

000

**GOLD FIELDS EXPLORATION PTY. LIMITED**

856001

<b>MINES</b>	
File Ref.	<b>EL 17/86</b>
<b>- 3 NOV 1987</b>	
Doc. Ref.	
Action Officer	Initials
<b>LETTER</b>	
<b>30. 10. '87</b>	
<b>REFERS</b>	
	Date

E.L. 17/86

BRANXHOLM AREA

RELINQUISHMENT REPORT FOR 157 SQ. KM. AREA

**OPEN FILE**



By: P.A. Roberts  
Senior Regional Geologist

Date: October, 1987

Circulation: Mines Department (1)  
RGC (1)

Report No. T/87/12

CONTENTS

	Page
1. INTRODUCTION	1
2. WORK COMPLETED, DECEMBER, 1986 TO OCTOBER, 1987	2

APPENDICES

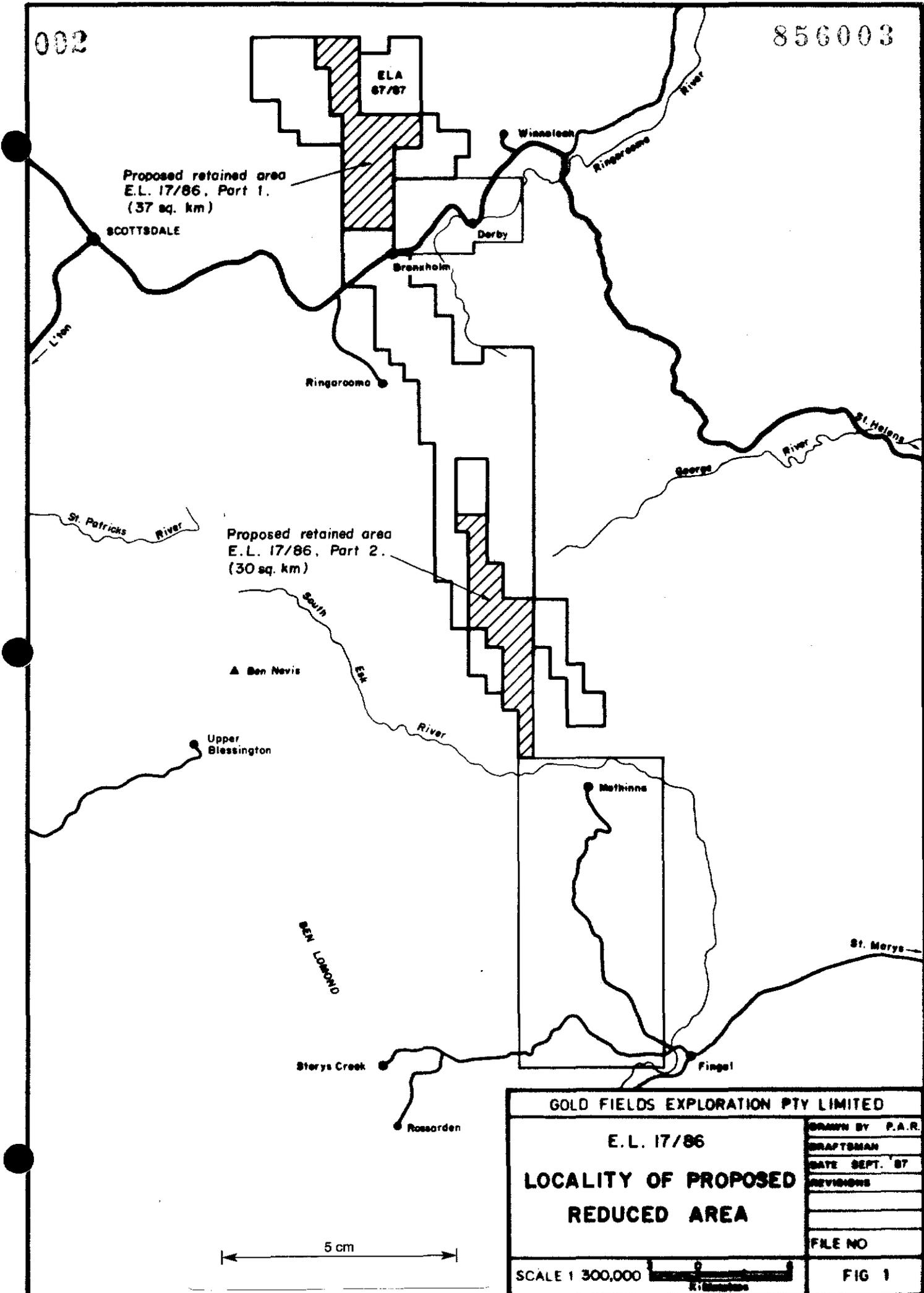
1. Schedule of relinquished area
2. Extracts from W. Herrmann's report on reconnaissance sampling and mapping (May, 1987).
3. Estimated expenditure on relinquished area.

LIST OF FIGURES

1. Locality plan, 1:300,000 (in text)
2. Interpretive Geology - Pearly Brook 1:25,000
3. Interpretive Geology - Pioneer 1:25,000
4. Interpretive Geology - Scottsdale 1:25,000
5. Interpretive Geology - Derby 1:25,000
6. Interpretive Geology - Ringarooma 1:25,000
7. Interpretive Geology - Victoria 1:25,000
8. Interpretive Geology - Saddleback 1:25,000.

002

856003



5 cm

GOLD FIELDS EXPLORATION PTY LIMITED	
E.L. 17/86	
<b>LOCALITY OF PROPOSED REDUCED AREA</b>	
DRAWN BY	P.A.R.
DRAFTSMAN	
DATE	SEPT. 87
REVISIONS	
FILE NO	
SCALE 1 300,000	FIG 1

003

-1-

## 1. INTRODUCTION

E.L.17/86 was granted on December 12th, 1986. The area was acquired in order to explore for gold mineralization in the northern section of the Mangana to Forester line of old gold fields in N.E. Tasmania.

Almost no modern exploration for gold had been carried out on the area at the time it was granted. Consequently, the first stage of exploration work required on the E.L. was a program of locating, sampling and mapping the old workings together with some reconnaissance geological mapping on the rest of the licence area. Contract geologist W. Herrmann was engaged to carry out this work, which was undertaken in February-March, 1987.

An assessment of Herrmann's results indicated that no further work could be justified on much of the E.L. Consequently, in the interests of turning over the ground as quickly as possible, a decision was made to relinquish a 157 sq. km. section of the licence area immediately (a schedule of the relinquished area is attached as Appendix 1).

This report documents the work completed on the relinquished area.

2. WORK COMPLETED, DECEMBER, 1986 to OCTOBER, 1987

W. Herrmann's work was confined to reconnaissance mapping and sampling. Consequently, his efforts did not cause any environmental disturbance in the relinquished area.

The results of Herrmann's activities within the relinquished area were most disappointing. It was therefore concluded that no further work could be justified and that the area should be dropped.

Herrmann prepared a report on his work in May, 1987. All of the sections of his report which are relevant to the relinquished area, including sample descriptions and assay results, are appended (Appendix 2). Following completion of his work, Herrmann prepared a series of interpretive geological maps on standard Government 1:25,000 topographic map bases. Copies of those maps are attached as Figures 2 to 8.

Approximately \$6,100 was spent on the relinquished area during the ten month period it was held (Appendix 3).

APPENDIX 1  
SCHEDULE OF RELINQUISHED AREA

SCHEDULE OF RELINQUISHED AREAPart 1 (N.W.)

Commencing at the north-west corner, situated at 553,000mE, 5,456,000mN thence grid east to 557,000mE thence grid south to 5,454,000mN thence grid east to 558,000mE thence grid south to 5,451,000mN thence grid east to 559,000mE thence grid south to 5,449,000mN thence grid west to 556,000mE thence grid north to 5,450,000mN thence grid west to 555,000mE thence grid north to 5,452,000mN thence grid west to 553,000mE thence grid north to the point of commencement.

Part 2 (N.E.)

Commencing at the north-west corner, situated at 564,000mE, 5,451,000mN thence grid east to 565,000mE thence grid south to 5,450,000mN thence grid east to 567,000mE thence grid south to 5,448,000mN thence grid west to 566,000mE thence grid south to 5,446,500mN thence grid west to 562,000mE thence grid north to 5,449,000mN thence grid east to 564,000mE thence grid north to the point of commencement.

Part 3 (Central)

Commencing at the north-west corner, situated at 559,000mE, 5,444,000mN thence grid east to 562,000mE thence grid south to 5,442,000 mN thence grid east to 563,000mE thence grid south to 5,440,000mN thence grid east to 565,000mE thence grid south to 5,438,000mN grid east to 566,000mE thence grid south to 5,435,000mN thence grid east to 568,000mE thence grid north to 5,436,000mN thence grid east to 571,000mE thence grid south to 5,420,000mN thence grid west to 569,000mE thence grid north to 5,422,000mN thence grid west to 568,000mE thence grid north to 5,425,000mN thence grid west to 566,000mE, thence grid south to 5,424,000mN thence grid east to 567,000mE thence grid south to 5,418,000mN thence grid west to 566,000mE thence grid north to 5,421,000mN thence grid west to 565,000mE thence grid north to 5,430,000mN thence grid west to 564,000mE thence grid north to 5,434,000mN thence grid west to 563,000mE thence grid north to 5,435,000mN thence grid west to 562,000mE thence grid north to 5,436,000mN thence grid west to 561,000mE thence grid north to 5,440,000mN thence grid west to 559,000mE thence grid north to the point of commencement.

