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INTERNATIONAL NICKEL AUSTRALIA LIMITED

FINAL REPORT TO

BROKEN HILL PROPRIETARY COMPANY LIMITED

ON THE

JUKES-DARWIN AREA OF EL 13/65 S.W. TASMANIA

REPORT ON EXPLORATION WORK CONDUCTED BY INAL

BETWEEN OCTOBER 1972 AND MARCH 1974

I. RUDDOCK

April 1974

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INTERNATIONAL NICKEL AUSTRALIA LIMITED

FINAL REPORT

EL 13/65 JUKES-DARWIN

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INTERNATIONAL NICKEL AUSTRALIA LIMITED

FINAL REPORT

EL 13/65 JUKES-DARWIN

SUMMARY

Investigations by International Nickel Australia Limited have been carried out, over a period of 18 months, to test the potential for economic copper mineralisation in Cambrian Mt Read Volcanics in the Jukes-Darwin area.

Work included geological mapping, adit sampling, a helicopter-borne turair and aeromagnetic survey, induced polarisation surveys and a four hole diamond drilling programme.

Following an initial assessment of the tenement, detail investigations were conducted over five selected areas:- East Darwin, Jukes Proprietary, Intercolonial Spur, Allan's Creek-Snake Peak and Findon's. Diamond drilling was carried out at East Darwin and Jukes Proprietary.

Results from these investigations were discouraging and it was decided that no further work was warranted.

CONCLUSIONS

1. Stratabound, disseminated, sulphide mineralisation (pyrite-chalcopyrite) occurs within volcanic, rhyolitic lithologies of the Cambrian Mt Read volcanics.

2. The volcanics may be divided into two sequences:

   (a) Central Core Massive Rhyolite
   (b) Flanking Schistose Rhyolite

3. Stratabound mineralisation is located in chloritic alteration zones which developed in pyroclastic sequences immediately flanking massive lavas. This is similar to that observed at Mt Lyell Mine, and was considered to have the best potential for economic copper mineralisation at Jukes-Darwin.

4. Within the massive lavas, disseminated pyrite and chalcopyrite are scattered through hematite-magnetite veins. This type of occurrence has a poor potential for economic copper mineralisation.

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5. Five priority areas were selected for detail examination on the basis of surface indications, adit observations and locations of turair anomalies:

   a) East Darwin
   b) Jukes Proprietary
   c) Intercolonial Spur
   d) Allan's Creek-Snake Peak
   e) Findon's

6. Induced polarisation surveys located moderate to strong anomalies, beneath the old workings at East Darwin and Jukes Proprietary, which warranted further investigation by diamond drilling.

7. Induced polarisation surveys in the remaining priority areas indicated only weak, shallow anomalies (corresponding to surface indications) that did not warrant further investigation.

8. Diamond drilling of the best targets at East Darwin and Jukes Proprietary showed that the promising grades and widths of copper mineralisation, located in the old adits, do not extend at depth.

9. Disappointing results from exploration in all priority areas led to the conclusion that no further work was warranted within the Exploration Licence 13/65.

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INTERNATIONAL NICKEL AUSTRALIA LIMITED

FINAL REPORT

EL 13/65 JUKES-DARWIN

PART ONE

INTRODUCTORY REMARKS

AND

SUMMARY OF PREVIOUS EXPLORATION

INTRODUCTION

In accordance with the Agreement between International Nickel Australia Limited and Broken Hill Proprietary Company Limited, signed in September 1972, INAL began exploration work within Exploration Licence 13/65 in mid-October 1972.

An exploration camp was established at ruined Crotty Smelters and all field investigations were conducted from there.

INAL completed investigations in late March 1974.

LOCATION AND ACCESS

The Jukes-Darwin area forms Part One of EL 13/65 in S.W. Tasmania (see Location Plan, Figure 1). Part One covers 44.5 square miles and is defined as:-

> "Commencing at the NW corner of the area whose grid coordinates are 810,000 yards N, 360,000 yards E, thence 5 miles grid E, 4 miles grid S, 1½ miles grid W, 7 miles again grid S, 3¼ miles again grid W, and 11 miles grid N to the point of commencement".

Reference to the area is made from Tasmanian State Survey Topography Sheets (scale 1:31,680), Lyell Sheet C and Pillinger Sheet A.

The northern boundary of the tenement lies about 8 km south-south-east of Queenstown and coincides roughly with the line of the west-flowing King River, between Mt Jukes and Mt Huxley.

Access to the area is by a single track Hydro-Electric Commission (H.E.C.) unsealed road (Kelly Basin Road), which branches south from the Lyell Highway (between Queenstown and Hobart) about 10 km east of Queenstown. The H.E.C. eastern road runs southward through the length of the area, about 1.5 km west of the eastern boundary.

Four bulldozed roads provide 4-wheel drive access to the central area. These roads were constructed by BHP in 1970 and two were upgraded and extended by INAL during 1973 (see Map 1).

A number of miners walking tracks lead to old workings; these were opened up and new tracks were cut by INAL to improve access for ground investigations (see Map 1). All areas of interest could be reached within 1 to 1½ hours walking time from 4-wheel drive roads.

PHYSIOGRAPHY

The area covers the southern part of the north-trending West Coast Range, between the King River and Macquarie Harbour.

The range forms a series of rugged peaks, between 600m to over 1,150m above sea level, separated by cross-cutting valleys.

The principal summits (from north to south) are Mt Jukes (1,168m), Conglomerate Peak (731m), Snake Peak (731m), Mt Darwin (1,031m) and South Darwin Peak (686m).

Pleistocene glaciation has accentuated the ruggedness of the terrain. Both eastern and western flanks of the Range are very steep; while precipitous crags form the eastern faces of Mt Jukes and Mt Darwin.

VEGETATION AND CLIMATE

All slopes and valleys are covered by dense cool temperate rain forest vegetation, which causes difficult access to all parts of the area. On the higher ridges and peaks, the vegetation becomes stunted and sparser (characterised by low scrub and button grass); here access is quite good.

The climate is of the cool Temperate Maritime Type. It is dominated by a westerly airstream renowned for its stormy "Roaring Forties". The weather pattern is very changeable, so that cold, wet and windy weather can occur at any time of year. On average, the most settled weather occurs in January and February.

During 1973 the weather remained unsettled throughout and stormy periods frequently curtailed field operations. The total annual rainfall for 1973 was 160 inches (recorded at Crotty Smelter site).

PREVIOUS WORK

The mineral potential of the area was first realised by prospectors during the copper boom of the 1890's. Encouraged by the discoveries at My Lyell and the opening of the smelters at Crotty, numerous prospecting syndicates located most of the visible mineralised zones in the area. When the North Lyell Company closed the Crotty Smelters in 1903, most prospecting activity ceased.

Between 1900 and 1914, Government geologists visited and reported on the area (1900 Twelvetrees, 1903 Waller, 1914 Loftus-Hills). The most comprehensive of these reports is that of Loftus-Hills.

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In 1940, the Mt Lyell Mining and Railway Company carried out channel sampling in many of the old adits and trenches, (1940 Douglas). The sampling technique was unsatisfactory because a high proportion of leached surface material was included in the samples causing low assays from obvious copper-rich zones. Douglas concluded that because of difficult access and poor assay results, no further work was warranted.

During 1950, Bradley studied the area. Although he gave a satisfactory account of the structure and post-Cambrian lithologies, his interpretation of the Cambrian sequences was incorrect; he regarded the volcanic lithologies as metasomatised greywacke sediments.

Between 1956 and 1960, Lyell-E.Z. Exploration (a combination of Mt Lyell and Electrolytic Zinc companies) re-examined parts of the area during brief field trips. They conducted an airborne magnetic survey of the whole area and geophysical surveys over some of the old prospects. Two diamond drill holes (L1 and L7) tested mineralisation at the Lake Jukes prospect and yielded poor results.

In the 1964-65 summer period, U.S. Metals Refining Company undertook brief inspections over some of the old mine prospects. Geological and ground geophysical surveys were carried out, but it was felt that the results did not warrant further exploration.

Since 1965, BHP Co Ltd has held title to the area.

INTERNATIONAL NICKEL AUSTRALIA LIMITED

FINAL REPORT

EL 13/65 JUKES-DARWIN

PART TWO

EXPLORATION WORK CONDUCTED

BY INTERNATIONAL NICKEL AUSTRALIA LIMITED

BETWEEN OCTOBER 1972 AND MARCH 1974

INTRODUCTION

Exploration work by INAL was carried out in three stages:-

I. Initial Investigations, to determine the regional setting of the area and to delineate areas of interest for copper mineralisation, in alteration zones developed in the Cambrian Mt Read Volcanics.

This involved photogeological mapping, surface prospecting, geochemical orientation studies, and a turair (airborne electromagnetic) survey over the tenement.

II. Detail Investigations, within selected areas to evaluate information for the selection of drill targets.

This involved geological mapping on surface and in adits, adit sampling and induced polarisation surveys.

III. Diamond Drilling, of selected targets.

A summary of exploration data is given in Table 1.

I. INITIAL INVESTIGATIONS

1. Regional Setting

An interpretative summary of major photogeological features, on the scale 1:60,000 was produced (see Map 2), to define the significant regional structures in the Queenstown - Macquarie Harbour region.

2. Jukes-Darwin

Reconnaissance geological mapping was conducted over the area and an interpretative map, on the scale 1:20,000 was produced (see Map 3). Ground examinations over accessible areas (see Map 4) were made to define the boundaries between the principal lithological sequences. Projections of these boundaries, into areas of little or no access, were made using information from black-and-white and colour air photos.

(Air photography for INAL was conducted by the Tasmanian Lands and Surveys Department).

Special attention was paid to the location of alteration zones, carrying disseminated sulphides (mainly pyrite with a little chalcopyrite), within the Mt Read Volcanics.

Most of the old adits and workings mentioned in the previous reports were examined.

As a complement to the work at Jukes-Darwin, visits were made to adjacent areas of the Mt Read Volcanics (from Mt Huxley northwards to Mt Read) and discussions were held with geologists from the Tasmanian Mines Department and Mt Lyell Company.

Resulting from this and work at Jukes-Darwin, a report entitled "Proposed Correlations of Lithology and Mineralisation in Cambrian Volcanics in the Jukes-Darwin and Queenstown Areas" was prepared, and this has provided a basis for the geological assessment of the Jukes-Darwin region.

3. Geochemical Study

Investigations were carried out over known sites of mineralisation (at East Darwin and Jukes Proprietary prospects) to establish a routine sampling technique suitable for the whole area.

4. Airborne Geophysical Surveys

Helicopter-borne electromagnetic (turair) and magnetic surveys were conducted during February 1973, by Seigel Associates Australia Pty Ltd. A total of 385 km of east-west lines were flown.

The turair survey was flown because it was considered to be the most suitable exploration method for locating deep targets in this rugged, thickly vegetated terrain.

5. Track Cutting

One team of cutters operated continuously between November 1972 and April 1973, clearing old access tracks to adits and workings and establishing new tracks for geological investigations of extensions of alteration zones from known mineralised areas. A contract crew was hired for two weeks in November 1972, to assist the initial work.

All access tracks are shown in Map 1. A total of 16.0 km of tracks were cut.

RESULTS OF INITIAL INVESTIGATIONS

A) GEOLOGY

1. Major Regional Structures

Similarities in the geological setting of Jukes-Darwin and Mt Lyell areas were noted during the air-photo examination of regional structures.

Major north-west trending lineaments, defined by fold axes and major faults, are believed to be related to large subcrustal fractures ("geofractures"), which affect Pre-Cambrian

basement rocks and Lower Palaeozoic rocks of the "West Coast Anticlinorium".

The two most prominent lineaments in the region are:

(i) the Linda Disturbance, which intersects the belt of Mt Read Volcanics at Mt Lyell;

(ii) the Andrew River Lineament, which intersects the Mt Read Volcanics in the Intercolonial Spur area at Jukes-Darwin.

Such structures may have been active lines of weakness since the late pre-Cambrian and may have controlled the site of significant mineralisation in the Mt Read Volcanics at Mt Lyell. They may also have controlled the location of similar deposits (not yet exposed) in the Jukes-Darwin area.

2. Regional Structural and Stratigraphic Elements

The Queenstown-Macquarie Harbour region may be considered to consist of four major north trending elements (see Map 2a):

(i) Pre-Cambrian Tyennan Block in the east, composed of highly deformed metasediments, dominantly quartzites and quartz-muscovite schists.

(ii) King Synclinorium, lying west of the Tyennan Block, in a complex structural trough containing a thick sequence of Ordovician to Devonian limestones, shales, sandstones, quartzites and slates.

(iii) West Coast Anticlinorium (forming the West Coast Range) lying west of the King Synclinorium, consists essentially of Cambrian Mt Read Volcanics, capped in many places by thick sequences of Ordovician Owen Conglomerate.

(iv) Dubbil-Barril Synclinorium, lying west of the West Coast Anticlinorium, consisting of broadly folded Ordovician to Devonian limestones, sandstones and shales.

3. Jukes-Darwin Area

a) General Stratigraphy

The area consists of Cambrian and Ordovician rocks which form the West Coast Anticlinorium.

The Cambrian rocks are dominantly rhyolitic lavas and pyroclastics, (referred to as the Mt Read Volcanics) which indicate a sub-aerial type of deposition. They are probably of Lower to Middle Cambrian in age and formed along a probable island

arc system which developed west of the Tyennan Block. In the south of the area a Cambrian subvolcanic granite (Darwin Granite) has intruded the volcanic pile as a broadly concordant body.

Upper Cambrian Jukes Conglomerate unconformably overlies the volcanics in the north and south of the area. It is a volcaniclastic conglomerate containing clasts of Mt Read Volcanics and Darwin Granite.

Ordovician Owen Conglomerate unconformably overlies all Cambrian rocks. Clasts are almost entirely of pre-Cambrian quartzites and quartz-mica schists. Most of the Conglomerate appears to lie within north west trending, ? fault-bounded grabens, except for a narrow overlapping sequence in the east which appears to overlie conglomerates within the grabens.

b) Mt Read Volcanics

The economic potential for stratabound copper mineralisation lies with the north trending belt of volcanics.

Observations indicated that the Mt Read Volcanics may be considered as two sequences:

(i) Inner, Central Rhyolitic Core: massive rocks, predominantly lavas and air-fall tuffs and agglomerates, characterised by ubiquitous hematite-magnetite veins.

(ii) Flanking Pyroclastic Rhyolites: schistose rocks, predominantly ignimbritic sequences of crystal tuffs and crystal-lithic tuffs, on the west and east flanks of the massive central core.

These sequences are thought to represent two phases of volcanic activity in the Mt Read Arc:

(i) Early Pyroclastic-Fall Phase, characterised by continuous high intensity gas blast, ejecting large volumes of magma from vents to produce air fall deposits; with lavas deposited close to vents.

(ii) Later Pyroclastic-Flow Phase, characterised by ignimbrite eruptions, explosion level in vents gradually deepens (after phase (i)) so that magma just reaches over the lips of craters, then avalanches downslope as ignimbrite eruptions.

The subvolcanic Darwin Granite appears to have intruded the Central Core Rhyolites prior to the Pyroclastic-Flow phase; clasts of the granite occur within the overlying Flanking Pyroclastics.

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4. Mineralisation

Sulphide mineralisation is thought to have occurred during fumarolic activity at the close of the Pyroclastic-Flow Phase. This was prior to the Upper Cambrian Jukesian Orogeny. Later remobilisation during the Devonian Tabberabberan Orogeny may have caused local concentrations of copper.

Chloritic alteration zones, containing disseminated sulphides (pyrite, occasional chalcopyrite and traces of galena and sphalerite) are developed in both volcanic sequences, mainly within pyroclastic units adjacent to areas of massive lava.

The most extensive alteration zones are developed in the Flanking Pyroclastic Rhyolites immediately flanking the massive Central Core Rhyolites:

e.g. East and west slopes of Intercolonial Spur, East Darwin area (eastern slopes of Snake Peak) and Jukes Proprietary area.

Smaller alteration zones occur in pyroclastic units within the Central Core, adjacent to lavas:

e.g. Findon's Prospect

Examinations of mineralised outcrops and old workings indicate two types of sulphide occurrence at Jukes-Darwin:

a) Disseminated Sulphides within hematite-magnetite veins in massive Central Core lavas

Pyrite and chalcopyrite occur as disseminated coarse grains and aggregates within iron-rich veins which are confined to the lavas. These veins usually have a scattered, irregular occurrence and the sulphides are not sufficiently concentrated to be regarded as possible economic deposits of low-grade copper.

A possible exception to this was thought to be widespread disseminated chalcopyrite in large hematite-magnetite pods and lenses on the western slopes of Darwin Plateau - the Prince Darwin-Tasman Darwin Prospects.

In 1957, Wade estimated that the disseminated chalcopyrite offered a potential for 4 million tons of 0.7% copper. The diamond drilling programme by BHP in 1970, however, indicated that the mineralisation was uneconomic.

Similar copper mineralisation associated with iron rich veins occurs in massive Central Core lavas at Red Hills, to the east of Mt Read, on Mt Lyell Company lenses. The latter company tested the mineralisation by drilling, and found that it was uneconomic.

b) Disseminated Sulphides within Flanking Pyroclastic Host Rocks

Pyrite and chalcopyrite (with traces of galena and sphalerite) occur as disseminated grains and aggregates, often orientated parallel to the foliation of the host rocks. The total sulphide content in the rocks varies between 2% and 60%.

The sulphides represent stratabound mineralisation, developed in pyroclastic sequences adjacent to the margin of massive lava, within the mineralised zone over width of 0.25m.

This can be seen in the following areas:

East Darwin, Jukes Proprietary, Eastern slopes of Intercolonial Spur, Western slopes of Intercolonial Spur, Eastern slopes of Sumpter's Peak, Findon's Prospect, Bean and Thow Prospect.

The ore bodies at Mt Lyell occur in a similar situation, as stratabound bodies developed in pyroclastics on the flanks of massive lavas. This environment was regarded as having the best potential for low-grade copper mineralisation at Jukes-Darwin, and all exploration has concentrated on this.

B) GEOCHEMISTRY

Pilot studies of soil, plant and stream sediment sampling were conducted at East Darwin and Jukes Proprietary.

The results (shown in Tables 2 to 5 and Figs. 2 and 3) were not sufficiently encouraging to allow any of the sampling methods to be recommended for routine exploration.

C) GEOPHYSICS

1. Turair Survey

A total of 75 turair anomalies were detected (see Map 5). All the responses were very weak and anomalies were within the noise level of the instrumentation. Most were phase anomalies of low magnitude, indicating poor conductors.

Eight of the best-looking anomalies were selected for follow-up induced polarisation surveys, in order of priority:

12, 57, 25, 28, 69, 16, 17, 18

Each of these correspond to known mineralisation in chloritic alteration zones located during initial geological investigations.

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12 & 57	Allan's Creek - Snake Peak area
25	Hydes Prospect, western slopes of Intercolonial Spur
28	Eastern slopes of Intercolonial Spur
69	Jukes Proprietary area
16 & 17	East Darwin area
18	Findon's Prospect

2. Airmagnetics

Magnetic contours are plotted on the 1:20,000 plan, Map 6. Magnetic highs are located in the massive Central Core Rhyolites, and correspond to concentrations of hematite-magnetite in lenses and pods, in the following areas:

Jukes Proprietary
Intercolonial Spur
Northern slopes of Mt Darwin
Mt Darwin Summit
Razorback Spur (south of Mt Darwin)
Western edge of Darwin Plateau (Prince Darwin-Tasman Darwin)

II. DETAIL INVESTIGATIONS

Introduction

Following the assessment of results from the initial investigations, several areas of interest were selected for more detailed study (see Map 4). These were, in order of priority:

1.	First Priority	A) East Darwin Area B) Jukes Proprietary Area
2.	Second Priority	A) Intercolonial Spur Area B) Allan's Creek - Snake Peak Area C) Findon's Area
3.	Third Priority	A) Eastern slopes of Sumpters Peak B) Bean & Thow (Lake Jukes) Area

Third priority areas were only to be investigated if favourable results were obtained from the first and second priority areas.

Work involved in these investigations included grid line cutting, geological mapping, adit clearing, mapping, and sampling and time-domain induced polarisation surveys. A programme of road building was also carried out to provide access for drilling at East Darwin and Jukes Proprietary.

1. Geological Mapping

1:5,000 scale mapping of first and second priority areas was carried out to delineate lithologies, alteration zones and positions of old workings (see Maps 10 to 12).

1:2,500 and 1:1,000 scale mapping of drilling areas at East Darwin (Maps 7 & 8) and Jukes Proprietary (Maps 9 & 10) provided further detail for drill-profile proposals (Figs. 13 to 14).

2. Adit Mapping

1:500 scale mapping was conducted at East Darwin and Jukes Proprietary, to determine underground extensions of lithologies, structures and widths of sulphide mineralisation in the following adits:

East Darwin Prospect	Pearce's	(Fig. 4a)
	Darwin Pty	(Fig. 4b)
	Souter's	(Fig. 4c)
	Dillon's No. 1 Upper & Lower Adits	(Fig. 4d)
	Dillon's No. 2	(Fig. 4e)
Jukes Proprietary Prospect	Adit No. 1 (Upper Adit)	(Fig. 5a)
	Adit No. 3 (Middle Adit)	(Fig. 5b)

Information from these was also plotted on to drill proposals.

3. Adit Sampling

Representative rock chip sampling was conducted over 2 metre sections within mineralised zones (2 to 30% total sulphides), and over 5 metre sections within non-mineralised zones, in the following adits:

East Darwin Prospect	Pearce's	(Fig. 6a)
	Darwin Pty	(Fig. 6b)
	Dillon's No. 1	(Fig. 6c)
Jukes Proprietary Prospect	Adit No. 1	(Fig. 7a)
	Adit No. 3	(Fig. 7b)

A total of 240 adit samples were collected and assayed for copper, lead and zinc. Results (shown in Tables 6 to 11) were plotted on to adit plans (Figs. 6a to 6c and 7a and 7b) and used to assess grades of copper mineralisation in the two areas.

4. Adit Clearing

This was carried out in the East Darwin Workings (Pearce's, Souter's and Darwin Pty) to remove fallen debris at adit entrances and clear limonitic mud accumulated in tunnels.

5. Induced Polarisation Surveys

Time domain surveys were conducted over first and second priority areas. A total of 16.1 km of lines were surveyed, with pole-dipole arrays (a = 50 metres, and n = 1 to 3). This work was carried out by contractors Geoterrex Pty Ltd.

Results are plotted on to profiles showing resistivities (ohm-metres) and chargeabilities (milliseconds):

East Darwin	(Figs. 8a to 8g)
Jukes Proprietary	(Figs. 9a to 9b)
Allan's Creek-Snake Peak	(Figs. 10a to 10b)
Findon's Prospect	(Figs. 11a to 11c)
Intercolonial Spur	(Figs. 12a to 12e)

6. Line Cutting

16.5 km of lines were prepared for grids for I.P. surveys and geological traverses (see Map 1).

7. Bulldozing

Access roads to East Darwin and Jukes Proprietary were constructed, and the BHP access road to Intercolonial Spur was upgraded. A total of 450 hours of work was completed.

1. FIRST PRIORITY AREAS

A) EAST DARWIN AREA

(i) Geology

A geological plan of the area on the scale 1:2,500 is shown in Map 7, and an elevation control plan on the scale 1:1,000 is shown in Map 8.

A thick sequence of Flanking Pyroclastics (apparent thickness 1,000m) in the east overlies Central Core Rhyolite to the west. The contact between the two sequences, appears sharp and dips steeply (75^{o}-80^{o}) towards the east, as seen in Pearce's, Dillon's No. 1 and Darwin Pty adits. The contact is exposed on surface in a small outcrop, on the track to Findon's, about 20m above the entrance to Dillon's No. 2 adit. Quartz veining and broken ground in the adits indicate that the contact is faulted.

In the westernmost part of the area, rocks of the Owen Conglomerate Series unconformably overlie the Central Core Rhyolite.

An inferred, ENE-trending fault affecting all rocks runs approximately across the centre of the area and divides it into northern and southern parts. It shows an apparent southerly displacement of about 25m of the northern part.

The Central Core Rhyolite consists of massive, well-jointed, pink-coloured lavas; with intercalations of grey-green coloured banded ash seen in the northern part of the area. Magnetite-hematite veins (1 to 5 cm wide) are common.

The Flanking Pyroclastics consist of numerous units of crystal tuffs and crystal-lithic tuffs (including "flow agglomerates") which represent a series of ignimbrite-flow deposits. Units of banded ashes are sometimes seen within these deposits. The rocks are grey-green in colour and are well-foliated. The foliations trend WNW (between 310° and 330°) and dip steeply (75° to 85°) towards the west.

(ii) Mineralisation

Stratabound pyrite-chalcopyrite occurs in an extensive WNW trending chloritic alteration zone, which is developed in Flanking Pyroclastics adjacent to the margin of the massive Central Core Rhyolite. The zone is approximately 200 metres wide and can be traced for about 800 metres along strike. Six adits and several costeans have intersected the mineralisation.

Sulphides (mainly pyrite) aggregate up to 10% of the total rock within the zone, while the strongest mineralisation is developed in a 70 metre wide zone adjacent to the contact with the lavas. From surface and adit observations it appeared that this 70 metre zone was persistent throughout the area to the south of the ENE trending fault (over a strike length of about 400m). North of the fault, strong mineralisation appeared to have a patchy distribution, as local concentrations adjacent to the lava contact.

The best cross-section of mineralisation in the southern part of the area is exposed in Pearce's Adit. Rock chip sampling indicated an eight metre wide zone averaging 0.97% copper (between 129 and 137 metres from the adit entrance) almost adjacent to the contact with massive lavas (see Fig. 6a). In the northern part of the area, in Darwin Pty Adit, local concentrations of chalcopyrite occur in thin veins within the pyroclastics near the lava contact. Two separate two metre sections assayed 1.3% and 1.55% copper (see Fig. 6b).

Within the massive lavas, disseminated grains of pyrite and chalcopyrite in irregular magnetite-hematite veins were observed in Pearce's and Darwin Pty Adits.

(iii) Geophysics: I.P. Surveys

Surveys totalling 3,475m were conducted along six lines across the strike and one line along the strike of the mineralisation (see Figs. 8a to 8g).

On lines 200S, 400S, 500S and 600S moderate strength anomalies defined on anomalous zone 50 to 100m wide, in Flanking Pyroclastics, corresponding to the continuous zone of mineralisation in the southern part of the area. North of this, on lines 00N and 150N, moderate strength anomalies less than 50 metres wide, correspond to mineralisation in Flanking Pyroclastics in Darwin Pty Adit and to mineralisation (in hematite-magnetite veins) in massive lavas.

On the Track Traverse, parallel to the strike, an anomalous zone extends from 50N (approximately line 600S) to 425N (approximately line 200S) corresponding to the mineralised zone in the southern part of the area.

B) JUKES PROPRIETARY AREA

(i) Geology

Geological plans of the area, on the scales 1:1,000 and 1:5,000 are shown in Maps 9 and 10 respectively.

Flanking Pyroclastics (crystal tuffs, crystal-lithic tuffs, agglomerates, and lavas) in the SE overlie massive Central Core lavas in the north-west. The north-east trending contact between the two sequences is sharp, where visible on the surface, and dips steeply (85^{o}) to the south-east. There is no evidence of faulting along this contact.

In the west, Jukes Conglomerate (consisting of material derived from the Mt Read Volcanics) unconformably overlies the volcanic sequences. In turn it is unconformably overlain by Owen Conglomerate (sandstones, grits and conglomerates derived from pre-Cambrian quartzites).

In the east, the volcanics are unconformably overlain by Owen Conglomerate.

A north-east trending fault, referred to as the "Jukes Proprietary Fault", occurs within the Flanking Pyroclastics and is parallel to the margin of the massive Central Core lavas. The fault dips steeply ($75-85^{o}$) to south-eastward. Its inferred position can be traced across the area; it affects the Flanking Pyroclastics and the Owen Conglomerate. The

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fault also marks the boundary of the mineralised chloritic alteration zone, developed in Flanking Pyroclastics on the margin of the massive Central Core lavas.

Several north-west trending faults, affecting the Central Core lavas and the Flanking Pyroclastics, offset the Jukes Proprietary Fault.

The location of faults, inferred on the surface, are confirmed by their occurrence in the old adits (see Figs. 5a and 5b).

The Central Core Rhyolite consists of massive, well-jointed, pink-coloured lavas. Magnetite-hematite veins (1 to 5 cm wide) are common and large veins (up to 15m wide) occur in the northern part of the area.

The Flanking Pyroclastics consist of an interdigitating sequence of crystal tuffs and crystal-lithic tuffs with occasional lenses of agglomerate (with dimensions between 2 x 5m and 6 x 10m). A wedge of porphyritic lavas (with feldspar phenocrysts up to 5mm across) occurs within the tuffs, in the eastern part of the area. The rocks are grey-green in colour and are well foliated. Foliations trend 310° and are vertical or steeply dipping (85°) to the south-west. Within the mineralised zone the fresh rocks are dark green (outcrops are rust coloured) due to chloritic alteration; original textures and foliations are preserved.

(ii) Mineralisation

Stratabound chalcopyrite-pyrite occurs in trending chloritic alteration zone about 550m long, developed in Flanking Pyroclastics, adjacent to the massive Central Core lavas. The zone is bounded on the north-west by the contact with massive lavas and on the south-east by the Jukes Proprietary Fault. The faulted contact between mineralised tuffs and unmineralised tuffs is sharp and is seen in the old workings as a ? fault 2 to 5 cm across. No mineralisation was observed within the fault.

The zone may be considered in three parts (northern, central and southern) separated from each other by north-westerly trending faults.

Central, main part

This is about 10m wide and can be traced, as rust-coloured outcrops on surface, for 300m along strike. Copper mineralisation was intersected by two adits: No. 1 (Upper Adit) and No. 3 (Middle Adit).

Chalcopyrite occurs in blebs and stringers, 1 to 5 cm long and up to 1 cm wide, sub-parallel to the foliation in dark green chloritised pyroclastics. Chalcopyrite content is between 1 to 5% throughout the workings, with local concentrations of 5 to 20%. Pyrite is subordinate to chalcopyrite in this zone and occurs with the latter in the blebs and stringers.

The average grade of copper is 1.4% in this 8 to 10m wide central portion, as indicated by rock chip sample assays.

Northern part

This varies between 40 and 100m wide and can be traced along strike for about 125m. Mineralisation occurs in discontinuous chloritic lenses (trending north-north-west) within the pyroclastics, and occurs in several small costeans as finely disseminated pyrite with rare chalcopyrite.

Southern part

This is a complex area, about 70m wide and 100m long, where the contact between massive lavas and the Flanking Pyroclastics is disjointed by north-north-west trending shears. This area is slightly chloritised and contains finely disseminated pyrite. Within the massive lavas, aggregates of coarse grained pyrite occur, in association with the hematite-magnetite veins.

Adit No. 2 (Lower Adit) was driven into "barren" massive lavas, on the north-west side of the mineralised zone. Within the workings, scattered disseminated pyrite and rare chalcopyrite were observed in the lavas.

(iii) Geophysics: I.P. Surveys

Surveys totalling 1250m were conducted along two lines, one across the strike of the mineralised zone (line 00N Fig. 9a), and one along strike (line 00E Fig. 9b).

Strong anomalies were obtained which correspond to mineralisation in the central main part of the mineralised zone. The strongest anomalies are centred just below the No. 1 and No. 3 workings (near the origin of both I.P. grid lines).

ASSESSMENT OF FIRST PRIORITY AREAS FOR DRILL TARGETS

Results from detailed investigations indicated that diamond drilling was warranted at East Darwin and Jukes Proprietary.

Drilling would test the possible downward extensions of interesting widths and grades of copper mineralisation located in the old adits.

Targets were selected to test zones beneath the strongest I.P. anomalies and three holes were planned:

EAST DARWIN (2 holes)	1) to test mineralisation in the southern part of the area to be collared at 467S 403E
	2) to test mineralisation in the northern part of the area to be collared at 125N 188E
JUKES PROPRIETARY (one hole)	3) to test mineralisation beneath Adits 1 and 3, and to be collared at 22+30N, 11+25E

2. SECOND PRIORITY AREAS

A) INTERCOLONIAL SPUR AREA

(i) Geology

A geological plan of the area, on the scale 1:5,000, is shown in Map 11.

The central part of the north trending Spur is formed by massive lavas of the Central Core. The lavas are flanked on the west and east by pyroclastics. Air-fall tuffs (interpreted as Central Core lithologies) immediately flank the lavas and are in turn flanked by pyroclastic flow material: crystal tuffs and crystal-lithic tuffs (Flanking Pyroclastics lithologies).

In the south, the massive lavas are flanked by a zone of air-fall tuffs containing large lenses of agglomerates and volcanic breccia. Narrow irregular hematite veins (1 cm to 10 cm thick) are ubiquitous throughout the zone which is interpreted as part of the Central Core. In the agglomerates lenses aerodynamically well-shaped bombs (measuring from 2 x 4 cm to 15 x 30 cm) occur in bedded lapilli tuffs. The volcanic breccia is seen as a deposit of large assorted blocks (measuring up to 1.5 x 2.5 m) of lavas and air-fall tuffs. The deposit appears to represent a gulley filling, on the slopes of a volcano, and not a vent infilling. Attempts made to trace the position of the vent (or vents) in this area proved fruitless, except to suggest that it lay in the area now occupied by massive lavas.

(ii) Mineralisation

Stratabound, disseminated pyrite and chalcopyrite occur in chloritic alteration zones on the east and west flanks of the massive lavas.

In the south, within the lapilli tuffs and agglomerates (chloritised and veined by hematite) very scattered disseminated pyrite occurs. A small barytes deposit is located in lenses within the lapilli tuffs and adjacent massive lavas.

Western Zone

Fine disseminations of pyrite are ubiquitous in outcrops traced from Hydes Prospect, through Hal Jukes Prospect, to Egg Creek, a strike distance of 350 metres. South of here, thick vegetation hinders access, but 650 metres south of Egg Creek an east-west access track cuts across 200 metres of chloritic alteration zone containing scattered disseminated pyrite. If this is an extension of the Hydes-Egg Creek mineralisation, then the whole zone is about 1,000 metres long.

The richest mineralisation is seen in Hydes Creek, where stringers of chalcopyrite are concentrated in a 30 metre wide zone in crystal-lithic tuffs. This zone is associated with a shallow dipping shear ($050^{\circ}/25^{\circ}$ SE). Sampling by BHP, in 1971, in the creek section indicated copper values of 0.5% to 1.25% over 24m. The Hydes Adit did not intersect this mineralisation and the copper enrichment is interpreted as remobilisation along the shear plane.

Eastern Zone

Mineralisation was hitherto unknown in this area until a search was made for the cause of Turair anomaly 28.

Disseminated pyrite and chalcopyrite occur at the northern end of the zone. Thin stringers of chalcopyrite occur in chloritised crystal tuffs, over an area of 50 x 100 metres on a steep, south-east trending ridge. A sample of gossanous float taken from the area (sample number A215794) assayed 6.1% copper, 27.5 ppm silver and 3.9 ppm gold.

Southward the mineralisation (seen as disseminated pyrite and rare chalcopyrite), in chloritised crystal tuffs, can be traced for 500 metres where it is intersected by access tracks. Beyond this there are no tracks, but air-photo interpretation suggests that the zone could extend for a further 500 metres.

Southern Zone

Chloritic alteration is developed throughout the lapilli tuffs and agglomerates, but only small scattered occurrences of disseminated pyrite were observed.

A small barytes deposit (known as Taylour's Reward) in a cross-cutting east-west zone, about 400 metres long, is developed in massive lavas and adjacent lapilli tuffs. The barytes occurs in a series of discontinuous, en echelon veins, which vary in width between 0.5 and 1.5 metres. Minor pyrite

and chalcopyrite (with rims of supergene covellite) form small aggregates at the margin of the barytes veins at the western end of the deposit (near a 2.5m deep shaft) and at the eastern end (near a 10m adit, driven westward).

BHP examined the barytes deposit in 1970 and concluded that it could contain up to 1 million tons of 85% $BaSO_4$. This tonnage seems exaggerated based on the surface expression of the barytes.

In the massive lavas of the central part of the Spur, irregular veins of magnetite-hematite have a scattered distribution. A few large pods (up to 5m x 10m) are developed and contain localised aggregates of pyrite and chalcopyrite.

(iii) Geophysics: I.P. Surveys

Surveys totalling 7,400 metres were completed. In the northern part of the area, four lines "across strike" (lines 0N, 1N, 2N & 3N Figs. 12b to 12e) were surveyed to test mineralisation in the eastern and western zones. In the south, one line "along strike" (Base Line 00N Fig. 12a) was surveyed to test mineralisation associated with the agglomerate zone and the barytes veins.

Weak, relatively shallow anomalies were located on the western and eastern slopes of the Spur, corresponding to disseminated pyrite and chalcopyrite seen in surface outcrops and in old workings. At the southern end of the Spur, no significant anomalies were located.

The results of the I.P. surveys indicated that no further work was warranted in the Intercolonial Spur area.

B) ALLAN'S CREEK - SNAKE PEAK AREA

(i) Geology

The area is shown on part of the geological plan of the "Findon's - Sumpter's Peak area", on the scale 1:5,000, in Map 12.

The area forms the south-east end of a north-west trending hanging valley, between Mt Darwin and Snake Peak. It is underlain by Central Core massive lavas.

Discontinuous north-west trending chloritic alteration zones are developed as lenses within the lavas, roughly along the length of the western tributary of Allan's Creek. The largest of these lenses, measuring 400 x 100 metres, was thought to be the cause of Turair anomalies 12 and 57.

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(ii) Mineralisation

Small amounts of disseminated pyrite occur scattered through the large chloritic lens. Alluvial gold diggings nearby suggest that the source of gold may have been the alteration zone.

Assays of ironstone samples from the alteration zone are not encouraging: containing less than 200 ppm copper, 2 to 16 ppm silver and less than 0.5 ppm gold (samples A215786-215789).

(iii) Geophysics: I.P. Surveys

Two lines, totalling 1,900 metres, were surveyed (00W and 100W) across the strike of the alteration zones and close to the plotted positions of Turair anomalies 12 and 57.

Only weak, shallow anomalies were detected, corresponding to the positions of chloritic alteration lenses in the lavas. (see Figs. 10a and 10b).

There were no I.P. or resistivity anomalies that could account for the "strong" Turair anomalies 12 and 57.

Results indicated that no further work was warranted in this area.

C) FINDON'S AREA

(i) Geology

The area is shown on part of the 1:5,000 plan, Map 12. It occupies the north-west end of the north-westerly trending hanging valley between Mt Darwin and Snake Peak.

A north-westerly trending zone of pyroclastics (crystal tuffs, crystal-lithic tuffs, lithic tuffs, and banded ashes) flanks massive lavas on the south-west slopes of Snake Peak. All lithologies are interpreted as Central Core material.

Chloritic alteration has affected the whole flanking zone of pyroclastics. Within the massive lavas, about 300m east of the Findon's workings, there is an elliptical area (250 x 100m) of hematite-rich lithic tuffs. This was referred to as the "Snake Peak Iron Body" by Corbett and Cuffley (1970 BHP report CR 894). On the north side of this iron-rich area is a 3m-wide chloritic alteration zone which can be traced north-westward for 250m from the tuffs into the surrounding lavas.

The iron-rich lithic tuffs were interpreted as the infilling of a small vent.

(ii) Mineralisation

In the flanking zone of pyroclastics, disseminated pyrite is ubiquitous. Chalcopyrite in scattered stringers (up to 0.5 x 2.0 mm) is exposed in a trench near a 6m shaft, about 200m south of Findon's Adit. The latter did not locate significant mineralisation. A sample from the trench wall (A215206) assayed 2.29% copper. A grab sample from the shaft was reported by Waller, in 1902, to contain 5.0% copper.

(iii) Geophysics: I.P. Surveys

Three lines, (125N, 00N and 200S), totalling 2,150 metres were surveyed, to test mineralisation within the pyroclastic zone (Findon's prospect) and in the iron rich area of lithic tuffs within the lavas.

Weak, shallow anomalies occurred over the Findon's Workings. Strong, but shallow, anomalies were located to the east within the iron rich area. (see Figs. 11a to 11c).

Results indicated that no further work was warranted in the area.

ASSESSMENT OF SECOND PRIORITY AREAS

Geological observations and Turair survey anomalies indicated possible interesting zones of mineralisation.

Induced polarisation surveys over these zones indicated that the mineralisation was minor, and did not extend much below the surface.

Results indicated that drilling was not warranted in these areas.

3) THIRD PRIORITY AREAS

It was decided not to carry out detailed work in these areas, because of the lack of encouraging results from explorations in the First and Second Priority areas.

III. DIAMOND DRILLING

INTRODUCTION

The drill programme commenced on October 20th 1973 and was completed on January 8th 1974. Drilling was carried out by Longyear Australia Pty Ltd using a Longyear 38 machine and wireline equipment.

