B.H.P. CO. LTD. E.L.13/65 - ADAMSFIELD, S.W. TASMANIA

PART 1. FIELDWORK AND RESULTS FROM 1971/72 SEASON

PART 2. REVIEW OF ALL RELEVANT WORK TO DATE

by

B. Flood

HOBART AUGUST 1972

LIST OF FIGURES

FIGURE NO.	DRAWING NO.	TITLE
1	A1-48	E.L.13/65 Adamsfield - Tas. Geology of Florentine Synclinorium.
2	A1-49	E.L.13/65 Adamsfield. Enlargement from Sheet No. 8112 Wedge. Geological Map, Northern Part.
3	A1-50	E.L.13/65 Adamsfield. Enlargement from Sheet No. 8112 Wedge. Geological Map, Southern Part.
4	A2-14	E.L.13/65 Adamsfield. Location of Cut Lines and Access Track. Sample Localities and Magnetic Readings.
5	A4-20	E.L.13/65 Adamsfield. Location of Lines and Whole Rock Samples S of Gordon River Road. Soil Sample Results Cu in ppm.

PART 1. FIELDWORK AND RESULTS FROM 1971/72 SEASON

003

739004

LIST OF CONTENTS

PART 1. FIELDWORK AND RESULTS FROM 1971/72 SEASON

INTRODUCTION

Last season several recordings of chrysotile cross fibre were made within the Adamsfield ultrabasic body or bodies. At the same time generally negative results were obtained from the geochemical soil sampling on the southern portion of the ultrabasics. Since previous soil sampling in Adamsfield also to the north had proved negative it was decided to make an attempt this season to examine the asbestos potential of the area. One minor soil and whole rock sampling program, however, was carried out to check anomalous Cu values from South of Gordon River Road, (Flood 1972 p.4).

The fieldwork then naturally fell into two programs:

1. Mapping and search for asbestos in the reasonably well exposed northern part.
2. Mapping and search for asbestos in the southern part, as well as geochemical resampling of a limited area.

Program 1 was carried out by the two geologists, B. Flood and J. G. Langlands, and lasted from 25th to 30th October, 1971. The last house still usable in the old Adamsfield township provided accommodation. Weather was variable with one heavy snowfall.

Program 2 was carried out by geologist, B. Flood, with A. Clarke, C. Wessing and C. Ashworth as field assistants. The work lasted from 2nd to 22nd December, 1971. The field party was accommodated in a caravan parked along the Gordon River Road. Weather was variable.

GEOLOGICAL MAPPING AND SEARCH FOR ASBESTOS

Northern Part

This work included mapping and close examination of all previously bulldozed lines, i.e. line 73N and all lines north of this (fig.2) as well as similar investigation of eleven east-

west traverses south of 73N.

These traverses which ascend in reasonably open country from the Saw Back Track towards the Range were selected on aerial photographs with around ½ mile spacing. They are not cleared, all examinations were done on natural outcrops.

Bulldozing of the lines in the northernmost part was done in 1966 (Taylor 1966), but no earlier attempt has been done to place this grid onto a geological map. The present map fig.2 arises from own work and Brown (1972) with regard to the ultrabasic body. The surrounding geology is mainly from Corbett (1969).

General Geology.
On the geological map fig.2 it has been distinguished between three different rock types within the ultrabasics.

1. Serpentinite (in some areas strongly sheared).
2. Layered Ultrabasics (mainly as serpentinite/pyroxenite)
3. Massive pyroxenite.

The types and their distribution is briefly dealt with as it is regarded relevant to the asbestos mineralisation. Detailed description is given by Brown (1972), and largely cited below.

The general topography of the area can be seen from the map (fig.2). The earlier bulldozed part occurs in a gently reliefed basin where the outline of the layered ultrabasic conforms well with the N-S extending hills. Further south the ultrabasics are found along the western slope of the Saw Back Range.

1. Serpentinite: The bulk proportion of the northern ultrabasic body (fig.2) consists of serpentinites, both massive and sheared. The latter mainly occurs in the north while the "tail" along the Saw Back Range is mainly massive. Various proportions of relict olivine grains occur in the massive serpentinite (Brown 1972). Brown mapped most of the "tail" as dunites, a classification not found valid by us due to the present amounts of serpentine minerals. The serpentinites are mainly dark green to matt green, with the sheared parts

more yellowish green.

2. Layered Ultrabasics: As mentioned these rocks form the hills or highermost part of the ultrabasics to the north. They consist essentially of alternating orthopyroxene and serpentinite layers. The central cores of the hills often show a more massive coarse grained pyroxenite up to 30m thick (Brown 1972). The serpentinite layers assumed formed after dunite still carry 20-60% olivine and weathers greyish green. The pyroxenite layers are generally coarse grained particularly in the central parts and weathers with a brown colour. The layers vary in thickness from less than 1cm to 200cm, the pyroxenite being the thickest. They appear parallel, with a strike direction consistent with N-S extension of the hills.

   The asbestos mineralizations were mainly encountered in this rock type.

3. Massive Pyroxenite: This description is here confined to a distinct body situated in the middle of the ultrabasic "tail" along Saw Back Range. It consists mainly of orthopyroxene, fine to very coarse grained, weathered dark brown. "The boundary between the enclosed pyroxenite and enclosing serpentinized dunite is mainly irregular - - -. An interdigitational relationship of the two rock types at the southern end of the pyroxenite is purely tectonic feature - - -." (Brown 1972).

Asbestos Mineralization.

The occurrences of chrysotile cross fibre within this part of Adamsfield ultrabasic body are few, scattered and the fibre is short. Those localities showing cross fibre of ≥1/16" are described in some detail below and are also marked on the map fig.2. Scattered minor occurrences of slip fibre were also observed.

Most of the fibre veins were encountered within or at the margin of the layered ultrabasics. They occur generally parallel with the banding and, except when forming gash veins

across pyroxenite band, exclusively within the serpentinite bands. Stockwork and rare formation of ribbon fibre are also observed. Generally the mode of occurrence is very similar to what was observed at Spero River (Flood 1971). A few cross fibre occurrences were also met with in massive serpentinite. The few slip fibre observations were mainly done in the sheared parts. Several observations of thread veins and the like not recorded here were made, and mainly along the western part of the central ridge of layered ultrabasics.

Locality	Approx. Position	Remarks
1	102N 121E	Outcrop in walls of long E-W open cut (a) South wall - A 10 feet diameter block of dark vitreous fibre bearing serpentinite is enclosed in slightly sheared pale matt green serpentinite. Veins of CO_3 are abundant. Cross fibre gash veins to ¼" are associated with some of the CO_3 veins. Less than ½% fibre. (b) North wall - A 5 feet diameter block of dark vitreous fibre bearing serpentinite enclosed in slightly sheared pale matt green serpentinite. Less than ½% cross fibre up to 2/16" associated with CO_3 veins.
2	100N 112E	Cross fibre veins 1/32" - 1/16" separate and forming ribbon fibre over a width of 5" in a serpentinite layer adjacent to pyroxenite.
3	86N 109E	Outcrop of serpentinised dunite on ridge crest. Localised fibre occurrence, one foot width with 3 veins @ 1/16 and 2 veins @ 1/32. Tightly bound, very narrow thread veins occur within the serpentinised dunite.

Locality	Approx. Position	Remarks
4	Line 9 600'E of road	Cross fibre, 3 @ 1/16", within and parallel to a serpentinised dunite layer margin.
5	Line 14 at road	One piece of non-outcrop, pale green weathering serpentinite with chrysotile slip/slant fibre to 1/16".
6	Line 15 at road, 80'N	Layered serpentinised peridotite on western side of road. Pale green weathering, dark and vitreous when fresh, serpentinite with rectangular stockwork of serpentine/magnetite veins, some of which contain an estimated ½% cross fibre to 1/16" over about 10 feet.
7	Line 15 600'E of road	(a) Layered peridotite with less than ½% cross fibre in joints within and approx. perpendicular to layers of serpentinised dunite. Width - 3 feet. (b) Layered peridotite with ribbon fibre. Log over 15" width of two dunitic layers enclosing a nearly barren peridotitic layer with pyroxene "boudins". 1/32" - 1/16" = approx. 4% fibre localised to 15" width.
8	100N 95E	Blackish green serpentine with minor pyroxenite bands around 1" thick. Cross fibre veins parallel banding and cross jointing forming stockwork within the serpentinite. Over 18" width 20 veins 1/32" and 1 vein 1/16" were logged.
9	112N 11550-11620E	Several occurrences of a couple of veins 1/32" - 1/16" within dark green serpentinite in banded ultrabasics.

