-89	1

Approved Signature:

for

Harry Fishman
Managing Director.
CLASSIC COMLABS LTD
(Please address any enquiries to Mr. Trevor Francis)

This report relates specifically to the sample(s) tested in so far as that the sample(s) is truly representative of the sample source as supplied.

637016

CLASSIC COMLABS LTD

Analytical Laboratories (INC. IN W.A.)

015

Job: 9AD0091
O/N: 11645/LD54/JPR

ANALYTICAL REPORT

SAMPLE	Au
16101	1.45
16103	0.60
16105	0.35
16107	0.15
16109	0.10
16111	0.10
16113	<0.05
16115	0.10
16117	N.A.
16119	0.10
16121	0.10
16123	0.10
16125	0.10
16127	0.10
16129	0.05
16131	<0.05
16133	0.05
16135	0.05
16137	0.25
16139	0.15
16141	N.A.
16143	0.05
16145	0.30
16147	<0.05
16149	<0.05
UNITS	ppb
SCHEME	BLEG2

CLASSIC COMLABS LTD

Analytical Laboratories (INC. IN W.A.)

Job: 9AD0091
O/N: 11645/LD54/JPR

016

ANALYTICAL REPORT

SAMPLE	Au
16151	<0.05
16153	0.50
16155	0.50
16157	<0.05
16159	<0.05
16161	<0.05
16163	<0.05
16165	<0.05
16167	<0.05
16169	<0.05
16171	<0.05
16173	<0.05
16175	<0.05
UNITS	ppb
SCHEME	BLEG2

$\bar{x} = 0.160$
$6n = 0.258$

CLASSIC COMLABS LTD

Analytical Laboratories (INC. IN W.A.)

017

Job: 9AD0091
O/N: 11645/LD54/JPR

ANALYTICAL REPORT

SAMPLE	Au Avg	Au Dp1	Au Dp2	Au Dp3	Pb	As	Ba
16102	<0.01	--	--	--	24	9	320
16104	<0.01	--	--	--	28	15	230
16106	<0.01	--	--	--	17	20	310
16108	0.03	0.03	0.02	--	7	14	320
16110	0.02	--	--	--	7	18	145
16112	<0.01	--	--	--	8	10	190
16114	0.01	--	--	--	19	8	270
16116	0.01	--	--	--	24	11	220
16118	<0.01	--	--	--	13	11	180
16120	<0.01	--	--	--	14	13	195
16122	0.01	--	--	--	10	13	160
16124	0.01	--	--	--	13	11	105
16126	0.01	--	--	--	14	15	185
16128	0.01	--	--	--	8	8	90
16130	<0.01	--	--	--	3	9	95
16132	0.01	--	--	--	5	9	95
16134	0.02	0.01	0.02	--	6	10	90
16136	<0.01	--	--	--	3	10	95
16138	<0.01	--	--	--	3	8	165
16140	<0.01	--	--	--	12	8	155
16142	<0.01	--	--	--	3	10	110
16144	0.02	--	--	--	2	10	105
16146	<0.01	--	--	--	6	7	190
16148	0.01	0.02	<0.01	--	6	10	130
16150	0.01	--	--	--	7	11	140
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	FA1	FA1	FA1	FA1	XRF1	XRF1	XRF1

CLASSIC COMLABS LTD

Analytical Laboratories (INC. IN W.A.)

018

Job: 9AD0091
O/N: 11645/LD54/JPR

ANALYTICAL REPORT

SAMPLE	Au Avg	Au Dp1	Au Dp2	Au Dp3	Pb	As	Ba
16152	<0.01	--	--	--	10	8	155
16154	<0.01	--	--	--	3	13	130
16156	0.01	--	--	--	<2	12	170
16158	0.01	<0.01	0.02	--	7	11	185
16160	0.01	--	--	--	6	8	50
16162	0.01	--	--	--	9	13	150
16164	0.02	--	--	--	14	32	330
16166	0.01	--	--	--	7	9	250
16168	0.01	0.02	--	--	5	10	180
16170	<0.01	--	--	--	2	7	105
16172	<0.01	--	--	--	7	9	220
16174	<0.01	--	--	--	10	12	210
16176	0.01	--	--	--	11	7	220
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	FA1	FA1	FA1	FA1	XRF1	XRF1	XRF1
				$\bar{x}$	9.3	11.3	174.8
				σ_n	6.3	4.5	70.1
					15.6	15.8	244.9
					21.9	20.3	315.0

CLASSIC COMLABS LTD

Analytical Laboratories (INC. IN W.A.)