Four holes, totalling 957.1 metres, Z142000 to Z142003 inclusive, were drilled to test mineralisation in the East Darwin and Jukes Proprietary areas.

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	Hole No.	Grid Position	Bearing (magnetic)	Depression Angle	Length
EAST DARWIN	Z142000	467S/403E	253°	45°	71.5m
	Z142001	467S/403E	253°	60°	329.8m
	Z142002	125N/188E	253°	60°	331.3m
JUKES PTY	Z142003	22+30N/ H+25E	299°	60°	224.5m
				Total "length"	957.1m

Complete logs with assay data (for copper, lead and zinc) are shown in Tables 12 to 15. Drill hole profiles are shown in Figs. 13a to 13b and Fig. 14.

Assays were carried out on 2 metre sections of split core, from the mineralised intersections, Selected samples were also assayed for silver and gold.

Assay samples from unmineralised parts of the cores were obtained from representative chip sampling over 5 metre sections.

Assaying was carried out at the INAL laboratory, in Boulder W.A., using Atomic Absorption techniques.

1. East Darwin Prospect

DDH Z142000 was terminated at 71.5 metres, because excessive deflection (10° to 12° per 30 metres) would have prevented the hole reaching the target zone. The hole was collared and terminated in crystal tuffs and crystal-lithic tuffs of the Flanking Pyroclastics. No significant mineralisation was intersected.

DDH Z142001 tested mineralisation beneath Pearce's and Dillon's No. 1 adits and an induced polarisation anomaly 100-150 metres below Pearce's (the lower of the two adits).

The hole was collared in Flanking Pyroclastics (crystal tuffs) and terminated in Central Core Rhyolite (lavas); the contact between the two sequences was intersected at 235.7 metres.

The mineralised zone was intersected between 127.7 and 235.7 metres, in chloritised Flanking Pyroclastics. Weak pyrite mineralisation as thin stringers and disseminations with traces of chalcopyrite and galena was observed. The highest copper assay from this zone was 0.06%, between 191 and 193 metres, while the mineralisation within the same potential ore zone in Pearce's Adit assayed 2.7% Cu over a two metre intersection.

Weak mineralisation also occurs in Central Core lavas, from their contact with the Flanking Pyroclastics to the end of the hole. Disseminated pyrite with traces of chalcopyrite occur in magnetite-hematite veins within the lavas; the greatest copper concentration was intersected between 254 and 256 metres which assay 0.04% Cu.

DDH Z142002 tested mineralisation and an induced polarisation anomaly 100 to 150 metres beneath the Darwin Proprietary Adit. The hole was collared in Flanking Pyroclastics (crystal tuffs) and terminated in Central Core lavas; the contact between the two sequences was intersected at 162.4 metres.

Sparse mineralisation occurred discontinuously throughout the hole. Sulphide concentration increases slightly in chloritised Flanking Pyroclastics between 103.9 and 162.4 metres, with development of occasional chalcopyrite and galena. Greatest copper assays (between 0.12% to 0.17%) were obtained between 103.9 to 109.9 metres. The interval 19.3 to 21.3 metres assayed 0.52% Pb and 0.30% Zn.

Weak mineralisation also occurs in Central Core lavas, where disseminated pyrite and chalcopyrite is associated with magnetite-hematite veinlets. Chalcopyrite is also sparsely disseminated through the lavas, with the interval 276.4 - 278.4 metres assaying 0.51% Cu within an eight metre interval between 276.4 and 284.4 metres averaging 0.24% Cu. These values are less than those obtained from Darwin Pty Adit, where a 2 metre intersection at the contact between pyroclastics and lavas assayed 1.55% Cu.

2. Jukes Proprietary Prospect

DDH Z142003 tested mineralisation and an induced polarisation anomaly 100m below No. 1 and No. 3 adits. The hole was collared in lavas within the Flanking Pyroclastics and terminated in Central Core lavas. The Jukes Proprietary Fault was intersected at 139.2 metres and the contact between the two volcanic sequences at 191.3 metres.

Mineralisation was intersected between 139.2 and 154.0 metres in chloritised crystal-lithic tuffs; however, weak mineralisation continued to 189.3 metres in chloritised crystal tuffs. Only weak copper mineralisation was intersected with chalcopyrite and pyrite forming thin (< 0.5 cm) irregular stringers and aggregates. The highest assays were obtained from a 6 metre section, averaging 0.59% Cu between 139.2 and 145.2 metres. Assays from the same mineralised shoot in No. 3 adit averaged 1.40% Cu.

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CONCLUSIONS

1. The drilling programmes at East Darwin and Jukes Proprietary indicate that copper mineralisation exposed in the adits does not extend in depth. It is possible that the near surface sulphides exposed in the workings represent secondary enrichment of leaner primary mineralisation.

2. Gold and silver assays were consistently much less than 5 dwts to the ton.

3. Drill cores confirm surface and adit observations that in the mineralised zones the sulphides are deposited near the base of a thick sequence of pyroclastic flows (ignimbrites) which were laid down on the flanks of the central core of massive lavas.

4. Drilling has tested targets based on geological and induced polarisation surveys at East Darwin and Jukes Pty. Prospects and the results suggest that the surface and near surface copper mineralisation is not indicative of economic mineralisation within 500 feet of the surface.

EQUIPMENT

1	Landrover	
1	Motorcycle (100 c.c)	
1	Mess unit	
4	Caravans	

PERSONNEL

Professional (4)	1	Senior Geologist	(18 months)
	1	Junior Geologist	(12 months)
	1	Geochemist	(1 month)
	1	Geophysicist	(2 months)
Technical (2)	1	Asst. Prospecting Hand	(16 months)
	1	Asst. Prospecting Hand	(2 months)
Labour (2)	1	Utility Worker	(16 months)
	1	Utility Worker	(10 months)
Contractors (12)	4	Drillers (Longyear)	(3 months)
	4	I.P. Crew (Geoterrex)	(5 weeks)
	1	Bulldozer Driver	(450 hours)
	3	Track Cutters	(2 weeks)

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TABLE I

SUMMARY OF EXPLORATION DATA

OCTOBER 1972 - MARCH 1974

Professional Man Days	980
Air Photography Colour/B & W	300 sq.km
Air Magnetic Survey	385 km
Turair Survey	385 km
Soil & Plant Sampling	1.35 km
" " " Samples	94
Track Cutting	16.0 km
Grid Lines	16.5 km
Induced Polarisation	16.1 km
Adit Channel Samples Analysed	240
Bulldozing	450 hours
Diamond Drill Holes	4
" " " Aggregate Length	957 m
Drill Samples Analysed	286

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TABLE 2

SOIL AND ROCK CHIP ASSAY RESULTS FOR EAST DARWIN TRENCH, JUKES-DARWIN AREA, TASMANIA

Sample & Site Number	Type of Sample and Depth (in)	Geochemical Analysis Cu	Pb	Zn
Site Number 1 (Upslope Barren Zone)				
A215501	S0-2	16	20	13
A215502	S6-12	16	20	10
A215503	S12+	16	10	9
A215504	RC 15	4	10	7
Site Number 2 (Upslope Barren Zone)				
A215507	S0-2	16	20	10
A215508	S6-12			
A215510	RC 12+	2	10	9
Site Number 3 (Upslope Barren Zone)				
A215512	S0-2	24	40	17
A215514	S6-12	16	10	7
A215516	RC 12+	4	20	9
Site Number 4 (Mineralized Zone)				
A215519	S0-2	16	20	13
A215520	S6-12	16	10	9
A215521	S12+	4	10	9
A215522	RC 15			
Site Number 5 (Mineralized Zone)				
A215525	S0-2	16	20	13
A215526	S6-12	4	20	9
A215527	S12+	4	10	7
Site Number 6 (Mineralized Zone)				
A215531	S0-2	24	40	17
A215532	S6-12			
A215533	S12+	16	5	9
A215534	RC 15			

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Sample & Site Number	Type of Sample and Depth (in)	Geochemical Analysis Cu	Pb	Zn
Site Number 7 (Mineralized Zone)				
A215537	SO-2	16	20	10
A215538	S6-12	16	10	9
A215539	S12+	16	10	7
A215540	RC 15	2	5	9
Site Number 8 (Downslope Barren Zone)				
A215543	SO-2	24	40	15
A215544	S6-12	4	10	7
A215546	RC 12+	4	10	9
Site Number 9 (Downslope Barren Zone)				
A215549	SO-2	24	40	19
A215550	S6-12	16	20	10
A215551	S12+	4	5	7
A215552	RC 15	2	10	9
Site Number 10 (Downslope Barren Zone)				
A215555	SO-2	16	20	17
A215556	S6-12	16	10	10
A215558	RC 12+	16	10	9
Site Number 11 (Downslope Barren Zone)				
A215561	SO-2	16	20	13
A215562	S6-12	4	10	9
A215563	S12+	4	5	9
A215564	RC 15	4	10	10

Sample Sites shown on Figure 2
S refers to soil sample and RC to rock chip
Depth of sampling is given in inches
All results expressed in terms of ppm's
Results obtained by A.A.S. for bulk materials only

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TABLE 3

PLANT ANALYSES AT EAST DARWIN TRENCH, JUKES-DARWIN AREA, TASMANIA

Sample and Site Number	Specimen	Geochemical Analysis Leaf Cu	Leaf Pb	Leaf Zn	Twig Cu	Twig Pb	Twig Zn
Site Number 1 (Upslope Barren Zone)							
A215505	A	24	5	21	20	10	9
A215506	B	36	5	25	36	5	15
Site Number 2 (Upslope Barren Zone)							
A215511	A	16	10	25	20	10	10
A215512	B	24	20	25	70	5	30
Site Number 3 (Upslope Barren Zone)							
A215517	A	16	10	17	24	5	9
A715518	B	24	10	13	116	20	25
Site Number 4 (Mineralized Zone)							
A215523	A	24	5	15	98	5	15
A215524	B	I.S.	I.S.	I.S.	30	5	9
Site Number 5 (Mineralized Zone)							
A215529	A	24	10	213	36	20	74
A215530	B	20	20	34	53	20	50
Site Number 6 (Mineralized Zone)							
A215535	A	30	20	102	188	20	112
A215536	B	24	10	124	16	5	17
Site Number 7 (Mineralized Zone)							
A215541	A	30	5	38	36	10	13
A215542	B	42	20	19	24	10	17
Site Number 8 (Downslope Barren Zone)							
A215547	A	24	20	13	45	20	40
A215548	B	45	20	40	36	20	21
Site Number 9 (Downslope Barren Zone)							
A215553	A	92	20	134	20	10	38
A215554	B	30	20	65	24	10	32

041

Sample and Site Number	Specimen	Geochemical Analysis					
		Leaf			Twig		
		Cu	Pb	Zn	Cu	Pb	Zn
Site Number 10 (Downslope Barren Zone)							
A215559	A	24	20	200	30	10	90
A215560	B	64	20	9	122	20	5
Site Number 11 (Downslope Barren Zone)							
A215565	A	45	20	55	45	20	21
A215566	B	58	20	9	98	20	5

Sample sites shown on Figure 2
All results expressed in terms of ppm's
Results obtained by A.A.S.
Plant Speciman A = Sprengelia incarnata ("Heath")
B = Leptospermum spp. ("Tea Tree")

TABLE 4

X-RAY DIFFRACTION ANALYSIS FOR SOIL MATERIALS AT EAST DARWIN TRENCH, JUKES-DARWIN AREA, TASMANIA

Sample Number	Depth (in)	Mineralized Composition			
		Mica	Kaolin	Felspar	Quartz
Site Number 2 (Upslope Barren Zone)					
A215508	6-12	55%	5%	--	40%
Site Number 6 (Mineralized Zone)					
A215532	6-12	50%	5%	5%	40%

Specimens were run for values of 2 theta from 4 degrees to about 20 degrees for first order basal reflections.

043

599044

TABLE 5

STREAM SEDIMENT RESULTS, ALIANS CREEK, JUKES-DARWIN AREA, TASMANIA

Sample Number	Location	Geochemical Analysis Cu	Pb	Zn	Fe
Site Number 1 (Volcanic Float)					
A215578	Just downstream from Andrew River Volcanics in valley till	36	40	52	2.6
Site Number 2 (Volcanic Float)					
A215579	500-750 m upstream	36	30	44	2.6
Site Number 3 (Sericite Schist Zone)					
A215580	500m upstream in A.R.U.	42	40	38	2.2
Site Number 4 (A.R.U.)					
A215581	100-500m upstream	36	40	34	1.8
Site Number 5 (Locally Chloritized)					
A215582	40m upstream from B.H.P. Sample No. A5 (N.C. White)	24	40	27	1.8

All results obtained by A.A.S.
Results for Cu, Pb and Zn-expressed in terms of ppm's and those for Fe in percent.

TABLE 6

599045 044

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Prospect EAST DARWIN

Project EL 13/65

Adit Pearce's

Co-ords.of Portal

Name JUKES-DARWIN

Sampled by AKC / RJDD/ IR / RD

Date 28.6.73 - 4. 7.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu ppm	Pb ppm	Zn ppm
Entrance Tunnel	215301A	0	5	5	Qu-Ser-Sch - crystal tuff,weathered	7	14	40
" "	02	5	10	5	Qu-Ser-Sch - crystal tuff & cryst. lithic tuff (weathered)	11	21	51
" "	03	10	15	5	Qu-Ser-Sch - crystal tuff & crystal lithic tuff (weathered)	11	30	66
" "	04	15	20	5	Qu-Ser-Sch - crystal tuff,(weathered)	20	39	59
" "	05	20	25	5	Qu-Ser-Sch - crystal tuff(weathered)	73	60	99
" "	06	25	30	5	Qu-Ser-Sch - crystal tuff	366	1420	1800
" "	07	30	35	5	Qu-Ser-Sch)- crystal tuffs & crystal Chlor. Sch) lithic tuffs,v.w.mineral	97	80	150
" "	08	35	40	5	Chlor.Sch,mineralized, v.w.	71	129	180
" "	09	40	45	5	Chloritic Sch.-mineralized, v.w.	79	40	175
" "	215310A	45	50	5	Chloritic Sch) crystal tuffs, Qu-Ser-Sch.) v.w. mineralized	9	50	160
" "	11	50	55	5	Qu-Ser-Sch, silic. & mineralized	83	25	106
" "	12	55	60	5	Qu-Ser-Sch - silic. & mineralized	220	25	99
" "	13	60	65	5	Qu-Ser-Sch. - silic. & mineralized	91	31	105
" "	14	65	70	5	Qu-Ser-Sch) Chlorite) Sch.) mineralized	10	22	105

Table 6

TABLE 6

599046

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INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Prospect EAST DARWIN

Project EL 13/65

Adit Pearce's

Co-ords.of Portal

Name JUKES-DARWIN

Sampled by AKC/RJDD/IR/RD

Date 28.6.73 - 4. 7.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
Entrance Tunnel	215315A	70	75	5	Qu-ser-sch - silic. & mineralized	30	21	103
" "	16	75	80	5	Qu-ser-sch.- silic. & mineralized	99	15	190
" "	17	80	85	5	Qu-ser-sch.- silic.& minld. Banded ash (weathered)	51	61	125
" "	18	85	86	1	Banded ash (weathered)	19	19	45
" "	19	86	87	1	Qu-ser-sch. - silic. & minld.	60	52	213
" "	215320A	87	88	1	Qu-ser-sch. - silic. & minld.	81	144	495
" "	21	88	89	1	Qu-ser-sch. - silic, & minld. v.s.	325	79	110
" "	22	89	90	1	Qu-ser-sch. - silic. & minld. v.s.	2720	91	260
" "	23	90	91	1	Qu-ser-sch. - silic. & minld.	16	23	80
" "	24	91	92	1	Qu-ser-sch. silic. & minld.	41	15	360
" "	25	92	93	1	Qu-ser-sch. - silic. & minld. v.s.	56	49	110
" "	26	93	94	1	Qu-ser-sch. - silic. & minld.	15	29	55
" "	27	94	95	1	Qu-ser-sch. - silic. & minld. v.v.s.	100	340	194
" "	28	95	96	1	Qu-ser-sch. - silic. & minld.	15	340	40
" "	29	96	97	1	Qu-ser-sch. - silic. & minld.	10	19	56
" "	215330A	97	98	1	Qu-ser-sch. - silic. & minld.	10	31	74
" "	31	98	99	1	Qu-ser-sch. - silic. & minld.	99	69	282

599047

047

TABLE 6

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Prospect EAST DARWIN

Co-ords.of Portal

Project EL 13/65

Adit Pearce's

Sampled by AKC/RJDD/IR/RD

Name JUKES-DARWIN

Date 28. 6.73 - 4. 7.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
Entrance Tunnel	215332A	99	100	1	Qu-ser-sch. - silic. & minld.	10	21	90
" "	33	100	101	1	Qu-ser-sch. - silic. & minld.	9	19	63
" "	34	101	102	1	Qu-ser-sch. - silic. & minld.	9	21	64
" "	35	102	103	1	Qu-ser-sch. - silic. & minld.	10	40	59
" "	36	103	104	1	Qu-ser-sch. - silic. & minld.	20	102	70
" "	37	104	105	1	Qu-ser-sch. - silic. & minld.	10	94	65
" "	38	105	106	1	Qu-ser-sch. - silic. & minld.	19	29	75
" "	39	106	107	1	Qu-ser-sch. - silic. & minld.	1440	208	105
" "	215340A	107	108	1	Qu-ser-sch. - silic. & minld.	11	29	160
" "	41	108	109	1	Qu-ser-sch. - silic. & minld.	55	40	101
" "	42	109	110	1	Qu-ser-sch. - silic. & minld.	296	19	99
" "	43	110	111	1	Qu-ser-sch. - silic. & minld.	21	16	83
" "	44	111	112	1	Qu-ser-sch. - silic. & minld.	11	20	176
" "	45	112	113	1	Qu-ser-sch. - silic. & minld.	17	25	180
" "	46	113	114	1	Qu-ser-sch. - silic. & minld.	960	19	132
" "	47	114	115	1	Qu-ser-sch. - silic. & minld.	419	30	128
" "	48	115	116	1	Qu-ser-sch. - silic. & minld.	349	30	70
" "	49	116	117	1	Qu-ser-sch. - silic. & minld.	15	19	64

599048

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TABLE 6

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Project EL 13/65 Adit Pearce's Prospect EAST DARWIN

Name JUKES-DARWIN Co-ords.of Portal

Sampled by AKC/RJDD/IR/RD

Date 28. 6.73 - 4.7.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
Entrance Tunnel	215350A	117	118	1	Qu-ser-sch. - silic. & minld.	640	30	69
" "	51	118	119	1	" "	10	10	60
" "	52	119	120	1	" "	66	20	74
" "	53	120	121	1	" "	11	40	80
" "	54	121	122	1	" "	19	40	50
" "	55	122	123	1	" "	10	20	102
" "	56	123	124	1	" "	172	19	120
" "	57	124	125	1	" "	30	21	110
" "	58	125	126	1	" "	40	27	85
" "	59	126	127	1	" "	21	22	90
" "	215360A	127	128	1	" "	59	20	70
" "	61	128	129	1	" "	47	19	80
" "	62	129	130	1	Qu-ser-sch. - minld. Cpy 10-15%	1.85%	115	230
" "	63	130	131	1	" " Cpy 5-10%	2.41%	277	134
" "	64	131	132	1	" " Cpy 5-10% & Py	.12%	29	60
" "	65	132	133	1	" " Cpy & py	.04%	20	65
" "	66	133	134	1	" " Cpy & py	.24%	19	90
" "	67	134	135	1	" " " "	.08%	90	31

TABLE 6

599049

049

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Prospect EAST DARWIN

Project EL 13/65

Adit Pearce's

Co-ords.of Portal

Name JUKES-DARWIN

Sampled by AKC/RJDD/IR/RD

Date 28.6.73 - 4.7.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
Entrance Tunnel	215368A	135	136	1	Qu-ser-sch. - minld. - Cpy 5%,Py 10-15%	.36%	43	52
" "	69	136	137	1	" " - Cpy 1-5%	2.7%	272	170
" "	215370A	137	138	1	" - v.w. minld.	70	16	65
" "	71	138	139	1	Sample not collected.			
" "	72	139	140	1	Qu-ser-sch. - minld.	225	280	490
" "	73	140	141	1	" - " - cpy, py, incl. fine-grd. ash?	410	162	200
" "	74	141	142	1	" - v.v.w. min., diss.pyr.	21	42	110
" "	75	142	143	1	" - " " diss.py. < 1%.	91	40	100
" "	76	143	144	1	Qu-ser-sch. - v.v.w.min, py.diss<<1%	28	51	53
" "	77	144	145	1	V.sheared qu-ser-sch.- min.v.v.w., trace of diss py.	20	95	335
" "	78	145	146	1	Mass.rhyolite,trace of diss. py.	9	16	106
" "	79	146	147	1	" " , trace of sulphide min	2	12	47
" "	215380A	147	148	1	" " ,no sulphide min.visible	80	100	139
" "	81	148	149	1	" " " " " "	29	10	20
" "	82	149	150	1	" " - py approx. 5%	10	31	80

TABLE 6

599050

050

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Prospect EAST DARWIN

Project EL 13/65

Adit Pearce's

Co-ords.of Portal

Name JUKES-DARWIN

Sampled by AKC/RJDD/IR/RD

Date 28.6.73 - 4. 7.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
Entrance Tunnel	215383A	150	151	1	Massive rhyolite; py 1-5%	9	12	45
" "	84	151	152	1	" " ; py 1%	10	15	34
" "	85	152	153	1	" " ; py<<1%	10	19	41
END OF ENTRANCE TUNNEL								

TABLE 6

INTERNATIONAL NICKEL AUSTRALIA LIMITED

599051

045

ADIT SAMPLING LOG SHEET

Prospect EAST DARWIN

Project EL 13/65

Adit Pearce's

Co-ords.of Portal

Name JUKES-DARWIN

Sampled by RD /AC

Date 8. 8.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
West Cross Cut	215398A	0	2	2	Qtz.seric.sch. - py 1-10%	4100	72	105
	99	2	4	2	" " " - py 10-20%,cpy 0-1%	225	205	100
	215400A	4	6	2	" " " - py 20-30%	370	225	163
	401	6	8	2	" " " - py 20-30%	3500	330	640
	02	8	9	1	" " " - py 80-100%	600	385	50
East Cross Cut No.2	215403A	0	2	2	Qtz.seric.sch. - py. 0-1%	52	27	135
(located at end of south drive)	404	2	4	2	" " " - py. 1-2%	2050	45	153
	405	4	6	2	" " " - py. 0-10%	80	63	180
	406	6	9	3	" " " - py. 1-5%	97	24	83

599052 051

TABLE 6

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Prospect EAST DARWIN

Project EL 13/65

Adit Pearce's

Co-ords.of Portal

Name JUKES-DARWIN

Sampled by RD / AC

Date 8. 8.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
West Cross Cut	215386A	0	2	2	Qtz.sericite schist, py. 20-80%	1.35%	82	147
	87	2	4	2	" " " , py. 10-50%	1900	72	190
	88	4	6	2	Sheared crystal tuffs, py. <10%	68	135	740
Roof sample across 2m at entrance to West cross-cut	89				Qtz.sericite sch., mass.py. including vein 20 cms wide; traces of mal, cpy	1.10%	250	165
East Cross Cut	215390A	0	2	2	Qtz.sericite schist, py 10-30%	93	50	102
	91	2	4	2	" " " , py 40-80%	87	83	136
	92	4	6	2	" " " , py 40-80% End.	157	58	124
East Cross-cut No.1 (Located at 23 m.in south drive)	215393A	0	2	2	Qtz.sericite schist, py 0-20%,cpy(-)	1100	60	125
	94	2	4	2	" " " , py 10-20%, cpy 5-10%	5500	39	95
	95	4	6	2	" " " , py 10-15%, cpy trace.	750	40	107
	96	6	7	1	" " " , py 5-10%	34	33	82
	97			2	" " " , py(-),cpy(-)to (+)	1250	70	75
		(Roof sample at entrance across 2 m.)						

TABLE 7

599053

052

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Prospect EAST DARWIN

Project EL 13/65

Adit Dillon's No. 1 (Lower Level)

Co-ords.of Portal

Name JUKES-DARWIN

Sampled by IR / RD

Date 9. 8.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
Main Tunnel	215407A	24	26	2	Quartz sericite schist	230	110	195
" "	08	26	28	2	" " "	440	70	1000
" "	09	28	30	2	" " "	290	62	132
" "	215410A	30	32	2	" " "	255	20	114
" "	11	32	34	2	" " ", py (-)	450	28	70
" "	12	34	36	2	" " ", py (-), cpy (-)	235	28	70
" "	13	36	38	2	" " ", cpy (-)	1950	22	63
" "	14	38	40	2	" " "	50	40	80
" "	15	40	42	2	" " ", cpy (+)	400	22	94
" "	16	42	44	2	" " "	3200	42	235
" "	17	44	46	2	" " ", cpy (-)	5000	40	160
" "	18	46	48	2	" " "	250	29	113
" "	19	48	50	2	" " "	225	48	121
" "	215420A	50	52	2	" " "	96	26	58
" "	21	52	54	2	" " "	125	21	90
" "	22	54	56	2	" " ", cpy (+)	4900	280	440
" "	23	56	58	2	" " ", cpy (+)	1900	109	165
" "	215424A	58	60	2	" " ", cpy (+) to (-)	5200	41	172

Table 7

599054

053

TABLE 8

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Project EL 13/65

Name JUKES-DARWIN

Adit DILLON's NO. 1
(Upper Level)

Prospect EAST DARWIN

Co-ords.of Portal

Sampled by IR / RD

Date 9. 8.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
Main Tunnel	215425A	0	2	2	Quartz-sericite schist	5600	29	29
	26	2	4	2	" "	310	25	40
	27	4	6	2	" "	83	21	65
	28	6	8	2	" "	63	27	100
	29	8	10	2	" "	280	19	108
	215430A	10	12	2	" "	125	21	102

Table 8

TABLE 9

599055 054

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Prospect EAST DARWIN

Project EL 13/65

Adit DARWIN PTY.

Co-ords.of Portal

Name JUKES-DARWIN

Sampled by RD / AC

Date 5. 9.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
Entrance Tunnel	215826A	24	26	2	Chlorite schist, diss py + cpy <1%	150	79	22
	27	26	28	2	" " " " "	19	75	21
	28	28	30	2	" " " " "	2600	109	20
	29	30	32	2	" " ,diss py + cpy 1-5%	250	112	17
	215830A	32	34	2	" " " " 5-10%	71	71	17
	31	34	36	2	" " " " 1-10%	2600	55	15
	32	36	38	2	" " " " 1-10%	6200	70	20
	33	38	40(Roof)	2	" " " " 1-5%	141	65	19
	34	40	42	2	Chlor.sch.,qtz.veining,c.g.cpy 1-10%	1.30%	99	20
West Cross-Cut (off South Drive)	215835A	(sample at entrance to West cross-cut)		2	" " ,more py vein, trace cpy.	1.55%	85	85
	36	0	2	2	Chlor.schist, diss.cpy + py 1-10%	6400	77	21
	37	2	4	2	" " " " " 1-10%	1640	82	20
	38	4	5.5	1.5	" " " " " "	2760	72	16
South Drive	215839A	2 m. ample across roof at 5 m.			" " " " " "	2000	80	20

Table 9

TABLE 10

599056

055

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Prospect EAST DARWIN

Project EL 13/65

Adit JUKES PTY. - Top Adit No.1

Co-ords.of Portal

Name JUKES-DARWIN

Sampled by AC / RD

Date 10-11.8.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
Top Adit No. 1	215431A	0	2	2	F.to med.g.xtal tuff,xtal lithic tuff	3400	123	167
	32	2	4	2	" " " " "	1.30%	40	180
	33	4	6	2	" " " " "	1.35%	46	166
	34	6	8	2	" " " " "	2.00%	75	167
	35	8	10	2	" " " " "	1.35%	60	160
	36	10	12	2	" " " " "	3500	69	188
	37	12	14	2	" " " " "	220	30	137
	38	14	16	2	" " " " "	1000	30	115
	39	16	18	2	" " " " "	370	29	125
	215440A	18	20	2	" " " " "	210	40	97
	41	20	22	2	" " " , c. agg.	275	41	80
	42	22	24	2	F.to c.g. xtal tuff, xtal lithic tuff	1100	43	82
	43	24	26	2	F. to mg. xtal tuff	600	22	115
	44	26	28	2	" " "	6500	39	125
	45	28	30	2	" " "	1800	31	100
	46	30	32	2	" " ", rhyolite agg.	245	29	95
	47	32	34	2	C.g. xtal tuff	105	37	82

Table 10

TABLE 10

INTERNATIONAL NICKEL AUSTRALIA LIMITED

599057 056

ADIT SAMPLING LOG SHEET

Prospect EAST DARWIN

Project EL 13/65

Adit JUKES PTY.

Co-ords.of Portal

Name JUKES DARWIN

Sampled by AC / RD

Date 10-11.8.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
Top Adit No. 1	215448A	34	36	2	C.g. xtal tuff	170	26	94
	49	36	38	2	Xtal tuff, % phenocrysts > 40%	93	52	103
	215450A	38	40	2	M.g. xtal tuff	160	111	90
	51	40	42	2	Xtal lithic tuff with pink rhyolite fragments up to 1 cm. in diam.	218	61	114
	52	42	44	2	" " " " "	435	80	82
	53	44	46	2	M. to c..g. xtal tuff	2600	52	100
	54	46	48	2	F.g. lava, xtal tuff	5600	240	78
	55	48	50	2	F.g. lava	550	150	70
	56	50	52	2	F.g. almost dirty lava cpy vein 2-5 cm.wide	900	100	65
	57	52	54	2	" " " " " "	170	52	72
			End.					

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TABLE 11

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Prospect EAST DARWIN

Project EL 13/65

Adit JUKES PTY. Middle Adit No.3

Co-ords.of Portal

Name JUKES-DARWIN

Sampled by RD / AC

Date 15-16. 8.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
Entrance Tunnel	215458A	0	2	2	Xtal tuffs & xtal lithic tuffs weathd	2900	50	166
" "	59	2	4	2	" " " " " "	4200	49	159
" "	215460A	4	6	2	" " " " " "	2500	40	188
" "	61	6	8	2	" " " " " "	2700	30	171
" "	62	8	10	2	" lithic tuff, trace min.	4400	31	211
" "	63	10	12	2	" " ", cpy 1-2%	4700	37	327
" "	64	12	14	2	" " ", cpy < 1%	1.00%	39	219
" "	65	14	16	2	Xtal lithic tuff,xtal tuff,cpy 1-2%	1.05%	31	220
" "	66	16	18	2	" " ", cpy <1%	1.30%	30	182
" "	67	18	20	2	" " ",xtal tuff, cpy <1%	1.30%	36	170
" "	68	20	22	2	" " ", agglom. cpy <<1%	1.50%	40	170
" "	69	22	24	2	" " ",xtal tuff,weathered	5500	45	144
" "	215470A	24	26	2	Xtal lithic,xtal tuff, cpy 1-2%	1.80%	45	248
" "	71	26	28	2	" " " " , cpy < 1%	3.05%	49	250
" "	72	28	30	2	" " tuff, cpy 1-3%	1900	59	235
" "	73	30	32	2	" " ", cpy << 1% (-)	5500	50	279
" "	74	32	34	2	" " ,xtal tuff, cpy < %	1.10%	57	250

Table 11

599059

058

TABLE 11

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Project EL 13/65

Name JUKES-DARWIN

Adit JUKES PTY. Middle Adit No.3

Prospect EAST DARWIN

Co-ords.of Portal

Sampled by RD / AC

Date 15-16.8.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
Entrance Tunnel	215475A	34	36	2	Xtal lithic,xtal tuffs, cpy 1-2%	1.30%	40	250
" "	76	36	37.4	1.4	" " tuff,agglom.?; cpy 1%	1.35%	36	225
" "	77	37.4	39.4	2	Agglomerate?, cpy < 1%	1.35%	41	240
" "	78	39.4	41.4	2	Xtal lithic tuff, cpy < 1%	1.3%	43	210
" "	79	41.4	43.4	2	" " " , samp. weathered	6.1%	65	130
" "	215480A	43.4	45.4	2	" " " " "	3.7%	59	111
" "	81	75.14	77.14	2	Xtal lithic,xtal tuff, trace diss.py	2000	222	121
" "	82	77.14	79.14	2	" " , ash bands, cpy 1-2%	2060	255	110
" "	83	79.14	81.14	2	" " ,xtal tuff, cpy 1-10%	1.55%	350	1200
" "	84	81.14	83.14	2	" " " " , cpy 1-5%	1.65%	1690	1720
" "	85	83.14	85.14	2	" " " " , cpy 0-1%	1.55%	50	127
" "	86	85.14	87.14	2	" " " " , cpy 5-10%	2.75%	59	180
" "	87	87.14	89.14	2	" " " " , cpy 5-15%	2.00%	39	95
" "	88	89.14	91.14	2	Xtal tuff,agglomerate? cpy 5-15%	2.00%	49	111
" "	89	91.14	93.14	2	Xtal lithic,xtal tuff, cpy 1-5%	1.15%	40	200
" "	215490A	93.14	95.14	2	" " " " , cpy 1-5%	1.80%	40	210
" "	91	95.14	97.14	2	Xtal lithic tuff, cpy 1-5%	1.10%	49	245

599060

059

TABLE 11

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Project EL 13/65

Name JUKES-DARWIN

JUKES PTY.

Adit Middle Adit No. 3

Prospect EAST DARWIN

Co-ords.of Portal

Sampled by RD / AC

Date 15-16.8.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
Entrance Tunnel	215492A	97.14	99.14	2	Xtal lithic tuff, cpy < 1%	640	41	235
" "	93	99.14	101.14	2	" " " , cpy 1-5%	1.00%	41	230
" "	94	101.14	103.14	2	" " " , cpy 1-10%	1.10%	40	205
" "	95	103.14	105.14	2	" " " , cpy 5-20%	2.50%	75	210
" "	96	105.14	107.14	2	" " " , cpy 5-15%	3.35%	120	215
" "	97	107.14	109.14	2	" " " , cpy 1-50% (more)	7.0%	219	275
" "	98	109.14	111.14	2	" " " , cpy 1-5%, py 1-2%	1.05%	66	200
" "	99	111.14	113.14	2	" " " (lava ?) , cpy 1%	8000	89	225
" "	215500A	113.14	115.14	2	" " " , cpy patchy 1-20%	1.40%	47	187
" "	215801A	115.14 (End of main tunnel at west winge)	118.14	3	" " " ,(lava ?) , cpy 1-5%	2550	33	230
Entrance Tunnel/ East Cross-cut	215802A	0	2	2	Xtal tuff, cpy 5-10%	1.70%	60	200
" " " "	03	2	4	2	" " ,xtal lithic tuff, cpy 5-15%	1.10%	49	205
" " " "	04	4	6	2	" " " " " , cpy 1-2%	1.10%	49	180
" " " "	05	6	8	2	" " " " " , cpy < 1%	1.00%	50	129
" " " "	06	8 (End of cross-cut; start of south drive)	9.3	1.3	Brecciated xtal tuffs, cpy 1-5%	1.40%	78	110

TABLE 11

599061

060

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Prospect EAST DARWIN

Project EL 13/65

Adit JUKES PTY. Middle Adit No. 3

Co-ords.of Portal

Name JUKES-DARWIN

Sampled by RD / AC

Date 15-16.8.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
Entrance Tunnel South Drive from end of east cross-cut	215807A	0	2	2	Brecc. tuffs or agglomerate, cpy 1-5%	9700	50	140
	08	2	4	2	" " " " ,cpy 1-5%	9000	57	117
	09	4	6	2	" " " " ,cpy < 1%	1.50%	99	166
	215810A	6	8	2	Xtal tuffs,xtal lithic tuffs,cpy 1-10%	1.40%	65	260
	11	8	10	2	" " " " " ,cpy 1-2%	7000	61	180
	12	10	12	2	" " " " " ,cpy < 1%	2900	86	240
	13	12	14	2	" " " " " ,cpy 1-5%	7000	40	181
	14	14	16	2	" " " " " ,cpy patch 1-10%	1.80%	35	150
	15	16	18	2	Xtal tuff, cpy 1-5%	9000	29	110
	16	18	20	2	" lithic,xtal tuff, cpy 1-5%	1.95%	51	171
	17	20	22	2	" " " " cpy 1-5%	6000	40	170
	18	22 (End of	24 south	2 drive)	" " " " cpy patch 1-10%	7500	49	195
West cross-cut (South drive)	215819A	0	1.6	1.6	Xtal tuff,diss.cpy 1-2%, py 1-5%	1400	140	220
	20	1.6	3.6	2	Xtal lithic,xtal tuff, 1-2% cpy	1.55%	41	290
	21	3.6	5.6	2	" " " " , cpy 1-10%	1.10%	50	260
	22	5.6	7.6	2	" " " " , cpy 1-10%	8900	55	250

TABLE 11

599062

INTERNATIONAL NICKEL AUSTRALIA LIMITED

ADIT SAMPLING LOG SHEET

Prospect EAST DARWIN

Project EL 13/65

Adit JUKES PTY.- Middle Adit No.3

Co-ords.of Portal

Name JUKES DARWIN

Sampled by RD / AC

Date 15-16.8.73

Adit Section	Sample Number	From m.	To m.	Length m.	Description	Cu	Pb	Zn
West Cross-cut from end of South Drive	215823A	7.6	9.6	2	Xtal lithic, xtal tuff, cpy 5-15%	3.40%	109	220
	24	9.6	11.6	2	" " " " , cpy 5-10%	2.10%	110	205
	25	11.6	13.6 (End)	2	" " " " , cpy 1-10%	4.90%	89	260

Table 12 Drill Log and Assays for Z142000, East Darwin

Table 13 Drill Log and Assays for Z142001, East Darwin

Table 14 Drill Log and Assays for Z142002, East Darwin

Table 15 Drill Log and Assays for Z142003, Jukes Proprietary

599064 TABLE 12

063

INTERNATIONAL NICKEL AUSTRALIA LIMITED
TASMANIA

PROJECT JUFES-DARWIN LOG HOLE No. Z 142000 COORDINATES 467E 4N
LOCATION EAST DARWIN AREA ANGLE FROM HORIZONTAL 45° DIRECTION R.L. GROUND

Scale Depth	Rec. Run	From / To METRES	DESCRIPTION ROCK TYPE Components, colour, grain size, weathering, alteration, etc.	MINERALISATION	Rec. Run	
		0	COLLAR			
		0 / 4.2	NO SAMPLE RETURN		4.2	A 216 -001
		4.2 / 10.0	FLANKING PYROCLASTICS (F.P.) CRYSTAL TUFF, showing some ignimbritic textures and glass shards. Foliation // 30°-40° Core rather broken.		5.8	-002
		10.0 / 11.9	F.P. As above. Foliation // 30°-40° Core rather broken.		1.9	-003
		11.9 / 16.9	F.P. CRYSTAL LITHIC TUFF, prominent clasts of crystal tuff 1-3cms; dest. clasts 1-2cm, prominent ash bands 1-6mm. Foliation // 40°-50° Contact with crystal tuffs // 40°	Trace of sulphides in clasts (Py)	5.0	-004
		16.9 / 21.9	F.P. AS ABOVE, coarsening downwards, clasts reach maximum size of 4 (3-4cms) at 18.8 M (Base of one pyroclastic unit?), pyrite clast at 18.6 M 6x3 cms. Foliation // 40°	SULPHIDES IN CLASTS M S (Py) @ 18.6M	5.0	-005

DRILL No.
TYPE LONGYEAR 38
DRILLER
COMMENCED 20-10-73
COMPLETED 22-10-73

COMMENTS
TARGET IP anomaly 200 m. below surface - at 175 E.
RESULT Hole abandoned at 71.9m. — WATER TABLE excessive deflection.