Part 4 (S.W.)

Commencing at the north-west corner, situated at 567,000mE, 5,418,000mN thence grid east to 568,000mE thence grid south to 5,417,000mE thence grid east to 569,000mE thence grid south to 5,414,000mN thence grid west to 568,000mE thence grid north to 5,415,000mN thence grid west to 567,000mE thence grid north to the point of commencement.

Part 5 (S.E.)

Commencing at the north-west corner, situated at 571,000mE, 5,420,000mN thence grid east to 573,000mE thence grid south to 5,416,000mN thence grid east to 574,000mE thence grid south to 5,414,000mN thence grid east to 575,000mE thence grid south to 5,412,000mN thence grid west to 573,000mE thence grid north to 5,415,000mN thence grid west to 572,000mE thence grid north to 5,417,000mN thence grid west to 571,000mE thence grid north to the point of commencement.

## APPENDIX 2

EXTRACTS FROM W. HERRMANN'S REPORT ON  
RECONNAISSANCE SAMPLING AND MAPPING

(MAY, 1987)

#### 4.1.5 Malabar Workings (Figure 3)

I have not been able to discover any written references to this prospect, located about 2km south east of Forester. Our only known previous work is depicted in Blake's 1934 Plan No 664J/32.

The prospect is located in an area of Radiata Pine plantation at present in the process of being clear felled. Despite the forestry work, we had little trouble in locating the workings consisting of several partly filled shafts and an adit. There is now absolutely no surface outcrop of the vein or host rocks and surprisingly little quartz vein float or rubble.

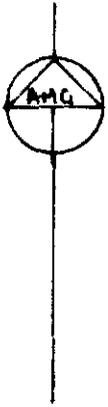
Blake's plan shows a vein (traced for about 80 metres of undefined width) striking about  $345^{\circ}$  and dipping fairly shallowly ( $45^{\circ}$ ?) to the west.

Our exploration of the adit (evidently lengthened since Blake's survey) showed the host rocks to consist of well bedded siltstone and lesser sandstone striking about  $350^{\circ}$  and dipping  $50-60^{\circ}$  to the west. This would suggest that the vein was nearly bedding parallel.

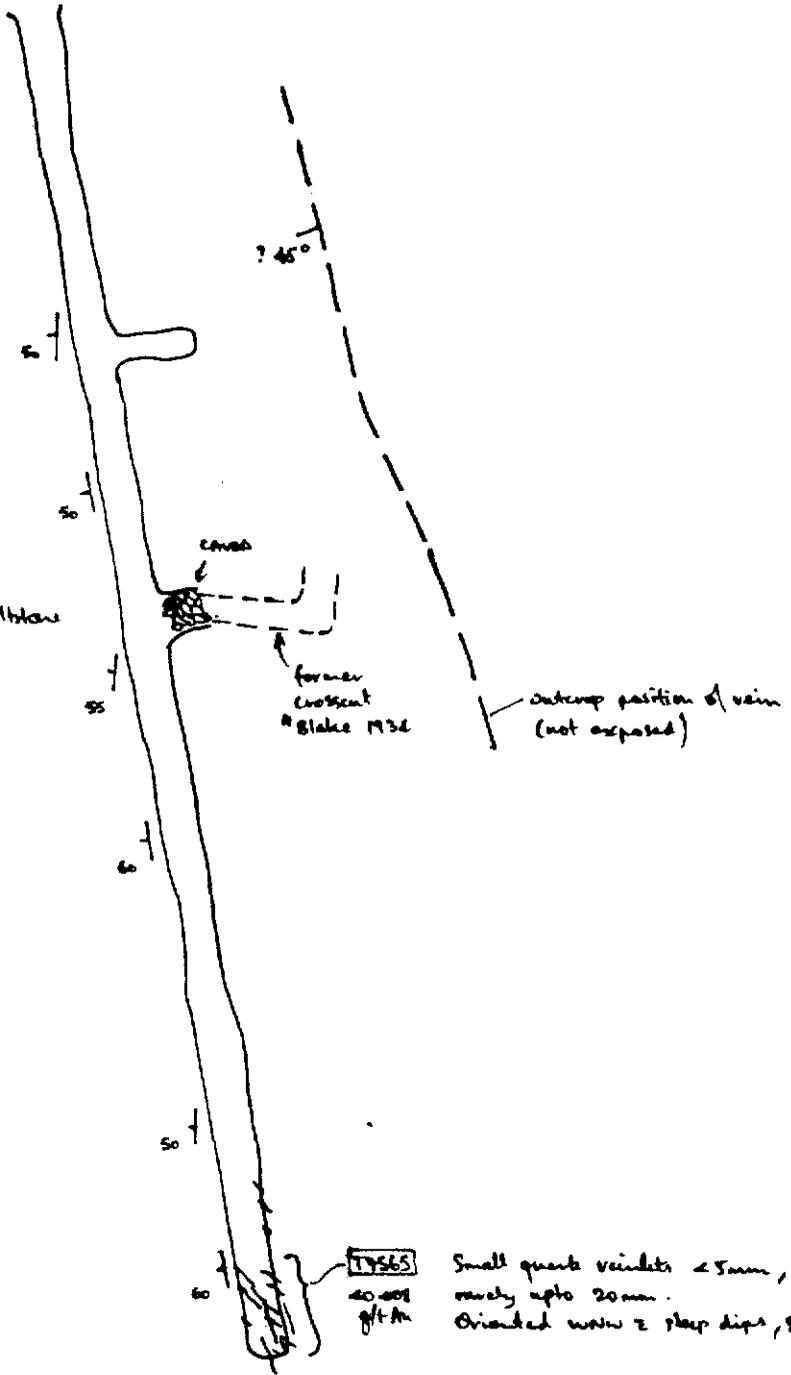
Blake's plan seems to show the trace of a vein along the east wall of the adit from near the portal to just beyond the eastern cross cut but I regret that this was not apparent to me.

The only evidence of mineralization was a zone of weak quartz stringers ( $< 5\text{mm}$ ,  $< 5/\text{m}$ ) towards the inner end of the adit but a 2.7m channel sample representing this zone (T7565) returned an assay of  $< 0.008\text{g/tAu}$ .

The nature of the main vein remains partly obscure but seems likely to have been more or less parallel to the plan of bedding in the enclosing sediments.



Country rock:  
 well bedded pink-grey  
 (oxidized) "sandstone" - siltstone  
 and minor sandstone.



5 cm

GOLD FIELDS EXPLORATION PTY. LIMITED	
E.L. 17/86	DRAWN BY : <i>W.A.</i>
FORESTER GOLDFIELD	DRAFTSMAN :
MALABAR ADIT	DATE : 4/87
PLAN	REVISIONS :
	FILE NO
SCALE 1:250	
	FIG. 3

## 5. WARRENTINA GOLDFIELD

The Warrentina Goldfield is here taken to include about a dozen old mines and prospects lying within a narrow north trending zone from the Dawn of Peace a few kilometres NW of Braxholm to Mt Horror.

This field is also very poorly documented and the only known technical reports are those of Blake, 1934 (Golden Mara), McIntosh-Reid, 1925 (Mt Horror Arsenopyrite Prospect) and Nye, 1926 (Dawn of Peace Mine).

However Blake's excellent plans and sections (664 A/32 to 664 G/32, 664 K/32, 664 M,N/32 and 664 P/32) show the locations and some details of most of the known prospects.

Production figures for most of the smaller mines are unknown but it seems that the Golden Mara area was by far the greatest producer with (recorded) 3367oz 15dwt 13grs (104.75kg) in the period 1892-1921. (Blake, 1934).

### 5.1 Description Of Old Workings

#### 5.1.1 Dawn of Peace (Figure 4)

This prospect is located on "Eungella", the property of Mr Bruce Davey. Blake's 1934 plan 664K/32 shows the layout of the workings and Nye (1926) describes the geology. Figure 4 (this report) shows the plan of the southern adit which is safely accessible only as far as the drive/stope on lode.

Most of the surface shafts and trenches have been partly filled and did not yield any useful observations.

In the southern adit (Fig 4), the host rocks are interbedded sandstone, siltstone and slate trending about 025° dipping steeply to east and west indicating a tight anticlinal hinge about 2m east of the lode position. The only "lode" visible at the end of the adit is a 1cm vein of milky quartz within a narrow sheared/puggy zone parallel to the bedding. Nye (1926) records that north of the main shaft to adit level the "reef was represented by a few inches of quartz in a band of black slates" but in the shaft

012



Narrow sheared peggy zone  
parallel to bedding  
1 cm. vein milky quartz  
on hanging wall side.

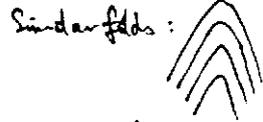
Partly collapsed.

Back filled & mullock

STOPE below level  
partly collapsed,  
rubble filled.

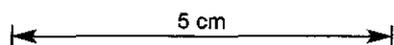
Approx. Position of  
main Shaft.  
(after Blake 1934  
Plan No: 664 K/32)

Tight anticlinal hinge,  
horizontal axis.



No cleavage!

Rock type: uniformly interbedded a.g. sst,  
olive brown (and.) to dark grey  
siltstones and slate.  
Ssts: 100-200 mm thick  
Sst/slst + slate = 2:1  
Slates fossils parallel to bedding.  
No other cleavage developed.