013

Job: 9AD0091
O/N: 11645/LD54/JPR

ANALYTICAL REPORT

SAMPLE	Cu	Zn	Ag
16102	9	46	<1
16104	50	48	<1
16106	10	54	<1
16108	8	60	<1
16110	6	19	<1
16112	6	19	<1
16114	19	42	<1
16116	5	26	<1
16118	3	12	<1
16120	7	26	<1
16122	7	19	<1
16124	9	14	<1
16126	22	26	<1
16128	7	22	<1
16130	<2	14	<1
16132	3	13	<1
16134	<2	6	<1
16136	2	17	<1
16138	28	60	<1
16140	34	60	<1
16142	6	28	<1
16144	4	22	<1
16146	3	24	<1
16148	8	20	<1
16150	7	20	<1
UNITS	ppm	ppm	ppm
SCHEME	AAS1	AAS1	AAS2

CLASSIC COMLABS LTD
Analytical Laboratories (INC. IN WA.)

637021

Job: 9AD0091
O/N: 11645/LD54/JPR

020

ANALYTICAL REPORT

SAMPLE	Cu	Zn	Ag
16152	3	22	<1
16154	2	7	<1
16156	16	32	<1
16158	5	14	<1
16160	2	7	<1
16162	9	30	<1
16164	24	34	<1
16166	3	15	<1
16168	3	18	<1
16170	<2	12	<1
16172	3	18	<1
16174	14	50	<1
16176	14	58	<1
UNITS	ppm	ppm	ppm
SCHEME	AAS1	AAS1	AAS2
$\bar{x}$	9.6	27	
σ_n	10.1	16	
	19.7	43	
	29 8	59	

637022

CLASSIC COMLABS LTD
Analytical Laboratories (INC. IN W.A.)

305 South Road, Mile End South, South Australia, 5031
Telephone: (08) 43 5722 Fax: (08) 234 0321 Telex: LABCOM AA89323

021

Mr. David Hall
Billiton Australia Ltd
30 Mersey Main Rd
Spreyton
DEVONPORT
TAS 7310 Australia

JOB NUMBER: 8AD3192

Your Reference: 11640/LD54/JPR

Date Received: 30-SEP-1988 Turnaround 5 days
Date Relayed: 5-OCT-1988
Date Reported: 5-OCT-1988

Number of Samples: 14

Report Analyte Codes
N.A. - Not Analysed.
L.N.R. - Listed But Not Received.
I.S. - Insufficent Sample for Analysis.

Report Comprising: Cover Sheet
Pages 1 to 2

Comments:

Report Dist'n: Carbon Copies(CC),Electronic Media(EM),Magnetic Media(MM)

Type	Recipient	Location	Date	Copies

Approved Signature:

for

Harry Fishman
Managing Director.
CLASSIC COMLABS LTD
(Please address any enquiries to Mr. Trevor Francis)

This report relates specifically to the sample(s) tested in so far as that the sample(s) is truly representative of the sample source as supplied.

637023

CLASSIC COMLABS LTD
Analytical Laboratories (INC. IN W.A.)

305 South Road, Mile End South, South Australia, 5031
Telephone: (08) 43 5722 Fax: (08) 234 0321 Telex: LABCOM AA89323

Job: 8AD3192
O/N: 11640/LD54/JPR

022

ANALYTICAL REPORT

SAMPLE	Au Avg	Au Dp1	Au Dp2	Au Dp3	Cu	Zn	Ag
16030	0.01	0.01	0.01	--	9	<2	<1
16031	0.01	--	--	--	6	<2	<1
16032	<0.01	--	--	--	36	30	<1
16033	0.01	--	--	--	36	48	1
16034	0.01	0.01	0.01	--	32	26	1
16035	0.01	--	--	--	9	<2	<1
16036	0.01	--	--	--	7	2	<1
16037	0.01	--	--	--	40	<2	<1
16038	<0.01	--	--	--	8	<2	<1
16039	0.01	--	--	--	13	42	1
16040	<0.01	--	--	--	11	92	1
16041	0.01	--	--	--	10	11	<1
16042	0.01	0.01	0.01	--	16	8	<1
16043	0.01	--	--	--	16	<2	<1
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	FA1	FA1	FA1	FA1	AAS1	AAS1	AAS2

