97-3966

318001

EXPLORATION LICENCES

18/96- MYALLA, 35/96- SISTERS CREEK

FINAL REPORT ON EXPLORATION

MAY TO DECEMBER 1996

Mineral Holdings Australia Pty Ltd
2nd Floor,
135, Collins St.,
Melbourne Vic 3000

Compiled by
D. McP. Duncan
McPherson Duncan & Associates
5, Old Summerleas Rd.,
Kingston Tas 7050

10th February 1997

318002

TABLE OF CONTENTS

ELs 18/96- Myalla, 35/96- Sisters Creek

1.0 Introduction

Following the closure of the Tioxide Australia Pty Ltd operation at Heybridge, Burnie, an opportunity was seen by Mineral Holdings Australia Pty Ltd (MHA) to use the plant and infrastructure to process suitable industrial minerals from the region. Accordingly, the concept was formed that bauxite from the north-western region of Tasmania could be exploited on a number of scales ranging from small, high grade deposits of 100,000 tonnes for specialist applications to millions of tonnes for lower grade, bulk industrial use.

Bauxite occurrences, mostly of limited extent, have been reported in a number of places in Tasmania (Owen, 1950) based on Jurassic dolerite or Tertiary basalt. MHA chose to select the best of these occurrences at Myalla which had been investigated by the Mines Department in 1944 (Dickinson, 1945) with indicated resources of around 200,000 tonnes.

Exploration Licence 18/96 of 12sq. km. was applied for on 2nd May 1996 to cover Well's Deposit south of the Bass Highway from which some initial sampling had revealed high grade bauxite. Exploration Licence 35/96 of 11 sq. km was applied for on 1st August 1996 to cover Bramich's Deposit and possible extensions on the basaltic rocks to the north of the Highway (Plan 1). As well as the collection of bauxite samples on the licences, limited reconnaissance sampling took place over a wide area on the basaltic rocks extending south from the coast between Wynyard and Devonport.

2.0 Exploration

Initial sampling by MHA (Kevin Pinner) in May 1996 on the Well's deposit on the property of Philip Beswick (EL 18/96) revealed high bauxite grades (over 50% total Al2O3). The samples (Bauxite 1-5) were described as chip samples from a pre-existing pit and from outcrops within 50 metres and the results on a range of elements following analysis by AMDEL are given in Table1 and Appendix 1 (as Jobs 6AD1189 and 6AD 1736). The samples were also processed to provide analyses on the magnetic and non-magnetic fractions. Additional sampling conducted in both licences is reported as samples 6-11 (Table 2 and Job 6AD 1951 in Appendix 2).

Both Comalco and Alcoa as potential joint venture partners were provided with material from Bauxite 1-5 samples to carry out their own analyses which are contained in the Appendix 3 as samples 33150 (1-5) and in Appendix 4 as samples MHA 1-5 respectively.

On 13-14th August, Alcoa and MHA personnel inspected and sampled two freshly cut, excavator trenches on Beswick's property and road and railway cuttings within the ELs and surrounding region. A report was produced by Alcoa geologist Peter Senini in September 1996 and is contained in Appendix 4. Full details of bauxite samples are given along with chemical analyses provided by Alcoa (Table 3- samples 131816-828 pits 1&2, EL 18/96; and 131829-131840 on ELs 18/96, 39/96 and in the surrounding

area). Additional analyses are also contained in the report of samples provided by MHA from Irby on EL 35/96 by Kevin Pinner (131846-852) and in the region from Mole Creek, Deloraine, and Cambell Town mainly by Geof Thomas (131853-865, sampling details in Table 4) and Westbury by Robert Gibb (131841-845).

Independent samples collected for MHA by Kevin Pinner on the two excavator trenches mentioned above were sent to AMDEL and gave the values listed in Appendix 5 (as Job 6AD 2778).

Other reconnaissance samples collected by Kevin Pinner in the area outside the licences as far as Hampshire to the south-east have been analysed as shown in Appendix 6 (Job 6AD 2937).

3.0 Conclusions

The Alcoa report concluded that while three of the original MHA samples in the pre-existing pit at Myalla had excellent bauxite grade (greater than 50% Al2O3), more representative samples from the 3m bauxite profile exposed in the new pits gave grades of 40-42% total Al2O3, 35-36% available Al2O3, 2-4% residual SiO2 and 20-22% Fe2O3. The high Fe2O3 makes the bauxite unacceptable for refractory/ chemical/ abrasives use.

Previous literature (see also Close, 1977) and this exploration program have combined to show that bauxite development in north-western Tasmania is patchy and has relatively thin profiles. Furthermore, the extensive landholdings and high resource value of the basalt-derived soils for cultivation puts constraints on further exploration and development.

On that basis, Alcoa declined to be further involved in a possible joint venture. Mineral Holdings then surrendered the licences in December 1996. The excavator trenches on the Beswick property were filled in and rehabilitated.

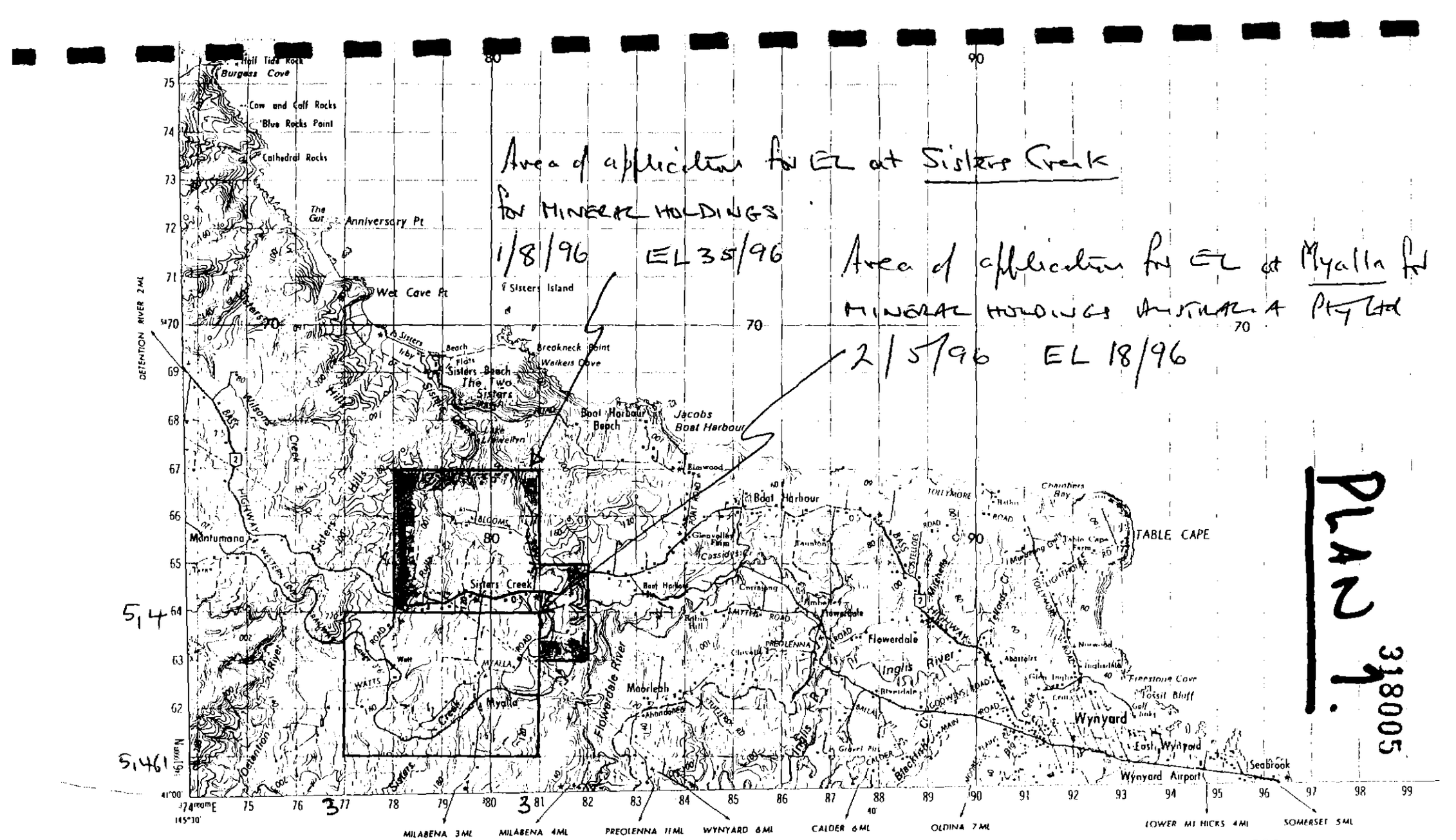
REFERENCES

Close, S.E. 1977. History of Exploration in the South Eastern Division 1963-1977. CRA Exploration Pty Ltd Report (refers also EL39/70)