Locality	Approx. Position	Remarks
10	118E 10925-108N	Several blocks of banded ultrabasics showing cross fibre veins from <1/32" to 2/16" in the serpentinite bands. <½% fibre.

Locality 1 and 3-7 were recorded by J. G. Langlands.

Although part of the bulldozed grid is not on bedrock the covered areas are entirely within serpentinites and it is believed mainly the sheared serpentinites. The more favourable areas with regard to asbestos mineralization are well exposed and the described examination is regarded sufficient to conclude that asbestos mineralizations of economical significance do not occur in the area.

Southern Part

Geological Mapping.

The mapping continued by extending the lines cut last season (Flood 1972, fig.2). The baseline was extended southwards from 2500S to 8900S along the assumed extension of the ultrabasic body. However, from 3500S the bush gets very thick (rain forest) and exposures are scarce.

To guide the mapping in the covered areas a Jalander magnetometer type 46-65 was used. The instrument was zero adjusted on the adjacent sediments, thus all the reading are relative.

The B1 line cut last season was extended from 900W to 1600W and the width of the ultrabasics was here shown to be larger than assumed. New E-W lines were cut from 6000S and 8500S, B2 and B3 respectively. A new access track was cut into the area from the Scotts Peak Road and joins the baseline at 8350S, see fig.3 and 4.

Due to the lack of exposures the map presented on fig.4 is rather speculative south of 3500S, the border between well exposed

serpentinites with tea-tree bush and rain forest. Along the creek to 6000S boulders and exposures in the creek bed mainly show grey chert and a finegrained dark green schist (amphibolites, see below). From 6000S serpentinite and talc schists are more frequently encountered as well as the above two rock types. Hence it has not been possible to separate them on the map. They are under any circumstances regarded as strongly associated rock types. The best exposures of serpentinite in this area were encountered at top of pass, except the road cut on Scotts Peak Road, fig.3, which is described below.

A few boulders of serpentinite were also found on access track east and uphill from 8350S, but as the magnetic readings dropped off quickly in this direction the geological boundary does not include them. The serpentinite, amphibolite, chert assemblage on the map is confined to areas with ground magnetic readings of >1000 gamma. To what extent these readings are due to subsurface ultrabasics is not known.

The wedging out of the serpentinites and related rocks to the south and the continuation of them to the southeast is based on the aeromagnetic map (Aero Service 1966) and the observation of serpentinites on Scotts Peak Road.

The amphibolites which occur so frequently in this area are partly thought responsible for the higher magnetic readings. They are represented by samples 72/19 - 20, 21, 23, whereof the first two have been examined under the microscope and show a rock strongly related to an amphibolite (71/M9-9) in contact with serpentinites north of Gordon River Road. Their widespread occurrence, however, suggests they are metamorphic igneous rocks rather than of contact metamorphic origin as earlier suggested (Flood 1972).

Asbestos Mineralization.

The asbestos mineralization encountered along Gordon River Road and southwards to 2500S is described in Flood (1971). The particular asbestos occurrences in orbicular serpentinite were sampled and tested with negative results (Flood 1972). The current investigation has mainly been in covered area hence the results are not conclusive.

Scotts Peak Road: The best exposure of the ultrabasics south of baseline 3300S appears here. It shows from south to north.

Approx. 100ft. of probably interfolded serpentinites and brownish mudstones.
Approx. 100ft. brown mudstone.
Approx. 90ft. serpentinites with minor sediments.

The serpentinite is partly blackish green, fairly massive, but mainly lighter green and strongly sheared. Chrysotile asbestos was not observed in bedrock, but several boulders along the road showed cross fibre veins up to ½" in a stockwork.

Top of Pass: Boulder of serpentinite with minor cross fibre 1/32" - 1/16".

Baseline around 3300S: On the well exposed serpentinites here a few minor occurrences of cross fibres.

Too few outcrops occur in the area to obtain conclusive information with regard to extension of the serpentinites. However, judged from boulders and outcrops, cherts and amphibolites dominate over serpentinites within this mixed assemblage of rocks. Besides the few occurrences of chrysotile asbestos mentioned above no other serpentinite outcrop or boulders carried veins of chrysotile asbestos.

As an economical asbestos orebody in this area should have a strike length in the order of 1000-3000ft. and a width of up to several hundred feet even the limited number of outcrops and boulders we have encountered should indicate its presence.

The aeromag results do not indicate any further southwards extension of the Adamsfield ultrabasic body.

GEOCHEMICAL SAMPLING AND RESULTS

Geochemical resampling of an area around 1000ft. south of Gordon River Road (fig.5) was initiated due to a few anomalous Cu values combined with higher than normal Ni values along line C2 (Flood 1972).

Soil Sampling

The C2 line was resampled from 550W to 1350W with 100ft. intervals. In addition two parallel lines 200ft. to the north and south of C2 were cut as C3 and C4 respectively. They were both sampled with 100ft. intervals from 400W to 1500W.

In all 36 soil samples numbered ADM1097-1132 were collected. They were sent to Geochem. and Mineralogical Labs., Sydney, and assayed for Ni, Cu, Co, Zn and Cr. The results are found listed at the back of this part of the report. The Cu values are shown on fig.5 where the Cu values from last seasons sampling also appear. These sampling results from C2 line confirm the high values obtained last season, but the returns along the C3 and C4 lines do not indicate any extension of the anomaly. On the contrary it seems like an ultrabasic zone with its abnormal low Cu values has a boundary running from C3-1450W to C4-1050W.

Whole Rock Samples

As the area is strongly covered the whole rock samples were collected where they could be found. Altogether 12 samples were collected and sent to Geochem. and Mineralogical Labs., Sydney, where they were assayed on Ni, Cu, Co, Zn and Cr. Their location is found on fig.5, and the assay results are listed at the back of this part of the report.

As is apparent from this list several rock types were encountered but the thick cover obliterated their internal relationship. No sulphide disseminations were observed in any of these rock types, but minute sulphide grains were seen in one of the gabbroic rocks. The gabbroic rock and green schists or amphibolite are assumed responsible for the high soil sample Cu values as the whole rock samples returns are up to 220 ppm. The accompanying high Ni value may originate from the serpentinites which outcrop uphill (steep) from the location of the anomaly. Hence the few high Cu and Ni values in the soil samples are ascribed to normal contents in corresponding bedrock.

Top of Pass: Along baseline at 6550S were noticed some boulders of both serpentinite and green schist (amphibolite) with sulphides as a minor dissemination, but mainly smeared out on joint planes.

Two samples numbered AA1159 and AA1160 of serpentinite and green schist respectively were sent to the above Lab. and assayed on Cu, Co, Ni and As. The results are found on fig.4 and in the lists at the back. The Cu value is unusually high for the serpentinite compared to the S.W. Tasmania ultrabasics in general. The return from the green schist sample, however, is not spectacular.

SUMMARY

The main aim of the current work has been geological mapping of the Adamsfield ultrabasics and examination of the area with regard to asbestos mineralizations.

In the northern part (fig.2) work was done along the previous bulldozed lines on the widest part of the ultrabasic body, and along traverses across the ultrabasic "tail" running along the western slope of Saw Back Range. It has here been distinguished between three rock types within the ultrabasics.

1. Serpentinites.
2. Layered ultrabasics.
3. Massive pyroxenites.

Search for asbestos resulted in find of ten localities with cross fibre veins ≈1/16". Several other localities of shorter fibre were encountered. The cross fibres were with a few exceptions found within or at the margins of the layered ultrabasics. However, the veins were always few, their width rarely exceeded 2/16" and never 1/4".

In the southernmost part of the Adamsfield ultrabasics line cutting and geological mapping continued from last season. Altogether this work implied around 9000ft. of lines cut and a new access track to Scotts Peak Road around 2200ft. long. The work was mainly in heavy rain forest with few exposures, and a magnetometer was used to guide the mapping. Still it was not possible to separate between the serpentinites and its main associates, hence serpentinites, green schists (amphibolites) and cherts have been mapped as one unit.

Asbestos cross fibre veins were encountered in boulders along Scotts Peak Road (up to ½") on to top of pass (fig.4) and in outcrop around baseline 3300S. The two latter localities showed only short fibre veins.

