14.6

GOLD FIELDS EXPLORATION PTY LTD

COPPERFIELD SOUTH

EL 4725

(PINE CREEK 1:250,000 SHEET SD 52-8)

ANNUAL REPORT

(10.02.86 - 09.02.87)

Distribution

- N.T. Mines Department
- G.F.E.L. Darwin
- G.F.E.L. Brisbane

JOHN VANN

Darwin N.T.
February 1987

CONTENTS

LIST OF APPENDICES

LIST OF FIGURES

LIST OF TABLES

LIST OF PLATES

SUMMARY

Reconnaissance mapping and sampling at Copperfield South EL 4725 identified a north plunging anticline ("Woollybutt") as the only area warranting further investigation as a gold target. A compass and tape grid was established over this structure and detailed (1:2,500 and 1:1,000 scale) mapping and sampling were conducted.

Following the identification of gold-bearing quartz veins about the axis of the anticline 13 trenches, totalling 1601m were dug, mapped and sampled. This sampling defined two anomalous zones, designated "Zone 2-B" and "Zone 6-C". These zones were tested by an 11 hole percussion drilling program. The best drilling results were 8m @ 1.98 g/t Au ("Zone 2-B") and 6m @ 0.62 g/t Au ("Zone 6-C").

It is recommended that further exploration work be carried out in 1987, with some emphasis on "blind" mineralisation beneath alluvium and in areas of poor outcrop.

1. INTRODUCTION

The Copperfield South Exploration Licence (EL4725), covering an area of 45 square kilometres and consisting of 14 blocks, is centred approximately 14 kilometres south-south-east of the Pine Creek township, Northern Territory. The Stuart Highway and old Stuart Highway both cross the EL in a north-east to south-west direction and provide access to the areas described in this report. Since the terrain is flat to gently undulating, access by four-wheel-drive vehicle is usually possible without prior road construction.

Most of the EL is inaccessible by vehicle during the December-March wet season.

Figure 1 shows the location of EL 4725.

2. REGIONAL GEOLOGY

Proterozoic Pine Creek Geosyncline sedimentary rocks, Cullen Batholith granitoids and Cainozoic/Quaternary cover units are exposed within EL4725 (see figure 2). Descriptions of regional geology can be found in Walpole et al. (1968), Needham and Stuart-Smith (1984), Stuart-Smith and Needham (1984) and Stuart-Smith et al. (1986). Lithological descriptions of rock units contained within EL4725 are given by Stuart-Smith et al. (1986).

3. WORK COMPLETED

An Exploration Licence was applied for on the 23rd of November, 1984, after regional rock chip sampling indicated anomalous gold values (up to 7.67 g/t) from the Woollybutt anticlinal axis and adjacent outcropping quartz veining. Of 16 samples collected, 5 contained $>$ 0.50 g/t Au (Dann, 1984). The Exploration Licence (4725) was granted on the 10th of February, 1986.

Work completed on EL4725 to February, 1987 consists of:

(1) 1:25,000 reconnaissance mapping/rock chip sampling

(2) Establishment of a 2.2 x 2.7 km compass and tape grid over the Woollybutt anticline and the adjacent syncline ("Woollybutt grid")

(3) 1:2,500 grid mapping/rock chip sampling of the Woollybutt grid

(4) 1:1,000 scale detailed geological mapping of the main anticlinal axial zone of the Woollybutt grid

(5) 1st trenching: 7 trenches, 838m (Woollybutt anticline)

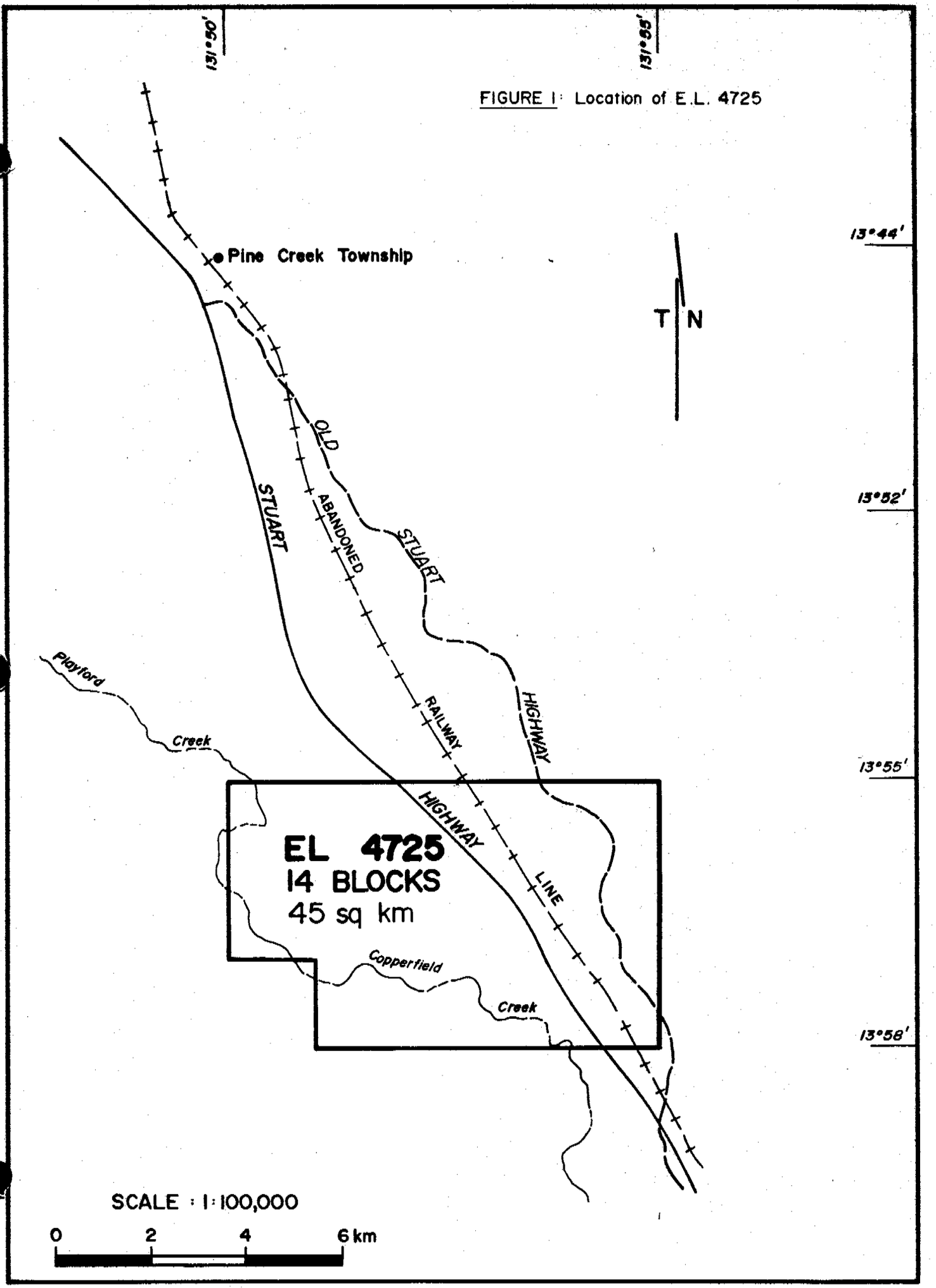
(6) 2nd trenching: 6 trenches, 763m (Woollybutt anticline)

(7) Percussion drilling: 11 holes, 313m (Woollybutt anticline)

This report details the above work.

...2.

FIGURE 1: Location of E.L. 4725



3.1. 1:25,000 Reconnaissance mapping

Using the B.M.R.'s 1:25,000 (compilation sheet 12) geological mapping and 1:25,000 scale colour airphotos as a base, reconnaissance rock chip sampling and infill mapping were conducted. The resulting map is included here as figure 2. All the major anticlinal structures known in EL4725 were examined with the exception of the Woollybutt anticline, which was known to be mineralised. All anticlines exposed siltstones, shales and sandstones of the Burrell Creek Formation. Five structures were investigated with results as follows (assays are presented as appendix 2).

3.1.1. Bloodwood Anticline

Axis strikes at approximately 290°, plunging at ?30° NW. Bedding dips on both limbs are about 50°. Of nine rock-chip samples collected the best assay was 0.03 g/t Au. Limonitic alteration and associated quartz veining were noted, though these features were confined to the immediate vicinity of the fold axis. Base metal analyses were also low.

3.1.2. Ironwood North Anticline

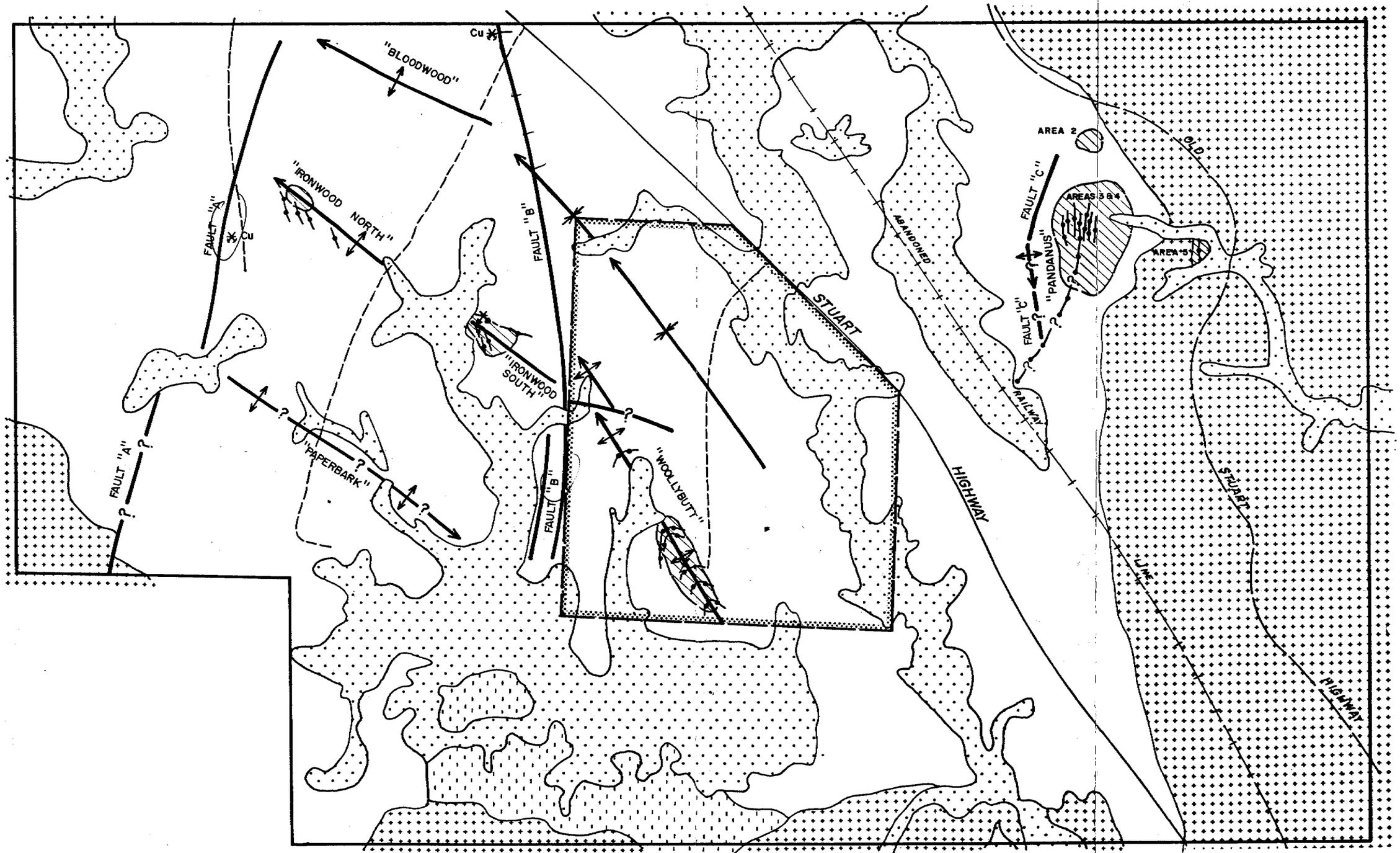
Axis strikes at about 310° with plunge (probably shallow) to the NW. Bedding dips steeply about the axis. Although extensive quartz veining and limonitic alteration are present, none of the 43 samples collected contained anomalous concentrations of gold, with the best assays being 0.06 g/t Au. An area of highly ferruginous, quartz veined sandstone, upon which a 2m deep pit had been sunk (see figure 2), returned anomalous base metal values. A sample from the pit (T50847) contained 3.15% Pb, 1230 ppm As, 1230 ppm Zn and 1120 ppm Cu, but $<$ 1ppm Ag and 0.04 ppm Au. Samples taken along strike from the same lithological unit exposed in the pit also proved to be Cu, Pb, Zn anomalous but devoid of Au, Ag and with lower concentrations of As (in the range $100 < As < 380$).

3.1.3. Ironwood South Anticline

This structure appears to be the southward extension of Ironwood North, with the fold having a similar attitude. Limonitic alteration and locally intense quartz veining are present, in places up to 50m from the axial trace. Extensive bulldozing around the creek bed appears to be a relict of considerable (?)alluvial gold mining. However, none of the samples collected were anomalous. The best assay from 20 rock chip samples was 0.04 ppm Au (T50896).

The Ironwood North/South anticline is terminated to the east by a prominent ridge which exposes extensive white quartz displaying brecciated or fragmented "cockade-like" structures and textures. This correlates with a fault mapped by the B.M.R. (see fault "B" figure 2). It is probable that the Ironwood and Woollybutt anticlines are the same structure.

...3.



Quaternary alluvium, soil

Cainozoic sand, gravel, transported terrestial sediments

Proterozoic Cullen Granite

Proterozoic Burrell Creek Formation

Alteration

Quartz vein

Fault, fault inferred

Anticlinal axis, axis inferred

Synclinal axis

Unsealed access track

Grid area

Disused alluvial workings (Au)

Disused hardrock workings (commodity indicated)

GOLD FIELDS EXPLORATION PTY. LIMITED

GEOLOGIST:	J.E.Vann
DRAWN:	D.A.Vann
DATE:	Feb. '87
CHECKED:	
1,250,000 REFERENCE:	SD 52-8

COPPERFIELD SOUTH
E.L. 4725
GEOLOGY

BASE: COMPILATION SHEET 12 BMR (SHEET 5270)

SCALE: 1:25,000 — 500m 0 500m 1km 1·5 km

FIGURE 2

3.1.4. Paperbark ?Anticline

This structure is mapped by the B.M.R., however a brief ground-check revealed almost no outcrop and thus no structural information was collected.

The rocks encountered were seemingly unaltered, unveined Burrell Creek sandstones. No samples were taken, and no quartz veining located.

3.1.5. Pandanus Anticline

This structure is mapped by the B.M.R. as a faulted minor anticline, with faulting along the axis. Ground checking confirmed the presence of the faulting (fault "C") but the area was not examined thoroughly enough to establish the nature of any folding. Extensive, intense quartz veining was revealed to the east of fault "C". This veining is predominantly grey-blue to pale grey-blue ("oily" to "sub-oily") quartz with cross cutting diffuse white quartz veinlets. Some brecciated sacharoidal quartz is also present. Exposure of wallrocks is generally poor, but those exposed are bleached, limonitic and contain quartz-filled fractures and cubic cavities after ?pyrite. It would seem that this veining and alteration would be on the east limb of the southerly plunging Pandanus anticline.

The main zone sampled at Pandanus was divided into two areas (Area 3 and Area 4) with a north-south creek bisecting them. A seperate, small alteration zone was mapped about 800m to the north, exposed on a prominent ridge (Area 2). A pyritic, hematic quartz-aplite vein/dyke about 1km east of the main Pandanus alteration system was briefly examined (Area 5).

Of the 112 rock chip samples collected only three contained > 0.10 g/t Au:

- Q42025 contained 0.27 g/t Au. Collected from the dyke in Area 5 (this sample was "high-graded").
- T5064 contained 0.16 g/t Au across 3m of altered, veined sandstone in Area 2.
- T50607 contained 0.11 g/t Au. This sample was from the most prominent vein in the main Pandanus alteration system.

Base metal values in Areas 2, 3 and 4 were generally very low, with only isolated Cu, Pb, Zn or As values >100 ppm.

3.1.6. Fault Mineralisation

Two copper shows, both of which appear to be fault controlled, were examined in addition to the above fold structures. Both consisted of high-grade oxidised (malachite) ore in fault breccias. These shows are referred to here as 'Fault "A" Copper Show' and 'Fault "B" Copper Show', and marked on Figure 2.

...4.

Fault "A" Copper show has several very small pits sunk along about 25m of the eastern contact between ferruginous siltstone and sandstone and the fault itself, which consists of brecciated, saccharoidial quartz with siltstone inclusions. Although a strongly altered, malachite-bearing sample (T50873) contained 7.50% Cu, none of the 6 samples collected in the immediate area contained > 0.04 g/t Au, or anomalous Pb, Zn, As or Ag.

The fault "B" copper show, located some 80m west of the new Stuart Highway (see Figure 2 and Figure 3) is a more extensive working than the fault "A" copper show. The geology of the two shows is similar but more clearly visible at fault "B". Mineralisation consists of ferruginous, malachitic, quartz veined breccia and malachitic, limonitic, sericitic quartz veined siltstone. Traces of ?cuprite were noted in less oxidised samples. The most intensely mineralised material collected was from the dumps adjacent to the two shallow pits. Copper assays were up to 12.40% (Q42026) with gold in the range 0.03< Au< 0.12. The highest gold value of 0.12 g/t Au was returned for sample Q42028, a sericitic, limonitic, quartz veined siltstone collected about 5m west of the brecciated, sheared trace of the fault. Sample Q42026, containing 12.40% Cu, also contained anomalous As (570 ppm) and Ag (98 g/t Ag).

The scale of both these mineralised bodies, combined with absent or low-level Au, precludes them from being economic targets for gold. It would seem that both are the results of supergene enrichment of low grade copper occurrences in the faults.

In summary, the 1:25,000 scale mapping and sampling program established the geology of the Exploration Licence area and indicated that the only significant area of anomalous gold mineralisation was associated with the Woollybutt anticline.

3.2. 1:2,500 Grid mapping

A 2.7 x 2.2km grid, with pegs at 50m spacing east-west and 100m spacing north-south, was extablished immediately north of Copperfield Creek. First pass geological mapping and sampling was carried out on this grid by D. Smith (Unpublished G.F.E.L. Report). The location of the grid is shown on figure 2.

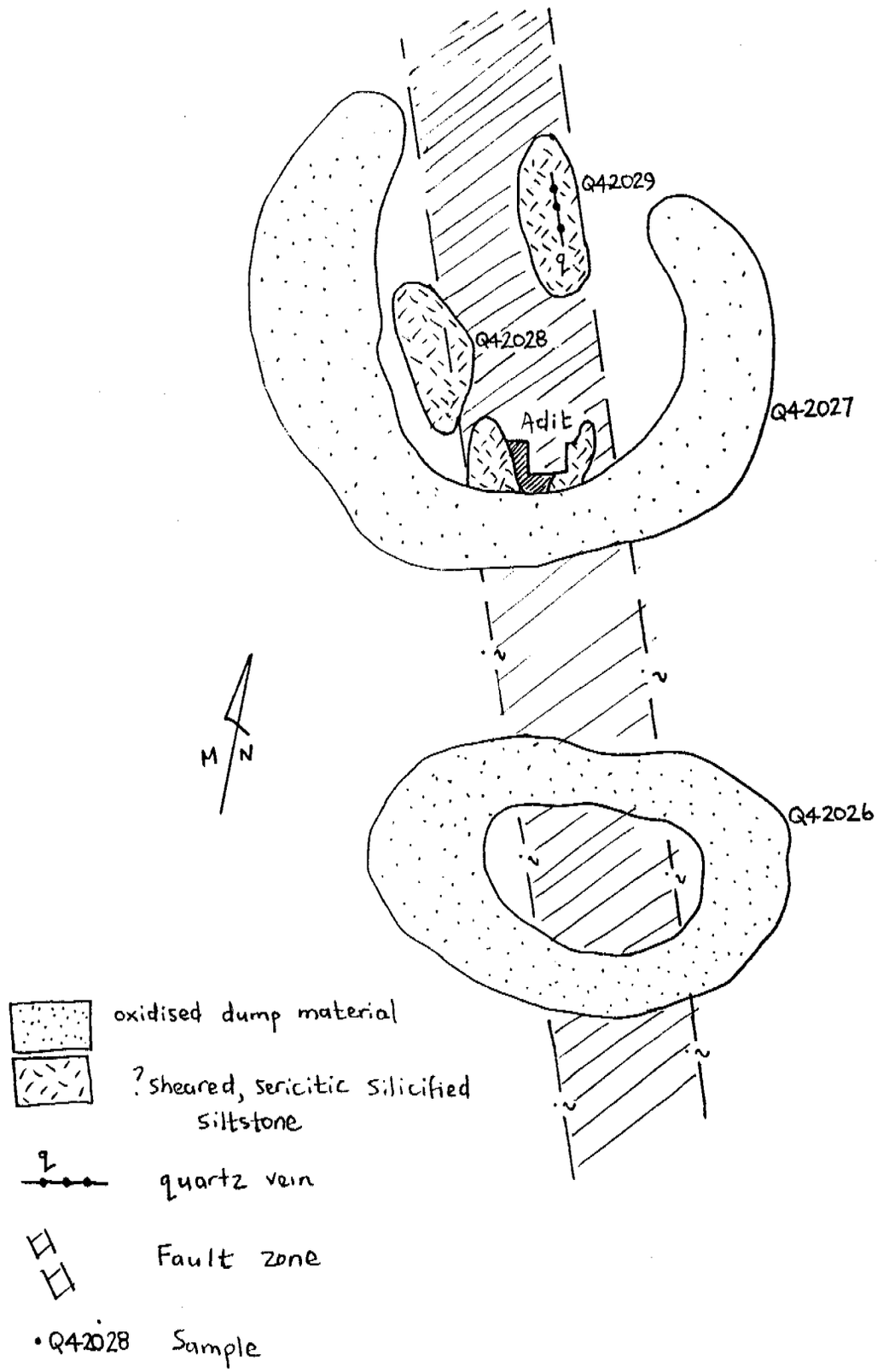
Though outcrop in the grid area is sparse, particularly in the vicinity of the Woollybutt anticlinal axis, the geological mapping confirmed the presence of a folded sequence of Burrell Creek Fromation sedimentary rocks as mapped by the B.M.R. The Burrell Creek Formation in the grid area consists of massive, fine to coarse grained greywacke, which is overlain by a sequence of massive to well-bedded greywackes intercalated with siltstones.

This sequence has been anticlinally folded about an axis which trends approximately 320° and plunges gently to the north-west. Conclusive evidence supporting the presence of the anticline is found in several areas along the axial trace, where arcuate quartz veins (interpreted as "saddle reefs") outcrop. The core of the anticline is believed to be occupied by the massive, fine to coarse grained greywacke.

...5.

Figure 3

Sketch-map (~1:200)
"Fault B" Copper show



Along the western edge of the grid area is a prominent ridge of greywacke which is invariably quartz veined and is locally brecciated and intensely silicified. This ridge is interpreted to represent a fault.

A total of 89 rock chip samples was collected over the grid area and 14 of these contained anomalous (> 0.10 ppm) gold. All anomalous samples were collected from the 150m x 1050m, 320° trending, zone coinciding with the trace of the Woollybutt anticlinal axis. All anomalous samples are of white to grey, frequently limonitic vein quartz , which occurs as outcrops and suboutcrops in this area. The highest gold assay, and the only assay exceeding 1 g/t Au, was 3.86 g/t (T51748) collected over 10m of strike length from a 0.5m wide arcuate quartz vein. Two other samples collected along strike from the same vein reported assays of 0.53 g/t and 0.49 g/t Au.

Mapping also confirmed the presence of a synclinal structure to the east of the Woollybutt anticline, but suggested that faulting exists between these two structures.

Appendix 3 documents the results of sampling during this mapping program. The 1:2,500 scale outcrop map is presented here as Plate 1.