Dickinson, D.R. 1945. Bauxite at Myalla. Tasmania Department of Mines. Unpublished Report

Owen, H. B. 1950. The Bauxite Resources of Tasmania. Record 1950/9. Bureau Mineral Resources, Canberra

Senini, P. 1996. Report on Tasmanian Bauxite Reconnaissance. Alcoa Report to Mineral Holdings


Area of application for EL at Sisters Creek
for MINERAL HOLDINGS
1/8/96 EL35/96
Area of application for EL at Myalla for
MINERAL HOLDINGS AUSTRALIA PTY LTD
2/5/96 EL 18/96
PLAN 1.
318005
5,14
5,1461
Burgess Cove
Cow and Calf Rocks
Blue Rocks Point
Cathedral Rocks
The Gut
Anniversary Pt
Wet Cave Pt
Sisters Island
Sisters Beach
The Two Sisters
Breakneck Point
Walkers Cove
Boat Harbour Beach
Jacobs Boat Harbour
Boat Harbour
Table Cape
Montumana
Sisters Creek
Myalla
Flowerdale
Flowerdale River
Inglis River
Wynyard
East Wynyard
Wynyard Airport
Seabrook
Table Cape
Milabena 3ML
Milabena 4ML
Preolenna 11ML
Wynyard 6ML
Calder 6ML
Oldina 7ML
Lower Mt Hicks 4ML
Somerset 5ML
EDITION 1
TRANSVERSE MERCATOR PROJECTION
HORIZONTAL DATUM: AUSTRALIAN GEODETIC DATUM 1966
SCALE 1:100,000
5 cm
PRODUCED by the Lands and Surveys Department Hobart 1969
NOMENCLATURE Topographic names on this map have been approved by the Nomenclature Board of Tasmania.
MAP ACCURACY: the average accuracy of this map is ±25 metres in the horizontal position of well defined detail and ±5 metres in elevation.
MAP RELIABILITY: Topographic information shown on this map is correct to 1969.
ROAD CLASSIFICATION: Roads are classified according to their intended function as part of the national road system. Classification of road surfaces will be shown on larger scale series when published.
BLACK NUMBERED GRID LINES ARE 1 000 METRE INTERVALS OF THE AUSTRALIAN MAP GRID ZONE 55
GRID VALUES ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP
CROWN COPYRIGHT RESERVED
Issued by authority of the Hon. Wilfred G Barker, Minister for Lands and Works, Tasmania

APPENDIX

1. **Analyses of MHA Bauxite(1-5) Samples-Myalla (including Table 1)**
2. **Analyses of MHA Bauxite (6-10) Samples- Myalla (Table 2 and Plan)**
3. **Analyses of MHA (1-5) Samples by Comalco**
4. **Report by Alcoa on Bauxite Reconnaissance with Analyses (Table 3) by Peter Senini**
5. **Analyses of MHA Samples- Pits 1& 2**
6. **Analyses of MHA Reconnaissance Samples**

amdel

318007

MINERAL CHEMISTRY

Amdel Laboratories Ltd
PO Box 338
Torrensville Plaza SA 5031
ACN 009 076 555

Telephone (08) 416 5300
Facsimile (08) 234 0321

RECEIVED
APP 1996

Mr Michael Thomas
Mineral Holdings Australia Pty Ltd
2nd Floor, 135 Collins Street
MELBOURNE VIC 3000

FINAL ANALYSIS REPORT

Your Order No:

Our Job Number : 6AD1189

Sample rec'd : 14/03/96
No. of samples : 5
Report comprises a cover sheet and pages 1 to 2

Results reported : 22/03/96

This report relates specifically to the samples tested in so far that the samples as supplied are truly representative of the sample source.

NOTE: Total Fe reported as Fe2O3

ORIGINAL SAMPLES FROM MYALLA

Approved Signature:

for
Alan Ciplys
Manager - Mineral Chemistry
AMDEL LABORATORIES ADELAIDE

Report Codes:
N.A. - Not Available.
L.N.R. - Listed But Not Received.
I.S. - Insufficient Sample.

Distribution Codes:
CC - Carbon Copy
EM - Electronic Media
MM - Magnetic Media

Appendix 1

318008

Job: 6ADI189
O/N:

Final

ANALYTICAL REPORT

SAMPLE	Al2O3	TiO2	Fe2O3	SiO2	MgO	CaO	P2O5	K2O	LOI
REDPA BAUXITE SPLE 1	54.3	2.77	12.4	0.54	0.08	0.07	0.39	<0.01	29.9
REDPA BAUXITE SPLE 2	50.3	2.83	16.3	0.27	0.08	0.06	0.52	<0.01	29.5
REDPA BAUXITE SPLE 3	51.8	1.84	12.9	1.61	0.04	0.07	0.55	<0.01	30.6
REDPA BAUXITE SPLE 4	51.9	0.33	3.62	16.3	0.12	0.11	0.08	0.05	26.2
REDPA BAUXITE SPLE 5	38.6	1.05	17.5	17.3	0.31	0.09	0.89	0.02	23.8
UNITS	%	%	%	%	%	%	%		
DET.LIM	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
SCHEME	IC4	IC4	IC4	IC4	IC4	IC4	IC4		

Sample Details

Samples 1 and 2 from previous pit 0-1m and 1-2m respectively.

Samples 3-5 from within 50m of pit in outcrop.

ORIGINAL PIT LOCALITY : 5,463,465mN
380,553mE

amdel

318009

MINERAL CHEMISTRY

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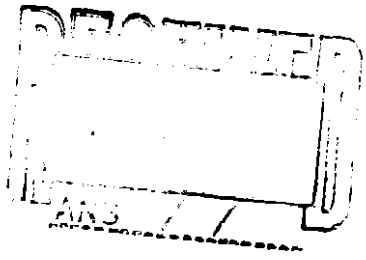

Mr Michael Thomas
Mineral Holdings Australia Pty Ltd
2nd Floor
135 Collins Street
MELBOURNE VIC 3000

FINAL ANALYSIS REPORT

Your Order No:

Our Job Number : 6AD1736

Sample rec'd : 29/04/96
No. of samples : 10
Report comprises a cover sheet and pages 1 to 2, A: 1 to 1

Results reported : 03/05/96

This report relates specifically to the samples tested in so far that the samples as supplied are truly representative of the sample source.

ORIGINAL SAMPLES FOR MAGNETIC SEPARATION FROM MUALLA

Approved Signature:

for
Alan Ciplys
Manager - Mineral Chemistry
AMDEL LABORATORIES ADELAIDE

Report Codes:
N.A. - Not Available.
L.N.R. - Listed But Not Received.
I.S. - Insufficient Sample.