Resampling of a limited area south of Gordon River Road implied 36 soil samples and 12 whole rock samples along the E-W C2 line cut last season and two new parallel lines C3 and C4. Both soil and whole rock samples were assayed for Ni, Cu, Co, Zn and Cr. The aim of sampling was to test a few high Cu - Ni values returned last season, but no extension of the anomaly was found to exist.

Two whole rock samples of green schist and serpentinite were collected from top of pass due to minor occurrences of sulphides. They were assayed for Cu, Co, Ni, As but with no significant return.

CONCLUSION

On the northern part of the ultrabasics the investigation along traverses and bulldozed lines has provided conclusive information regarding asbestos potential. In spite of good outcrop only 10 localities of ≈1/16" cross fibre veins were encountered, and they were all of limited extension, hence no asbestos mineralization of economical significance occurs.

Regarding the central part the negative results from asbestos investigation last season has been dealt with earlier (Flood 1971, 1972).

Results from the area investigated this season are not conclusive due to bad exposures but an economical asbestos orebody within this area would necessarily cover a considerable proportion of the surface area mapped. As only an insignificant number of the serpentinite outcrops and boulders investigated carry chrysotile cross fibre veins it is most unlikely that any such orebody can exist.

The geochemical resampling south of Gordon River Road did not

prove any extension of the small anomalous Cu - Ni area found last year. It is indicated that the Cu values originated from normal content in gabbroic-amphibolitic rocks and the Ni values from close by serpentinites.

016

SOIL SAMPLING ADAMSFIELD 1972

ASSAY RESULTS

Co-ordinates			Results in ppm				
Easterlies	Northerlies	Sample No.	Ni	Cu	Co	Zn	Cr
550W	C2	ADM1097	240	170	66	90	850
650W	"	1098	320	140	48	60	2000
750W	"	1099	240	110	52	76	850
850W	"	1100	250	200	100	190	250
950W	"	1101	180	120	42	80	900
1050W	"	1102	290	140	64	100	725
1150W	"	1103	200	330	44	38	400
1250W	"	1104	480	280	72	48	825
1350W	"	1105	1200	12	110	96	>1%
400W	C3	ADM1107	200	120	60	96	550
500W	"	1108	290	140	90	90	625
600W	"	1109	92	38	28	80	300
700W	"	1110	96	38	30	68	350
800W	"	1111	140	110	72	94	400
900W	"	1112	260	140	84	110	925
1000W	"	1113	310	92	60	54	1950
1100W	"	1114	120	150	50	28	625
1200W	"	1115	210	86	52	78	675
1300W	"	1116	160	66	44	24	900
1400W	"	1117	170	84	36	68	600
1500W	"	1118	1520	8	260	320	>1%
400W	C4	ADM1132	250	130	72	100	575
500W	"	1131	270	140	72	82	1100
600W	"	1130	340	160	60	72	1200
700W	"	1129	250	110	48	54	1100
800W	"	1128	140	38	22	42	1100
900W	"	1127	120	96	28	28	325
1000W	"	1120	300	130	42	30	1025
1100W	"	1121	880	10	110	44	1600
1200W	"	1122	1320	10	90	34	950
1300W	"	1123	1640	16	120	100	>1%
1295W	"	1124	1600	12	100	110	>1%
1400W	"	1125	600	56	72	74	3200
1500W	"	1126	300	26	40	70	6800
1000W	100N	ADM1106	250	90	48	72	1500
1000W	100S	ADM1119	210	98	42	72	755

017

739018

ROCK SAMPLING ADAMSFIELD 1972

ASSAY RESULTS

Co-ordinates			Results in ppm				
Easterlies	Northerlies	Sample No. and Rock Type	Ni	Cu	Co	Zn	Cr
1050W	C2	AA1147 Gabbroic	110	110	36	74	725
C2-C3	Access 40W	AA1148 Gabbroic	82	110	26	40	850
1100W	C3	AA1149 Gabbroic	190	90	40	48	300
1800W	C3	AA1150 Serpentinite	2400	52	120	58	3700
C2-C4	Access 30S	AA1151 Gabbroic	50	110	28	52	350
C2-C4	Access 100S	AA1152 Gabbroic	170	42	40	26	550
700W	C4	AA1158 Gabbroic	60	200	60	46	300
900W	C4	AA1157 Gabbroic	76	130	76	46	25
1000W	C4	AA1153 Green Schist (Amphibolite)	100	96	100	46	150
1100W	C4	AA1154 Siltstone	180	56	180	30	300
1400W	C4	AA1155 Talc-serpent-inite	2140	10	2140	32	2050
1500W	C4	AA1156 Greenst. and opalized serpentinite	300	220	300	54	475
			Ni	Cu	Co	As	
B.L.	6550S	AA1159 Serpentinite	1900	240	140	5	
B.L.	6550S	AA1160 Green Schist (Amphibolite)	110	210	60	x	

PART 2. REVIEW OF ALL RELEVANT WORK TO DATE

019

739020

LIST OF CONTENTS

PART 2. REVIEW OF ALL RELEVANT WORK TO DATE

INTRODUCTION

For most of the last 15 years the area in question has been held under Exploration Licences. From 1957 to 1961 it was part of Lyell-Electrolytic Zinc Exploration's (L.E.E.) Exploration Licence 1/59. From 1964 it was held as E.L.1/64 and from 1965 as E.L.13/65 by B.H.P. Co. Ltd. Adamsfield from 1964 was included in an area of 6000 square miles, which was gradually reduced in size. It became a separate part (Part III) of E.L.13/65 in 1969 and has had its present shape and size (see fig.1) since 1970.

During these years regional work has been carried out by the exploration companies, and considerable relevant work has been done by H.E.C. and Land & Survey as aerial photographing, publication of maps, road building etc.

Detailed exploration has largely concentrated around the known occurrences of ultrabasic rocks. Primary the aim was towards basemetals, later the asbestos potential of the ultrabasics has been examined.

The latter area around the old Adamsfield township attracted much interest already in the 1920s due to rich finds of Osmiridium in alluvials, and represents the only economical exploited ground within this part of E.L.13/65. However, the mining licence to the alluvials at Adamsfield are not included in this exploration licence.

Particularly with regard to geological descriptions not every work is listed in this report, but the later and more comprehensive works are mentioned and discussed when pertinent.

ACCESS

During the period of L.E.E. only one 4 wheel drive track led from Maydena into the Adamsfield township, the Adamsfield Track. Otherwise only bush tracks like the South Gordon Track

and Port Davey Track existed.

During the 1960s access has been greatly improved mainly due to the H.E.C. Gordon Scheme. The eastern and southern part of our licence area is now traversed by The Gordon River Road and branching off from this the Scotts Peak Road. They are both mainly sealed highways.

In 1965 a new four wheel drive track, the Saw Back Track, was put into Adamsfield township from Gordon River Road along the Western side of Saw Back Range, see fig.1, 2 and 4. This offers the shortest and best access to Adamsfield.

TOPOGRAPHICAL MAPS

Land and Survey

HUNTLEY AND FEDDER SERIES	2" = 1 mile
WEDGE (provisional edition)	1" = 1 mile
WEDGE	1:100,000

The WEDGE maps cover the whole area, the latter shows all the abovementioned tracks and roads.

H.E.C.

The area south of Saw Back Range, around the junction Gordon River Road and Scotts Peak Road is covered by:

H.E.C. Middle Gordon Scheme, Scotts Peak Access Road and Gordon Access Road Map Sheets 1" = 400'.

AERIAL PHOTOGRAPHS

The area was covered by aerial photos initiated by L.E.E. in 1958.

Adastraphoto S.W. Tasmania 1" = 30 chains.

Part of the area including Adamsfield ultrabasic body was covered by Land and Survey in 1964.

Adamsfield Access, Project 1478 1" = 15 chains.

Part of the area (including most of Adamsfield ultrabasic body) was covered by H.E.C. (Land and Survey) in 1965.

Scotts Peak Road Project 1268 1" = 20 chains.

The latter runs show the Gordon River Road and Saw Back Track half built.

GEOLOGICAL MAPS AND DESCRIPTIONS

Reconnaissance, as well as more detailed work with emphasis on the ultrabasics and alluvials of Adamsfield had been carried out. But access problems and lack of maps etc. had hampered more extensive work in these regions.

Regional Work

L.E.E.