CLASSIC COMLABS LTD
Analytical Laboratories (INC. IN W.A.)
305 South Road, Mile End South, South Australia, 5031
Telephone: (08) 43 5722 Fax: (08) 234 0321 Telex: LABCOM AA89323

637024

Job: 8AD3192
O/N: 11640/LD54/JPR

023

ANALYTICAL REPORT

SAMPLE	Ba	Pb	As
16030	100	6	3
16031	40	<2	6
16032	350	12	12
16033	80	3	26
16034	45	9	24
16035	95	5	7
16036	370	3	10
16037	50	13	140
16038	55	<2	19
16039	80	9	11
16040	15	5	14
16041	65	4	24
16042	105	<2	62
16043	30	3	210
UNITS	ppm	ppm	ppm
SCHEME	XRF1	XRF1	XRF1

8634

5444000 N

5440000N

5435000 N

5430000 N

5425000 N

463000E

472000E

ASBESTOS RANGE NATIONAL PARK

NORTH EAST ARM

Briggs Creek

A H OSBOURN
48 Shaw St
Devonport
6529116

A J CUNNINGHAM
89 Hillcrest Rd
Devonport
6529095

SHEEPWASH CREEK

E R LEE (Deceased)
C/- Tas Perm. Exec
6529070

P K Cunningham
89 Hillcrest Road
Devonport
6529108

Browns

P K CUNNINGHAM
6529087

V C LEE
49 West Goderich St
Deloraine
6529060

T & E LEE
C/- Tas Perm
Executors
23 Patterson St
Launceston
6529052

ROAD

Sheepwash Creek

PORT SORELL

STATE FOREST

Leased to Road & Site Developers
47M/85
39ha

BROWN Creek

37M/76 INDUSTRIAL SANDS P/L
295ha

LANDS DEPT.
Leased to
Addison

BEACH ROAD

Marshalls Little Brown Creek

POINT

WATTS Creek ROAD

STATE FOREST

EAGLE

D A & L A ADDISON
RSD 515
Latrobe
6588885

BAKERS

ROAD

Creek

H BYNON
6531611
C WHITE
6531603

SOUTH EAST ARM

D STEPHENSON
P O Box 145
Port Sorell
7239567

J C & V M HARDY
145 Tasman St
Devonport
6528877

Branches Creek

BRANCHES CREEK ROAD

C W WHITE
RSD 545
Latrobe
6531590

Little Branches Creek

DALGARTH ROAD

BRADFORDS TRACK

J R & H C STEPHENSON
P O Box 145
Port Sorell
7239612

DALCOATH

LARCOMBE

H BYNAN
P O Box 27
Devonport
6531582

MARTINS ROAD

STATE FOREST

CUMMINGS ROAD

C W & P W WHITE
RSD 545
Latrobe
6531638

BRANCHES CREEK PLANTATION

FRANKFORD ROAD

KERMODE ROAD

C A LADE (Deceased)
C/- Dunlop Park
Thirlstan
6531646

RIVER

BEACH ROAD

BAKERS ROAD

Kermode Creek

ROARING MAGG HILL

K S & J P GREGORY
6 Aylett Ave
Devonport
6532287

C N & Z E WRAY
Exton Grange
Exton
6532235

RUBICON

UNCOMMITED CROWN LAND

FRANKLIN ROAD

AFH
P O Box 582
Burnie
6532200

C N & Z E WRAY
Exton Grange
Exton
6332278

RUBICON HILLS

R K & M E WESTCOTT
C/- 119 Bayis St
Devonport
6332251

D S ROBSON
P O Box 681
Devonport
6532219

FRANKFORD ROAD

J CLUNE
M L A

FRANKLIN RIVULET

J CLUNE
100 Tugrah Rd
Devonport
6532198

C N & Z E WRAY
Exton Grange
Exton
6332235

FRANKLIN

STATE FOREST

M C GOOCH
"Wisedale"
Frankford
6532165

Saxons Creek

C W & P W WHITE
RSD 545
Latrobe
6531638

Gum Scrub Creek

RIVER

FIGG ROAD Creek

RUBICON

AND OTHERS ROAD

SMITHS

SMITHS AND OTHERS ROAD

STATE FOREST

DOLERITE ROAD

Gum Scrub Creek

STATE FOREST

LEGEND

- E.L. Boundary
- Reserve Boundary
- 2016 Property Boundary
- Public Road
- Gravel road with bridge
- Vehicular track with gate
- Walking track
- Power transmission line
- Wet area
- Creek, river
- Area voluntarily excised