LOGGED BY R.S.D.
DRAWN BY
CHECKED BY R.R.
SHEET 1 OF 4
DRAWING No.
REFER ALSO

FORM 1

064

599065

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES-DARWIN LOG HOLE No. Z 142000 COORDINATES 467S 402E

LOCATION EAST DARWIN AREA ANGLE FROM HORIZONTAL 45° DIRECTION 253° magE

Core Recovery	Scale Depth	Rec / Run	From / To (METRES)	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE — ASSAYED	SAMPLE No.
			21.9	F.P.		A
			/	AS ABOVE, ash banding less conspicuous,		216
			26.9	some rock hematite stained clasts <1cm	5.0	-006
				Foliation // 40°		
			26.9	F.P.		
			/	GRADATIONAL CONTACT - CRYSTAL LITHIC TUFF		
			30.0	containing abundants of pink rhyolite(?)	3.1	-007
				Foliation // 50°		
			30.0	F.P.		
			/	CRYSTAL LITHIC TUFF, clasts of pink cherty rhyolite and grenish crystal tuff, moderately indurated. Foliation // 50° Sulphides trivial to (Py) MVVW	5.0	-008
			35.0			
			35.0	F.P.		
			/	AS ABOVE, gradational contact with		
			39.0	underlying indurated crystal tuff.	4.0	-009
				Foliation // 48-50°		
			39.0	F.P.		
			/	CRYSTAL TUFF, indurated, quartz		
			44.0	vein 4 cm thick at 33.9 M, 2 mm wide		
				carbonate veins at 42.9M.		
				Foliation // 75°		
				Carbonate veins // 50°, qtz // 65°		
				(41.4M contact change to BG)	5.0	-010
			44.0	F.P.		
			/	AS ABOVE; qtz veins at 48.2M,		
			49.0	47.9M, 47.4M (7 & 2 cm thick)	5.0	-011
				qtz veins // 60°-80°		
			49.0	F.P.		
			/	AS ABOVE		
			51.5		2.0	-012

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY R.J.D
DRAWN BY
CHECKED BY I.R.
SHEET 2 OF 4
DRAWING No.
REFER ALSO

FORM 1

599066

065

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES-DARWIN LOG HOLE No. Z 142000 COORDINATES 467[illegible]

LOCATION EAST DARWIN AREA ANGLE FROM HORIZONTAL 45° R.L. GROUND DIRECTION 253 mag°

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. MINERALISATION		SAMPLE No.
			51·5 / 56·6	F.P. CRYSTAL TUFF, clast(?) of pink clasty dolerite occasionally present, indurated	5·0	A 216 -013
			56·6 / 61·5	F.P. AS ABOVE. Foliation // 60°-70°	5·0	-014
			61·5 / 65·8	F.P. CRYSTAL LITHIC TUFF, base(?) of ash flow consisting of lithic tuffs with and intercalated 1m thick crystal tuff at 62·5m, units undoin coarse fragmental unit with clast sizes 2-2cm and prominant skarns. Abundant quartz phenocrysts are present in the matrix. Foliation // 40-60°	4·3	-015
			65·8 / 71·5	F.P CRYSTAL TUFF, Ash flow (ignimbrite), well preserved pumice fragments occur at the top the unit; obliterate downwards as welding becomes more intense, quartz phenocrysts (≤ 3mm) are abundant. Foliation // 65°-70°	5·7	-016
			71·5	E.O.H.		

DRILL No.
TYPE
DRILLER
COMMENCED
COMPLETED

COMMENTS
TARGET
RESULT
WATER TABLE

LOGGED BY R.J.D
DRAWN BY
CHECKED BY I.R.
SHEET 3 OF 4
DRAWING No.
REFER ALSO

FORM 1

599067

066

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT

LOCATION

LOG HOLE No. Z 142000

COORDINATES

R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec Run	Core From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Graphic Log	SAMPLE No.
				LOG SUMMARY		
			0	COLLAR		
			0-119	FLANKING PYROCLASTICS (F.P.) CRYSTAL TUFF		
			119-390	F.P. CRYSTAL LITHIC TUFF		
			390-615	F.P. CRYSTAL TUFF		
			615-658	F.P. CRYSTAL LITHIC TUFF		
			658-715	F.P CRYSTAL TUFF		
			715	E.O.H.		
				PAJARI TESTS :		
				15.24 M 254° 39° dip		
				30.48 M 257° 32° "		
				45.72 M 252° 27° "		
				60.96 M 249° 27° "		
				ACID TESTS:		
				30.48 M " 32° dip		
				NQ RODS TO 41.4 M		
				BQ " " 71.5 M		
				CASING LEFT IN HOLE : NIL.		
				RODS " " " : NIL.		

DRILL No.
TYPE LONGYEAR 38

DRILLER
COMMENCED 20-10-73
COMPLETED 22-10-73

COMMENTS

TARGET

RESULT Hole terminated : Excessive deflection 38° in first 60.96 M

WATER TABLE

LOGGED BY R.J.D.
DRAWN BY
CHECKED BY I.R.
SHEET 4 OF 4
DRAWING No.
REFER ALSO

FORM 1

599068 TABLE 13

067

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes - Darwin LOG HOLE No. Z 142001 COORDINATES 467 S 403 E

LOCATION EAST DARWIN AREA ANGLE FROM HORIZONTAL 60° DIRECTION 253° R.L. GROUND

Casing	Scale Depth	Rec / Run	From / To METRES	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. MINERALISATION	Sample Interval	SAMPLE No.
			0	COLLAR		
			0 / 1.4	No SAMPLE RETURN	1.4	A 216 -020
			1.4 / 6.4	FLANKING PYROCLASTICS (F.P.) CRYSTAL TUFF, showing some ignimbritic flow textures; discontinuous & continuous banding present; qtz. phenocrysts <1mm. Foliation // 15 - 20° Core rather broken, slightly weathered	5.0	-021
			6.4 / 11.4	F. P. As ABOVE At 10.0 M, irregular qtz. veins (0.5 cm. wide)	5.0	-022
			11.4 / 16.4	F. P. As ABOVE Foliation // 30° Core broken	5.0	-023
			16.4 / 21.2	F. P. Trace sulphides (Py) @ 17.4 M As ABOVE Foliation // 30° Contact with underlying unit // 20°	4.8	-024
			21.2 / 26.2	F. P. CRYSTAL LITHIC TUFF, clasts up to 20 x 5 cm. Clasts elongated & streaked out by shearing Foliation // 15 - 25°	5.0	-025

DRILL No.
TYPE Longyear 38

DRILLER
COMMENCED 26 - 10 - 73
COMPLETED 15 - 11 - 73

COMMENTS

TARGET IP anomaly 200 m. below surface at 175 E.

RESULT Sulphides - Cu-Pb-Zn. < 0.1%.

WATER TABLE

LOGGED BY RJD / IR
DRAWN BY
CHECKED BY IR
SHEET 1 OF 21
DRAWING No.
REFER ALSO

FORM 1

068

599069

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes - Darwin LOG HOLE No. Z 142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION — ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Sample Graphic Log Length	SAMPLE No.
				F.P.		
			26·2 / 30·5	As ABOVE ; banding becomes prominent at base. Foliation // 20-25°	4·3	A 216 - 026
				F.P.		
			30·5 / 33·5	CRYSTAL TUFF, w. prominent banding Foliation // 20-25° Core rather broken	3·0	- 027
				F.P.		
			33·5 / 36·3	As ABOVE, but w. qtz-fsp veins // 40-50° Large vein (0·5 m) @ 34·7 - 35·2 m // 40° Foliation // 10-20° Core very broken 33·5 - 34·1 m.	2·8	- 028
				F.P.		
			36·3 / 37·8	CRYSTAL LITHIC TUFF containing coarse fragments up to 18 x 10 cm. Upper + lower contacts of this unit // 20°	1·5	- 029
				F.P.		
			37·8 / 42·3	CRYSTAL TUFF / CRYSTAL LITHIC TUFF "Mixed lithology" Essentially ash-flow material but with med-sized clasts (1-5 cm) constituting 30% of the rock		
				Fsp± vein (5cm) // 45° @ 39·3 M Foliation // 25° (Core size changes HQ to NQ @ 38·7m)	4·5	- 030
				F.P.		
			42·3 / 47·3	CRYSTAL LITHIC TUFF Indurated, med-sized clasts (5cm x 2cm) with mainly "charty rhyolite" fragments Clasts elongated + orientated // 25° (ie // foliation)	5·0	- 031
				F.P.		
			47·3 / 49·0	As ABOVE Foliation // 30°	1·7	- 032

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY I.R.
DRAWN BY
CHECKED BY I.R.
SHEET 2 OF 21
DRAWING No.
REFER ALSO

FORM 1

069

599070

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES-DARWIN LOG HOLE No. Z142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION — ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Core Loss LENGTH	SAMPLE No.
			49.0 / 52.1	F.P. M vvw CRYSTAL LITHIC TUFF Py 1-3% @ With med-sized clasts of hematite-rich 49.0 - 49.5 M cherty rhyolite. @ 49-49.5 M and 51.0 - 52.1 M 51 - 62.1 M		
				Py mineralisation assoc. with Mvvw hematite-rich zones Foliation // 30°	3.1	A 216 -033
			52.1 / 55.4	F.P. CRYSTAL LITHIC TUFF as in A216038 med-sized clasts, indurated rock Foliation // 25-30°	3.3	-034
			55.4 / 57.0	F.P. Trace sulphides CRYSTAL LITHIC TUFF, similar to A216033 Py ≃ 1% @ with hematite rich cherty rhyolite 55.4 - 55.9 M clasts @ 53.4 - 55.9 M. 56.6 - 57.0 M Py min^{n} assoc. with hematite-rich zone " also with qtz-chlor veins @ 56.6-57.0 M. Foliation // 25-30°	1.6	-035
			57.0 / 62.0	F.P. CRYSTAL LITHIC TUFF Dense, indurated as in A216031 Foliation // 30-35°	5.0	-036
			62.0 / 67.0	F.P. As above, but w. pink cherty rhyolite fragments more abundant towards 67.0 M. Foliation // 30° Qtz-chlor. vein // 70° @ 63.9 - 64.0 M Qtz vein // 55° @ 65.5 - 65.6 M	5.0	-037

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

TARGET RESULT WATER TABLE

COMMENTS

LOGGED BY I.R. DRAWN BY CHECKED BY I.R. SHEET 3 OF 21 DRAWING No. REFER ALSO

FORM 1

599071

070

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES - DARWIN LOG HOLE No. Z142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Cosing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Core Log Length	SAMPLE No.
			67.0 / 72.0	F.P. As ABOVE v. pink chalcy rhyolite clasts predominant Foliation // 30°	5.0	A 216 -038
			72.0 / 76.7	F.P. As ABOVE Foliation // 30°	4.7	-039
			76.7 / 77.4	F.P. As ABOVE Qtz - vein @ 76.8 - 77.4 M Top contact // 50° Bottom // 75°	0.7	-040
			77.4 / 82.0	F.P. As ABOVE Foliation // 35° Qtz - vein // 50° @ 80.3 - 80.4 M.	4.6	-041
			82.0 / 85.5	F.P. MVVW As ABOVE Py 1-2% @ Foliation // 40° 85.5 M Sharp contact @ 85.5 with minor Py mineln (Py crystals up to 0.5 cm)	3.5	-042
			85.5 / 89.5	F.P. CRYSTAL TUFF Ash-flow material with "pumice?" fragments, up to 5x1 cm common, esp. towards 89.5 M. Qtz. phenocrysts (1 to 2 mm across) abundant in matrix Qtz vein (5 cm) @ 89.2 M // 45° Foliation // 55°	4.0	-043
			89.5 / 93.0	F.P. CRYSTAL - LITHIC TUFF Base of ash-flow. Ash-flow material predominates but clasts make up 40% of rock. Clast of chert (?ash) 20mm. across @ 92.4 M. Foliation // 35°	3.5	-044

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS
TARGET
RESULT
WATER TABLE

LOGGED BY I.R.
DRAWN BY
CHECKED BY I.R.
SHEET 4 OF 21
DRAWING No.
REFER ALSO

FORM 1

599072

071

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes - Darwin LOG HOLE No. Z 142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	~~FOOTAGE~~ From METRES To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE ~~Sample from~~ LENGTH	SAMPLE No.
				F.P.		
			93.0	CRYSTAL TUFF		
			/	Ash-flow material, with orientated,		
			98.0	elongated pumice fragments (0.5 x 4 cm),		
				similar to those in A216043.		
				Contact with base of Ash Flow above		A
				@ 93.0 m.		216
				Foliation // 40°	5.0	-045
				F.P.		
			98.0	AS ABOVE.		
			/	Qtz. vein (20 mm wide) @ 99.5 m // 5°	5.0	-046
			103.0	Foliation // 45°		
				F.P.		
			103.0	AS ABOVE, but orientated pumice fragments		
			/	more common. Small (0.5 x 1.0 cm), pink,	1.7	-047
			104.7	cherty fragments becoming common near base.		
				Foliation // 45°		
				F.P.		
			104.7	AS ABOVE, orientated pumice fragments		
			/	common. Pink, cherty fragments more abundant	2.1	-048
			106.8	and larger (0.5 x 4.0 cm) than in '047		
				Foliation // 45° CONTACT @ 106.8 // 45°		
				F.P.		
			106.8	CRYSTAL - LITHIC TUFF		
			/	Base of Ash-flow. Hematite-rich @ 106.8 - 107.1 m	2.6	-049
			109.4	and 107.3 - 107.6 m. Clasts med. sized (2-3 cm)		
				intercalated with Ash-flow material like '046 to '047		
				F.P.		
			109.4	VEIN QUARTZ		
			/	Contacts: upper // 65°	1.0	-050
			110.4	lower // 50°		
				F.P.		
			110.4	CRYSTAL TUFF		
			/	Fine grained. Qtz. phenos. now c. 0.5mm. across.	5.0	-051
			115.4	Finer texture than Ash-flow unit above. Foliation // 35°		
				(CORE BROKEN. CHANGE NQ to BQ core @ 113.4 M)		

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY I.R.
DRAWN BY
CHECKED BY I.R.
SHEET 5 OF 21
DRAWING No.
REFER ALSO

FORM 1

599073

072

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES - DARWIN LOG HOLE No. Z 142 001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	FOOTAGE From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Complete Assay LENGTH	SAMPLE No.
				F.P.		
			115·4	As ABOVE, but texture becoming coarser		A 216
				towards base	2·4	-052
			117·8	Foliation // 40°		
				F.P.		
			117·8	As ABOVE, but texture now similar to		
				1046 to 1048	5·5	-053
			123·7	Foliation // 50°		
				F.P.		
			123·7	CRYSTAL - LITHIC TUFF		
				Contains c. 60% Ash-flow material as matrix		
			126·9	with coarse qtz. phenos (1 to 2 mm) Med. sized clast		
				fragments. Pink, cherty, rhyolite fragments		
				become abundant towards base		
				Foliation // 55°	3·2	-054
				F.P.		
			126·9	VEIN QUARTZ		
				Contacts : upper // 20°	0·8	-055
			127·7	lower // 55°		
				F.P. CHLORITIC ALTERATION ZONE (CHLOR). Mvvw.		
			127·7	CRYSTAL TUFF / CRYSTAL - LITHIC TUFF Py ≃ 1 - 3%		
				(MIXED LITHOLOGY) as interstitial grains		
			130·0	Dark grey-green, altered and highly (up to 3mm) usually		
				sheared. Med. sized clasts (1 to 2 cm.) concd in thin		
				Foliation // 50° layers (5·0 mm)		
				// foliation	2·3	-056
				F.P. (CHLOR.) Mvvw.		
			130·0	CRYSTAL - LITHIC TUFF Py c. 1-3%		
				Dark grey-green, altered, highly sheared as above	3·0	-057
			133·0	Foliation // 50°		

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY I.R.
DRAWN BY
CHECKED BY I.R.
SHEET 6 OF 21
DRAWING No.
REFER ALSO

FORM 1

073

599074

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes - Darwin LOG HOLE No. Z 142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Core	Scale Depth	Rec / Run	FOOTAGE From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Sample graphic log length	SAMPLE No.
			133·0	F. P. (CHLOR.) Mvvw.		
				CRYSTAL TUFF Py : 1-3%		A216
				Qtz. phenos. (1mm) orientated in trains sub // 50°	2·2	-058
			135·2	Rock has mottled (d. grey) appearance. Small (5mm)		
				clasts in basal 0·3 M		
			135·2	F. P. (CHLOR.) Mvvw.		
				LITHIC TUFF Py : 1-3%		
				Fine-grained with distinct banded appearance		
			137·2	? Ash-fall deposit. Matrix f.g. ash material		
				Clasts (1·0 - 4·0cm) stretched - out with vague		
				outlines. D. grey, highly sheared rock.		
				Foliation // 50°		
					2·0	-059
				F. P. (CHLOR.) Mvvw.		
			137·2	AS ABOVE Py : 1-3%		
				Foliation // 50°	2·0	-060
			139·2			
				F. P. (CHLOR.) Mvvw.		
			139·2	AS ABOVE Py : 1-3%		
				Foliation // 50°	2·0	-061
			141·2			
				F. P. (CHLOR.) Mvvw.		
			141·2	AS ABOVE Py : 1-3%		
				Foliation // 50°	2·0	-062
			143·2			
				F. P. (CHLOR.) Mvvw.		
			143·2	AS ABOVE Py : 1-3%		
				Foliation // 50°	1·4	-063
			144·6			
				F. P. (CHLOR.) Mvvw.		
			144·6	AS ABOVE Py : 1-3%		
				Foliation // 50°	2·0	-064
			146·6			

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY I.R.
DRAWN BY
CHECKED BY I.R.
SHEET 7 OF 21
DRAWING No.
REFER ALSO

FORM 1

599075

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES - DARWIN LOG HOLE No. Z142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	FOOTAGE From METRES To	DESCRIPTION — ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Sample Crosses top Lens?	SAMPLE No.
			146·6 / 148·6	F.P. (CHLOR.) Mvvw. As ABOVE Py: 1-3% Foliation // 55°	2·0	-065
			148·6 / 150·6	F.P. (CHLOR) Mvvw. As ABOVE Py: 1-3% But clastic material becoming coarser esp. @ 148·6 - 149·6 (clasts 1-3 cm) Foliation // 55°	2·0	-066
			150·6 / 152·6	F.P. (CHLOR) Mvvw. As ABOVE Py: 1-3% Foliation // 55°	2·0	-067
			152·6 / 154·6	F.P. (CHLOR.) Mvvw. As ABOVE Py: 1-3% Foliation // 60°	2·0	-068
			154·6 / 156·7	F.P. (CHLOR.) Mvvw. As ABOVE Py: 1-3% Foliation // 55°	2·1	-069
			156·7 / 158·7	F.P. (CHLOR.) Mvvw. CRYSTAL TUFF Py: 1-3% Med-gr. Indurated Poorly developed Foliation // 60°	2·0	-070
			158·7 / 160·8	F.P. (CHLOR.) Mvvw. As ABOVE, but with some Py: 1-3% Small orientated pumice fragments // 60° Basal 0·3M is xstal-lith. tuff - (base of flow) - lower contact // 60°	2·1	-072
			160·8 / 162·8	F.P. (CHLOR.) Mvvw CHERTY ASH (? BEDDED CHERT) Py: 3% Massive siliceous rock with poorly defined banding // 60° Bands consist of sericitic material (1-2 mm. thick). Ser. material also occurs as network:- rock has fragmental appearance. than	2·0	-073

COMMENTS

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

TARGET

RESULT

WATER TABLE

LOGGED BY I.R.
DRAWN BY I.R.
CHECKED BY I.R.
SHEET 8 OF 21
DRAWING No.
REFER ALSO

FORM 1

599076

075

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes - Darwin LOG HOLE No. Z 142 001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	FOOTAGE From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
				F.P. (CHLOR.) Mvvw.		A 216
			162.8	As ABOVE Py : 3%	2.4	-074
			165.2	But now with definite		
				chert fragments @ 165.0 - 165.2 M.		
				F.P. (CHLOR.) Mvvw.		
			165.2	TUFFACEOUS ASH Py : 1-3%		
				F. gr. massive rock with no		
			168.0	obvious flow texture. Probably		
				ash-fall material showing high		
				degree of welding.		
				Qtz. veins @ 165.8 - 166.2 (irregular contacts)		
				@ 167.6 - 167.7 (contacts // 55°)	2.8	-075
				also small veins (<0.1 M thick) throughout.		
				F.P. (CHLOR.) Muuw.		
			168.0	CRYSTAL - LITHIC TUFF Py : 1 - 3%		
				Med. sized clasts (1-2 cm)	1.9	-076
			169.9	Intercalated ash band @ 169.0 - 169.1		
				(contacts // 55°). Probably ash-fall material.		
				F.P (CHLOR.) Muvw.		
			169.9	As ABOVE Py : 1 - 3%		
				but now clasts smaller (0.5 - 1 cm)	2.1	-077
			172.0	Foliation // 55°		
				F.P. (CHLOR.) Mvvw.		
			172.0	As ABOVE Py : 1 - 3%		
				Foliation //55°	2.0	-078
			174.0			
				F.P. (CHLOR.) Mvvw.		
			174.0	CRYSTAL TUFF Py : 1 - 3%		
				Poorly defined flow texture.	2.0	-079
			176.0	Massive, indurated. U. contact diffuse		
				F.P. (CHLOR.) Mvw.		
			176.0	As ABOVE Py : 5-10%		
				Qtz - carbonate veinlets (2-4 mm) Trace: Cpy, Galena	1.4	-080
			177.4	fairly prominent. in qtz-carb veinlets		

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY I.R.
DRAWN BY
CHECKED BY I.R.
SHEET 9 OF 21
DRAWING No.
REFER ALSO

FORM 1

599077

076

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes - Darwin LOG HOLE No. Z 142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	FOOTAGE From / To (METRES)	DESCRIPTION — ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic log Length	SAMPLE No.
			177.4 / 179.4	F.P. (CHLOR.) Mvvw. As Above Py : 1-3% Foliation // 60°	2.0	A 216 -081
			179.4 / 181.4	F.P. (CHLOR.) Mvvw. As Above Py : 1-3%	2.0	-082
			181.4 / 183.4	F.P. (CHLOR.) Mvvw. As Above Py : 1-3% weak Foliation // 55° Trace : Cpy, Gal. Cpy in a few elongated aggregates (0.5 x 2.0 mm) // 55° Galena in small aggregates (3mm across) in qtz-carb veinlets.	2.0	-083
			183.4 / 184.7	F.P. (CHLOR.) Mvvw. As Above Py : 1-3% Foliation // 55° Trace : Cpy. Gal.	1.3	-084
			184.7 / 187.0	F.P. (CHLOR.) Mw. As Above Py : 10-15% Foliation // 55° Trace : Cpy, Gal.	2.3	-085
			187.0 / 189.0	F.P. (CHLOR.) Mvvw. As Above Py : 1-3% Core now has a mottled, banded appearance Trace : Cpy. Gal. Foliation // 60°	2.0	-086
			189.0 / 191.0	F.P. (CHLOR.) Mvvw. As Above Py : 1-3% Mottled appearance more prominent Trace : Cpy. Gal Foliation // 60°	2.0	-087

DRILL No.
TYPE
DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY I.R.
DRAWN BY
CHECKED BY I.R.
SHEET 10 OF 21
DRAWING No.
REFER ALSO

FORM 1

599078

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

072

PROJECT: JUKES - DARWIN LOG HOLE No.: Z 142001. COORDINATES:

LOCATION: R.L. GROUND:

ANGLE FROM HORIZONTAL: DIRECTION:

Casing	Scale Depth	Rec / Run	FOOTAGE From / METRES To	DESCRIPTION — ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Graphic Log	SAMPLE No.
			191·0 / 193·0	F.P. (CHLOR.). Mvw. CRYSTAL TUFF / CRYSTAL - LITHIC TUFF Py : 5% Mixed lithology. Possible ash-fall Trace : Cpy, Gal material. Banding more prominent // 60°	2·0	A 216 -088
			193·0 / 194·9	F.P. (CHLOR.) Mvw. As ABOVE Py : 5% Trace : Cpy, Gal	1·9	-089
			194·9 / 195·6	VEIN QUARTZ. Contacts irregular - much disrupted.	0·6	-090
			195·5 / 196·5	F.P. (CHLOR.) Mw. CRYSTAL TUFF / CRYSTAL-LITHIC TUFF Py : 15% often as in -088 and -089 in stringers (0·5 x 2mm) Trace : Cpy, Gal	1·0	-091
			196·5 / 198·5	F.P. (CHLOR.) Mvvw. As ABOVE, but with gradual Py : 1-3% passage into crystal tuff below Trace : Cpy, Gal (diffuse contact). Becoming paler (p. grey-green) in appearance	2·0	-092
			198·5 / 200·6	F.P. (CHLOR.) Mvvw. CRYSTAL TUFF Py : 1-3% Well developed flow texture Trace : Cpy, Gal Pale grey-green and pale brown in colour. Mottled appearance. Foliation //60°	2·0	-093
			200·5 / 202·5	F.P. (CHLOR.) Mvvw. As ABOVE but now has almost a Py : 1-3% banded appearance due to orientated vitric Trace : Cpy, Gal. material in lenses 0·5 to 1 mm wide and 2 - 5 mm long. Foliation //60°	2·0	-094
			202·5 / 204·6	F.P. (CHLOR.) Mvvw. As ABOVE Py : 1-3%	2·0	-095

DRILL No.:
TYPE:

DRILLER:
COMMENCED:
COMPLETED:

COMMENTS

TARGET:

RESULT:

WATER TABLE:

LOGGED BY: I.R.
DRAWN BY:
CHECKED BY: I.R.
SHEET 11 OF 21
DRAWING No.:
REFER ALSO:

FORM 1

078

599079

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES-DARWIN LOG HOLE No. Z142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	FOOTAGE From / To (METRES)	DESCRIPTION — ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. — MINERALISATION	SAMPLE Core Log LENGTH	SAMPLE No.
			204·5 / 206·5	F.P. (CHLOR) Mvvw. As ABOVE Py: 1-3%	2·0	A 216 -096
			206·5 / 208·5	F.P. (CHLOR.) Mvvw. As ABOVE Py: 1-3% Foliation // 65°	2·0	-097
			208·5 / 210·5	F.P. (CHLOR.) Mvvw. As ABOVE Py: 1-3%	2·0	-098
			210·5 / 212·5	F.P. (CHLOR.) Mvvw. As ABOVE Py: 1-3%	2·0	-099
			212·5 / 214·5	F.P. (CHLOR.) Mvvw. As ABOVE Py: 1-3%	2·0	-100
			214·5 / 216·5	F.P. (CHLOR.) Mvvw. As ABOVE Py: 1-3%	2·0	-101
			216·5 / 218·5	F.P. (CHLOR.) Mvvw. As ABOVE Py: 1-3%	2·0	-102
			218·5 / 220·5	F.P. (CHLOR.) Mvvw. As ABOVE Py: 1-3% Core slightly broken from 220 to 220·5 m	2·0	-103

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY I.R.
DRAWN BY
CHECKED BY I.R.
SHEET 12 OF 21
DRAWING No.
REFER ALSO

FORM 1

599080

079

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES - DARWIN LOG HOLE No. Z 142 001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	Metres From / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Sample Graphic Log Legend	SAMPLE No.
			220.5 / 223.2	F.P. (CHLOR.) Mvvw. As ABOVE Py : 1% Core rather broken 220.5 – 221.5 M Foliation // 60°	2.7	A 216 -104
			223.2 / 225.2	F.P. (CHLOR.) Mvvw. As ABOVE Py : 1 – 3% Core darker in appearance ? more chloritic	2.0	-105
			225.2 / 227.2	F.P. (CHLOR.) Mvvw. As ABOVE Py : 1-3%	2.0	-106
			227.2 / 229.2	F.P. (CHLOR.) Mvw. As ABOVE Py : 5%	2.0	-107
			229.2 / 231.2	F.P. (CHLOR.) Mvw. As ABOVE but becoming Py : 5% paler in colour once more Foliation // 60°	2.0	-108
			231.2 / 233.2	F.P. (CHLOR.) Mvw. As ABOVE Py : 5% Pale coloured Foliation // 70°	2.0	-109
			233.2 / 235.7	F.P. (CHLOR.) Mvw. As ABOVE Py : 5% Core broken to 235.4 M but then becomes massive (and in tact). Contact with central Core Lava appears gradational. Qtz – carb. veinlets (0.5 cm. thick) abundant. Foliation // 75°	2.5	-110

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY I.R.
DRAWN BY
CHECKED BY I.R.
SHEET 13 OF 21
DRAWING No.
REFER ALSO

FORM 1

599081

080

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES - DARWIN LOG HOLE No. Z 142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	FOOTAGE From / METRES To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Geotime Log Interval	SAMPLE No.
			235·7	CENTRAL CORE RHYOLITE (C.C.) Mvvw.		
				MASSIVE LAVA Py : 3%		
				Porphyritic with chloritised feldspars as fine		
			237·7	(1 to 1·5 mm) phenocrysts. Fine veinlets aggregates assoc.		
				(1 to 2 mm) of magnetite - hematite. with mgt - hem.		
				Core magnetic from 237·5 - 237·7		A 216
				Fine veinlets (1-2 mm) qtz - carbonate.		
				Core has reddish - purple colour	2·0	-111
				C.C. Mvvw.		
			237·7	As ABOVE Py : 5%		
				as small aggregates	2·0	-112
			239·7	(0·5 x 1·0 mm) & veinlets		
				assoc. with mgt.		
				C.C. Mvvw.		
			239·7	As ABOVE Py : 1-3%		
				But now grey - purple	2·0	-113
			241·7	in colour		
				C.C. Mvvw.		
			241·7	As ABOVE but Lava now has Py : 3%		
				brecciated appearance @ 243 - 243·7 due	2·0	-114
			243·7	to introduction of mgt. veins. Core		
				strongly magnetic ; d. red - purple coloured.		
				C.C. Mvvw.		
			243·7	As ABOVE with numerous Py : 3%		
				mgt. veinlets. Strongly	2·3	-115
			246·0	magnetic.		
				C.C. Mvvw.		
			246·0	As ABOVE, but mgt. veins now Py : 3%		
				rare. Lava now shows marked	2·0	-116
			248·0	saccharoidal texture (due to internal		
				microscopic snowflake texture?) & d. grey-purple colour		
				C.C. Mvvw.		
			248·0	As ABOVE, but now has darker Py : 3%		
				appearance, probably due to	2·0	-117
			250·0	chloritic alteration.		

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS
TARGET
RESULT
WATER TABLE

LOGGED BY J.R.
DRAWN BY
CHECKED BY J.R.
SHEET 14 OF 21
DRAWING No.
REFER ALSO

FORM 1

599082

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes - DARWIN LOG HOLE No. Z 142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / To METRES	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
			250·0 / 252·0	C.C. Mvw. As ABOVE, with chloritic alteration Py : 5% as distinct xenals (1-2mm) throughout the core	2·0	A 216 -118
			252·0 / 254·0	C.C. Mvw. As ABOVE Py: 5% as above Mgt. vein @ 252·1 - 252·2 M Py "pod" (3x1cm) @ 253·6	2·0	-119
			254·0 / 256·0	C.C. Mw. As ABOVE Py : 10% but becoming pink coloured with Trace: Cpy chloritised feldspar phenocrysts	2·0	-120
			256·0 / 258·0	C.C. Mvw. As ABOVE, pink coloured (hem. rich) Py : 5% with qtz-carb veinlets (2-4 mm thick) Trace: Cpy	2·0	-121
			258·0 / 260·0	C.C. Mvw. As ABOVE Py : 5% Trace : Cpy	2·0	-122
			260·0 / 262·0	C.C. Mvvw. As ABOVE Py: 3% but darker appearance with blue grey coloration. becomes more abundant near base	2·0	-123
			262·0 / 264·0	C.C. Mvw. As ABOVE, but Py: 5% Core now pink-coloured (hem. rich) Cpy: 2% with qtz-carb. veinlets	2·0	-124
			264·0 / 266·0	C.C. Mvw. As ABOVE, but core Py: 5% now blue-grey coloured	2·0	-125

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY I.R.
DRAWN BY
CHECKED BY I.R.
SHEET 15 OF 21
DRAWING No.
REFER ALSO

FORM 1

082

599083

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes - Darwin LOG HOLE No. Z142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	FOOTAGE From / To METRES	DESCRIPTION — ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
			266.0 / 268.0	C.C. Mvvw. As ABOVE, but becoming pink coloured towards base. Py : 3%	2.0	A 216 -126
			268.0 / 270.0	C.C. Mvw. As ABOVE, now pink coloured (hem. rich) Slightly magnetic at hem-mgt veinlets Py : 5% Cpy : 1%	2.0	-127
			270.0 / 272.0	C.C. Mvw. As ABOVE, slightly magnetic at hem-mgt. veinlets. Qtz-carb veinlets (3-4 mm) @ 271.1 Py : 5% Cpy : 1% comm'd @ 270.1 and 271.1	2.0	-128
			272.0 / 274.0	C.C. Mvw. As ABOVE Py : 5% Cpy : Trace	2.0	-129
			274.0 / 276.0	C.C. Mvw. As ABOVE Py : 8% Cpy : Trace	2.0	-130
			276.0 / 278.0	C.C. Mvw. As ABOVE Hem-veinlets 2-4 cm give core brecciated appearance Py : 10% Cpy : Trace	2.0	-131
			278.0 / 280.0	C.C. Mvw. Py : 10% As ABOVE brecciated appearance Cpy : Trace	2.0	-132
			280.0 / 282.0	C.C. Mvw. As ABOVE Core rather broken + sheared Py : 5% Cpy : Trace	2.0	-133

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY I.R.
DRAWN BY
CHECKED BY I.R.
SHEET 16 OF 21
DRAWING No.
REFER ALSO

FORM 1

083

599084

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES - DARWIN LOG HOLE No. Z 142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	FOOTAGE From / To METRES	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log Length	SAMPLE No.
			282·0 / 284·0	C.C. Mvw. As ABOVE Py: 10% Core unbroken Cpy: Trace	2·0	A 216 -134
			284·0 / 286·0	C.C. Mvw. As ABOVE Py: 12% Cpy: Trace	2·0	-135
			286·0 / 288·0	C.C. Mvw. As ABOVE Py: 5% Cpy: Trace	2·0	-136
			288·0 / 290·0	C.C. Mvvw. As ABOVE Py: 3% Cpy: Trace	2·0	-137
			290·0 / 292·0	C.C. Mvvw. As ABOVE Py: 3%	2·0	-138
			292·0 / 294·0	C.C. Mvw. As ABOVE Py: 8% Cpy: Trace in qtz veinlets	2·0	-139
			294·0 / 295·5	C.C. Mw. LITHIC TUFF Py: 15% Med-sized Clasts (2 - 4 cm) in hem-mgt. rich matrix. Shear @ 295·3 // 15° Core broken	1·5	-140
			295·5 / 297·5	C.C. Mvw. As ABOVE hem.-rich. Py: 10% Shear from 295·5 - 296·0 M Ash band 297·4 - 297·5 M	2·0	-141

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY I. R.
DRAWN BY
CHECKED BY I. R.
SHEET 17 OF 21
DRAWING No.
REFER ALSO

FORM 1

599085

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

084

PROJECT Jukes - Darwin LOG HOLE No. Z142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From METRES To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
			297.5 / 299.5	C.C. Mw. As ABOVE but clasts becoming smaller towards 299 M, then broken (? autobrecciated lavas) pink lavas with abundant hem. veins. Py: 15%	2.0	A 216 -142
			299.5 / 301.5	C.C. Mw. MASSIVE LAVA Hem. rich. Highly brecciated by hem vein 301.6 - 302.0 M Py: 15%	2.0	-143
			301.5 / 303.5	C.C. M As ABOVE Abundant hem - py veins Py: 25% Cpy: Trace in qtz veins (1mm thick)	2.0	-144
			303.5 / 305.5	C.C. Mvw. As ABOVE Hem veins rare from 303.5 to 304.5 M then becoming common again towards 305.5 M Py: 5%	2.0	-145
			305.5 / 307.5	C.C. Mvw. As ABOVE Py: 5%	2.0	-146
			307.5 / 309.5	C.C. Mvvw As ABOVE but with brecciated appearance @ 308.5 - 309.5 M; mgt rich @ 309.0 M. Py: 3%	2.0	-147
			309.5 / 311.5	C.C. Mvvw. As ABOVE with brecciated appearance Mgt. vein @ 310.5 - 311.5 M Py: 3%	2.0	-148
			311.5 / 313.5	C.C. Mvw. As ABOVE with brecciated appearance but now mgt. poor Py: 3%	2.0	-149

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS
TARGET
RESULT
WATER TABLE

LOGGED BY I.R.
DRAWN BY
CHECKED BY I.R.
SHEET 18 OF 21
DRAWING No.
REFER ALSO

FORM 1

599086

085

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT: JUKES - DARWIN LOG HOLE No. Z 142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	CORE SIZE	From / To (METRES)	DESCRIPTION — ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
				313·5 / 315·5	C.C. Mvvw. As Above Py: 3% Hem. veins become less common, brecciated appearance dies out @ 314 m.	2·0	A 216 -150
				315·5 / 317·5	C.C. Mvvw. As Above Py: 1% Hem. veinlets absent	2·0	-151
				317·5 / 319·5	C.C. Mvvw. As Above Py: 1% Cpy: Trace, seen as coarse aggregate @ 3201 (1 x 2 cm.)	2·0	-152
				319·5 / 321·5	C.C. Mvvw. As Above Py: 1%	2·0	-153
				321·5 / 323·5	C.C. Mvvw. As Above Py: 1%	2·0	-154
				323·5 / 325·5	C.C. Mvvw. As Above Py: 1% w. Qtz. veins (1-2 cm)	2·0	-155
				325·5 / 327·5	C.C. Mvvw. As Above Py: 1% Core rather broken	2·0	-156
				327·5 / 329·8	C.C. Mvw As Above Py: 5% Core rather broken Hem-py vein 328-328·5 m	2·3	-157
					END OF HOLE		

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

TARGET
RESULT
WATER TABLE

COMMENTS

LOGGED BY I. R.
DRAWN BY
CHECKED BY I. R.
SHEET 19 OF 21
DRAWING No.
REFER ALSO

FORM 1

086

599087

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes - Darwin LOG HOLE No. Z 142001 COORDINATES 467S 403E

LOCATION East Darwin Area ANGLE FROM HORIZONTAL 60° DIRECTION 253° mgts R.L. GROUND

Casing	Scale Depth	Rec / Run	Footage From / Metres / To	DESCRIPTION — ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Graphic Log	SAMPLE No.
				Log Summary		
			0	Collar		
			0 - 21·2	Flanking Pyroclastics (F.P.) crystal tuff		
			21·2 - 85·5	F.P. crystal-lithic tuff		
			85·5 - 127·7	F.P. crystal tuff		
			127·7 - 135·2	F.P. (chloritised) crystal lithic tuff : Mvvw : Py		
			135·2 - 156·7	F.P. (chloritised) lithic tuff : Mvvw : Py		
			156·7 - 160·8	F.P. (chloritised) crystal tuff : Mvvw : Py		
			160·8 - 165·2	F.P. (chloritised) cherty ash : Mvvw : Py		
			165·2 - 174·0	F.P. (chloritised) crystal-lithic tuff : Mvvw : Py		
			174·0 - 191·0	F.P. (chloritised) crystal tuff : Mvvw - Mww : Py Trace Cpy, Gal		
			191·0 - 198·5	F.P. (chloritised) crystal-lithic tuff : Mvvw - Mvw : Py Trace Cpy, Gal		
			198·5 - 235·7	F.P. (chloritised) crystal tuff : Mvvw : Py Mww (227·2 - 235·7) : Py		
			235·7 - 329·8	Central Core Rhyolites (C.C.) Lavas : Mvvw : Py Mww (280·0 - 292·0) : Py Cpy Mw (291·0 - 303·5) : Py Mvvw : (303·5 - 329·8) : Py		
			329·8	E. O. H.		
				(cont'd over)		

DRILL No.
TYPE Long year 38

DRILLER
COMMENCED 26·10·73
COMPLETED 29·10·73 15·11

COMMENTS

TARGET IP anomaly 200m below surface at 175E.

RESULT Sulphides - Cu Pb Zn < 0·1%.

WATER TABLE —

LOGGED BY I.R.
DRAWN BY
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SHEET 20 OF 21
DRAWING No.
REFER ALSO

FORM 1

599088

INTERNATIONAL NICKEL AUSTRALIA LIMITED

084 TASMANIA

PROJECT JUKES-DARWIN LOG HOLE No. Z 142001 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	FOOTAGE From / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Graphic Log	SAMPLE No.

Log Summary (Cont'd) p. 2.