Distribution Codes:
CC - Carbon Copy
EM - Electronic Media
MM - Magnetic Media

Appendix 1

amdel

318010

Job: 6AD1736
O/N:

Final

ANALYTICAL REPORT

SAMPLE	Al2O3	CaO	Fe2O3	K2O	MgO	P2O5	SiO2
REDPA BAUXITE1 MAGS	32.1	0.02	28.1	<0.01	0.67	0.28	0.56
REDPA BAUXITE1 NMAGS	54.0	0.04	11.8	<0.01	0.06	0.40	0.58
REDPA BAUXITE2 MAGS	28.6	0.18	32.8	<0.01	0.79	0.32	0.22
REDPA BAUXITE2 NMAGS	50.9	0.05	15.4	<0.01	0.06	0.53	0.30
REDPA BAUXITE3 MAGS	20.8	0.14	35.3	<0.01	1.09	0.29	1.14
REDPA BAUXITE3 NMAGS	51.5	0.06	12.8	<0.01	0.04	0.56	1.62
REDPA BAUXITE4 MAGS	32.1	0.10	20.3	0.23	0.72	0.13	20.1
REDPA BAUXITE4 NMAGS	52.2	0.09	3.34	0.04	0.11	0.08	16.0
REDPA BAUXITE5 MAGS	39.7	0.04	23.7	<0.01	0.30	1.14	7.82
REDPA BAUXITE5 NMAGS	38.7	0.11	16.0	0.02	0.32	0.88	19.8
UNITS	%	%	%	%	%	%	%
DET.LIM	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SCHEME	IC4	IC4	IC4	IC4	IC4	IC4	IC4

amdel

Job: 6AD1736 318011
O/N:

Final ANALYTICAL REPORT

SAMPLE	TiO2	LOI	Totwt	Wt
REDPA BAUXITE1 MAGS	19.0	17.5	1.03	3.37
REDPA BAUXITE1 NMAGS	2.19	30.2	29.57	96.6
REDPA BAUXITE2 MAGS	18.9	16.3	0.960	3.73
REDPA BAUXITE2 NMAGS	2.18	30.0	24.75	96.3
REDPA BAUXITE3 MAGS	25.3	I.S.	0.040	0.11
REDPA BAUXITE3 NMAGS	1.81	30.8	36.68	99.9
REDPA BAUXITE4 MAGS	7.73	I.S.	0.560	1.41
REDPA BAUXITE4 NMAGS	0.23	26.9	39.24	98.6
REDPA BAUXITE5 MAGS	2.72	24.1	6.39	22.2
REDPA BAUXITE5 NMAGS	0.56	22.9	22.38	77.8
UNITS	%	%	grams	%
DET.LIM	0.01	0.01	0.01	0.01
SCHEME	IC4	GRAV7	WEIGHT	WEIGHT

amdel

Job: 6AD1736A
O/N: 318012

Final

ANALYTICAL REPORT

SAMPLE	Au	Pt
REDPA BAUXITE1	<1	<5
REDPA BAUXITE2	<1	<5
UNITS	ppb	ppb
DET.LIM	1	5
SCHEME	FA3	FA3

AMDEL ANALYTICAL REPORT
JOB NO. 6AD1736

SAMPLE	Al_2O_3	CaO	Fe_2O_3	K_2O	MgO	P_2O_5	SiO_2	TiO_2	LOI	Au	Pt	Total Weight	Weight
CHIP SAMPLES													
BAUXITE SPLE 1	54.3	0.07	12.4	<0.01	0.08	0.39	0.54	2.77	29.9	< 1	< 5		
BAUXITE SPLE 2	50.3	0.06	16.3	<0.01	0.08	0.52	0.27	2.83	29.5	< 1	< 5		
BAUXITE SPLE 3	51.8	0.07	12.9	<0.01	0.04	0.55	1.61	1.84	30.6				
BAUXITE SPLE 4	51.9	0.11	3.62	0.05	0.12	0.08	16.3	0.33	26.2				
BAUXITE SPLE 5	38.6	0.09	17.5	0.02	0.31	0.89	17.3	1.05	23.8				
MAGNETIC SEPARATION OF ABOVE SAMPLES													
BAUXITE 1 MAGS	*32.1*	*0.02*	*28.1*	*<0.01*	*0.67*	*0.28*	*0.56*	*19.0*	*17.5*			*1.03*	*3.37*
BAUXITE 1 N MAGS	54.0	0.04	11.8	<0.01	0.06	0.40	0.58	2.19	30.2			29.57	96.6
BAUXITE 2 MAGS	*28.6*	*0.18*	*32.8*	*<0.01*	*0.79*	*0.32*	*0.22*	*18.9*	*16.3*			*0.960*	*3.73*
BAUXITE 2 N MAGS	50.9	0.05	15.4	<0.01	0.06	0.53	0.30	2.18	30.0			24.75	96.3
BAUXITE 3 MAGS	*20.8*	*0.14*	*35.3*	*<0.01*	*1.09*	*0.29*	*1.14*	*25.3*	*I.S.*			*0.040*	*0.11*
BAUXITE 3 N MAGS	51.5	0.06	12.8	<0.01	0.04	0.56	1.62	1.81	30.8			36.68	99.9
BAUXITE 4 MAGS	*32.1*	*0.10*	*20.3*	*0.23*	*0.72*	*0.13*	*20.1*	*7.73*	*I.S.*			*0.560*	*1.41*
BAUXITE 4 N MAGS	52.2	0.09	3.34	0.04	0.11	0.08	16.0	0.23	26.9			39.24	98.6
BAUXITE 5 MAGS	*39.7*	*0.04*	*23.7*	*<0.01*	*0.30*	*1.14*	*7.82*	*2.72*	*24.1*			*6.39*	*22.2*
BAUXITE 5 N MAGS	38.7	0.11	16.0	0.02	0.32	0.88	19.8	0.56	22.9			22.38	77.8
UNITS	%	%	%	%	%	%	%	%	%	ppb	ppb		
DET. LIM.	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1	5		
SCHEME	IC4	IC4	IC4	IC4	IC4	IC4	IC4	IC4	IC4	FA3	FA3		

TABLE 1

LEGEND: [redacted] MAGS - MAGNETICS (ITALICS)

N MAGS - NON-MAGNETICS

amdel

318014

MINERAL CHEMISTRY

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Mr Michael Thomas
Mineral Holdings Australia Pty Ltd
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135 Collins Street
MELBOURNE VIC 3000

FINAL ANALYSIS REPORT

Your Order No:

Our Job Number : 6AD1951

Sample rec'd : 14/05/96
No. of samples : 6
Report comprises a cover sheet and pages 1 to 2

Results reported : 24/05/96

This report relates specifically to the samples tested in so far that the samples as supplied are truly representative of the sample source.

FURTHER MYALLA SAMPLES

Gold results 2 + more Myalla Samples due in

4/6/96

Approved Signature:

A Ciplys

for
Alan Ciplys
Manager - Mineral Chemistry

Appendix 2

Report Codes:
N.A. - Not Available.
L.N.R. - Listed But Not Received.
I.S. - Insufficient Sample.

Distribution Codes:
CC - Carbon Copy
EM - Electronic Media
MM - Magnetic Media

318015

amdel

Final

Job: 6AD1951
O/N:

ANALYTICAL REPORT

SAMPLE	Al2O3	Fe2O3	SiO2	TiO2	CaO	MgO	P2O5
5C 6	31.8	15.7	31.7	2.64	0.15	0.33	0.12
5C 7	23.6	25.2	30.4	3.40	0.16	0.88	0.22
5C 8	28.0	17.8	35.0	3.11	0.08	0.32	0.06
5C 9	41.2	29.9	0.89	2.07	0.06	0.05	0.19
5C 10	23.9	49.9	4.14	0.75	0.06	0.08	0.66
5C 11	21.2	32.9	25.1	2.52	0.51	0.62	0.53
UNITS	%	%	%	%	%	%	%
DET.LIM	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SCHEME	IC4	IC4	IC4	IC4	IC4	IC4	IC4

IC4/ Met: Alkaline fusion to give total solution dissolution followed by a I.C.P. (OES) finish.

Results will be very similar.

amdel

318016

Job: 6AD1951
O/N:

Final

ANALYTICAL REPORT

SAMPLE	LOI	Au
5C 6	16.8	--
5C 7	14.6	--
5C 8	14.7	--
5C 9	25.2	--
5C 10	20.4	--
5C 11	16.2	0.30

– Wodenbreek calcrete
28/5/96.

UNITS	%	ppm
DET.LIM	0.01	0.01
SCHEME	GRAV7	FA1

TABLE 2

318017

SISTERS CREEK

BAUXITE

AMDEL LABORATORIES ANALYTICAL REPORT 21.5.1996.