637025

5 cm

89-2960

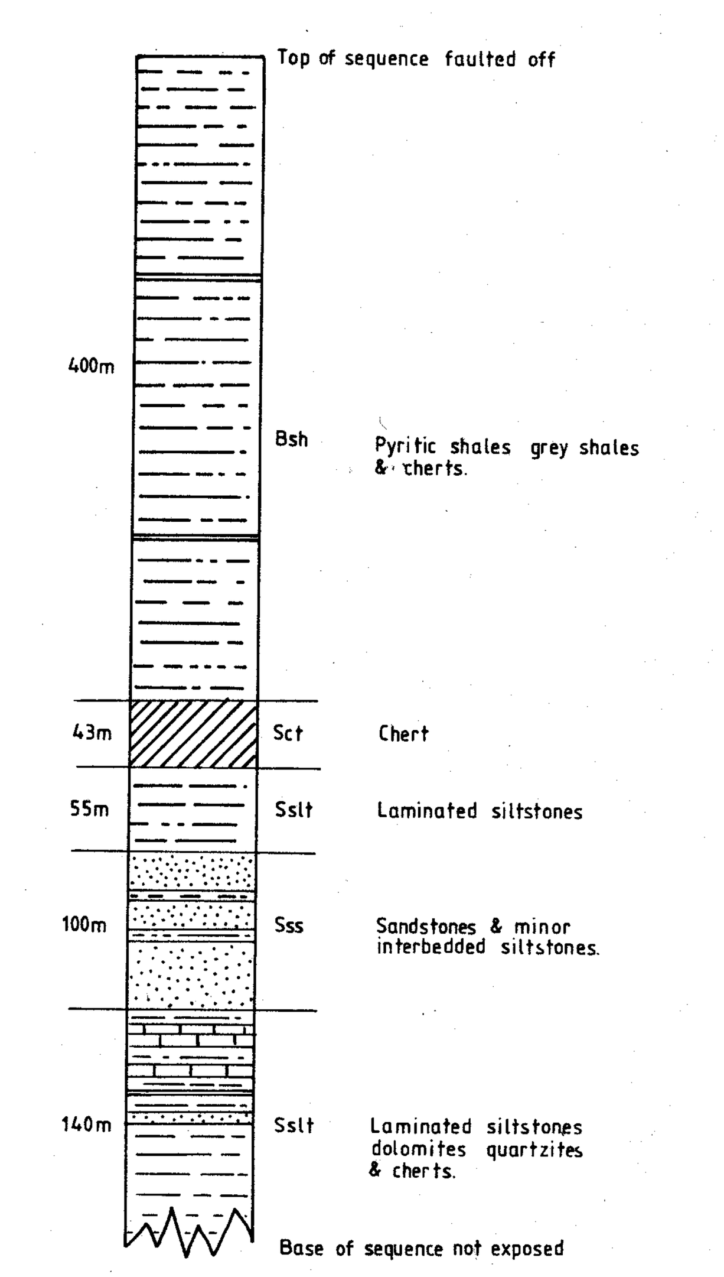
Billiton Australia
The Metals Division of the Shell Company of Australia Limited

Project	PORT SORELL
Title	TOPOGRAPHIC BASE PLAN AND LAND HOLDINGS
Author J P R Dept. TAS	Scale 1:25,000
Drawn O H Date 9/88	Revised Date
Checked Date	S'ceded Date
Sheet No. FIG 2	Drawing No. D/LD 54/001