GOLD FIELDS EXPLORATION PTY. LIMITED	
E.L. 17/86	
WARRENTINA GOLDFIELD	
DAWN OF PEACE ADIT	
PLAN	
SCALE 1:250	0 2.5 5 7.5 10 Metres
DRAWN BY: [Signature]	FILE NO.
DRAFTSMAN:	
DATE 4/87	
REVISIONS:	
	FIG. 4

019

and to the south it represents a fissure vein parallel to the strike of the bedding but with a dip of  $85^{\circ}$  to the east, ie: cutting across the steep westerly dip of the bedding at a low angle. Nye quoted production of six tons of quartz from the southern shaft and adit for a return of one ounce per ton ( $\sim 183.6g$ ).

It appears to represent a narrow fissure vein perhaps a fault, petering out northwards where it becomes parallel to bedding. Nye recommended further exploration to the south and in depth below the position of the shaft. According to Mr. Davey, his grandfather carried out underhand stoping of the lode south of the adit during the late 1920's and reportedly produced sufficient gold to manufacture a ring for each of the three daughters of the family.

My inspection indicated negligible quartz stringer veining in the adit and as the lode itself appears to be narrow, irregular, impersistent, outlying and alone, the prospectivity here seems to be low.

#### 5.1.2. Golden King Reef

This prospect is situated on the property of Mr. Ken Brown, "Benego" about 2km north of Branxholm.

Blake's 1934 Plan 664 E/32 shows a NE trending reef about 20m in length with four shafts to maximum depth about 27m over a strike interval of 75m. The shafts have been filled by the farmer and there is no useful surface exposure.

According to Mr. Brown, there is an adit driven south westward from Whiskey Creek between Warrentina Road and the railway.

However, the landholder on that side, Mr. I. Edwards of Branxholm, knows nothing of an adit and doubts its' existence, as do I.

## 6.1 Description Of Old Workings

### 6.1.1 Tiger Reef

This prospect is/was located on the property of Mr Jacobs. The area is now under pasture but our careful search revealed the portal of the adit all but blocked by earth and old tree stumps with only a rabbit hole sized entrance remaining (which we did not attempt). The stopes (shown by Blake and Nye 1934, Plan I) are likewise filled but there is a small remnant of a mullock dump at the position of the middle stope. A high graded grab sample of milky-smoky vein quartz with minor arsenopyrite (T7653) from this mullock assayed 1.39g/tAu.

Blake (1933) describes the workings in detail indicating that the reef had a NE strike and steep SE dip, was traceable over about 100m length and ranged in thickness from 50-500mm. Hills (1923) reported an output of 100 tons yielding 1oz/ton.

### 6.1.2 Prendergast Mine (Figure 9) *also known as New R.*

The Prendergast Mine area is now thickly overgrown with blackberries rendering examination of the surface workings very difficult. We located both adits; the lower one is blocked but we were able to map the upper adit; details shown in Figure 9.

Unfortunately the main lode which trends NE and dips 80° SE has been largely stoped away at the end of the adit and is no longer visible.

The country rocks are interbedded slate-siltstone and fine sandstone dipping steeply west.

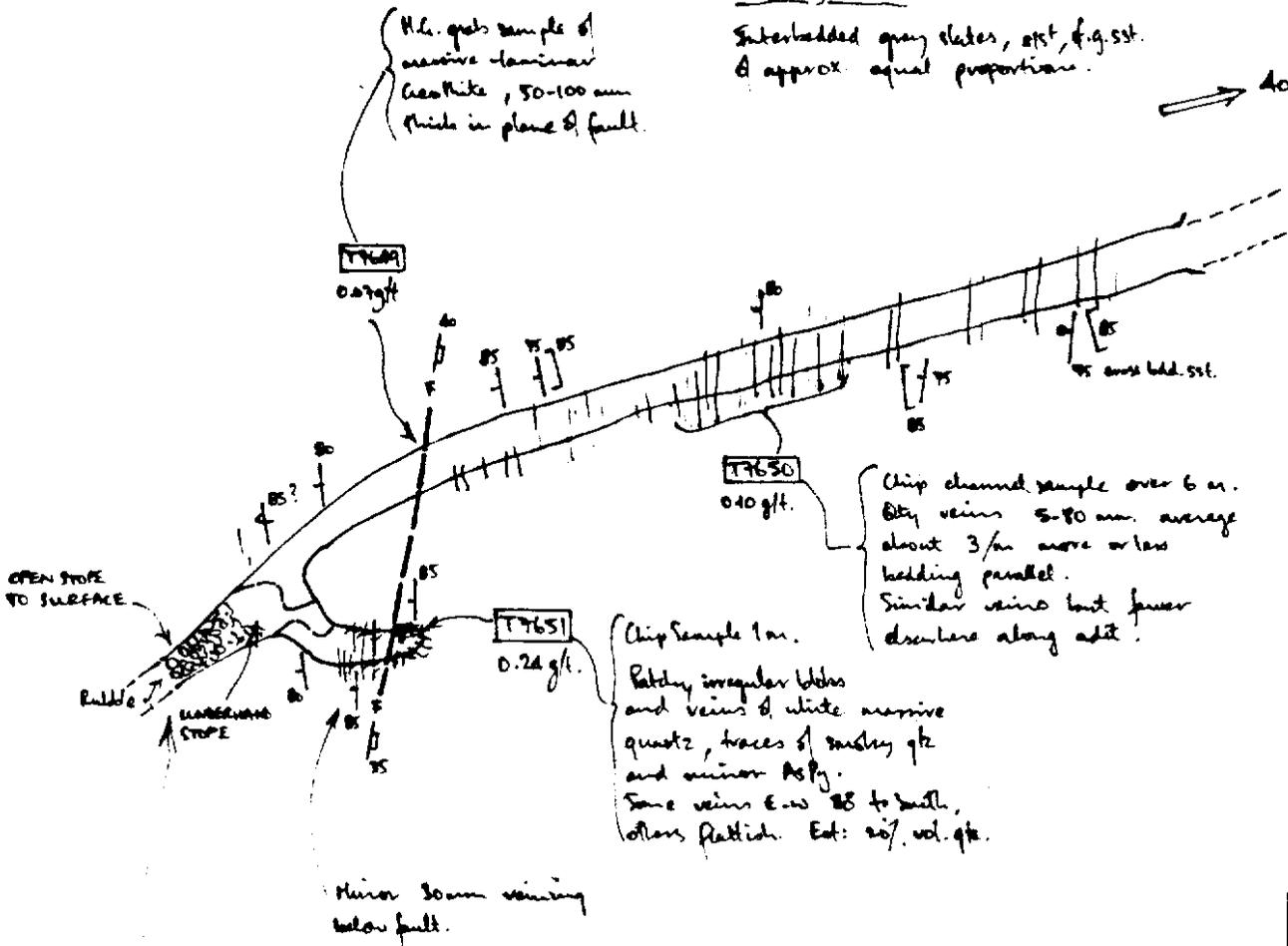
Occasional bedding parallel minor quartz veins occur along the adit. A 6m channel sample (T7650) over the most intense zone yielded 0.1g/tAu.

015

COUNTRY ROCKS:

Interbedded gray slates, qtz, & g.sst. of approx equal proportion.

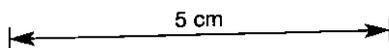
40m. lower Adit (Collapsed)



NOTES: Main hole not visible in Stope.  
Blake's 1934 Plan Shows Stopes trending ENE to NE with 80° dip to SE.

T7652 : 43.33 (44.00) g/t Au  
H.G. grab sample of smoky quartz with visible fine gold and minor AsPy. From millchill heap about 30m. NE of this adit portal (but above level of lower adit.)

General area thickly overgrown with blackberries, surface workings not examined.



GOLD FIELDS EXPLORATION PTY. LIMITED	
E.L. 17/86.	
NEW RIVER GOLDFIELD PRENDERGAST UPPER ADIT PLAN	
SCALE 1:250	DRAWN BY: <i>[Signature]</i> DRAFTSMAN: DATE: 4/87 REVISIONS: FILE NO. FIG 9

A grab sample (T7649) of massive-laminar "geothite" 50-100mm thick, occupying a shallow east dipping fault plane assayed only 0.07g/tAu but 1.3%As suggesting that arsenic is fairly mobile in the weathering zone and may be a useful pathfinder element (providing secondary dispersion haloes) for geochemical exploration.

Hills (1923) reported that the main lode had an average width of "about 3 feet" and "the average yield on the ore produced was between 20-25 dwts/ton" (30.6-38.3g/t) with a total yield of approximately £18,000.

Blake (1933) mentions two Mines Department Boreholes (No's 3 and 4) which intersected the lode at about 55m depth but indicated only a "trace" of gold.

#### 6.1.3. Central Ringarooma Reef

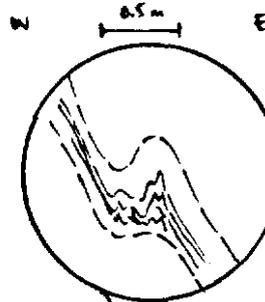
This reef was not described by Blake (1933) but Blake and Nye (1934) Plan No 1, show a NE trending reef dipping at  $75^{\circ}$  to NW, developed by two adits and a shaft with some open stopes.

Hills (1923) throws us into confusion by describing a "Central Lode" (under the "Donovan's-Lode Group" which includes the nearby Prendergast, Crest and Pennefather's lodes) which he reports to strike at  $313^{\circ}$ (M) and dip SW at  $70^{\circ}$  and developed by two adits.