Based on previous work, own field parties as well as photo interpretations, a regional map Scale 1" = 100 chains was compiled by L.E.E. and is found reproduced in Gebert (1965). However, L.E.E.'s airborne geophysical survey in the Adamsfield area was limited (see below) and did not provide any regional information.

B.H.P.

During their work B.H.P. gradually got the benefit from better access, more aerial photographs, and a complete aeromagnetic survey flown in 1965/66 (see below).

Based on detailed mapping along Gordon River Road and air photo interpretation a regional map with description was compiled by Gebert (1966 draft form).

A PhD student was granted a Company Scholarship for mapping of the whole area, and given helicopter support in the field. This work was finished in 1969 and provided a geological map 1" = 1 mile with a description mainly concentrated on the Cambrian sedimentation in the area (Corbett 1969). The map is reproduced as fig.1 in this report. It partly includes an area of Ordovician Limestone to the east, mapped and described for an Honour Thesis by the same author (Corbett 1964).

The reader is referred to the detailed legend on Corbett's map fig.1, and a brief summary of the main geological features of the area follows.

An old Precambrian block of mainly quartzites and quartz schist occurs to the west and a block of young Precambrian rocks covers the southeastern part, consisting of dolomites, quartzites and siltstones. Most of the area, however, is covered by Paleozoic rock of Cambrian to Devonian age, which are folded into large north-south trending syn and anticlines. The general structure of the Paleozoic succession is mainly ascribed to movements of Cambrian and Devonian age. Post deformation Permotriassic sediments and Jurassic dolerite cap some of the mountains. The larger valleys are filled with alluvials of Tertiary and recent age. Except the Jurassic dolerites igneous rocks occur only in the lower or middle Cambrian, with the ultrabasic bodies as the most prominent features. However, both extrusive and intrusive rocks of mainly basic to intermediate composition occur widespread within the Lower Cambrian sediments and associated with the ultrabasics. This is apparent from Corbett's (1969) many recordings along Gordon River Road and from own work on the ultrabasics on both sides of this road. Acid tuffs are recorded from an area west of Mt. Mueller (Corbett 1969).

On fig.1 the present shape of E.L.13/65 PART III Adamsfield is outlined and the extension of the Gordon Scheme Lake to be flooded in 1975 is shown.

A brief geological description of the Adamsfield area was given by Hall and McIntyre (in Hall et al 1969a).

Detailed Maps

Previous to the work by L.E.E. and B.H.P. economical interest concentrated around Osmiridium in alluvials on the northernmost part of Adamsfield ultrabasic body. The work by the above two companies has also been focused on the ultrabasics, first for basemetals and lately also for chrysotile asbestos. Hence this chapter refers to work on

(i) Adamsfield ultrabasics, extending N-S for almost 10 miles in the central part of the Licence area (fig.1, 2 and 3).

(ii) Boyes River ultrabasics, very poorly exposed around 7 miles to the north west of Adamsfield (fig.1).

Adamsfield.
Due to the Osmiridium rush a geological map (Scale 1" = 20 chains) and description was produced by Nye (1929). This covers an area which roughly corresponds to fig.2 this report.

Based on fieldwork by B.H.P. in 1965 the same area was mapped (Scale 1" = 1 chain) and described by Gebert (1965). His report gives a brief description of bedrock, but concentrates around the osmiridium and chromite potential of the alluvial deposits.

In 1971 fieldwork was carried out by a student from University of Tasmania for an Honours Thesis on petrology and structure of the Adamsfield ultrabasics (Brown 1972). Field mapping was done in Scale 1" = 20 chains, but the map accompanying the thesis was reduced to scale around 1:40,000. Although the whole extension of the Adamsfield ultrabasics appears on this map, only the northernmost part has been reliably dealt with due to access and exposures. The present map fig.2 is partly compiled from Brown's work and is commented upon in Part 1 of this report.

Regarding the southern part of the ultrabasics the map (fig.3) is the first attempt to outline their full extension based on fieldwork. The central part around Gordon River Road, rectangle 2, fig.3, is described by Flood (1971, 1972) and the southernmost part in this report, Part 1. The geology surrounding the ultrabasics is mainly based on Corbett's (1969) mapping and interpretation.

Boyes River.
Very few exposures exist on the Boyes River ultrabasic body. The extension however can be assumed from the aromag map, see below.

Due to lack of access only two or three visits have been paid to this locality during B.H.P.'s program. The ultrabasics appear as scattered outcrops on the regional map by Corbett (1969).

A similar configuration of outcrop also appears on a map (Scale 1" = 2000ft.) by McIntyre and Dumstead (in Hall et al 1969b). This map was made as a guide during the geochemical sampling program 1967/68.

GEOPHYSICAL SURVEYS

A review of all geophysical exploration in S.W. Tasmania up to 1966 was given by Taylor (1966b). Since then only one ground geophysical program has been conducted in Adamsfield (Hillsdon 1968), see below.

Airborne

L.E.E.

Two isolated areas, one around the junction of Gordon River - Boyes River and the other around Adamsfield township were covered by aeromag and A.E.M. in 1958. Two A.E.M. anomalies A/61-2 on sheared serpentinite east of Adamsfield and one A5/1 on Cambrian/Ordovician contact to the west of Adamsfield were recorded. They were all followed up by ground work and rejected as insignificant (Scott 1959, Kingsbury 1961a,b).

B.H.P.

The whole area was covered by aeromag flown in 1965/66. Total magnetic intensity maps in scale 1:63,360 and 1:23,760 with an interpretation report were issued by Aero Service (1966).

Several anomalies occurred within the present E.L.13/65 - Adamsfield. They are marked on fig.1 and listed below with the number and interpretation as used in the Aero Service report. They were all given a Field Check Priority of 1.

Anomaly No.	Cause of Anomaly
27	Ultrabasics
28	" Detailed quantitative analysis indicated a subsurface body 1150ft. below surface.
29	Ultrabasics
30	"
36	"

Anomaly No.	Cause of Anomaly
37	Ultrabasics
38	"
39	"
40	Ultrabasic intrusion at depth.
41) 42)	Very small local features. Interpreted as small off-shoots or apophysis of the main ultrabasic rock.
43	Ultrabasic intrusion at depth.
44	" " " "

The extension and continuity of the anomalies which vary considerably is not shown here, but is found on the magnetic intensity maps (Aero Service 1966).

Ground follow up: Regarding anomaly 27 and 28 our information relies solely upon the mapping by Corbett (1969) which did not reveal the presence of ultrabasics at the surface. This is in accordance with the analyses of 28. No analysis was carried out for 27 but it is assumed that its source is also subsurface.

29 and 30 refer to ultrabasics at surface as mentioned by Hall and McIntyre (Hall et al 1969a), and shown on maps by McIntyre and Bumstead (Hall et al 1969b) and Corbett (1969). They are however, largely covered by transported boulder talus and will be extensively flooded in 1975, see fig.1.

36 and 37 are more or less one consistent anomaly along the Adamsfield ultrabasics (fig.2 and 3) and have been thoroughly checked up on ground by geological, geophysical and geochemical examinations.

38 and 39. No traverses have been made across the location of these anomalies. Their intensities are less than on the recorded ultrabasic immediately to the east of 39, i.e. on the B3 line fig.2 and 4. The geological environment as mapped along Gordon Road north of the anomalies and the Ni anomaly in stream sediments close to 39, see below, strongly support the assumption of ultrabasic bodies, but of insignificant widths and extension.

40. A traverse by Corbett (pers. comm.) on the "peninsula" in the future Gordon Lake where this anomaly is situated revealed the presence of abundant cherts, but no ultrabasics. As chert is associated with ultrabasics elsewhere the interpretation of subsurface ultrabasics as source of anomaly is supported.

41. It is not known whether anyone has visited the exact locality of this anomaly. It is small, the area covered and will be mainly submerged by the new lake.

42. This anomaly is situated on or close to an area of Cambrian volcanics where also acid porphyries of Mt. Read volcanic type have been observed in a largely covered area (Corbett 1969).

43 and 44. The interpreter (Aero Service 1966) of these anomalies was not aware of the presence of dolerites on Mt. Mueller. Although the position of the anomaly peak does not correspond well with Mt. Mueller it is suggested that this dolerite cap and boulder scree around the mountain at least partly is responsible for these anomalies.

Ground Surveys

L.E.E.