8635

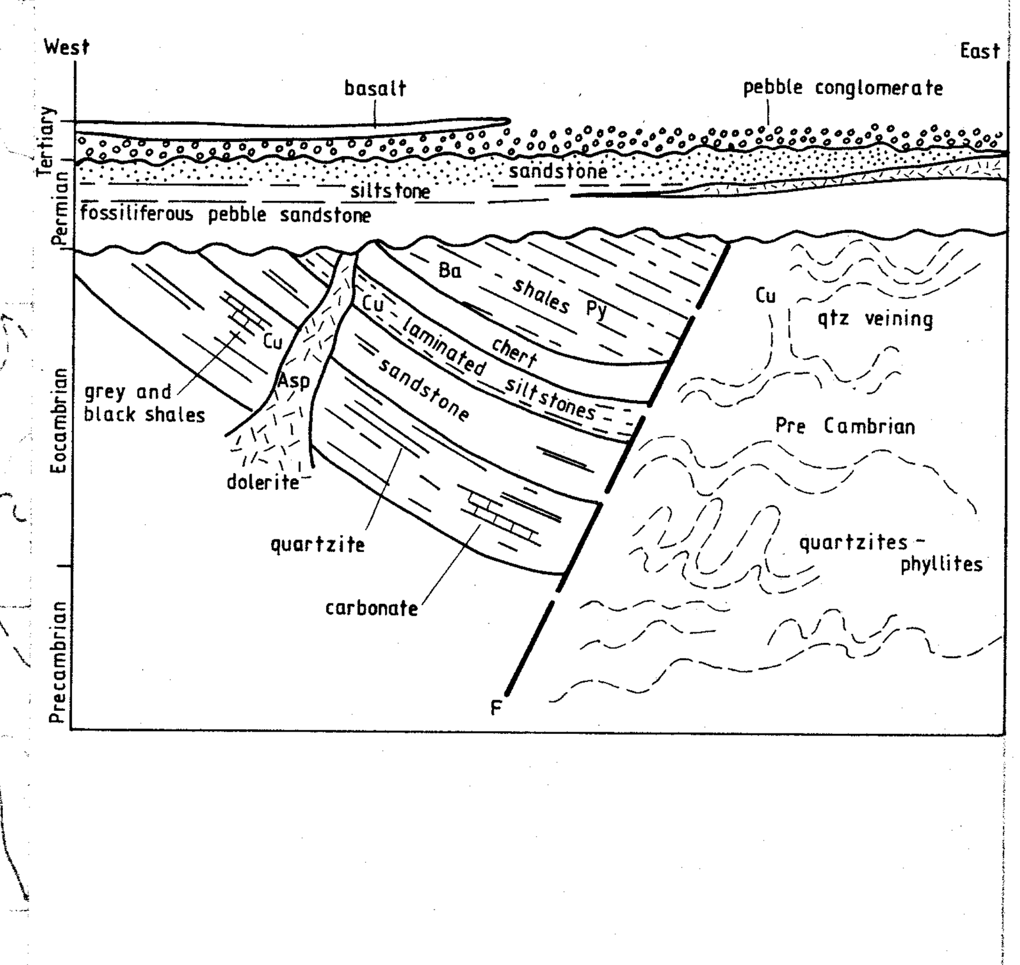

ASBESTOS RANGE NATIONAL PARK
NORTH EAST ARM
PORT SORELL
SOUTH EAST ARM
5444000 N
5440000N
5435000 N
5430000 N
5425000 N
463000E
472000E
A.H. OSBOURN 48 Shaw St Devonport 6529116
A.J. CUNNINGHAM 89 Hillcrest Rd Devonport 6529095
E.R LEE (Deceased) C/- Tas Perm. Exec. 6529071
P.K. CUNNINGHAM 6529087
T & E LEE C/- Tas Perm Executors 23 Patterson St Launceston 6529052
STATE FOREST
Leased to Road & Site Developers 295ha ML
37M/76 INDUSTRIAL SANDS
LANDS DEPT Leased to Addison
L.A. ADDISON RSD 515 Latrobe
BRANCHS CREEK Py
J.C & V.M. HARDY 145 Tasman St Devonport
D. STEPHENSON P.O. Box 145 Port Sorell 7239567
J.R. & H.C. STEPHENSON P.O. Box 145 Port Sorell 7239612
H BYNAN 6531611
C WHITE 6531601
C.W. WHITE RSD 545 Latrobe 6531590
H. BYNAN P.O. Box 27 Devonport 6531582
C.W. & P.W. WHITE RSD 545 Latrobe 6531638
C.A. LADE (Deceased) C/- Dunlop Park Thirlstan 6531646
K.S. & J.P. GREGORY 6 Aylett Ave Devonport 6532247
C.N. & Z.E. WRAY Exton Grange Exton 6532235
C.N. & Z.E. WRAY Exton Grange Exton 6332278
UNCOMMITED CROWN LAND
R.K. & M.E. WESTCOTT C/- 119 Davis St Devonport 6332251
D.S. ROBSON P.O. Box 681 Devonport 6532219
AFH P.O. Box 582 Burnie 6532200
J CLUNE MLA
J. CLUNE 100 Tugrah Rd Devonport 6532198
M.C. GOOCH "Wisedale" Frankford 6532165
C.W. & P.W. WHITE RSD 545 Latrobe 6531638
BRANCHES CREEK PLANTATION
FRANKFORD ROAD
RUBICON RIVER
RUBICON HILLS
ROARING MAGG HILL
SMITHS AND OTHERS ROAD
DOLERITE ROAD
RIVULET Cu Pb Zn
Pb Ba
Lsf
Bsh
Sct
Sslt
Sss
PЄ