3.3 1:1,000 grid mapping

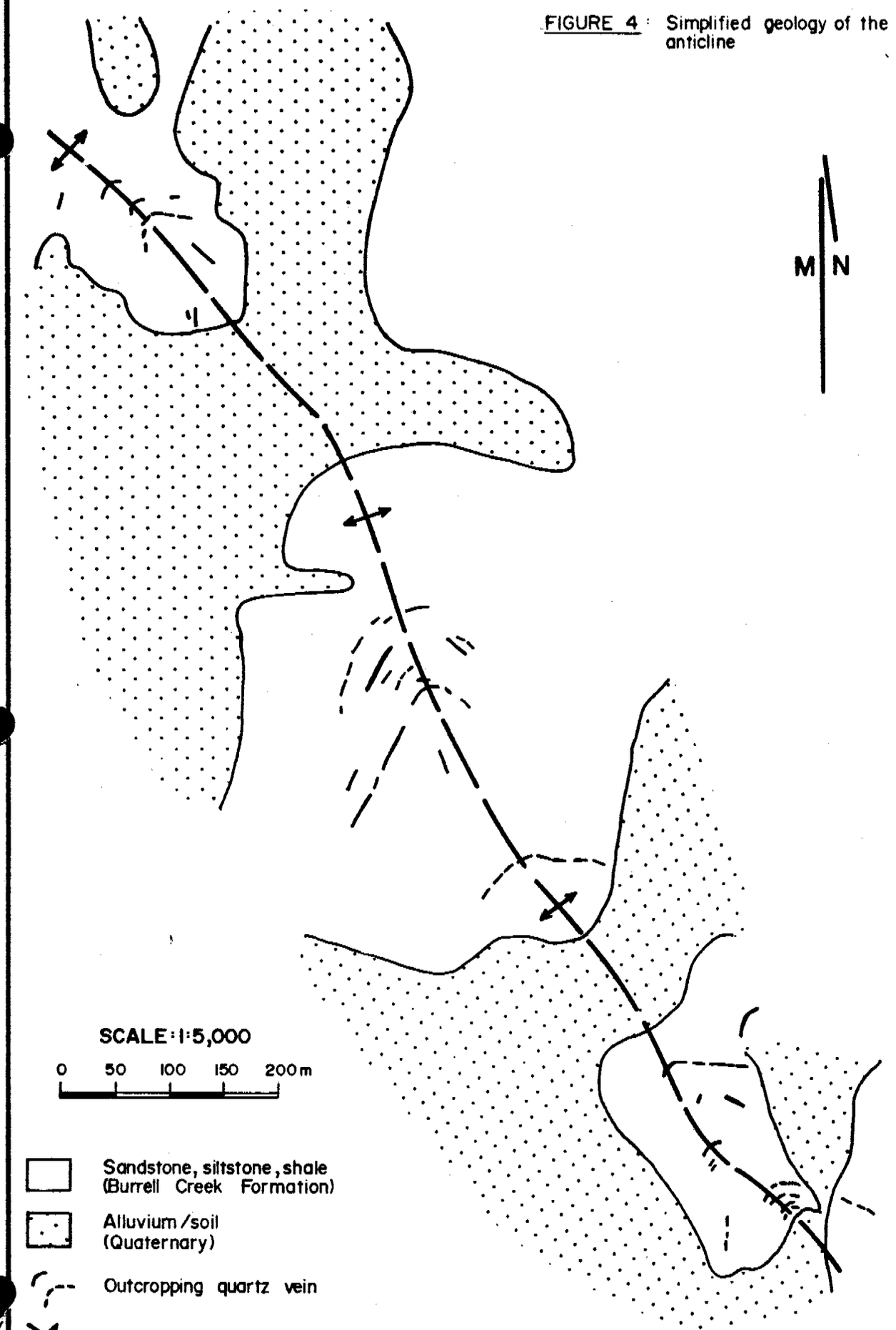
Following the broad delineation of structure obtained by 1:2,500 scale mapping, an area of the Woollybutt grid encompassing the known mineralised length of the anticlinal axis was selected for more detailed mapping at 1:1,000 scale (Plates 2 & 3). A 1:5,000 simplified version of this map is included here as Figure 4.

The aim of this mapping was to detail the geology of the anticlinal axial area, map all outcropping quartz veins and establish the extent of Quaternary alluvium and soil cover. This mapping revealed considerably more outcrop and subcrop of quartz veining than was previously appreciated. In addition to the arcuate veins mapped at 10,550 N, 9700 E at least 5 other locations there are exposures of saddle-like quartz vein closures. These outcrops allow a fairly accurate trace of the axial plane to be interpreted (see Plates 2 & 3, Figure 4). This axial trace corresponds closely to the previously mapped axis.

Mapping by the B.M.R. at 1:25,000 scale indicates that the folded lighologies are all members of the Burrell Creek Formation. In the 1:1,000 mapping only isolated, weathered outcrops (other than vein quartz) were located, but it would seem that the geology is essentially monotonously interbedded siltstones, shales, sandstones and greywackes. Trenching subsequently confirmed this impression and such lithologies conform with the published descriptions of the Burrell Creek Formation (Walpole et al., 1968) and are broadly similar to those in the Enterprise area (Dann and Delaney, 1984).

...6.

FIGURE 4 : Simplified geology of the Woollybutt anticline



Since this mapping was intended to complement subsequent trenching (see Section 3.4.) only ten 5m line chip surface samples were collected (see appendix 4). Locations of samples are shown on Plate 3. Only one sample (T50958) was anomalous (> 0.10 g/t Au), reporting 0.25 g/t Au. This sample was collected in a north-south direction across the anticlinal axis. Base metals were low in all samples.

Mapping confirmed that the Woollybutt structure is an open anticline, plunging to the north.

3.4. First trenching program

During April and May of 1986 838m of 18" (45cm) wide trenches were completed over the Woollybutt anticlinal axis. Trenches were designed to test outcropping quartz veining. A total of seven trenches (Trenches 1 - 7) were completed and their locations are shown on Figure 5. In all, 183 geochemical samples were collected and all exposures of bedrock in the trenches were mapped.

3.4.1. Geology

Mapping of trenches revealed considerably more quartz veining than was expected from surface mapping. While the bedding-parallel vein sets (including those closing about the axial trace) outcrop in part, trenching revealed at least three major vein sets:

(1) Bedding-parallel and sub-parallel quartz veins

(2) "Ladder"-like quartz veins

(3) ?axis-parallel and sub-parallel quartz veins.

Vein types (1) and (2) are more common than type (3). In addition to these major sets, numerous fine (from < 2mm to ~ 1cm) quartz-limonite-(carbonate) veinlets were noted. These tended to be less controlled by bedding and in places could be described as a weakly developed stockworks-style alteration. Alteration usually accompanies veining and is noted in weathered rocks as a distinct yellow or red colouration and by the presence of fine (1-5mm) cubic limonite pseudomorphs after ?pyrite. In addition, pseudo-orthorhombic hollows, or pits, were noted in very altered greywacke and quartz veins in Trench 6. These are probably after arsenopyrite (Vann, 1986).

Trenches were mapped and the data is presented as 1:500 scale plans (Plates). The weathering of lithologies, and in places incomplete exposure, made mapping marker units difficult. These plans present data representing lithology, alteration, veining and structure.

Recording of structural data during trench mapping allowed the use of stereographic projection as an interpretive tool. Figure 6 shows a plot of poles to bedding using an equal-angle projection (Wulff Net). Fitting a cyclographic trace, or "great circle", to these points results in a overall plunge of 40°N being read. The strike of the axial plane is

...7.

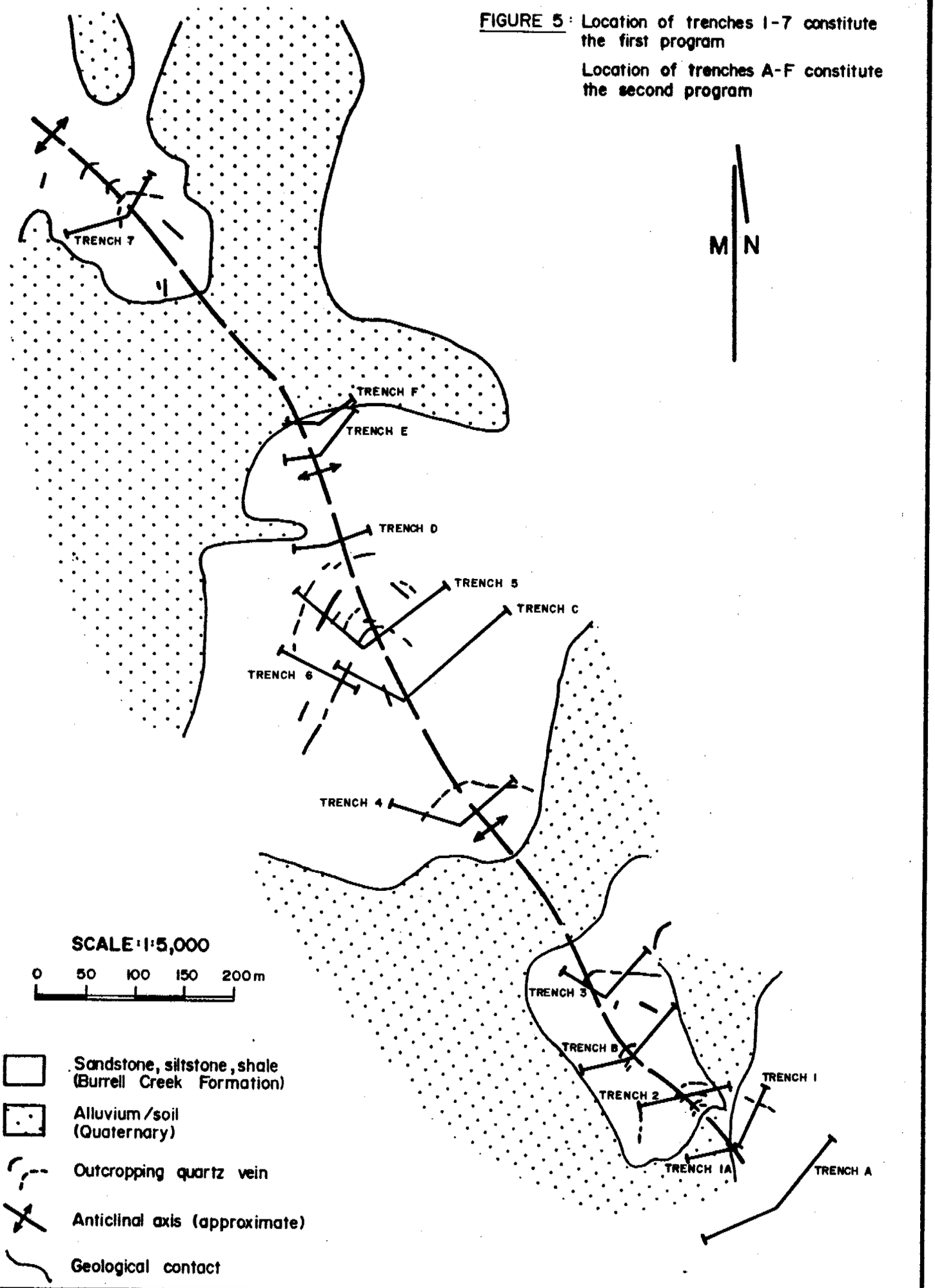
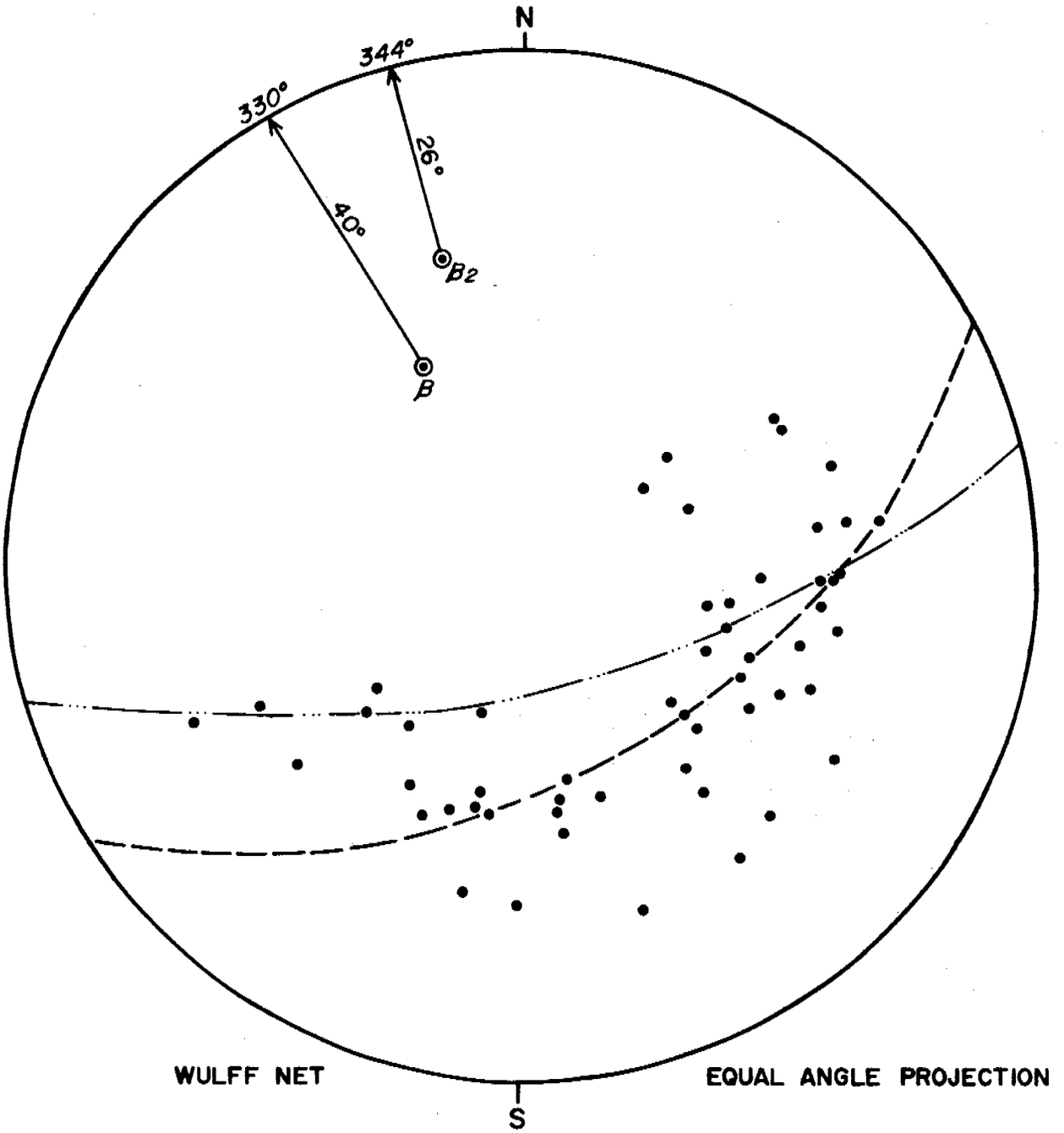


FIGURE 5: Location of trenches 1-7 constitute the first program

Location of trenches A-F constitute the second program

FIGURE 6: S-Pole diagram (poles to bedding)



——— Cyclographic trace fitted to poles from Trench 1 & Trench 2. (β_2 is the corresponding pole to this trace)

– – – Cyclographic trace fitted to all poles (β is the corresponding pole to this trace)

• Poles to bedding. n = 53

approximately 330°, with the dip of this plane being subvertical. Observations of ?axis-parallel veins and cleavage in Trenches 2 and 6 are suggestive of a slightly east-dipping axis, but this is equivocal. The second cyclographic trace in Figure 6 is fitted to data from Trenches 1 and 2 only, and appears to confirm the field observation that the plunge of the structure is shallower to the south.

Although the overall plunge is 40°, it is 25-30° in the vicinity of Trench 1 and 2 and possibly as steep as 45° around Trench 3.

Surface mapping at 1:1,000 (see section 3.3) indicated a variability in axial strike of 10-15° from a mean of approximately 330°, and this is confirmed by plotting structural data from trenches.

3.4.2. Geochemistry

Samples were collected from the trenches using a steel dustpan and a geological hammer. Sampling was undertaken as close as practicable to the trench floor by chipping along a line between 5m markers, resulting in an average sample weight of approximately 5kg. In areas of more intense alteration some detailed line-chip sampling was completed, in addition to sampling of specific veins.

All samples were assayed for Au, As, Cu, Pb, Zn and Ag. Results are tabulated in appendix 5.

A summary of anomalous Au results is included as Table 1 (nb: this table combines all trenching results including those from the follow-up trenching described in section 3.5 of this report). In general, anomalous Au results appear to be accompanied by anomalous As (see also, Table 1).

Initial trenching of the Woollybutt anticline confirmed and clarified the overall geological picture: the structure is an open anticline plunging towards the north, the axis strikes at 330° and appears to be subvertical. The structure is mineralised in two main areas: one in the region of trenches 5 and 6; the other, to the south, in the vicinity of trenches 1 and 2.

...8.

TABLE 1 Summary of trenching results
(trenches are listed South to North)

Trench A

- 5m @ 0.15 g/t Au (eastern limb)
- weakly anomalous As (130-620 ppm)
- axis not tested (alluvium not penetrated)

Trench 1

- 5m @ 0.13 g/t Au (eastern limb) includes 1m @ 0.45 g/t
- weakly anomalous As (> 300 ppm) over westernmost 25m
- axis/western limb not tested (alluvium not penetrated)

Trench 1A

- 5m @ 0.15 g/t Au (eastern limb)
- anomalous As (670-1600 ppm) over 25m near axis
- western limb incompletely tested (alluvium not penetrated)

Trench 1A (Deepened)

- no anomalous Au
- anomalous As (up to 1210, predominantly 300-800 ppm) over western limb

Trench 2

- 60m @ 0.25 g/t Au (across axis) includes 30m @ 0.34 g/t near axis
- 30m @ 0.34 g/t includes 5m @ 0.57, 0.45, 0.57
- As anomalous over 60m mineralised interval, up to 2310, generally >900ppm.

* resampling of Trench 2 (at 2m intervals) over the best 40m of the previously anomalous section indicated 40m @0.12 g/t including 16m @ 0.19; with similarly anomalous As results.

Trench B

- 41m @ 0.23 g/t Au (across axis but mainly western limb) includes 10m @ 0.57 g/t (eastern limb)
- 10m @ 0.57 g/t includes 2m @ 0.86, 0.77
- highly anomalous As (up to 1.39%, mainly >1000 ppm) over best 10m interval. Entire trench As anomalous, particularly eastern limb.

Trench 3

- 5m @ 0.11 g/t Au (eastern limb)
- 15m @ 0.21 g/t Au (eastern limb) includes 1.5m @ 5.5 g/t
- 5m @ 0.30 g/t Au (near axis)
- Au is accompanied by As (up to 1210 ppm)

Trench 4

- no anomalous Au values

Trench 6

- 25m @ 0.67 g/t Au (western limb) includes 10m @ 1.20 g/t
- Au is accompanied by As (up to 2650 ppm)
- 10m @ 0.11 g/t Au
- Trench 6 did not test the axis

Trench C

- 15m @ 0.69 g/t Au including 7m @ 1.31 g/t (western limb)
- Au is accompanied by As (up to 4500 ppm)

Trench 5

- 15m @ 0.50 g/t Au (eastern limb) includes 5m @ 0.80 g/t
- 15m @ 0.11 g/t Au (western limb)
- Au is accompanied by As (up to 1260 ppm)

Trench D

- no anomalous Au
- weakly anomalous As (200-300 ppm range)

Trench E

- 5m @ 0.14 g/t Au (eastern limb)
- weakly anomalous As (to 630 ppm)

Trench F

- 5m @ 0.36 g/t Au (eastern limb)
- weakly anomalous As (to 430 ppm)

Trench 7

- 10m @ 0.24 g/t Au (eastern limb) including 5m @ 0.33 g/t
- 10m @ 0.14 g/t Au (western limb)
- anomalous As (to 780 ppm)

3.5 Second Trenching Program

During October 1986 763m of additional trenches and 93.5m of deepening (T-1A) were completed. Location of these trenches is shown in Figure 5. Trenches were sampled and mapped in the same manner as for the first program (see 3.4). Trenches were sampled at 5m intervals, except where obvious veining and alteration were noted and sampling intervals of 2m or 1m were used. A summary of significant results is included here as Table 1, and complete lists of assays are in appendix 6.

Best results were from Trench "B" with 41m @ 0.23 g/t Au including 10m @ 0.48 g/t Au; and Trench "C" with 15m @ 0.69 g/t Au including 7m @ 1.31 g/t Au. No significant Au assays were returned from trenches south of T-2 or north of T-5, with the exception of 5m @ 0.36 g/t Au in Trench "F". Unfortunately, Trench "A" failed to penetrate hard alluvium south of Trenches 1-1A and 2.

3.5.1 Geology

The geological information collected from Trenches A-F did not significantly alter the understanding of geology already gained. Plates 1-9 show trench maps of all exposed bedrock.

Trenching in the south (Trench "A", "B", 1-A) confirmed that a zone of ?axis-controlled mineralisation, more noticable on the western limb of the anticline, exists between Trenches 2 and "B" (named "Zone 2-B"). The area of anomalous veining exposed in Trench 6 was also exposed in Trench "C". This zone was named "Zone 6-C".

3.5.2. Geochemistry

The overall geochemical trends noted during earlier trenching were confirmed. Anomalous Au values tended to be associated with anomalous As and visible veining/limonitic alteration.

3.6 Drilling

During November 1986 a 313m, 11 hole, percussion drilling program was completed. Drilling statistics and summaries of assays are listed in Table 2. Full assay results are included here as appendix 7, and drill hole locations can be found on figure 7.

Drilling concentrated on the areas of known mineralisation, ie: "Zone 2-B" and "Zone 6-C" (see figure 7). Drilling was undertaken by Queensland Drilling Ltd using an Ingersol Rand CM351 Crawl-Air percussion rig. This rig is of the type usually used for drilling mine sample/blast-holes. The spudding of each hole to 1m depth meant that sampling of drill chips commenced at 1m. Holes were sampled each metre. This rig was unable to deliver uncontaminated sample from below the water-table

No geological data was recorded since the generally fine size of samples only revealed quartz-rich/quartz-poor intervals. Arsenopyrite and pyrite were noted in quartz chips from Au-anomalous intervals of PDH5 and PDH10.

The best intervals occurred in PDH5 (8m @ 1.98 g/t Au, including 1m @ 9.11 g/t Au) in "Zone 2-B" and in PDH 10 (6m @ 0.62 g/t Au) in "Zone 6-C).

...9.