However, we managed to locate some workings as depicted by Blake and Nye (1934). The upper adit is inaccessible due to an underhand stope at least 10m deep in the floor of the approach to the portal. The trend of the reef here appears to have been about  $50^{\circ}$ (AMG) dipping  $70^{\circ}$ NW with a (stoped) width of 0.3-0.6m.

Our plan of the lower adit is presented in Figure 10. Unfortunately the adit is caved at 57m, presumably just before the position of the reef.

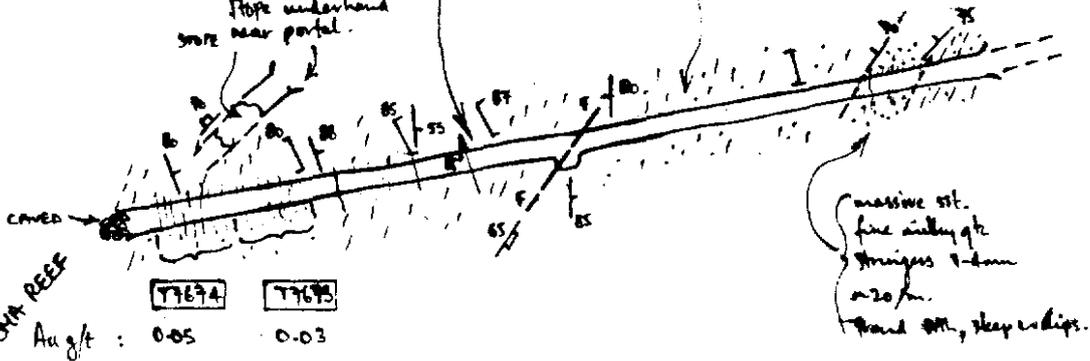
017



Tight compressed folds,  
Plunge approx 15° → 34°

Interbedded sst, stst, dk gray slate,  
slate increasing westward.

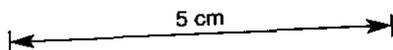
Upper Adit  
Inaccessible  
because of  
flops underhand  
near portal.



CENTRAL RINGAROOMA REEF

Aug't : 0.05      0.03

Chip samples along both walls  
5 m. each.  
Discontinuous paddy milky quartz  
veins 5-15 mm, average 10/m.  
Dominantly N trend & steep  
dips to W but also some to E.  
(ie: sub // to dty.)  
No sulphides.  
Similar veining of lower intensity  
elsewhere along adit walls.



GOLD FIELDS EXPLORATION PTY. LIMITED	
E.L. 17/86	
NEW RIVER GOLDFIELD.	
CENTRAL RINGAROOMA REEF	
LOWER ADIT PLAN	
DRAWN BY : L.J.	DRAFTSMAN :
DATE : 4/87	REVISIONS :
FILE NO	FIG 10

SCALE 1:500



The country rocks are interbedded sandstone-siltstone-slate with steep dips W - NNW and ENE implying a tight synclinal hinge, which however is not evident, about half way along the adit. Tight, crumpled folds just west of this position are asymmetric with short west dipping limbs and shallow NNW plunge. The steeply dipping cleavage is approximately parallel to this direction.

Minor quartz stringer veining dominantly of steep westerly and easterly dip occurs along the adit. The best development near the inner end of the adit was chip sampled over two consecutive 5m intervals (T7673, 7674) but yielded disappointing results of 0.03 and 0.05g/tAu.

#### 6.1.4. Mullunah Reef (Figure 11)

Figure 11 illustrates the geological details at the Mullunah Adit.

The lode exposed near the bend in the adit is about 0.8m wide consisting of brecciated country rocks with subparallel (to footwall) quartz veins to 50mm and irregular patches of quartz infilling breccia matrix. The full width of the lode may not be exposed, about 20% of the brecciated zone is of quartz but this diminishes rapidly southward along the lode. It is evidently a fault fissure inconsistently mineralized.

Samples T7675 from the bend and T7676 from about 9m further south tell the story with 1.4 and 0.02g/tAu respectively.

The quartz reef evidently makes again further south as Twelvetrees (1904) reports two shafts (presumably at about the "fallen stopes" depicted by Blake & Nye, 1934) one of which produced 15 or 20 tons at 1½oz/ton.



GOLD FIELDS EXPLORATION PTY. LTD.

SAMPLE RECORD AND ANALYTICAL DATA SHEET

COLLECTED BY: W. HEERMANN  
R. WALKER

PROJECT EL 17/86

PROSPECT:

SAMPLE STORAGE REQ'D:

LABORATORY: ANACAPS.

DATE DISPATCHED:

1 250.000 SHEET LAUNCESTON

TYPE OF SAMPLE: Rock Chip

SAMPLE PREP. REQ'D:

ANALYSIS REQ'D: 95.1.08.04383

DATE RECEIVED:

A19962

020

856021

SAMPLE NUMBER	LOCATION		DESCRIPTION	ANALYSES							
				Cu	Pb	Zn	Ag	Bi	As	PPM Au	AuClk
T7649	NEW RIVER	PRENDERGAST UPPER ADIT.	H.G. grab sample of massive quartzite on Fault Plane. 50-100 mm. thick.	45	<5	750	<0.5	<10	13000	0.07	
T7650	"	"	chip channel sample over 6 m. (12-18 m. Portal) Qty. veins 5-80 mm, 3/m, // to bedding.	30	"	60	"	"	1000	0.10	
T7651	"	"	chip sample over 1m. Patchy irregular pods and veins massive white quartz, minor smoky quartz with AsPy. Above fault plane in caddy south of Stopes.	15	"	70	"	"	1800	0.24	
T7652	"	PRENDERGAST	H.G. samples from mullock dump 30 m. NE of upper Adit Portal (from upper Adit?) Smoky quartz with AsPy and visible gold.	10	145	70	3.0	"	2000	43.33	44.00
T7653	"	TIGER REEF	H.G. Sample lumps of milky quartz with laminar zones of smoky quartz with dissem. AsPy. AsPy 1-2% overall. From mullock at Tiger Reef Central Stope (filled)	10	<5	10	<0.5	"	3100	1.39	

**GOLD FIELDS EXPLORATION PTY. LTD.**

**SAMPLE RECORD AND ANALYTICAL DATA SHEET**

COLLECTED BY: **W. HERMANN  
P. LAWLER**

PROJECT **EL 1786**

PROSPECT:

SAMPLE STORAGE REQ'D:

LABORATORY: **ANALABS**

DATE DISPATCHED:

1 250.000 SHEET **LANNESTON** TYPE OF SAMPLE: **ROCK CHIP**

SAMPLE PREP. REQ'D:

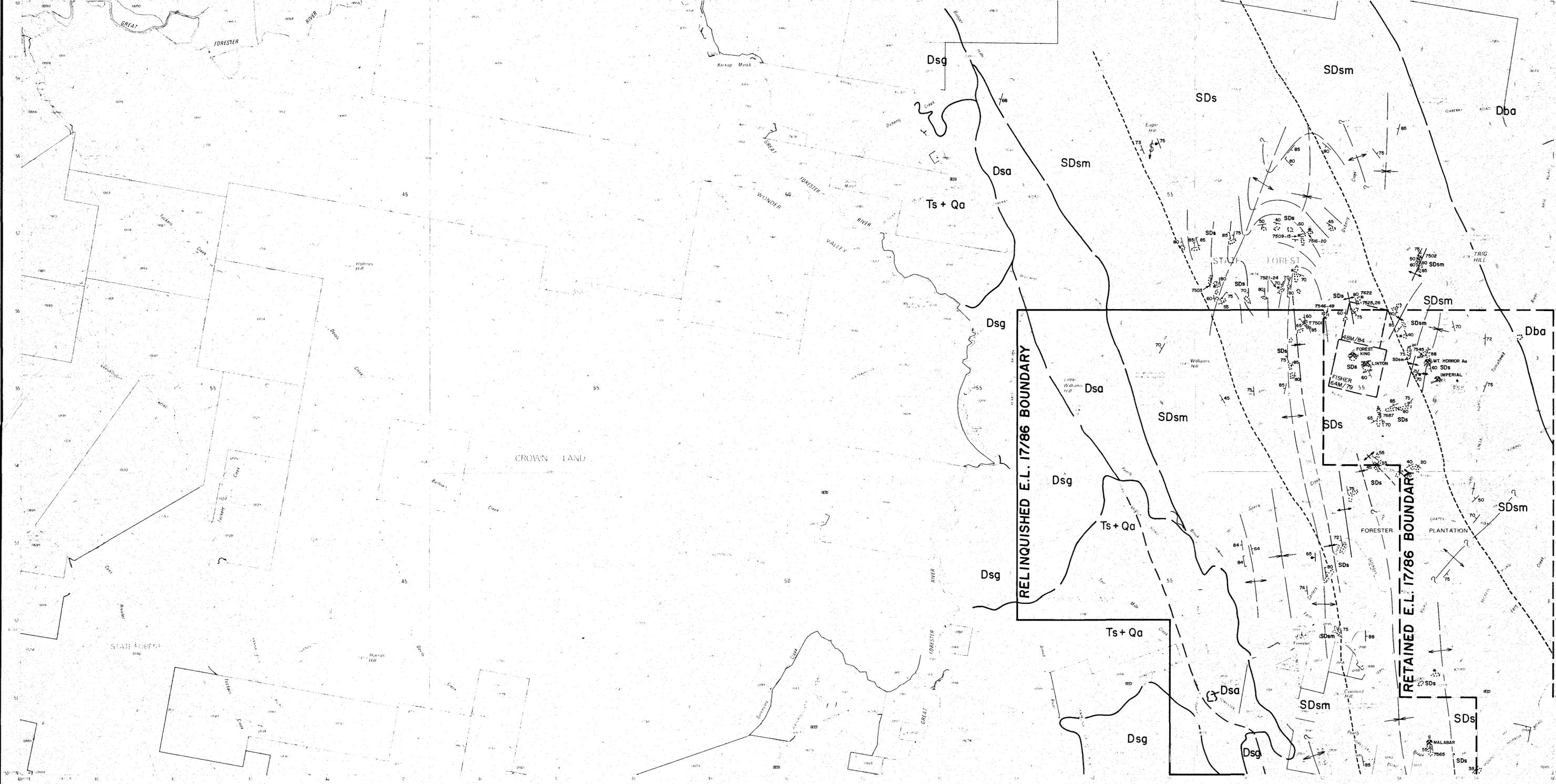
ANALYSIS REQ'D: **95.1.08.04383** DATE RECEIVED:

A19962

SAMPLE NUMBER	LOCATION	DESCRIPTION	ANALYSES PPM									
			Cu	Pb	Zn	Ag	Bi	As	Au	AuChk	Mo	
T7673	ALDERSON	CENTRAL RANG. AROOMA. LOWER PLOT	Chip channel sample over 5m.	<5	10	55	"	<10	170	0.03		
T7674	"	"	Poddy milky qtz veins 5-15 mm, 10/m. Chip channel sample over 5m. adj 9673 Lithologies as above.	30	25	45	"	"	350	0.05		

APPENDIX 3  
EXPENDITURE ON RELINQUISHED AREA

	\$
PERSONNEL COSTS	1,500
TRAVEL AND ACCOMMODATION	200
CONSULTANTS AND CONTRACTORS	3,000
ASSAYING CHARGES	500
STORES AND SUPPLIES	100
VEHICLE COSTS	200
TENEMENT COSTS	500
OFFICE COSTS	100
	<hr/>
TOTAL	\$6,100
	<hr/>



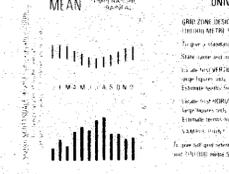
PRODUCTION Mapping Division, Lands Department, Hobart, 1987.  
ACCURACY Horizontal SDs at each defined detail within 17.5 metres of true position. Vertical SDs at each defined detail within 5 metres. These accuracies may not be achieved in areas of dense vegetation.  
RELIABILITY Topographic detail compiled from aerial photography flown 1981 with field verification February 1982.  
NIMENCLATURE Topographic names have been approved by the Nomenclature Board of Tasmania.  
PUBLIC RIGHT OF WAY Roads or tracks on this map do not necessarily indicate a public right of way.  
To assist in correcting future editions of this map, users, mining areas and adjacent are invited to write to the Director of Mapping, GPO Box 444, Hobart, Tasmania, 7001.

PROJECTION Universal Transverse Mercator (UTM).  
HORIZONTAL DATUM Australian Geodetic Datum 1986.  
VERTICAL DATUM Australian Height Datum (AHD) 1986, excepting offshore charts, whose datum is mean sea level.  
GRID 1:500 metres intervals of the Universal Transverse Mercator Grid Zone 55 (Australian Map Grid). Australian National Spheroid. Grid values are shown on 100 m of the north-west corner of the map.  
CONTOUR INTERVALS 10 metres with 50 metre water contours.  
WORLD GEODETIC SYSTEM 1972 To convert coordinates from this system to Australian Geodetic Datum 1986, increase the value of longitude by 1.17 and decrease the value of latitude by 1.17. To obtain heights decrease satellite heights by 1.17.  
MAGNETIC VARIATION True Grid and Magnetic North are shown diagrammatically on the centre of this map. Magnetic North is correct for 1987 and moves easterly about 0.11° every two years.

Build up area with commercial centre.  
Roads maintained for continuous public use.  
Main arterial Road number.  
Other roads, bridge.  
Rural roads, bridge.  
Walking track, bridge.  
Railway station.  
Power transmission line and poles, pylons.  
Building, factory of special interest, Res. Mine.  
Post office, Police station, Fire station, School.

SCALE 1:25,000  
Contour path, temporary ground.  
Rubbish, original and, cartons.  
Topography station, spirit elevation.  
Crestline with water, depression contour.  
Mud or silt, or mire.  
Broken rock surface.  
Dense forest, Medium forest.  
Cool grass vegetation, Brimble grass.  
Dune, dune, dune.  
Wetland.  
Swamp, Land subject of flooding.  
Waterfall, Rapid.  
Indicative channels or floodbank, Ledge.  
Flood marks or ledge, Dike, rock mark.  
Lighthouse, Exposed wreck.  
Sand, Tide, reef.  
Suber coastal flat, Tidal flat.  
Jetty, Landing ramp.

BOUNDARIES shown on this map are NOT authoritative. For full particulars please consult the Registrar General's Department in the Lands Department.  
Properties with land parcel boundaries are shown as at 22/9/1987.  
Areas within parcel boundaries, or on, or along the lines, are not depicted. To quote a land parcel reference prefix parcel number with municipal number.  
Municipality name.  
Municipality number.  
Municipality boundary.  
Ward name.  
Ward boundary.  
Town boundary.  
Reservoir boundary.  
Property boundary, Land parcel boundary and number.



UNIVERSAL GRID REFERENCE  
GRID ZONE DESIGNATION  
UTM Zone 55E  
Easting  
Northing  
INDEX TO ADJOINING MAPS  
East Sandy Point  
BRIARPORT 5246  
BOWWOOD 5245  
NAROWAY 5244  
OXBERRY 5448  
PEARLY BROOK 5445  
SCOTTSDALE 5444  
MONARCH 5648  
PIONEER 5645  
JERRY 5644  
BRANDISH

**GEOLOGICAL LEGEND**

QUATERNARY	Qa	River alluvium
PERMIAN	P	Sandstone and conglomerate
TERTIARY	Ts	Sub-basaltic gravels, sands, muds
	Tb	Basalt
LATE DEVONIAN TO EARLY CARBONIFEROUS	Dsa	Granite - adamellite
	Dsg	Biotite - hornblende - Granodiorite
	Ds*	Scottsdale Batholith
	Db*	Blue Tier Batholith

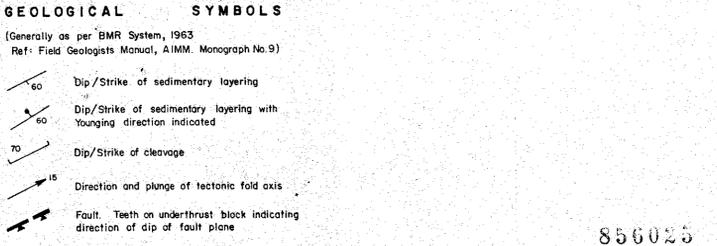
**GEOLOGICAL SYMBOLS**  
(Generally as per BMR System, 1963  
Ref: Field Geologists Manual, A.I.M.M. Monograph No.9)

60	Dip/Strike of sedimentary layering
60	Dip/Strike of sedimentary layering with Younging direction indicated
70	Dip/Strike of cleavage
15	Direction and plunge of tectonic fold axis
↗	Fault. Teeth on underthrust block indicating direction of dip of fault plane

**ORDOVICIAN TO DEVONIAN ?**

SDsm	Contact Metamorphosed Mathinna Beds
SDs	Mathinna Beds: Turbiditic sequence of quartzwacke, siltstone, mudstone, shale

**NOTE:**  
Original coloured paper copies of 1:25,000 and 1:10,000 Outcrop Geology Plans show sedimentary lithotypes of Mathinna Beds by colour code



**GOLD FIELDS EXPLORATION PTY. LIMITED**  
E.L. 17/86  
87-2733  
PEARLY BROOK SHEET

**INTERPRETIVE GEOLOGY AND OLD MINE WORKINGS**

SCALE 1:25,000

856025

DRAWN BY: WH  
DRAFTSMAN: T.G.D.S.  
DATE: Sep '87  
REVISIONS:  
CHECKED:  
FILE NO.  
FIG. 2



**PRODUCTION:** Mapping Division, Lands Department, Hobart, 1982.  
**ACCURACY:** Horizontal 50% of well defined detail is within 12.5 metres of true position. Vertical 90% of elevations are within 5 metres. These accuracies may not be achieved in areas of dense vegetation.  
**RELIABILITY:** Topographic detail compiled from aerial photography ( flown 1981) with field verification 1982.  
**NOMENCLATURE:** Topographic names have been approved by the Nomenclature Board of Tasmania.  
**PUBLIC RIGHT OF WAY:** Roads or tracks on this map do not necessarily indicate a public right of way.  
 To assist in correcting future editions of this map users noting errors and omissions are invited to write to the Director of Mapping, GPO Box 44A, Hobart, Tasmania, 7001.  
 TASMANIAN GOVERNMENT 1982

**PROJECTION:** Universal Transverse Mercator (UTM)  
**HORIZONTAL DATUM:** Australian Geodetic Datum 1986  
**VERTICAL DATUM:** Australian Height Datum (Tasmania) excepting offshore islands whose datum is mean sea level  
**GRID:** 1000 metre intervals of the Universal Transverse Mercator Grid Zone 55 (Australian Map Grid) Australian National Standard Grid values are shown in full at the south-west corner of the map  
**CONTOUR INTERVAL:** 10 metres with 50 metre index contours  
**WORLD GEODETIC SYSTEM 1972:** To convert to ordinates from this system to Australian Geodetic Datum 1986, increase the value of ordinates by 1.1 and decrease the value of longitudes by 1.7. To obtain heights decrease satellite heights by 7.0 metres.  
**MAGNETIC VARIATION:** True Grid and Magnetic North are shown approximately for the centre of this map. Magnetic North is correct for 1982 and moves easterly about 0.1° every two years.