EO CAMBRIAN SEQUENCE - PORT SORELL AREA


Top of sequence faulted off
400m Bsh Pyritic shales grey shales & cherts.
43m Sct Chert
55m Sslt Laminated siltstones
100m Sss Sandstones & minor interbedded siltstones.
140m Sslt Laminated siltstones dolomites quartzites & cherts.
Base of sequence not exposed

Thicknesses taken from Gee, 1971.

SCHEMATIC EAST-WEST GEOLOGICAL SECTION ACROSS E.L. 24/80 BADGER HEAD


West
East
basalt
pebble conglomerate
sandstone
siltstone
fossiliferous pebble sandstone
Tertiary
Permian
Eocambrian
Precambrian
Ba
shales Py
Cu
laminated siltstones
chert
sandstone
grey and black shales
Asp
dolerite
quartzite
carbonate
qtz veining
Pre Cambrian
quartzites - phyllites
F

LEGEND

- E.L. Boundary
- Reserve Boundary
- 2016 Property Boundary
- Public Road
- Gravel road with bridge
- Vehicular track with gate
- Walking track
- Power transmission line
- Wet area
- Creek, river
- Area voluntarily excised

637026

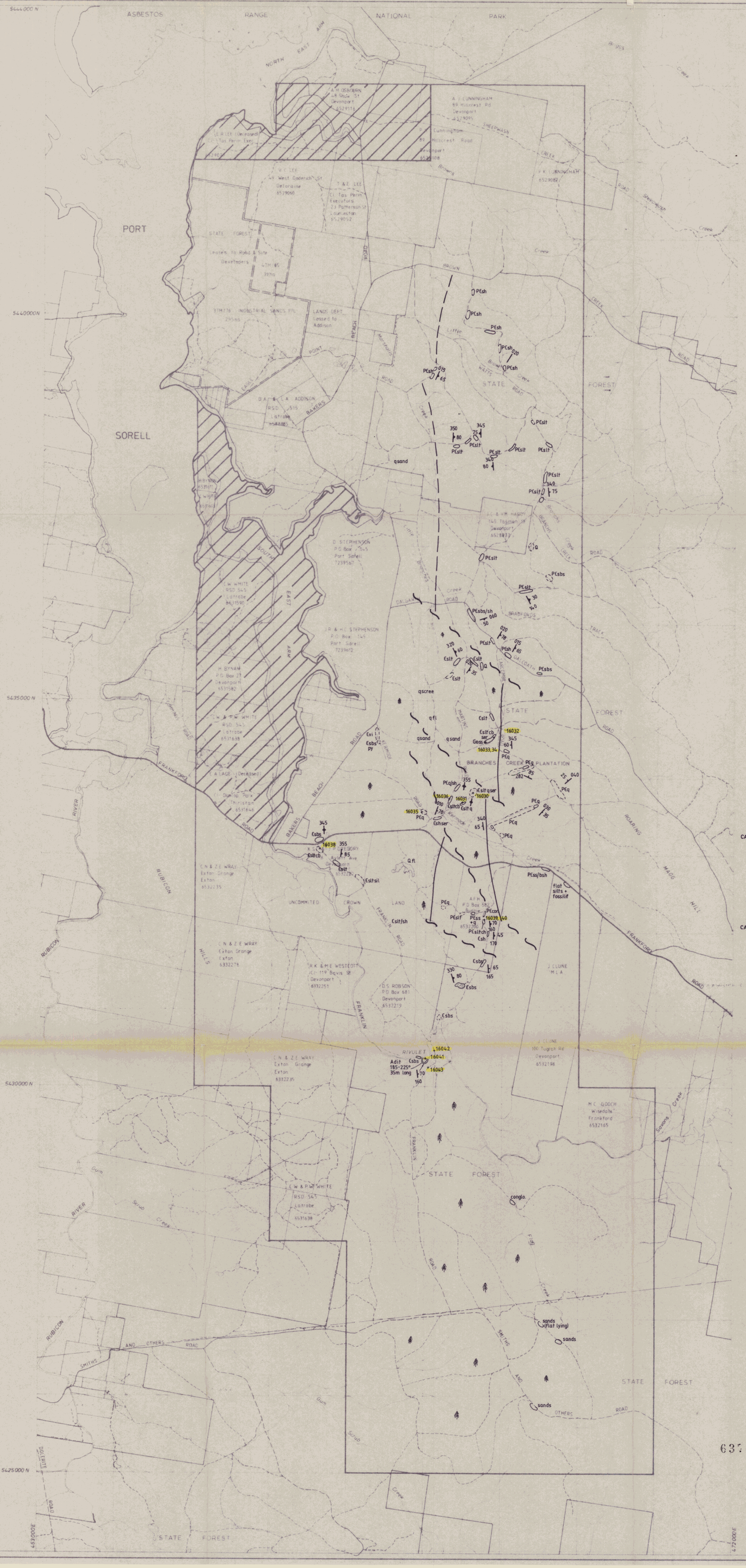
5 cm

89 - 2960

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

Project	PORT SORELL
Title	GEOLOGICAL SETTING
Author J.P.R. Dept. TAS	Scale 1:25,000
Drawn OH Date 9/88	Revised Date
Checked Date	S'ceded Date
Sheet No. FIG 3	Drawing No. D/LD 54/002

8636



ROCK CHIP SAMPLING

Sample	Au	Cu	Zn	Ag	Ba	Pb	As