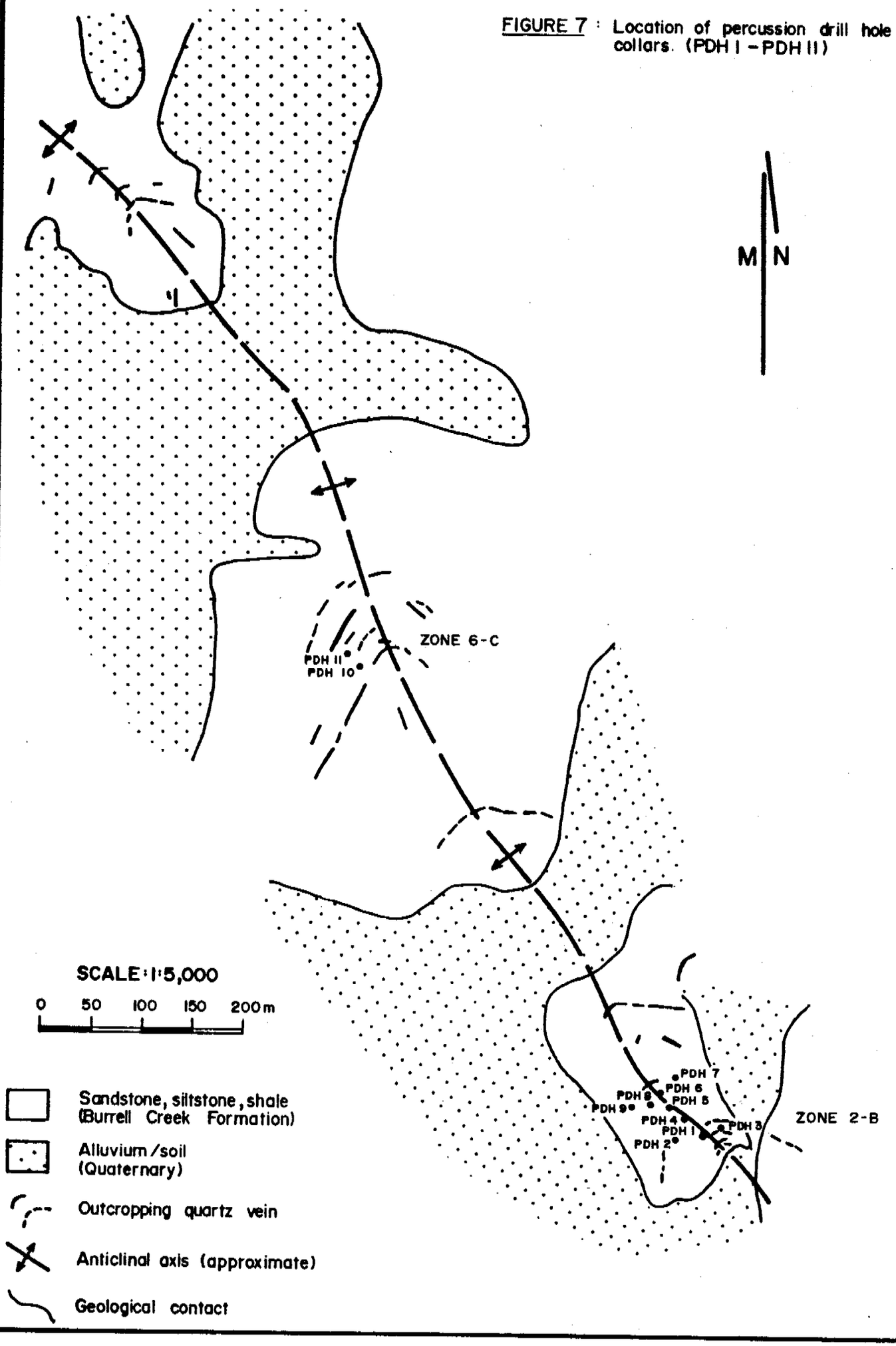
TABLE 2

DRILLING STATISTICS & ASSAY RESULTS, COPPERFIELD SOUTH

Hole	Brg/ Dip	Total Depth	Anomalous Intervals
ZONE 2B			
PDH1	vert	24m	2- 3m, 1m x 0.16 g/t Au 4-14m, 10m x 0.32 g/t Au
PDH2	060 -45	30m	1- 2m, 1m x 0.32 g/t Au 4-17m, 13m x 0.21 g/t Au
PDH3	250 -45	25m	3- 5m, 2m x 0.15 g/t Au
PDH4	vert	25m	1-25m, 24m x 0.37 g/t Au
PDH5	vert	24m	4- 5m, 1m x 0.11 g/t Au 6- 9m, 3m x 0.26 g/t Au 12-14m, 2m x 0.68 g/t Au 16-24m, 8m x 1.98 g/t Au including 1m x 9.11 g/t and 1m x 3.89 g/t Au
PDH6	vert	23m	1- 2m, 1m x 0.22 g/t Au 17-18m, 1m x 0.43 g/t Au
PDH7	225 -45	25m	23-24m, 1m x 0.14 g/t Au
PDH8	070 -45	34m	1- 2m, 1m x 0.12 g/t Au 4-21m, 17m x 0.71 g/t Au
PDH9	070 -45	33m	4- 5m, 1m x 0.21 g/t Au 14-18m, 4m x 0.30 g/t Au 23-25m, 2m x 0.66 g/t Au 27-29m, 2m x 0.24 g/t Au
ZONE 6C			
PDH10	115 -60	35m	1- 7m, 6m x 0.62 g/t Au 19-20m, 1m x 0.16 g/t Au 21-22m, 2m x 0.22 g/t Au 23-25m, 2m x 0.11 g/t Au
PDH11	115 -60	35m	7-17m, 10m x 0.44 g/t Au

...10.

FIGURE 7 : Location of percussion drill hole collars. (PDH I - PDH II)



Drilling at "Zone 6-C" indicated that gold mineralisation is confined to a 5m thick package of stratigraphy on the western limb of the anticline; while drilling at "Zone 2-B" indicated quite anomalous gold values in the axial part of the anticline, with possible extensions of this mineralisation on the western limb.

4. EXPENDITURE

The expenditure figures for the Copperfield South project, up to the 28th January, 1987, are listed below:

Item	$ Cost
Personnel costs (salaries, wages, on-costs, etc)	25,300
Travel	3,620
Consultants and Contractors	15,301
Sample Preparation and Analysis	17,243
Stores and Supplies	2,168
Vehicle Costs	5,055
Stationery	77
Tenement Rental	70
Administrative Overheads	10,325
	79,159

5. CONCULSIONS

From results obtained by mapping, rock-chip sampling, extensive trenching and initial percussion drilling, the following may be concluded:

- The Woollybutt anticline and adjacent areas contain the only economically interesting mineralisation in EL 4725.
- The Woollybutt structure is an open anticline plunging at 25°-50° to the north, with the axial plane being subvertical or steeply east-dipping.
- Gold mineralisation occurs in quartz-veined, limonitic Burrell Creek Formation, usually where greywackes predominate over pelitic rocks.
- Drilling and trenching indicate that the best mineralisation is axial to, or on the western limb of, the anticline.
- Zones "2-B" and "6-C" contain the only mineralisation of "economic" grade encountered so far.
- Potential for further mineralisation exists under alluvial cover, and in areas of little or no outcrop, especially about the axis and western limb of the fold.

...11.

6. RECOMMENDATIONS

It is recommended that further testing of known mineralisation, involving R.A.B./percussion/diamond drilling be undertaken in 1987. In addition some R.A.B. drilling through alluvial cover may be warranted in order to locate blind mineralisation.

...12.

REFERENCES

Dann, R., 1984 E.L. Application, Copperfield South. Unpublished G.F.E.L. memorandum.

Dann, R., and Delaney, W.R., 1984. Geology of the Enterprise Mine, Pine Creek, Northern Territory. Proc. Aus. I.M.M. Conference, Darwin, N.T., August 1984: 407-413.

Needham, R.S., and Stuart-Smith, P.G., 1984. The relationship between mineralisation and depositional environment in Early Proterozoic Metasediments of the Pine Creek Geosyncline. Proc. Aus. I.M.M. Conference, Darwin, N.T., August 1984: 201-211.

Smith, D. Copperfield South Prospect. Unpublished G.F.E.L. internal company report.

Stuart-Smith, P.G., and Needham, R.S., 1984. Hydrothermal mineral deposits and their association with granitoids of the Cullen Mineral Field, Northern Territory. Proc. Aus. I.M.M. conference, Darwin, N.T., August 1984: 329-338.

Stuart-Smith, P.G., et al, 1986. McKinaly River, N.T. 1:100,000 Geological map commentary. B.M.R. (Canberra).

Vann, J.E., 1986. E.L. 4725 (Copperfield South) Progress Report to June 1986 (including results of initial trenching). Unpublished G.F.E.L. internal company report.

Walpole, B.P. et at, 1968. Geology of the Katherine-Darwin Region, Northern Territory. B.M.R. Bulletin 82. (Canberra).

APPENDIX 1

Analytical Methods

Analytical methods

Analyses were performed by Australian Assay Laboratories in Pine Creek. Methods and A.A.L.'s own quality parameters etc. are listed below:

Element	Method	Quality Parameter	Detection limit
Au	Fire Assay FA50/D610	Acc. ± 15%	0.01 ppm
AuR_1	Fire Assay FA50/D610	Acc. ± 15%	0.01 ppm
AuR_2	Fire Assay FA50/D610	Acc. ± 15%	0.01 ppm
Ag	AAS/D100	Prec. ± 10%	1 ppm
As*	AAS/D100	Prec. ± 10%	2 ppm
As	AAS/D100	Prec. ± 10%	100 ppm
Cu	AAS/D100	Prec. ± 10%	2 ppm
Pb	AAS/D100	Prec. ± 10%	5 ppm
Zn	AAS/D100	Prec. ± 10%	2 ppm

* Two different detection limits (2ppm and 100 ppm) were variously employed during 1986.

Data presented in Appendices 2 - 7 is in parts per million (ppm) units unless stated otherwise. Standards were included as every tenth or twentieth sample. These standards are coded as PHY, CPD, GC4, GC6, and GC9.

APPENDIX 2

1:25,000 Mapping Assays

QUARTZ VEIN TYPES

The following is documentation of an abbreviated system of quartz vein sample descriptions. The major types of quartz veining sampled in the Pine Creek area fall into five distinct categories, viz:

TYPE I — grey-blue, vitreous, "oily" quartz, often with strong conchoidal fracture

TYPE II — pale grey to grey, "sub-oily" quartz, with less defined conchoidal fracture than in type I.

TYPE III — grey-blue to pale grey ("oily" to "sub-oily") quartz with cross-cutting white quartz. Often the white quartz is in anastomosing veinlets which lack sharp boundaries, ie: have a diffuse appearance

TYPE IV — white "buck" quartz, often visibly crystalline or saccharoidal

TYPE V — platy, white quartz with brecciated or fragmented "cockade-like" textures and structures. Diffuse white quartz veinlets often overprint in a stockworks pattern. Occasional carbonate replacement textures observed. This type of quartz is typically associated with faulting, or fold axes

OTHER ABBREVIATIONS (SUFFIXES)

The following suffixes appearing after the "quartz-type" are modifiers of the basic description:

py	pyritic	T	contains tourmaline
apy	arsenopyritic	G	gossanous
ga	contains galena	S	sericitic
sp	contains sphalerite	M	melanteritic
cpy	contains chalcopyrite	Pb°	contains secondary lead minerals
cu	contains cuprite		
ma	contains malachite	U°	contains secondary uranium minerals
az	contains azurite		

The width of the vein and the length/orientation of the sample are also included in the description, thus-

15cm QIII py ma 1m

represents a 15cm wide quartz vein of type III, which contains pyrite and malachite; the sample was taken as a line chip over 1m, across strike

An identical sample description with the 1m line chip taken parallel to the strike of the vein would look like this-

15cm QIII py ma 1m//

A description containing no information about the length of sample is assumed to be a grab sample, thus-

15cm QIII py ma

represents the sample above again, but a grab sample

PROJECT: COPPERFIELD STH GEOLOGIST: J.VANN	DATE: JUNE 1986	PANDANUS AREA RECON. SAMPLING (1)	Gold Fields Exploratio

SAMPLE	DESCRIPTION	Au	Au$_R$		As	Cu	Pb	Zn	Ag		
T50604	sheared qtz vein, wall rock to T50899	0.09			<100	20	48	46	21		
05	veined, weakly altered sandstone 3m line chip	0.16			<100	8	31	27	7		
06	as per T50605 but with limonitic cubic cavities	0.05			<100	9	40	18	<1		
07	2m QI G 3m strikes ~N-S	0.11			<100	11	21	20	<1		
08	2m QI G 3m // strikes ~N-S	0.04			<100	10	20	15	<1		
09	2m QI G 3m strikes ~N-S	0.01			<100	12	16	16	<1		
T50610	STD: PHY	0.05			<100	381	36	238	<1		
11	QI G 3m strikes ~N-S	0.01			<100	14	11	12	<1		
12	QI G 5m strikes ~N-S	0.01			<100	13	15	19	<1		
13	QII G strikes ~N-S	0.02			<100	9	28	13	<1		
14	QII G 2m strikes ~N-S	0.01			<100	12	34	15	<1		
15	QII G strikes ~N-S	0.02			<100	10	27	16	<1		
16	QII G strikes ~N-S	0.02			<100	14	20	11	<1		
17	QII G 3m // strikes ~N-S	0.01			<100	8	25	18	<1		
18	QII G 7m strikes ~N-S	0.01			<100	10	21	13	<1		
19	QII G strikes ~N-S	0.01			<100	12	26	18	<1		
T50620	STD: GC9	2.57	3.23		<100	270	61	52	<1		
21	QII G strikes ~N-S	0.04			<100	13	25	19	<1		
22	QII G 6m // strikes ~N-S	0.02			<100	5	30	28	<1		
23	QII G strikes ~N-S	0.02			<100	12	35	32	<1		
24	QII G strikes ~N-S	0.01			<100	12	36	44	<1		

PROJECT: COPPERFIELD SOUTH GEOLOGIST: J.VANN	DATE: JUNE 1986	PANDANUS (2)	Gold Fields Exploratio

SAMPLE	DESCRIPTION	Au	tur		As	Cu	Pb	Zn	Ag		
25	grab sample: ferruginous, ?sericitic sandstone	0.01			<100	13	30	31	<1		
26	as per T50625	0.03			<100	20	24	18	<1		
27	as per T50625	0.08	0.02		<100	27	34	39	<1		
28	QIG 3m // several veins sampled, strikes NS	0.01			<100	13	12	15	<1		
29	QIG 4m // strikes ~N-S	0.05			<100	16	12	12	<1		
T50630	STD : PHY	0.05			<100	389	29	231	<1		
31	grab sample: wall rock to T50629	0.01			<100	25	19	32	<1		
32	QIG strikes ~N-S	0.02			<100	11	21	9	<1		
33	QIG strikes ~N-S	0.01			<100	8	20	8	<1		
34	5m linechip (N-S) of silicified Burrell CK seds.	0.06			<100	40	73	33	<1		
35	grab sample: limonitic altered sandstone	0.02			<100	15	28	33	<1		
36	5m E-W line chip: altd quartz-veined sandstone	0.03	0.02		<100	42	25	29	<1		
37	2m EW line chip: altd quartz-veined sandstone	0.02			<100	45	76	156	<1		
38	30cm QIG 4m // strikes~N-S	0.02			<100	13	24	22	<1		
39	QIG 3m // strikes ~N-S	0.01			<100	10	23	16	<1		
T50640	STD: GC4	1.03	1.37		3840	263	31	199	<1		
41	QIG 3m // strikes ~N-S	0.04			<100	14	26	14	<1		
42	QIG 3m // strikes ~N-S	0.02			<100	12	26	10	<1		
43	QIG 10m // strikes ~N-S	0.02			<100	10	28	20	<1		
44	QIG 3m strikes ~N-S	0.01			<100	21	27	17	<1		
45	QIG 5m // strikes ~N-S	0.02			<100	20	25	12	<1		

PROJECT: COPPERFIELD SOUTH	DATE: JUNE 1986	PANDANUS	(3)	Gold Fields Exploration
GEOLOGIST: J. VANN				

SAMPLE	DESCRIPTION	Au	Au$_R$		As	Cu	Pb	Zn	Ag	
46	QIG 5m ‖ strikes ~N-S	0.01			<100	20	23	7	<1	
47	QIG 5m ‖ strikes ~N-S	0.03			<100	27	21	10	<1	
48	QIG 5m ‖ strikes ~N-S	0.01			<100	26	23	7	<1	
49	QIG 5m ‖ strikes ~N-S	0.04			<100	25	23	14	<1	
T50650	STD: GC6	0.70			600	174	35	101	<1	
51	QIG 8m ‖ strikes ~N-S	0.04			<100	980	27	15	<1	
52	QIG 5m ‖ strikes ~N-S	0.01			<100	20	31	14	<1	
53	?altered, brecciated sandstone, 4m line chip (NS)	0.07			<100	10	17	5	<1	
54	as per T50653, 4m line-chip, Bedding strikes 350°	0.03	0.02		<100	14	22	5	<1	
55	as per T50653, 6m line chip (NS)	0.02			<100	18	18	3	<1	
56	as per T50653, 3m line chip (NS)	<0.01			<100	28	24	4	<1	
57	as per T50653, 6m line chip (NS)	0.03			<100	16	28	4	<1	
58	as per T50653, 5m line chip, minor qtz veins	0.06			<100	10	20	3	<1	
59	as per T50653, grab sample	0.01			<100	22	29	12	<1	
T50660	STD: PHY	0.04			<100	384	37	240	<1	
61	as per T50653, 6m line chip (NS)	0.01			<100	3490	44	11	<1	
62	as per T50653, 3m line chip (EW)	0.02			<100	562	41	3	<1	
63	as per T50653, 5m line chip (NS)	0.01			<100	1800	34	2	<1	
64	QIG slickensided strikes ~NS	<0.01			<100	562	29	3	<1	
65	as per T50653, grab sample strikes ~NS	0.02	0.02		<100	43	25	21	<1	
66	10cm QIG 5m, ?altered wallrock strikes ~NS	0.03			<100	70	31	18	<1	

PROJECT: COPPERFIELD SOUTH | DATE: JUNE 1986 | PANDANUS (4) | Gold Fields Exploration

GEOLOGIST: J. VANN

SAMPLE	DESCRIPTION	Au	Au$_R$		As	Cu	Pb	Zn	Ag	
67	2m line chip (EW). Altd ?hornfelsed sandstone, Strikes ~NS	<0.01			<100	129	110	144	<1	
68	20cm QIG 5m ; Wall rock is ?altd sst, Strikes ~NS	0.03			<100	84	50	42	<1	
69	QIG 5m // Strikes ~NS	<0.01	<0.01		<100	18	23	15	<1	
T50670	STD : GC4	1.53			3420	262	36	198	<1	
71	QIG 5m // Strikes ~NS	<0.01	0.01		<100	13	29	30	<1	
72	3m chip along strike (NS): altd, limonitic ?sst	0.02			<100	7	30	5	<1	
73	10cm QIV 2m ; wall rock is ?altd sst, vein & rock str. NS	<0.01			<100	34	46	28	<1	
74	8m EW chip : altd locally bleached sst Strikes ~NS	<0.01			<100	12	27	4	<1	
75	as per T50675	0.09			<100	10	23	3	<1	
76	30cm QII G 3m ; limonitic wall rocks & vein strike ~NS	<0.01			<100	24	58	36	<1	
77	QII G 3m // Strikes ~NS	0.02			<100	25	49	46	<1	
78	QIV and adjacent ?altd siltst Strikes ~NS	<0.01			<100	15	23	11	<1	
79	QII G 6m // Strike 010	<0.01	0.01		<100	23	16	11	<1	
T50680	STD: GC6	0.80			610	176	47	95	<1	
81	grab: altd, limonitic sst ± minor qtz veinlets	<0.01			<100	428	44	14	<1	
82	1m QI	<0.01			<100	47	11	3	<1	
83	QIG 5m // Strikes ~N-S	<0.01			<100	15	107	17	<1	
84	50cm QIII G 3m // Strikes ~NS	0.01			<100	20	176	33	<1	
85	QIII G	<0.01			<100	16	45	4	<1	
86	QIII G	0.01			<100	42	32	7	<1	
87	QIII G 5m // Strikes ~N-S	<0.01			<100	8	22	6	<1	

PROJECT: COPPERFIELD SOUTH | DATE: JUNE 1986 | PANDANUS (5) | Gold Fields Exploration

GEOLOGIST: J. VANN

SAMPLE	DESCRIPTION	Au	tue		As	Cu	Pb	Zn	Ag		
88	QIII G 5m strikes ~N-S	0.01			<100	5	9	3	<1		
89	QV strike not obvious, vein is vuggy	0.03			<100	16	23	12	<1		
TS0690	STD: GC9	3.33			1370	279	52	46	<1		
91	50cm QIII G 5m // strikes ~N-S	<0.01			<100	7	25	12	<1		
92	grab: wall rock to TS0691	<0.01			<100	9	20	41	<1		
93	30cm QI 5m // strikes ~N-S	<0.01			<100	10	20	17	<1		
94	5m line chip (EW): altd, limonitic sst ± qtz veinlets	<0.01	<0.01		<100	10	35	4	<1		
95	5m line chip (NS): as per TS0694. o/c strikes ~N-S	<0.01	<0.01		<100	9	25	3	<1		
96	QIII + QI G 5m // strikes ~N-S	<0.01	0.01		<100	8	10	2	<1		
97	QIII + QV G	<0.01			<100	8	15	5	<1		
98	QI 5m // strikes ~N-S	<0.01			<100	10	45	18	<1		
99	QI 4m strikes ~N-S	0.01	<0.01		<100	14	31	16	<1		
TS0700	STD: GC9	3.53			1370	268	56	45	<1		
Q42001	4m QI G 5m strikes ~N-S	0.09			< 00	9	20	9			
02	4m QIG 10m // (same vein as Q42001)	0.05			<100	20	34	30	<1		
03	QIG strikes ~N-S	0.06			<100	13	19	5	<1		
04	15cm QIG 2m strikes ~N-S	<0.01			<100	10	17	4	<1		
05	40cm QII 4m; wall rock is altd ?sst, strikes ~N-S	0.01			<100	9	24	23	<1		
06	QII	<0.01			<100	11	26	4	<1		
07	1m QI 5m // strikes ~NS	0.02			<100	7	18	16	<1		

PROJECT: COPPERFIELD SOUTH | DATE: JUNE 1986 | PANDANUS (6) | Gold Fields Exploration

GEOLOGIST: J. VANN

SAMPLE	DESCRIPTION	Au	Au$_R$		As	Cu	Pb	Zn	Ag		
08	30cm QII 3m; vein & ?altd wallrocks strike ~NS	0.03	0.02		<100	29	38	24	<1		
09	10cm QII G & limonitic wall rock	0.03			<100	44	60	18	<1		
Q42010	STD: GC6	0.58			590	175	41	101	<1		
11	Feldspathic, micaceous, qtz-rich "sugary" rock (?aplite)	0.03			<100	6	21	3	<1		
12	1.5m QIV G 5m // strikes ~N-S	<0.01			<100	21	83	29	<1		
13	1.5m QIV G 6m // strikes ~N-S	0.02			<100	16	40	16	<1		
14	4m QI 4m (could be >1 vein) strikes ~N-S	0.01			<100	6	21	6	<1		
15	15cm QII 2m; wall rocks limonitic, vein/rock strikes NS	<0.01			<100	6	32	24	<1		
16	>20cm QIII G 5m // strikes ~N-S	<0.01			<100	30	22	7	<1		
17	>20cm QIII G 5m // strikes ~N-S	<0.01			<100	7	22	2	<1		
18	limonitic qtz ± FeOx veined, bleached sst; 5m line chip	0.04	0.01		540	12	67	4	<1		
19	QIV G S strikes ~N-S	0.03			<100	45	675	24	<1		
Q42020	STD: PMY	0.02			<100	374	39	231	<1		
21	altd, gossanous, quartzose, ?sheared siltstone (grab)	0.04			3270	261	8200	315	<1		
22	as per Q42019	<0.01			240	54	1950	30	<1		
23	as per Q42019	0.02			360	2750	1340	34	<1		
24	sheared ?"mylonitic"-looking rock ± FeOx & qtz & sericite	0.04			330	93	2180	20	<1		
25	QIV G M nb: >20% ?hematite (grab)	0.27			680	272	3310	114	<1		
T50899	altered, hornfelsed pelitic sediment	0.03			<100	9	29	11	<1		
T50900	STD: GC9	3.18	2.97		1280	273	62	53	<1		

PROJECT: COPPERFIELD SOUTH | DATE: JUNE 1986 | 'FAULT "B" COPPER SHOW' (1) | Gold Fields Exploration

GEOLOGIST: J.VANN

SAMPLE	DESCRIPTION	Au	Au R		As	Cu	Pb	Zn	Ag		
Q42026	grab: ferruginous, quartz veined malachitic dump material	0.03	0.04		570	12.40%	91	20	98		
27	as per Q42026 but less malachite. (? trace cuprite)	0.09	0.04		<100	2.37%	24	22	13		
28	outcrop of sericitic, limonitic quartz veined siltstone	0.12			<100	2680	17	28	<1		
29	as per Q42028 but sheared and more altered	0.06			<100	164	24	30	<1		
Q42030	STD: GC4	1.29			3610	277	34	199	<1		
31	STD: GC9	2.96			1440	275	55	46	<1		

PROJECT: COPPERFIELD SOUTH GEOLOGIST: J. VANN	DATE: JUNE 1986	BLOOD WOOD RECON. SAMPLING	Gold Fields Exploration

SAMPLE	DESCRIPTION	Au	tue		As	Cu	Pb	Zn	Ag		
T50819	mixed qtz float (mostly QIVG & QIIG)	0.02	0.02		<100	58	39	22	<1		
T50820	as per T50819	0.02			<100	14	21	8	<1		
21	QIVG, bedding parallel, 2-15cm wide, (grab)	0.03			<100	25	29	20	<1		
22	wall rock to T50821 veins (grab)	0.03			<100	38	29	20	<1		
23	? Axial QIVG	0.01			<100	4	23	6	<1		
24	1-10cm wide QIV in greywacke; w-limb, near axis, (~300°)	0.02			<100	10	22	12	<1		
25	? Axial QIVG, QVG float	0.03			<100	8	21	7	<1		
26	altered, QIVG veined sandstone (grab)	0.01			<100	4	24	7	<1		
27	as per T50826 ? w-limb.	0.01			<100	5	31	15	<1		

PROJECT: COPPERFIELD SOUTH | DATE: JUNE 1986 | IRON WOOD NORTH RECON. SAMPLING (1) | Gold Fields Exploration