The anomalies detected by the airborne survey were located on ground by E.M. A6/1 and A6/2 were rejected as sheared serpentinites and no further work was recommended. A5/1 was also subjected to I.P. which gave no anomalous effect. The cause of the E.M. anomaly was said to be an overburden effect. However, geological investigation in the area revealed a narrow breccia with pyrite correlated with the Jukes Breccia.

B.H.P.

Two ground geophysical surveys have been conducted, both within rectangle 1 fig.2, i.e. on the northernmost part of the Adamsfield ultrabasic body. Lines were bulldozed across the body followed by a magnetic survey in 1966 (Taylor 1966a). Taylor concluded that "The observed anomalies could all be explained by the magnetic properties of the rock types in

the area; no mineralized zone could be recognised from the results or indicated by the geology". Based on the ground magnetic survey no further work was recommended.

In 1968 an E.M. S.P. and magnetic survey were done along the same lines by Hillsdon (1968), who concluded: "The results of the E.M. survey of the ultrabasics at Adamsfield were limited by the rugged terrain. They do not indicate any conducting zones caused by mineralization". The S.P. results supported the E.M. results and the magnetic results agreed with those obtained by Taylor (1966a). No further work was recommended.

GEOCHEMICAL SURVEYS

These have also generally been limited to the ultrabasic rocks and mainly been conducted as soil sampling programs. The latter have been carried out on the Adamsfield ultrabasic body within rectangles 1 and 2 on fig. 2 and 3 respectively. A minor stream sampling program was performed along the Gordon River Road across the ultrabasic.

Stream sampling has also been done in the Boyes River area.

Adamsfield

Soil and whole rock sampling.

In 1969/70 the bulldozed lines within rectangle 1 fig.2 were resurveyed and pegged and some of the lines were extended. Thereafter 791 B-horizon soil samples were collected at 50 foot intervals. All the samples were analysed for Co, Ni, Cu, Zn, As and Cr (Corbett 1970).

Two chip sample collections were taken over the face of the open cut (see fig.2) and assayed for Co, Ni, Cu, Zn and As. Based on the result of this survey Corbett (1970) concluded that no significant anomaly existed for any element, and no further work was recommended in the search for nickel sulphide mineralization.

Concurrently with mapping of the ultrabasics, soil and whole

rock samples were collected in 1971 on both sides of Gordon River Road. Altogether 322 soil and 28 whole rock samples from within rectangle 2 on fig.3 were assayed on Ni, Cu, Co, Zn and Cr (Flood 1971, 1972 and Part 1 this report). Regarding tracks and lines along which the sampling was done see the above reports. This sampling program did not reveal any significant anomalies. High Cu-Ni values along the C2 line (fig.3) were, after resampling, ascribed to normal content in gabbroic rock and adjacent serpentinites. No further geochemical work has been recommended.

Stream and whole rock sampling.

Gordon River Road: During the 1967/68 season a stream reconnaissance survey was carried out along the Gordon River Road approximately between co-ordinates 420 KYE and 438 KYE. Altogether 18 samples were collected and assayed on Ni, Cu and Zn (McIntyre and Bumstead in Hall et al 1969b).

During this survey also 43 samples of Cambrian sedimentary rocks were collected and tested for phosphate, 7 samples of Precambrian pelitic schists were tested for basemetals and several other elements (no localities are given for these samples), and 6 samples from the ultrabasics along Gordon River Road were also tested for basemetals and other elements. Regarding the phosphate testing, all samples returned negative results. No anomalous concentration of basemetals were found in the Precambrian schists. Neither were there any indications of anomalous concentration of nickel, chromium or platinoid metals in the ultrabasic rocks.

However, at the headwater of Boyd River close to aeromag anomaly 39 (see fig.1) one anomalous Cu and Zn value and two anomalous Ni values were returned from the stream sampling. Further work was recommended on this locality.

These anomalies, however, are assumed ascribed to natural content in the associated rocks and soils.

Boyes River

During the 1967/68 season a geochemical survey was carried out around the two southern aeromag anomalies at Boyes River

030

(McIntyre and Bumstead in Hall et al 1969b). 60 stream samples and 9 ultrabasic whole rock samples were collected. The stream samples were assayed for Cu, Zn, Ni and As and the whole rock samples for Cr, Mn, Co, Ni, Cu, Zn, Ag, B, Li, Ba and Zr.

The whole rock samples were said to carry average Ni and Li values, while the other element values were low.

A few anomalous Ni and As values were obtained in a stream draining from the west.

The Ni value could refer to the ultrabasics, but the accompanying high As indicates sulphide mineralization and further sampling was recommended.

ASBESTOS MINERALIZATION

Fieldwork during 1970/71 season revealed the presence of chrysotile cross fibre veins in Adamsfield ultrabasic rocks (Flood 1971). The best mineralization was found along the Gordon River Road in an orbicular serpentinite. Milling and testing on 4 samples were done for this zone, both on cross fibre bearing material and potential slip fibre in sheared serpentinites. This work revealed low percentage and inferior quality of the fibre from this particular asbestos zone (Flood 1972).

Further work in the 1971/72 season both in the northern part and southernmost part of the ultrabasic failed to locate asbestos mineralization of economic significance (Part 1 this report).

ALLUVIALS

The main workings on the alluvials are around the Adamsfield township, fig.2. They extend for around 3 miles along Main Creek between the quarry and Adams Falls and around 1½ miles up Adams River from the Main Creek Junction.

031

Only Osmiridium has been economically utilized from the alluvials and the mining field has been treated in detail by Nye (1929).

The alluvials, however, also contain chromite, some magnetite and in places pyrite (Apthorpe 1966). Gebert (1965) reviewed the Adamsfield Osmiridium deposits and presented plans for an extensive drilling program on the alluvials along Main Creek and Adams River.

However, as late as 9th June this year all the old mining claims on the alluvials were still held, mainly by Mr. J. Bennetto, but also by Mr. G. M. Hall and W. D. Clark. The claims appear on Mineral Chart Adamsfield 1 South.

OTHER MINERALIZATIONS

Osmiridium

The osmiridium occurs disseminated in the ultrabasics which is regarded as the original source rock. It is also found as secondary concentration in Cambrian conglomerates. None of these occurrences are of economical grade.

Sulphides in Ultrabasics

The millerite sampled and assayed by Nye (1929) from the head of Main Creek has, despite several attempts, never been located. It is assumed to have been a very local enrichment.

Pyrite from the alluvial workings sampled by Taylor and reported by Apthorpe (1966) has possibly originated from the ultrabasics but has not to the knowledge of this author been recorded in situ.

Chromite

Chromite occurs frequently disseminated throughout the massive serpentinites and pyroxenites. Only one occurrence of chromite lenses is known. Brown (1972) reports from the pyroxenite core of the northwestern body of layered ultrabasics "at least six lenses, consisting of up to 80 percent chromite. These lenses are up to 1 meter long and 3 centimeters wide ....."

The Humboldt and Mt. Mueller Mines

These prospects are situated in the easternmost part of E.L. 13/65 on the southeast slope of The Needles (see fig.1). Some work was done around the turn of the century and is reported on by Twelvetrees (1908), but geologists from Department of Mines have visited and reported on the area at intervals (Henderson 1939, Hughes 1952).

The country rock where a couple of adits and a few shafts and cuttings occur is described as dark slates with minor quartzites and the age is, by the above two authors, indicated as Cambrian or lower Ordovician respectively. Corbett (1969) has, however, mapped the whole area as Upper Precambrian.

The shales are cut by quartz and quartz-carbonate veins a few inches wide and which sometimes carry minor amounts of pyrite and chalcopyrite. No further work was recommended.

Limestones

No fieldwork except geological mapping has been done on the limestones within this area. Although the limestones are quarried to the east of E.L.13/65 for use in the Australian Newsprint Mill, transport cost is believed to be a barrier regarding production of limestone from our licence.

A review on limestones in Australia is currently being done by one of the Company geologists (Dr. B. Bischoff) at Whyalla, who has been furnished with information also from this office.

SUMMARY

The area in question was included in L.E.E. E.L.1/59 from 1957 to 1961 and from 1964 it was included in and later a separate part of B.H.P. E.L.13/65.

The area is covered by aerial photographs and topographical maps. During the 1960s access improved immensely due to the H.E.C. Gordon Scheme.

Several geological maps occur, and the whole licence is covered by a recent map 1" = 1 mile with description (Corbett 1969). A map has also been compiled on the Adamsfield ultrabasics in Scale 4" = 1 mile (this report).