PAJARI TESTS

	Bearing (mgtc)	Dip
15.24 M	In-core barrel	59°
45.72 M	247°	57°
60.96 M	247°	54°
76.20 M	248°	50°
106.68 M	erratic	39°
152.4 M	238°	22°
182.9 M	247°	10°
243.8 M	254°	+ 4°
274.3 M	205°	erratic
304.8 M	256°	+ 7°
320.0 M	257°	+ 8°

HQ Rods To 38.7 M

NQ " " 113.4 M

BQ " " 329.8 M

CASING LEFT IN HOLE : 38.71 M of NW

RODS LEFT IN HOLE : NIL

DRILL No.
TYPE LONGYEAR 38

DRILLER
COMMENCED 26-10-73
COMPLETED 15-11-73

TARGET

RESULT

WATER TABLE

COMMENTS

LOGGED BY I.R.
DRAWN BY
CHECKED BY I.R.
SHEET 21 OF 21
DRAWING No.
REFER ALSO

FORM 1

599089

088 INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

COORDINATES 467S 40S

HOLE No. Z 142001

PROJECT JUKES - DARWIN

R.L. GROUND

LOCATION EAST DARWIN AREA

ANGLE FROM HORIZONTAL 60°

DIRECTION 253° mgt S

SAMPLE No.	Type	METRES From	To	Width	DESCRIPTION	ASSAYS: A.A.S. (A) CLASSICAL [C] FIRE [F] OTHER [O] Cu	Zn	Pb				
A 216020		0	1.4	1.4	No sample	—	—	—	—	—	—	—
021		1.4	6.4	5.0	F.P. Cryst. Tuff							
022		6.4	11.4	5.0	As above							
023		11.4	16.4	5.0	As above							
024		16.4	21.2	4.8	As above. Tr. sulph							
025		21.2	26.2	5.0	F.P. Cryst - Lith Tuff							
026		26.2	30.5	4.3	As above							
027		30.5	33.5	3.0	F.P. Cryst. Tuff							
028		33.5	36.3	2.8	As above							
029		36.3	37.8	1.5	F.P. Cryst - Lith Tuff							
A216 030		37.8	42.3	4.5	As above							
031		42.3	47.3	5.0	As above	18	85	41				
032		47.3	49.0	1.7	As above	29	182	55				
033		49.0	52.1	3.1	Mvvw. As above	20	98	39				
034		52.1	55.4	3.3	As above	102	80	40				
035		55.4	57.0	1.6	As above. Tr. sulph.	18	60	22				
036		57.0	62.0	5.0	As above	15	42	25				
037		62.0	67.0	5.0	As above	11	35	20				
038		67.0	72.0	5.0	As above	10	22	38				
039		72.0	76.7	4.7	As above	10	28	18				
A216 040		76.7	77.4	0.7	Quartz vein							
041		77.4	82.0	4.6	F.P. Cryst - Lith Tuff	10	38	15				
042		82.0	85.5	3.5	As above. Tr. sulph.	10	45	17				
043		85.5	89.5	4.0	F.P. Cryst. Tuff	9	52	21				
044		89.5	93.0	3.5	F.P. Cryst - Lith Tuff	12	89	30				
045		93.0	98.0	5.0	F.P. Cryst - Tuff	12	80	41				
046		98.0	103.0	5.0	As above	12	535	345				
047		103.0	104.7	1.7	As above	8	730	345				
048		104.7	106.8	2.1	As above	25	530	149				
049		106.8	109.4	2.6	F.P. Cryst - Lith Tuff	18	565	300				
A2160 50		109.4	110.4	1.0	Quartz vein	10	400	30				
051		110.4	115.4	5.0	F.P. Cryst. Tuff	9	89	69				
052		115.4	117.8	2.4	As above							
053		117.8	123.7	5.5	As above	10	90	58				
054		123.7	126.9	3.2	F.P. Cryst - Lith Tuff	28	700	370				
055		126.9	127.7	0.8	Quartz vein	59	780	28				
056		127.7	130.0	2.3	Mvvw F.P. (CH) Cryst-Lith Tuff	120	280	60				
057		130.0	133.0	3.0	Mvvw. As above	11	135	40				
058		133.0	135.2	2.2	Mvvw F.P (CH) Cryst - Tuff	40	140	68				
059		135.2	137.2	2.0	Mvvw F.P. (CH) Lith - Tuff	360	210	20				
A216 060		137.2	139.2	2.0	Mvvw As above	155	220	20				
061		139.2	141.2	2.0	Mvvw As above	115	195	15				
062		141.2	143.2	2.0	Mvvw As above	91	196	19				
063		143.2	144.6	1.4	Mvvw As above	48	180	80				

ASSAYS BY & DATE
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COMMENTS

Copper values in Dillons and Pearces Adits not intersected at depth. Values < 0.1% Cu Pb Zn

PREPARED BY I.R.
CHECKED BY I.R.
SHEET 1 OF 4
DRAWING No.
REFER ALSO
FILE No.

Form 1

599090

INTERNATIONAL NICKEL AUSTRALIA LIMITED

089

HOLE No. Z 142 001

COORDINATES

PROJECT JUKES - DARWIN

R.L. GROUND

LOCATION

ANGLE FROM HORIZONTAL DIRECTION

SAMPLE No.	Type	METRES From — To	Width	DESCRIPTION	ASSAYS: A.A.S. [A] CLASSICAL [C] FIRE [F] OTHER	Cu	Zn	Pb	Ag	Au		
A216064		144·6 - 146·6	2·0	Mvvw. F.P.(CH) Lith. Tuff		119	380	620				
065		146·6 - 148·6	2·0	Mvvw. As above		20	200	120				
066		148·6 - 150·6	2·0	Mvvw. As above		15	150	16				
067		150·6 - 152·6	2·0	Mvvw. As above		20	120	30				
068		152·6 - 154·6	2·0	Mvvw. As above		21	129	21				
069		154·6 - 156·7	2·1	Mvvw. As above		10	120	21				
A216070		156·7 - 158·7	2·0	Mvvw. F.P(CH) Cryst. Tuff		30	100	30				
~~071~~		~~-~~	~~-~~	~~-~~		—	—	—	—	—	—	—
072		158·7 - 160·8	2·1	Mvvw. F.P(CH) Cryst. Tuff		9	90	76				
073		160·8 - 162·8	2·0	Mvvw. F.P(CH) Cherty Ash		15	40	26				
074		162·8 - 165·2	2·4	Mvvw. As above		10	55	45				
075		165·2 - 168·0	2·8	Mvvw. F.P(CH) Tuff - Ash		19	71	49				
076		168·0 - 169·9	1·9	Mvvw. F.P(CH) Cryst. Lith. Tuff		117	140	20				
077		169·9 - 172·0	2·1	Mvvw. As above		115	140	20				
078		172·0 - 174·0	2·0	Mvvw. As above		145	149	20				
079		174·0 - 176·0	2·0	Mvvw. F.P.(CH) Cryst. Tuff		264	160	20				
A216080		176·0 - 177·4	1·4	Mvw. As above		99	140	32				
081		177·4 - 179·4	2·0	Mvvw. As above		109	140	20				
082		179·4 - 181·4	2·0	Mvvw. As above		69	146	21				
083		181·4 - 183·4	2·0	Mvvw. As above		56	120	18				
084		183·4 - 184·7	1·3	Mvvw. As above		21	170	20				
085		184·7 - 187·0	2·3	Mw. As above		110	158	13				
086		187·0 - 189·0	2·0	Mvvw. As above		8	140	20				
087		189·0 - 191·0	2·0	Mvvw. As above		170	100	20				
088		191·0 - 193·0	2·0	Mvw. F.P(CH) Cryst. Lith. Tuff		570	100	60	2·0	<0·5		
089		193·0 - 194·9	1·9	Mvw. As above		155	110	41	1·3	<0·5		
A216090		194·9 - 195·5	0·6	Quartz Vein		11	110	49	1·3	<0·5		
091		195·5 - 196·5	1·0	Mw. F.P(CH) Cryst. Lith. Tuff		335	120	170	2·2	<0·5		
092		196·5 - 198·5	2·0	Mvvw. As above		78	42	425				
093		198·5 - 200·5	2·0	Mvvw. F.P(CH) Cryst. Tuff		126	85	32				
094		200·5 - 202·5	2·0	Mvvw. As above		50	70	18				
095		202·5 - 204·5	2·0	Mvvw. As above		72	95	28				
096		204·5 - 206·5	2·0	Mvvw. As above		100	95	30				
097		206·5 - 208·5	2·0	Mvvw. As above		35	140	21				
098		208·5 - 210·5	2·0	Mvvw. As above		42	98	21				
099		210·5 - 212·5	2·0	Mvvw. As above		82	98	25				
A216100		212·5 - 214·5	2·0	Mvvw. As above		78	140	60				
101		214·5 - 216·5	2·0	Mvvw. As above		80	120	90				
102		216·5 - 218·5	2·0	Mvvw. As above		95	145	55				
103		218·5 - 220·5	2·0	Mvvw. As above		90	128	69				
104		220·5 - 223·2	2·7	Mvvw. As above		152	112	60				
105		223·2 - 225·2	2·0	Mvvw. As above		102	132	101				
106		225·2 - 227·2	2·0	Mvvw. As above		28	140	48				
107		227·2 - 229·2	2·0	Mvw. As above		90	123	20				

ASSAYS BY & DATE
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COMMENTS

PREPARED BY I.R.
CHECKED BY I.R.
SHEET 2 OF 4
DRAWING No.
REFER ALSO
FILE No.

Form 1

599091

090

INTERNATIONAL NICKEL AUSTRALIA LIMITED

HOLE No. Z 142001

COORDINATES

PROJECT JUKES - DARWIN

R.L. GROUND

LOCATION

ANGLE FROM HORIZONTAL

DIRECTION

SAMPLE				DESCRIPTION	ASSAYS: A.A.S. (A) CLASSICAL [C] FIRE [F] OTHER [O]						
No.	Type	METRES From — To	Width		Cu	Zn	Pb	Ag	Au		
A216108		229·2 - 231·2	2·0	Mvw. F.P(CH) Cryst. Tuff	50	85	19	1·0	<0·5		
109		231·2 - 233·2	2·0	Mvw. As above	60	62	17	0·9	<0·5		
A216110		233·2 - 235·7	2·5	Mvw. As above	390	60	20	0·9	<0·5		
111		235·7 - 237·7	2·0	Mvw. CENTRAL RHY. LAVA	245	150	30	1·0	<0·5		
112		237·7 - 299·7	2·0	Mvw. As above	40	102	22	1·0	<0·5		
113		239·7 - 241·7	2·0	Mvvw. As above	22	118	15	1·0	<0·5		
114		241·7 - 243·7	2·0	Mvvw. As above	52	118	18	0·7	<0·5		
115		243·7 - 246·0	2·3	Mvvw. As above	140	115	19	0·5	<0·5		
116		246·0 - 248·0	2·0	Mvvw. As above	190	82	20	0·5	<0·5		
117		248·0 - 250·0	2·0	Mvvw. As above	150	155	25				
118		250·0 - 252·0	2·0	Mvw. As above	140	120	30				
119		252·0 - 254·0	2·0	Mvw. As above	118	145	32				
A216120		254·0 - 256·0	2·0	Mvw. As above	395	90	49				
121		256·0 - 258·0	2·0	Mvw. As above	305	75	80				
122		258·0 - 260·0	2·0	Mvw. As above	50	111	93				
123		260·0 - 262·0	2·0	Mvvw. As above	10	130	20				
124		262·0 - 264·0	2·0	Mvw. As above	67	91	49				
125		264·0 - 266·0	2·0	Mvw. As above	40	121	39				
126		266·0 - 268·0	2·0	Mvvw. As above	20	105	58				
127		268·0 - 270·0	2·0	Mvw. As above	95	41	40				
128		270·0 - 272·0	2·0	Mvw. As above	200	240	20				
129		272·0 - 274·0	2·0	Mvw. As above	30	46	20				
A216130		274·0 - 276·0	2·0	Mvw. As above	25	22	20				
131		276·0 - 278·0	2·0	Mvw. As above	18	30	13				
132		278·0 - 280·0	2·0	Mvw. As above	18	48	12				
133		280·0 - 282·0	2·0	Mvw. As above	30	52	18				
134		282·0 - 284·0	2·0	Mvw. As above	15	62	18				
135		284·0 - 286·0	2·0	Mw. As above	10	48	20				
136		286·0 - 288·0	2·0	Mvw. As above	10	47	29				
137		288·0 - 290·0	2·0	Mvvw. As above	13	50	41				
138		290·0 - 292·0	2·0	Mvvw. As above	10	75	78				
139		292·0 - 294·0	2·0	Mvw. As above	41	31	18				
A216140		294·0 - 295·5	1·5	Mw. CEN. RHY. Lith. Tuff	39	58	20				
141		295·5 - 297·5	2·0	Mvw. As above	125	49	18				
142		297·5 - 299·5	2·0	Mw. As above	10	30	19				
143		299·5 - 301·5	2·0	Mw. CEN. RHY. LAVA	9	25	20				
144		301·5 - 303·5	2·0	M. As above	10	25	30				
145		303·5 - 305·5	2·0	Mvw. As above	8	22	15				
146		305·5 - 307·5	2·0	Mvw. As above	8	29	20				
147		307·5 - 309·5	2·0	Mvvw. As above	20	255	30				
148		309·5 - 311·5	2·0	Mvvw. As above	35	550	60				
149		311·5 - 313·5	2·0	Mvvw. As above	10	60	28				
A216150		313·5 - 315·5	2·0	Mvvw. As above	10	40	10				
151		315·5 - 317·5	2·0	Mvvw. As above	10	40	20				

ASSAYS BY & DATE
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COMMENTS

PREPARED BY I.R.
CHECKED BY I.R.
SHEET 3 OF 4
DRAWING No.
REFER ALSO
FILE No.

Form 1

599092

091

INTERNATIONAL NICKEL AUSTRALIA LIMITED

COORDINATES

HOLE No. Z 142001

PROJECT JUKES - DARWIN

R.L. GROUND

LOCATION

ANGLE FROM HORIZONTAL DIRECTION

SAMPLE				DESCRIPTION	ASSAYS: A.A.S. (A) CLASSICAL [C] FIRE [F] OTHER [O]						
No.	Type	METRES From — To	Width		Cu	Zn	Pb	Ag	Au		
A 216152		317.5 - 319.5	2.0	Mvvw. Cen. Rhy. Lava	80	88	20	<0.5	<0.5		
153		319.5 - 321.5	2.0	Mvvw. As above	55	55	12	<0.5	<0.5		
154		321.5 - 323.5	2.0	Mvvw. As above	50	50	15	<0.5	<0.5		
155		323.5 - 325.5	2.0	Mvvw. As above	35	31	11	0.5	<0.5		
156		325.5 - 327.5	2.0	Mvvw. As above	x 135	30	13	<0.5	<0.5		
157		327.5 - 329.8	2.3	Mvvw. As above	40	30	18				

ASSAYS BY & DATE 1.
1.
2.
2.
3.
3.

COMMENTS

PREPARED BY I.R.
CHECKED BY I.R.
SHEET 4 OF 4
DRAWING No.
REFER ALSO
FILE No.

Form 1

TABLE KP 599093

092

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA
LOCATION JUKES-DARWIN
EAST DARWIN AREA

LOG HOLE No. Z 142002

COORDINATES 125N 188E

R.L. GROUND

ANGLE FROM HORIZONTAL 60° DIRECTION 253° magtc

Core Size	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Interval	SAMPLE No.
			0	COLLAR		
			0 / 1.0	NO SAMPLE RETURN	1.0	A 216 -160
			1.0 / 3.0	FLANKING PYROCLASTICS (F.P.) CRYSTAL TUFF, (ignimbritic) qtz phenocrysts ≤ 3mm. Foliation // 50° Core broken and weathered.	2.0	-161
			3.0 / 5.0	F.P. AS ABOVE, relict glass shards still recognisable. Strong iron (limonite) staining along foliation planes. Foliation // 15° and 40° Core broken and weathered.	2.0	-162
			5.0 / 6.6	F.P. AS ABOVE, base of unit contains fragments of underlying ash. Iron staining Contact // 20° Core slightly broken.	1.6	-163
			6.6 / 8.5	F.P. ASH & MINOR LITHIC TUFF, very fine grained banded ashes. MVWW Py < 3% Bedding // 30° Foliation // 40°	1.9	-164
			8.5 / 10.5	F.P. CRYSTAL LITHIC TUFF, small proportion of subangular fragments up to 5 cms. and rounded fragments of fine grained ash. 5x15cms Pyroclastic flow deposit.		

DRILL No.
TYPE LONGYEAR 38

DRILLER
COMMENCED 19-11-73
COMPLETED 9-12-73

COMMENTS

TARGET IP anomaly 200m. below

RESULT surface - at 25E. - west of Darwin Pty. mineralization

Greatest assay - 0.5% Cu at 276m - 278m.

WATER TABLE

LOGGED BY R.J
DRAWN BY
CHECKED BY I.R.
SHEET 1 OF 26
DRAWING No.
REFER ALSO

FORM 1

093

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA JUKES-DARWIN LOG HOLE No. Z142002 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Core Size / Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION — ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE LENGTH	SAMPLE No.
			contact with unit above // 25°		A
			Foliation // 50°		216
				2.0	-165
			F.P.		
		10.5 / 11.3	AS ABOVE, gradational contact with underlying unit. Core recovery very bad with 1M of very broken ground at the base of the sample.	0.8	-166
			F.P.		
		11.3 / 13.3	CRYSTAL LITHIC TUFF - AGGLOMERATE, consisting of angular to subangular fragments of rhyolite, ash, recrystallized volcanic material. Clast size exceeds 6cms. Matrix of fine grained chloritic (mottled green) material 25% to 35% of the rock. Qtz vein 0.2M thick @ 13.0M. Qtz vein // 90° — Trace Py < 1% in small clasts < 0.5cm. Cpy < 1% in Qtz vein	2.0	-167
			F.P.		
		13.3 / 15.3	As above	2.0	-168
			F.P.		
		15.3 / 17.3	AS ABOVE Qtz vein 0.1M thick @ 16.0M, 0.2 thick @ 16.4M, Core extremely broken and sheared between 16.4 and 17.3M. Qtz vein // 65° — MVVW Py 0-3% Trace of Cpy in Qtz vein	2.0	-169
			F.P.		
		17.3 / 19.3	AS ABOVE, irregular Qtz veining and broken and sheared core at 17.3M for 1.4M — MVVW Py 0-3% Cpy < 1% in Qtz Gal < 1% in Qtz	2.0	170 -171

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS
TARGET
RESULT
WATER TABLE

LOGGED BY RJD
DRAWN BY
CHECKED BY IR
SHEET 2 OF 2
DRAWING No.
REFER ALSO

FORM 1

599095

094

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA JUKES-DARWIN LOG HOLE No. Z 142002 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / To METRES	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
			19.3 / 21.3	F.P. AS ABOVE, Fragments increasing in size to block dimensions i.e. >20 cms	Mvw Py 0-5%, f.g. clast 1x4 cms; Gal clast 6x4 cms, Cpy 0<1%	2.0	A 216 -170
			21.3 / 23.3	F.P. AS ABOVE, average size of fragments decreases to about 5 cm at 22M. Possible clast of granite (6x3cm) @ 21.9M 0.1M of broken ground @ 21.5M. Foliation // 35°	Mvw Py 0-5%, as clasts and fine grained stringers, Gpx and Cpy < 1%	2.0	-171
			23.3 / 25.3	F.P. AS ABOVE, amount of matrix in proportion to fragments increasing.	Mvvw Py 0-3%	2.0	-173
			25.3 / 27.3	F.P. AS ABOVE, Average size of fragments 1-3 cms, occasional fragments over 6 cms.	Trace Py 0-1%	2.0	-174
			27.3 / 29.3	F.P. AS ABOVE, large clasts of pinkish rhyolite up to 15x10 cms Average size <5 cms of clasts. Foliation // 50°	Mw Py 0-20% Cpy 0<1%, but @ 28.4M is 1% over 0.3M	2.0	-175
			29.3 / 31.3	F.P. AS ABOVE, veinlet of carbonate (calcite?) @ 30.4M Foliation // 60°	Mvvw Py 0-3%	2.0	-176
			31.3 / 33.3	F.P. AS ABOVE, clasts of chirty rhyolite common, flecks of bright green chlorite	Trace Py 0-1%	2.0	-177

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS
TARGET
RESULT
WATER TABLE

LOGGED BY RJD
DRAWN BY
CHECKED BY IR.
SHEET 3 OF 26
DRAWING No.
REFER ALSO

FORM 1

599096

095

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA — JUKES-DARWIN — LOG HOLE No. Z142002 — COORDINATES

LOCATION — R.L. GROUND

ANGLE FROM HORIZONTAL — DIRECTION

Casing	Rec / Run	From / To METRES	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Number and LENGTH	SAMPLE No.
		33.3	F.P. — Trace		
		/	AS ABOVE, base of unit defined by 0.5cm thick quartz vein and prominant silvering of the mating over 0.1M. Py 0-1%		
		35.0	Contact // 40°		
			Foliation // 40°		A 216
				1.7	-178
		35.0	F.P. — Mvvw		
		/	CRYSTAL TUFF, very fine grained ê no textures visible. Qtz veins 1-2mm thick occur // to foliation and at right angle to foliation, am present at approx 0.1 to 0.2M intervals. Py 0-3%		
		37.0	Foliation // 40° to 50°		A
				2.0	-179
		37.0	F.P. — Trace		
		/	AS ABOVE — Py <1%		
		39.0	Foliation // 50°	2.0	-180
		39.0	F.P.		
		/	AS ABOVE, faint discontinuous banding could be evidence of ignimbritic origin of the unit. — Trace Py 0-1%	2.0	-181
		41.0	Foliation // 30° to 40°		
		41.0	F.P. — Trace		
		/	AS ABOVE — Py 0-1%		
		43.0	Foliation // 45°, 55°, 60°	2.0	-182
		43.0	F.P. — Trace		
		/	AS ABOVE — Py 0-1%,		
		45.0	Foliation // 30°, 50° — @ 43.8M approx 2 qtz vein 8 cms thick	2.0	-183

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY RJD
DRAWN BY
CHECKED BY IR
SHEET 4 OF 26
DRAWING No.
REFER ALSO

FORM 1

599097

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA LOG HOLE No. Z142002 COORDINATES

LOCATION JUKES-DARWIN R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From METRES To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc.	MINERALISATION	SAMPLE Gauche Length	SAMPLE No.
			45·0	F.P.	Tmac		A 216
				AS ABOVE	Py 0-1%	2·0	-184
			/	Foliation // 30°, 60°			
			47·0				
			47·0	F.P.			
				AS ABOVE, some relict glass shards just discernable between 47·7M-49·0M, extremely comparted		2·0	-185
			/	Foliation // 5°, 55°			
			49·0				
			49·0	F.P.	MVVW		
				AS ABOVE	Py 0-3%	2·0	-186
			/	Foliation // 30° & 35°, 55°			
			51·0				
			51·0	F.P.			
				AS ABOVE		3·0	-187
			/	contact // 45°			
			54·0				
			54·0	F.P.	MVVW		
				~~AS ABOVE~~ CRYSTAL LITHIC TUFF, top of unit	Py 1-3%		
			/	marked by prominant red-brown Hematite	Cpy <1%		
			56·0	indurated crystal lithic tuff 0·5M thick Average	Gal <1%		
				fragment size 3x3 cm, reaching 10x10 cms.			
				Particulary bright green chlorite clots in some			
				fragments		2·0	-188
				Foliation // 50°			
			56·0	F.P	MVW		
				AS ABOVE	Py 0-5%		
			/	Foliation // 50° and 60°	Cpy <1%	2·0	-189
			58·0		Gal <1%		
			58·0	F.P.	MVVW		
				AS ABOVE, becoming increasingly chlorite	Py 0-3%		
			/	and darker green towards the base of the	Cpy <1%	2·0	-190
			60·0	sample			

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY RJD
DRAWN BY
CHECKED BY IR.
SHEET 5 OF 26
DRAWING No.
REFER ALSO

FORM 1

599098

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA LOG HOLE No. Z142002 COORDINATES
LOCATION JUKES-DARWIN R.L. GROUND
ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION: ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. ; MINERALISATION	SAMPLE (Interval & Length)	SAMPLE No.
			60.0 / 62.0	F.P. AS ABOVE, cleats becoming less distinct as unit becomes more altered and silicified Foliation // 45°	Mvvw Py 0-3% 2.0	A 216 - 191
			62.0 / 64.0	F.P. AS ABOVE, Foliation // 45° to 50°	Mvvw Py 0-3% Cpy < 1% 2.0	- 192
			64.0 / 66.0	F.P. AS ABOVE, becoming/~~was~~ increasingly silicified	Mw Py 1-20%, Cpy < 1%; but @ 66.7M fg to mg massive Py over 3cm, contains possible fg disc Cpy	
					2.0	- 193
			66.0 / 68.01	F.P. AS ABOVE, 0.1M intercalation of ilmenitite, indurated crystal lithic tuff (red-brown) ~~was~~ at 66.8M	Mvvw Py 0-3% Cpy < 1% 2.01	- 194
			68.1 / 70.1	F.P. CRYSTAL TUFF, indurated with red-brown ilmenitite. Contact ^ up unit diffuse. Fine grained. Contact // 45° approx.	Trace Py < 1% 2.0	- 195
			70.1 / 72.1	F.P. CRYSTAL LITHIC TUFF, indurated & red/brown ilmenitite in similar fashion to above unit. Foliation // 40° and 60°	Trace Cpy < 1% 2.0	- 196
			72.1 / 73.1	F.P. AS ABOVE Foliation // 35° and 50°	Trace Py < 1% Cpy < 1% 1.0	- 197

DRILL No.
TYPE
DRILLER
COMMENCED
COMPLETED

COMMENTS
TARGET
RESULT
WATER TABLE

LOGGED BY RJD
DRAWN BY
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SHEET 6 OF 26
DRAWING No.
REFER ALSO

FORM 1

098

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA LOG HOLE No. 2142002 COORDINATES

LOCATION JUKES-DARWIN R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / To METRES	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
			73·1 / 75·4	F.P. CRYSTAL TUFF, fine grained and indurated with Haematite, ± inclusion of 0·5M @ 74·6M, which is a mottled green colour in contrast to red brown colour of rest of sample; Qtz-sericite vein @ 75·4M, 5cms thick Foliation // 40° Qtz vein // 50°	2·3	A 216 -198
			75·4 / 77·4	F.P. Trace CRYSTAL TUFF, characterised by prominent Py 0-1% subangular to angular quartz phenocrysts ≤ 3mm and ragged clots of f.g. Haematite 5×2 cms on average. Matrix is also partially indurated with haematite and often contains flecks of bright green chlorite Foliation // 35°	2·0	-199
			77·4 / 79·4	F.P. AS ABOVE Foliation // 50° and 30°	2·0	-200
			79·4 / 81·4	F.P. Trace AS ABOVE, occasional subangular fragments of pink chlorite Py 0-1% up to 1 cm	2·0	-201
			81·4 / 83·4	F.P. AS ABOVE Foliation // 35°	2·0	-202
			83·4 / 85·4	F.P. AS ABOVE Foliation // 30° and 60°	2·0	-203

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY R.J.D

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SHEET 7 OF 26

DRAWING No.

REFER ALSO

FORM 1

599100

099

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA LOG HOLE No. 2142002 COORDINATES
LOCATION JUKES-DARWIN R.L. GROUND
ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc.	MINERALISATION	SAMPLE Complete into Lower?	SAMPLE No.
			95.4	F.P.	Trace		A
				AS ABOVE	Py < 1%		216
			/			2.0	-204
			87.4				
			87.4	F.P.			
				AS ABOVE, occasional green flecks of chlorite		2.0	-205
			/	Foliation // 50°-65°			
			89.4				
			89.4	F.P.	Trace		
				AS ABOVE	Py < 1%		
			/	Foliation // 50°		2.0	-206
			91.4				
			91.4	F.P.			
				AS ABOVE	Trace		
			/		Py < 1%	2.0	-207
			93.4				
			93.4	F.P.	Trace		
				AS ABOVE, matrix darkening in colour	Py < 1%		
			/	as becomes more chloritic and impregnated			
			95.4	with diamantite, Qtz veins 1 cm wide			
				Foliation // 55°			
				Qtz vein // 55°			
						2.0	-208
			95.4	F.P.	Trace		
				AS ABOVE, matrix becoming greener in	Py < 1%		
			/	colour as chlorite content increases. Qtz		2.0	-209
			97.4	vein @ 95.4 M 2 cms thick			
				Foliation // 25° and 50°			
			97.4	F.P.	Trace		
				AS ABOVE, amount of chlorite in proportion to	Py < 1%		
			/	diamantite increasing. Diffuse contact with		1.5	-210
			98.9	underlying unit.			
				Contact // 50°			

DRILL No.
TYPE
DRILLER
COMMENCED
COMPLETED

COMMENTS
TARGET
RESULT
WATER TABLE

LOGGED BY RJD
DRAWN BY
CHECKED BY I.R.
SHEET 8 OF 26
DRAWING No.
REFER ALSO

FORM 1

599101

100

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA LOG HOLE No. Z142002 COORDINATES
LOCATION SUKES-DARWIN R.L. GROUND
ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Geophysic Log LENGTH	SAMPLE No.
			98·9 / 100·9	F.P. (CHLOR) Trace CRYSTAL TUFF, chloritic and sericitic grey Py < 1%, in colour, abundant quartz phenocrysts and Cpy < 1%, but @ appears to be the same lithology as the above unit. 100·3M, 0·1M Qtz Poorly Ragged splodges of leucoxene in above appear to MVVW ≈ Cpy 3%, have been replaced fine col. areas of carbonate (oxidised) Gal & Spal < 1% Foliation // 60° and 35° Qtz vein // 50°	2·0	A 216 -211
			100·9 / 102·9	F.P. (CHLOR) Trace AS ABOVE Py 0-1%, but @ Foliation // 35°, 50° 102·1M, Qtz vein 4cms Qtz // 70° thick contains 3% Cpy, Gal & Spal < 1%	2·0	-212
			102·9 / 103·9	F.P. (CHLOR) Trace AS ABOVE, quartz phenocrysts becoming Py 0-1% less distinct towards the base of the unit Foliation // 20° and 60°	1·0	-213
			103·9 / 105·9	F.P. (CHLOR) MW CRYSTAL LITHIC TUFF, consisting of clast Py 0-20% like fragments set in a fine grained Cpy < 1%, but @ 105·3M chloritic groundmass (frag size up to 4x6cm) Mst ≈ 1cm of banded Pale green in colour, with lithic fragments fine g. Cpy Foliation // 25° and 65°	2·0	-214
			105·9 / 107·9	F.P. (CHLOR) MW AS ABOVE, unit is becoming more Py 0-20% structureless and texturless ≈ the Cpy < 1% exception of anastomosing veins of chlorite Intense development of dark green chlorite with 0·1M broken ground at 106·6M Foliation // 15° and 60°	2·0	-215

DRILL No.
TYPE
DRILLER
COMMENCED
COMPLETED

COMMENTS
TARGET
RESULT
WATER TABLE

LOGGED BY R.J.D.
DRAWN BY
CHECKED BY I.R.
SHEET 9 OF 26
DRAWING No.
REFER ALSO

FORM 1

599102

101

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA / TUKES - DARWIN LOG HOLE No. 2142002 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION — ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Graphic Log LENGTH	SAMPLE No.
			107.9	F.P. (CHLOR) — Mvvw		A
				AS ABOVE, fragments are becoming bands — Py 0-3%		216
				to distinguish quite even ghosts like — Cpy ≤ 1%, but @ 109M	2.0	-216
			109.9	Foliation // 50°-55° — a 8M of Py 50%, Cpy 10%		
			109.9	F.P. (CHLOR) — Mvw		
				AS ABOVE, intense development of dark green — Py 0-10%		
				Mariti at 111.8M over 0.2M — Cpy ≤ 1%	2.0	-217
			111.9	Foliation // 55° to 60°		
			111.9	F.P. (CHLOR) — Mvvw		
				AS ABOVE — Py 0-3%		
				Foliation // 55° — Sph ≤ 1%	2.0	-218
			113.9			
			113.9	F.P. (CHLOR) — Mvvw		
				AS ABOVE, intense dark green Mariti development — Py 0-3%		
				@ 115 M E 2-3 cm wide irregular vein of fg	2.0	-219
			115.9	Mariti		
				Foliation // 60°		
			115.9	F.P. (CHLOR) — Mvvw		
				AS ABOVE, — Py 0-3%		
				Foliation // 60°	2.0	-220
			117.9			
			117.9	F.P. (CHLOR) — Mvvw		
				AS ABOVE, occasional blue-black bands — Py 0-3%		
				of a fine grained unidentifiable material	2.0	-221
			119.9	Foliation // 35° and 55°		
			119.9	F.P. (CHLOR)		
				AS ABOVE, original texture of the crystal — Mvvw		
				lithic tuff now apparent — Py 0-3%	2.0	-222
			121.9	Foliation // 25° and 55°		
			121.9	F.P. (CHLOR) — Mvvw		
				AS ABOVE — Py 0-3%		
				Foliation // 50° and 60°	2.0	-223
			123.9			

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY RJD
DRAWN BY
CHECKED BY I.R.
SHEET 10 OF 26
DRAWING No.
REFER ALSO

FORM 1

599103

102

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA LOG HOLE No. Z142002 COORDINATES
LOCATION JUKES-DARWIN R.L. GROUND
ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphical Log LENGTH	SAMPLE No.
			123·9 / 125·9	F.P. (CHLOR) M v v w AS ABOVE, 1-2 cm wide irregular qtz-sideritic vein @ 124·1M Py 0-3% Foliation // 25° and 50° to 55°	2·0	A 216 -224
			125·9 / 127·9	F.P. (CHLOR) Trace AS ABOVE, scattered quartz-siderite veining. 0·1M broken ground at 127M Py < 1% caused by kink band. Foliation // 55°, 25° Kink band // 15°	2·0	-225
			127·9 / 129·9	F.P (CHLOR) M v v w AS ABOVE, banded appearance caused by alternating green mafic (chloritic) and Py 0-3% white cherty areas Cpy 1% @ 128M Foliation // 45°, 30° and 60°	2·0	-226
			129·9 / 131·9	F.P. (CHLOR) Trace AS ABOVE Py < 1% Foliation // 35° and 60°	2·0	-227
			131·9 / 134·0	F.P. (CHLOR) M v v w AS ABOVE, original texture of the unit is fairly distinct. Possibly a pyroclastic flow Py 0-3% deposit. Irregular quartz veining and broken Cpy < 1% in Qtz ground may mark the base of the unit. Small faults or kink bands @ 2-3 cms dip. Foliation // 50°	2·1	-228
			134·0 / 136·0	F.P. (CHLOR) M v v w CRYSTAL LITHIC TUFF, similar in general Py 0-3% appearance to the above unit, but clasts and are fairly distinct. Characterised by small fragments of red-pink beam ot. mat. on 1-2 cms		

DRILL No.
TYPE
DRILLER
COMMENCED
COMPLETED

COMMENTS
TARGET
RESULT
WATER TABLE

LOGGED BY RJD
DRAWN BY
CHECKED BY I.R.
SHEET 11 OF 26
DRAWING No.
REFER ALSO

FORM 1

599104

103

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA
PROJECT JUKES-DARWIN LOG HOLE No. Z142002 COORDINATES
LOCATION R.L. GROUND
ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic log LENGTH	SAMPLE No.
				Mottled grain in colour appearance with irregular Qtz-Sid veins. Contact ? up is gradational. Foliation // 50°	2·0	A 216 -229
			136·0 / 138·0	F.P. (CHLOR) MVVW AS ABOVE, hematite at clasts core Py 0-10% Foliation // 40° and 65° Cpy ≤ 1%	2·0	-230
			138·0 / 140·0	F.P. (CHLOR) MVW AS ABOVE, original texture and clasts Py 0-10% becoming more smeared out by shearing. Cpy ≤ 1% Foliation // 55°	2·0	-231
			140·0 / 141·0	F.P. (CHLOR) MVW AS ABOVE, core very broken ≤ 0·2M Py 0-10% of Qtz veining and shearing @ 141·1M Cpy ≤ 1% Foliation // 40° and 55°	1·0	-232
			141·0 / 142·0	F.P. (CHLOR) AS ABOVE, lot 1·5M of sample very broken MVVW and sheared Py 0-3%	1·0	-233
			142·0 / 144·0	F.P. (CHLOR) MVVW AS ABOVE Py 0-3%	2·0	-234
			144·0 / 146·0	F.P. (CHLOR) AS ABOVE, veinlets of chlorite < 1mm thick MVVW irregular and // to foliation. Core broken Py 0-3% Foliation // 60°	2·0	-235
			146·0 / 148·0	F.P. (CHLOR) MVVW AS ABOVE, intense chloritic chloritic Py 0-3% alteration and broken grade for 0·2M @ 147·2M Foliation // 45° and 70°	2·0	-236

DRILL No.
TYPE
DRILLER
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COMMENTS
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WATER TABLE

LOGGED BY R.J.D
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SHEET 12 OF 26
DRAWING No.
REFER ALSO

FORM 1

599105

INTERNATIONAL NICKEL AUSTRALIA LIMITED

104

TASMANIA
PROJECT JUKES-DARWIN LOG HOLE No. Z142002 COORDINATES
LOCATION R.L. GROUND
ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
			148·0	F.P. (CHLOR) Mvvw		A
			/	AS ABOVE, original lithology very Py 0-3%		216
				indistinct, strong chloritisation & silicification.	2·0	-237
			150·0	Dark green banding.		
			150·0	F.P. (CHLOR) Mvvw		
			/	AS ABOVE, banding consisting of white- Py 0-3%		
				blue bands set in generally mottled green Cpy ≤ 1% assoc 2 hem		
			152·0	matrix. Possibly silicified ash bands within		
				the lithic tuff. Local core of hem ≤ 5 mm.		
				Foliation // 55° and 60°		
					2·0	-238
			152·0	F.P. (CHLOR) Mvvw		
			/	AS ABOVE, discontinuous dark green chlorite Py 0-3%		
				banding gaining prominence. Cpy ≤ 1%	2·0	-239
			154·0			
			154·0	F.P. (CHLOR) Mvvw		
			/	AS ABOVE Py 0-3%		
				Cpy ≤ 1%	2·0	-240
			156·0			
			156·0	F.P. (CHLOR) Mvw		
			/	AS ABOVE, clasts of hematite increasing in Py 0-10%		
				abundance & a 3 cm ring vein @ 157·8M. Bands Cpy ≤ 1%	2·0	-241
			158·0	of siliceous chert like matl ≤ 0·1M.		
				Foliation // 65°		
			158·0	F.P. (CHLOR) Mvvw		
			/	AS ABOVE, irregular remnants of finer chlorite Py 0-3% but @ 159·6M		
				bands caused by alternating chlorite/quartz hem Py 50-60% over 4 cms	2·0	-242
			160·0	bands. Cpy ≤ 1%		
			160·0	F.P. (CHLOR) Mvvw		
			/	AS ABOVE, base of F.P. core is v. f. g. and dirty, Py 0-3%		
				green chl. band grs brecciated app. chlorite all hematite	2·4	-243
			162·4	very intense towards the base.		