GEOLOGIST: J. VANN

SAMPLE	DESCRIPTION	Au	Au R		As	Cu	Pb	Zn	Ag		
28	QIIS ; in creek bed	0.02			<100	116	239	433	<1		
29	QIIS ; with clay on joints, in creek bed	0.01	0.01		<100	62	39	75	<1		
T50830	QIVG and QVG ?axial float	0.02			<100	24	81	48	<1		
31	weakly sericitic sandstone ± minor FeOx veinlets	<0.01			<100	75	156	119	<1		
32	20cm QIIG apy 5m, ± specularite, vein strikes 220°	0.02			<100	67	112	67	<1		
33	QIIG apy, ± specularite & green mineral	0.01			<100	45	81	42	<1		
34	as per T50833	0.02	0.01		<100	19	38	23	<1		
35	as per T50833	0.06			<100	25	41	22	<1		
36	QIVG + QVG ?axial vein & veined sst. (Strike = 310°)	0.02			290	142	3270	710	<1		
37	as per T50836	0.03			<100	54	84	33	<1		
38	1m QIIG 5m //. vein is 310°/steep West.	0.01			<100	261	635	269	<1		
39	as per T50838	0.02			<100	487	108	92	<1		
T50840	STD: GC9	2.98	3.43		1320	278	66	56	<1		
41	altered, ferruginous sandstone.	0.04	0.07		<100	142	202	103	<1		
42	QIVG 15m // strike 308°	0.02			<100	140	175	42	<1		
43	as per T50842	0.01	0.02		<100	44	131	47	<1		
44	? saddle closure in QIIG, common float about	0.03			<100	30	36	14	<1		
45	QIIG strikes ~300°	0.01			<100	53	205	67	<1		
46	silty wall rock to T50847	SAMPLE		NOT	RECEIVED		BY	AAL			
47	1m chip across 350°/80E qtz clay zone in pit	0.04			1230	1120	3.15%	1230	<1		
48	15m chip along strike: highly altered ferruginous bed	0.01			220	114	1110	350	<1		

PROJECT: COPPERFIELD SOUTH GEOLOGIST: J.VANN	DATE: JUNE 1986	IRONWOOD NORTH (2)	Gold Fields Exploration

SAMPLE	DESCRIPTION	Au	Au R		As	Cu	Pb	Zn	Ag		
49	as per T50848 but 30m north, along strike	0.02			270	243	3940	1140	<1		
T50850	STD: PMY	0.03			<100	402	45	236	<1		
51	as per T50849	0.06			380	63	2020	498	<1		
52	as per T50849: 25m chip along strike. zone ~3m wide	0.03			280	107	6200	422	4		
53	2m QII G 10m // 340°/80°W	0.03			<100	22	148	38	<1		
54	10m chip of ? weakly altered sst/sltst strike=340°	<0.01			<100	228	1.98%	658	<1		
55	1m QII 10m // strike=340°	0.01			<100	114	1030	298	<1		
56	50cm QIV 5m // strike=350°	0.04			<100	20	175	34	<1		
57	2m QIV 20m // strike=310°	0.01			<100	101	2350	640	<1		
58	QII G float from 100m x100m area	0.01			<100	56	198	61	<1		
59	as per T50858	0.02			<100	42	98	112	<1		
T50860	STD: GC6	0.69	0.77		520	170	48	108	<1		
61	as per T50858	0.02			<100	31	195	65	<1		
62	QIV G 15m // (milky vein) strike=290°	0.02			<100	21	109	42	<1		
63	QIV G float	0.03	0.01		<100	39	49	19	<1		
64	QIV G float ? E-limb	0.01			<100	56	36	7	<1		
65	QIV G float	0.01			<100	23	77	15	<1		
66	5m chip across 085° striking altd sst. Dip unknown	0.04			<100	19	41	45	<1		
67	QV G float	0.01			<100	74	152	19	<1		
68	QV G float	0.01			<100	40	109	38	<1		
69	QII G float	0.01			<100	43	73	45	<1		

PROJECT: COPPERFIELD SOUTH | DATE: JUNE 1986 | Copper Show, FAULT "A" | Gold Fields Exploration

GEOLOGIST: J.VANN

SAMPLE	DESCRIPTION	Au	tue		As	Cu	Pb	Zn	Ag
T50870	STD: GC4	1.38			3880	262	45	203	<1
71	QV G grab, strikes 360°	0.03			<100	44	42	15	<1
72	altered, ferruginous wallrocks to T50871	0.04			<100	67	35	14	<1
73	as per T50872 but malachite-bearing (5-10%?)	0.02			<100	7.50%	25	8	<1
74	grab sample from dump: QV G ma py apy	SAMPLE NOT RECEIVED BY AAL							
75	hornfelsed ? tuff with minor qtz veinlets	0.02			<100	1350	105	62	<1
76	QV strikes ~090	<0.01			<100	71	40	12	<1

PROJECT: COPPERFIELD SOUTH GEOLOGIST: J.VANN	DATE: JUNE 1986	IRONWOOD SOUTH RECON. SAMPLING	Gold Fields Exploration

SAMPLE	DESCRIPTION	Au	Au R		As	Cu	Pb	Zn	Ag		
TS0877	1m QII G 15m // strikes @ 20°; ? W-limb	0.01			<100	44	220	41	<1		
78	QII float	<0.01			<100	53	107	76	<1		
79	QII G float	0.01			<100	19	36	17	<1		
TS0880	STD: GC6	0.68			630	181	46	107	<1		
81	weakly altered/veined sst. Bedding @ 360°, cleavage @ 310°	0.03			<100	217	44	21	<1		
82	5m wide zone of QII veining (@ 310°) Bedding @ 360°	0.01			<100	23	32	15	<1		
83	QI G	<0.01			<100	23	22	7	<1		
84	QII G	SAMPLE NOT RECEIVED BY AAL									
85	Altered sst; wallrock to TS0884	0.01			<100	47	46	41	<1		
86	QII G	0.02			200	42	50	24	<1		
87	QII G	0.01			<100	12	38	13	<1		
88	QII G	0.02			<100	15	32	16	<1		
89	1m QI strikes 360°, W-limb bedding // vein	0.01	<0.01		<100	54	88	51	<1		
TS0890	STD: GC4	1.22			3690	272	42	196	<1		
91	QI G	0.01	0.01		<100	14	38	35	<1		
92	(? hornfelsed) crystal-lithic ? rhyolitic tuff	0.03			<100	27	49	50	<1		
93	altd sst and QI G float	0.01			<100	15	40	14	<1		
94	QI G and ? tuffaceous sst wallrocks	0.01			<100	42	39	10	<1		
95	greenish altered limonitic sst c QII G	<0.01			<100	10	42	14	<1		
96	QI G 5m (line chip is E-W, o/c is circular)	0.04			<100	9	37	13	<1		
97	parallel (5m) Sample to TS0896	0.01			<100	19	46	23	<1		

PROJECT: COPPERFIELD SOUTH GEOLOGIST: J. VANN	DATE: JUNE 1986	IRONWOOD SOUTH	Gold Fields Exploration

SAMPLE	DESCRIPTION	Au	Au$_R$		As	Cu	Pb	Zn	Ag		
T50898	as per T50897	0.01			<100	19	36	14	<1		

APPENDIX 3

1:2,500 Mapping Assays

COPPERFIELD SOUTH, E.L.A. 4725

ROCK OUTCROP, SUBOUTCROP AND FLOAT CHIP SAMPLES

DESCRIPTIONS AND ASSAY RESULTS

Sample Number	Description	Assay Data Au	Ag	As	Cu	Pb	Zn
T51701	Suboutcrop: Vuggy, limonitic, often sugary quartz. Trace arsenopyrite	0.22	<1	510	54	100	34
T51702	Float: Strongly goethitic/ hematitic quartz	0.03	1	120	132	1260	91
T51703	Outcrop: Irregularly quartz veined greywacke	<0.01	<1	18	12	10	6
T51704	Outcrop: Quartz veined greywacke	0.01	<1	17	39	<5	5
T51705	Outcrop: As above	0.01	<1	15	25	<5	<2
T51706	Float: Quartz with limonite on fractures	0.01	<1	10	8	<5	9
T51707	Outcrop: Fine grained greywacke with small randomly oriented quartz veins	0.01	<1	15	20	<5	9
T51708	Float: Pale green to grey siliceous rock (chert)?	0.01	<1	23	25	12	19
T51709	Float: Quartz breccia with fragments of greywacke	<0.01	<1	18	18	<5	<2
T51710	Float: Quartz vein	0.01	<1	8	<2	9	13
T51711	Float: Quartz vein in greywacke. Locally strongly limonitic	0.83	1	1730	334	1390	78
T51712	Suboutcrop: Quartz-veined greywacke, siltstone. Patchy silicification	0.01	<1	38	25	15	6
T51713	Float: Quartz vein	0.01	<1	22	7	10	20
T51714	Float: Qtz vein. This type of float makes up 10% of the float here	0.14	5	130	81	225	40
T51715	Outcrop: 50cm wide sulphide bearing quartz vein	0.10	<1	150	74	141	33
T51716	Float: Quartz float	0.04	<1	20	17	17	11
T51717	Float: White quartz	0.01	<1	128	6	88	<2
T51718	Float: locally chloritic vein quartz	0.01	<1	12	10	19	18

		Au	Ag	As	Cu	Pb	Zn
T51719	Float: Quartz	0.02	<1	20	<2	10	7
T51720	Float: vein quartz with coarse, euhedral k-feldspar	0.02	<1	13	5	10	<2
T51721	Float: quartz	0.01	<1	6	9	9	9
T51722	As above	0.01	<1	8	11	9	5
T51723	As above. Locally strongly limonitic	0.02	<1	130	80	147	19
T51724	Float: veinquartz and brecciated, limonitic, silicified greywacke	0.01	<1	15	9	14	<2
T51725	Float: quartz and silicified brecciated greywacke	0.01	<1	28	18	14	<2
T51726	Float: white quartz. Occasionally strongly limonitic	0.02	1	52	46	351	72
T51727	As above	0.01	<1	37	49	138	22
T51728	As above	0.01	<1	11	12	18	17
T51729	As above	0.02	<1	11	11	6	6
T51730	Suboutcrop: strongly silicified quartz veined sandstone/greywacke local possible brecciation	0.01	<1	13	23	<5	<2
T51731	As above	0.04	<1	12	6	<5	<2
T51732	As above	0.01	<1	10	16	12	5
T51733	As above	0.02	<1	14	5	<5	<2
T51734	Float: quartz	0.03	<1	<2	8	7	<2
T51735	Float: strongly limonitic coarsely crystalline or sugary quartz	0.02	<1	<2	6	6	<2
T51736	Float: quartz with limonite hematite, specularite	0.07	<1	51	13	12	15
T51737	As above	0.05	<1	55	17	13	8
T51738	As above	0.04	<1	57	13	14	7
T51739	Outcrop: grey coloured goethitic, hematitic quartz vein	0.43	<1	120	65	303	44
T51740	As above	0.04	<1	142	36	17	40
T51741	Outcrop: limonitic quartz vein	0.29	<1	55	12	19	9
T51742	Suboutcrop: pale grey limonitic quartz vein	0.33	<1	51	10	12	15

		Au	Ag	As	Cu	Pb	Zn
T51743	As above. Local euhedral quartz	0.13	<1	73	16	35	7
T51744	Suboutcrop: locally pale grey quartz	0.03	<1	19	10	10	8
T51745	Outcrop: 1 metre quartz vein folded. Sampled along 20 metres of strike length	0.05	<1	74	18	156	15
T51746	Suboutcrop: quartz vein	0.04	<1	87	12	14	9
T51747	Suboutcrop: medium grey coloured, weakly limonitic quartz vein, 2 metres wide	0.11	<1	119	43	1150	116
T51748	Outcrop: 0.5 metre wide quartz vein offset by several minor faults, and probably folded	3.86	<1	87	83	137	20
T51749	As above. Faults not noticed here	0.45	<1	87	75	93	21
T51750	As above	0.56	<1	153	65	223	35
T51751	Suboutcrop: 50cm quartz vein	0.13	<1	105	68	171	27
T51752	Outcrop: same vein as T51751	0.13	<1	85	60	250	31
T51753	Float: quartz	0.06	<1	123	26	26	23
T51754	Float: quartz vein rubble	0.01	<1	104	23	84	20
T51755	As above	0.49	<1	78	18	49	21
T51756	Suboutcrop: 3 one metre wide quartz veins	0.02	<1	13	7	11	18
T51757	Float: quartz	0.04	<1	19	8	7	9
T51758	Float: quartz, strongly limonitic	0.07	<1	103	20	34	24
T51759	Suboutcrop: quartz, moderate limonite	0.05	<1	20	16	19	11
T51760	Suboutcrop: quartz, strongly limonitic	0.02	<1	14	41	21	9
T51761	Outcrop: 30cm limonitic quartz vein	0.02	<1	11	9	5	11
T51762	Suboutcrop: quartz moderate limonite	0.03	<1	15	16	6	9
T51763	Suboutcrop: quartz veined greywacke	0.03	<1	51	8	18	30
T51764	Suboutcrop: as above	0.04	<1	85	30	11	34
T51765	Suboutcrop: Brecciated, silicified, veined greywacke	0.02	<1	9	7	11	12

		Au	Ag	As	Cu	Pb	Zn
T51766	Suboutcrop: strongly veined silicified, possibly brecciated greywacke	0.03	<1	9	10	6	7
T51767	Suboutcrop: strongly quartz veined greywacke	0.03	<1	12	15	8	9
T51768	As above	0.04	<1	16	14	6	8
T51769	Suboutcrop: quartz vein, breccia	0.04	<1	20	18	9	8
T51770	Suboutcrop: moderately veined greywacke	0.02	<1	9	12	14	16
T51771	Float: white quartz	0.03	<1	4	6	5	<2
T51772	Outcrop: greywacke, moderately veined	0.01	<1	6	<2	10	11
T51773	Outcrop: 1 metre wide, moderately to strongly limonitic quartz vein	0.02	<1	5	6	7	13
T51774	Suboutcrop: moderately to strongly veined greywacke. Slickensides	0.03	<1	6	5	10	14
T51775	Suboutcrop: two quartz veins	0.01	<1	7	7	11	8
T51776	Float: quartz with common dark green mineral	0.01	<1	7	10	14	14
T51777	Outcrop: 30cm moderately limonitic quartz vein. Common dark green mineral	<0.01	<1	8	12	13	15
T51778	Float: quartz vein minor greywacke	0.01	<1	8	11	54	64
T51779	Outcrop: strongly silicified moderately veined greywacke	<0.01	<1	14	93	13	22
T51780	Suboutcrop: weakly to moderately veined greywacke	0.02	<1	9	6	26	5
T51781	Float: quartz	<0.01	<1	5	5	9	6
T51782	As above	0.01	<1	50	25	189	27
T51783	As above, local specularite	0.01	<1	7	9	13	<2
T51784	Float: quartz	0.01	<1	7	7	12	<2
T51785	As above, locally may contain tourmaline	<0.01	<1	8	8	9	5
T51786	Float: quartz with minor dark green sucrosic mineral	0.02	<1	7	12	19	13

		Au	Ag	As	Cu	Pb	Zn
T51787	Float: white quartz	<0.01	<1	7	7	9	<2
T51788	Float: quartz, locally with potassium feldspar	<0.01	<1	8	11	18	9
T51789	Outcrop: strongly veined greywacke	<0.01	<1	9	7	147	5

APPENDIX 4

1:1,000 Mapping Assays

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: MAY 1986
GEOLOGIST: J. VANN

LINE CHIPS OUTCROP & FLOAT } WOOLLYBUTT GRID
NEAR 11,000N, 9400E

SAMPLE		Au	AuR		As	Cu	Pb	Zn	Ag		
T50950	rockchip A1	0.01			<100	31	50	11	<1		
S1	A2	0.02			130	48	23	10	<1		
S2	B	0.01			<100	18	27	9	<1		
S3	C	0.08			320	31	93	20	<1		
S4	D1	0.04			<100	14	39	13	<1		
S5	D2	0.03			<100	13	29	8	<1		
S6	D3	0.01			<100	10	21	8	<1		
S7	D4	0.02			100	12	26	21	<1		
S8	D5	0.25			<100	13	37	15	<1		
S9	D6	0.04			<100	9	21	10	<1		

ALL SAMPLES TYPE IV & TYPE II QTZ, FOR LOCATIONS SEE PLATE 3 1:1000 GEOLOGICAL PLAN.

APPENDIX 5

First Trenching Program Assays

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: MAY 1986
GEOLOGIST: J. VANN

TRENCH 1.

SAMPLE	metres	Au	AuR	Au_{R_2}	As	Cu	Pb	Zn	Ag		
TS0701	0-5	0.05	0.07	0.06	140	6	31	49	<1		
02	5-10	0.03		0.03	280	11	16	<2	<1		
03	10-15.2	0.02		0.02	200	31	15	8	<1		
04	15.2-20	0.04		0.09	350	414	18	22	<1		
05	20-25	0.03		0.03	280	65	21	12	<1		
06	25-30	0.02		0.01	220	32	15	2	<1		
07	30-35	0.01		0.01	230	24	60	25	<1		
08	35-40	0.04		0.02	320	34	25	29	<1		
09	40-45	0.03		0.09	350	37	39	36	<1		
TS0710	STD: GC4	0.09		1.40	3750	202	18	164	<1		
11	45-50	0.03		0.03	370	14	21	13	<1		
12	50-55	0.03		0.02	340	41	20	13	<1		
13	55-60	0.13		0.05	510	60	74	8	<1		
14	55-56	0.02		0.05	480	44	24	15	<1		
15	56-57	0.02		0.01	340	28	25	7	<1		
16	57-58	0.46		0.45	460	54	101	8	<1		
17	58-59	0.05	0.03	0.05	590	63	76	8	<1		
18	59-60	0.06		0.03	530	54	42	13	<1		
19	14.2-15.5	0.07		0.04	240	35	238	21	<1		
TS0720	STD: GC9	0.08		3.30	1350	227	38	26	<1		
21	23.5-24.5	0.10		0.11	230	13	12	<2	<1		
22	31.5-32.5	0.02		0.01	<100	<2	49	<2	<1		
23	36.5-37.5	0.04		0.01	130	<2	38	6	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: MAY 1986
GEOLOGIST: J.VANN

TRENCH 1 EXTENDED ("T - 1A")

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
TS0996	0-5	0.08			270	91	57	22	<1		
97	5-10	0.13	0.10		290	77	54	21	<1		
98	10-15	0.18	0.13		120	72	59	21	<1		
99	15-20	0.05	0.08		<100	58	54	21	<1		
TS1000	STD: GC4	1.34			3540	252	42	188	<1		
TS0801	20-25	0.05			130	50	141	21	<1		
02	25-30	0.02			100	45	50	22	<1		
03	30-35	0.01			130	48	61	26	<1		
04	35-40	0.03			330	49	52	21	<1		
05	40-45	0.07			1600	59	58	22	<1		
06	45-50	0.08			1350	53	56	23	<1		
07	50-55	0.06	0.06		950	59	101	71	<1		
08	55-60	0.02			960	70	51	49	<1		
09	60-65	0.05			670	26	45	41	<1		
TS0810	STD: PHY	0.03			<100	356	52	228	<1		
11	65-70	0.05			390	33	38	39	<1		
12	70-74	0.08	0.08		460	38	45	37	<1		
TS0816	5.5 - 8.5	0.09			240	39	245	23	<1		
TS0949	"vein1"	0.07			230	31	39	20	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: MAY 1986
GEOLOGIST: J. VANN

TRENCH 2

SAMPLE	metres	Au	AuR	AuR_2	As	Cu	Pb	Zn	Ag		
T50724	0-5	0.03	0.03	0.01	210	5	20	24	<1		
25	5-10	0.03		0.02	300	11	31	24	<1		
26	10-15	0.07		0.09	450	9	23	7	<1		
27	15-20	0.17		0.12	1340	127	40	10	<1		
28	20-25	0.52		0.61	1810	183	125	32	<1		
29	25-30	0.17		0.22	1380	32	12	35	<1		
T50730	STD: GC6	0.87		0.71	720	142	24	76	<1		
31	30-35	0.14		0.15	1310	2	10	26	<1		
32	35-40	0.49		0.39	1150	62	27	108	<1		
33	40-45	0.12		0.09	1230	59	225	95	<1		
34	45-50	0.56		0.59	2310	64	68	15	<1		
35	50-55	0.24	0.16	0.19	2290	101	23	23	<1		
36	55-60	0.14		0.14	920	8	6	40	<1		
37	60-65	0.25		0.24	670	4	35	36	<1		
38	65-70	1.03		0.09	460	2	9	21	<1		
39	70-75	0.24		0.17	650	12	23	25	<1		
T50740	STD: PHY	0.04		0.02	110	304	22	205	<1		
41	75-80	0.03		0.03	370	7	15	31	<1		
42	80-85	0.06		0.03	270	<2	9	19	<1		
43	85-90	0.06		0.03	230	<2	5	13	<1		
44	90-95	0.09		0.05	440	4	11	11	<1		
45	95-100	0.04	0.06		280	<2	13	22	<1		
46	100-105	0.03			210	<2	20	35	<1		
47	105-110	0.05			270	<2	10	22	<1		
48	110-115	0.04			160	2	10	20	<1		
49	115-120	0.10			280	3	11	3	<1		
T50750	STD: GC9	3.30			1410	223	45	26	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: MAY 1986
GEOLOGIST: J.VANN

TRENCH 3

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
TS0751	0-5	0.05			<100	2	11	27	<1		
52	5-10	0.05			<100	2	15	29	<1		
53	10-15	0.03			110	3	13	28	<1		
54	15-20	0.11			160	26	34	32	<1		
55	20-25	0.06	0.06		140	31	16	17	<1		
56	25-30	0.05			200	43	40	72	<1		
57	30-35	0.18			270	158	705	193	<1		
58	35-40	0.20			280	53	83	58	<1		
59	40-45	0.25			1210	42	164	50	<1		
TS0760	STD: GC6	0.67			600	148	27	78	<1		
61	45-50	0.07			350	3	25	3	<1		
62	50-55	0.30			500	103	48	26	<1		
63	55-60	0.05			120	8	12	16	<1		
64	60-65	0.05			140	43	23	26	<1		
65	65-70	0.06			160	29	25	21	<1		
66	70-75	0.04			110	27	47	18	<1		
67	75-80	0.12			330	45	74	6	<1		
68	80-85	0.04			120	26	95	39	<1		
69	85-90	0.03	0.02		100	24	44	22	<1		
TS0770	STD: PHY	0.04			<100	302	17	192	<1		
71	90-95	0.02			<100	12	17	30	<1		
72	95-100	0.04	0.03		110	18	28	18	<1		
73	STD: GC4	1.40			—	—	—	—	—		
74	STD: GC6	0.71			—	—	—	—	—		
75	STD: GC9	3.30			—	—	—	—	—		
76	41.0-42.5	5.30			1.68%	221	1060	78	2		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: MAY 1986
GEOLOGIST: J. VANN

TRENCH 4

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
TS0777	0-5	0.13	0.12		300	86	36	61	1		
78	5-10	0.18			220	51	21	53	1		
79	10-15	0.03			110	46	30	49	<1		
TS0780	STD: GC6	0.70			580	138	35	95	<1		
81	15-20	0.07			140	49	10	43	1		
82	20-25	0.06			140	85	28	43	<1		
83	25-30	0.01	0.02		120	46	24	34	<1		
84	30-35	0.06	0.04		<100	57	25	49	<1		
85	35-40	0.02			110	36	19	38	<1		
86	40-45	0.01			<100	104	25	66	1		
87	45-50	0.01			<100	58	21	35	<1		
88	50-55	0.03			<100	48	24	41	<1		
89	55-60	0.04			<100	94	32	56	<1		
TS0790	STD: GC4	1.23			3420	223	28	185	<1		
91	60-65	0.04			<100	86	26	78	<1		
92	65-70	0.03			<100	70	34	59	<1		
93	70-75	0.03			<100	72	72	65	<1		
94	75-80	0.09			<100	93	74	68	<1		
95	80-85	0.08			<100	63	42	39	<1		
96	85-90	0.05			<100	45	76	45	<1		
97	90-95	0.02			<100	89	58	70	<1		
98	95-100	0.01	0.01		<100	72	53	54	<1		
99	100-105	0.03			<100	109	49	50	<1		
TS0800	STD: GC4	1.41			3390	259	44	186	<1		
TS0901	105-110	0.05			<100	121	79	76	<1		
02	110-115	0.02			<100	155	149	81	<1		
03	115-120	0.05	0.03		<100	123	48	71	<1		
04	120-125	0.02			<100	91	42	92	<1		
05	125-130	0.03			180	145	575	159	<1		
06	130-135	0.03			320	585	199	138	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: MAY 1986
GEOLOGIST: J. Vann