16030	0·01	9	<2	<1	100	6	3
16031	0·01	6	<2	<1	40	<2	6
16032	<0·01	36	30	<1	350	12	12
16033	0·01	36	48	1	80	3	26
16034	0·01	32	26	1	45	9	24
16035	0·01	9	<2	<1	95	5	7
16036	0·01	7	2	<1	370	3	10
16037	0·01	40	<2	<1	50	13	140
16038	<0·01	8	<2	<1	55	<2	19
16039	0·01	13	42	1	80	9	11
16040	<0·01	11	92	1	15	5	14
16041	0·01	10	11	<1	85	4	24
16042	0·01	16	8	<1	105	<2	82
16043	0·01	16	<2	<1	30	3	210

CAMBRIAN	Cslt	Siltstone – fine grained, massive or poorly banded
	Csltcb	Calcareous Siltstone – locally limestone, vughy, weathers to ferruginous orange brown siltstone
	Csbs	Black Shale – well laminated fissile occassionally pyritic
	Cvi	Intermediate-Volcanic – fine to medium grained, massive probable intrusive dyke.
PRE CAMBRIAN	PEq	Quartzite – massive silicified sand size quartz
	PEss	Sandstone – dirty orange brown, minor mica content
	PEsh	Shale – fissile siltstone, may be crenulated
	PEcon	Conglomerate – pebble sized, well rounded, good sorting
	PEslt	Siltstone – pelitic sediment, variably fissile

LEGEND

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- 2016 Property Boundary
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- Vehicular track with gate
- Walking track
- Power transmission line
- Wet area
- Creek river
- Area voluntarily excised