The mapped lithologies span from Older Precambrian to Devonian with minor Permotriassic sediments and Jurassic dolerite caps. Alluvials fill the main valley floors.

The Precambrian and Paleozoic rock are all sedimentary, except part of the Lower Cambrian, into which the Adamsfield and Boyes River ultrabasics were emplaced. Both extrusive and intrusive rocks of basic-intermediate composition are associated with the Adamsfield ultrabasic (Flood 1972). Acid volcanics of Cambrian age are found west of Mt. Mueller (Corbett 1969), associated with other igneous rock of intermediate to basic? composition.

From a prospecting point of view it is generally the Lower Cambrian rocks which have directly or indirectly attracted the interest to this region.

Osmiridium from the ultrabasics but concentrated in alluvials was mined in the 1920s. The osmiridium mining claims are not included in E.L.13/65 and not held by B.H.P.

During the L.E.E. and B.H.P. periods in this region the base-metal and asbestos potential has been the aim of investigations, hence almost all work has been concentrated on and around the ultrabasics.

Airborne geophysical survey by L.E.E. around Boyes River and Adamsfield township outlined three A.E.M. anomalies. Two on ultrabasics and one west of Adamsfield. They were all ground checked and rejected (Scott 1959, Kingsbury 1961a,b). A full aeromag survey by B.H.P. (Aero Service 1966) outlined several anomalies which mainly have been ascribed to the presence of the ultrabasic rocks, outcropping or subsurface. Two anomalies are possibly connected with dolerite and one No. 42 occurs on or close to the Cambrian acid volcanics.

The Boyes River area where few outcrops of the ultrabasics occur due to thick talus cover, has been mapped and geochemically stream-whole rock samples. A few stream samples returned high Ni-As values and were recommended checked (McIntyre and Bumstead in Hall et al 1969b).

At Adamsfield ground magnetic, E.M. and S.P. surveys as well as geochemical soil sampling have been carried out on the northernmost part of the ultrabasics, all within rectangle 1, fig.2, the results were negative (Taylor 1966a, Hillsdon 1969, Corbett 1970).

Also the southern part of Adamsfield ultrabasics (rectangle 2, fig.3) have been subjected to a soil-whole rock geochemical survey with negative results (Flood 1972, Part 1 this report).

A reconnaissance stream sampling along Gordon River Road (approximately across fig.3) gave two anomalous Ni values and one each anomalous value for Cu and Zn at the head of Boyd River. Further checking of this locality was recommended by McIntyre and Bumstead (Hall et al 1969b).

All the tracks, lines and traverses shown on the Adamsfield ultrabasics (fig.2 and 3) have been checked for asbestos mineralization. A cross fibre and possible slip fibre bearing zone on the Gordon River Road had four samples submitted for milling and testing. The latter zone did not carry fibre of economic grade or quality (Flood 1972). No other locality showed any significant concentration of chrysotile asbestos (Part 1 this report).

Outside the ultrabasic terrain Cambrian sedimentary rocks have been tested for phosphate and Precambrian pelitic schists have been tested for basemetal and other elements. All samples returned negative results (McIntyre and Bumstead in Hall et al 1969b).

In the westernmost part of E.L.13/65 there occurs an old Copper prospect, Humboldt and Mt. Mueller Mines. Geologists from Tasmania Department of Mines have after inspections not recommended any further work on these prospects (Henderson 1939, Hughes 1952).

CONCLUSIONS AND RECOMMENDATIONS

The regional work done within this part of E.L.13/65, as geological mapping and aeromag survey, has not outlined any new major exploration target.

However, the corresponding occurrence of acid volcanics and a small aeromag (42) anomaly in the eastern part of the licence area should be further checked in the field.

Groundwork in detail has only been carried out on and around the Adamsfield ultrabasic bodies. The results have generally given negative results both with regard to chrysotile asbestos mineralization and basemetals. The Minor Cu, Ni, Zn stream sample anomaly on the Gordon River Road west of the main ultrabasic body is assumed caused by basic and ultrabasic igneous rocks and high Zn-soil on top of the ultrabasics. No further work is warranted here or anywhere else on the Adamsfield ultrabasics.

The stream sampling Ni-As anomaly encountered at Boyes River is for the following reasons not regarded sufficiently important to warrant further work in the area. The copper values are consistently low and anomalous As values were also obtained on scree and alluvium returning low both Cu and Ni values. Outcrops are few and most of the overburden consists of transported boulder talus, hence the recommended soil sampling will be a dubious exploration tool. Access is difficult, the southern part of the anomaly will be flooded, and along the northern part the ultrabasics are probably subsurface.

The old copper prospects on the easternmost part of E.L.13/65, Humboldt and Mt. Mueller Mine, have been reported by Mines Department geologists to contain insignificant chalcopyrite mineralisation and no further work is recommended.

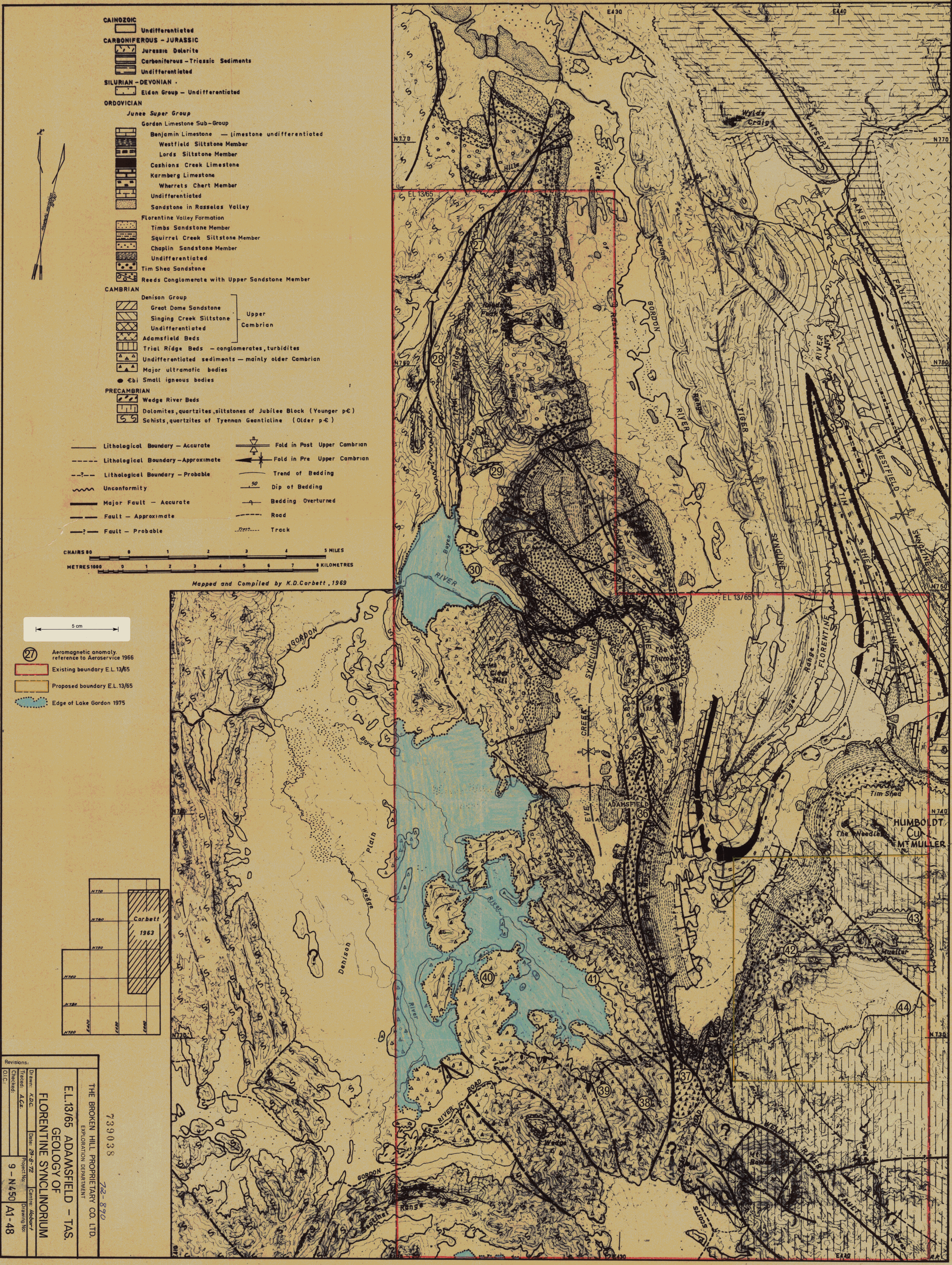
Regarding the limestones within this area transport cost is assumed prohibitive, but comments from Dr. Bischoff at Whyalla will be requested before the exploration licence expires in December.