TRENCH 4

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
TS0907	135 - 140	0.05			210	113	46	101	<1		
08	140 - 145	0.03			290	448	420	252	<1		
TS0813	"vein 1"	0.04			390	247	680	213	<1		
TS0814	"vein 2"	0.05			260	68	490	72	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: MAY 1986
GEOLOGIST: J. VANN

TRENCH 5

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
TS0909	0-5	0.76	0.83		580	104	29	43	<1		
TS0910	STD : PHY	0.07			140	356	29	219	<1		
11	5-10	0.60			1080	130	45	52	<1		
12	10-15	0.11			410	105	95	82	<1		
13	15-20	0.06			450	59	59	46	<1		
14	20-25	0.03			130	47	24	34	<1		
15	25-30	0.03	0.03		100	44	151	55	<1		
16	30-35	0.09			160	81	123	64	<1		
17	35-40	0.03			110	61	117	57	<1		
18	40-45	0.09			140	86	122	75	<1		
19	45-50	0.07			240	64	315	81	<1		
TS0920	STD : PHY	0.05			<100	336	30	228	<1		
21	50-55	0.01			<100	45	31	31	<1		
22	55-60	0.06			100	32	33	15	<1		
23	60-65	0.05			<100	48	43	25	<1		
24	65-70	0.03			<100	60	28	40	<1		
25	70-75	0.05	0.08		350	87	75	59	<1		
26	75-80	0.03			220	50	20	41	<1		
27	80-85	0.03			210	51	22	71	<1		
28	85-90	0.02			<100	44	18	82	<1		
29	90-95	0.02			1260	76	20	58	1		
TS0930	STD : GC9	3.80			<100	246	46	52	<1		
31	95-100	0.06			<100	74	26	115	<1		
32	100-105	0.05			100	52	21	105	<1		
33	105-110	0.06			210	54	21	80	<1		
34	110-115	0.13			1230	103	126	121	<1		
35	115-120	0.07			440	72	46	79	<1		
36	120-125	0.12			460	65	58	62	<1		
37	125-130	0.13	0.10		340	131	112	82	<1		
38	130-135	0.07			160	74	300	62	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: MAY 1986
GEOLOGIST: J. VANN

TRENCH 5

2

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
39	135-140	0.16			170	54	65	31	<1		
TS0940	STD: GC4	1.40			3450	248	23	177	<1		
41	140-145	0.05			110	56	29	23	<1		
42	145-150	0.02			<100	51	26	41	<1		
43	150-155	0.13			120	53	29	24	<1		
44	155-160	0.04			100	33	26	47	<1		
45	160-165	0.04			<100	26	42	52	<1		
46	165-170	0.03			100	39	99	39	<1		
47	170-175	0.07			210	54	42	32	<1		
48	175-180	0.10	0.09		<100	31	28	46	<1		
TS0815	"vein 1"	1.19	1.28		190	119	112	22	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: MAY 1986
GEOLOGIST: J. VANN

TRENCH 6

SAMPLE	METRES	Au	AuR		As	Cu	Pb	Zn	Ag		
T50960	STD : GC6	0.74			710	170	55	99	<1		
61	0-5	0.03			110	51	53	58	<1		
62	5-10	0.03			270	56	55	43	<1		
63	10-15	0.04			360	69	54	75	<1		
64	15-20	0.51	0.45		1760	114	246	33	<1		
65	20-25	1.69	2.13		2650	128	61	50	<1		
66	25-30	0.14	0.14		910	80	55	48	<1		
67	30-35	0.14			780	110	93	93	<1		
68	35-40	0.12			260	41	47	29	<1		
69	40-45	0.08			170	53	52	31	<1		
T50970	STD : PHY	0.04			<100	403	61	235	<1		
71	45-50	0.05			<100	46	49	44	<1		
72	50-55	0.06			<100	58	59	75	<1		
73	55-60	0.05			<100	42	58	54	<1		
74	60-65	0.09			<100	48	60	43	<1		
75	65-70	0.12			120	63	71	47	<1		
76	70-75	0.11	0.05		130	54	62	48	<1		
77	75-80	0.07	0.04		<100	55	51	33	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: MAY 1986
GEOLOGIST: J. VANN

TRENCH 7

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
TS0978	0-5	0.04			<100	33	43	34	<1		
79	5-10	0.05			<100	34	57	36	<1		
TS0980	STD: GC9	4.20			1280	247	58	44	<1		
81	10-15	0.05			<100	33	51	39	<1		
82	15-20	0.02			110	41	78	71	<1		
83	20-25	0.12			320	57	43	42	<1		
84	25-30	0.33	0.28		780	104	93	25	<1		
85	30-35	0.05			280	28	27	17	<1		
86	35-40	0.03	0.03		290	22	19	19	<1		
87	40-45	0.03			220	27	32	22	<1		
88	45-50	0.11			470	46	54	36	<1		
89	50-55	0.13	0.10		560	36	53	35	<1		
TS0990	STD: GC6	0.80			560	171	52	100	<1		
91	55-60	0.03			240	30	36	28	<1		
92	60-65	0.03			230	35	38	30	<1		
93	65-70	0.04			<100	24	34	34	<1		
94	70-75	0.02			<100	26	31	28	<1		
95	75-80	0.01			130	48	30	24	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: OCTOBER 1986
GEOLOGIST: J. VANN

TRENCH 5 / TRENCH 2
(resampling)

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
QS4901	110 – 111	0.15			480	59	191	72	<1	T-5	
QS4902	111 – 112	0.10			360	50	200	51	<1	T-5	
QS4903	112 – 113	0.27	0.29		1430	65	128	109	<1	T-5	
	TRENCH 2										
QS4904	28 – 30	0.36			1600	47	42	52	<1	T-2	
QS4905	30 – 32	0.19			1890	47	37	56	<1	T-2	
QS4906	32 – 34	0.17			1060	30	28	53	<1	T-2	
QS4907	34 – 36	0.14	0.11		600	45	25	89	<1	T-2	
QS4908	36 – 38	0.14			890	58	35	126	<1	T-2	
QS4909	38 – 40	0.15			1100	116	46	189	<1	T-2	
QS4910	STD : GC4	1.48			3800	247	36	198	<1		
QS4911	40 – 42	0.10			970	87	117	124	<1	T-2	
QS4912	42 – 44	0.18			1290	68	399	62	<1	T-2	
QS4913	44 – 46	0.51	0.72		960	98	287	42	<1	T-2	
QS4914	46 – 48	0.22	0.30		570	46	82	28	<1	T-2	
QS4915	48 – 50	0.07	0.06		870	41	32	16	<1	T-2	
QS4916	50 – 52	0.41			2800	118	38	33	<1	T-2	
QS4917	52 – 54	0.21			2600	229	46	42	<1	T-2	
QS4918	54 – 56	0.48			1410	76	23	65	<1	T-2	
QS4919	STD : GC9	3.24			1690	252	58	49	<1		
QS4920	56 – 58	0.16	0.19		930	41	24	85	<1	T-2	
QS4921	58 – 60	0.81	0.75		610	33	29	56	<1	T-2	
QS4922	60 – 62	0.15			370	23	24	64	<1	T-2	
QS4923	62 – 64	0.10			600	32	22	59	<1	T-2	
QS4924	64 – 66	0.08			410	33	20	34	<1	T-2	
QS4925	66 – 68	0.17			180	10	19	29	<1	T-2	
QS4926	68 – 70	0.05			390	23	22	37	<1	T-2	

APPENDIX 6

Second Trenching Program Assays

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: OCTOBER 1986
GEOLOGIST: J. VANN

TRENCH 1
EXTENDED (DEEPENED)

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
Q42401	40 - 45	0.02			310	64	51	64	<1		
Q42402	45 - 50	0.02	0.01		230	14	26	32	<1		
Q42403	50 - 55	0.02			360	77	30	36	<1		
Q42404	55 - 60	0.03			320	48	32	53	<1		
Q42405	60 - 65	0.02			400	35	31	42	<1		
Q42406	65 - 70	0.03			590	88	62	36	<1		
Q42407	70 - 75	0.03			390	69	49	29	<1		
Q42408	75 - 80	0.04			560	66	50	30	<1		
Q42409	80 - 85	0.03			370	59	120	24	<1		
Q42410	STD: GC4	1.40			4000	249	39	197	<1		
Q42411	85 - 90	0.02			480	86	40	32	<1		
Q42412	90 - 95	0.02	0.01		300	21	22	36	<1		
Q42413	95 - 100	0.07			420	26	27	54	<1		
Q42414	100 - 105	0.03			810	52	39	26	<1		
Q42415	105 - 110	0.02			1210	38	40	27	<1		
Q42416	110 - 115	0.03			590	36	42	54	<1		
Q42417	115 - 120	0.02			670	47	32	68	<1		
Q42418	120 - 125	0.02			370	17	29	46	<1		
Q42419	125 - 130	0.01			240	12	22	37	<1		
Q42420	130 - 135	0.04			450	22	36	45	<1		
Q42421	STD: PHY	0.04	0.04		160	373	34	232	<1		
	Nb: no sample		0-	40m							

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPER FIELD SOUTH
DATE: OCTOBER 1986
GEOLOGIST: J. VANN

TRENCH "A"

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
Q42422	alluvium grab sample @ ~140m	0.01			140	17	42	21	<1		
Q42423	0 - 5	0.01			160	32	26	25	<1		
Q42424	5 - 10	0.01			330	40	27	18	<1		
Q42425	10 - 15	0.01			270	54	34	26	<1		
Q42426	15 - 20	0.01			130	145	33	21	<1		
Q42427	20 - 25	0.01			320	257	310	24	<1		
Q42428	25 - 30	<0.01			210	81	42	29	<1		
Q42429	STD: CPD	0.50			1390	142	53	51	<1		
Q42430	30 - 35	0.15			310	45	38	25	<1		
Q42431	35 - 40	0.02	0.02		210	62	34	30	<1		
Q42432	40 - 45	0.02			430	130	24	24	<1		
Q42433	45 - 50	0.02			310	107	67	75	<1		
Q42434	50 - 55	0.01			300	44	31	55	<1		
Q42435	55 - 60	0.04			620	96	26	26	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: OCTOBER 1986
GEOLOGIST: J. VANN

TRENCH "B"

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
Q42436	2.5-5.0	0.06	0.09		530	61	198	84	<1		
Q42437	5-10	0.09			570	102	44	57	<1		
Q42438	10-15	0.30			590	59	36	53	<1		
Q42439	15-20	0.08			540	74	27	72	<1		
Q42440	STD: GC9	3.18			1690	271	59	48	<1		
Q42441	20-25	0.12			300	46	40	74	<1		
Q42442	25-30	0.02			210	42	26	49	<1		
Q42443	30-35	0.06			150	34	27	58	<1		
Q42444	35-40	0.08			210	40	26	53	<1		
Q42445	40-45	0.05			260	90	32	62	<1		
Q42446	45-50	0.03			340	49	27	44	<1		
Q42447	50-52	0.06			410	67	70	145	<1		
Q42448	52-54	0.02			350	98	34	50	<1		
Q42449	54-56	0.13			370	172	20	38	<1		
Q42450	56-58	0.07			330	62	16	42	<1		
Q42451	STD: PHY	0.08			210	358	38	234	<1		
Q42452	58-60	0.09	0.09		400	57	32	40	<1		
Q42453	60-62	0.43	0.43		700	102	21	39	<1		
Q42454	62-64 N	0.36	0.45		1530	166	39	57	<1		
Q42455	62-64 S	0.58	0.51		1150	128	49	70	<1		
Q42456	64-66 N	0.29			620	94	26	52	<1		
Q42457	64-66 S	0.28			910	73	25	42	<1		
Q42458	66-68 N	0.63			1930	157	31	48	<1		
Q42459	66-68 S	1.10	0.86		7800	156	54	36	<1		
Q42460	STD: CPD	0.52			1400	144	36	49	<1		
Q42461	68-70 N	0.99	0.92		1.39%	94	31	37	<1		
Q42462	68-70 S	0.40			1880	82	18	24	<1		
Q42463	70-72 N	0.14			1060	94	22	45	<1		
Q42464	70-72 S	0.16			950	81	23	45	<1		
Q42465	72-74	0.09			790	94	21	67	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: OCTOBER 1986
GEOLOGIST: J. VANN

TRENCH "B"

2

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
Q42466	74-76	0.19			640	83	31	98	<1		
Q42467	76-78	0.10			630	92	56	87	<1		
Q42468	78-80	0.09			610	72	17	41	<1		
Q42469	80-82	0.16			340	49	23	36	<1		
Q42470	82-84	0.13			450	88	24	39	<1		
Q42471	STD: GC9	3.14			1750	279	63	52	<1		
Q42472	84-86	0.12			210	52	24	40	<1		
Q42473	86-88	0.09			300	48	28	43	<1		
Q42474	88-90	0.14	0.16		1110	307	56	73	<1		
Q42475	90-95	0.15			310	40	23	37	<1		
Q42476	95-100	0.06			880	64	29	38	<1		
Q42477	100-105	0.02			370	40	19	42	<1		
Q42478	105-110	0.02			230	41	23	48	<1		
Q42479	STD: GC4	1.29			3300	261	26	209	<1		
Q42480	110-117	0.08	0.07		1250	76	24	56	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: OCTOBER 1986
GEOLOGIST: J. VANN

TRENCH "C"

SAMPLE	metres	Au	Au R		As	Cu	Pb	Zn	Ag		
Q42481	2-5	0.06			210	72	34	12	<1		
Q42482	5-10	0.08			520	142	53	63	<1		
Q42483	10-15	0.10			210	132	46	29	<1		
Q42484	15-20	0.09	0.08		200	96	37	74	<1		
Q42485	20-25	0.10			160	87	36	62	<1		
Q42486	25-30	0.27	0.34		140	213	37	30	<1		
Q42487	30-35	0.13			540	95	181	24	<1		
Q42488	35-40	0.05			160	94	54	23	<1		
Q42489	40-45	0.10			260	86	62	15	<1		
Q42490	STD: PHY	0.07			170	360	46	224	<1		
Q42491	45-50	0.03			220	114	72	57	<1		
Q42492	50-55	0.03			270	95	355	17	<1		
Q42493	55-60	0.05			150	119	65	12	<1		
Q42494	60-65	0.03			130	131	52	12	<1		
Q42495	65-70	0.04			240	71	40	6	<1		
Q42496	70-75	0.04			440	60	62	7	<1		
Q42497	75-80	0.04			210	52	41	7	<1		
Q42498	80-85	0.09	0.04		190	55	30	4	<1		
Q42499	85-90	0.07	0.09		180	81	34	7	<1		
Q42500	STD: CPD	0.48			1290	139	44	43	<1		
Q42501	90-95	0.06			230	91	45	12	<1		
Q42502	95-100	0.05			310	114	49	13	<1		
Q42503	100-105	0.03			170	73	42	14	<1		
Q42504	105-110	0.15			260	134	35	66	<1		
Q42505	110-115	0.03			120	42	38	64	<1		
Q42506	115-120	0.05			110	32	32	94	<1		
Q42507	120-125	0.03	0.03		400	35	27	38	<1	←	
Q42508	125-130	0.03			180	105	36	60	<1		
Q42509	130-135	0.19			<100	62	34	64	<1		
Q42510	STD: GC9	2.98			1710	267	62	46	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: OCTOBER 1986
GEOLOGIST: J. VANN

TRENCH "C"

SAMPLE	metres	Au	Au R		As	Cu	Pb	Zn	Ag		
Q42511	135 - 140	0.05			380	61	53	46	<1		
Q42512	140 - 145	0.04			180	32	30	8	<1		
Q42513	145 - 150	0.03			<100	68	61	56	<1		
Q42514	150 - 155	0.03			<100	39	86	64	<1		
Q42515	155 - 160	0.04			130	78	151	90	<1		
Q42516	160 - 165	0.05			200	68	92	92	<1		
Q42517	165 - 170	0.06			310	45	55	34	<1		
Q42518	170 - 175	0.03			140	86	56	50	<1		
Q42519	175 - 180	0.04	0.05		200	73	34	92	<1		
Q42520	180 - 182	0.05			240	96	33	66	<1		
Q42521	STD: GC4	1.33			4050	256	29	204	<1		
Q42522	182 - 184	0.05			530	91	28	37	<1		
Q42523	184 - 185 *	sample		not	received by A.A.L.						
Q42524	186 - 187 *	0.67	0.57		730	35	18	22	<1		
Q42525	188 - 189 *	0.36			530	36	97	41	<1		
Q42526	190 - 192	1.97			2960	94	62	51	<1		
Q42527	192 - 194	0.24	0.23		1250	78	43	46	<1		
Q42528	194 - 196	0.10			690	48	28	31	<1		
Q42529	STD: CPD	0.46			1210	139	50	47	<1		
Q42530	196 - 198	0.07			450	112	30	74	<1		
Q42531	198 - 200	0.17			640	242	760	176	<1		
Q42532	185 - 186	0.40			2090	119	43	35	<1		
Q42533	187 - 188	0.48			1850	62	475	107	<1		
Q42534	189 - 190	3.40			4500	165	32	132	<1		
Q42535	154 - 155	0.03			190	66	142	52	<1		
Q42536	138 - 139	0.03			520	57	40	6	<1		
Q42537	16 - 18	0.08			280	148	31	29	<1		
Q42538	18 - 20	0.06	0.04		170	94	54	81	<1		
Q42539	20 - 22	0.15			130	72	16	32	<1		
Q42540	22 - 24	0.04			100	66	24	38	<1		

* "missing" samples are @ Q42532 → Q42534

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: OCTOBER 1986
GEOLOGIST: J.VANN.

TRENCH "C"

3

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
Q42541	STD: GC4	1.50			3850	245	52	201	<1		
Q42542	72 - 74	0.05			450	86	39	10	<1		
Q42543	74 - 76	0.03			330	66	226	32	<1		
Q42544	76 - 78	0.02	0.01		290	93	199	39	<1		
Q42545	78 - 80	0.01			180	44	37	7	<1		
Q42546	80 - 82	0.01			<100	42	31	4	<1		
Q42547	82 - 84	0.01			200	45	21	5	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: OCTOBER 1986
GEOLOGIST: J. VANN

TRENCH "D"

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
Q42548	2.5 – 5.0	0.03			210	79	52	38	<1		
Q42549	5 - 10	0.02			350	57	47	43	<1		
Q42550	STD: PHY	0.03			230	357	62	221	<1		
Q42551	10 – 15	0.06	0.10		210	92	74	49	<1		
Q42552	15 - 20	0.02			260	93	160	108	<1		
Q42553	20 - 25	0.01			190	56	52	55	<1		
Q42554	25 - 30	0.01			230	51	49	24	<1		
Q42555	30 - 35	0.01			240	44	45	22	<1		
Q42556	35 - 40	0.02			220	34	67	53	<1		
Q42557	40 - 45	0.01			200	22	48	38	<1		
Q42558	45 - 50	0.01			190	21	52	40	<1		
Q42559	STD: CPD	047			1310	137	61	49	<1		
Q42560	50 - 55	0.04	0.02		310	42	62	51	<1		
Q42561	55 - 60	0.02			260	32	53	26	<1		
Q42562	60 - 65	0.02			240	39	54	23	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: OCTOBER 1986
GEOLOGIST: J. VANN

TRENCH "E"

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
Q42563	5-10	0.08			630	56	44	45	<1		
Q42564	10-15	0.05			320	23	35	44	<1		
Q42565	15-20	0.04			180	50	39	72	<1		
Q42566	20-25	0.04			140	104	124	108	<1		
Q42567	25-30	0.05	0.04		140	48	35	60	<1		
Q42568	30-35	0.14			150	61	26	65	<1		
Q42569	35-40	0.03			110	38	33	64	<1		
Q42570	40-45	0.04			100	42	25	41	<1		
Q42571	STD: PHY	0.07			<100	303	36	205	<1		
Q42572	45-50	0.04			<100	115	41	102	<1		
Q42573	50-55	0.03			<100	28	24	35	<1		
Q42574	55-60	0.02	0.01		130	32	47	56	<1		
Q42575	60-65	0.03			110	22	23	59	<1		
Q42576	65-70	0.02			<100	21	28	78	<1		
Q42577	70-75	0.03			110	27	25	56	<1		
Q42578	75-80	0.03			<100	28	23	66	<1		
Q42579	4-5	0.08			460	50	58	57	<1		
Q42580	STD: CPD ? →	0.86			1250	122	37	47	<1		
Q42581	5-6	0.09			370	31	32	47	<1		
Q42582	6-7	0.07			520	61	33	52	<1		
Q42583	7-8	0.10			470	73	120	49	<1		
Q42584	18-19	0.03			110	41	42	82	<1		
Q42585	19-20	0.02			110	75	47	108	<1		
Q42586	20-21	0.04			<100	57	62	35	<1		
Q42587	21-22	0.03	0.03		150	184	670	170	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: OCTOBER 1986
GEOLOGIST: J. JANN

TRENCH "F"

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
Q42588	5-10	0.36			130	86	48	56	<1		
Q42589	10-15	0.03			130	58	50	76	<1		
Q42590	15-20	0.02			<100	54	42	72	<1		
Q42591	STD : GC9	2.97			1550	265	67	52	<1		
Q42592	20-25	0.02			<100	48	39	50	<1		
Q42593	25-30	0.03			<100	99	50	72	<1		
Q42594	30-35	0.02			400	42	51	47	<1		
Q42595	35-40	0.02	0.02		390	40	43	52	<1		
Q42596	40-45	0.02			430	74	79	126	<1		
Q42597	45-50	0.02			210	52	38	62	<1		
Q42596	50-55	0.03			300	42	52	58	<1		
Q42597	55-60	0.03			260	41	34	37	<1		
Q42600	STD: GC4	1.36	1.44		3980	239	39	198	<1		

APPENDIX 7

Drilling Assays

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. VANN

PDH 1

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
QS6001	1-2	0.07	0.03		230	28	12	22	<1		
QS6002	2-3	0.16			910	119	42	21	<1		
QS6003	3-4	0.07			630	26	52	21	<1		
QS6004	4-5	0.65			1650	105	257	32	<1		
QS6005	5-6	0.60			2530	129	188	97	<1		
QS6006	6-7	0.23			1900	114	137	119	<1		
QS6007	7-8	0.29			1790	165	234	145	<1		
QS6008	8-9	0.19			1880	138	143	175	<1		
QS6009	9-10	0.23	0.16		2000	130	95	200	<1		
QS6010	STD: GC4	1.41			3550	242	23	192	<1		
QS6011	10-11	0.30			1290	105	46	175	<1		
QS6012	11-12	0.26			2470	275	59	179	<1		
QS6013	12-13	0.18			2930	167	41	57	<1		
QS6014	13-14	0.29			3240	183	18	59	<1		
QS6015	14-15	0.06	0.05		2400	64	7	51	<1		
QS6016	15-16	0.08			1990	29	10	46	<1		
QS6017	16-17	0.07			1560	75	9	52	<1		
QS6018	17-18	0.07			1320	124	18	41	<1		
QS6019	18-19	0.06			1520	141	24	39	<1		
QS6020	* 19-20 D	0.04	0.03		1250	66	14	36	<1		
QS6021	19-20	0.05			1220	66	15	42	<1		
QS6022	20-21	0.03			800	124	31	38	<1		
QS6023	21-22	0.03	0.02		640	145	32	41	<1		
QS6024	22-23	0.01			460	73	12	22	<1		
QS6025	23-24	0.03			290	99	18	26	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. VANN

PDH 2

(1)

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
QS6026	1-2	0.30	0.35		520	27	56	223	<1		
QS6027	2-3	0.05			510	31	102	340	<1		
QS6028	3-4	0.08			590	52	62	320	<1		
QS6029	4-5	0.15			1030	68	117	304	<1		
QS6030	STD: GC9	2.89			1240	235	37	45	<1		
QS6031	5-6	0.27			1250	57	52	217	<1		
QS6032	6-7	0.15			1160	68	51	188	<1		
QS6033	7-8	0.08			670	50	30	89	<1		
QS6034	8-9	0.12	0.13		1630	129	85	187	<1		
QS6035	9-10	0.56			2490	127	244	124	<1		
QS6036	10-11	0.27			2200	109	141	182	<1		
QS6037	11-12	0.28			2880	139	110	158	<1		
QS6038	12-13	0.17			2330	84	56	93	<1		
QS6039	13-14	0.14			1820	130	53	170	<1		
QS6040	* 13-14 D	0.23	0.24		1750	128	57	175	<1		
QS6041	14-15	0.09			1580	144	67	98	<1		
QS6042	15-16	0.23	0.18		2660	103	30	112	<1		
QS6043	16-17	0.19			2300	97	60	53	<1		
QS6044	17-18	0.07			1950	49	29	65	<1		
QS6045	18-19	0.07			1050	59	13	44	<1		
QS6046	19-20	0.06			880	19	14	37	<1		
QS6047	20-21	0.08			1700	46	23	40	<1		
QS6048	21-22	0.02			640	38	17	40	<1		
QS6049	22-23	0.03			600	25	14	32	<1		
QS6050	STD: PM7	0.02			25	332	24	202	<1		
QS6051	23-24	<0.01			530	63	15	28	<1		
QS6052	24-25	<0.01			430	19	14	21	<1		
QS6053	25-26	0.01	<0.01		390	12	16	28	<1		
QS6054	26-27	0.04			630	34	19	32	<1		
QS6055	27-28	0.03			470	35	23	51	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. VANN