DRILL No.
TYPE
DRILLER
COMMENCED
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COMMENTS
TARGET
RESULT
WATER TABLE

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FORM 1

599106

105

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA LOG HOLE No. Z142002 COORDINATES

LOCATION JUKES-DARWIN R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Completion Log (Lithol)	SAMPLE No.
			162.4	CENTRAL CORE RHYOLITE (CCR) · Trace	@	A
			/	Massive porphyritic lava ± alkalitised fsp.		
			164.4	Py <1% coarse crystals. Contact D the FP is sharp & overall	2.0	216
				amount of broken up stn. 162.4M to 162.6M. Up pt.		-244
				of unit in core but becomes a red pink col		
				by 163M. Irregular veins of specular hem 1-2cm		
				wide containing blebs of fg. Py		
				C.C. Trace		
			164.4	As Above Py: 0-1%		
			/		2.0	-245
			166.4			
				C.C. Mvvw.		
			166.4	As Above Py: 1-3%		
			/	assoc. with hem.	2.0	-246
			168.4			
				C.C. Mvvw.		
			168.4	As Above Py: 1-3%		
			/	Varies from pale green with saccharoidal	2.0	-247
			170.4	texture to pink-red with chalky appearance		
				Irregular qtz veins @ 170.3		
				C.C. Mw.		
			170.4	As Above Py: 1-2½%		
			/	Qtz veins (0.5m) @ 170.6 M } // 25°	2.0	-248
			172.4	+ 171.6 M }		
				C.C. Mvvw.		
			172.4	As Above Py: 0-3%		
			/	Foliation // 20-30°	2.0	-249
			174.4			
				C.C. Mvw		
			174.4	As Above Py: 1-10%		
			/	Py > Hem.	2.0	-250
			176.4			

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

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WATER TABLE

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SHEET 14 OF 26
DRAWING No.
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FORM 1

599107

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INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes-Darwin LOG HOLE No. Z 142002 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / To METRES	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
			176.4 / 178.4	C.C. Mvvw. As Above Py : 1-3% Irregular qtz. veining (2cm wide) over 0.2M @ 177.6M	2.0	A 216 -251
			178.4 / 180.4	C.C. Mvvw. As Above Py : 1-3% @ 178.6 M, 0.2 M is black-green (Py 5% Cpy 1% colour w. abundant hem, py, cpy @ 180.1 m) Cpy : Trace	2.0	-252
			180.4 / 182.4	C.C. As Above, colour varies from Mvw. p. mottled green to bright pink Py : 3-5% with d.green chlorite pseudomorphs after feldspar. Foliation // 40°-75°	2.0	-253
			182.4 / 184.4	C.C. Mvvw. As Above Py : 1% P. green to d. green, with saccharoidal texture.	2.0	-254
			184.4 / 186.4	C.C. Mvvw. As Above, Py : 1-3% but changing to chalky p. pink colour at 186.2 M	2.0	-255
			186.4 / 188.4	C.C. Mvvw. As Above Py : 1-3% green, chalky appearance. 0.6 M Broken ground @ 187.0 M Chlorite veins // 50°	2.0	-256
			188.4 / 190.4	C.C. Trace sulph. As Above Py < 1% Cpy trace (@ 190.2) in qtz vein	2.0	-257
			190.4 / 192.4	C.C. Trace sulph As Above Py < 1% Cpy trace (@ 192.4) in qtz vein	2.0	-258

DRILL No.
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DRILLER
COMMENCED
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WATER TABLE

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599108

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INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes - Darwin LOG HOLE No. Z142002 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	PERCENTAGE From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
				C.C. Trace sulph.		
			192.4	As ABOVE Py <1%		A 216
				Slightly more chloritic	2.0	-259
			194.4	Foliation // 40°		
				C.C. Trace sulph.		
			194.4	As ABOVE Py <1%		
				Now has mottled green	2.0	-260
			196.4	appearance.		
				C.C. Trace sulph		
			196.4	As ABOVE Py <1%		
				Locally brecciated (over 0.4M @ 197.2M)	2.0	-261
			198.4	and intensely veined w. hem, qtz, chlor		
				Foliation // 50°		
				C.C. Trace sulph		
			198.4	As ABOVE Py <1%		
					2.0	-262
			200.4			
				C.C. Trace sulph.		
			200.4	As ABOVE, but now pink Py <1%		
				and shotty with irregular qtz-carb	2.0	-263
			202.4	veinlets (up to 1cm thick) and		
				locally abundant hem.		
				C.C. Trace sulph		
			202.4	As ABOVE, with Py <1%		
				irregular qtz-carb. veinlets. Hem.	2.0	-264
			204.4	veinlets subordinate.		
				C.C. Trace sulph		
			204.4	As ABOVE, but passing back Py <1%		
				into green mottled rhyolite @ 260.0M	2.0	-265
			206.4	with saccharoidal texture. Hem.		
				veinlets subordinate.		
				C.C. Trace sulph.		
			206.4	As ABOVE, with mottled green appearance Py <1%		
				prominent chlorite angular pseudomorphs, after (but 5% @	2.0	-266
			208.4	fsp. Hem. veinlets absent 208.3M)		

DRILL No.
TYPE

DRILLER
COMMENCED
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WATER TABLE

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INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

108

PROJECT JUKES - DARWIN LOG HOLE No. Z142002 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	METRES From	METRES To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Core/Chip LENGTH	SAMPLE No.
			208.4	210.4	C.C. Trace sulph. As ABOVE, chlor. pseudomorphs still prominent, rock has pink-green colour. Hem (5cm thick) @ 208.6M, qtz-sid. (3cm thick) @ 210.3M. Py <1%	2.0	A 216 -267
			210.4	212.4	C.C. Trace sulph. As ABOVE, with anastomizing veinlets of dk. green chlor. (0.1-0.5cm) irregular qtz-sid. veinlets. Py <1%	2.0	-268
			212.4	214.4	C.C. Trace sulph. As ABOVE, but hem-veinlets make up 50% of rock @ 214.2 - 214.4 M. Py <1%	2.0	-269
			214.4	216.4	C.C. Trace sulph. As ABOVE, with some hem. veinlets Py <1%	2.0	-270
			216.4	218.4	C.C. Trace sulph. As ABOVE, small amount of hem. veining, Qtz-sid. vein @ 217.0M. Py <1%	2.0	-271
			218.4	220.4	C.C. Trace sulph. As ABOVE, mottled green appearance and saccharoidal texture. little hem. Py <1%	2.0	-272
			220.4	222.4	C.C. Trace sulph As ABOVE Py <1%	2.0	-273
			222.4	224.4	C.C. As ABOVE but slightly more pink and chalky. Hem. veinlets more common Qtz (0.2 cm wide) @ 223.9M Trace sulph Py <1% Cpy trace in qtz vein	2.0	-274

DRILL No.
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DRILLER
COMMENCED
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WATER TABLE

LOGGED BY R.J.D.
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SHEET 17 OF 26
DRAWING No.
REFER ALSO

FORM 1

599110

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

109

PROJECT Jukes - Darwin LOG HOLE No. Z142002 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / To METRES	DESCRIPTION — ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. ; MINERALISATION	SAMPLE Sampling Log Length	SAMPLE No.
			224.4 / 226.4	C.C. Trace sulph As Above. Py <1% Hem. rich.	2.0	A 216 -275
			226.4 / 228.4	C.C. Trace sulph. As Above but now pale pinks in colour with a faint saccharoidal texture. Occasional veinlets of hem.	2.0	-276
			228.4 / 230.4	C.C. Trace sulph As Above, Py <1% irregular qtz veining @ 228.5, 229.4 & 229.9 M.	2.0	-277
			230.4 / 232.4	C.C. Trace sulph As Above, Py <1% saccharoidal texture now more prominent & hem. veinlets v. occasional	2.0	-278
			232.4 / 234.4	C.C. MVVM. As Above, but now p. pinks to p. green in colour with hem. veinlets + brecciated appearance @ 234.2 and 233.3 M, over 0.2M lengths Py: 1-3%	2.0	-279
			234.4 / 236.4	C.C. MVVM As Above, but @ 236.6M interv chlor. veinings and bleaching over 0.2M. Py: 1-3% @ 235.4 M purple glassy material (1cm. wide) marks the contact between unaltered lavas and brecc'd hem. rich material below.	2.0	-280
			236.4 / 238.4	C.C. Trace sulph. As Above, but v. abundant hem. Py: <1% from 236.4 to 237.9 M hem. veinlets make up 10-80% of rock. Qtz vein //15° @ 237.3M (2 cm thick)	2.0	-281

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

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WATER TABLE

LOGGED BY R.J.D
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CHECKED BY I.R.
SHEET 18 OF 26
DRAWING No.
REFER ALSO

FORM 1

599111

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INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES-DARWIN LOG HOLE No. Z 142002 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / To METRES	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
			238·4	C.C. Trace Sulph:		A 216
				As ABOVE, but clotty texture Py: <1%		
				(over 0·5 m) @ 239·0 m. Hem. veinlets Cpy in 1cm	2·0	-282
			240·4	continues, with 3 parallel hem. & mgt. veins (1%) @ 239 & 239·3		
				C.C. Trace sulph.		
			240·4	As ABOVE, but now mottled Py: <1%		
				green appearance. Hem veinlets Cpy @ 241·9 m (1%)	2·0	-283
			242·4	adjacent. Core broken from		
				240·6 - 241·0		
				C.C. Trace sulph.		
			242·4	As ABOVE Py: <1%		
					2·0	-284
			244·4			
				C.C. Trace sulph.		
			244·4	As ABOVE, but with Py: <1%		
				occasional hem. veinlets Cpy (1-3% over	2·0	-285
			246·4	0·2 m @ 245·8 m		
				C.C. Trace sulph		
			246·4	As ABOVE. Py: <1%		
					2·0	-286
			248·4			
				C.C. Trace sulph.		
			248·4	As ABOVE Py: <1%		
				Cpy @ 248·5 m	2·0	-287
			250·4			
				C.C. Trace sulph.		
			250·4	As ABOVE, but now chlor. Py: <1%		
				veins and bleaching (0·1m) @ 250·5	2·0	-288
			252·4	Qtz-sid veins (3cm. thick) @ 252·2		
				//25°		
				C.C. Trace sulph:		
			252·4	As ABOVE, irregular qtz & hem. Py: <1%		
				veins to 253·4 and core v. broken. Cpy @ 251·5 m	2·0	-289
			254·4	@ 253·8 m hem-mgt (0·5 cm)		

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

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RESULT

WATER TABLE

LOGGED BY R. J. D.
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SHEET 19 OF 26
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FORM 1

599112

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INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES-DARWIN LOG HOLE No. Z 142 002 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From METRES To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic log LENGTH	SAMPLE No.
				C.C. Mvvw.		
			254·4 / 256·4	As ABOVE, but mottled grey-green passing down into brecciated pink hem-rich zone @ 255·9 Qtz vein (3cm) @ 255·0 // 20°	Py: 1% Cpy: 1% (Comm^d from @ 253·5 m) 2·0	A 216 -290
				C.C. Mvvw.		
			256·4 / 258·4	As ABOVE, but w. occasional hem-mgt. veins	Py: 1-3% (up to 0·5cm across in hem-mgt) Cpy <1% (Comm^d to right) 2·0	-291
				C.C. Mvvw.		
			258·4 / 260·4	As ABOVE, but bleached + chloritised from 259·7 - 260	Py: 1-3% Cpy: <1% (@ 259·7) 2·0	-292
				C.C. Mvvw.		
			260·4 / 262·4	As ABOVE, intense brecciation with hem-mgt veins @ 260·4 and 261·8	Py: 1-3% Cpy: <1% 2·0	-293
				C.C. Mvvw.		
			262·4 / 264·4	As ABOVE, occasional hem-mgt veins and brecciation; mottled grey-green appearance.	Py: 1-3% Cpy: c. 1% from (263·9 - 264·4) 2·0	-294
				C.C. Trace sulph.		
			264·4 / 266·4	As ABOVE, grey-green mottled.	Py: <1% Cpy: from 264·4 to 265·4 2·0	-295
				C.C. Trace sulph.		
			266·4 / 268·4	As ABOVE, but hem-mgt. veinlets more absent	Py: <1% but @ 267·4 - m.g. Cpy (30%) and Py (20%) with Gal (40%) in 1x1cm aggregate 2·0	-296
				C.C. Trace sulph.		
			268·4 / 270·4	As ABOVE but with occasional hem-mgt. veinlets	Py: <1% Cpy - diss. from 268·4 to 269·4 with 1cm wide vein (20% Cpy) @ 269·2M in mgt. 2·0	-297

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

COMMENTS

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WATER TABLE

LOGGED BY R.J.D.
DRAWN BY
CHECKED BY I.R.
SHEET 20 OF 26
DRAWING No.
REFER ALSO

FORM 1

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INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes - Darwin LOG HOLE No. Z 142002 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Ret / Run	FOOTAGE From / To METRES	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
			270·4 / 272·4	C.C. Trace sulph. As Above Py: <1% hem-mgt. veinlets more Cpy: <1%	2·0	A 216 - 298
			272·4 / 274·4	C.C. Trace sulph. As Above Py: <1% hem-mgt. veinlets more Cpy: <1% somewhat more abundant	2·0	- 299
			274·4 / 276·4	C.C. Mvvw. As Above Py: 1% hem-mgt veins common with Cpy: 1% assoc. some brecciation. Qtz-sid w. qtz-sid. veins more with breed material	2·0	- 300
			276·4 / 278·4	C.C. Mvvw As Above Py: <1% hem-mgt veins more Cpy: 1-3% but abundant, with increase brecciation. @ 278·1 over 25 cm Cpy 95% mgt. 5%	2·0	- 301
			278·4 / 280·4	C.C. Mvvw. As Above Py: 1%, Cpy: 1% assoc. with hem-mgt. veins	2·0	- 302
			280·4 / 282·4	C.C. Mvvw. As Above Py: 1%, Cpy: 1%	2·0	- 303
			282·4 / 284·4	C.C. Trace Sulphs As Above Py: < 1%	2·0	- 304
			284·4 / 286·4	C.C. Trace Sulphs. Less hem rich, more grey-purples lenses showing saccharoidal texture Py: <1%	2·0	- 305

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

TARGET

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WATER TABLE

COMMENTS

LOGGED BY R.J.D.
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INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes-Darwin LOG HOLE No. Z 142002 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / To METRES	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic log LENGTH	SAMPLE No.
			286·4 / 288·4	C.C. Grey-purple As ABOVE	2·0	A 216 - 306
			288·4 / 290·4	C.C. Trace sulphs. Grey-purple, bx with Py + Cpy : <1% minor hem-mgt. veinlets (Mvvw over basal 1·0 m)	2·0	-307
			290·4 / 292·4	C. C. Trace sulphs. As ABOVE Py + Cpy : <1% (Mvvw over basal 0·5 m)	2·0	-308
			292·4 / 294·4	C.C. Trace sulphs. As ABOVE Cpy : <1%	2·0	-309
			294·4 / 296·4	C.C. Mvvw. As ABOVE Cpy : 1% with qtz-carb in qtz-carb. veins veinlets 2mm. across	2·0	-310
			296·4 / 298·4	C.C. Mvvw. As ABOVE Cpy : 1% with qtz-carb veinlets in qtz-carb veinlets	2·0	-311
			298·4 / 300·4	C.C. Trace sulphs. As ABOVE Cpy + Py : <1% with qtz-carb veinlets	2·0	-312
			300·4 / 302·4	C.C. Trace sulphs. As ABOVE Cpy + Py : <1%	2·0	-313

DRILL No.
TYPE

DRILLER
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COMMENTS

LOGGED BY I.R.
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DRAWING No.
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FORM 1

599115

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INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes - Darwin LOG HOLE No. Z 142002 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	METRES From / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Sample Graphic Log Contact	SAMPLE No.
			302·4 / 304·4	C.C. Trace sulphs. As ABOVE Cpy + Py : <1%	2·0	A 216 - 314
			304·4 / 306·4	C.C. Trace sulphs As ABOVE Cpy + Py : <1%	2·0	- 315
			306·4 / 308·4	C.C. Trace sulphs. As ABOVE Cpy + Py : <1% Qtz vein (4cm wide) @ 307.6M	2·0	- 316
			308·4 / 310·4	C.C. Trace sulphs As ABOVE Cpy + Py : <1%	2·0	- 317
			310·4 / 312·4	C.C. Trace sulphs. As. ABOVE but Cpy + Py : <1% with numerous thin (< 2mm) qtz-carb veinlets from 310.9 - 311.6M	2·0	- 318
			312·4 / 314·4	C.C. grey-purple As ABOVE. but from 313.5M becoming cherty, pinky red hema-rich.	2·0	- 319
			314·4 / 316·4	C.C. Red-pink cherty lamina with hema-mgt. veinlets	2·0	- 320
			316·4 / 318·4	C.C. Trace sulphs. As ABOVE Py : <1%	2·0	- 321

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY I.R.
DRAWN BY I.R.
CHECKED BY
SHEET 23 OF 26
DRAWING No.
REFER ALSO

FORM 1

599116

115

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES - DARWIN LOG HOLE No. Z 142002 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing / Scale Depth	Rec / Run	SURFACE From METRES To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Sample Graphic Log LENGTH	SAMPLE No.
		318·4	C.C. Trace sulphs.		A
			As ABOVE Py: <1%	2·0	216
		320·4			-322
		320·4	C.C. Trace sulphs.		
			As ABOVE, but with patches of Py: <1%	2·0	-323
		322·4	grey-purple saccharoidal material		
		322·4	C.C. Trace sulphs.		
			Grey-purple loose but Py+Cpy: <1%		
			becoming pink, hem-rich @ 323·8M (Musc Cpy in qtz vein	2·0	-324
		324·4	328·3 - 328·9m)		
		324·4	C.C.		
			Pink, hem-rich but becoming		
			grey purple @ 325·0 m.	2·0	-325
		326·4			
		326·4	C.C.		
			Grey-purple loose	2·0	-326
		328·4			
		328·4	C.C.		
			As Above	2·9	-327
		331·3			
		331·3	END OF HOLE		

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

TARGET

RESULT

WATER TABLE

LOGGED BY I.R. DRAWN BY CHECKED BY I.R. SHEET 24 OF 26 DRAWING No. REFER ALSO

FORM 1

599117

116

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes - Darwin LOG HOLE No. Z 142002

COORDINATES 125 N 188 E

LOCATION EAST DARWIN AREA

ANGLE FROM HORIZONTAL 60° DIRECTION 253° mgts

R.L. GROUND

Casing	Scale Depth	Rec / Run	FOOTAGE From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Graphic Log	SAMPLE No.
				LOG SUMMARY		
			0	COLLAR		
			0 - 6·6	FLANKING PYROCLASTICS (F.P.) CRYSTAL TUFF		
			6·6 - 350	F.P. CRYSTAL - LITHIC TUFF / AGGLOMERATE Mvvw: Py, Cpy, Gal @ 15·3 - 31·3		
			35·0 - 54·0	F.P. CRYSTAL TUFF		
			54·0 - 73·1	F.P. CRYSTAL - LITHIC TUFF Mvvw: Py, Cpy, Gal (HW @ 66 - 68)		
			73·1 - 98·9	F.P. CRYSTAL TUFF		
			98·9 - 103·9	F.P. (CHLORITISED) CRYSTAL TUFF		
			103·9 - 162·4	F.P. (CHLORITISED) CRYSTAL - LITHIC TUFF Mvvw: Py Cpy (HW @ 103·9 - 107·9)		
			162·4 - 331·3	CENTRAL CORE RHYOLITES (C.C.) LAVAS Mvvw: Py, Cpy 166·4 - 188·4 232·4 - 236·4 256·6 - 266·4 276·4 - 282·4 (Cpy) 294·6 - 298·4 - (Cpy)		
			331·3	E. O. H.		
				(Cont'd overleaf)		

DRILL No.
TYPE Longyear 38

DRILLER
COMMENCED 19·11·73
COMPLETED 9·12·73.

COMMENTS

TARGET IP anomaly 200 m. below surface at 25 E. - west of Darwin Ply. mineralization.

RESULT No Cu Pb Zn values > 0·5%.

WATER TABLE

LOGGED BY I.R.
DRAWN BY
CHECKED BY I.R.
SHEET 25 OF 26
DRAWING No.
REFER ALSO

FORM 1

599118

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT Jukes - Darwin LOG HOLE No. Z 142 002 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	FOOTAGE From / To METRES	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Graphic Log	SAMPLE No.
				LOG SUMMARY (cont'd) p. 2.		
				PAJARI TESTS		
				Bearing (Mgt) Dip		
				30.48 M In casing 56°		
				60.96 M 247° 50°		
				91.44 M 245° 40°		
				106.7 M (219? erratic) 36°		
				121.9 M 249° 32°		
				152.4 M 269° 20°		
				182.9 M 239° 16°		
				243.8 M 264° 9°		
				274.3 M 228° 5°		
				304.8 M 252° 2°		
				HQ RODS TO 30.48 M		
				NQ " " 121.9 M		
				BQ " " 331.3 M		
				CASING LEFT IN HOLE : 61.9 M of BW.		
				RODS LEFT IN HOLE : NIL		

DRILL No. TYPE Longyear 38

DRILLER

COMMENCED 19-11-73

COMPLETED 9-12-73

TARGET

RESULT

WATER TABLE

COMMENTS

LOGGED BY I.R.

DRAWN BY

CHECKED BY I.R.

SHEET 26 OF 26

DRAWING No.

REFER ALSO

FORM 1

599119

118

INTERNATIONAL NICKEL AUSTRALIA LIMITED
TASMANIA

COORDINATES 125N 188E

HOLE No. Z 142002

PROJECT JUKES-DARWIN

R.L. GROUND

LOCATION EAST DARWIN AREA

ANGLE FROM HORIZONTAL 60° DIRECTION 253° mgtc

SAMPLE No.	Type	METRES From	To	Width	DESCRIPTION	ASSAYS: A.A.S. (A) CLASSICAL [C] FIRE [F] OTHER [O] Cu	Zn	Pb				
A216160		0	1·0	1·0	No Sample	–	–	–	–	–	–	–
161		1·0	3·0	2·0	F.P. Cmpt. Tuff							
162		3·0	5·0	2·0	As above							
163		5·0	6·6	1·6	As above							
164		6·6	8·5	1·9	F.P. Cmpt-Lith Tuff							
165		8·5	10·5	2·0	As above							
166		10·5	11·3	0·8	As above							
167		11·3	13·3	2·0	Trace Sulp F.P. Cmpt-Lith Tuff	57	59	29				
168		13·3	15·3	2·0	As above							
169		15·3	17·3	2·0	Mvvw As above	82	100	40				
A216170		17·3	19·3	2·0	Mvvw As above	60	1280	990				
171		19·3	21·3	2·0	Mvw As above	100	3000	5150				
172		21·3	23·3	2·0	Mvw As above	39	390	910				
173		23·3	25·3	2·0	Mvvw As above							
174		25·3	27·3	2·0	Trace Sulp As above							
175		27·3	29·3	2·0	Mw As above	440	515	2200				
176		29·3	31·3	2·0	Mvvw As above							
177		31·3	33·3	2·0	Trace Sulp. As above							
178		33·3	35·0	1·7	Trace Sulp As above							
179		35·0	37·0	2·0	Mvvw Cmpt. Tuff							
A216180		37·0	39·0	2·0	Tr. Sulp. As above							
181		39·0	41·0	2·0	Tr. Sulp. As above							
182		41·0	43·0	2·0	Tr. Sulp. As above							
183		43·0	45·0	2·0	Tr. Sulp. As above							
184		45·0	47·0	2·0	Tr. Sulp. As above							
185		47·0	49·0	2·0	As above							
186		49·0	51·0	2·0	Mvvw As above							
187		51·0	54·0	3·0	As above							
188		54·0	56·0	2·0	Mvvw F.P. Cmpt-Lith Tuff	25	325	335				
189		56·0	58·0	2·0	Mvw As above	20	350	110				
A216190		58·0	60·0	2·0	Mvvw As above	38	510	138				
191		60·0	62·0	2·0	Mvvw As above	40	310	169				
192		62·0	64·0	2·0	Mvvw As above	51	360	198				
193		64·0	66·0	2·0	Mw As above	89	495	540				
194		66·0	68·1	2·1	Mvvw As above	195	490	35				
195		68·1	70·1	2·0	Tr. Sulp. F.P. Cmpt. Tuff	10	330	60				
196		70·1	78·1	2·0	Tr. Sulp. F.P. Cmpt-Lith Tuff	38	325	122				
197		78·1	73·1	1·0	Tr. Sulp. As above	212	330	239				
198		73·1	75·4	2·3	F.P. Cmpt. Tuff.	9	240	90				
199		75·4	77·4	2·0	Tr. Sulp As above	3	218	52				
A216200		77·4	79·4	2·0	As above	10	152	48				
201		79·4	81·4	2·0	Tr. Sulp. As above	5	160	48				
202		81·4	83·4	2·0	As above	3	180	59				
203		83·4	85·4	2·0	As above	< 2	198	51				

ASSAYS BY & DATE
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COMMENTS

Target zone 160m – 240m.
assayed < 0.5% Cu. Pb or Zn.

PREPARED BY R.J.D.
CHECKED BY
SHEET 1 OF 4
DRAWING No.
REFER ALSO
FILE No.

Form 1

599120

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT 119 JUKES - DARWIN

HOLE No. Z142002

COORDINATES

LOCATION

ANGLE FROM HORIZONTAL

R.L. GROUND

DIRECTION

SAMPLE No.	Type	METRES From — To	Width	DESCRIPTION	ASSAYS: A.A.S. (A) CLASSICAL [C] FIRE [F] OTHER [O] Cu	Zn	Pb	Au	Ag
A216204		85·4 - 87·4	2·0	Tr. Sulp. As Above	9	205	62		
205		87·4 - 89·4	2·0	As above	5	152	45		
206		89·4 - 91·4	2·0	Tr. Sulp. As above	8	150	41		
207		91·4 - 93·4	2·0	Tr. Sulp. As above	8	141	48		
208		93·4 - 95·4	2·0	Tr. Sulp. As above	<2	148	75		
209		95·4 - 97·4	2·0	Tr. Sulp. As above	5	140	122		
A216210		97·4 - 98·9	1·5	Tr. Sulp. As above	31	160	210		
211		98·9 - 100·9	2·0	Tr. Sulp. F.P.(CH) Crypt. Tuff.	69	840	150		
212		100·9 - 102·9	2·0	Tr. Sulp. As above	215	1500	800		
213		102·9 - 103·9	1·0	Tr. Sulp. As above	69	980	545		
214		103·9 - 105·9	2·0	Mw F.P.(CH). Crypt-Lith Tuff.	1175	360	960	<0·5	15·8
215		105·9 - 107·9	2·0	Mw As above	480	335	235	<0·5	5·9
216		107·9 - 109·9	2·0	Mvvw As above	1650	122	130	<0·5	7·1
217		109·9 - 111·9	2·0	Mvvw As above	32	205	50	<0·5	1·2
218		111·9 - 113·9	2·0	Mvvw As above	50	72	49	<0·5	1·1
219		113·9 - 115·9	2·0	Mvvw As above	20	75	51		
A216220		115·9 - 117·9	2·0	Mvvw As above	58	70	49		
221		117·9 - 119·9	2·0	Mvvw As above	42	535	195		
222		119·9 - 121·9	2·0	Mvvw As above	35	95	59		
223		121·9 - 123·9	2·0	Mvvw As above	15	52	42		
224		123·9 - 125·9	2·0	Mvvw As above	49	38	40		
225		125·9 - 127·9	2·0	Tr. Sulp. As above	51	30	38		
226		127·9 - 129·9	2·0	Mvvw As above	100	31	35		
227		129·9 - 131·9	2·0	Tr. Sulp. As above	45	38	40		
228		131·9 - 134·0	2·1	Mvvw As above	69	40	49		
229		134·0 - 136·0	2·0	Mvvw F.P.(CH) Crypt-Lith Tuff.	22	51	22		
A216230		136·0 - 138·0	2·0	Mvw As above	55	41	18		
231		138·0 - 140·0	2·0	Mw As above	50	65	19		
232		140·0 - 141·0	1·0	Mvw As above	41	83	20		
233		141·0 - 143·0	1·0	Mvvw As above	950	58	29		
234		142·0 - 144·0	2·0	Mvvw As above	59	49	17		
235		144·0 - 146·0	2·0	Mvvw As above	50	39	19		
236		146·0 - 148·0	2·0	Mvvw As above	20	47	18		
237		148·0 - 150·0	2·0	Mvvw As above	12	62	17		
238		150·0 - 152·0	2·0	Mvvw As above	23	68	25		
239		152·0 - 154·0	2·0	Mvvw As above	45	65	18		
A216240		154·0 - 156·0	2·0	Mvvw As above	45	55	20		
241		156·0 - 158·0	2·0	Mvw As above	330	70	20		
242		158·0 - 160·0	2·0	Mvvw As above	375	60	19		
243		160·0 - 162·4	2·4	Mvvw As above	65	50	19		
244		162·4 - 164·4	2·0	Tr. Sulp. GEN. RHY LAVA	12	21	15		
245		164·4 - 166·4	2·0	Tr. Sulp As above	9	25	15		
246		166·4 - 168·4	2·0	Mvvw As above	12	20	15		
247		168·4 - 170·4	2·0	Mvvw As above	15	21	15		

ASSAYS BY & DATE 1. 1. 2. 2. 3. 3.

COMMENTS

PREPARED BY R.J.D.
CHECKED BY
SHEET 2 OF 4
DRAWING No.
REFER ALSO
FILE No.

Form 1

599121

129

INTERNATIONAL NICKEL AUSTRALIA LIMITED

HOLE No. Z142002

COORDINATES

PROJECT JUKES-DARWIN

R.L. GROUND

LOCATION

ANGLE FROM HORIZONTAL DIRECTION

ASSAYS: A.A.S. (N) CLASSICAL (C) FIRE (F) OTHER (O)

SAMPLE No.	Type	METRES From — To	Width	DESCRIPTION	Cu	Zn	Pb
A216248		170·4 - 172·4	2·0	Mw As Above	12	18	15
249		172·4 - 174·4	2·0	Mvvw as above	10	19	13
A216250		174·4 - 176·4	2·0	Mvw as above	10	22	10
251		176·4 - 178·4	2·0	Mvvw as above	10	20	10
252		178·4 - 180·4	2·0	Mvvw as above	370	40	18
253		180·4 - 182·4	2·0	Mvw as above	15	19	15
254		182·4 - 184·4	2·0	Mvvw as above	15	20	16
255		184·4 - 186·4	2·0	Mvvw as above	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
256		186·4 - 188·4	2·0	Mvvw as above	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
257		188·4 - 190·4	2·0	Tr. Sulp. as above			
258		190·4 - 192·4	2·0	Tr. Sulp. as above			
259		192·4 - 194·4	2·0	Tr. Sulp. as above			
A216260		194·4 - 196·4	2·0	Tr. Sulp. as above			
261		196·4 - 198·4	2·0	Tr. Sulp. as above			
262		198·4 - 200·4	2·0	Tr. Sulp. as above			
263		200·4 - 202·4	2·0	Tr. Sulp. as above			
264		202·4 - 204·4	2·0	Tr. Sulp. as above			
265		204·4 - 206·4	2·0	Tr. Sulp. as above			
266		206·4 - 208·4	2·0	Tr. Sulp. as above			
267		208·4 - 210·4	2·0	Tr. Sulp. as above			
268		210·4 - 212·4	2·0	Tr. Sulp. as above			
269		212·4 - 214·4	2·0	Tr. Sulp. as above			
A216270		214·4 - 216·4	2·0	Tr. Sulp. as above			
271		216·4 - 218·4	2·0	Tr. Sulp. as above			
272		218·4 - 220·4	2·0	Tr. Sulp. as above			
273		220·4 - 222·4	2·0	Tr. Sulp. as above	20	21	10
274		222·4 - 224·4	2·0	Tr. Sulp. as above	29	19	10
275		224·4 - 226·4	2·0	Tr. Sulp. as above	10	20	10
276		226·4 - 228·4	2·0	Tr. Sulp. as above	10	21	10
277		228·4 - 230·4	2·0	Tr. Sulp. as above	22	25	12
278		230·4 - 232·4	2·0	Tr. Sulp. as above	18	19	10
279		232·4 - 234·4	2·0	Mvvw as above	19	35	15
A216280		234·4 - 236·4	2·0	Mvvw as above	12	17	15
281		236·4 - 238·4	2·0	Tr. Sulp. as above	150	12	12
282		238·4 - 240·4	2·0	Tr. Sulp. as above	160	15	12
283		240·4 - 242·4	2·0	Tr. Sulp. as above	52	35	15
284		242·4 - 244·4	2·0	Tr. Sulp. as above	50	25	10
285		244·4 - 246·4	2·0	Tr. Sulp. as above	355	20	10
286		246·4 - 248·4	2·0	Tr. Sulp. as above	31	19	10
287		248·4 - 250·4	2·0	Tr. Sulp. as above	50	22	12
288		250·4 - 252·4	2·0	Tr. Sulp. as above	30	20	10
289		252·4 - 254·4	2·0	Tr. Sulp. as above	30	20	10
A216290		254·4 - 256·4	2·0	Mvvw as above	52	25	9
291		256·4 - 259·4	2·6	Mvvw as above	170	18	10

ASSAYS BY & DATE
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COMMENTS

PREPARED BY R.J.D.
CHECKED BY
SHEET 3 OF 4
DRAWING No.
REFER ALSO
FILE No.

Form 1

599122

121

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT JUKES - DARWIN

HOLE No. Z 142002

COORDINATES

R.L. GROUND

LOCATION

ANGLE FROM HORIZONTAL

DIRECTION

SAMPLE No.	Type	METRES From — To	Width	DESCRIPTION	ASSAYS: A.A.S. [A] CLASSICAL [C] FIRE [F] OTHER [O] Cu	Pb	Zn	Au	Ag
A216292		258·4 - 260·4	2·0	Mvvw as above	28	8	28		
293		260·4 - 262·4	2·0	MVVW as above	205	10	28		
294		262·4 - 264·4	2·0	Mvvw as above	110	10	29	<0·5	0·9
295		264·4 - 266·4	2·0	Trace Sulp. as above	210	16	36	<0·5	1·0
296		266·4 - 268·4	2·0	Tr. Sulp. as above	130	51	40	<0·5	0·9
297		268·4 - 270·4	2·0	Tr. Sulp. as above	1600	16	40	<0·5	1·0
298		270·4 - 272·4	2·0	Tr. Sulp. as above	200	17	33	<0·5	0·8
299		272·4 - 274·4	2·0	Tr. Sulp. as above	405	18	36	<0·5	1·0
A216300		274·4 - 276·4	2·0	Mvvw as above	440	90	51	<0·5	1·5
301		276·4 - 278·4	2·0	Mvvw as above	5100	19	40	<0·5	2·5
302		278·4 - 280·4	2·0	Mvvw as above	1450	33	30	<0·5	1·8
303		280·4 - 282·4	2·0	Mvvw as above	2100	20	30	<0·5	1·1
304		282·4 - 284·4	2·0	Tr. Sulp. as above	1000	20	40	<0·5	1·0
305		284·4 - 286·4	2·0	Tr. Sulp as above	230	11	59	<0·5	1·0
306		286·4 - 288·4	2·0	as above	630	15	49	<0·5	1·0
307		288·4 - 290·4	2·0	Tr. Sulp as above	1600	19	48	<0·5	1·2
308		290·4 - 292·4	2·0	Tr. Sulp as above	2700	20	49	<0·5	3·2
309		292·4 - 294·4	2·0	Tr. Sulp as above					
A216310		294·4 - 296·4	2·0	Tr. Sulp as above					
311		296·4 - 298·4	2·0	Mvvw as above					
312		298·4 - 300·4	2·0	Tr. Sulp as above					
313		300·4 - 302·4	2·0	Tr. Sulp as above					
314		302·4 - 304·4	2·0	Tr. Sulp as above					
315		304·4 - 306·4	2·0	Tr. Sulp as above					
316		306·4 - 308·4	2·0	Tr. Sulp as above					
317		308·4 - 310·4	2·0	Tr. Sulp as above					
318		310·4 - 312·4	2·0	Tr. Sulp as above					
319		312·4 - 314·4	2·0	as above					
A216320		314·4 - 316·4	2·0	as above					
321		316·4 - 318·4	2·0	Tr. Sulp. as above					
322		318·4 - 320·4	2·0	Tr. Sulp as above					
323		320·4 - 322·4	2·0	Tr. Sulp as above					
324		322·4 - 324·4	2·0	Tr. Sulp as above	3050	100	550		
325		324·4 - 326·4	2·0	as above					
326		326·4 - 328·4	2·0	as above					
A216327		328·4 - 331·3	2·9	as above					
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		-							
		-							
		-							
		-							
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ASSAYS BY & DATE 1.
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COMMENTS

PREPARED BY R. S. D.
CHECKED BY
SHEET 4 OF 4
DRAWING No.
REFER ALSO
FILE No.

Form 1

599123 TABLE 15

122

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES-DARWIN LOG HOLE No. Z142003

COORDINATES 22+30N, 11+25E

LOCATION JUKES PTY AREA

ANGLE FROM HORIZONTAL 60° DIRECTION 299° magE

R.L. GROUND

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE (graphic log) LENGTH	SAMPLE No.
			0	COLLAR		
			0 / 2.0	NO SAMPLE RETURN	2.0	
			2.0 / 7.0	FLANKING PYROCLASTICS (F.P.) 'LAVA', with distinct zoned feldspars up to 0.5cm in diam. Weath pale yell-red. Core broken	5.0	A 216 -330
			7.0 / 12.0	F.P. AS ABOVE, intensity of weathering decreasing light grey col. & light green chlorite pseudomorphs after feldspar. occasional fracture infilling of dk. acc. crosscut. qtz-dk veinlets <1cm thick.	5.0	-331
			12.0 / 17.0	F.P. AS ABOVE, weath, core broken.	5.0	-332
			17.0 / 22.0	F.P. AS ABOVE, less weath, locally intense brecciation & dk. veining from 21-22M. Qtz-dk. vein 2cm thick @ 20.9M Qtz // 65°	5.0	-333
			22.0 / 27.0	F.P. AS ABOVE, slightly weath over first 2M.	5.0	-334
			27.0 / 32.0	F.P. AS ABOVE, Tourmaline (gas) brecciation and dk veining, over 0.5M @ 29.0M, core broken and weath from 31.0-32.0M (Core size changes HQ to NQ @ 30.5M)	5.0	-335

DRILL No.
TYPE Longyear 38

DRILLER
COMMENCED 21-12-73
COMPLETED 8-1-74

COMMENTS

TARGET Down-dip extension of mineralization in No-3 adit 150 m. below surface - and IP anomaly 30 m. northward.

RESULT

WATER TABLE 0.68% Cu over 4m.