GAD 1951

SAMPLE #	Al_2O_3	Fe_2O_3	SiO_2	TiO_2	CaO	MgO	P_2O_5	LOI	REMARKS
6 EL 35/96	31.8	15.7	31.7	2.64	0.15	0.33	0.12	16.8	Earthy material yellow to orange
7 EL 18/96	23.6	25.2	30.4	3.40	0.16	0.88	0.22	14.6	earthy material red to dark red
8 EL 35/96	28.0	17.8	35.0	3.11	0.08	0.32	0.06	14.7	earthy material yellow/brown/red these 3 samples may be weathered basalt, the samples were taken in cuttings about 2 metres deep
9 EL 18/96	41.2	29.9	0.89	2.07	0.06	0.05	0.19	25.2	rock sample brownish red
10 EL 18/96	23.9	49.9	4.14	0.75	0.06	0.08	0.66	20.4	rock sample yellowish brown these two samples were taken from the bauxite knob
11	21.2	32.9	25.1	2.52	0.51	0.62	0.53	16.2	dish sample (panned concentrate)

UNITS %
DET.LIM 0.01
SCEME IC4

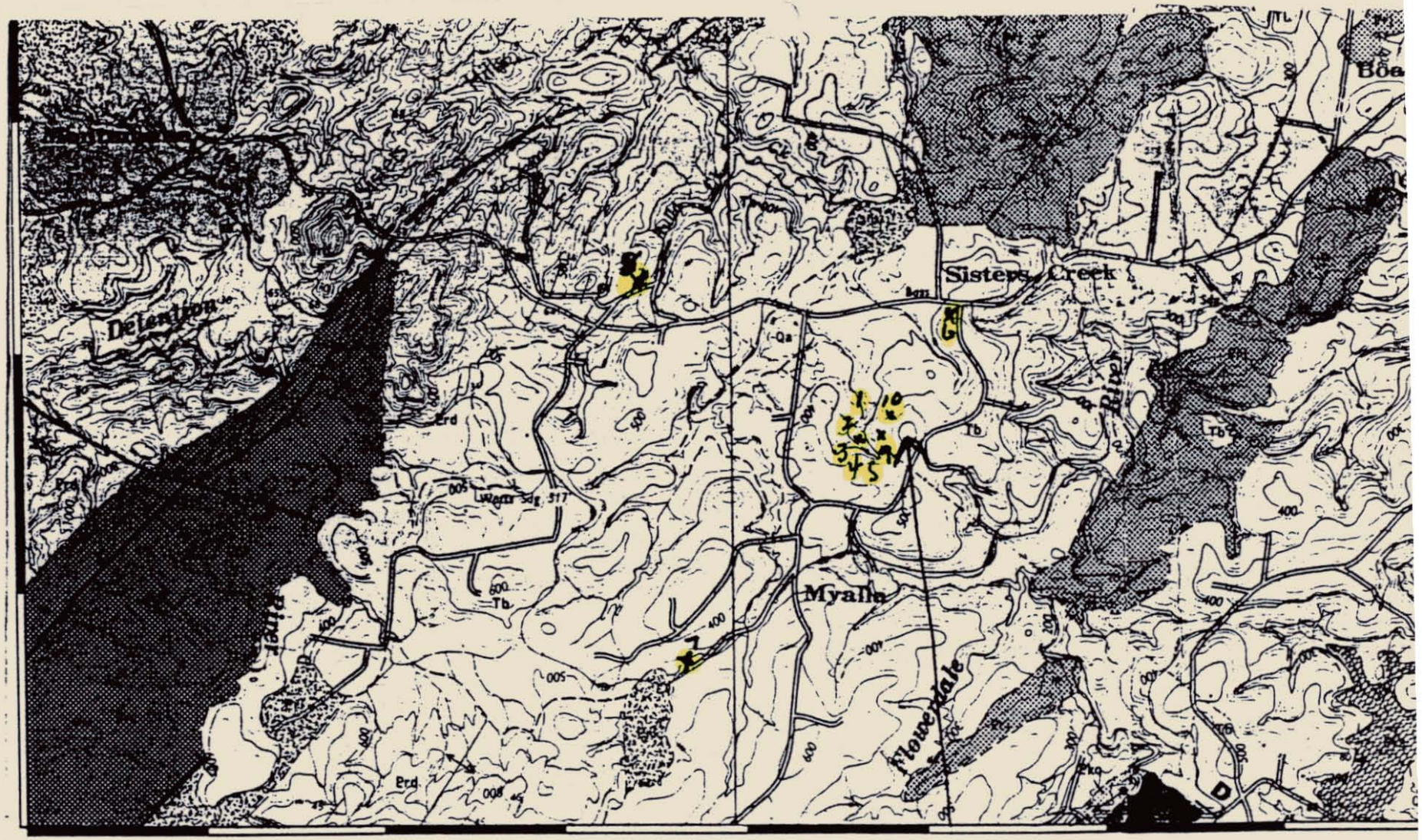
See following Plan

Comments by
Kevin Pinner 12.5.1996.

SAMPLES 1–5 COLLECTED FROM PITS 1 and 2; ANALYSES PRESENTED AS AMDEL REPORTS GAD 1189 and GAD 1736 / 22013

EL 18/96 PIT 1 ; loc. 5,463,465N; 380,523 E ~~BARNETTS ROAD~~.

EL 18/96 PIT 2 ; loc 5,463,299N ; 380,600E ~~[illegible]~~ 22019



360

SAMPLING BY KEVIN PINNER

BAUXITE SAMPLE LOCATIONS No 1 — 10. 17/5/96

318018

2nd and 3rd Order Trianguiation based on
Lochmaben Astronomical Station Lat. 41° 48' 23.389" S
Long. 147° 17' 49.725" E.

Trig: Stations { 2nd and 3rd Order / 4th Order

State Permanent Mark

COMALCO
RESEARCH & TECHNOLOGY

samples.

318019

ANALYSIS REPORT

Sample: BAUXITE
Submitted by: G CARFI
Analysed by: V ARGIRO

Report No: 33150
Requisition No: 33150
Cost Code: LUS15

SAMPLE		Am Del Al_2O_3 %	Am Del Fe_2O_3 %	Am Del SiO_2 %		
33150-1	sample 1	54.3	50.2	12.4 17.0	0.54	0.5
33150-2	2	50.3	51.0	16.3 15.6	0.27	0.3
33150-3	3	51.8	49.7	12.9 15.2	1.61	1.5
33150-4	4	51.9	52.2	3.62 4.7	No 30	15.6
33150-5	5	38 60	49.2	17.50 8.4	17 30	13.5

SAMPLE		TiO_2 %		P_2O_5 %		SO_3 %
33150-1	2.77	2.5	0.39	0.4	—	0.3
33150-2	2.83	2.7	0.52	0.4	—	0.2
33150-3	1.81	2.4	0.55	0.6	—	0.2
33150-4		0.4	0.01	0.1	—	0.1
33150-5	0.33 1.05	1.1	0.89	0.3	—	0.1

Original Samples at Myalla

ORIGINAL SAMPLES AT MYALLA (see Appendix 1 for locations)

Notes: XRF:18/6/96 LOI:17/6/96

Copies to: 1. G CARFI 2.
3. 4.

Analytical Supervisor: [signature] Date: 18/06/96

Appendix 3 - Comalco

COMALCO
RESEARCH & TECHNOLOGY

318020

ANALYSIS REPORT

Sample: BAUXITE
Submitted by: G CARFI
Analysed by: V ARGIRO

Report No: 33150
Requisition No: 33150
Cost Code: LUS15

SAMPLE	MgO %	Cr_2O_3 %	LOI %
33150-1	0.1	0.1	29.9 29.1
33150-2	0.1	0.1	29.5 29.7
33150-3	0.1	0.1	30.0 29.7
33150-4	0.1	<0.05	26.8 26.8
33150-5	0.2	<0.05	26.5 26.7

0.08 0.08 0.04 0.12 0.31

Notes: XRF:18/6/96 LOI:17/6/96

Copies to: 1. G CARFI 2.
3. 4.