Built up area with commercial centre  
 Roads maintained for continuous public use  
 Roads of restricted use or access  
 Walking track Bridge  
 Railway Station  
 Light railway  
 Power transmission line and pylon supports  
 Building Feature of special interest: Run Mine  
 Post office Police station Fire station School

1000 750 500 250 0  
 Caravan park, Camping ground  
 Rubbish disposal area, Cemetery  
 Trigonometric station Spot elevation  
 Contour with value Depression contour  
 Quarry or open cut mine  
 Broken rocky surface  
 Dense forest Medium forest  
 Low dense vegetation Distinctive grass  
 Orchard Pine plantation

SCALE 1:25 000  
 1 centimetre represents 25 metres  
 Windbreak  
 Swamp Land subject to flooding  
 Waterfall Rapids  
 Indefinite shoreline or foreshore level  
 Quarry or open cut mine  
 Lighthouse Exposed wreck  
 Sand Tidal jet  
 Saline coastal flat Tidal flats  
 Jetty launching ramp

BOUNDARIES shown on this map are NOT authoritative. For full particulars please consult the Registrar General's Department or the Lands Department. Property and land parcel boundaries are shown as at March 1982. Areas within unenclosed towns or lots whose true boundaries are not depicted. To give a land parcel reference prefix parcel number with municipal number.  
 Municipality name  
 Municipality number  
 Municipal boundary  
 Ward name  
 Ward boundary  
 Town boundary  
 Reserve boundary  
 Property boundary. Land parcel boundary and number

**MEAN TEMPERATURE**  
 15 10 5 0 -5 -10 -15 -20 -25 -30 -35 -40 -45 -50  
 J F M A M J J A S O N D  
**UNIVERSAL GRID REFERENCE**  
 GRID ZONE DESIGNATION  
 HIGH 900 METRE SQUARE IDENTIFICATION  
 To give a standard reference to the nearest 100 metres  
 1. Give the square name and number of this map  
 2. Locate the vertical grid line on the left of point and read large figure only in either the top or bottom margin e.g. 61  
 3. Locate the horizontal grid line on the left of point e.g. 61  
 4. Locate the horizontal grid line on the right of point e.g. 61  
 5. Locate the vertical grid line on the right of point e.g. 61  
 6. To give full grid reference prefix with Grid Zone Designation and 100 000 metre square identification letters e.g. 55SG0815534

**INDEX TO ADJOINING MAPS**  
 OXBERRY 5448  
 MONARCH 5646  
 GLADSTONE 5846  
 PEARLY BROOK 6445  
 PIONEER 8545  
 LANKA 5845  
 SCOTTSDALE 5444  
 BRANTHAM 5644  
 SPURRS RIVULET 5844

QUATERNARY		PERMIAN		LATE DEVONIAN TO EARLY CARBONIFEROUS	
Qa	River alluvium	P	Sandstone and conglomerate	Db	Scottsdale Batholith
Ts	Sub-basaltic gravels, sands, muds			Db*	Blue Tier Batholith
Tb	Basalt				
		Jd1	Dolerite		

ORDOVICIAN TO DEVONIAN ?	
SDsm	Contact Metamorphosed Mathinna Beds
SDs	Mathinna Beds: Turbiditic sequence of quartzwacke, siltstone, mudstone, shale

**NOTE:** Original coloured paper copies of 1:25,000 and 1:10,000 Orthoep Geology Plans show sedimentary lithotypes of Mathinna Beds by colour code

GEOLOGICAL SYMBOLS	
(Generally as per BMR System, 1963 Ref: Field Geologists Manual, A.I.M.M. Monograph No.9)	
60	Dip/Strike of sedimentary layering
60	Dip/Strike of sedimentary layering with Younging direction indicated
70	Dip/Strike of cleavage
15	Direction and plunge of tectonic fold axis
↗	Fault. Teeth on underthrust block indicating direction of dip of fault plane

**GOLD FIELDS EXPLORATION PTY. LIMITED**  
**E.L. 17/86**  
**PIONEER SHEET**  
**87-2733**  
**INTERPRETIVE GEOLOGY**  
**AND OLD MINE WORKINGS**

856026

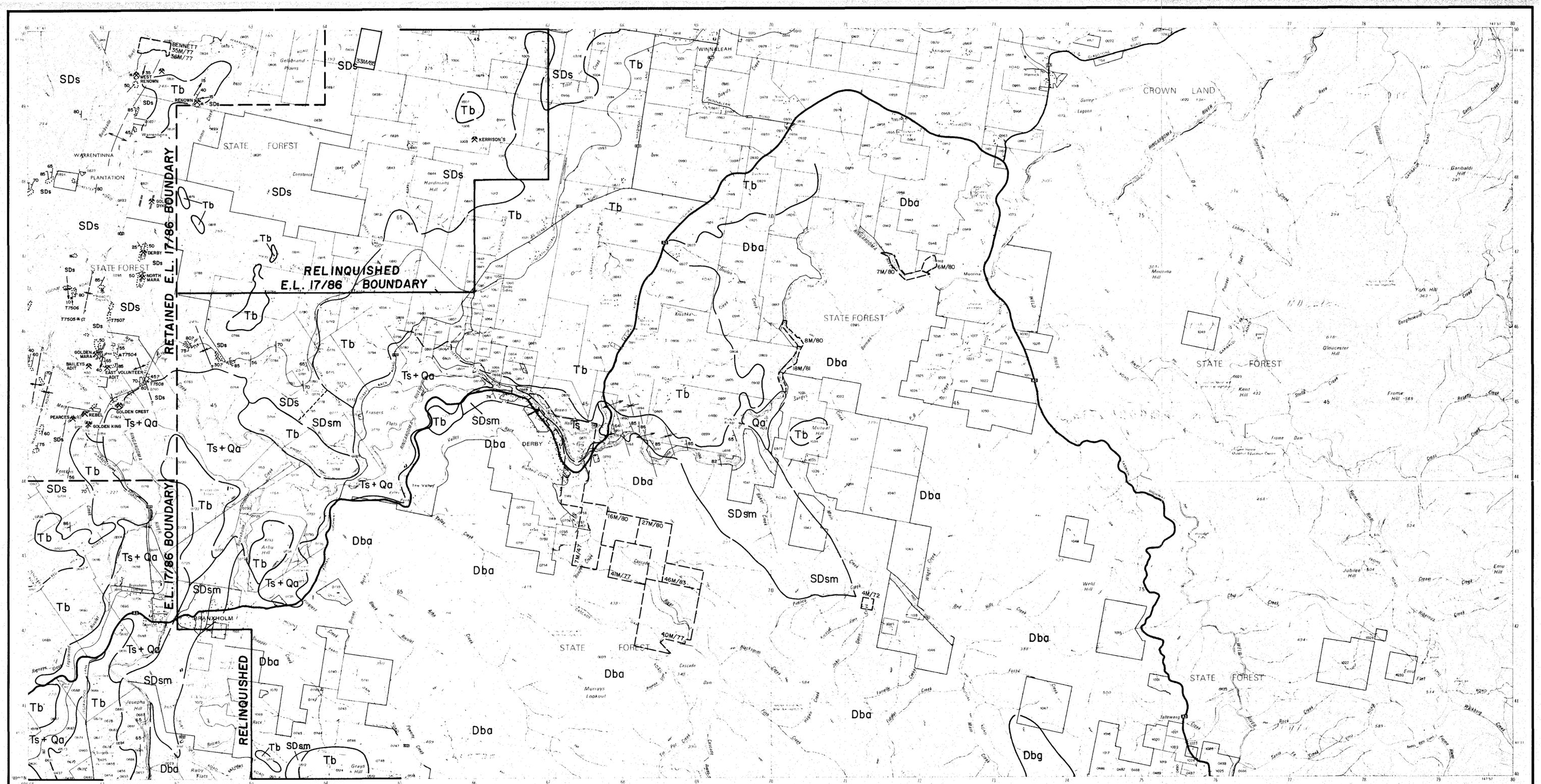
5 cm

SCALE 1:25,000

0 500 1000 1500 METRES

DRAWN BY: W.H.  
 DRAFTSMAN: T.G.D.S.  
 DATE: Sep. '87  
 REVISIONS:  
 CHECKED:  
 FILE NO.  
 FIG 3





**PRODUCTION** Mapping Division, Lands Department, Hobart, 1982  
**ACCURACY** Horizontal 80% of well defined details within 1:25 metres of true position. Vertical 90% of elevations are within 5 metres. These figures may not be achieved in areas of dense vegetation.  
**RELIABILITY** Topographic detail compiled from aerial photographs, flown 1981 with field verification 1982.  
**NOMENCLATURE** Topographic names have been approved by the Nomenclature Board of Tasmania.  
**PUBLIC RIGHT OF WAY** Roads or tracks on this map do not necessarily indicate a public right of way.  
 To assist in correcting future editions of this map, users noting errors and omissions are invited to write to the Director of Mapping, GPO Box 444, Hobart, Tasmania 7001.