LOGGED BY R.J.D
DRAWN BY
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SHEET 1 OF 16
DRAWING No.
REFER ALSO

FORM 1

599124

123

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA JUKES-DARWIN LOG HOLE No. Z 142003 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Sample Log LENGTH	SAMPLE No.
			32.0 / 37.0	F.P. AS ABOVE, col varies from pink to pale green, foliation is locally intense, some annealing of breccia frag < 5cms is apparent (gas streaming?) Trace qtz-chl vein @ 35.0M, 0.05M thick	5.0	A 216 - 336
			37.0 / 42.0	F.P. AS ABOVE, passes into last 3M of a light pink massive 'lava' ± patchy pheno. chloritised feldspars.	5.0	- 337
			42.0 / 47.9	F.P. AS ABOVE, Foliation // 50°-60°.	5.9	- 338
			47.9 / 52.9	F.P. AS ABOVE, Qtz-chl vein @ 47.9M 5cms thick Qtz // 35°	5.0	- 339
			52.9 / 57.0	F.P. AS ABOVE	4.1	- 340
			57.0 / 58.0	F.P. LAVA (PROPYLITIZED?) Medium to crg. rk consisting of diffuse white quartz, pink pt- feldspar and chl. plag. Has app of dyke rock of granitic text. sharp but irreg contacts ? surrounding volc.	1.0	- 341
			58.0 / 60.4	F.P. CRYSTAL TUFF, fg. grey to green massive often cherty, chloritic; slightly brecciated	2.4	- 342
			60.4 / 62.4	F.P. 'LAVA', porphyritic pink lava similar to above unit between 2.0-57.0M Trace Sulphides Py ≤ 1%	2.0	- 343

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

TARGET

RESULT

WATER TABLE

COMMENTS

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SHEET 2 OF 16
DRAWING No.
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FORM 1

599125

124

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA JUKES-DARWIN LOG HOLE No. Z142003 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Core Rec	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Core Sample Len (UNITS)	SAMPLE No.
			62.4	F.P. AS ABOVE		A 216
			/	Foliation // 65° and 30°	2.0	-344
			64.4			
			64.4	F.P. AS ABOVE, colour varies from pink to pale green		
			/		2.0	-345
			66.4			
			66.4	F.P. AS ABOVE, phenocrysts becoming slightly less distinct		
			/		2.8	-346
			69.2			
			69.2	F.P. Trace Sulphides CRYSTAL TUFF, arenaceous, pale pink, cherty tex., Py ≤ 1% occ. phenocrysts of qtz and dk felds. Qtz-chl		
			/	veins up to 1 cm. thick common.		
			71.2	Qtz // 55° Foliation // 25°, 45°		
					2.0	-347
			71.2	F.P. Trace Sulphides AS ABOVE, increasing psammitic text Py ≤ 1%		
			/	towards the base.	1.9	-348
			73.1			
			73.1	F.P. CRYSTAL TUFF, dk. grey, f.g., psammitic		
			/	stoping at the top of unit (caused by emplace of overlying unit). Contact is sharp but irreg		
			75.1	could have been affected by local cooling		
				Foliation // 30°, 40°, 50°		
					2.0	-349

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY R.S.D DRAWN BY CHECKED BY SHEET 3 OF 16 DRAWING No. REFER ALSO

FORM 1

599126

125

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA LOG HOLE No. Z142003 COORDINATES
LOCATION JUKES-DARWIN R.L. GROUND
ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION — ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. ; MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
			75.1 / 77.1	F.P. Trace Sulphide AS ABOVE, c.g. diffuse areas up to 10x10 cms Py < 1% of altered (propylitized) crystal tuff	2.0	A 216 - 350
			77.1 / 79.1	F.P. AS ABOVE, some development of diffuse areas of quartz as a result of alt. spotty devel. of chl. after feld., becoming more prom.	2.0	- 351
			79.1 / 81.1	F.P. AS ABOVE	2.0	- 352
			81.1 / 83.1	F.P. AS ABOVE, rounded frag. of rhyolite 3x2 cms @ 82.6 M Foliation // 65	2.0	- 353
			83.1 / 85.1	F.P AS ABOVE, alteration more intense & minor associated app. & intense chlorite microveining.	2.0	- 354
			85.1 / 87.1	F.P. AS ABOVE, col. change to pinkish & imp devel of klinite pseudomorphs. Access qtz-chl veins 0.5 cm thick, width & limonite dip along joints @ 86.9 - 87.1M Qtz // 20° Foliation // 30°-35°, 40°	2.0	- 355
			87.1 / 88.2	F.P. AS ABOVE, imp diffuse contact & underlying unit	1.1	- 356

DRILL No.
TYPE
DRILLER
COMMENCED
COMPLETED

COMMENTS
TARGET
RESULT
WATER TABLE

LOGGED BY R.J.D
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SHEET 4 OF 16
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FORM 1

599127

126

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES-DARWIN LOG HOLE No. Z142003 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION: ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Sample Length	SAMPLE No.
			88.2 / 90.2	F.P. CRYSTAL TUFF, very fine grained almost cherty texture, pale greenish pink colr, strongly fractured	2.0	A 216 -357
			90.2 / 92.2	F.P. AS ABOVE, fragmented, occas autobrecciation, ving qty veining 0.5-1cm thick. Trace Sulphides Py <1% Cpy, Gal << 1% in Qty veins.	2.0	-358
			92.2 / 94.2	F.P. AS ABOVE Qty // 50° and 60° Trace Sulphides Py < 1% Cpy, Spal, Gal << 1% in Qty @ 92.8M	2.0	-359
			94.2 / 96.2	F.P. AS ABOVE, darker green in colour, slightly more saccharoidal texture and less fract. Trace Sulphides Py < 1% Cpy << 1% @ 95.1M	2.0	-360
			96.2 / 98.7	F.P. AS ABOVE, becoming increasingly altered and leached, diffuse areas of pinkish mat. set in a dk. green chl. matrix (inc. propylitization?) Trace Sulphides Py << 1%	2.5	-361
			98.7 / 99.8	F.P. CRYSTAL TUFF, pinkish white to pale green altered and sheared, e.g. - propylitized? Core broken, slightly weath between 98.9-100.1M	1.1	-362
			99.8 / 101.8	F.P. CRYSTAL TUFF, dk green, similar to mat. in samples A216349-356. Slightly weath and core brok. grad. between 100.7-102.0M	2.0	-363
			101.8 / 103.1	F.P. AS ABOVE Trace Sulphides Py << 1%	2.0	-364

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY R.S.D
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SHEET 5 OF 16
DRAWING No.
REFER ALSO

FORM 1

599128

127

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA LOG HOLE No. E142003 COORDINATES

LOCATION TUKES-DARWIN R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic log LENGTH	SAMPLE No.
			103·1	F.P.		A 216
			/	AS ABOVE, becoming increasingly pale green towards the base.	0·7	-365
			103·8			
			103·8	F.P. Trace Sulphides		
			/	CRYSTAL TUFF, med gr. quartz rich fractured Py << 1%		
			105·7	ĉ thin anastomising veins of py along fractures	1·9	-366
			105·7	F.P. MVVW		
			/	AS ABOVE, spotty chlorite development after plag Py 0-3% patic @		
			107·7	between 106·8 & 107·6M. 107·3-107·4M.	2·0	-367
				Foliation // 55°-50°		
			107·7	F.P. MVVW		
			/	AS ABOVE, patic prominent anastomising Py 0-3%, best @		
			108·7	veins of pyrite. 108·5M, MW ĉ 10-20%	1·0	-368
				Py over 0·1M.		
			108·7	F.P. Trace Sulphides		
			/	CRYSTAL TUFF, fg. dk green, slightly Py << 1%		
			110·7	chloritised, very alt app.	2·0	-369
			110·7	F.P. Trace Sulphides		
			/	AS ABOVE, paler white green in colour		
			112·7	Foliation // 50° and 30°	2·0	-370
			112·7	F.P. MVVW		
			/	AS ABOVE, chlorite developed as diffuse Py 0-3% (patic assoc.		
			114·7	blotchy patches 0·5-1cm in a green white ĉ chlorite development)	2·0	-371
				f.g. groundmass.		
				Foliation // 50°, 40°		
			114·7	F.P. MVVW		
			/	AS ABOVE Py 0-3% fg. disc and		
			116·7	irreg veinlets	2·0	-372

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

TARGET RESULT WATER TABLE

COMMENTS

LOGGED BY R.J.D DRAWN BY CHECKED BY SHEET 6 OF 16 DRAWING No. REFER ALSO

FORM 1

599129

INTERNATIONAL NICKEL AUSTRALIA LIMITED

128

PROJECT TASMANIA JUKES-DARWIN LOG HOLE No. Z142003 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / To METRES	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphite Log LENGTH	SAMPLE No.
			116·7 / 118·7	F.P. Trace Sulphides Py < 1% AS ABOVE, passes down into a dark green pink crystal tuff ± occ. phenocrysts of quartz and chloritised feldspar. Last 0·1M is slightly weath and limonite stained. Foliation // 25°, 60°	2·0	A 216 -373
			118·7 / 120·7	F.P. AS ABOVE, slightly weath over 0·1M @ 120·6M	2·0	-374
			120·7 / 122·7	F.P. AS ABOVE, small irregular dk green veins of chlorite present.	2·0	-375
			122·7 / 124·7	F.P. AS ABOVE, chlorite veining and brecciation increasing towards the base, last 0·4M intensely brecciated and chloritised.	2·0	-376
			124·7 / 126·7	F.P. CRYSTAL TUFF (pass a continuation of the above unit), brecciated and chloritised to give qtz angular to subangular fragments of crystal tuff 0·1 - 10cms set in a f.g. chloritic matrix. 0·2M broken grd @ 125·6M (also slightly weath) Foliation // 35°	2·0	-377
			126·7 / 128·7	F.P. AS ABOVE, amount of chlorite matrix compared to brecciated fragments smaller	2·0	-378

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY R.T.D DRAWN BY CHECKED BY SHEET 7 OF 16 DRAWING No. REFER ALSO

FORM 1

599130

129

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA JUKES-DARWIN LOG HOLE No. 7142003 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	~~FOOTAGE~~ From METRES To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic log LENGTHS	SAMPLE No.
			128·7 / 130·7	F.P. AS ABOVE, con very weath and limonite at from 129·5 – 130·7 M	2·0	A 216 – 379
			130·7 / 132·7	F.P. CRYSTAL TUFF, med. gr. similar to above Ê only slight brecciation and infilling of matrix by chlorite.	2·0	– 380
			132·7 / 134·7	F.P. Trace AS ABOVE, prominant stroking (primary) Py << 1% caused by changes in the grain size, resembles flow. Foliation // 30°, 55°	2·0	– 381
			134·7 / 136·7	F. P. AS ABOVE, chlorite replacement of orig. groundmass patic intense c.f. above Core limonite at one most of the 2M, weath from 136·5 – 136·7M.	2·0	– 382
			136·7 / 139·2	F.P. Trace Sulp AS ABOVE, partly chloritised, sheared and Py < 1% very weathered 1st 0·2M. Last 0·4M is light brown fault pug. (JUKES PTY. FAULT) Apparent dip of the fault is 70°-80°	2·5	– 383
			139·2 / 141·2	FLANKING: PYROCLASTICS (CHLOR) CHLORITISED Trace Sulphides CRYSTAL LITHIC TUFF, fractured dark green, contains Cpy < 1% abundant open spaces, suggesting leaching. Gal < 1%	2·0	– 384
			141·2 / 143·2	FP (CHLOR) Mvvw AS ABOVE Cpy 0-3% (patchy) <1% Py	2·0	– 385
			143·2 / 145·2	FP (CHLOR) Mvvw AS ABOVE, fragments rounded to angular Cpy 0-3% 1-3 cm, open spaces becoming less abundant <1% Py Foliation // 25°, 60°	2·0	– 386

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

COMMENTS

TARGET

RESULT

WATER TABLE

LOGGED BY R.S.D
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SHEET 9 OF 16
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FORM 1

599131

139

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA
LOCATION JUKES-DARWIN
LOG HOLE No. Z142003
COORDINATES
R.L. GROUND
ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From METRES To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc.	MINERALISATION	SAMPLE LENGTH	SAMPLE No.
			145.2 / 148.0	FP (CHLOR) Becoming AS ABOVE, becoming more brecciated towards the base. Possibly some type of explosion breccia.	Trace Sulphides Cpy < 1% Py < 1%	2.8	A 216 -387
			148.0 / 150.0	FP (CHLOR) CRYSTAL LITHIC TUFF, characterised by pink to white frags. of crystal tuff 1-2 cm set in a dk. green chlor. matrix. Foliation // 45° Contact // 20°	Trace Sulphides Py < 1%	2.0	-388
			150.0 / 152.0	FP (CHLOR) AS ABOVE, matrix extremely chloritic over last 0.6M	Trace Sulphides Cpy, Py < 1% but @ 151.6M Mw over 0.1M & 10-20% banded Py	2.0	-389
			152.0 / 154.0	FP (CHLOR) AS ABOVE, rounded frags less abundant quartz phenocrysts < 0.5 mm coming in. Some small irreg veinlets of siderite.	Trace Sulphides Py < 1% Cpy < 1%	2.0	-390
			154.0 / 156.0	FP (CHLOR) CRYSTAL TUFF, red & green, characterised by abundant quartz phenocrysts (rounded to angular) slightly brecciated from 155-156M	MvW Cpy < 1%-10%, patchy @ 155.1 & 155.6M	2.0	-391
			156.0 / 158.0	FP (CHLOR) AS ABOVE	MvvW Cpy 0-3% patchy Py 1-3%	2.0	-392
			158.0 / 160.2	FP (CHLOR) AS ABOVE, & minor crystal lithic tuff.	MvW Cpy 0-5% (patchy) Py 0-1%	2.2	-393

DRILL No.
TYPE
DRILLER
COMMENCED
COMPLETED

COMMENTS
TARGET
RESULT
WATER TABLE

LOGGED BY R.J.D.
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SHEET 9 OF 16
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FORM 1

599132

131

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES-DARWIN LOG HOLE No. Z142003 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	FOOTAGE From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc.	MINERALISATION	SAMPLE Graphic Log GENESIS	SAMPLE No.
			160.2 / 161.6	FP CRYSTAL TUFF, pinkish white in colr, occ. qtz phenocrysts Contact // 25°	Trace Sulphides Cpy << 1% Py << 1%, but from 160.2 to 160.6, MVW Cpy 1-10%	1.4	A 216 - 394
			161.6 / 163.6	FP (CHLOR) CRYSTAL TUFF, pink to dark green, c haracterised by abundant avg. qtz phenocrysts <4 mm, Moditied felds. angular to subrounded.	Trace Sulphides Tcpy, Py < 1%	2.0	- 395
			163.6 / 165.6	FP (CHLOR) AS ABOVE	MVVW Cpy 0-3% patic @ 163.6M over 0.2M	2.0	- 396
			165.6 / 167.6	FP (CHLOR) AS ABOVE	Trace Sulphides Cpy << 1% Py << 1%	2.0	- 397
			167.6 / 169.6	FP (CHLOR) AS ABOVE, con recovery very poor & broken from 168.5M to 169.6M & 0.6M loss @ 169.6M	Trace Sulphides Py < 1%	2.0	- 398
			169.6 / 171.6	FP (CHLOR) AS ABOVE	MVVW Py 0-3%, as occ blebs and stringers	2.0	- 399
			171.6 / 173.6	FP (CHLOR) AS ABOVE, between 171.6 & 172.2M very broken, qtz 4 cm thick @ 173.3M Numerous smaller ring qtz-cbl. veins between 173.3 & 173.6M Foliation // 20°, 30°, 45°	Trace Sulphides Py < 1%	2.0	- 400

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

TARGET

RESULT

WATER TABLE

LOGGED BY R.J.D.
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SHEET 10 OF 16
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FORM 1

599133

132

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES-DARWIN LOG HOLE No. Z142003 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From METRES To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
			173·6 / 175·6	F P (CHLOR) Trace Sulphides AS ABOVE, persistant purplish colr, Py < 1% irreg qtz-carb veins and some tectonic brecciation. Foliation // 35° Qtz // 35°	-	
					2·0	A 216 -401
			175·6 / 177·6	F P (CHLOR) Trace Sulphides AS ABOVE, chloritation and destruction of Py < 1% orig. fabric locally intense over 0·3M @ 176·4M Foliation // 30°, 45°	2·0	-402
			177·6 / 179·6	F P (CHLOR) Trace Sulphides AS ABOVE Py < 1%	2·0	-403
			179·6 / 181·6	F P (CHLOR) Trace Sulphides AS ABOVE Cpy < 1% Py < 1%	2·0	-404
			181·6 / 183·6	F P (CHLOR) Trace Sulphides AS ABOVE, irreg intercalation of 0·2M Cpy < 1%, Py < 1% of f.g. crystal tuff @ 182·0M. blebs @ 182·0 M over 2 Cpy 1-3%	2·0	-405
			183·6 / 185·6	F P (CHLOR) Trace Sulphides AS ABOVE, broken and iron stained Cpy < 1% over 0·5M @ 185·0M (Fault?) Py < 1%	2·0	-406
			185·6 / 187·6	F P (CHLOR) Trace Sulphides AS ABOVE, variable chloritization and dest Cpy << 1% of orig fabric, some tectonic shattering and ore Py < 1% very broken. Gal << 1% @ 187·5M	2·0	-407

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

TARGET

RESULT

WATER TABLE

COMMENTS

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SHEET 11 OF 16

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FORM 1

599134

133

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT JUKES-DARWIN LOG HOLE No. Z142003 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From METRES To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc.	MINERALISATION	SAMPLE Graphic log LENGTH	SAMPLE No.
			187.6 / 189.3	FP (CHLOR) AS ABOVE, base of unit, base is irregular marked by a fine grained crystal tuff 1cm wide. Contact // 50° Foliation // 30°-35°	Trace Sulphides Py < 1%	1.7	A 216 -408
			189.3 / 191.3	FP EXPLOSION BRECCIA, irregular shaped pieces of pink rhyolite (< 5cms) set in a chloritic f.to m.g. chloritised matrix (devitrified)	Trace Sulphides Py < 1% Cpy << 1% but @ 191.1M small occ. of tenoidal cpy	2.0	-409
			191.3 / 193.3	CENTRAL CORE RHYOLITE (CCR) BRECCIA TO MASSIVE LAVA, lava pink-red with chloritised light green feldspars, breccia gradational to lava. Brittle fracturing @ 191.6M & abund. qtz-sid veinlets.	Trace Sulphides Cpy << 1% but @ 192.9M Mvvw ≥ 3-10% Cpy as veinlets assoc. & qtz-sid vns.	2.0	-410
			193.3 / 195.3	CCR AS ABOVE, more lava increasing in abundance. Foliation // 25°, 35°	Trace Sulphides occ blebs and stringers of Cpy, Py < 1%.	2.0	-411
			195.3 / 197.3	CCR AS ABOVE	Mvvw Cpy patchy 0-3% assoc ≥ qtz-sid vns & & anast veinlets of pyrite	2.0	-412
			197.3 / 199.3	CCR AS ABOVE, homogeneous massive pink cherty rhyolite	Trace Sulphides Cpy < 1% but @ 197.5 Mvvw Cpy 1-3% over 0.2M Py < 1%	2.0	-413
			199.3 / 201.3	CCR AS ABOVE, colour varies from a pale pink to a dark grey & prominent green chlor feldspars.	Mvvw Py 0-3% Cpy < 1% as stringers	2.0	-414

DRILL No.
TYPE

DRILLER
COMMENCED
COMPLETED

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WATER TABLE

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599135

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT TASMANIA JUKES-DARWIN LOG HOLE No. 2142003 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION: ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphite Log LENGTH	SAMPLE No.
			201·3 / 203·3	CCR AS ABOVE, irreg qtz-chlor veins 1-2 cms wide @ 202·8M Foliation // 55° Trace Sulphides Py < 1% Cpy << 1%	2·0	-415
			203·3 / 205·3	CCR AS ABOVE, core very broken bitween 204·8 - 204·9 M Trace Sulphides Py < 1%	2·0	-416
			205·3 / 207·3	CCR AS ABOVE Foliation // 60° Trace Sulphides Py < 1%	2·0	-417
			207·3 / 209·3	CCR AS ABOVE Trace Sulphides Py < 1% Cpy < 1% best @ 208·3M, Cpy 1% over 6·1M	2·0	-418
			209·3 / 211·3	CCR AS ABOVE Foliation // 30°-35°, 45° Trace Sulphides Py < 1%	2·0	-419
			211·3 / 213·3	CCR AS ABOVE Trace Sulphides Py < 1%	2·0	-420
			213·3 / 215·5	CCR AS ABOVE, slight tectonic brecciation. Trace Sulphides Py < 1% Cpy << 1% but from 215·3-215·5 Cpy 1%	2·2	-421
			215·5 / 217·5	CCDP (CHLOR) CRYSTAL LITHIC TUFF, lithic fragments of pink rhyolite ≤ 1 cm, occ 2 cm, angular to subrounded often ê corroded edges set in a f.g. black clastic matrix, banding produced Trace Sulphides Py < 1%		

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

TARGET

RESULT

WATER TABLE

COMMENTS

LOGGED BY R.J.D DRAWN BY CHECKED BY SHEET 13 OF 16 DRAWING No. REFER ALSO

FORM 1

599136

135

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT TUKES-DARWIN LOG HOLE No. Z142003 COORDINATES

LOCATION R.L. GROUND

ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	From / METRES / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	SAMPLE Graphic Log LENGTH	SAMPLE No.
				by bands of f.g. chlorite 2-3cms thick, occ. qtz phenocrysts from 217.3-217.5 M. Banding // 55° Foliation // 40°-45°	2.0	A 216 -422
			217.5 / 219.5	CCR (CHLOR) AS ABOVE, slight decrease in size of fragments to ave < 0.5 cms. — Trace Sulphides Cpy << 1% Py < 1%	2.0	-423
			219.5 / 221.7	CCP (CHLOR) AS ABOVE, occasional pink rhyolite frags up to 5cms. Fragments less corroded than before. — Trace Sulphides Py < 1%	2.2	-424
			221.7 / 223.7	CCR (CHLOR) MASSIVE LAVA, pink to grey in colour — Trace Sulphides Py < 1% Cpy << 1%	2.0	-425
			223.7 / 224.5	CCR AS ABOVE	0.8	-426
				END OF HOLE		

DRILL No. TYPE

DRILLER COMMENCED COMPLETED

TARGET

RESULT

WATER TABLE

COMMENTS

LOGGED BY R.J.D.
DRAWN BY
CHECKED BY
SHEET 14 OF 16
DRAWING No.
REFER ALSO

FORM 1

136

599137

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

PROJECT

LOCATION JUNES - DARWIN / JUNES - PTY AREA.

LOG HOLE No. Z 14 2003

COORDINATES 22+30 N , 14+25 E

R.L. GROUND

ANGLE FROM HORIZONTAL 60° DIRECTION 299° mgtc

Casing	Scale Depth	Rec Run	FOOTAGE From	FOOTAGE To	DESCRIPTION: ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Graphic Log	SAMPLE No.
					LOG SUMMARY		
				0	COLLAR		
			2.0	69.2	FLANKING PYROCLASTICS (FP) - LAVA		
			69.2	139.2	F.P. - CRYSTAL TUFF Mvvw : Py (105.7 - 116.7 m) (JUNES PTY FAULT @ 138.8 - 139.2)		
			139.2	154.0	F.P. - CRYSTAL-LITHIC TUFF, CHLORITISED. Mvvw : Cpy, Py		
			154.0	189.3	F.P. - CRYSTAL TUFF, CHLORITISED Mvvw - Mvw : Cpy, Py (154.0 - 161.6 m)		
			189.3	191.3	F.P. - EXPLOSION BRECCIA		
			191.3	215.5	CENTRAL CORE RHYOLITE (CCR) - LAVA Mvvw : Py, Trace Cpy.		
			215.5	221.7	CENTRAL CORE PYROCLASTICS (CCP) - CRYSTAL-LITHIC TUFF, CHLORITISED.		
			221.7	224.5	CCR - LAVAS		
				224.5	END OF HOLE		1
					CONT'D OVERLEAF		

DRILL No.
TYPE Long year 38

DRILLER
COMMENCED 21·12·73
COMPLETED 8·1·73.

COMMENTS

TARGET Down dip extension of mineralisation in No 3 Adit. -150 m. below surface - 2 IP anomaly 30 m. northward.

RESULT

WATER TABLE 0·68 %. Ca over 4 m.

LOGGED BY RJD
DRAWN BY
CHECKED BY
SHEET 15 OF 16
DRAWING No.
REFER ALSO

FORM 1

137

599138

INTERNATIONAL NICKEL AUSTRALIA LIMITED

PROJECT
LOCATION
LOG HOLE No. Z142003
COORDINATES
R.L. GROUND
ANGLE FROM HORIZONTAL DIRECTION

Casing	Scale Depth	Rec / Run	FOOTAGE From / To	DESCRIPTION ROCK TYPE, Components, colour, grain size, weathering, alteration, etc. : MINERALISATION	Graphic Log	SAMPLE No.
				LOG SUMMARY CONTD' p2.		
				PATARI TESTS		
				Bearing (mgts) Dip		
				30.48 295° 59°		
				61.00 234° 58°		
				91.40 324° 66°		
				152.40 293° 43°		
				182.90 NO READING		
				213.40 200° 38°		
				HQ RODS TO 30.48		
				NQ RODS TO 109.7		
				BQ RODS TO 224.5		
				CASING LEFT IN HOLE NIL		
				RODS LEFT IN HOLE NIL		

DRILL No. Longyear 38
TYPE
DRILLER
COMMENCED 21-12-73
COMPLETED 8-1-74

COMMENTS
TARGET
RESULT
WATER TABLE

LOGGED BY R.T.D
DRAWN BY
CHECKED BY
SHEET 16 OF 16
DRAWING No.
REFER ALSO

FORM 1

138

599139

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

HOLE No. 214-2003

COORDINATES 22+30N, 1+25E

PROJECT JUKES - DARWIN

R.L. GROUND

LOCATION JUKES PTY AREA

ANGLE FROM HORIZONTAL 60° DIRECTION 299° magCE

SAMPLE No.	Type	From — To (METRES)	Width	DESCRIPTION	ASSAYS: A.A.S. [A] CLASSICAL [C] FIRE [F] OTHER [O] Cu	Zn	Pb	Au	Ag		
A216330		2·0 - 7·0	5·0	F.P. Lava.							
331		7·0 - 12·0	5·0	AS ABOVE							
332		12·0 - 17·0	5·0	AS ABOVE							
333		17·0 - 22·0	5·0	AS ABOVE							
334		22·0 - 27·0	5·0	AS ABOVE							
335		27·0 - 32·0	5·0	AS ABOVE							
336		32·0 - 37·0	5·0	AS ABOVE							
337		37·0 - 42·0	5·0	AS ABOVE							
338		42·0 - 47·9	5·9	AS ABOVE							
339		47·9 - 52·9	5·0	AS ABOVE							
A216340		52·9 - 57·0	4·1	AS ABOVE							
341		57·0 - 58·0	1·0	AS ABOVE							
342		58·0 - 60·4	2·4	AS ABOVE							
343		60·4 - 62·4	2·0	Tr. Sulp. AS ABOVE							
344		62·4 - 64·4	2·0	AS ABOVE							
345		64·4 - 66·4	2·0	AS ABOVE							
346		66·4 - 69·2	2·8	AS ABOVE							
347		69·2 - 71·2	2·0	Tr. Sulp. F.P. Crystal Tuff							
348		71·2 - 73·1	1·9	Tr. Sulp. AS ABOVE							
349		73·1 - 75·1	2·0	AS ABOVE							
A216350		75·1 - 77·1	2·0	Tr. Sulp AS ABOVE							
351		77·1 - 79·1	2·0	AS ABOVE							
352		79·1 - 81·1	2·0	AS ABOVE							
353		81·1 - 83·1	2·0	AS ABOVE							
354		83·1 - 85·1	2·0	AS ABOVE							
355		85·1 - 87·1	2·0	AS ABOVE							
356		87·1 - 88·2	1·1	AS ABOVE							
357		88·2 - 90·2	2·0	AS ABOVE							
358		90·2 - 92·2	2·0	Tr. Sulp AS ABOVE	93	195	175				
359		92·2 - 94·2	2·0	Tr. Sulp AS ABOVE	200	1220	160				
216360		94·2 - 96·2	2·0	Tr. Sulp AS ABOVE	100	1660	235				
361		96·2 - 98·7	2·5	Tr. Sulp AS ABOVE	88	2900	230				
362		98·7 - 99·8	1·1	AS ABOVE	130						
363		99·8 - 101·8	2·0	AS ABOVE	PE						
364		101·8 - 103·1	2·0	Tr. Sulp AS ABOVE							
365		103·1 - 103·8	0·7	AS ABOVE							
366		103·8 - 105·7	1·9	Tr Sulp AS ABOVE	130	145	430				
367		105·7 - 107·7	2·0	Mvvw AS ABOVE	148	140	87				
368		107·7 - 109·7	1·0	MVVW AS ABOVE	165	1400	190				
369		109·7 - 110·7	2·0	Tr. Sulp AS ABOVE							
A216370		110·7 - 112·7	2·0	Tr. Sulp AS ABOVE							
371		112·7 - 114·7	2·0	MVVW AS ABOVE	5	15	20				
372		114·7 - 116·7	2·0	MVVW AS ABOVE	8	18	18				
373		116·7 - 118·7	2·0	Tr Sulp AS ABOVE							

ASSAYS BY & DATE 1.. 1.. 2.. 2.. 3.. 3..

COMMENTS

Greatest Cu values - 0·68% Cu
141·2 - 145·2 m.

PREPARED BY R.S.D
CHECKED BY
SHEET 1 OF 3
DRAWING No.
REFER ALSO
FILE No.

FORM 2

599140

139

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

HOLE No. Z142003

COORDINATES

PROJECT JUKES-DARWIN

R.L. GROUND

LOCATION JUKES-PTY AREA

ANGLE FROM HORIZONTAL

DIRECTION

SAMPLE No.	Type	From — To	Width	DESCRIPTION	ASSAYS: A.A.S. [A] CLASSICAL [C] FIRE [F] OTHER [O] Cu	Zn	Pb	Au	Ag
A216374		118·7 - 120·7	2·0	AS ABOVE					
375		120·7 - 122·7	2·0	AS ABOVE					
376		122·7 - 124·7	2·0	AS ABOVE					
377		124·7 - 126·7	2·0	AS ABOVE					
378		126·7 - 128·7	2·0	AS ABOVE					
379		128·7 - 130·7	2·0	AS ABOVE					
A216380		130·7 - 132·7	2·0	AS ABOVE					
381		132·7 - 134·7	2·0	Tr. Sulp AS ABOVE					
382		134·7 - 136·7	2·0	AS ABOVE					
383		136·7 - 138·2	2·5	Tr Sulp AS ABOVE					
384		139·2 - 141·2	2·0	Tr Sulp CCR(CH) Crystal Lithic Tuff	4050	255	750	<0·5	3·0
385		141·2 - 143·2	2·0	Mvvw AS ABOVE	6500	172	47	<0·5	2·4
386		143·2 - 145·2	2·0	Mvvw AS ABOVE	7200	153	30	<0·5	2·8
387		145·2 - 148·0	2·8	Tr Sulp AS ABOVE	1120	115	18	<0·5	1·1
388		148·0 - 150·0	2·0	Tr Sulp AS ABOVE	50	122	15	<0·5	0·5
389		150·0 - 152·0	2·0	Tr Sulp AS ABOVE	160	270	20	<0·5	0·9
A216390		152·0 - 154·0	2·0	Tr Sulp AS ABOVE	1100	218	32	<0·5	1·5
391		154·0 - 156·0	2·0	Mvvw CCR(CH) crystal Tuff	2550	180	160	<0·5	3·0
392		156·0 - 158·0	2·0	Mvvw AS ABOVE	630	160	35	<0·5	1·1
393		158·0 - 160·2	2·2	Mvvw AS ABOVE	710	225	22	<0·5	1·1
394		160·2 - 161·6	1·4	Tr Sulp AS ABOVE	1100	90	30	<0·5	2·7
395		161·6 - 163·6	2·0	Tr Sulp AS ABOVE	890	150	20	<0·5	1·1
396		163·6 - 165·6	2·0	Mvvw AS ABOVE	540	89	21	<0·5	1·0
397		165·6 - 167·6	2·0	Tr Sulp AS ABOVE	160	79	19	<0·5	0·9
398		167·6 - 169·6	2·0	Tr. Sulp AS ABOVE	209	97	29	<0·5	0·9
399		169·6 - 171·6	2·0	Mvvw AS ABOVE	800	150	40	<0·5	1·3
A216400		171·6 - 173·6	2·0	Tr Sulp AS ABOVE	260	110	25	<0·5	1·0
401		173·6 - 175·6	2·0	Tr Sulp AS ABOVE	20	60	15	<0·5	0·6
402		175·6 - 177·6	2·0	Tr. Sulp AS ABOVE	22	88	12	<0·5	0·5
403		177·6 - 179·6	2·0	Tr. Sulp AS ABOVE	25	69	15	<0·5	0·8
404		179·6 - 181·6	2·0	Tr Sulp AS ABOVE	245	112	15	<0·5	1·0
405		181·6 - 183·6	2·0	Tr Sulp AS ABOVE	1980	95	25	<0·5	1·9
406		183·6 - 185·6	2·0	Tr Sulp AS ABOVE	280	68	20	<0·5	0·8
407		185·6 - 187·6	2·0	Tr Sulp AS ABOVE	155	95	18	<0·5	0·8
408		187·6 - 189·3	1·7	Tr Sulp AS ABOVE	70	80	15	<0·5	0·5
409		189·3 - 191·3	2·0	Tr Sulp CCR(CCR BRECCIA	455	72	25	<0·5	1·0
A216410		191·3 - 193·3	2·0	Tr Sulp CCR LAVA	300	65	15	<0·5	0·9
411		193·3 - 195·3	2·0	Tr Sulp AS ABOVE	275	68	18	<0·5	1·0
412		195·3 - 197·3	2·0	Mvvw AS ABOVE	1810	80	28	<0·5	1·5
413		197·3 - 199·3	2·0	Tr Sulp AS ABOVE	1200	93	38	<0·5	1·0
414		199·3 - 201·3	2·0	Mvvw AS ABOVE	1110	135	45	<0·5	1·5
415		201·3 - 203·3	2·0	Tr. Sulp AS ABOVE	355	99	42	<0·5	1·0
416		203·3 - 205·3	2·0	Tr Sulp AS ABOVE	48	88	12	<0·5	0·9
417		205·3 - 207·3	2·0	Tr. Sulp AS ABOVE	62	90	15	<0·5	0·7

ASSAYS BY & DATE 1.
1.
2.
2.
3.
3.

COMMENTS

PREPARED BY R.J.D.
CHECKED BY
SHEET 2 OF 3
DRAWING No.
REFER ALSO
FILE No.

Form 1

599141

140

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

HOLE No. 7142003

COORDINATES

PROJECT JUKES - DARWIN

R.L. GROUND

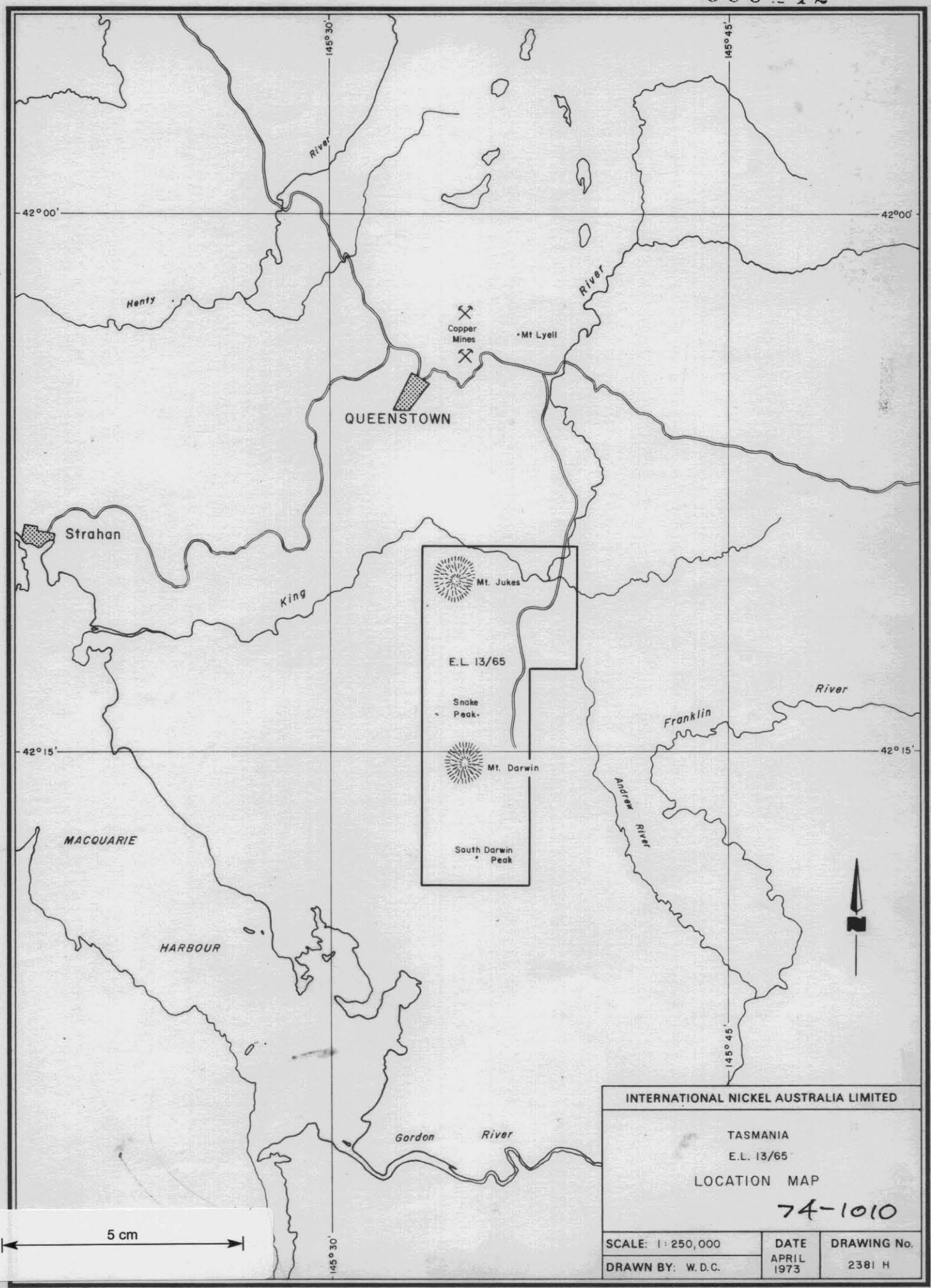
LOCATION JUKES PTY AREA

ANGLE FROM HORIZONTAL

DIRECTION

SAMPLE No.	Type	From — To	Width	DESCRIPTION	ASSAYS: A.A.S. [A] CLASSICAL [C] FIRE [F] OTHER [O] Cu	Zn	Pb	Au	Ag
A2/6418		207·3 - 209·3	2·0	Tr Sulp AS ABOVE	510	110	17	<0·5	1·0
419		209·3 - 211·3	2·0	Tr Sulp AS ABOVE	100	105	19	<0·5	1·0
420		211·3 - 213·3	2·0	Tr Sulp AS ABOVE	215	112	18	<0·5	0·9
421		213·3 - 215·5	2·2	Tr Sulp AS ABOVE	335	142	22	<0·5	1·0
422		215·5 - 217·5	2·0	Tr. Sulp CCR(CH) Gap (Lith Sh	190	130	22	<0·5	1·0
423		217·5 - 219·5	2·0	Tr Sulp AS ABOVE	95	185	25	<0·5	1·1
424		219·5 - 221·7	2·2	Tr Sulp AS ABOVE	330	180	23	<0·5	1·0
425		221·7 - 223·7	2·0	Tr Sulp CCR LAVA	245	90	18	<0·5	0·8
A2/6426		223·7 - 224·5	0·8	Tr Sulp AS ABOVE	930	105	30	<0·5	1·5
		-							
		-							
		-						

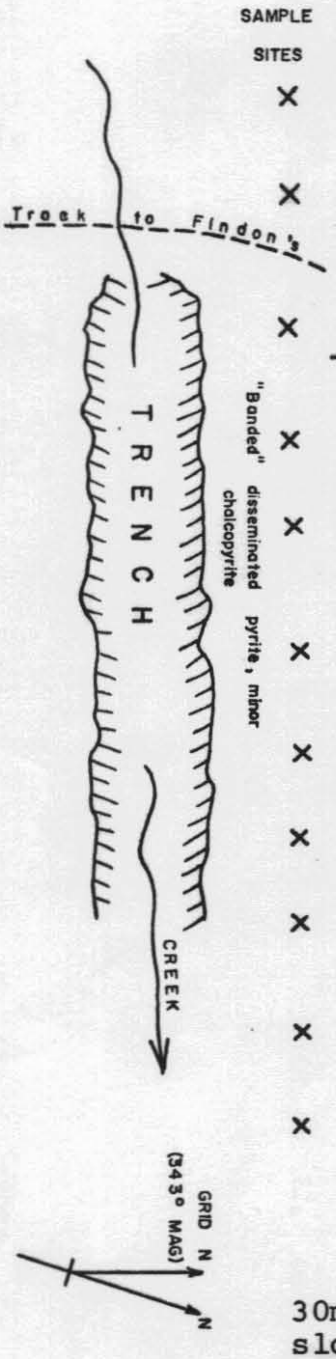
599142



1560 Fig 1

FIGURE 2

UPSLOPE
(WNW)



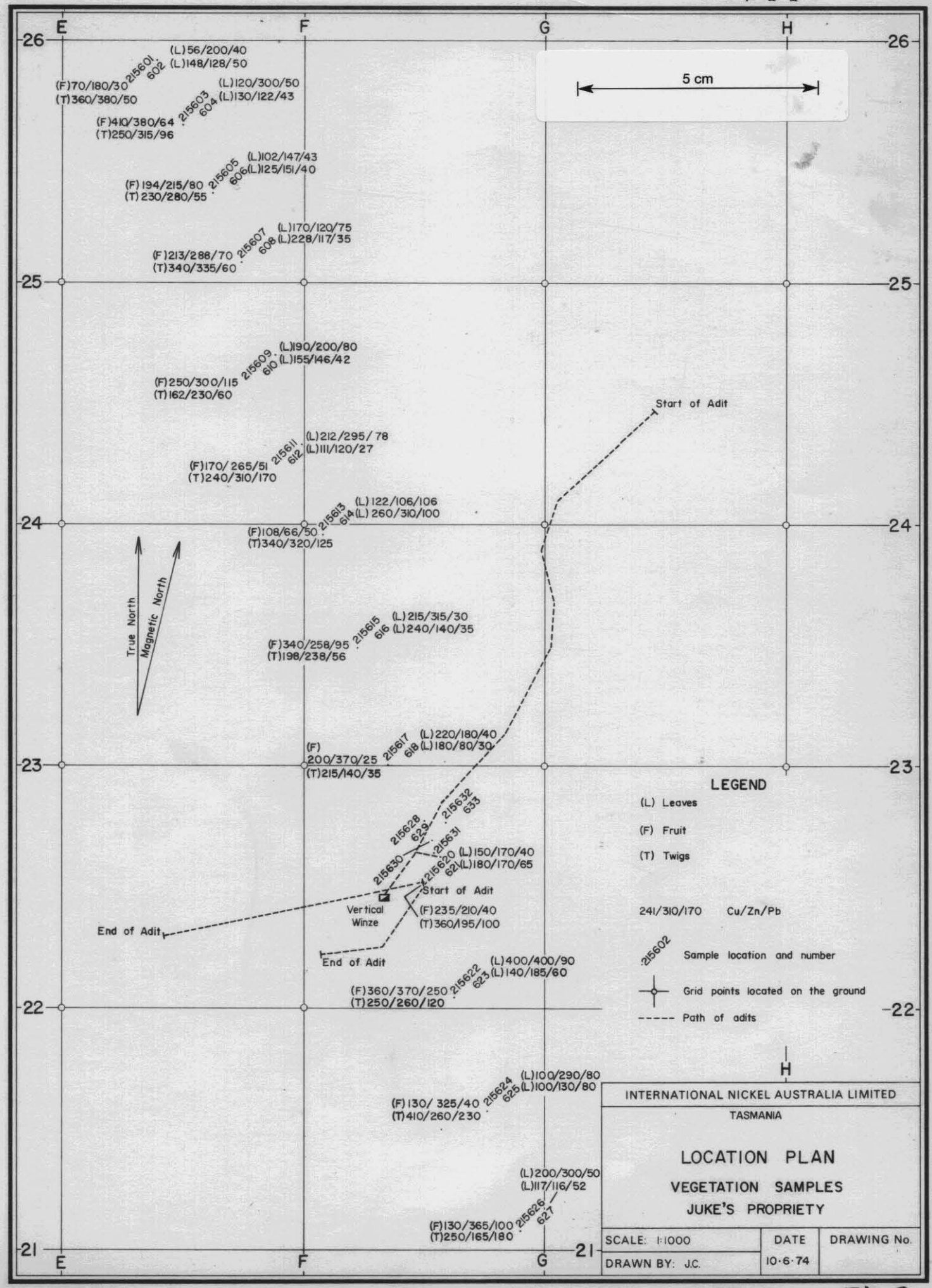
Station	Depth of Sample Cms
1	0-5, 15-30, 30+, RC
2	0-5, 15-30, RC
BARREN ZONE	
3	0-5, 15-30, RC
4	0-5, 15-30, 30+, RC
5	0-5, 15-30, 30+
MINERALISED ZONE	
6	0-5, 15-30, 30+, RC
7	0-5, 15-30, 30+, RC
8	0-5, 15-30, RC
9	0-5, 15-30, 30+, RC
BARREN ZONE	
10	0-5, 15-30, RC
11	0-5, 15-30, 30, RC

30m Station interval
slope 25-30°

Location of trench:
Approx. 050S/100E to 150E

Figure 2
Soil and Rock Chip Sampling Scheme at East Darwin Trench Jukes-Darwin, Tasmania.