Analytical Supervisor: _____ Date: 18/06/96

318021

Appendix 4

Alcoa

REPORT ON TASMANIAN BAUXITE

RECONNAISSANCE

JULY/AUGUST 1996

Peter Senini

1. INTRODUCTION

After correspondence between Mr J. Sibly of Alcoa of Australia Limited and Mr N. Thomas of Mineral Holdings Australia Pty Limited and on the basis of limited samples sent to Alcoa by Mineral Holdings, a preliminary field inspection was undertaken on the 13/14 August 1996 of the Myalla region in north-western Tasmania.

Discussions covering bauxite, magnesite and limestone deposits plus various fixed plant facilities available in the NW Tasmanian region, were held on Monday 12th August at Mineral Holdings office in Melbourne. Alcoa representatives were R. Baker and P. Senini. On Tuesday 13 August, J. Sibly, R. Baker - Alcoa with N. Thomas, M. Thomas and Dr J. Nixon - Mineral Holdings inspected various mining and minerals treatment fixed plant and facilities.

P Senini - Alcoa and K. Pinner - Mineral Holdings inspected and sampled trenches and road and railway cuttings within the potential bauxite area.

On Wednesday 14 August P. Senini, K. Pinner and M. Thomas visited magnesite deposits at the Arthur and Lyons Rivers, and collected further Laterite samples for bauxite analysis.

2. BAUXITE GEOLOGY

2.1 Exploration History

Bauxite exploration and discoveries in Tasmania date back to the early 1940's, with bauxite identified in the Ouse, Campbell Town, Swansea and St Leonards regions. However the largest estimated deposits for any of the above regions was less than 1 Mt.

The Myalla bauxite deposit was investigated by the Mines Dept. in 1944, with indicated reserves of around 200,000t. Very limited investigation or exploration has been undertaken since this time.

2.2 Geology

The bedrock of the bauxitic formations is almost invariably dolerite of Jurassic age, which has a widespread occurrence in Tasmania. The bauxitic regions of the NW (ie. Myalla) are developed on Tertiary Basalts.

The bauxite formations are regarded as being derived from Early Tertiary accumulations of basaltic tuffs and are overlain by interbedded sands and clays.

At Myalla the major stratigraphic units present are:

- Tertiary Volcanics - basalts and basaltic tuffs with associated bauxite.
- Tertiary fresh water or estuarine sediments.
- Pre Cambrian quartzite and slate.

The pre Cambrian rocks which form prominent hills ranging in elevation from 150m to 500m R.L. surround the lava field on the north, west and south, and less prominent inliers of quartzite occur within the area occupied mainly by the volcanics.

The Tertiary fresh-water and estuarine beds consist of gravel, sand and clay which is exposed where stream channels have cut through the overlying basalt.

Within the basalt area the land surface is mainly composed of rich agricultural soil but weathered and fresh basalt is exposed in road cuttings and in a few natural outcrops. The bauxite occurs on the flat crests of low hills which are remnants of a former more or less plane surface which sloped gently to the north.

2.3 Myalla Bauxite

The 1950 Tasmanian Mines Dept. Report describes 3 types of bauxite:

1. A grey-blue material with the outward appearance of normal weathered visicular basalt. The vesicles are filled with blobs of white gibbsite, and veins of white, yellow or brown gibbsite also occur.

2. Nodular bauxite in which nodules of gibbsite are embedded in a clayey matrix.

3. Brown bauxite which largely consists of angular and subangular nodules of fine grained gibbsitic rock embedded in a softer lighter matrix.

   During the Alcoa field visit the vesicular weathered basalt was noted and sampled, while the trenches displayed nodular to banded and friable material.

   Very few of the samples collected, assayed at acceptable grades for commercial bauxite.

2.4 Myalla Bauxite Profiles

1. Tasmanian Mines Dept 1945

Depth (m)	Description	Ave Al_2O_3	$ReSiO_2$	Fe_2O_3
0.3 - 1.0	Brown, hard some earthy bands, particularly towards the base; blebs and seams of gibbsite	51.5	0.8	-
1.0 - 1.5		48.3	0.8	19.6
1.5 - 2.0		47.9	1.0	-
2.0 - 2.5	Brown, mixed hard and soft bands showing gibbsite	46.5	1.6	-
2.5 - 3.0		47.3	1.7	-
3.0 - 4.5	Soft brown sandy to clayey, with white veins and black carbonaceous patches.	22.6	9.9	-
4.5 - 6.0		18.3	12.1	-

2. Alcoa 1996

Depth (m)	Description	Ave Al_2O_3	$ReSiO_2$	Fe_2O_3
0 - 0.4	Soil layer, friable fine to medium fragments, dark red-brown	24.7	5.3	22.8
0.4 - 1.4	Nodular to clayey bands, nodular material tends to be in layers. Dark red-brown	36.3	2.0	23.2
1.4 - 2.4	Nodular material tends to be in bands. Dark red-brown to dark brown	36.2	1.4	23.2
2.4 - 3.4	Clayey to nodular, bands less pronounced. Dark brown	32.7	3.6	21.6
3.4 - 4.4	Friable, basaltic material	26.9	4.1	30.8
4 - 5	Weathered "feldspathic" material whitish-grey to brown	5.9	9.2	23.1
5 - 6	Pelitic, weathered, layered material. Reddish-grey to grey	0.0	14.2	21.5

The total Si: jumps from 5% to 25% for the last 2m.

2.5 **Sample Collection**

MHA1 to	MHA5	were the original samples supplied by Mineral Holdings Australia from the Myalla area.
131816 to	131828	were profile samples collected from the 2 pits within the Myalla area.
131829 to	131840	samples collected from the Myalla and adjacent regions during trip, mainly from road cuttings.
131841 to	131845	samples, surface and from post holes collected from the Westbury region. Collected by Mineral Holdings associate.
131846 to	131852	soil samples from the Irby area (Myalla region, north of Highway). Collected by Mineral Holdings associate (K. Pinner).
131853 to	131865	samples collected by Mineral Holdings associate, from a wide area around Westbury - Deloraine.

Sample Locations - See Appendix 1

Sample Description - See Appendix 2

Sample Assay Results - See Appendix 3

3. DISCUSSION

Three of the original 5 samples taken by Mineral Holdings from the Bramich Road (Myalla) area indicated excellent bauxite grade, with even the outside possibility of abrasive/chemical grade bauxite.

The field visit showed that these high grade results appear to be from a very limited area of bauxite development. Sampling of the pits at Bramich Road, from where original samples were taken, indicates a potential bauxite thickness of 3 metres. Grades for this interval are 40-42% Total Al_2O_3, 35-36% Ave Al_2O_3, 2-4% $ReSiO_2$ and Fe_2O_3 around 20-22%. The high Fe_2O_3 obviously makes it unacceptable for refractory/chemical/abrasives use.

Economic bauxite development appears to be of restricted extent, mainly confined to hilltop areas. The extensive cultivation of the region, however makes field assessment and sampling difficult.

The additional samples collected from the Myalla region were from road/rail cuttings and indicated poor bauxite development. In several exposures, the basalt could be defined filling old channels. These exposures together with the profiles from the Bramich Road pits suggest the remnant basalt cover is relatively thin.

4.0 CONCLUSIONS

Previous literature, the sampling and field reconnaissance tend to indicate bauxite development in north-west Tasmania is patchy, of limited extent, and has relatively thin bauxitic profiles.

The extensive landholdings and cultivation would put restrictions on further exploration or development.

In several exposures, studied and sampled, it appears that although extensive weathering has occurred, the next stage of leaching (laterization) has not occurred to a significant extent, or has been localised.

The further sampling by Mineral Holdings over a wider area of north-west Tasmania has not produced results that warrant further exploration at this stage.