Further fieldwork is then only proposed on the acid volcanics/ aeromag anomaly (42). Stream sampling and geological traverses in the area will be attempted as early as possible in the next season. Results from the investigation should be obtained before the licence expires 21st December. If the results are negative, Part III Adamsfield of our E.L.13/65 should be relinquished in total.

If for some reason the work cannot be done within the time limit or returned results necessitate further work E.L.13/65 should be reduced to an area of around 29 square miles around Mt. Mueller defined as follows:

Commencing at International Grid.
Co-ordinates 738,000YN 444,000YE, thence easterly to 738,000YN 435,000YE, thence southerly to 728,000YN 435,000YE, thence westerly to 728,000YN 444,000YE, thence northerly to 738,000YN 444,000YE.

In particular when considering the basemetal potential of this region, the general discouraging exploration results obtained from similar environments elsewhere in Tasmania should be recollected.


CAINOZOIC
Undifferentiated
CARBONIFEROUS - JURASSIC
Jurassic Dolerite
Carboniferous - Triassic Sediments
Undifferentiated
SILURIAN - DEVONIAN
Eldon Group - Undifferentiated
ORDOVICIAN
Junee Super Group
Gordon Limestone Sub-Group
Benjamin Limestone — limestone undifferentiated
Westfield Siltstone Member
Lords Siltstone Member
Cashions Creek Limestone
Karmberg Limestone
Wherrets Chert Member
Undifferentiated
Sandstone in Rasselas Valley
Florentine Valley Formation
Timbs Sandstone Member
Squirrel Creek Siltstone Member
Chaplin Sandstone Member
Undifferentiated
Tim Shea Sandstone
Reeds Conglomerate with Upper Sandstone Member
CAMBRIAN
Denison Group
Great Dome Sandstone
Singing Creek Siltstone
Undifferentiated
Upper Cambrian
Adamsfield Beds
Trial Ridge Beds — conglomerates, turbidites
Undifferentiated sediments — mainly older Cambrian
Major ultramafic bodies
€bi Small igneous bodies
PRECAMBRIAN
Wedge River Beds
Dolomites, quartzites, siltstones of Jubilee Block (Younger p€)
Schists, quartzites of Tyennan Geanticline (Older p€)
Lithological Boundary — Accurate
Lithological Boundary — Approximate
Lithological Boundary — Probable
Unconformity
Major Fault — Accurate
Fault — Approximate
Fault — Probable
Fold in Post Upper Cambrian
Fold in Pre Upper Cambrian
Trend of Bedding
50
Dip of Bedding
Bedding Overturned
Road
Track
CHAINS 80 0 1 2 3 4 5 MILES
METRES 1000 0 1 2 3 4 5 6 7 8 KILOMETRES
Mapped and Compiled by K.D.Corbett, 1969
5 cm
27
Aeromagnetic anomaly. reference to Aeroservice 1966
Existing boundary E.L. 13/65
Proposed boundary E.L. 13/65
Edge of Lake Gordon 1975
Corbett
1963
N770
N760
N750
N740
N730
N720
E430
E440
EL 13/65
Wylds Craig
MYSERY RANGE FAULT
GORDON RIVER
TIGER SYNCLINE
RIVER
WESTFIELD SYNCLINE
TIM SHEA ANTICLINE
FLORENTINE
Tiger Range
ADAMSFIELD
EVE CREEK SYNCLINE
Vale of Rasselas
Boyes RIVER
Plain
Wedge
Denison
Tim Shea
HUMBOLDT
Cu
MT MULLER
The Needles
Mt Mueller
Mt Wedge
Mt Bowes
WEDGE RIVER FAULT
SCOTTS ROAD
GORDON
Sentinel Range
RIVER ROAD
28
29
30
36
37
38
39
40
41
42
43
44
Fig. 1

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

E.L.13/65 ADAMSFIELD – TAS.
GEOLOGY OF FLORENTINE SYNCLINORIUM

Drawn: K.D.C.	Date: 29-8-72	Centre: Hobart
Traced: A.Cz.	Project No: 9 - N450	Drawing No: A1-48
Checked:		
O.I.C.:		

Revisions:

739038

72-890

1237

Fig. 2

RAGGED RANGE

ADAM

RIVER

ADAMSFIELD

SAW BACK RANGE

Saw Back Track

STACEY LOOKOUT

Line 8

73N

86N

100N

118N

125N

140N

THE THUMBS

FLORENTINE RIVER

Adamsfield Track

Adamsfield

LEGEND:

- ALLUVIAL AND SCREE UNDIFFERENTIATED
- LIMESTONES
- MARINE SAND AND SILTSTONES, UNDIFFERENTIATED
- UPPER SANDSTONE MEMB
- TIM SHEA SANDSTONE
- REEDS CONGLOMERATE
- ADAMSFIELD BEDS
- MASSIVE PYROXENITE
- LAYERED ULTRABASICS
- SERPENTINITES
- MAINLY CHERT, AMPHIBOLITES AND SERPENTINITES
- GABBROIC OR AMPHIBOLITIC BODIES OR DYKES
- SEDIMENTARY AND IGNEOUS ROCKS, UNDIFFERENTIATED
- PRECAMBRIAN SEDIMENTS
- STRIKE/DIP OF BEDDING
- FAULTS CERTAIN AND APPROXIMATE
- GEOLOGICAL BOUNDARIES CERTAIN AND APPROXIMATE
- UNCONFORMITY
- BULLDOZED, HANDCUT AND WALKED TRACKS AND LINES
- ASBESTOS LOCALITY ON NORTHERN PART

LE

UE

O

5 cm

SCALE

0 1/4 1/2 3/4 1

IN MILES.

SCALE 1:15,840.

Fig. No. 2

To accompany

Dated

739039

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT 72-890

E.L.13/65. ADAMSFIELD.