599144



INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

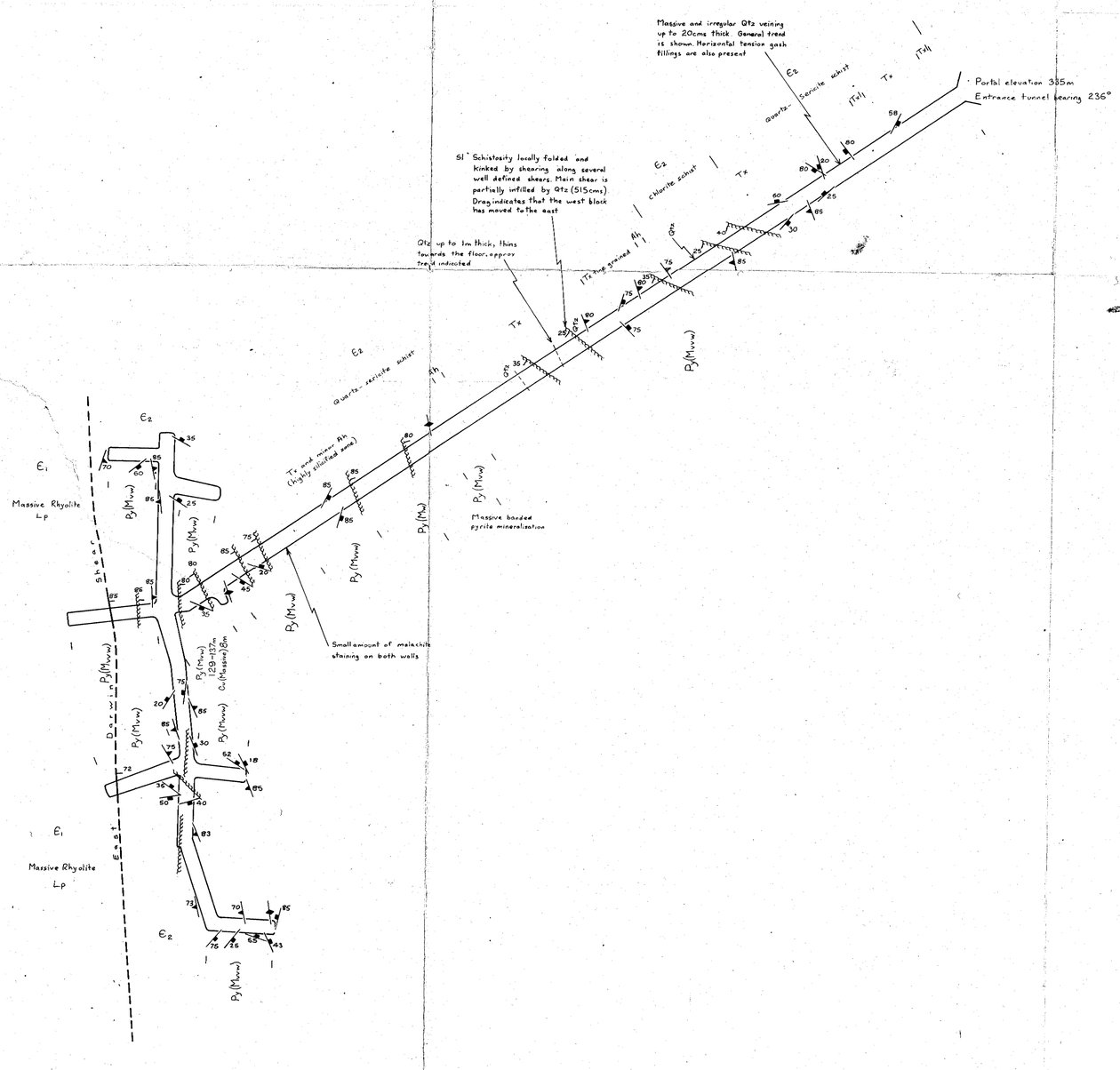
LOCATION PLAN

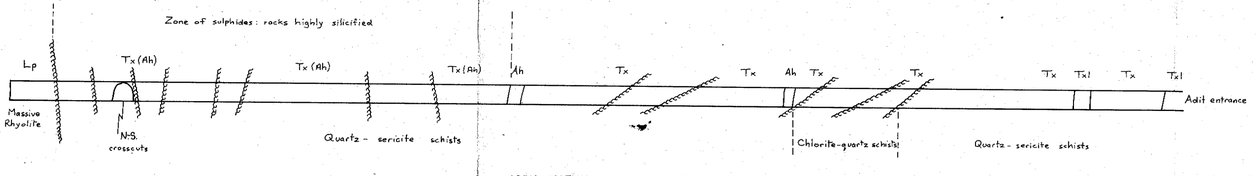
VEGETATION SAMPLES

JUKE'S PROPRIETY

SCALE: 1:1000	DATE	DRAWING No.
DRAWN BY: J.C.	10·6·74	

1562 Fig 3





CROSS-SECTION ALONG MAIN TUNNEL

TRUE NORTH

LEGEND

	Qtz	Vein quartz
CAMBRIAN — E2 Andrew River Volcanics	Tx	Tuff, crystal
	Txl	Tuff, crystal-lithic
	Ah	Ash
E1 Darwin Type Rhyolite	Lp	Lava, massive porphyritic
		Schistosity, strike and dip
		Jointing, strike and dip
		Major shear or fault, strike and dip
	mvm	Shear, strike and dip
	Py	Pyrite
	Cpy	Chalcopyrite

5 cm

SULPHIDES

Masa	⩾ 90	Massive
Ms	70 - 90	Mineralization strong
M	30 - 70	Mineralization
Mw	10 - 30	Mineralization weak
Mvw	3 - 10	Mineralization very weak
Mvvw	1 - 3	Mineralization very, very weak

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

EL 13/65 EAST DARWIN AREA

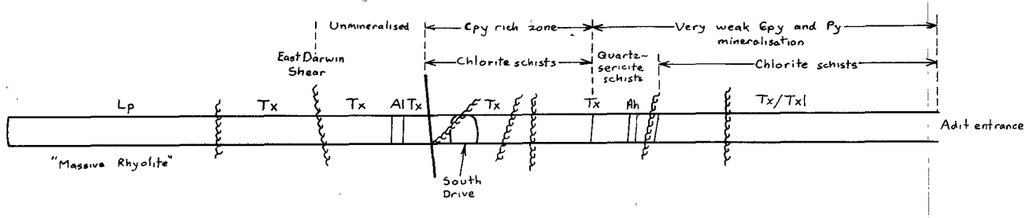
GEOLOGY

PEARCE 'S ADIT

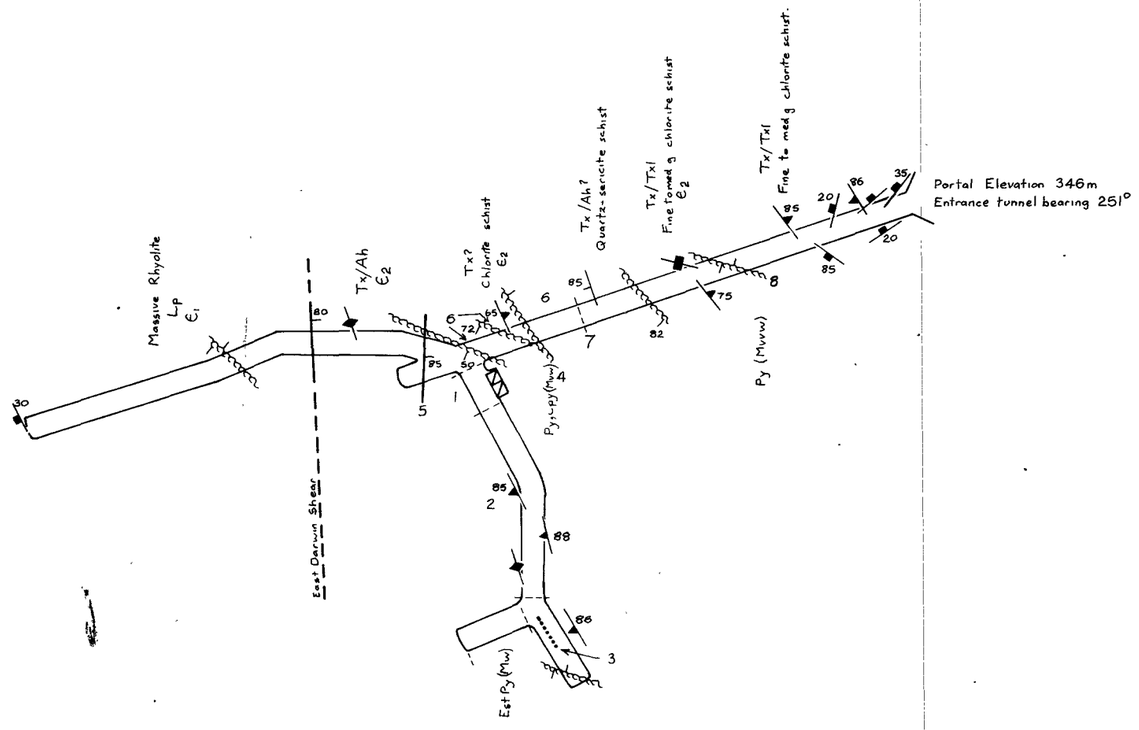
Scale: 1:500	Date: 18·6·74	Drawing No.
Drawn by: J.C.	Approved:	

599145

1563 Fig 4a



CROSS-SECTION ALONG MAIN TUNNEL



LEGEND

1. Irregular quartz veining containing coarse grained remobilised chalcopyrites
2. Mixed lithologies consisting of chlorite and quartz-sericite schists, with 0.5m wide lens-like body of cherty rhyolite at 16m. Mineralisation is variable and is locally enriched in quartzy veins
3. Vein (10cm) of coarse grained pyrites- seam exposed in road for approx 2m
4. Anastomosing veins of quartz and siderite are associated with chalcopyrites and pyrites mineralisation
5. N-S fault which has brought unmineralised lithologies into contact with mineralised chlorite schists
6. Deformation of schists caused by extremely strong E-W shearing. Shears are infilled with quartz (≤ 5cm) with coarse chalcopyrites
7. Quartz veining up to 1m wide
8. Horizontal and near horizontal quartz veining associated with large shears. Local intense deformation of the schistosity has occured

5 cm

CAMBRIAN

- E2 Andrew River Volcanics
  - Tx — Tuff, crystal
  - Txl — Tuff, crystal-lithic
  - Ah — Ash
- E1 Darwin Type Rhyolite
  - Lp — Lava, massive porphyritic

Qtz — Vein quartz

Schistosity, strike and dip

Jointing, strike and dip

Major shear or fault, strike and dip

Shear, strike and dip

Py — Pyrite

Cpy — Chalcopyrite

SULPHIDES

Mass	⩾ 90	Massive
Ms	70 - 90	Mineralization strong
M	30 - 70	Mineralization
Mw	10 - 30	Mineralization weak
Mvw	3 - 10	Mineralization very weak
Mvvw	1 - 3	Mineralization very, very weak

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

EL 13/65 EAST DARWIN AREA

GEOLOGY

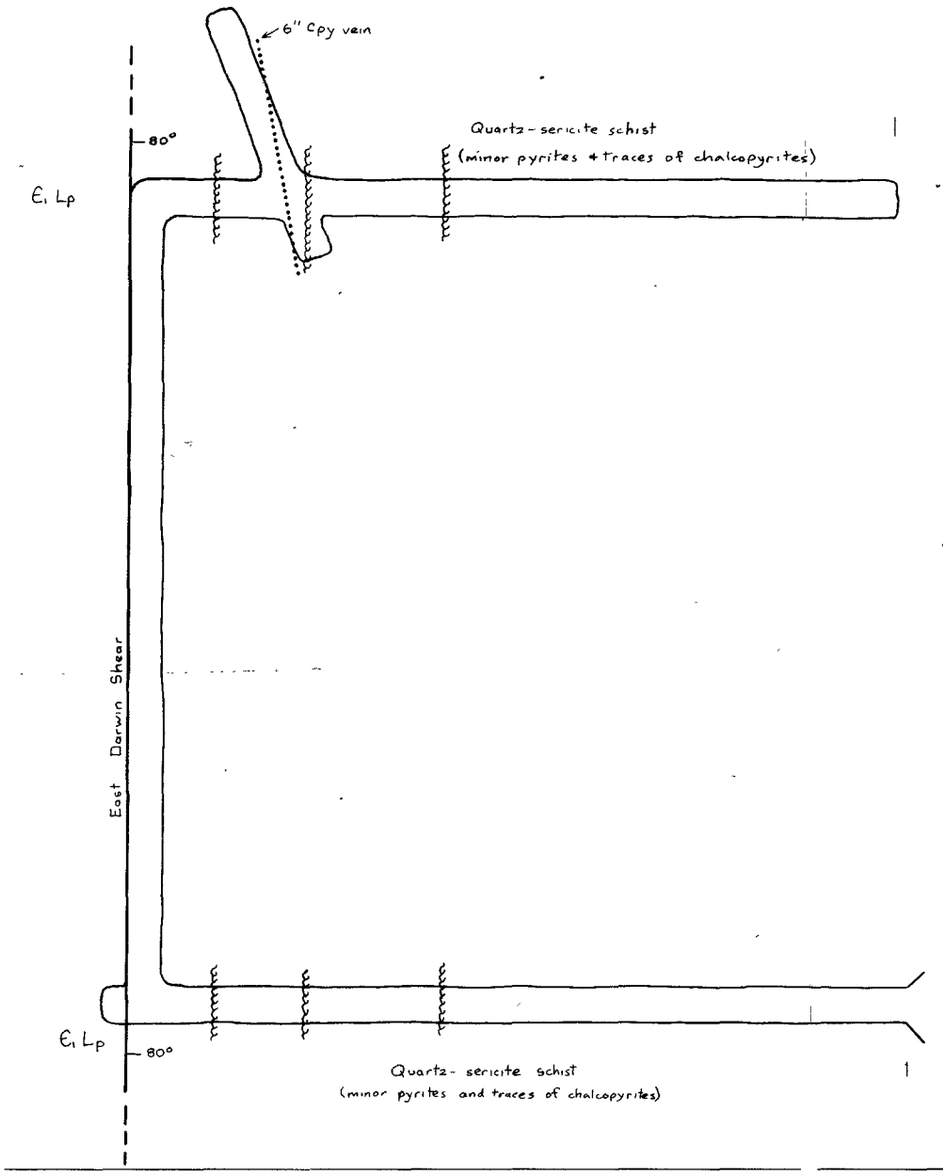
DARWIN PROPRIETARY ADIT

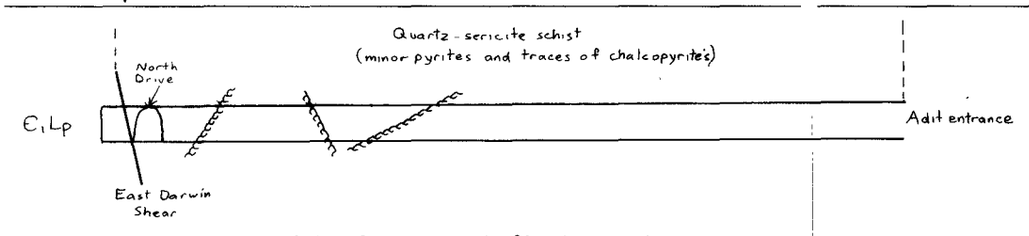
Scale 1:500	Date 18:6:74	Drawing No
Drawn by J.C	Approved	

599146

1564

Fig 4b





CROSS-SECTION OF ENTRANCE TUNNEL

LEGEND

		Qtz	Vein quartz
CAMBRIAN	E2 Andrew River Volcanics	Tx	Tuff, crystal
		Txl	Tuff, crystal-lithic
		Ah	Ash
	E1 Darwin Type Rhyolite	Lp	Lava, massive porphyritic
			Schistosity, strike and dip
			Jointing, strike and dip
			Major shear or fault, strike and dip
			Shear, strike and dip
		Py	Pyrite
		Cpy	Chalcopyrite

599147

5 cm

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

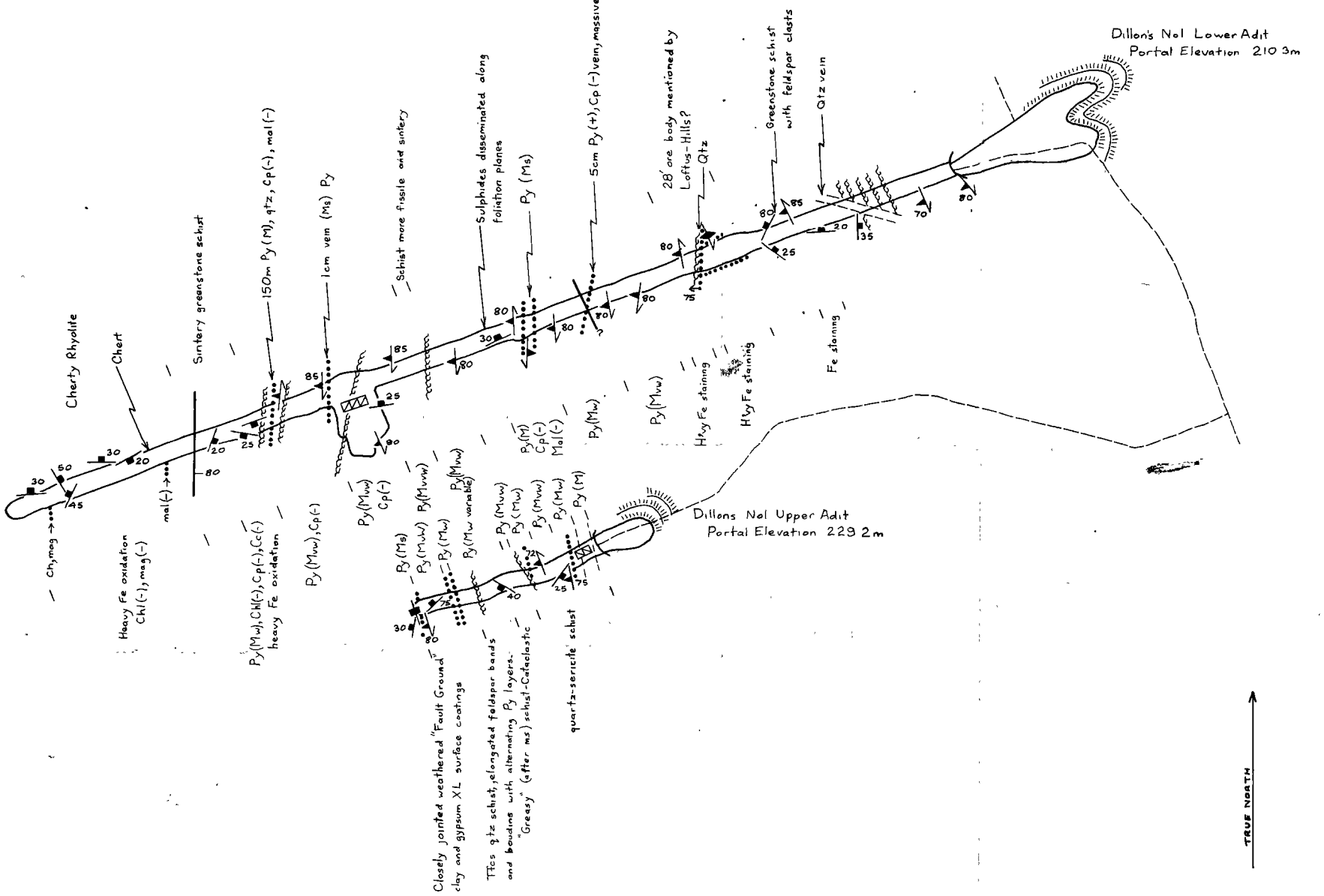
EL 13/65 EAST DARWIN AREA

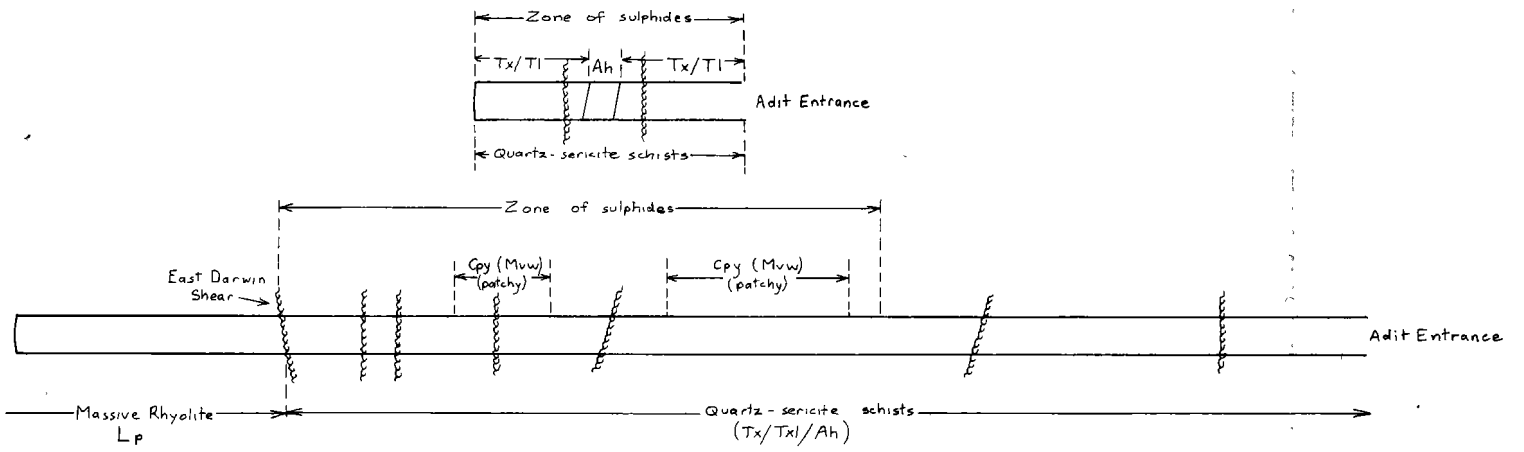
GEOLOGY

SOUTER'S ADIT

SCALE. 1·500	DATE	DRAWING No.
DRAWN BY. J.C.	19·6 74	

Fig 4c





CROSS-SECTIONS OF DILLON'S No1 UPPER AND LOWER ADITS

LEGEND

	Quartz sericite schist
	Darwin rhyolite massive
	Schistosity, strike & dip
	Jointing, strike & dip
	Slickenside, direction & plunge
	Fault, strike & dip
	Shear
	Broken ground - shear & fault zones
	Mineralisation
Qtz	Quartz
Py	Pyrite
Cp	Chalcopyrite
Cc	Chalcocite
Mal	Malachite
Gal	Galena
Mag	Magnetite
(-)	Minor
(+)	Major
	Portal
	Winze
	Adit dump

SULPHIDES

Mass	⩾ 90	Massive
Ms	70 - 90	Mineralization strong
M	30 - 70	Mineralization
Mw	10 - 30	Mineralization weak
Mvw	3 - 10	Mineralization very weak
Mvvw	1 - 3	Mineralization very, very weak

5 cm

599148

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

EL 13/65 JUKES DARWIN

GEOLOGY

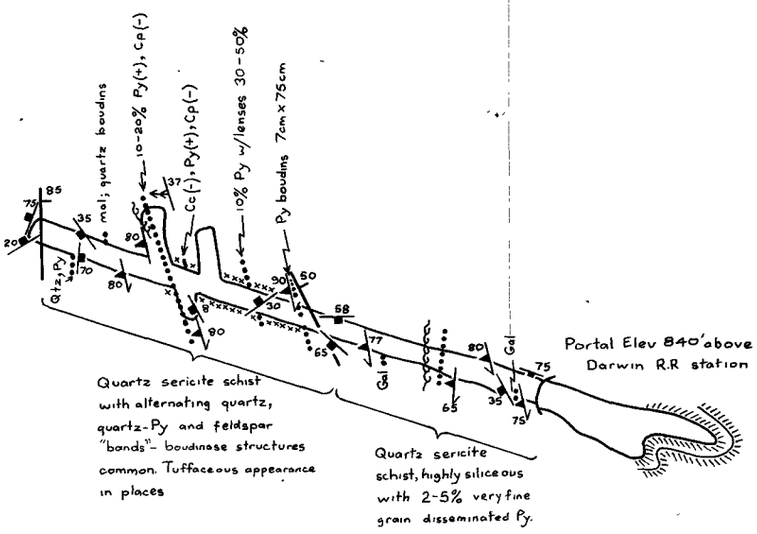
DILLON'S No. 1

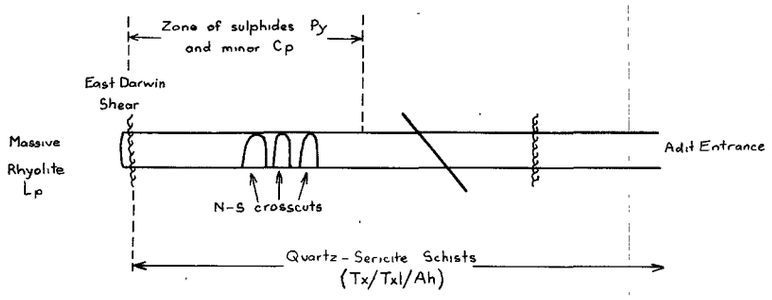
UPPER & LOWER ADITS

SCALE 1:500	DATE 17 6·74	DRAWING No
DRAWN BY J.C	APPROVED	

1565 Fig 4a

599149





TRUE NORTH

CROSS-SECTION OF DILLON'S No.2 ADIT

LEGEND

	Quartz sericite schist
	Darwin rhyolite massive
70	Schistosity, strike & dip
8	Jointing, strike & dip
	Slickenside, direction & plunge
60	Fault, strike & dip
	Shear
xxxxx	Broken ground - shear & fault zones
.....	Mineralisation
Qtz	Quartz
Py	Pyrite
Cp	Chalcopyrite
Cc	Chalcocite
Mal	Malachite
Gal	Galena
Mag	Magnetite
(-)	Minor
(+)	Major
	Portal
	Winze
	Adit dump

SULPHIDES

Mass	≥ 90	Massive
Ms	70 - 90	Mineralization strong
M	30 - 70	Mineralization
Mw	10 - 30	Mineralization weak
Mvw	3 - 10	Mineralization very weak
Mvvw	1 - 3	Mineralization very, very weak

5 cm

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

EL 13/65 JUKES DARWIN

GEOLOGY

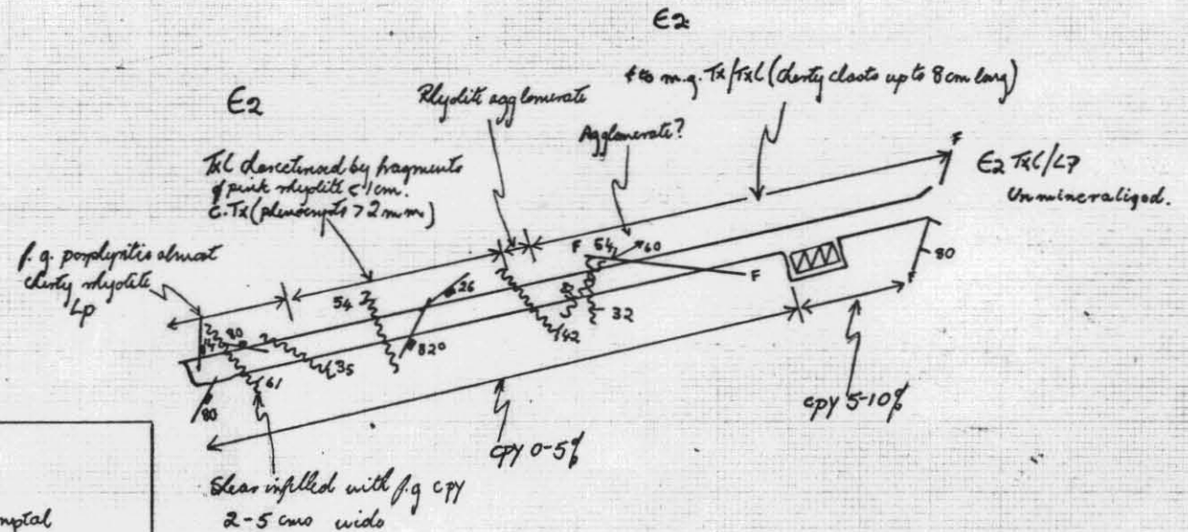
DILLON'S No. 2 ADIT

SCALE: 1:500	DATE	DRAWING No.
DRAWN BY: JC	14·6·74	

1566 Fig 4e

599150

5 cm



LEGEND

CAMBRIAN Flanking Rhyolitic sequence

- E2 Tx — Tuffs, crystal
- E2 TxL — Tuffs, crystal lithic
- E2 Lp — Lava, porphyritic

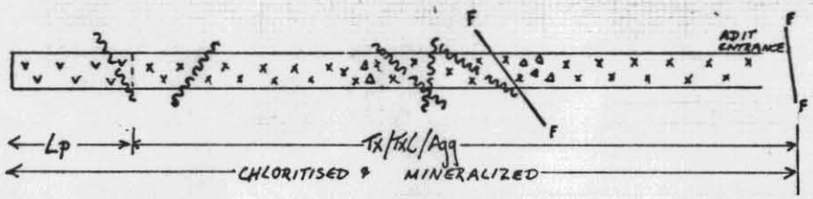
Jointing, strike and dip

Major older fg or fault with pitch of slickensides

Shear, strike and dip

Vertical mine

SCALE IN METRES 5 0 5 10 15 20



INTERNATIONAL NICKEL AUSTRALIA LTD

TASMANIA EL 13/65

JUKES - DARWIN

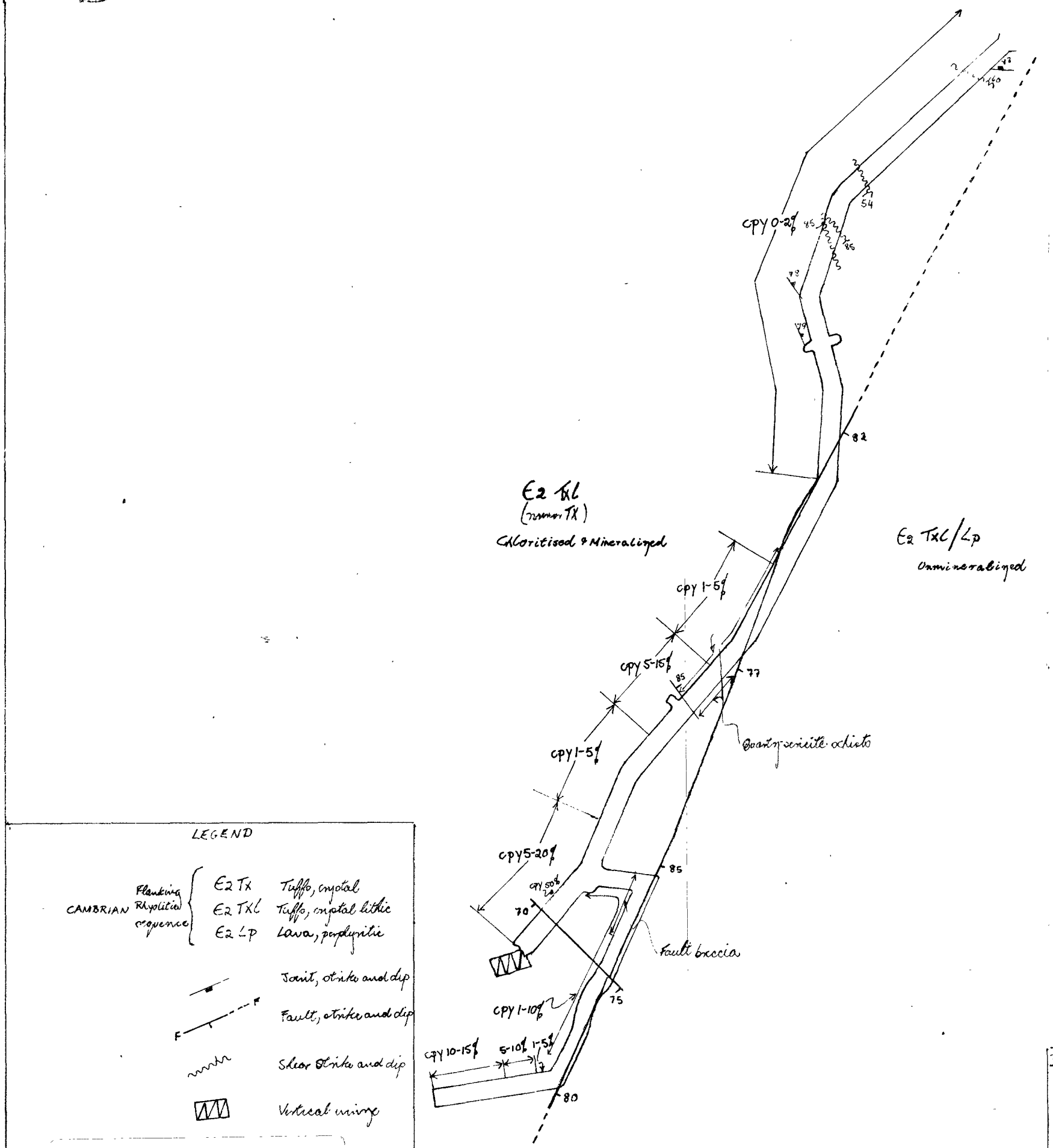
GEOLOGY

JUKES PTY. No.1 ADIT

SCALE 1:500 R.J. DUDLEY 21-8-73

1567 Fig 5a

599151



LEGEND

CAMBRIAN — Flanking Rhyolitic sequence

- E2 Tx — Tuffo, crystal
- E2 TxL — Tuffo, crystal lithic
- E2 Lp — Lava, porphyritic

Joint, strike and dip

Fault, strike and dip

Shear strike and dip

Vertical mine

5 cm

5 0 5 10 15 20

SCALE IN METRES

INTERNATIONAL NICKEL AUSTRALIA LTD

TASMANIA E.L. 13/65

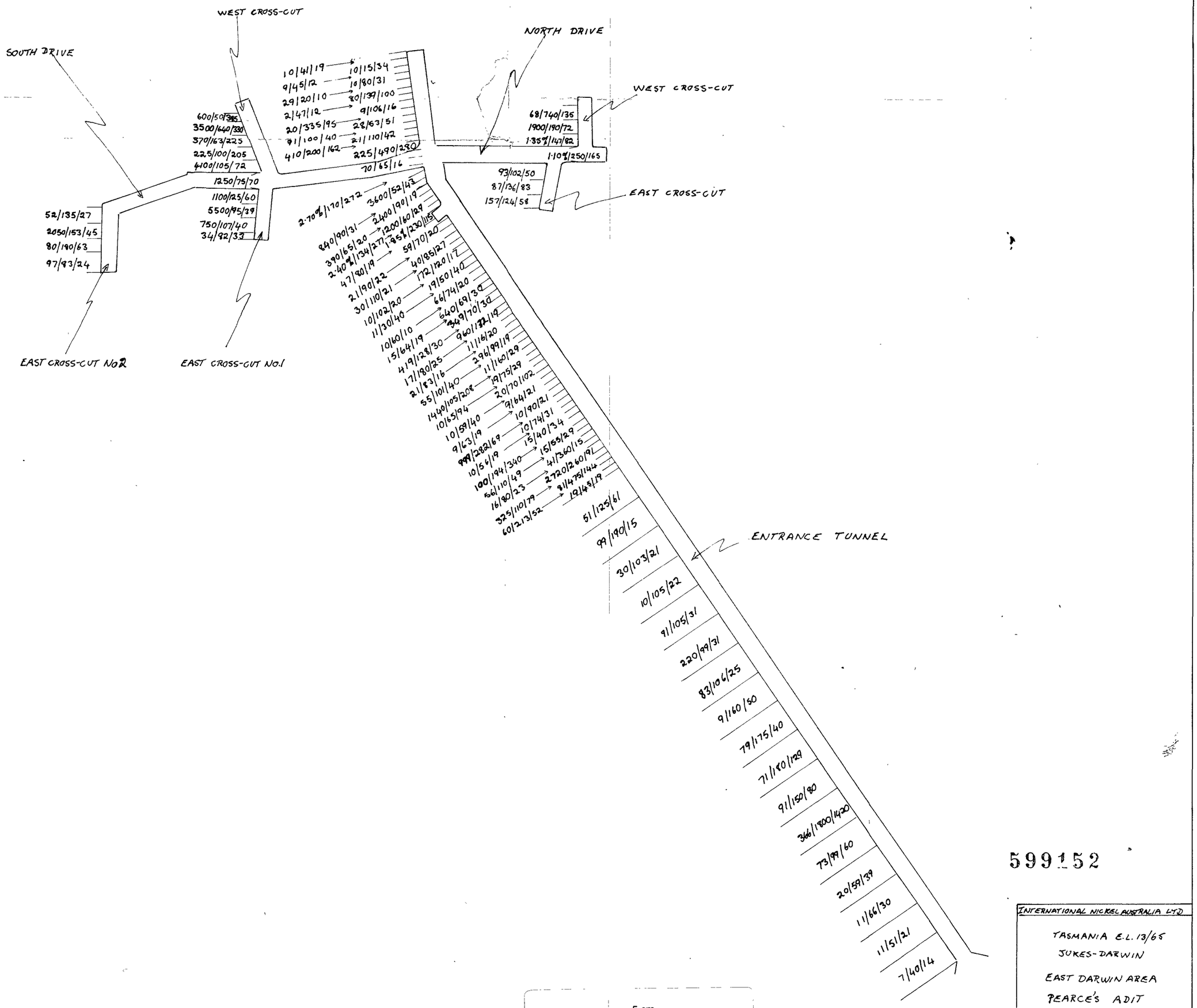
JUKES - DARWIN

GEOLOGY

JUKES PTY NO. 3 ADIT

SCALE 1:500 R.T. DUDLEY 21-8-73

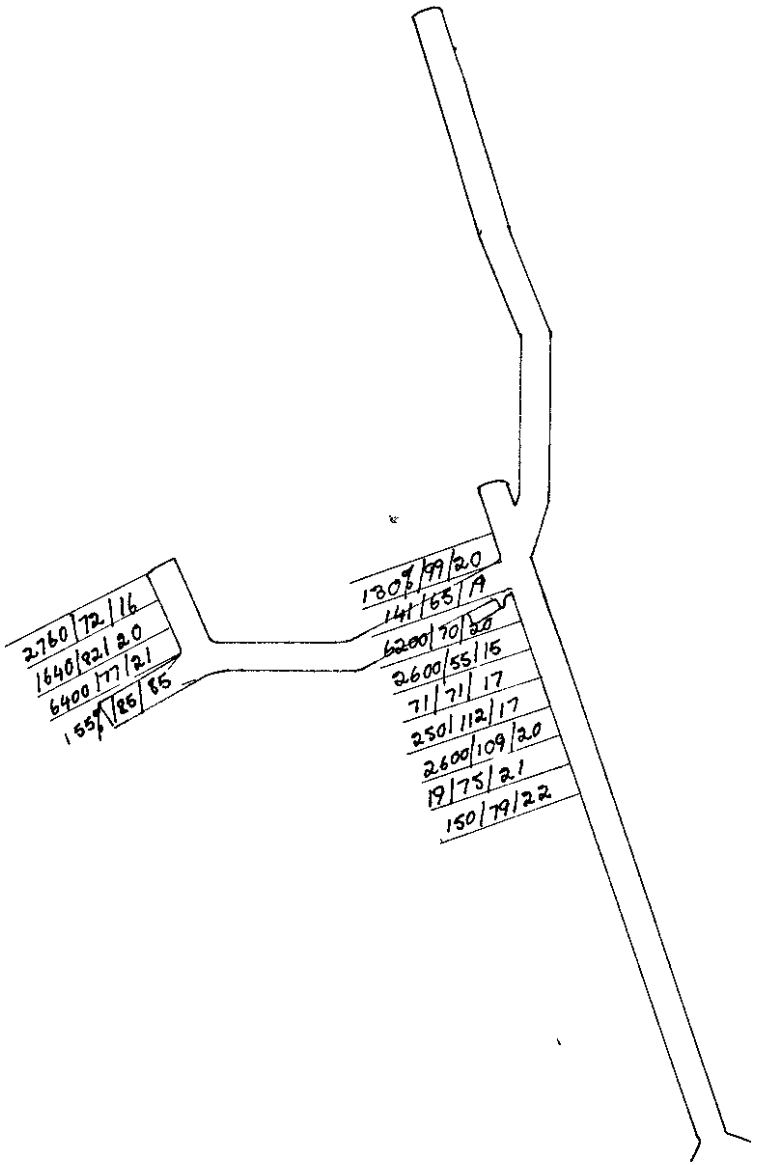
1568 Fig 5b



599152

INTERNATIONAL NICKEL AUSTRALIA LTD	
TASMANIA E.L. 13/65	
JUKES-DARWIN	
EAST DARWIN AREA	
PEARCE'S ADIT	
ADIT SAMPLING (Cu Zn Pb)	
SCALE 1:500	R. J DUDLEY 7-9-73