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TASMANIA SAMPLES - LOCATIONS

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131816	5463465N/380523E	Bramichs Road	Pit 1	EL 18/96	
131817	"	"	"	"	
131818	"	"	"	"	
131819	"	"	"	"	
131820	"	"	"	"	
131821	"	"	"	"	
131822	"	"	"	"	
131823	5463299/380600	Bramichs Road	Pit 2	EL 18/96	
131824	"	"	"	"	
131825	"	"	"	"	
131826	"	"	"	"	
131827	"	"	"	"	
131828	"	"	"	"	
131829	5461889/378752	Austins Road	2m	EL 18/96	
131830	5462450/376550	Rulla Road	3m		
131831	5463000/377650	Rulla Road	1-2m	EL 18/96	
131832	5465150/378850	Highway	2m	EL 35/96	
131833	5464150/378850	Highway	2-3m	" "	
131834	5460300/381500	Scotts Road	2-3m	SE	
131835	5458450/378600	Lapoinya Road	1-2m	SOUTH	
131836	"	"	2-3m	SOUTH	
131837	5465420/387180	Gates Road	2m	EAST	
131838	5465830/384160	Highway	1.5m	EAST	
131839	"	"	2-2.5m		
131840	"	"	3m		
131841	5400380/488140	Westbury	0-0.5m		
131842	5400380/488200	"	Surface		
131843	5400450/488150	"	Surface		
131844	5400550/488160	"	Surface		
131845	5400550/488020	"	Surface		
131846	5465700N/378750E	Irby	Soil	EL 35/96	
131847	"	"	"	"	"
131848	"	"	"	"	"
131849	"	"	"	"	"
131850	"	"	"	"	"
131851	"	"	"	"	"
131852	"	"	"	"	"
131853	54 01-02/4 67-68	Deloraine-Red Hill	3-6m		
131854	54 02-03/4 68-69	Deloraine-Lemana	0-3m		
131855	54 10-12/4 57-59	Meltema (Weegena)	"		
131856	54 16-17/4 58-59	Kimberley	"		
131857	54 17-19/4 50-52	Stoodley-Sheffield	"		
131858	54 13-14/4 42-44	Paradise Junct.-Sheffield	"		
131859	53 98-5400/4 47-49	Mole Creek	"		
131860	54 00-01/4 50-51	Mole Creek(Mersey	"		

~~131859~~	~~53 98-5400/4 47-49~~	~~Mide Creek~~	~~"~~
~~131860~~	~~54 00-01/4 50-51~~	~~Mide Creek(Mersey Hill)~~	~~"~~
131861	53 97-98/4 53-54	Lobster Creek-Chudleigh	"
131862	53 98-5402/4 61-63	Dairy Plains (Needles-Red Hill)	"
131863	54 02-03/4 84-85	Black Hills-Westbury	"
131864	53 60-70/5 30-40	Campbell Town (Back Road) (? Valleyfield Road)	3m
131865	53 99-5400/4 84-85	Glenara-Westbury	0-3m

Appendix 2

TASMANIA SAMPLES - FIELD DESCRIPTIONS

131816 - Bramichs Road Pit 1 (Northern Pit)
0-40cm - soil type layer, friable fine-medium fragments, dark red-brown basaltic.

131817 - Pit 1 0.4 - 1.4m
Nodular to clayey bands, nodular material tends to be in layers dark red-brown, basaltic.

131818 - Pit 1 1.4 - 2.4m
Nodular material tends to be in bands but not as pronounced as for above metre. One black band 1-2cm dark red-brown to dark brown.

131819 - Pit 1 2.4 - 3.4m
Clayey to nodular, bands less pronounced. Dark brown.

131820 - Pit 1 4-5m
Weathered "feldspathic" material, pelitic. Whitish-grey to brown.

131821 - Pit 1 5m +
Pelitic, weathered, layered material. Reddish-grey to grey.

131822 - Pit 1 3.4 - 4.4m
Friable, basaltic material. Brown.

131823 - Bramichs Road Pit 2 (Southern Pit) 1 - 2m
Beneath soil cover (0-1m)
Friable medium-fine slightly nodular material. Red-brown.

131824 - Pit 2 2 - 3m
Nodular layered material. Brown.

131825 - Pit 2 3 - 4m
Nodular becoming friable to whitish granular. Brown.

131826 - Pit 2 4 - 5m
Clayey, little or no granular material. Brown.

131827 - Pit 2 Special (4 - 5m)
Black clayish friable material.

131828 - Pit 2 5m +
Weathered granular material, pelitic.

131829 - Austins Road - Road Cutting - 2m below surface
Soil - clay - basaltic.

131830 - Rulla Road (Watts SDG) - 3m below surface
Road cutting. Edge of basalt.

131831 - Rulla Road - Railway Cutting - 1 - 2m below surface
Basalt infilling old channels.
Brown to light brown. Underlying pelitic material.

131832 - Highway - Road Cutting
Vesicular basalt - several layers.
Reddish to whitish clay.

131833 - Highway - Road Cutting
Weathered material around basalt core (Spheroidal weathering).

131834 - Scotts Road - Road Cutting - 2 - 3m below surface
Spheroidal weathering grading to clayish basaltic material.

131835 - Lapoinya Road - Road Cutting - 1 - 2m below surface
Soil type material, very clayey.
Dark red-brown.

131836 - Lapoinya Road - Road Cutting - 2m below surface
Soil, clayey material with slightly reddish banded texture.

131837 - Gates Road - Dam Cutting - 2m below surface
Slightly nodular material with more clayish material below, basaltic.

131838 - Highway - Road Cutting - 1.5m below surface
Friable dark brown material, continuous from surface.

131839 - Highway - Road Cutting - 2 - 2.5m below surface
Friable material, appears to be old channel infilled with basalt flow.

131840 - Highway - Road Cutting - 3m +
Material immediately below contact of above basalt channel infill.

131841 - Westbury
Very wet red-brown to dark brown clay.

131842 - Westbury
Nodular (Fe) hard laterite sample. Brown to yellow brown, typical caprock.

131843 - Westbury
Lateritic caprock, nodular to hard, mottled.

131844 - Westbury
Nodular to mottled caprock, red-brown to dark red-brown, light mottles with spherical (sandy) patches.

131845 - Westbury
Massive to slightly nodular caprock some vesicules, brown, Fe.

131846 - Irby
Basaltic soil, clayey to friable, dark red-brown.

131847 - Irby
Basaltic soil, clayey to friable, dark red-brown.

131848 - Irby
Basaltic soil, clayey to friable, dark red-brown.

131849 - Irby
Basaltic soil, minor hard fragments, dark brown.

131850 - Irby
Basaltic soil, friable, fine, brown to dark brown.

131851 - Irby
Basaltic soil, clayey, dark brown

131852 - Irby
Basaltic soil, friable, fine-medium, dark brown to red-brown.

131853 - Sample A Deloraine-Red Hill
Soft friable, slightly clayey, brown to dark brown lateritic material
red/brown clasts under lens with silty light brown material (qtz ? v minor)
Basaltic

131854 - Sample B Deloraine-Lemana
Hard (caprock) brown to red/brown silty texture
dark brown clasts, cemented strongly. Lateritic Seds?

131855 - Sample C Moltema (Weegena)
Silty/sandy friable, slightly clayey material, light brown, whitish patches qtz grains very angular. Weathered seds.

131856 - Sample D Kimberley
Brown to dark brown, consolidated, but breaks easily, slightly clayey, fine, very minor sub rounded qtz, black coatings.

131857 - Sample E Stoodley-Sheffield
Light brown clayey/silty well consolidated. Weathered seds.

131858 - Sample F Paradise Junct-Sheffield
Brown - light brown, hard, indurated siltstone.

131859 - Sample G Mole Creek
Light brown, fawn, whitish patches, clayey, consolidated silty clay

131860 - Sample H Mole Creek (Mersey Hill)
Mod Hard, consolidated, brown silty to slightly clayey material black patches/coating. ?

131861 - Sample I Lobster Creek - Chudleigh
Light brown/yellow siltstone to fine sandstone, grains angular predominantly qtz. Moderately consolidated.

131862 - Sample J Dairy Plains (Needles/Red Hill)
Brown to light brown friable, silty (slight clay) soil, siltstone, very poorly consolidated angular grains. Fe rich compared to previous sample.

131863 - Sample K Westbury-Black Hills
Brown to dark brown caprock material. Hard. Fe rich rounded clasts
? Basaltic.