PDH 2

(21

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
QS6056	28-29	0.02			550	65	22	47	<1		
QS6057	29-30	0.02	0.02		690	34	33	42	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. VANN

PDH 3

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
Q56058	1-2	0.07	0.04		766	45	91	71	<1		
Q56059	2-3	0.06			230	20	15	28	<1		
Q56060	* 3-4 D	0.14			260	13	13	33	<1		
Q56061	3-4	0.06			250	14	18	32	<1		
Q56062	4-5	0.21			400	14	15	34	<1		
Q56063	5-6	0.06			320	16	14	27	<1		
Q56064	6-7	0.06			410	30	9	29	<1		
Q56065	7-8	0.05	0.07		420	18	13	30	<1		
Q56066	8-9	0.08			620	68	15	37	<1		
Q56067	9-10	0.07			630	33	9	39	<1		
Q56068	10-11	0.06			590	44	10	36	<1		
Q56069	11-12	0.09	0.08		600	63	8	36	<1		
Q56070	STD: CPD	0.47			—	—	—	—	—		
Q56071	12-13	0.06			1060	75	10	45	<1		
Q56072	13-14	0.05	0.03		820	51	20	57	<1		
Q56073	14-15	0.02	0.01		680	37	18	55	<1		
Q56074	15-16	0.02			710	35	12	42	<1		
Q56075	16-17	<0.01			720	35	10	41	<1		
Q56076	17-18	0.09			660	20	15	47	<1		
Q56077	18-19	<0.01	<0.01		770	25	12	38	<1		
Q56078	19-20	0.03			1040	41	12	34	<1		
Q56079	20-21	0.03	0.02		1210	69	34	48	<1		
Q56080	* 20-21 D	0.06			1190	71	36	51	<1		
Q56081	21-22	0.10			1670	119	22	48	<1		
Q56082	22-23	0.09	0.07		2130	119	18	65	<1		
Q56083	23-24	0.03			1200	79	13	56	<1		
Q56084	24-25	0.01			790	50	12	40	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. VANN

PDH 4

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
QS6085	1-2	0.14			1870	177	126	125	<1		
QS6086	2-3	0.46	0.43		2150	137	35	99	<1		
QS6087	3-4	0.99	1.28		2070	191	23	50	<1		
QS6088	4-5	0.64	0.56		2110	218	24	85	<1		
QS6089	5-6	0.29	0.22		2370	289	390	200	<1		
QS6090	STD: PHY	0.02			—	—	—	—	—		
QS6091	6-7	0.17			1850	187	49	129	<1		
QS6092	7-8	0.20			1930	298	65	247	<1		
QS6093	8-9	0.47	0.57		1970	276	29	250	<1		
QS6094	9-10	0.98	1.05		2160	223	27	182	<1		
QS6095	10-11	0.31	0.34		1420	145	18	66	<1		
QS6096	11-12	0.43			1610	150	24	113	<1		
QS6097	12-13	0.17			700	42	8	21	<1		
QS6098	13-14	0.63			3270	139	18	40	<1		
QS6099	14-15	0.44			1.02%	209	23	33	<1		
QS6100	* 14-15D	0.41	0.51		9390	240	23	32	<1		
QS6101	15-16	0.19			2040	141	45	58	<1		
QS6102	16-17	0.36	0.23		4820	216	423	114	<1		
QS6103	17-18	0.23			8940	107	510	174	<1		
QS6104	18-19	0.16	0.14		3050	229	86	119	<1		
QS6105	19-20	0.20			3290	49	80	154	<1		
QS6106	20-21	0.24	0.20		1.40%	454	24	75	<1		
QS6107	21-22	0.21			1670	60	115	218	<1		
QS6108	22-23	0.41			5350	644	33	75	<1		
QS6109	23-24	0.25	0.31		2870	121	72	115	<1		
QS6110	STD: GC4	SAMPLE		NOT	RECEIVED			BY AAL			
QS6111	24-25	0.16			1880	103	60	110	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. VANN

PDH 5

SAMPLE	metres	Au	AuR	AuR₂	As	Cu	Pb	Zn	Ag		
QS6112	1-2	0.06			520	80	73	105	<1		
QS6113	2-3	0.06			430	38	34	69	<1		
QS6114	3-4	0.02	0.06		330	25	16	56	<1		
QS6115	4-5	0.11			680	50	23	104	<1		
QS6116	5-6	0.07	0.06		740	75	30	80	<1		
QS6117	6-7 ?	1.24	0.31	0.46	730	65	28	80	<1		
QS6118	7-8	0.20			1180	61	22	96	<1		
QS6119	8-9	0.36			720	54	21	51	<1		
QS6120	* 8-9 D	0.10	0.12		820	63	21	60	<1		
QS6121	9-10	0.02			590	21	15	58	<1		
QS6122	10-11	0.09			890	74	27	70	<1		
QS6123	11-12	0.06	0.09		770	108	43	78	<1		
QS6124	12-13	1.28	1.14		870	68	39	79	<1		
QS6125	13-14	0.14	0.15		830	48	18	51	<1		
QS6126	14-15	0.09	0.13		940	72	17	41	<1		
QS6127	15-16	0.03			900	130	14	88	<1		
QS6128	16-17	9.95	8.26		1500	345	34	60	<1		
QS6129	17-18	0.20			1010	103	18	67	<1		
QS6130	STD: CPD	0.49			—	—	—	—	—		
QS6131	18-19	0.26			110	110	14	62	<1		
QS6132	19-20	0.52			695	695	15	39	<1		
QS6133	20-21	0.38	0.28		94	94	10	53	<1		
QS6134	21-22	0.18			66	66	17	35	<1		
QS6135	22-23	4.67	3.10		167	167	16	98	<1		
QS6136	23-24	1.28	1.43		90	90	23	55	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPER FIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. VANN

PDH 6

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
Q56137	1-2	0.22			430	100	156	127	<1		
Q56138	2-3	0.08			350	202	46	76	<1		
Q56139	3-4	0.07			320	50	25	50	<1		
Q56140	* 3-4 D	0.05			310	65	32	65	<1		
Q56141	4-5	0.06			240	41	19	46	<1		
Q56142	5-6	0.03			220	48	16	44	<1		
Q56143	6-7	0.02			250	35	12	32	<1		
Q56144	7-8	0.07			410	31	18	49	<1		
Q56145	8-9	0.01			240	21	9	31	<1		
Q56146	9-10	0.02			360	23	11	39	<1		
Q56147	10-11	0.03			230	29	14	44	<1		
Q56148	11-12	0.04			350	30	12	89	<1		
Q56149	12-13	0.02			220	43	20	109	<1		
Q56150	STD: PHY	SAMPLE		NOT	RECEIVED			BY	A.A.	L.	
Q56151	13-14	<0.01			360	79	54	170	<1		
Q56152	14-15	0.03			400	78	29	125	<1		
Q56153	15-16	0.02			220	28	13	40	<1		
Q56154	16-17	0.08	0.03		350	32	13	45	<1		
Q56155	17-18	0.43			310	36	16	49	<1		
Q56156	18-19	0.08			270	18	17	47	<1		
Q56157	19-20	0.08			230	24	10	38	<1		
Q56158	20-21	0.04	0.02		300	26	15	36	<1		
Q56159	21-22	0.05			115	36	14	30	<1		
Q56160	* 22-23 D	0.05			99	48	14	55	<1		
Q56161	22-23	0.02			100	44	12	57	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. VANN

PDH 7

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
QS6162	1-2	0.05			260	42	27	44	<1		
QS6163	2-3	0.04	0.02		220	21	15	31	<1		
QS6164	3-4	0.03			350	37	14	55	<1		
QS6165	4-5	0.06			270	22	24	74	<1		
QS6166	5-6	0.07			270	28	16	39	<1		
QS6167	6-7	0.03	0.04		280	21	13	33	<1		
QS6168	7-8	0.02			160	21	12	37	<1		
QS6169	8-9	0.03			136	32	16	51	<1		
QS6170	STD : GC9	3.59			1320	246	42	42	<1		
QS6171	9-10	0.04			250	50	21	59	<1		
QS6172	10-11	0.03			149	32	25	46	<1		
QS6173	11-12	0.02			260	29	16	37	<1		
QS6174	12-13	0.02			240	31	20	38	<1		
QS6175	13-14	0.02			260	19	18	37	<1		
QS6176	14-15	0.02	0.04		310	24	13	34	<1		
QS6177	15-16	0.02			340	36	12	33	<1		
QS6178	16-17	0.04			220	35	13	29	<1		
QS6179	17-18	0.04	004		230	35	15	42	<1		
QS6180	* 17-18 D	0.04			240	33	10	42	<1		
QS6181	18-19	0.03			360	55	40	124	<1		
QS6182	19-20	0.03			161	29	14	46	<1		
QS6183	20-21	0.04			500	88	26	69	<1		
QS6184	21-22	0.05	0.07		380	60	22	60	<1		
QS6185	22-23	0.08			710	160	92	140	<1		
QS6186	23-24	0.14			1010	346	93	132	<1		
QS6187	24-25	0.07	0.06		570	73	29	81	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. VANN

PDH 8

(1)

SAMPLE	metres	Au	AuR	AuR_2	As	Cu	Pb	Zn	Ag		
QS6188	1 - 2	0.12			250	50	77	69	<1		
QS6189	2 - 3	0.06			240	51	23	46	<1		
QS6190	STD: CPD	0.48			1230	126	19	45	<1		
QS6191	3 - 4	0.03	<0.01		210	28	10	37	<1		
QS6192	4 - 5	0.13			490	75	12	29	<1		
QS6193	5 - 6	0.14			830	235	16	34	<1		
QS6194	6 - 7	3.76	2.63	2.23	760	51	12	22	<1		
QS6195	7 - 8	3.08	2.84	2.25	860	60	7	20	<1		
QS6196	8 - 9	0.39			880	160	235	136	<1		
QS6197	9 - 10	0.59			1050	81	29	43	<1		
QS6198	10 - 11	0.94			1450	141	17	48	<1		
QS6199	11 - 12	1.24	1.31		2180	303	23	68	<1		
QS6200	* 11 - 12 D	1.28	1.32		2190	311	19	67	<1		
QS6201	12 - 13	0.77	0.71		1800	199	16	63	<1		
QS6202	13 - 14	0.68	0.41		1230	463	21	76	<1		
QS6203	14 - 15	0.48			980	101	23	65	<1		
QS6204	15 - 16	0.44			790	315	32	94	<1		
QS6205	16 - 17	0.19	0.17		680	114	21	86	<1		
QS6206	17 - 18	0.13			610	260	14	49	<1		
QS6207	18 - 19	0.13			460	89	16	46	<1		
QS6208	19 - 20	0.18			420	39	16	38	<1		
QS6209	20 - 21	0.13	0.15		590	59	16	45	<1		
QS6210	STD: GC4	1.39			3160	240	24	190	<1		
QS6211	21 - 22	0.08			610	57	13	39	<1		
QS6212	22 - 23	0.15			620	79	16	65	<1		
QS6213	23 - 24	0.20			1030	88	14	53	<1		
QS6214	24 - 25	0.25			1070	93	26	76	<1		
QS6215	25 - 26	0.37			1050	91	44	146	<1		
QS6216	26 - 27	0.14			700	36	18	81	<1		
QS6217	27 - 28	0.06	0.05		810	34	13	51	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. JANN

PDH 8.

(2)

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
QS6218	28-29	0.05			320	27	15	51	<1		
QS6219	29-30	0.05			240	33	19	53	<1		
QS6220	* 29-30 D	0.08	0.08		260	36	19	52	<1		
QS6221	30-31	0.12			270	37	16	44	<1		
QS6222	31-32	0.21			240	69	23	40	<1		
QS6223	32-33	0.05	0.03		140	58	18	50	<1		
QS6224	33-34	0.05			138	72	32	50	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. VANN

POW 9

(1)

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
QS6225	1-2	0.06			126	49	101	80	<1		
QS6226	2-3	0.04			96	62	31	43	<1		
QS6227	3-4	0.04	0.03		270	108	26	52	<1		
QS6228	4-5	0.21			550	115	18	39	<1		
QS6229	5-6	0.07			300	113	15	49	<1		
QS6230	* 6-7 D	0.03			245	109	24	54	<1		
QS6231	6-7	0.04			210	106	13	55	<1		
QS6232	7-8	0.03			106	23	12	45	<1		
QS6233	8-9	0.04			230	12	10	39	<1		
QS6234	9-10	0.05	0.06		240	28	15	42	<1		
QS6235	10-11	0.05			300	23	11	33	<1		
QS6236	11-12	0.03			320	17	9	29	<1		
QS6237	12-13	0.02			380	9	12	31	<1		
QS6238	13-14	0.07			370	23	9	37	<1		
QS6239	14-15	0.19	0.21		480	35	18	25	<1		
QS6240	STD : GC9	2.91			1670	251	36	45	<1		
QS6241	15-16	0.26			550	50	10	24	<1		
QS6242	16-17	0.50			350	31	15	34	<1		
QS6243	17-18	0.20	0.24		480	55	12	45	<1		
QS6244	18-19	0.06			370	38	11	35	<1		
QS6245	19-20	SAMPLE NOT RECEIVED									
QS6246	20-21	0.11			440	47	9	43	<1		
QS6247	21-22	0.04	0.02		350	57	10	38	<1		
QS6248	22-23	0.04			360	20	12	41	<1		
QS6249	23-24	0.35			640	55	10	37	<1		
QS6250	* 23-24 D	1.06	0.83		600	69	16	42	<1		
QS6251	24-25	0.61	0.64		410	27	11	71	<1		
QS6252	25-26	0.07			280	37	18	48	<1		
QS6253	26-27	0.10			370	84	17	60	<1		
QS6254	27-28	0.28	0.26		220	20	16	37	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. VANN

PDH 9 (2)

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
QS6255	28-29	0.21			400	37	24	53	<1		
QS6256	29-30	0.09			290	33	24	52	<1		
QS6257	30-31	0.08			2450	82	15	44	<1		
QS6258	31-32	0.08			1030	66	25	60	<1		
QS6259	32-33	SAMPLE	NOT		RECEIVED		BY	A.A.L			

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J.VANN

PDH 10

(1)

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
QS6260	STD: PHY	0.02			—	—	—	—	—		
QS6261	1-2	0.47			780	165	108	120	<1		
QS6262	2-3	0.84			1400	727	27	51	<1		
QS6263	3-4	0.95			1880	158	42	51	<1		
QS6264	4-5	1.04	0.60		2000	169	17	64	<1		
QS6265	5-6	0.44			1470	148	36	59	<1		
QS6266	6-7	0.22			1490	144	36	59	<1		
QS6267	7-8	0.09			800	191	32	60	<1		
QS6268	8-9	0.08			890	125	13	53	<1		
QS6269	9-10	0.10	0.13		570	87	13	80	<1		
QS6270	* 9-10 D	0.10			520	67	15	95	<1		
QS6271	10-11	0.10			700	131	29	186	<1		
QS6272	11-12	0.06			370	38	17	132	<1		
QS6273	12-13	0.05			80	30	22	80	<1		
QS6274	13-14	0.03	0.05		75	33	14	66	<1		
QS6275	14-15	0.03			57	38	14	65	<1		
QS6276	15-16	0.03			59	19	11	59	<1		
QS6277	16-17	0.05			87	82	19	64	<1		
QS6278	17-18	0.05			340	132	34	68	<1		
QS6279	18-19	0.05			210	30	18	78	<1		
QS6280	STD: GC9	3.06			1150	240	35	45	<1		
QS6281	19-20	0.16			720	199	35	145	<1		
QS6282	20-21	0.06	0.08		260	30	27	77	<1		
QS6283	21-22	0.22			780	319	293	168	<1		
QS6284	22-23	0.07			410	328	282	91	<1		
QS6285	23-24	0.13			129	163	38	103	<1		
QS6286	24-25	0.10			126	37	21	75	<1		
QS6287	25-26	0.04			126	28	18	84	<1		
QS6288	26-27	0.04	0.05		134	38	18	90	<1		
QS6289	27-28	0.03			220	5	17	73	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. VANN

PDH 10

(2)

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
QS6290	* 27 - 28 D	0.03			210	18	14	20	<1		
QS6291	28 - 29	0.03			270	46	92	132	<1		
QS6292	29 - 30	0.04			490	139	149	217	<1		
QS6293	30 - 31	0.04	0.03		141	36	27	82	<1		
QS6294	31 - 32	0.03			114	16	20	59	<1		
QS6295	32 - 33	0.04			111	7	17	56	<1		
QS6296	33 - 34	0.06			155	19	14	54	<1		
QS6297	34 - 35	0.07	0.03		144	45	15	43	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPERFIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. VANN

PDH 11

(1)

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
QS6298	1-2	0.06			330	97	152	102	<1		
QS6299	2-3	0.04			490	121	57	54	<1		
QS6300	STD: GC9	2.93			1680	253	39	44	<1		
QS6301	3-4	0.12			720	200	158	60	<1		
QS6302	4-5	0.06			520	108	47	53	<1		
QS6303	5-6	0.08			500	82	43	75	<1		
QS6304	6-7	0.04			610	56	17	75	<1		
QS6305	7-8	0.23			620	99	17	177	<1		
QS6306	8-9	0.11			1370	71	15	211	<1		
QS6307	9-10	1.97	1.60		1980	159	16	187	<1		
QS6308	10-11	1.12	1.01		1700	162	109	120	<1		
QS6309	11-12	0.57			1440	136	45	57	<1		
QS6310	* 11-12D	0.40	0.37		1550	123	52	60	<1		
QS6311	12-13	0.16			1230	183	32	91	<1		
QS6312	13-14	0.15			730	166	18	152	<1		
QS6313	14-15	0.11			480	214	27	154	<1		
QS6314	15-16	0.10			460	65	15	163	<1		
QS6315	16-17	0.14			670	69	26	219	<1		
QS6316	17-18	0.07			370	200	35	187	<1		
QS6317	18-19	0.02	0.08		250	95	15	103	<1		
QS6318	19-20	0.02			129	31	11	106	<1		
QS6319	20-21	0.02			121	17	12	85	<1		
QS6320	STD: CPD	0.48	0.48		930	121	18	44	<1		
QS6321	21-22	0.05			153	26	16	81	<1		
QS6322	22-23	0.02			97	28	12	80	<1		
QS6323	23-24	0.02	0.03		97	15	9	65	<1		
QS6324	24-25	0.04			117	80	15	105	<1		
QS6325	25-26	0.02			250	72	15	178	<1		
QS6326	26-27	0.10			490	40	16	91	<1		
QS6327	27-28	0.07			370	150	19	79	<1		

GOLD FIELDS EXPLORATION P/L — DARWIN N.T.

PROJECT: COPPER FIELD SOUTH
DATE: NOVEMBER 1986
GEOLOGIST: J. VANN

PDH 11 (2)

SAMPLE	metres	Au	AuR		As	Cu	Pb	Zn	Ag		
QS6328	28-29	0.04	0.03		220	38	9	64	<1		
QS6329	29-30	0.06			280	118	34	69	<1		
QS6330	* 29-30 D	0.04			270	128	39	70	<1		
QS6331	30-31	0.03			133	52	23	64	<1		
QS6332	31-32	0.03			85	24	15	46	<1		
QS6333	32-33	0.03			127	21	16	92	<1		
QS6334	33-34	0.02			129	18	22	97	<1		
QS6335	34-35	0.02	0.03		138	56	34	172	4		

9000 E
9500 E
10000 E
10500 E
11000 E

12500 N
12000 N
11500 N
11000 N
10500 N
10000 N

STUART HIGHWAY
KATHERINE

LEGEND

- Anticlinal axis
- Synclinal axis
- Outcrop
- Float
- Bedding with dip

T51781 qtz
T51780
T51779
T51782 qtz
T51783 qtz
T51784 qtz
T51785 qtz
T51786* qtz
T51787 qtz
T51788 * qtz float
T51789
T51760 qtz vein
T51761 qtz vein
T51759 qtz vein
T51762* qtz blow
T51763
T51764
T51765
T51766
T51767
T51768* * T51769
T51707
T51709*
T51776 * qtz float
T51777 qtz vein
T51778 qtz
T51774*
T51773*
T51772*
T51770
T51735* * T51734
T51727
T51726
T51723 qtz
T51758
T51757
T51756
T51753
T51754*
T51755
T51733
T51732
T51731
T51730
T51706 * qtz float
T51705*
T51704*
T51703
T51715
T51751
T51748
T51750
T51749
T51747
T51741 * gwke, qtz
T51752
T51745
T51746
T51744 qtz
T51702 * qtz float
T51741,42,43 qtz vein
T51708 hornfel
T51701
T51740
qtz vein
T51711 qtz vein
quartz, quartz veined gwke float * T51724 qtz
T51725 brecciated qtz float
T51728 qtz
T51722 qtz
T51721 qtz
T51720 qtz
T51729* qtz float
T51718 * qtz float
T51713 * qtz float

CR87/139A

REVISIONS	GOLD FIELDS EXPLORATION PTY. LIMITED (Incorporated in New South Wales)	
REVISION J VANN JAN. 1987	GEOLOGIST: D. Smith	COPPERFIELD SOUTH
	DRAWN: D. Vann	WOOLLYBUTT GRID
	DATE: Jan. 1987	E.L. 4725
	CHECKED: John Vann	Outcrop Geology & Sample Locations
	1:250,000 REFERENCE: SD 52-8	
	Scale 1:2,500 (50 25 0 50 100 150 m)	PLATE 1

light shale scree

TRENCH F

shale scree

light qtz scree

light qtz scree

TRENCH E

shale/sst scree

light shale scree

qtz scree, minor shale scree

ferruginous qtz float

ferruginous qtz veined sst float

subcropping sst

sst/sh scree with common qtz

sst

qtz veined sst scree

shale/qtz scree

sst scree with minor quartz

sst

TRENCH D

subcropping sst

TRENCH 5

shale scree

qtz

qtz

qtz

qtz

qtz

light qtz scree

qtz float altered, veined subcropping sst

sh/sltst

? subcropping shale with light scree

qtz

shale

qtz

P.D.H 11

TRENCH 6

P.D.H 10

sst float

TRENCH C

sh

sst & minor qtz scree

sst & ferruginous

heavy qtz scree

sst & qtz scree

qtz

sst

subcropping (?) altered sandstones

qtz float

sandstone ? s/c with qtz

heavy qtz scree

heavy qtz scree

qtz

siltst with minor qtz

light qtz scree

siltst float

shale scree

shale scree with minor qtz

sh-sst with minor qtz

siltst-sh with minor qtz

TRENCH 4

qtz

qtz

qtz scree

qtz scree/sh scree

heavy qtz scree 50°

TRENCH 3

shale & qtz scree

sh

sh

qtz

qtz

sh

qtz scree

sh scree

light qtz scree

TRENCH B

sh scree

qtz scree

qtz scree

light qtz scree

heavy qtz scree

PDH 7

PDH 6

PDH 9

PDH 8

P.D.H 5

TRENCH 2

TRENCH 1/1A

50°

P.D.H 4

P.D.H 3

P.D.H 1

P.D.H 2

heavy qtz scree

qtz scree

qtz float

sltst

sltst

heavy qtz scree

TRENCH A

CR87/139A

LEGEND

Float — sh shale; sltst siltstone; sst sandstone

Sandstone/siltstone outcrop

Oriented quartz float or "scree"

Quartz outcrop

Geological contact

Geological contact inferred

Anticlinal axis inferred

Anticlinal axis inferred/concealed

Quaternary alluvium/soil

Lower Proterozoic Burrell Creek Formation

Trench

Percussion Drill Hole (vertical/inclined)

T5095 Location of surface rockchip sample

NOTES

1. The term "scree" refers to loose, weathered, fine to coarse float
2. This float is thought to be largely in-situ
3. See Plate 4 for location diagrams