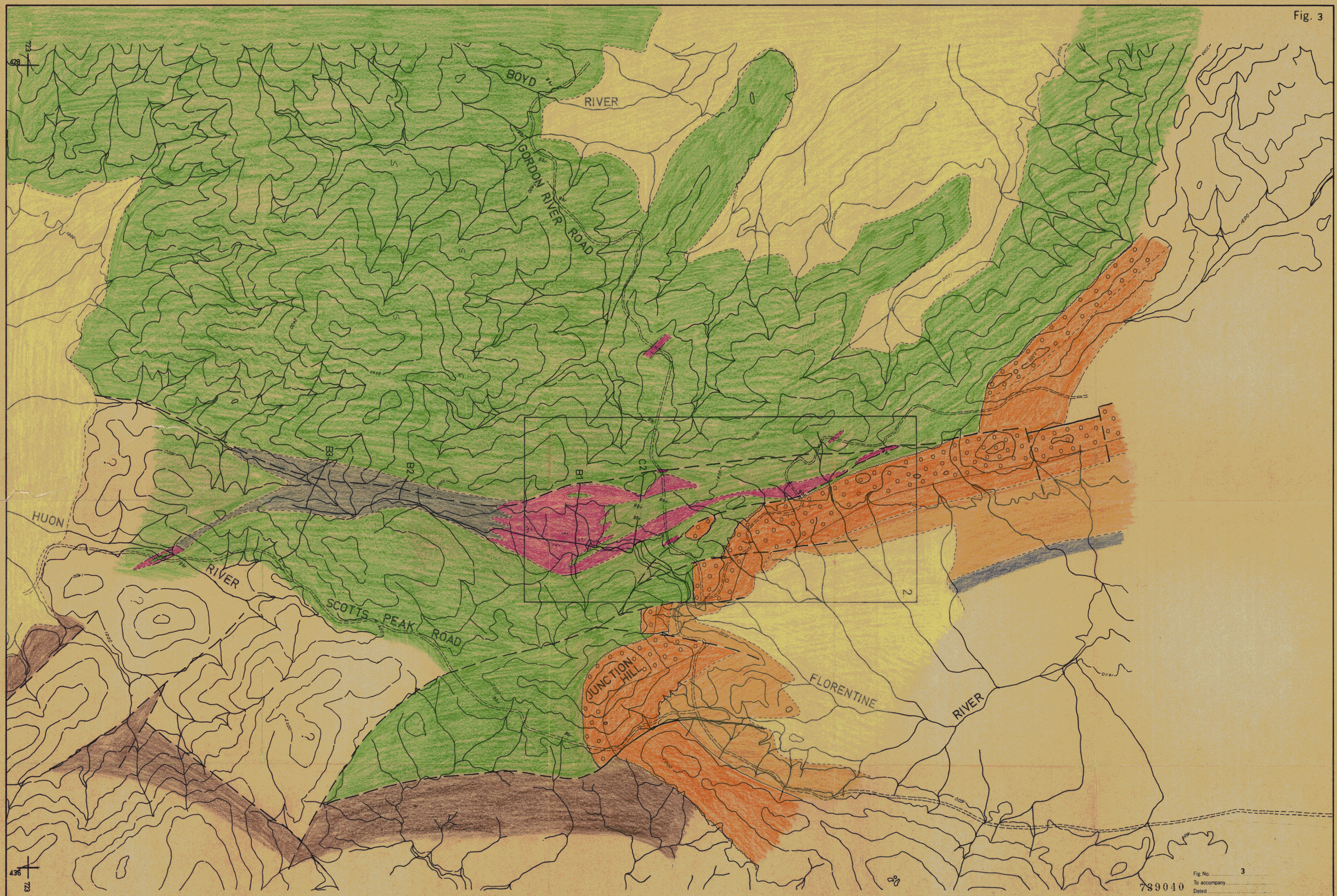
ENLARGEMENT FROM SHEET Nº 8112 WEDGE.
GEOLOGICAL MAP, NORTHERN PART

Drawn: B. F.	Date: 20 - 7 - 71	Centre: HOBART:	
Traced M.L., J.D.	Project No: 9 - N450	Drawing No: A1- 49	
Checked			
O.I.C.			

Revisions:

1238

Fig. 3



LEGEND:

REFER TO E.L.13/65 ADAMSFIELD
NORTHERN PART DRAWING NO A1-49

SCALE.

0 1/4 1/2 3/4 1

IN MILES

5 cm

SCALE 1:15,840.

739040

Fig. No. 3
To accompany
Dated

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT 72-890

E.L.13/65. ADAMSFIELD
ENLARGEMENT FROM SHEET No. 8112 WEDGE.
GEOLOGICAL MAP, SOUTHERN PART

Drawn: B.F.	Date: 20-7-71	Centre: HOBART.	
Traced M.L., J.D.	Project No: 9-N450	Drawing No: A1-50	
Checked			
O.I.C.			

Revisions:

Fig. 4

472000 YE

2500S

3000S

3500S

72/19-19, 20 (BOULDERS)

250

4000S

4500S

200

LINE

250

5000S

BASE

5500S

160

B2

800W

90

110

150

500W

200

250

6000S

72/19-22

6500S

AA1159 240, 140, 1900, 5
AA1160 210, 60, 110, 4
72/19-23

TOP OF PASS

7000S

7500S

72/19-21

8000S

B3

50

1600W

50

100

120

1100W

250

80

500W

210

250

8350S

80

8500S

250

20

SCOTTS PK. RD. ACCESS

8900S

LEGEND:

SERPENTINITES

SERPENTINITES
AMPHIBOLITES
SEDIMENTS (MAINLY CHERTS)

CUT TRACK

110

CUT LINE WITH MAGNETIC READING IN GAMMA X10

AA1159 WHOLE ROCK SAMPLE Cu, Co, Ni, As in ppm

72/19-19 PETROGRAPHICAL SAMPLE

N

5 cm

0 400 800 1200

SCALE IN FEET

SCOTTS PEAK ROAD

725000 YN

739041

Fig. No. 4
To accompany
Dated

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT 72-890

E.L.13/65 ADAMSFIELD
LOCATION OF CUT LINES AND ACCESS TRACK
SAMPLE LOCALITIES AND MAGNETIC READINGS

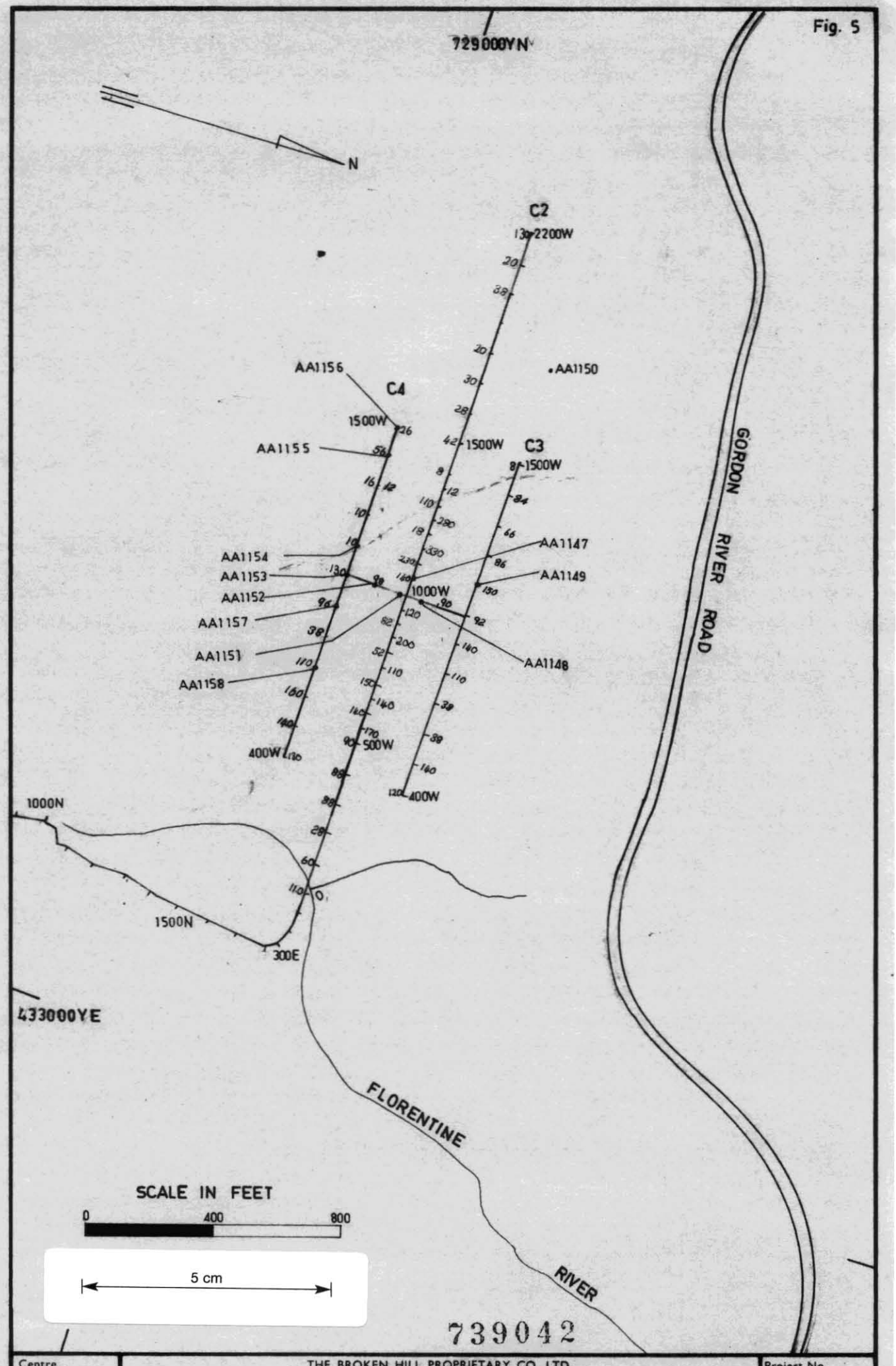
Drawn: B.F.	Date: AUG. 72	Centre: HOBART
Traced: J.D.	Project No.: 9 - N450	Drawing No.: A2- 14
Checked:		

Revisions:

1:40

12-890

Fig. 5



Centre HOBART	THE BROKEN HILL PROPRIETARY CO. LTD. E. L. 13/65 ADAMSFIELD		Project No. 9—N450
Date MAY, 72	LOCATION OF LINES AND WHOLE ROCK SAMPLES S OF GORDON RIVER ROAD. SOIL SAMPLE RESULTS Cu IN PPM		Drawing No. A4– 20