131864 - Sample L Campbelltown - Back Road (Valleyfield Road)
Dark red/brown nodular caprock material. Fe rich.
Very small sample

131865 - Sample M Westbury-Glenara
Mottled caprock material with dark brown (Fe) layers, red-brown to whitish silty clay regions. Hard to very hard.

REQUEST NO:													WS-049
	Tasmanian BAUXITE ANALYSIS						APPENDIX 3						
		N/R =	No	Request						DATE:	1/08/96		
SAMPLE NUMBER	%CR2O3	%MNO	OXALATE kg/t	Na2O %	SiO2 T %	SiO2 RE %	Al2O3 T %	Al2O3AV %	Fe2O3 %	CaO %	Mg %	K2O %	
MHA1	0.122	0.024	0.89	0.19	0.66	0.2	48.80	45.6	17.4	0.61	0.228	0.59	
MHA2	0.132	0.029	0.70	0.13	0.29	0.0	50.40	47.7	14.8	0.58	0.231	0.44	
MHA3	0.124	0.023	1.14	0.13	1.36	1.1	51.40	48.9	12.0	0.66	0.172	0.46	
MHA4	0.009	0.029	0.73	0.10	14.40	7.5	50.64	37.2	6.7	1.30	0.184	0.90	
MHA5	0.019	0.039	0.54	0.10	19.79	9.9	44.76	25.7	8.4	1.27	0.362	0.82	
131816	N/R	N/R	N/R	0.03	13.88	5.3	33.60	24.7	22.8	0.09	N/R	0.102	
131817	N/R	N/R	N/R	0.02	3.53	2.0	42.97	36.3	23.2	0.01	N/R	0.027	
131818	N/R	N/R	N/R	0.01	2.05	1.4	43.81	36.2	23.2	0.00	N/R	0.005	
131819	N/R	N/R	N/R	0.02	5.68	3.6	43.77	32.7	21.6	0.00	N/R	0.001	
131820	N/R	N/R	N/R	0.02	25.93	9.2	30.58	5.9	23.1	0.00	N/R	0.004	
131821	N/R	N/R	N/R	0.02	27.15	14.2	25.11	0.0	21.5	0.00	N/R	0.007	
131822	N/R	N/R	N/R	0.03	4.97	4.1	35.94	26.9	30.8	0.00	N/R	0.002	
131823	N/R	N/R	N/R	0.02	3.39	2.4	44.40	39.2	21.4	0.00	N/R	0.022	
131824	N/R	N/R	N/R	0.01	5.95	4.3	42.54	34.2	20.7	0.00	N/R	0.012	
131825	N/R	N/R	N/R	0.01	7.06	3.5	43.52	33.4	19.9	0.01	N/R	0.012	
131826	N/R	N/R	N/R	0.05	9.38	6.0	24.16	12.4	36.7	0.05	N/R	0.005	
131827	N/R	N/R	N/R	0.01	28.32	10.1	32.75	6.3	14.8	0.08	N/R	0.006	
131828	N/R	N/R	N/R	0.01	38.70	10.2	34.09	0.0	9.5	0.02	N/R	0.005	
131829	N/R	N/R	N/R	0.04	22.36	11.0	25.20	6.5	19.3	0.02	N/R	0.077	
131830	N/R	N/R	N/R	0.05	27.91	12.1	26.27	4.1	19.6	0.01	N/R	0.057	
131831	N/R	N/R	N/R	0.04	30.51	13.5	26.41	0.0	20.4	0.01	N/R	0.016	
131832	N/R	N/R	N/R	0.04	30.78	12.6	27.48	0.0	21.7	0.02	N/R	0.027	
131833	N/R	N/R	N/R	0.03	21.02	7.9	32.79	12.9	21.3	0.01	N/R	0.016	
131834	N/R	N/R	N/R	0.14	32.07	16.0	25.59	0.0	19.6	0.05	N/R	0.142	
131835	N/R	N/R	N/R	0.01	35.45	13.2	30.47	0.0	13.6	0.00	N/R	0.035	
131836	N/R	N/R	N/R	0.02	33.64	15.7	28.15	0.0	15.2	0.00	N/R	0.007	
131837	N/R	N/R	N/R	0.24	33.72	17.8	23.58	0.0	19.8	0.17	N/R	0.437	

TABLE 3

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REQUEST NO:													WS-049
	Tasmanian BAUXITE ANALYSIS						APPENDIX 3						
		N/R =	No	Request						DATE:	1/08/96		
SAMPLE NUMBER	%CR2O3	%MNO	OXALATE kg/t	Na2O %	SiO2 T %	SiO2 RE %	Al2O3 T %	Al2O3AV %	Fe2O3 %	CaO %	Mg %	K2O %	
131838	N/R	N/R	N/R	0.03	24.99	11.4	28.45	7.1	23.8	0.01	N/R	0.103	
131839	N/R	N/R	N/R	0.02	30.86	14.4	27.54	0.0	22.7	0.01	N/R	0.022	
131840	N/R	N/R	N/R	0.02	32.49	15.1	27.59	0.0	21.2	0.03	N/R	0.008	
131841	N/R	N/R	N/R	0.03	8.68	7.1	31.94	22.0	32.3	0.06	N/R	0.053	
131842	N/R	N/R	N/R	0.04	11.15	1.4	30.07	22.5	38.9	0.01	N/R	0.011	
131843	N/R	N/R	N/R	0.04	7.51	2.7	28.45	23.5	40.8	0.01	N/R	0.015	
131844	N/R	N/R	N/R	0.03	2.39	1.7	35.87	28.4	37.9	0.02	N/R	0.003	
131845	N/R	N/R	N/R	0.00	10.41	1.9	45.83	39.7	15.3	0.01	N/R	0.020	
131846	N/R	N/R	N/R	0.05	28.71	9.8	21.13	8.3	18.0	0.20	N/R	0.190	
131847	N/R	N/R	N/R	0.06	29.27	13.1	22.38	4.0	17.3	0.34	N/R	0.188	
131848	N/R	N/R	N/R	0.04	25.36	10.1	24.09	8.9	16.4	0.23	N/R	0.184	
131849	N/R	N/R	N/R	0.09	28.72	12.1	20.97	5.2	17.4	0.55	N/R	0.247	
131850	N/R	N/R	N/R	0.11	26.27	10.7	21.27	6.2	18.8	0.82	N/R	0.274	
131851	N/R	N/R	N/R	0.05	25.01	11.6	22.61	7.8	17.7	0.44	N/R	0.315	
131852	N/R	N/R	N/R	0.04	42.58	8.2	11.92	2.4	17.8	0.17	N/R	0.193	
131853	N/R	N/R	N/R	0.01	11.51	7.8	30.42	25.9	20.8	0.01	N/R	0.012	
131854	N/R	N/R	N/R	0.02	4.51	4.9	25.44	19.5	29.5	0.07	N/R	0.001	
131855	N/R	N/R	N/R	0.00	22.39	9.5	3.23	0.0	1.1	0.04	N/R	0.242	
131856	N/R	N/R	N/R	0.08	32.46	14.8	9.79	0.0	9.5	0.06	N/R	0.279	
131857	N/R	N/R	N/R	0.03	32.57	5.3	8.73	0.0	2.8	0.01	N/R	2.393	
131858	N/R	N/R	N/R	1.02	51.50	4.8	15.22	0.0	9.7	4.97	N/R	2.208	
131859		Not	Assayed		See	sample	descriptions				N/R		
131860	N/R	N/R	N/R	0.07	50.12	4.2	12.34	0.0	18.9	0.05	N/R	2.995	
131861		Not	Assayed		See	sample	descriptions				N/R		
131862	N/R	N/R	N/R	0.00	61.67	6.2	6.82	0.4	4.2	0.02	N/R	0.131	
131863	N/R	N/R	N/R	0.06	2.68	1.1	26.30	23.2	36.0	0.03	N/R	0.019	
131864	N/R	N/R	N/R	0.05	13.64	2.1	28.73	21.7	31.9	0.04	N/R	0.038	
131865	N/R	N/R	N/R	0.06	1.55	0.5	26.69	22.3	50.7	0.01	N/R	0.005	