**PROJECTION** Universal Transverse Mercator (UTM)  
**HORIZONTAL DATUM** Australian Geodesic Datum 1956  
**VERTICAL DATUM** Australian Height Datum (Tasmania) excepting offshore islands where datum is sea level.  
**GRID** 1000 metre intervals of the Universal Transverse Mercator Grid Zone 55 (Australian Map Grid). Australian National Standard Grid values are shown at half at the south west corner of the map. CONTOUR INTERVAL 10 metres with 50 metre index contours.  
**WORLD GEODETIC SYSTEM 1972** To convert co-ordinates from this system to Australian Geodesic Datum 1956, increase the value of longitude by 5.3 and decrease the value of latitude by 1.7. To obtain height decrease latitude height by 1.7 metres.  
**MAGNETIC VARIATION** True Grid and Magnetic North are shown diagrammatically for the centre of this map. Magnetic North is correct for 1982 and moves westerly about 0.1° every two years.

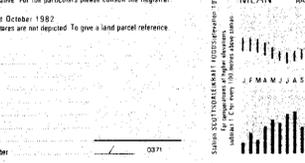
Build up area with commercial centre  
 Roads maintained for continuous public use  
 Roads of restricted use or access  
 Walking track, Bridge  
 Railway Station  
 Light railway  
 Power transmission line and pylon positions  
 Post office  
 Police station  
 Fire station  
 School

Primary road Route number  
 Secondary road Route number  
 Major road Route number  
 Other roads, Bridge  
 Vehicular track Gate  
 Caravan park, Camping ground  
 Rubbish disposal area, Cemetery  
 Trigonometric station, Spot elevation  
 Centre with value, Depression contour  
 Quarry or open cut mine  
 Broken rocky surface  
 Dense forest, Medium forest  
 Low dense vegetation, Distinctive grass  
 Orchard, Pine plantation

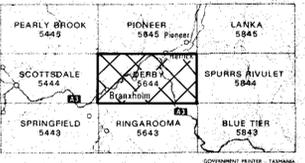
1000 500 0 500 1000  
 SCALE 1:25,000  
 1 centimetre represents 25 metres

**BOUNDARIES** shown on this map are NOT authoritative. For full particulars please consult the Registrar General's Department or the Lands Department.  
 Property and land parcel boundaries are shown as at October 1982.  
 Areas within proclaimed towns or cities that are not depicted. To give a land parcel reference, prefix parcel number with municipal number.

Municipality name  
 Municipal number  
 Municipality boundary  
 Ward name  
 Ward boundary  
 Town boundary  
 Reserve boundary  
 Property boundary, Land parcel boundary and number



**UNIVERSAL GRID REFERENCE**  
 GRID ZONE DESIGNATION  
 100 000 METRE SQUARE IDENTIFICATION  
 To give a standard reference in the nearest 100 metres:  
 1. State name and number of this map.  
 2. Underline the VERTICAL grid line to the left of point and read large figures only in either the top or bottom margin e.g. 70  
 3. Estimate tenths from grid line to point e.g. 4.4  
 4. Locate the HORIZONTAL grid line below the point and read large figures only in either the left or right margin e.g. 4.4  
 Example results from grid line to point e.g. 70444.4  
 "STATE" PREFIX: AUSTRALIA 1982  
 To give full grid reference prefix with Grid Zone Designation and 100 000 metre Square Identification number e.g. 55SG10444.4



**GEOLOGICAL LEGEND**

QUATERNARY	Qa	River alluvium
TERTIARY	Ts	Sub-basaltic gravels, sands, muds
	Tb	Basalt
LATE DEVONIAN TO EARLY CARBONIFEROUS	Dsg	Biotite - hornblende Granodiorite
	Dsg Dba	Granite - adamellite
	Dsg Dba	De: Scottsdale Batholith
	Dsg Dba	Db: Blue Tier Batholith
JURASSIC	Jdl	Dolerite
PERMIAN	P	Sandstone and conglomerate
ORDOVICIAN TO DEVONIAN ?	SDsm	Contact Metamorphosed Mathinna Beds
	SDs	Mathinna Beds: Turbiditic sequence of quartzwacke, siltstone, mudstone, shale

**NOTE:** Original coloured paper copies of 1:25,000 and 1:10,000 Outcrop Geology Plans show sedimentary lithologies of Mathinna Beds by colour code

**GEOLOGICAL SYMBOLS**  
 (Generally as per BMR System, 1963  
 Ref: Field Geologists Manual, A.I.M.M. Monograph No.9)

60	Dip/Strike of sedimentary layering
60	Dip/Strike of sedimentary layering with Younging direction indicated
70	Dip/Strike of cleavage
15	Direction and plunge of tectonic fold axis
↗↘	Fault. Teeth an underthrust block indicating direction of dip of fault plane

856028

**GOLD FIELDS EXPLORATION PTY. LIMITED**  
 E.L. 17/86  
 DERBY SHEET  
 87-2733  
 INTERPRETIVE GEOLOGY  
 AND OLD MINE WORKINGS

7178

SCALE 1:25,000  
 500 0 500 1000  
 METRES

**DRAWN BY:** W.H.  
**DRAFTSMAN:** T.G.D.S.  
**DATE:** Sep '87  
**REVISIONS:**  
**CHECKED:**  
**FILE NO.:**  
**FIG. 5**





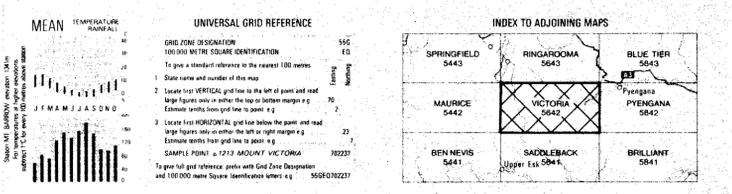
PRODUCTION Mapping Division, Lands Department, Hobart, 1965  
 ACCURACY Horizontal: 90% of well defined detail is within 12.5 metres of true position.  
 Vertical: 90% of elevations are within 5 metres. These accuracies may not be achieved in areas of dense vegetation.  
 RELIABILITY Topography compiled from aerial photography flown 1963 with field verification 1965.  
 NOMENCLATURE Place names have been approved by the Nomenclature Board of Tasmania PUBLIC RIGHT OF WAY Roads on this map do not necessarily indicate a public right of way REVISION A five yearly revision cycle is intended for this series. Users noting errors and omissions are invited to write to the Director of Mapping, GPO Box 444, Hobart, Tasmania, 7001.  
 © TASMANIAN GOVERNMENT 1965

PROJECTION Universal Transverse Mercator (UTM)  
 HORIZONTAL DATUM Australian Geodesic Datum 1966  
 VERTICAL DATUM Australian Height Datum (Tasmania) excluding offshore islands whose datum is mean sea level  
 GRID 1000 metre intervals of the Universal Transverse Mercator Grid, Zone 50, Australian Map Grid, Australian National Standard. Grid values are shown in full at the south west corner of the map  
 CONTOUR INTERVAL 10 metres with 50 metre wider contours  
 WORLD GEODETIC SYSTEM 1972 To convert co-ordinates from this system to Australian Geodesic Datum 1966, increase the value of latitude by 0.7" equivalent to 16 metres, and decrease the value of longitude by 4.7" equivalent to 96 metres. To obtain height decrease satellite height by 2 metres  
 MAGNETIC VARIATION True, Grid and Magnetic North are shown diagrammatically for the centre of the map. Magnetic North is correct to 1965 and moves westerly about 0.1" every two years.

1000 750 500 0  
 METRES

SCALE 1:25,000  
 1 centimetre on the map represents 250 metres on the ground

BOUNDARIES shown on this map are NOT authoritative. For full particulars please consult the Registrar-General's Division, Law Department, or the Survey Division, Lands Department. Areas within proclaimed towns or less than two hectares may not be depicted. Boundaries of Crown Land (including Reserves) extend to low water mark. To give a land parcel reference, quote parcel number with municipal number. To use the number to give title or survey information please consult the Mapping Division, Property and parcel boundaries



**GEOLOGICAL LEGEND**

QUATERNARY	Qa	River alluvium
TERTIARY	Ts	Sub-basaltic gravels, sands, muds
	Tb	Basalt
PERMIAN	P	Sandstone and conglomerate
	Jdl	Dolerite
LATE DEVONIAN TO EARLY CARBONIFEROUS	DbA	Granite - adamellite
	Dbg	Biotite - hornblende Granodiorite

**GEOLOGICAL SYMBOLS**  
 (Generally as per BMR System, 1963  
 Ref: Field Geologists Manual, A.I.M.M. Monograph No. 9)

SDsm	Contact Metamorphosed Mathinna Beds
SDs	Mathinna Beds: Turbiditic sequence of quartzwacke, siltstone, mudstone, shale

**NOTE:**  
 Original coloured paper copies of 1:25,000 and 1:10,000 Outcrop Geology Plans show sedimentary lithotypes of Mathinna Beds by colour code