GOLD FIELDS EXPLORATION PTY. LIMITED

Incorporated in New South Wales

GEOLOGIST:	J. Vann
DRAWN:	D. Vann
DATE:	Feb'1987
CHECKED:	
1:250,000 REFERENCE:	SD52-8

COPPERFIELD SOUTH
E.L. 4725

WOOLLYBUTT ANTICLINE SOUTH

Scale 1: 1,000 — 20 10 0 20 40 60 m

AFE 3

9276E 9350E 9400E 9450E 9500E 9576E

11200N 11150N 11100N 11050N 11000N 10950N 10900N 10850N

sst & sltst scree

light sltst & qtz scree

sandstone & shale scree

sltst scree

sltst scree

light shale/sst scree

light quartz float

sst scree

sltst/sst & minor quartz scree

sltst & sst scree

subcropping sst

sltst & sst scree

sltst scree

sltst scree

qtz scree

light qtz & shale scree

T50954 to T50959

qtz float

qtz

sst

qtz

sst & sltst scree

qtz

heavy qtz float & scree

TRENCH 7

heavy qtz float & o/c qtz

qtz

sst/sh scree

heavy qtz scree

T50953

qtz

qtz

sltst scree

T50950 T50951

slst scree

qtz scree

heavy qtz & ? s/c quartz

qtz

qtz s/c

subcropping sst

T50952

qtz

sltst scree

light shale scree

sst subcrop

sandstone & shale scree

? Fault - derived quartz float & qtz veined sandstone float with common subcropping sandstone/greywacke

Approximate Location of Western Fault

M N

CR87/139A

9300E 9700E 10000E

11200N

PLATE 3

PLATE 3 WOOLLYBUTT ANTICLINE NORTH

10800N

PLATE 2

PLATE 2 WOOLLYBUTT ANTICLINE SOUTH

10400N

10000N

DARWIN

CULLEN BATHOLITH

COPPERFIELD SOUTH

ALPINE CREEK

50km

Float sh shale; sltst siltstone; sst sandstone

Sandstone/siltstone outcrop

Oriented quartz float or "scree"

Quartz outcrop

Geological contact

Geological contact inferred

Anticlinal axis inferred

Anticlinal axis inferred/concealed

Quaternary alluvium/soil

Lower Proterozoic Burrell Creek Formation

Trench

Percussion Drill Hole (vertical/incline)

T50951 Location of surface rockchip sample

NOTES

1 *The term "scree" refers to loose, weathered, fine to coarse float*

2 *This float is thought to be largely in-situ.*

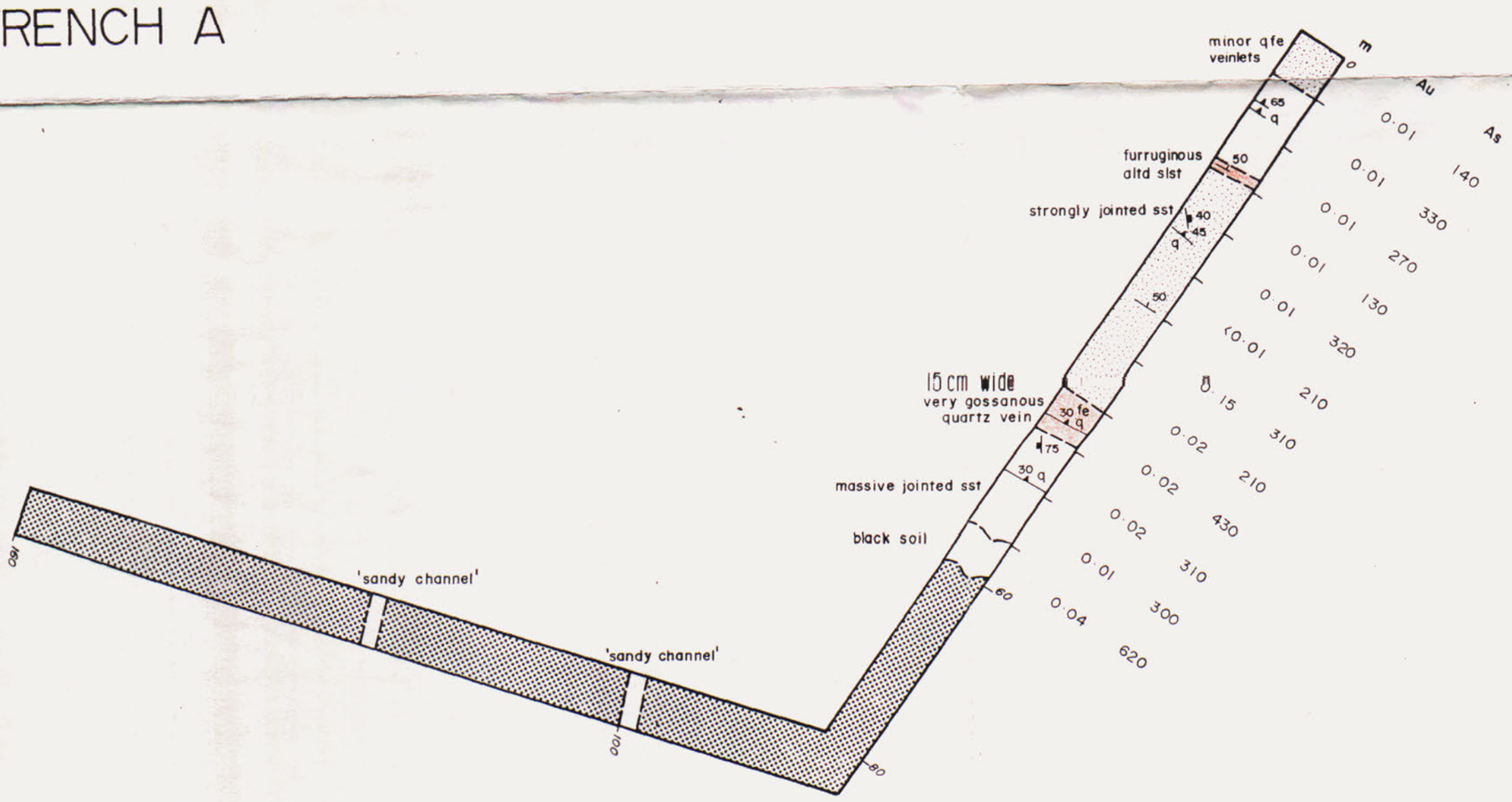
GOLD FIELDS EXPLORATION PTY. LIMITED
Incorporated in New South Wales

GEOLOGIST	J. Vann	COPPERFIELD SOUTH E.L. 4725
DRAWN	D. Vann	
DATE	Jan '87	WOOLLYBUTT ANTICLINE NORTH
CHECKED		
1:250,000 Reference	SD 52-8	

SCALE 1:1000 20 0 0 20 40 60m PLATE 3

TRENCH 1/1A

TRENCH A



CR87/139A

QUATERNARY

Alluvium / soil

PROTEROZOIC
BURRELL CREEK FORMATION

Greywacke with lesser interbeds of greywacke

Shale and siltstone with lesser interbeds of greywacke

"Limonitic" alteration - mainly limonite, fine quartz veinlets

Interpreted anticlinal axis

64 Jointing orientation

Inferred bedding contact

40 Strike and dip of bedding

6/m Frequency of veining along trench (6 per metre)

Strike and dip of vein (≤ 40cm wide)

"Stockworks" veining

Major vein (≥ 40 cm)

MINERALOGY

q quartz
fe iron oxides ± quartz
cc carbonate
py pyritic spotting or boxworks textures
apy arsenopyritic boxwork textures

NOTES
1. Width of trench is not to scale
2. Assays are in parts per million unless otherwise stated
3. For location of trenches see figure 5

ABBREVIATIONS:

c̄	with	slst	siltstone
altd	altered	sh	shale
gwke	greywacke	sst	sandstone

GOLD FIELDS EXPLORATION PTY. LIMITED

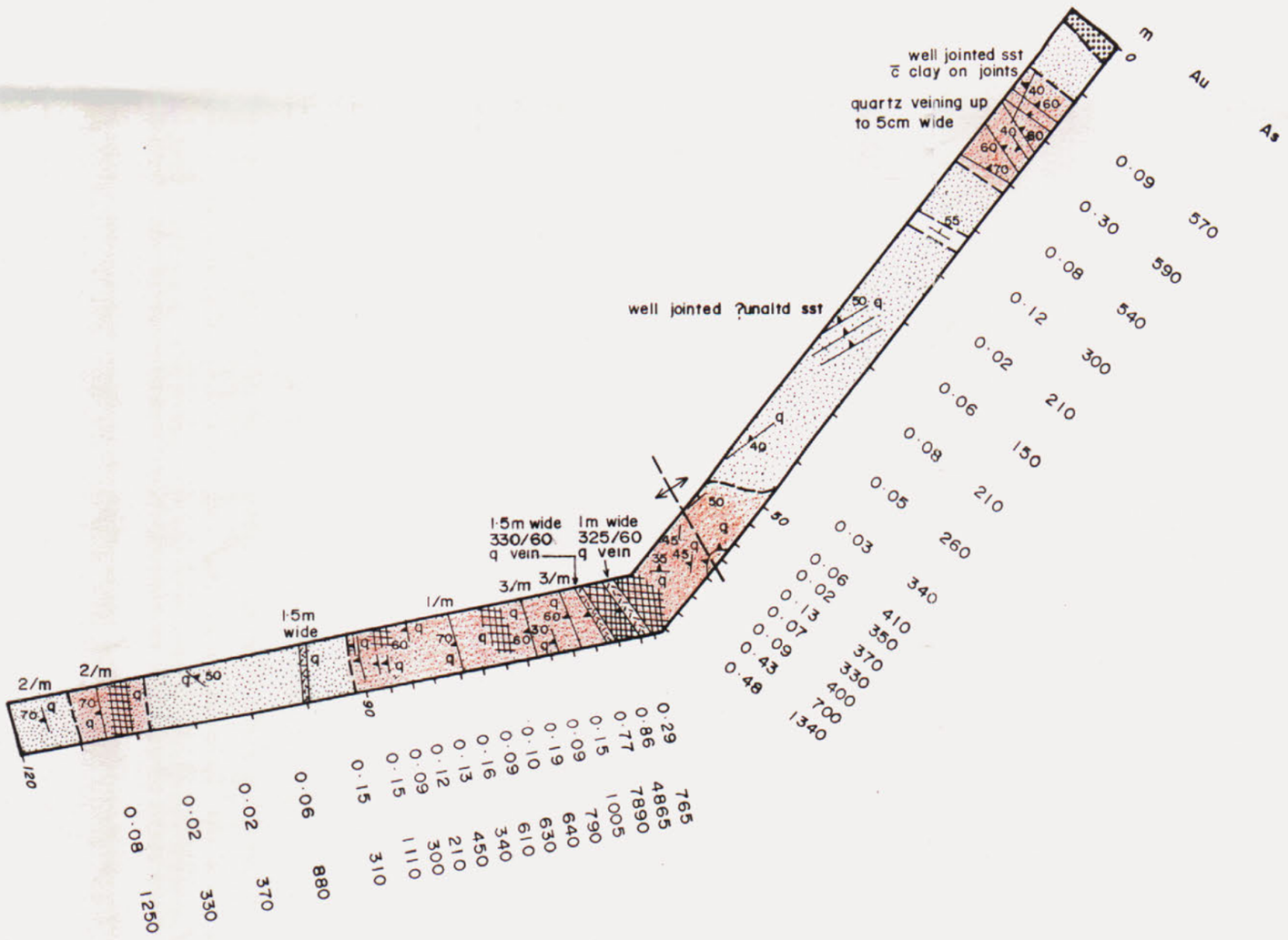
GEOLOGIST:	J. Vann
DRAWN:	D. Vann
DATE:	Jan '87
CHECKED:	
1:250,000 REFERENCE:	

COPPERFIELD SOUTH
E.L. 4725
GEOLOGICAL PLANS
TRENCHES 1/1A & 2

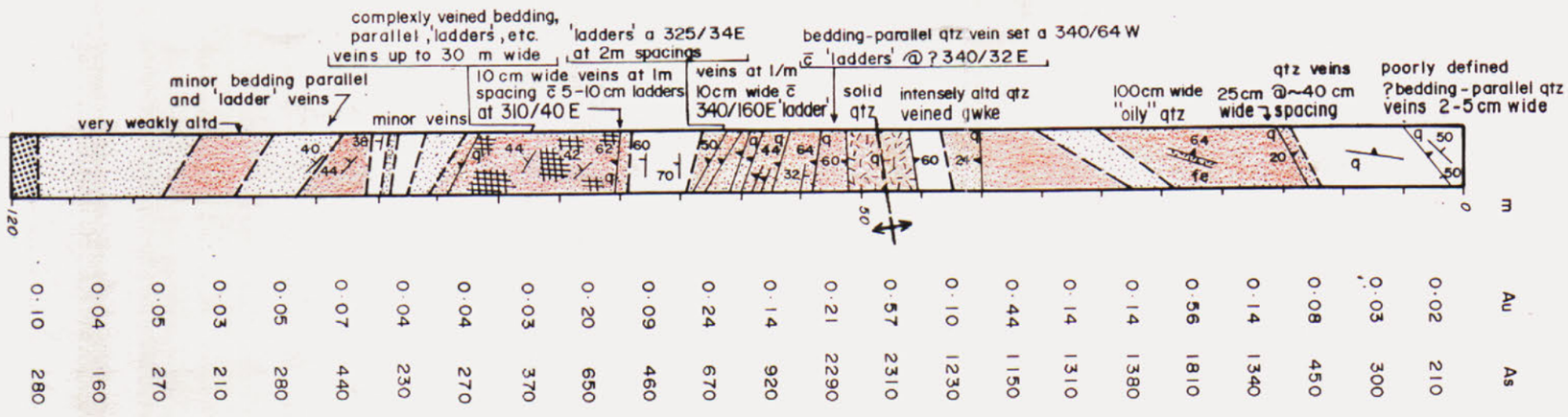
SCALE: 1:500 (10 0 10 20 30m)

PLATE 4

TRENCH B



TRENCH 2



CR87/139A

QUATERNARY

Alluvium / soil

PROTEROZOIC
BURRELL CREEK FORMATION

Greywacke with lesser interbeds of greywacke

Shale and siltstone with lesser interbeds of greywacke

"Limonitic" alteration - mainly limonite, fine quartz veinlets

Interpreted anticlinal axis

64 Jointing orientation

Inferred bedding contact

40 Strike and dip of bedding

6/m Frequency of veining along trench (6 per metre)

Strike and dip of vein (≤ 40cm wide)

"Stockworks" veining

Major vein (≥ 40 cm)

MINERALOGY

q quartz

fe iron oxides ± quartz

cc carbonate

py pyritic spotting or boxworks textures

apy arsenopyritic boxwork textures

NOTES
1. Width of trench is not to scale
2. Assays are in parts per million unless otherwise stated
3. For location of trenches see figure 5

ABBREVIATIONS:

c̄	with	slst	siltstone
altd	altered	sh	shale
gwke	greywacke	sst	sandstone

GOLD FIELDS EXPLORATION PTY. LIMITED

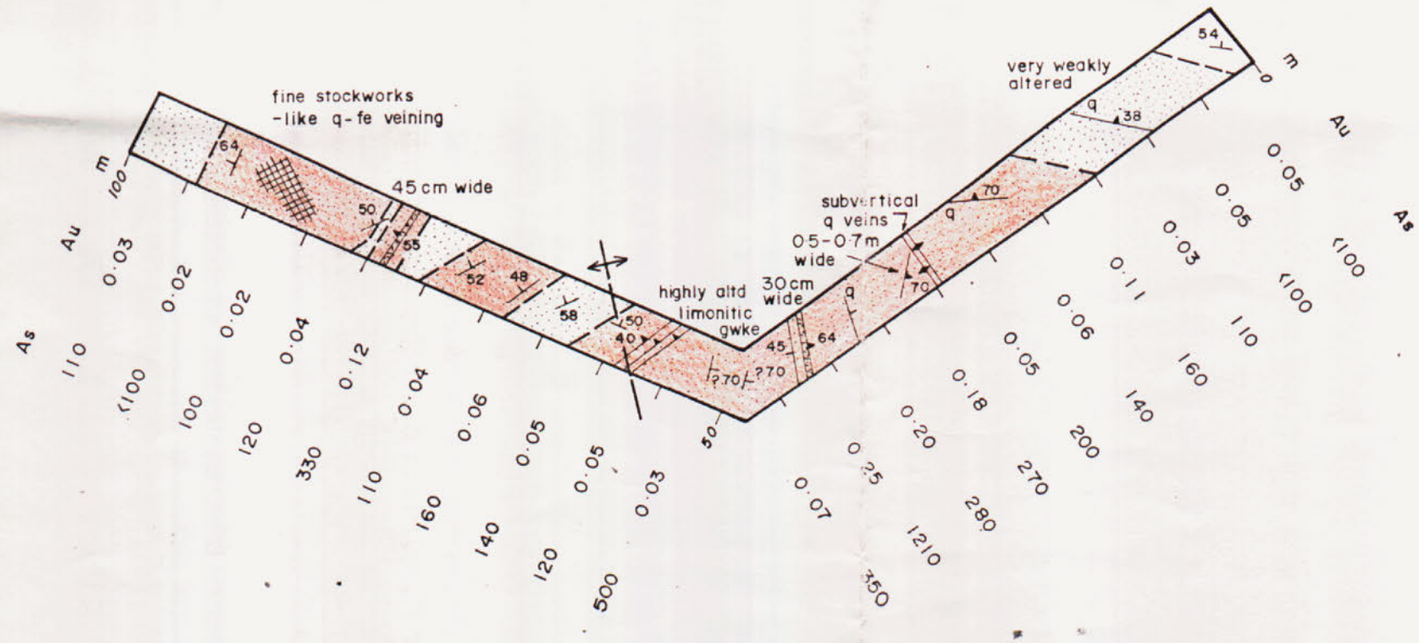
GEOLOGIST:	J. Vann
DRAWN:	D. Vann
DATE:	Jan '87
CHECKED:	
1,250,000 REFERENCE:	

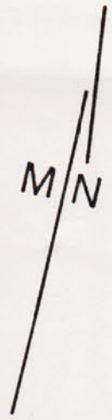
COPPERFIELD SOUTH
E.L. 4725
GEOLOGICAL PLANS
TRENCHES B & 2

SCALE: 1:500 (10 0 10 20 30m)

PLATE 5

TRENCH 3





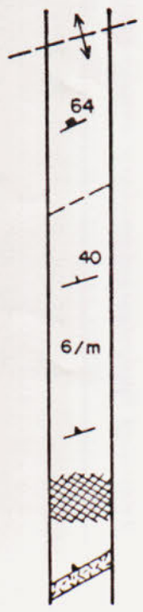
CR87/139A

QUATERNARY

- Alluvium / soil

PROTEROZOIC
BURRELL CREEK FORMATION

- Greywacke with lesser interbeds of greywacke
- Shale and siltstone with lesser interbeds of greywacke
- "Limonitic" alteration - mainly limonite, fine quartz veinlets



- Interpreted anticlinal axis
- Jointing orientation
- Inferred bedding contact
- Strike and dip of bedding
- Frequency of veining along trench (6 per metre)
- Strike and dip of vein (≤ 40cm wide)
- "Stockworks" veining
- Major vein (≥ 40 cm)

MINERALOGY

q	quartz
fe	iron oxides ± quartz
cc	carbonate
py	pyritic spotting or boxworks textures
apy	arsenopyritic boxwork textures

NOTES

1. Width of trench is not to scale
2. Assays are in parts per million unless otherwise stated
3. For location of trenches see figure 5

ABBREVIATIONS:

c	with	slst	siltstone
altd	altered	sh	shale
gwke	greywacke	sst	sandstone

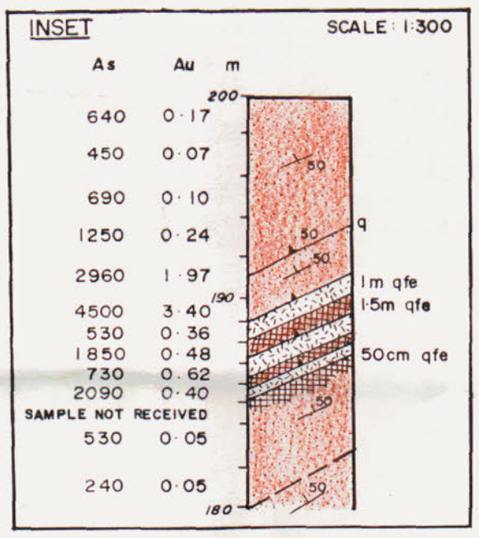
GOLD FIELDS EXPLORATION PTY. LIMITED

GEOLOGIST:	J. Vann
DRAWN:	D. Vann
DATE:	Jan '87
CHECKED:	
1,250,000 REFERENCE:	

COPPERFIELD SOUTH
E.L. 4725
GEOLOGICAL PLANS
TRENCH 3

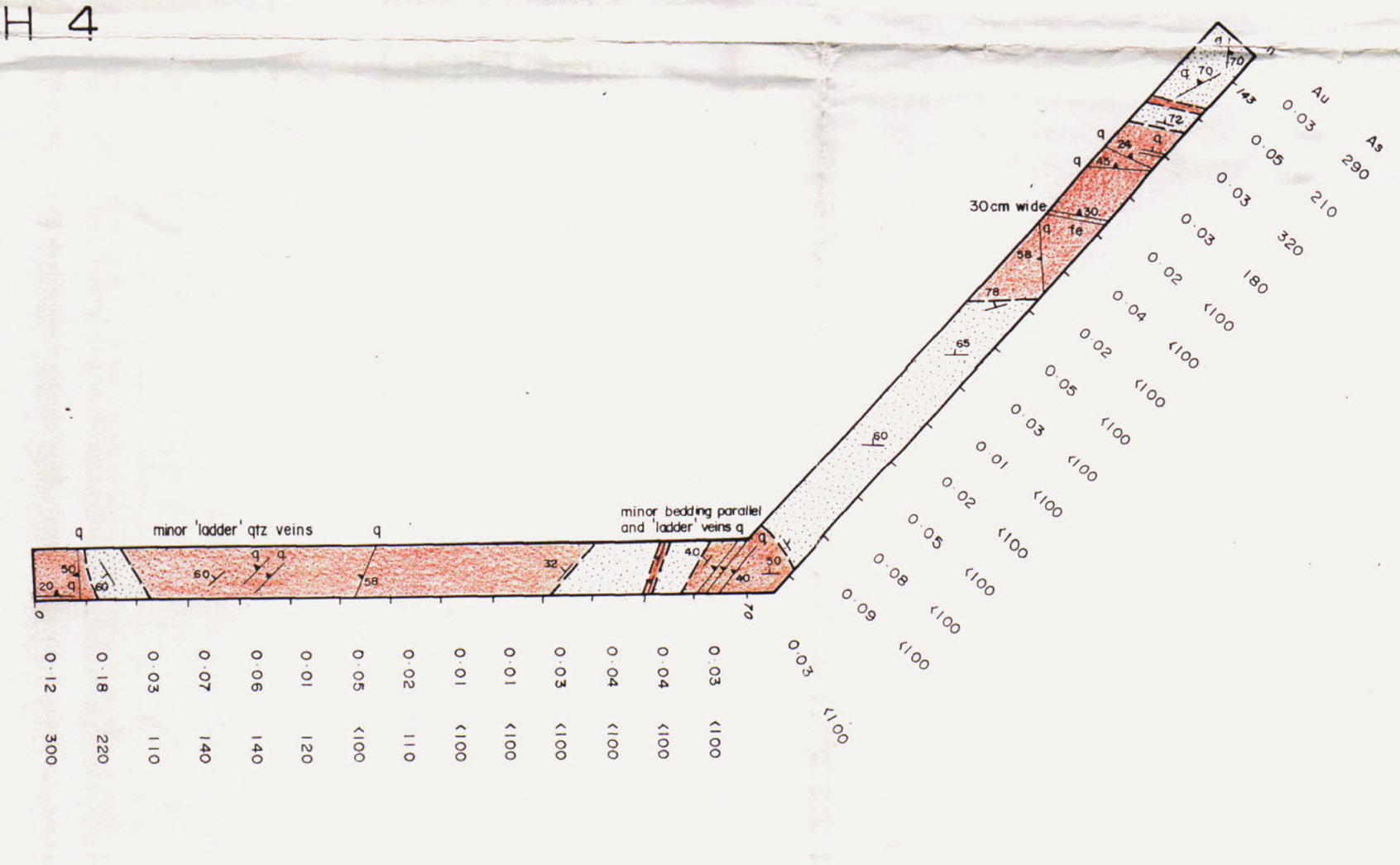
SCALE: 1:500 (10 0 10 20 30m)