TABLE 3

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TABLE 4

SAMPLE NO. 131- PREFIX	NW TASMANIAN LOCATION	SAMPLES TAKEN IN ROADSIDE VIADUCT COLLECTION METHOD	LATERITE PROFILE SAMPLES TAKEN AT DEPTHS .	UNDUL-ATING RED SOIL, FARMING OR GRAZING - LAND.	WEIGHT IN GRAMS	GENERAL
A -853	DELORAINE	Grab sample taken from 3-10 M below surface	Profile in cutting 6 Metres deep with red soil above.	PRIVATE LAND AREAS BUT SAMPLES TAKEN ROADSIDE.	60	These spot samples were taken by an inexperienced prospector G.A. Thomas
B -854	DELORAINE	- DITTO -	2-3 metres in depth	- DITTO -	50	below red soil areas in the
C-855	MOLTEMA	- DITTO -	- DITTO -	- DITTO -	80	rocks or clay.
D-856	KIMBERLEY	- DITTO -	- DITTO -	- DITTO -	5	As great difficulty was
E-857	STOODLEY	- DITTO -	- DITTO -	- DITTO -	120	experienced to match
F-858	PRADISE JUNT.	- DITTO -	- DITTO -	- DITTO -	50	a Myalla specimen
G-859	MOLE CREEK	- DITTO -	- DITTO -	- DITTO -	100	bauxite sample to new
H-860	MOLE CREEK	- DITTO -	- DITTO -	- DITTO -	80	sampled areas.
I -861	LOBSTER CREEK, CHUDLEIGH	- DITTO -	- DITTO -	- DITTO -	100	Many results will not be encouraging but analysis
J -862	DAIRY PLAINS	- DITTO -	- DITTO -	- DITTO -	80	will add to geological
K -863	BLACK HILLS, WESTBURY.	- DITTO -	- DITTO -	- DITTO -	80	knowledge of the area.
L -864	BACK ROAD, CAMPBELL TOWN.	Telegraph Post Hole Drill sample 3 m. deep	drill hole	- DITTO -	5	
M -865	GLENARA. W	- DITTO -	- DITTO -	- DITTO -	10	

W = WESTBURY AREA.

Attached: Illustrated map of location (1).

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ANALYTICAL REPORT

SAMPLE		Al2O3	Fe2O3	SiO2	TiO2	CaO	MgO	P2O5
PIT 1	0- 1	43.7	21.7	2.29	3.50	0.09	0.12	0.30
PIT 1	1- 2	44.2	20.6	2.88	3.32	0.06	0.09	0.33
PIT 1	2- 3	37.6	25.4	8.14	3.92	0.07	0.12	0.42
PIT 1	3- 4	27.2	28.0	20.4	4.35	0.06	0.23	0.38
PIT 2	0- 1	48.7	16.3	3.89	2.30	0.09	0.10	0.27
PIT 2	1- 2	43.3	16.2	10.2	2.27	0.07	0.13	0.39
PIT 2	2- 3	34.6	29.2	4.69	3.64	0.09	0.16	1.13
PIT 2	3- 4	33.1	16.1	27.0	1.62	0.12	0.39	0.51

MHA sampling at Myalla in new excavator trenches Pits 1 & 2

UNITS	%	%	%	%	%	%	%
DET.LIM	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SCHEME	IC4	IC4	IC4	IC4	IC4	IC4	IC4

Appendix 5

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318030

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ANALYTICAL REPORT

SAMPLE		Au	Au Dp1	LOI
PIT 1	0- 1	<0.01	<0.01	27.2
PIT 1	1- 2	<0.01	--	26.5
PIT 1	2- 3	<0.01	<0.01	23.1
PIT 1	3- 4	<0.01	--	17.6
PIT 2	0- 1	<0.01	--	27.5
PIT 2	1- 2	<0.01	--	25.1
PIT 2	2- 3	<0.01	--	24.5
PIT 2	3- 4	<0.01	<0.01	19.6

UNITS	ppm	ppm	%
DET.LIM	0.01	0.01	0.01
SCHEME	FA1	FA1	GRAV7

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318037 NATA

MINERAL CHEMISTRY

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Mr Michael Thomas
Mineral Holdings Australia Pty Ltd
2nd Floor, 135 Collins Street
MELBOURNE VIC 3000

FINAL ANALYSIS REPORT

Your Order No:

Our Job Number : 6AD2937

Sample rec'd : 14/08/96
No. of samples : 9
Report comprises a cover sheet and pages 1 to 2

Results reported : 22/08/96

This report relates specifically to the samples tested in so far that the samples as supplied are truly representative of the sample source.

Reconnaisance sampling
(ALL SAMPLES ≈ 1kg).

Approved Signature:

A Ciplys

for
Alan Ciplys
Manager - Mineral Chemistry

Appendix 6

Report Codes:
N.A. - Not Available.
L.N.R. - Listed But Not Received.
I.S. - Insufficient Sample.

Distribution Codes:
CC - Carbon Copy
EM - Electronic Media
MM - Magnetic Media

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Job: 6AD2937
O/N:

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ANALYTICAL REPORT

SAMPLE	Al2O3	CaO	Fe2O3	K2O	MgO	MnO	Na2O
GLDINA 1	29.1	0.05	18.0	0.11	0.28	0.18	0.03
GLDINA 2	24.8	0.03	22.9	0.08	1.22	0.19	0.05
HENRIETTA 1	34.2	0.03	19.2	0.30	0.18	0.04	0.03
HENRIETTA 2	27.2	<0.01	16.4	0.12	0.53	0.35	0.04
TEWKESBURY 1	26.4	0.02	20.4	0.04	0.93	0.25	0.06
TEWKESBURY 2	26.7	0.03	21.2	0.03	1.24	0.24	0.04
HAMSHIRE 1	23.9	0.11	19.4	0.03	1.74	0.22	0.05
HIGHCLERE 1	26.9	<0.01	21.4	0.02	0.80	0.19	0.04
WEST PINE 1	25.8	0.07	21.1	0.17	0.38	0.08	0.04

Reconnaissance Sampling Details
(supplied by Kevin Pinner)

Oldina 1- soft, brownish yellow rock- from 1m road cutting
5,458,600mN; 385,700mE
Oldina 2- soft, lumpy, earthy, brown material- from 1m road cutting
5,449,000mN; 389,000mE
Henrietta 1- soft, earthy, yellowish brown material- from 2m road cutting
5,439,800mN; 387,300mE
Henrietta 2- very soft, earthy, pinkish brown material- from 3m road cutting
5,437,300mN; 385,400mE
Tewkesbury 1- very soft, earthy material, brown with yellow spots- from 3m road cutting
5,434,000mN; 391,700mE
Tewkesbury 2- very soft, earthy material, pinkish brown with fine yellow particals- from 2m road cutting
5,431,100mN; 392,000mE
Hampshire 1- very soft, brownish material with yellow spots- from 2m road cutting
5,431,800mN; 395,700mE
Highclere 1- soft, brownish material- from 2m road cutting
5,438,000mN; 399,600mE
West Pine 1- reddish brown, soil sample
5,446,900mN; 416,200mE

UNITS	%	%	%	%	%	%	%
DET.LIM	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SCHEME	IC4	IC4	IC4	IC4	IC4	IC4	IC4

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O/N:

318039

Final

ANALYTICAL REPORT

SAMPLE	P2O5	SiO2	TiO2	LOI
GLDINA 1	0.23	31.7	2.02	17.7
GLDINA 2	0.32	31.2	3.17	17.3
HENRIETTA 1	0.10	24.0	0.94	20.8
HENRIETTA 2	0.01	39.0	0.73	16.2
TEWKESBURY 1	0.42	32.2	3.44	16.4
TEWKESBURY 2	0.16	30.4	3.30	16.9
HAMSHIRE 1	0.15	35.1	3.62	16.4
HIGHCLERE 1	0.29	30.8	3.15	15.9
WEST PINE 1	0.15	32.1	3.34	17.1
UNITS	%	%	%	%
DET.LIM	0.01	0.01	0.01	0.01
SCHEME	IC4	IC4	IC4	GRAV7