**GOLD FIELDS EXPLORATION PTY. LIMITED**

E.L. 17/86

VICTORIA SHEET  
 87-2733

INTERPRETIVE GEOLOGY  
 AND OLD MINE WORKINGS

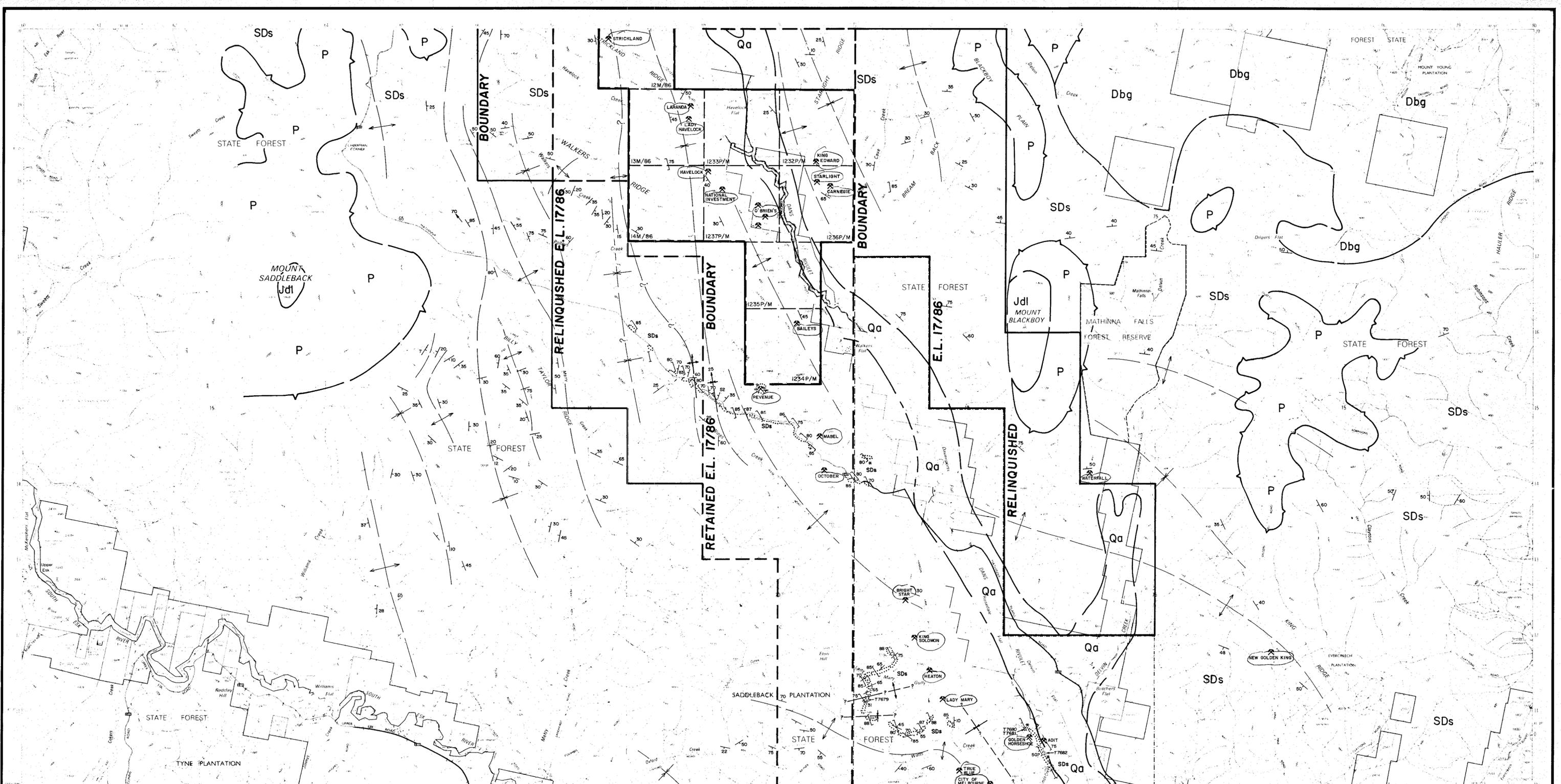
856030

7180

SCALE 1:25,000

900 0 900 1000 METRES

DRAWN BY: W.H.  
 DRAFTSMAN: T.G.D.S.  
 DATE: Sep '87  
 REVISIONS:  
 CHECKED:  
 FILE NO.  
 FIG. 7



**PRODUCTION:** Mapping Division, Lands Department, Hobart, 1988.  
**ACCURACY:** Horizontal 90% of well defined details within 12.5 metres of true position. Vertical 90% of elevations are within 5 metres. These accuracies may not be achieved in areas of dense vegetation.  
**RELIABILITY:** Topography compiled from aerial photography from 1983 with field verification 1985.  
**NON-INDICATURE:** Place names have been approved by the Nomenclature Board of Tasmania. PUBLIC RIGHT OF WAY: Roads on this map do not necessarily indicate a public right of way. REVISION: A five yearly revision cycle is intended for this series. Users noting errors and omissions are invited to write to the Director of Mapping, GPO Box 444, Hobart, Tasmania, 7001.  
 © TASMANIAN GOVERNMENT 1988.

**PROJECTION:** Universal Transverse Mercator (UTM).  
**HORIZONTAL DATUM:** Australian Geodesy Datum 1986.  
**VERTICAL DATUM:** Australian Height Datum (Tasmanian), excepting offshore islands whose datum is mean sea level.  
**GRID:** 1000 metre intervals of the Universal Transverse Mercator Grid. Zone 55, Australian Map Grid, Australian National System.  
**CONTOUR INTERVAL:** 10 metres with 50 metre index contours.  
**WORLD GEODETIC SYSTEM 1972:** To convert co-ordinates from this system to Australian Geodesy Datum 1986, increase the value of longitude by 1.7, equivalent to 16 metres, and decrease the value of latitude by 1.7 metres.  
**MAGNETIC VARIATION:** True, Grid and Magnetic North are shown diagrammatically for the centre of this map. Magnetic North is correct for 1988 and moves westerly about 0.1° every two years.

**Residential area:** Commercial buildings.  
**Roads:** maintained for continuous public use.  
**Roads of restricted use:** or access.  
**Walking track:** or horse trail (appropriate position with bridge).  
**Power transmission line:** and power stations.  
**Building:** feature of historic or special interest. Run, Mine, Post office, Police station, Fire station, School.

**Swamp:** Waterlogging.  
**Wet area:** Subject to flooding.  
**Waterfall:** Rapids.  
**Tidal rocks or ledge:** Offshore rock.  
**Navigation light or lighthouse:** Exposed wreck.  
**Sand:** Tidal flat.  
**Saline coastal flat:** Tidal flat.  
**Jetty:** Launching ramp.

**BOUNDARIES:** shown on this map are NOT authoritative. For full particulars please consult the Register General's Office, Law Department, or the Survey General, Lands Department. Areas within proclaimed towns or less than two hectares may not be depicted. Boundaries of Crown Land (including Reserved) extend to low water mark. To check a land parcel reference, with parcel number with municipal number. To use the number to plan title or survey information please consult the Mapping Division. Property and parcel boundaries are shown as at September 1985.  
**Municipality:** name and number.  
**Ward:** name.  
**Ward boundary:** Town boundary. Other administrative boundaries.  
**Reserve boundary:** Wooded or growing symbol.  
**Property boundary:** Land parcel boundary and number.  
**Boundary location:** uncertain or indefinite.

**MEAN TIDE:** (1985 Mean High Water)  
**UNIVERSAL GRID REFERENCE:**  
**GRID ZONE IDENTIFICATION:** 58E UTM 500 000 000 000 000 000  
 To give a standard reference to the nearest 100 metres:  
 1. State name and number of the map.  
 2. UTM zone (58E) and grid zone (U) to the right of point and read large figure sets in either the top or bottom margin e.g. 58E U  
 3. UTM Easting (500 000) and UTM Northing (000 000) to the right and read large figure sets in either the left or right margin e.g. 500 000 000 000  
 To give full grid reference prefix with Grid Zone Designation and UTM zone name Square Identification letters e.g. 58E UTM 500 000 000 000 000 000

**INDEX TO ADJOINING MAPS:**  
 MAURICE 5442  
 VICTORIA 5642  
 PYENGINA 5842  
 BEN NEVIS 5441  
 SADDLEBACK (Upper) 85601  
 BRILLIANT 5841  
 GIBLIN 5440  
 MATHINNA 5640  
 DUBLIN TOWN 5840

**QUATERNARY** Qa River alluvium  
**TERTIARY** Ts Sub-basaltic gravels, sands, muds  
 Tb Basalt

**JURASSIC** Jdl Dolerite  
**PERMIAN** P Sandstone and conglomerate  
**LATE DEVONIAN TO EARLY CARBONIFEROUS** Dsa Granite - adamellite  
 Dba  
 Dsg Biotite - hornblende Granodiorite  
 Ds Scottsdale Batholith  
 Db Blue Tier Batholith

**ORDOVICIAN TO DEVONIAN?** SDsm Contact Metamorphosed Mathinna Beds  
 SDs Mathinna Beds: Turbiditic sequence of quartzwacke, siltstone, mudstone, shale  
**NOTE:** Original coloured paper copies of 1:25,000 and 1:10,000 Outcrop Geology Plans show sedimentary lithotypes of Mathinna Beds by colour code.

**GEOLOGICAL SYMBOLS**  
 (Generally as per BMR System, 1963  
 Ref: Field Geologists Manual, A.I.M.M. Monograph No.9)  
 Dip/Strike of sedimentary layering  
 Dip/Strike of sedimentary layering with Younging direction indicated  
 Dip/Strike of cleavage  
 Direction and plunge of tectonic fold axis  
 Fault, Teeth on underthrust block indicating direction of dip of fault plane

**856031**  
**7181**

**GOLD FIELDS EXPLORATION PTY. LIMITED**  
**E.L. 17/86**  
**SADDLEBACK SHEET**  
**87-2733**  
**INTERPRETIVE GEOLOGY**  
**AND OLD MINE WORKINGS**

**DRAWN BY:** W.H.  
**DRAFTSMAN:** T.G.D.S.  
**DATE:** Sep. 87  
**REVISIONS:**  
**CHECKED:**  
**FILE NO.:**  
**FIG. 8**