PLATE 6



TRENCH C

TRENCH 4



CR87/139A

QUATERNARY

Alluvium / soil

PROTEROZOIC
BURRELL CREEK FORMATION

Greywacke with lesser interbeds of greywacke

Shale and siltstone with lesser interbeds of greywacke

"Limonitic" alteration - mainly limonite, fine quartz veinlets

Interpreted anticlinal axis

64 Jointing orientation

Inferred bedding contact

40 Strike and dip of bedding

6/m Frequency of veining along trench (6 per metre)

Strike and dip of vein (≤ 40cm wide)

"Stockworks" veining

Major vein (≥ 40 cm)

MINERALOGY

q quartz
fe iron oxides ± quartz
cc carbonate
py pyritic spotting or boxworks textures
apy arsenopyritic boxwork textures

NOTES
1. Width of trench is not to scale
2. Assays are in parts per million unless otherwise stated
3. For location of trenches see figure 5

ABBREVIATIONS:

c̄	with	slst	siltstone	L	laterite
altd	altered	sh	shale		
gwke	greywacke	sst	sandstone		

GOLD FIELDS EXPLORATION PTY. LIMITED

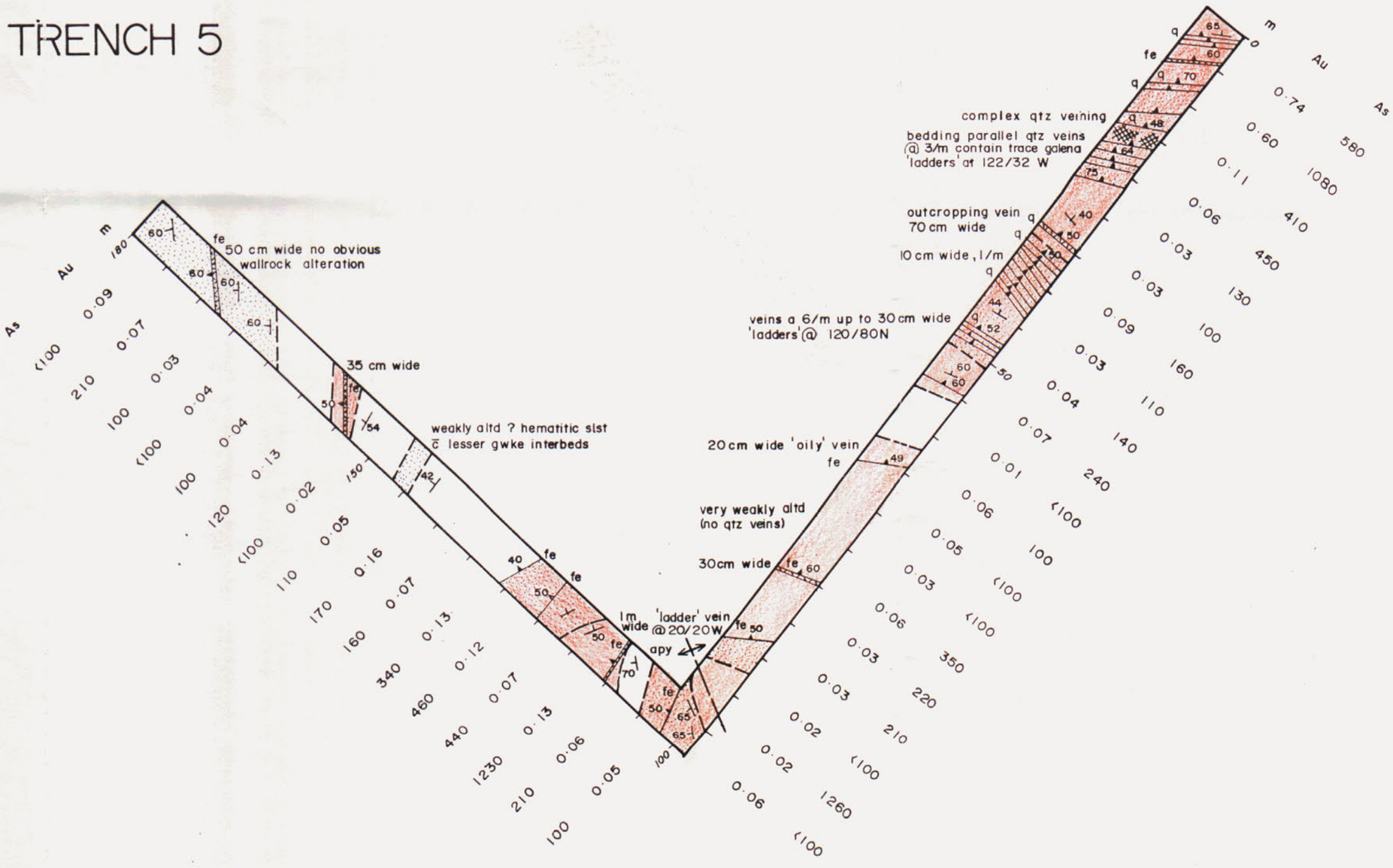
GEOLOGIST:	J. Vann
DRAWN:	D. Vann
DATE:	Jan '87
CHECKED:	
1,250,000 REFERENCE:	

COPPERFIELD SOUTH
E.L. 4725
GEOLOGICAL PLANS
TRENCHES C & 4

SCALE: 1:500 (10 0 10 20 30m)

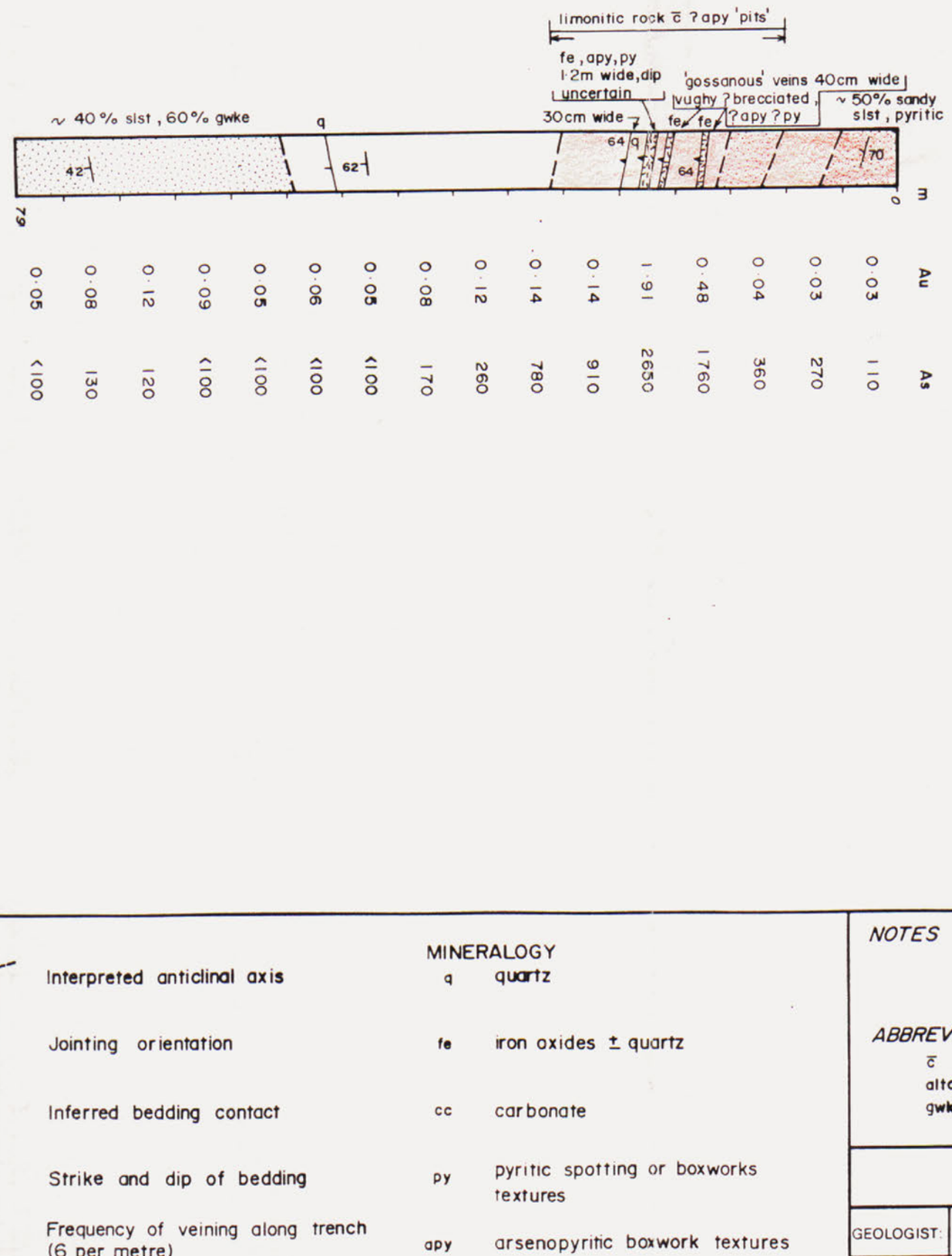
PLATE 7

TRENCH 5



M N

TRENCH 6



M N

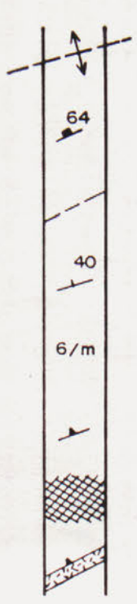
CR87/139A

QUATERNARY

- Alluvium / soil

PROTEROZOIC
BURRELL CREEK FORMATION

- Greywacke with lesser interbeds of greywacke
- Shale and siltstone with lesser interbeds of greywacke
- "Limonitic" alteration - mainly limonite, fine quartz veinlets



- Interpreted anticlinal axis
- Jointing orientation
- Inferred bedding contact
- Strike and dip of bedding
- Frequency of veining along trench (6 per metre)
- Strike and dip of vein (≤ 40cm wide)
- "Stockworks" veining
- Major vein (≥ 40 cm)

MINERALOGY

q	quartz
fe	iron oxides ± quartz
cc	carbonate
py	pyritic spotting or boxworks textures
apy	arsenopyritic boxwork textures

NOTES
1. Width of trench is not to scale
2. Assays are in parts per million unless otherwise stated
3. For location of trenches see figure 5

ABBREVIATIONS:

c̄	with	slst	siltstone
altd	altered	sh	shale
gwke	greywacke	sst	sandstone

GOLD FIELDS EXPLORATION PTY. LIMITED

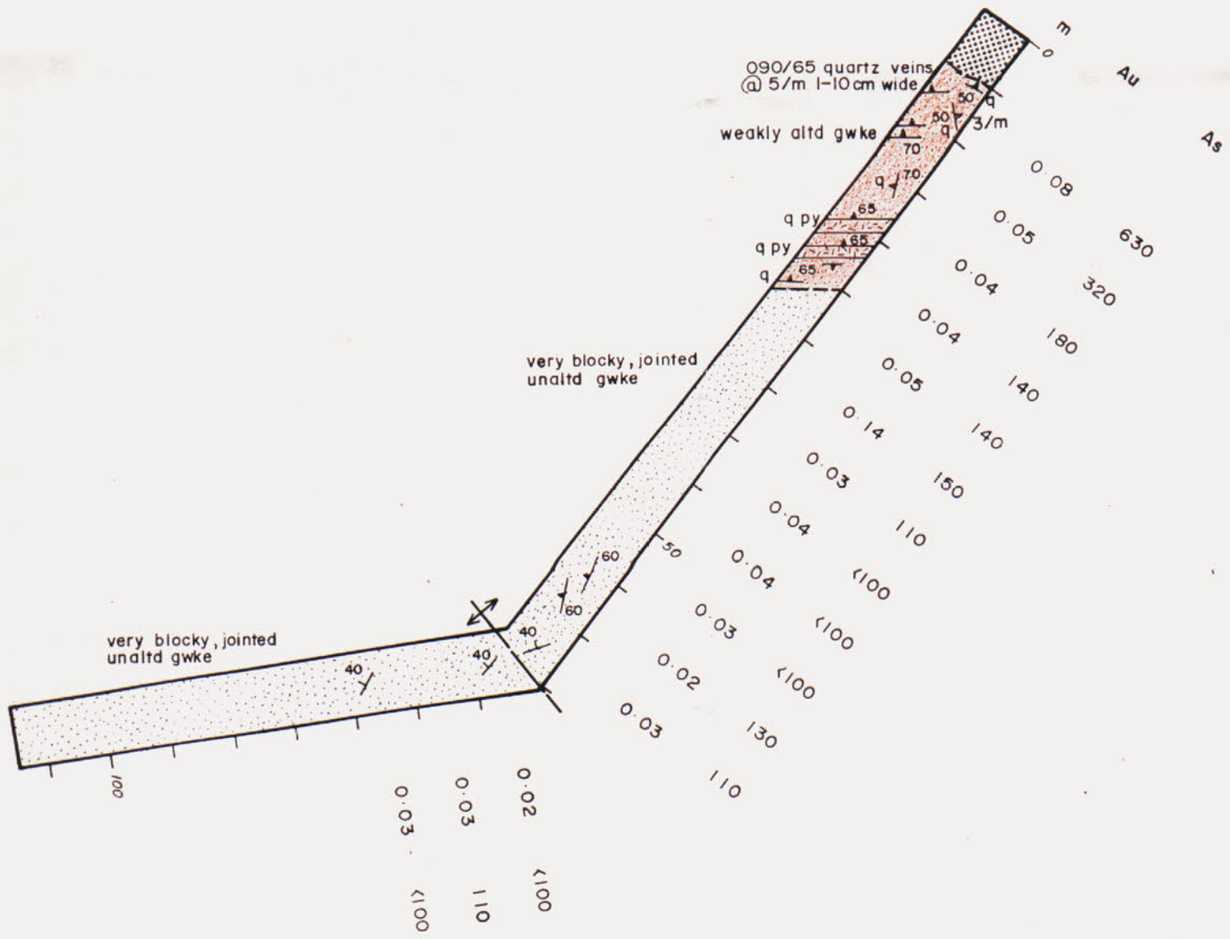
GEOLOGIST:	J. Vann
DRAWN:	D. Vann
DATE:	Jan '87
CHECKED:	
1:250,000 REFERENCE:	

COPPERFIELD SOUTH
E.L. 4725
GEOLOGICAL PLANS
TRENCHES 5 & 6

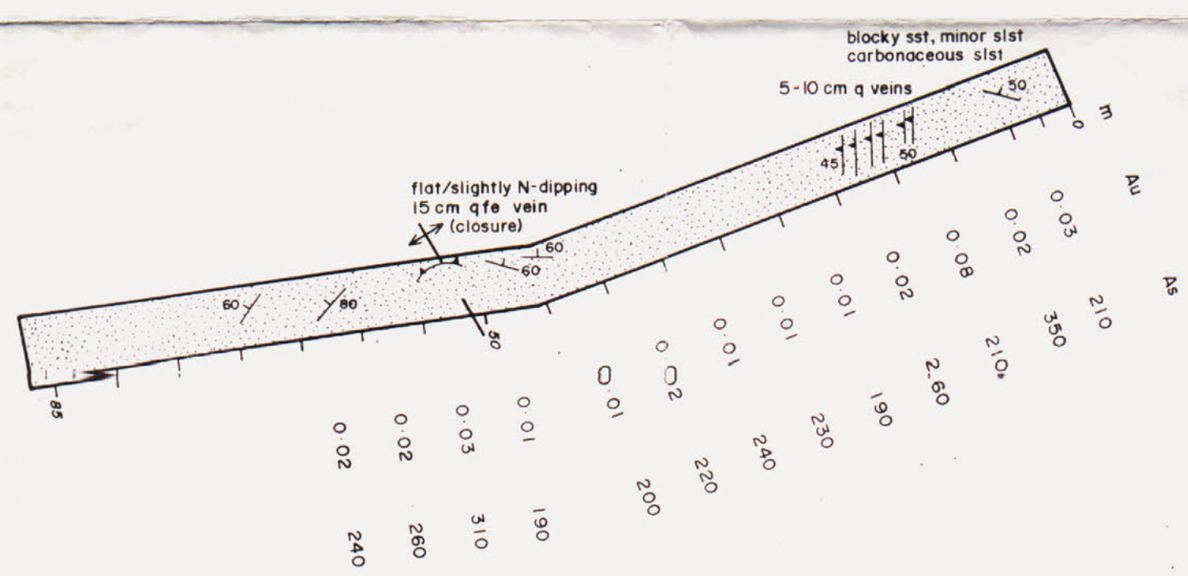
SCALE: 1:500 (10 0 10 20 30m)

PLATE 8

TRENCH E



TRENCH D



QUATERNARY

- Alluvium / soil

PROTEROZOIC
BURRELL CREEK FORMATION

- Greywacke with lesser interbeds of greywacke
- Shale and siltstone with lesser interbeds of greywacke
- "Limonitic" alteration - mainly limonite, fine quartz veinlets

- Interpreted anticlinal axis
- 64 Jointing orientation
- Inferred bedding contact
- 40 Strike and dip of bedding
- 6/m Frequency of veining along trench (6 per metre)
- Strike and dip of vein (≲ 40cm wide)
- "Stockworks" veining
- Major vein (≳ 40 cm)

MINERALOGY

q	quartz
fe	iron oxides ± quartz
cc	carbonate
py	pyritic spotting or boxworks textures
apy	arsenopyritic boxwork textures

NOTES
1. Width of trench is not to scale
2. Assays are in parts per million unless otherwise stated
3. For location of trenches see figure 5

ABBREVIATIONS

c̄	with	slst	siltstone
altd	altered	sh	shale
gwke	greywacke	sst	sandstone

GOLD FIELDS EXPLORATION PTY. LIMITED

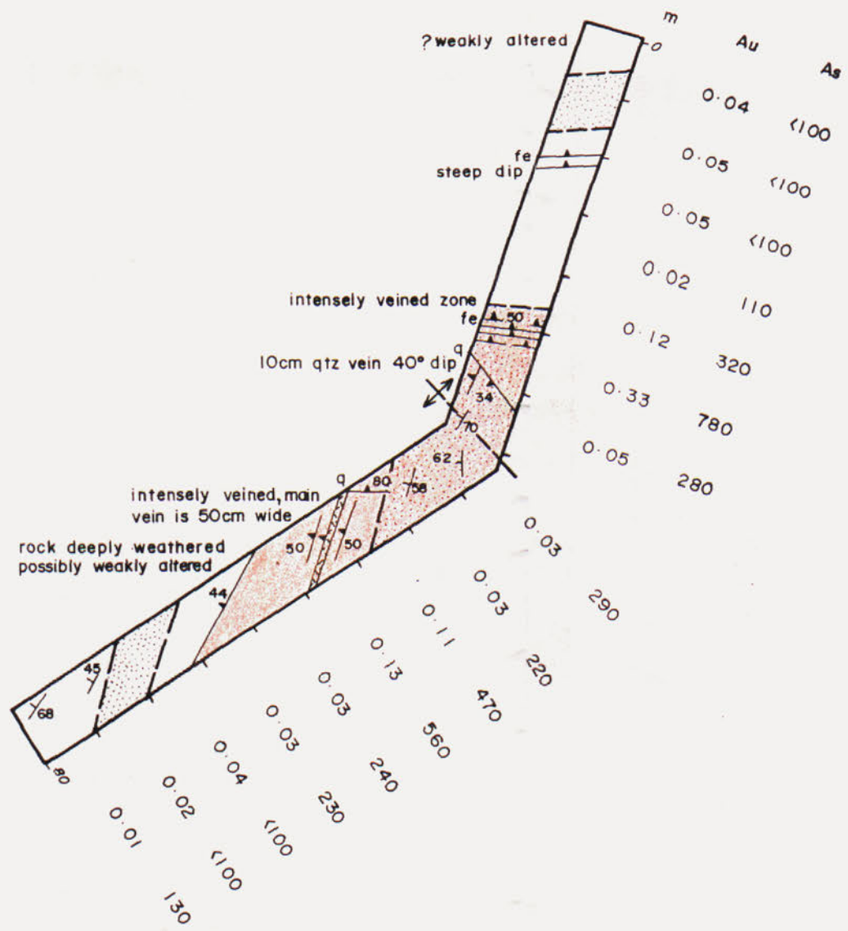
GEOLOGIST:	J. Vann
DRAWN:	D. Vann
DATE:	Jan '87
CHECKED:	
1:250,000 REFERENCE:	

COPPERFIELD SOUTH
E.L. 4725
GEOLOGICAL PLANS
TRENCHES E & D

SCALE: 1:500 (10 0 10 20 30m)

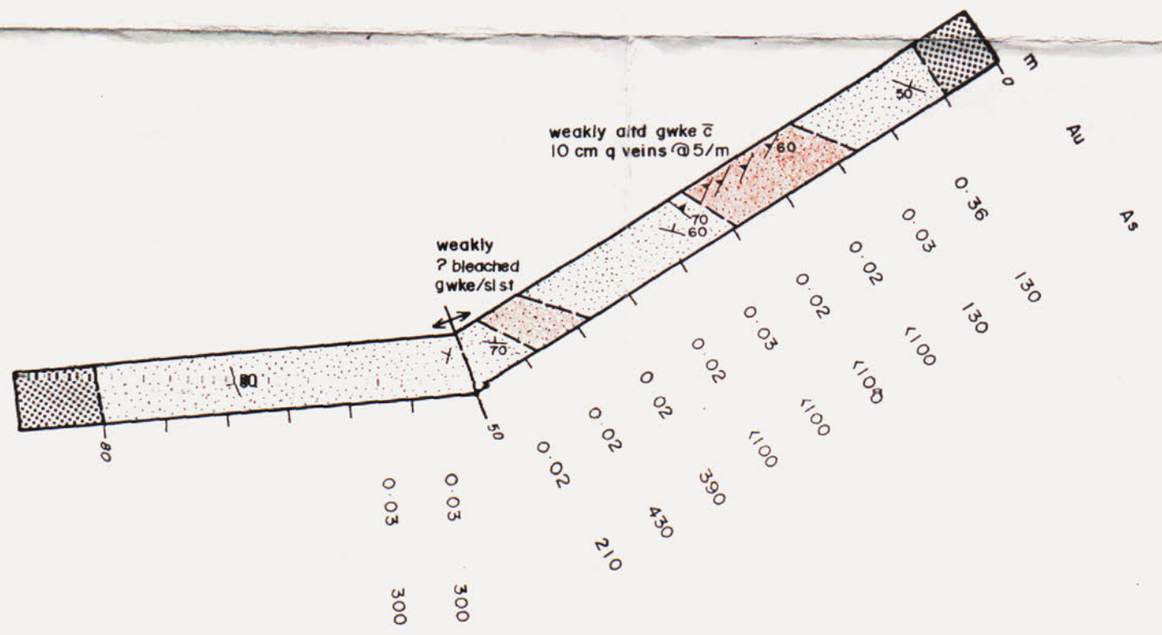
PLATE 9

TRENCH 7



M N

TRENCH F



CR87/139A

QUATERNARY

- Alluvium / soil

PROTEROZOIC
BURRELL CREEK FORMATION

- Greywacke with lesser interbeds of greywacke
- Shale and siltstone with lesser interbeds of greywacke
- "Limonitic" alteration - mainly limonite, fine quartz veinlets

- Interpreted anticlinal axis
- 64 Jointing orientation
- Inferred bedding contact
- 40 Strike and dip of bedding
- 6/m Frequency of veining along trench (6 per metre)
- Strike and dip of vein (≤ 40cm wide)
- "Stockworks" veining
- Major vein (≥ 40 cm)

MINERALOGY

q	quartz
fe	iron oxides ± quartz
cc	carbonate
py	pyritic spotting or boxworks textures
apy	arsenopyritic boxwork textures

NOTES
1. Width of trench is not to scale
2. Assays are in parts per million unless otherwise stated
3. For location of trenches see figure 5

ABBREVIATIONS:

c̄	with	sist	siltstone
altd	altered	sh	shale
gwke	greywacke	sst	sandstone

GOLD FIELDS EXPLORATION PTY. LIMITED

GEOLOGIST:	J. Vann
DRAWN:	D. Vann
DATE:	Jan '87
CHECKED:	
1,250,000 REFERENCE:	

COPPERFIELD SOUTH
E.L. 4725
GEOLOGICAL PLANS
TRENCHES 7 & F

SCALE: 1:500 (10 0 10 20 30m)

PLATE 10