5 cm

Mag. N

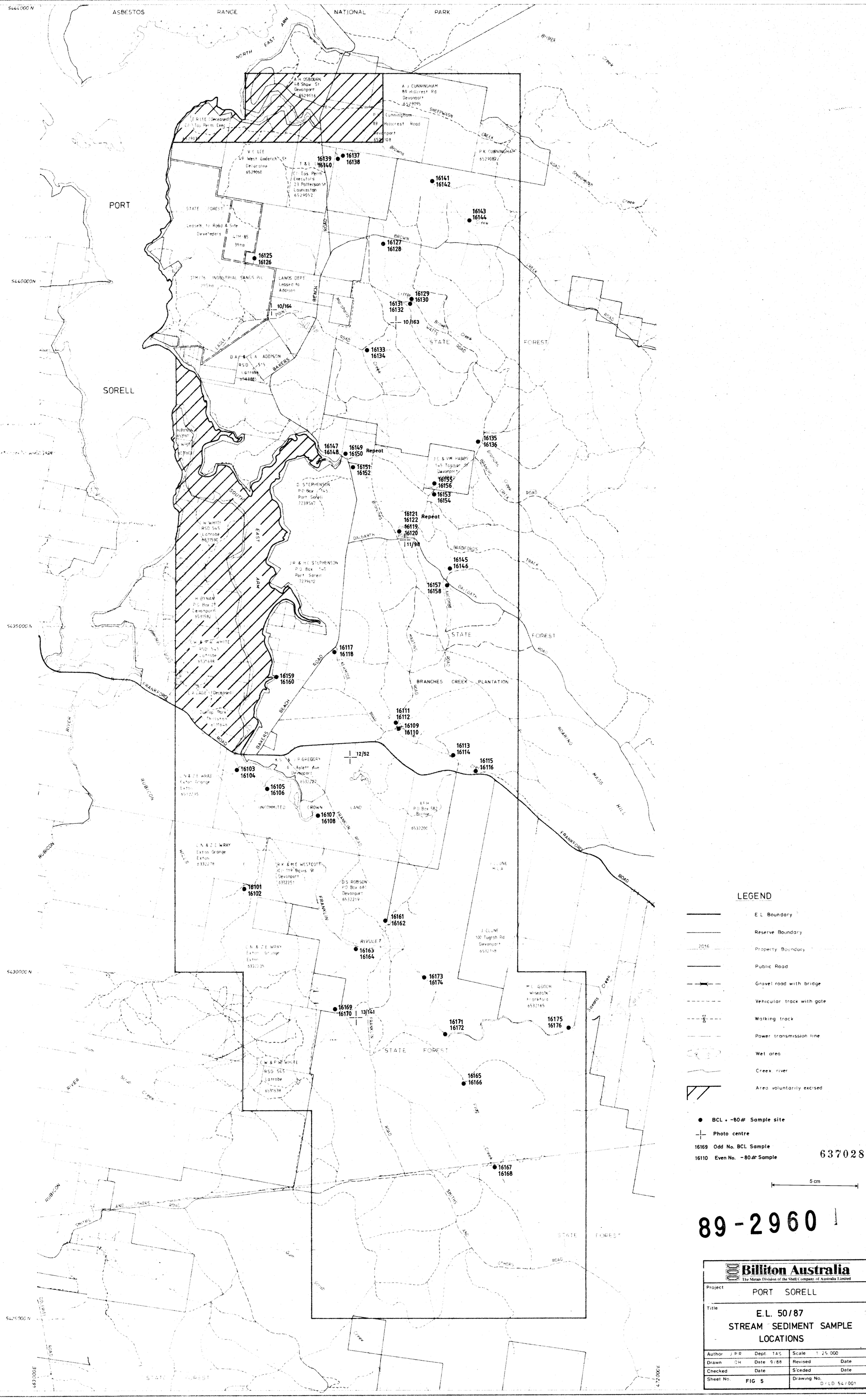
89-2960

637027

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

Project	PORT SORELL		
Title	E.L. 50/87 GEOLOGICAL FACT		
Author	J P R	Dept. TAS	Scale 1: 25,000
Drawn	OH	Date 9/88	Revised Date
Checked		Date	S'ceded Date
Sheet No.	FIG 4		Drawing No. D/LO 54/001

8637



LEGEND

- E.L. Boundary
- Reserve Boundary
- 2016 Property Boundary
- Public Road
- Gravel road with bridge
- Vehicular track with gate
- Walking track
- Power transmission line
- Wet area
- Creek river
- Area voluntarily excised

● BCL + -80# Sample site

┼ Photo centre

16169 Odd No. BCL Sample

16110 Even No. -80# Sample

637028

5 cm

89-2960

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

Project: PORT SORELL

Title: E.L. 50/87
STREAM SEDIMENT SAMPLE LOCATIONS

Author J.P.R.	Dept. TAS.	Scale 1:25,000	
Drawn DH	Date 9/88	Revised	Date
Checked	Date	S'ceded	Date
Sheet No. FIG 5		Drawing No. D/LD 54/001	