1569 Fig 6a



5 cm

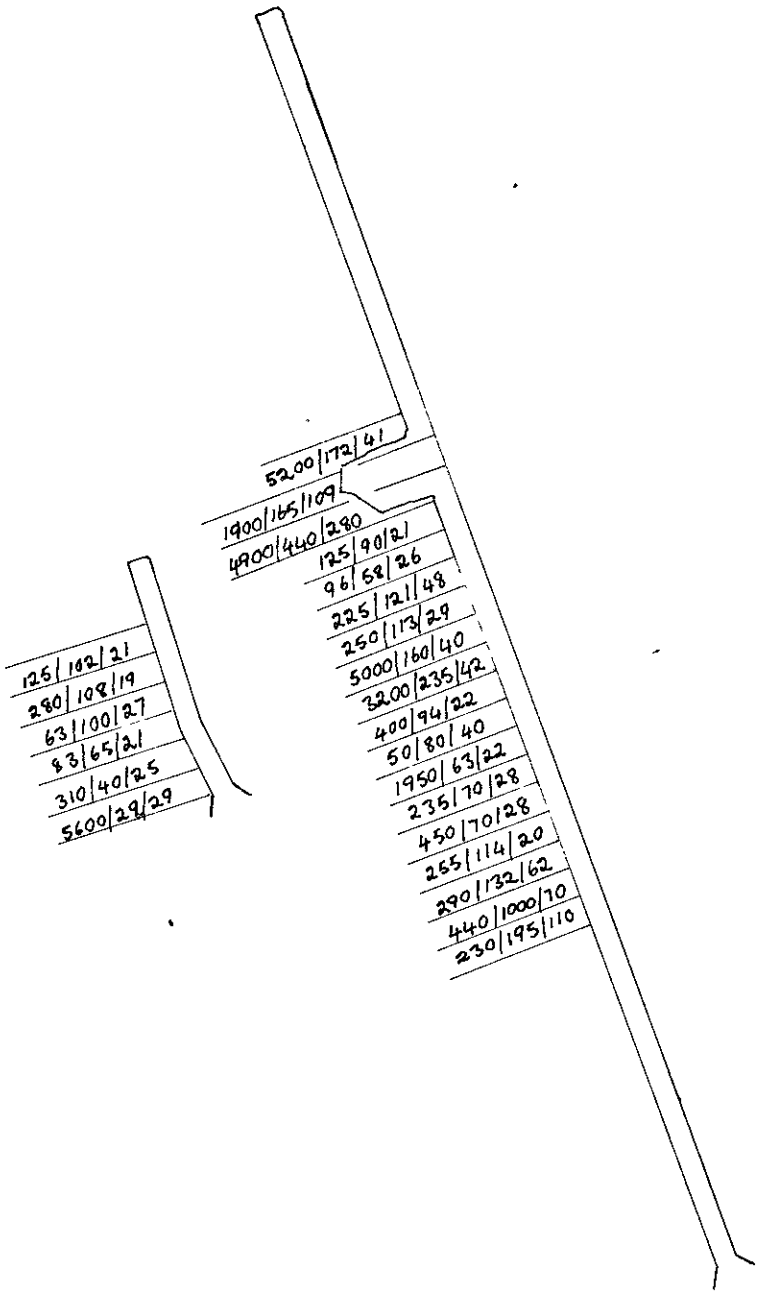
599153

INTERNATIONAL NICKEL AUSTRALIA LTD

TASMANIA EL 13/66
JUKES-DARWIN
EAST DARWIN AREA
DARWIN PTY ADIT
ADIT SAMPLING
Cu Zn Pb

SCALE 1:500 R.J DUDLEY 7-73

1570Fig 6b



599154

INTERNATIONAL NICKEL AUSTRALIA LTD

TASMANIA EL 13/65

JUKES-DARWIN

EAST DARWIN AREA

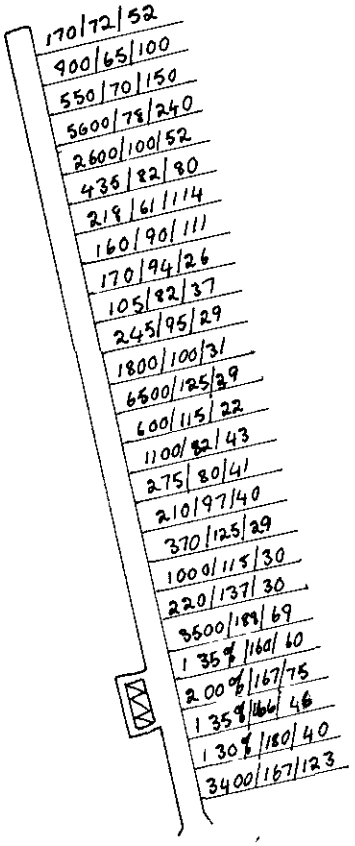
DILLON'S No1 (Upper & Lower) ADITS

ADIT SAMPLING (Cu Zn Pb)

SCALE 1:500 R J DUDLEY 7-9-73

5 cm

1571 Fig 6c



N

599155

INTERNATIONAL NICKEL AUSTRALIA LTD

TASMANIA E L 13/65

JUKES-DARWIN

JUKES PROPRIETARY AREA

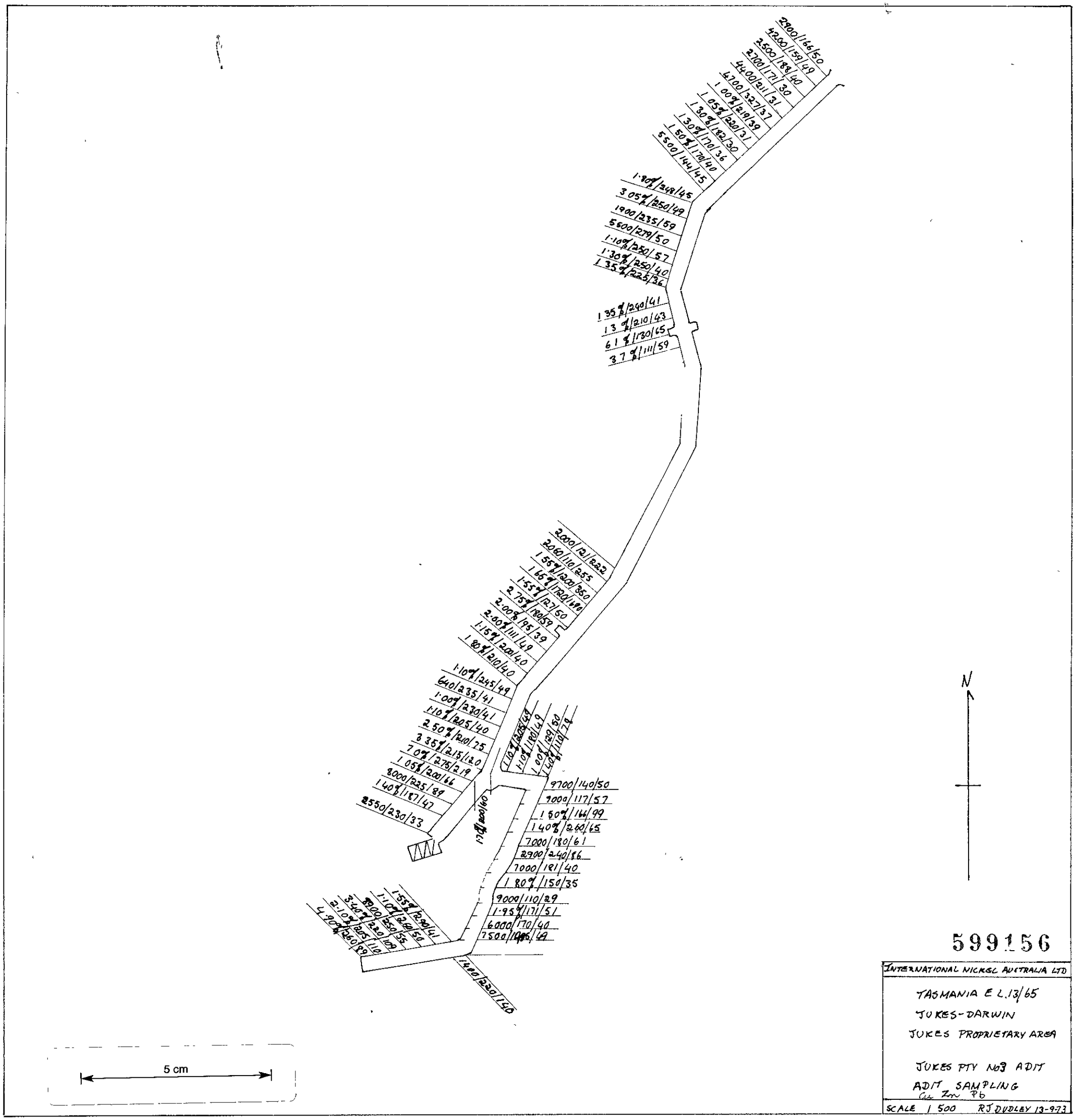
JUKES PTY No/ ADIT

ADIT SAMPLING
(Cu Zn Pb)

SCALE 1'500 R J DUDLEY 13-9-73

5 cm

1572 Fig 7a



599156

INTERNATIONAL NICKEL AUSTRALIA LTD

TASMANIA E.L.13/65

JUKES-DARWIN

JUKES PROPRIETARY AREA

JUKES PTY No3 ADIT

ADIT SAMPLING

Cu Zn Pb

SCALE 1 500 RJ DUDLEY 13-9-73

1573 Fig 7b

599157

TOTARA (T.N.C)

55.407N

EAST MAPPING GRID.

150N

MON SEP 10 73.

L 150 N — a = 50m, n = 1, 2, 3 — PULSE 2.0m/2.0ff — POLE DIPOLE

150W 100W 50W 0 50E 100E 150E 200E 250E 300E 350E 400E 450E

2900 1785 1230 890 1615 1650 2500 3110 2960 2805 2580 n = 1

1468 1110 870 1290 1630 1900 3080 2820 3040 2820 = 2

ρ_a (Ωm) 1559 1065 1080 1090 1970 1860 2870 2490 2630 = 3

150W 100W 50W 0 50E 100E 150E 200E 250E 300E 350E 400E 450E

26·0 13·5 26·5 18·0 10·0 14·4 7·0 3·5 3·8 3·5 4·5 n = 1

9·5 24·0 20·8 16·5 8·8 11·9 5·9 3·5 2·5 2·5 = 2

IPm (milli secs) 15·8 19·0 20·0 16·0 7·8 9·8 4·5 2·5 2·8 = 3

Fig. 8a

1:2500

5 cm

GORMACK GRAPH PAPERS : CHRISTCHURCH N.Z. No. 0230 19 x 30 cm., in mm.

599158

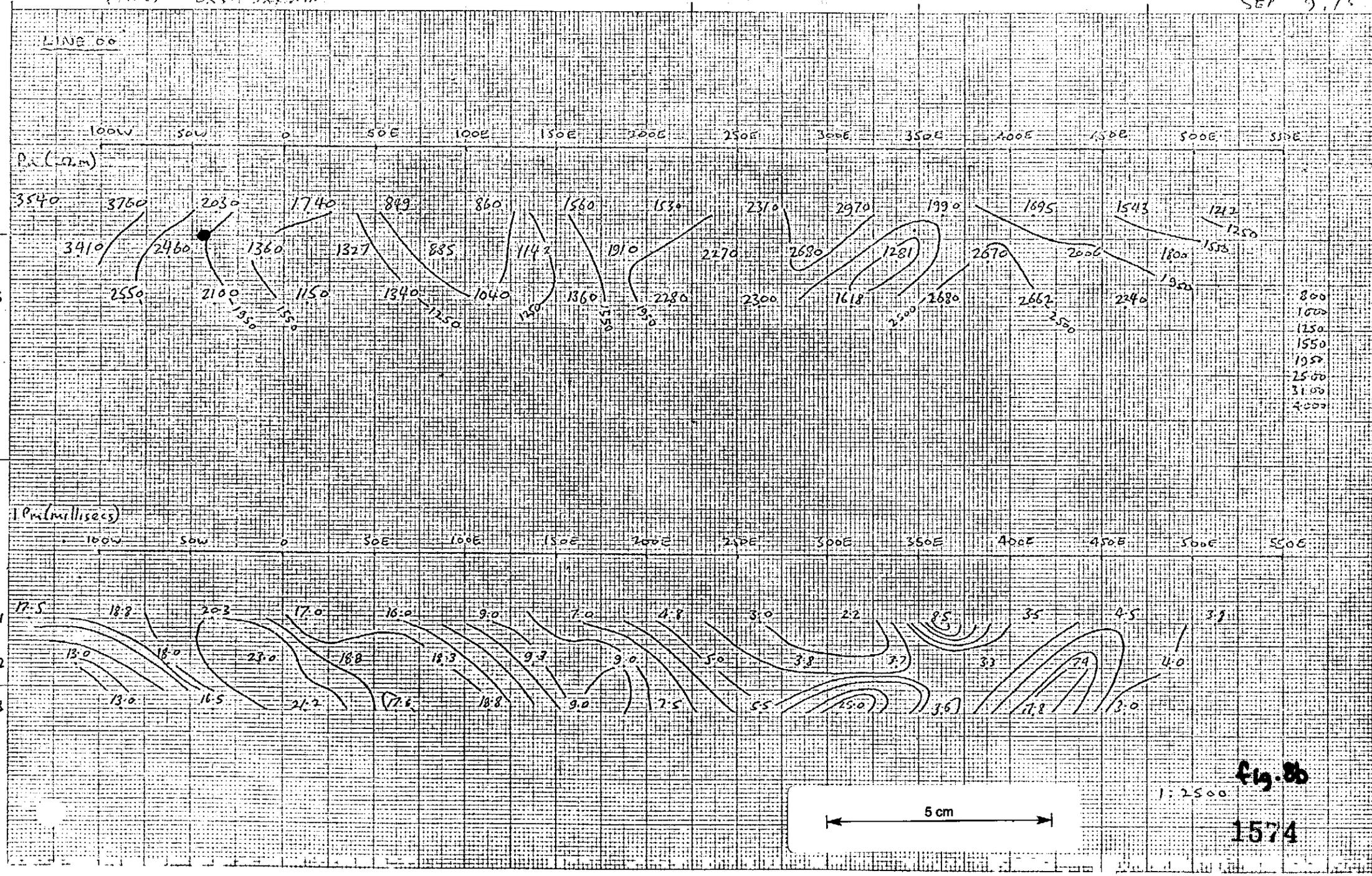


Fig. 8b

1:2500

1574

GORMACK GRAPH PAPERS : CHRISTCHURCH N.Z. No. 0230 19 x 30 cm., in mm.

HOTCHKISS 85 407

FIELD DATA (TNC) EAST DARWIN

200S

599159

SEP 8/9 73.

LINE 200 S

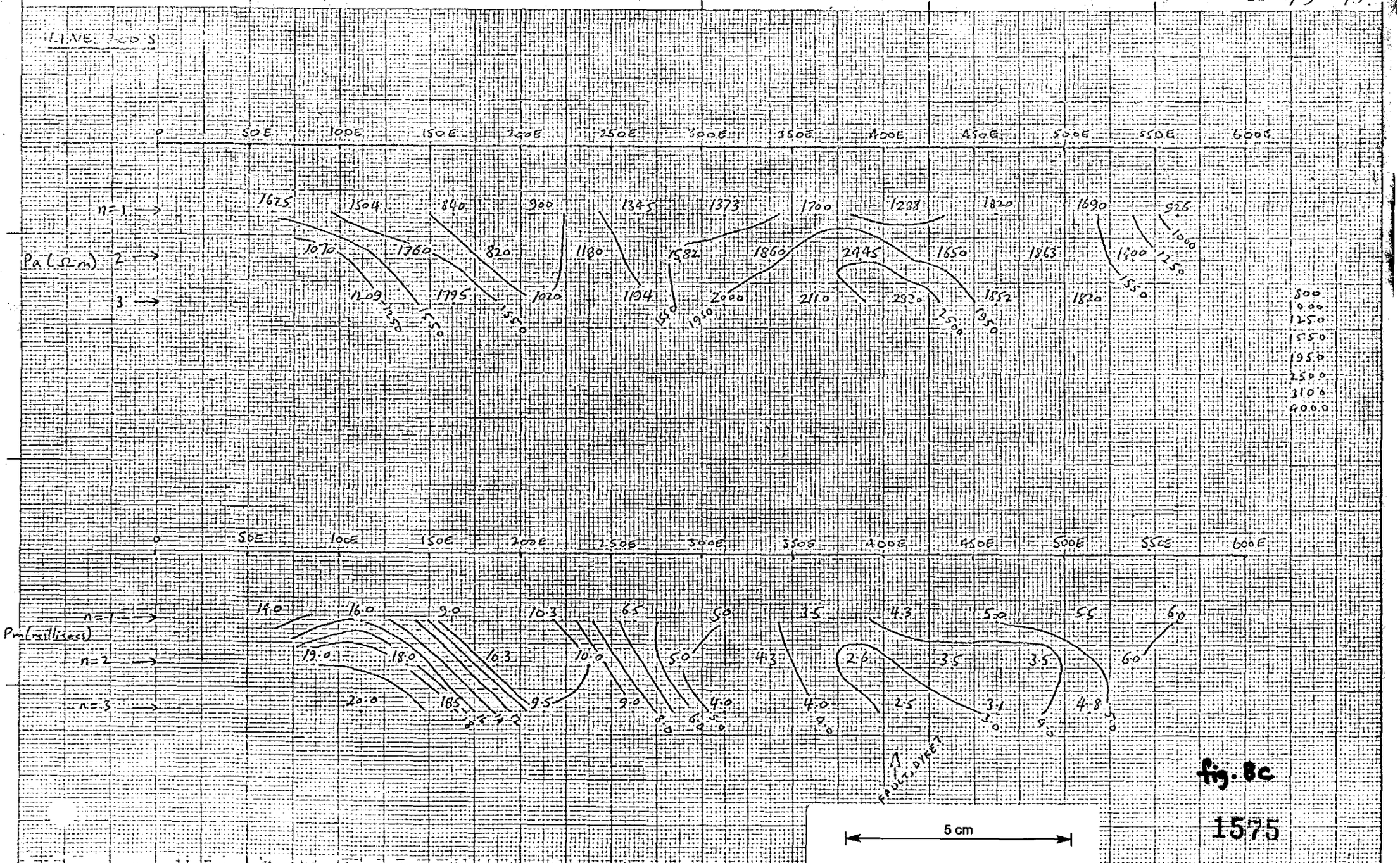
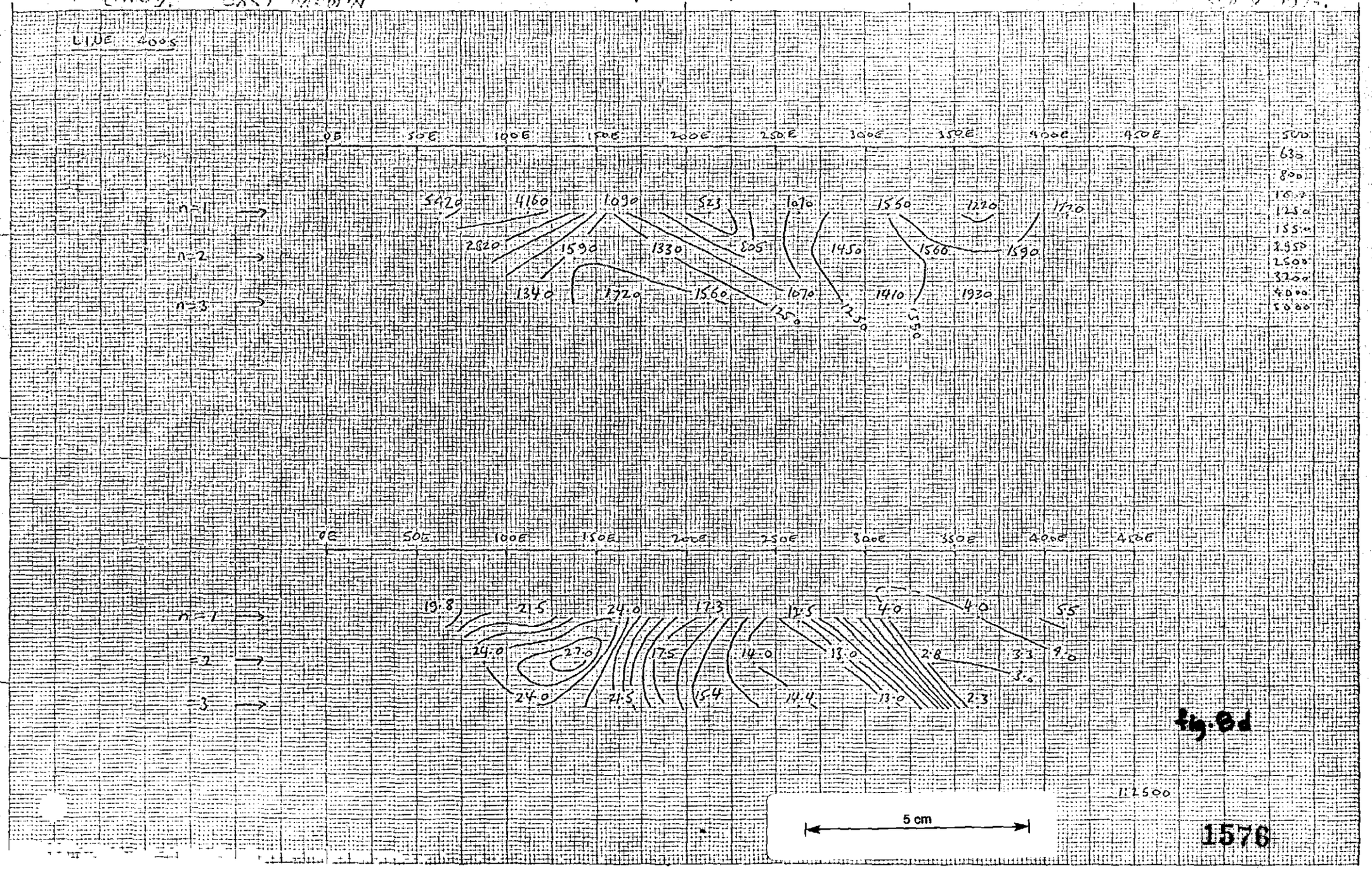


fig. 8c

1575

599160

400S'


LINE 400S
0E 50E 100E 150E 200E 250E 300E 350E 400E 450E
n=1
n=2
n=3
5420 4160 1090 523 1070 1560 1220 1170
2820 1590 1330 805 1450 1560 1590
1340 1720 1560 1070 1410 1930
0E 50E 100E 150E 200E 250E 300E 350E 400E 450E
n=1
n=2
n=3
19.8 21.5 24.0 17.3 17.5 4.0 4.0 5.5
29.0 22.0 17.5 14.0 13.0 2.8 3.3 9.0
24.0 21.5 15.4 14.4 13.0 2.3 3.0
5 cm
1:2500
fig.6d
1576

TNC.

FIELD DATA. EAST DARWIN GRID. 500S 599161 Tues Sep. 6, 73.

L 500 S EQUIPMENT: SCINTREX IPR7 POLE DURATION 2sec / 2sec Fri Sep 7, 73

TRACK SOUTH TO LINE 600S

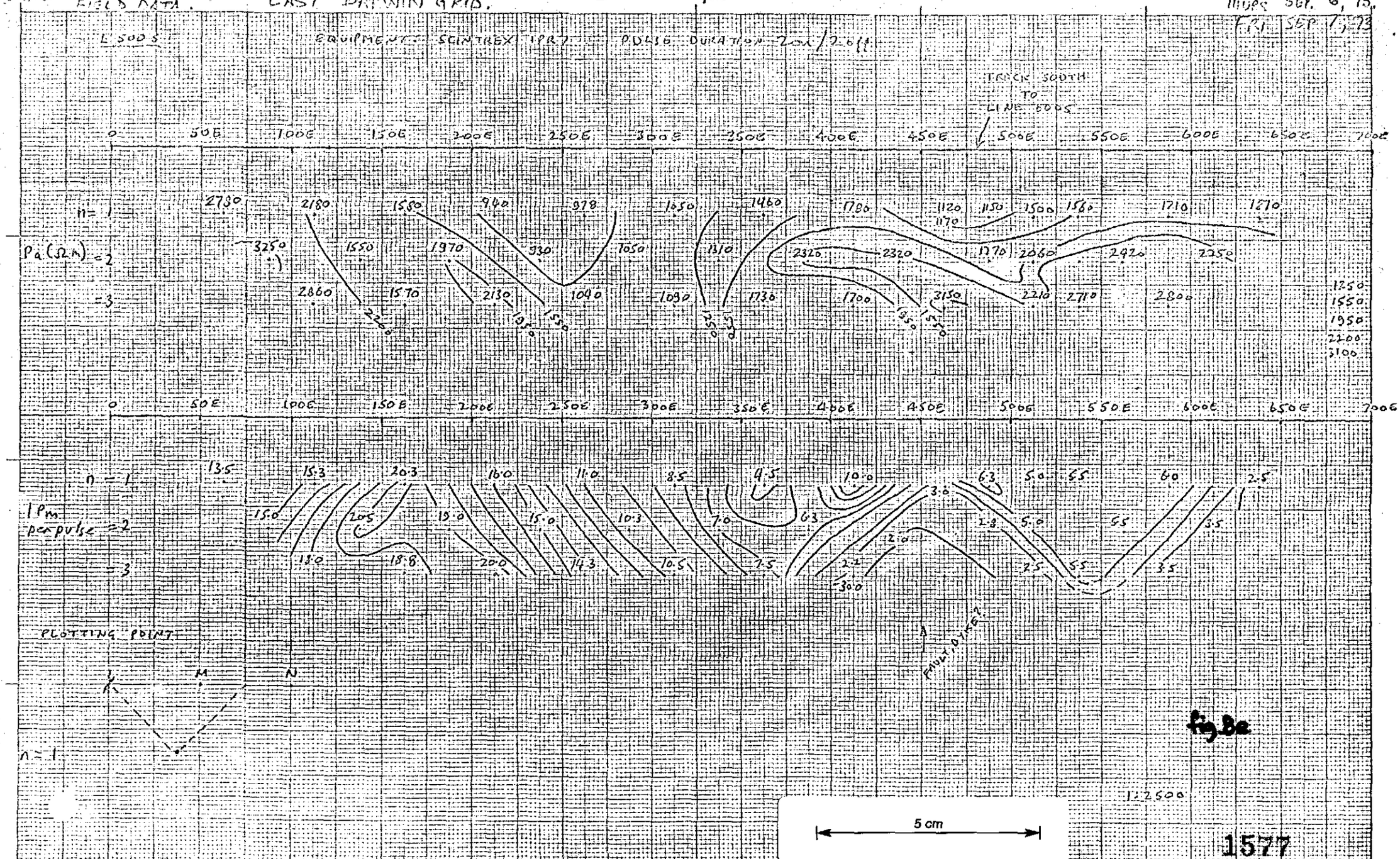


fig 8a

1577

GEOTRACEX (NZ) BS 407.
(FIELD DATA)

EAST DARWIN IP POLE DIPOLE 2 + 2 SEC PULSE 2 on/2 off

600S

599162

Times Sep 13, 73.

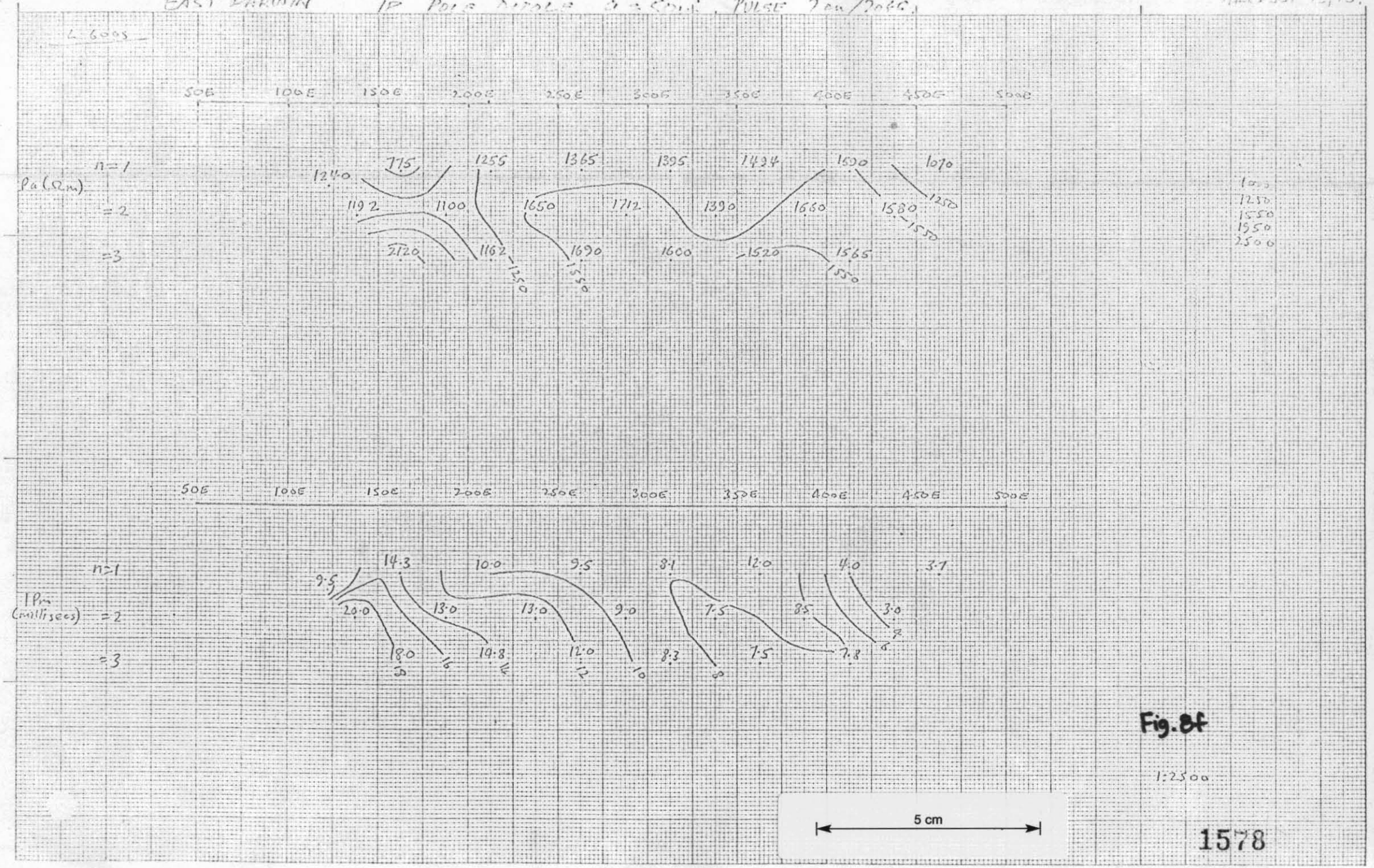


Fig. 8f

1:2500

1578

GORMACK GRAPH PAPERS : CHRISTCHURCH N.Z. No. 0230 19 × 36 cm., in mm.

599163

TRACK.

TIMS SEP 11, 78.

L1 "TRACK" // STRIKE, POLE DIPOLE, PULSE 2 on 2 off, a = 75 m, n = 2, 3

255 50N 125N 200N 275N 350N 425N 500N 575N 650N 725

Pa (Ωm)

n = 2 → 1355 3870 2460 1685 3255 1925 1865 1680

n = 3 → 1460 3230 2190 2030 3320 1850 1920

255 50N 125N 200N 275N 350N 425N 500N 575N 650N 725

IPm (millisecs)

n = 2 → 20·5 19·5 22·8 21·0 19·5 17·3 13·8 10·0

n = 3 → 23·0 18·5 18·0 21·4 18·5 17·5 12·3

5 cm

Fig 8

1:2500

1579

No. 0230 19 x 30 cm., in mm. CORMACK GRAPH PAPERS : CHRISTCHURCH N.Z.

599164

Sun Sep 6, 73

JUKES PROPRIETARY 00N

L I C O N

200W 150W 100W 50W 00 50E 100E 150E 200E 250E 300E 350E 400E 450E

Pa (Ωm)

1000
1250
1550
1950
2500
3200
4000
5000

4950 5475 3280 1340 920 1570 2090 2900 2360 3220 1575 1350
5000 5400 2520 1255 1035 1310 2080 2690 2810 2690 1720
4000 3100 1570 1440 1500 2080 3000 2870 2940 1540 2100 1950
2500 1950 1550 1950 1950 2500 3200 3200

200W 150W 100W 50W 00 50E 100E 150E 200E 250E 300E 350E 400E 450E

IPm (millisecs)

14.0 19.0 27.0 32.0 26.3 13.8 12.8 10.5 9.0 8.4 7.0 7.5
19 21.3 30.0 36.0 25.5 23.5 14.5 12.0 7.0 9.0 6.3 6.0
31.5 31 30 28 24.0 23.5 20.5 14.5 9.5 7.5 16.5 6.2
30 28 26 24 23 20 18 16 14 12 10 8 8 10 12 14 14 12 10 8 7

Fig. 9a

1:2500

5 cm

1580

GORMACK GRAPH PAPERS : CHRISTCHURCH N.Z. No. 0230 19 × 30 cm., in mm.

599165

00 EAST — POLE–DIPOLE — n = 1, 2, 3 — PULSE 2 sec/2 sec

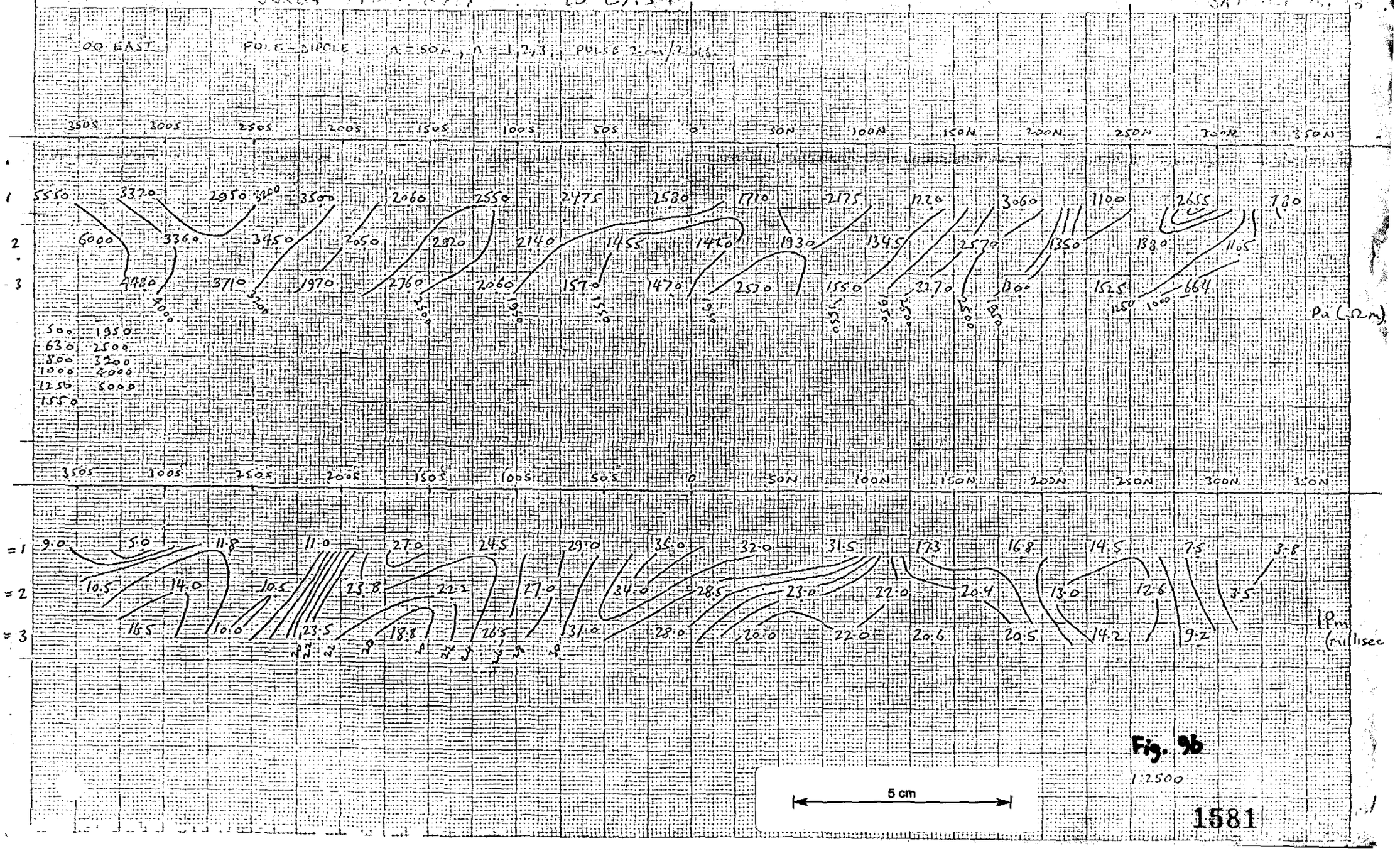


Fig. 9b

1:2500

5 cm

1581

GEOTERREX 85425

FIELD DATA (TNC) SNAKE PEAK/ALLANS CRK GRID.

599166

SAT FEB 23, 1974.

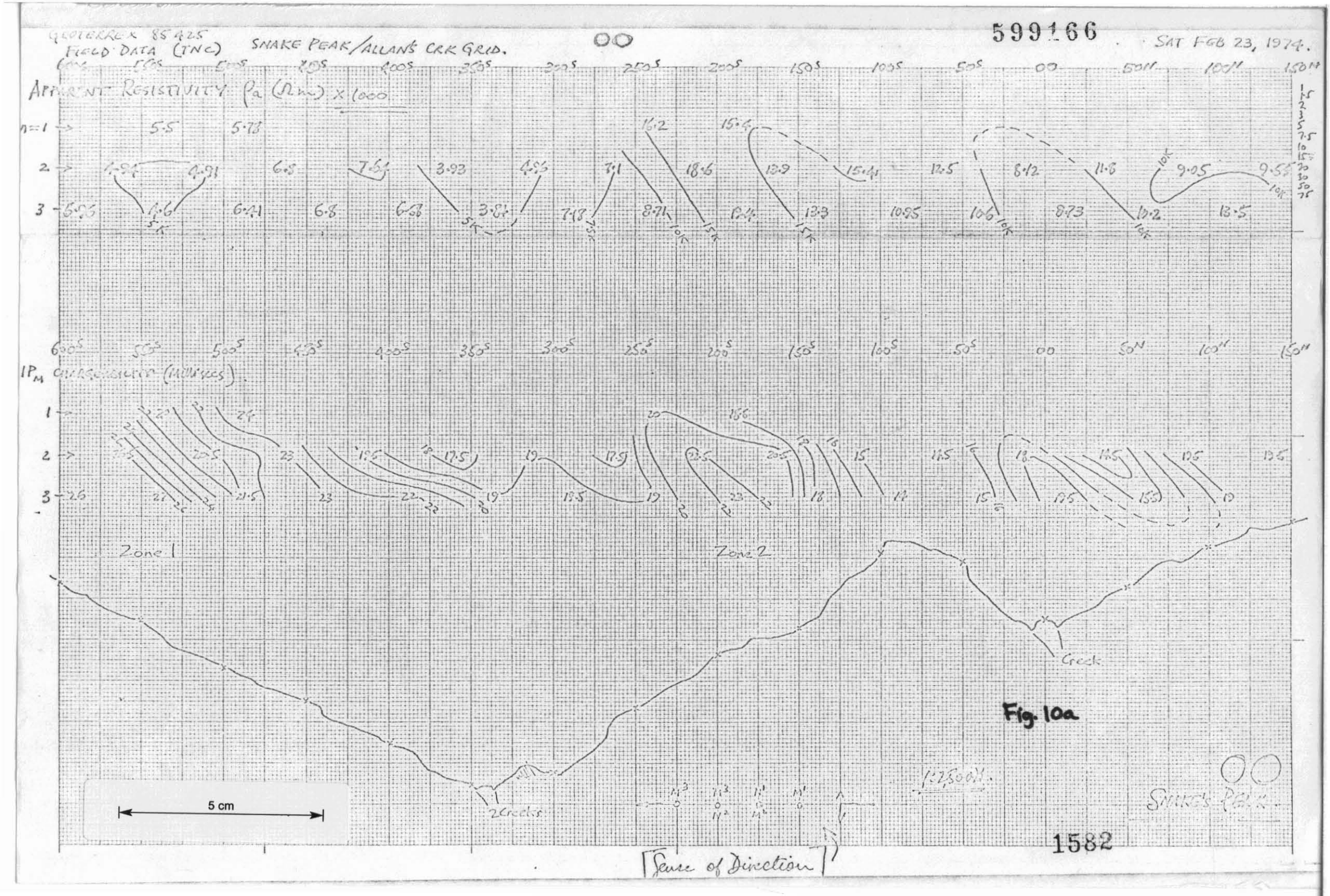


Fig. 10a

1582

GEOTERREX FIELD DATA (INC)

SNAKE PEAK ALLAN'S CREEK GRID.

100W

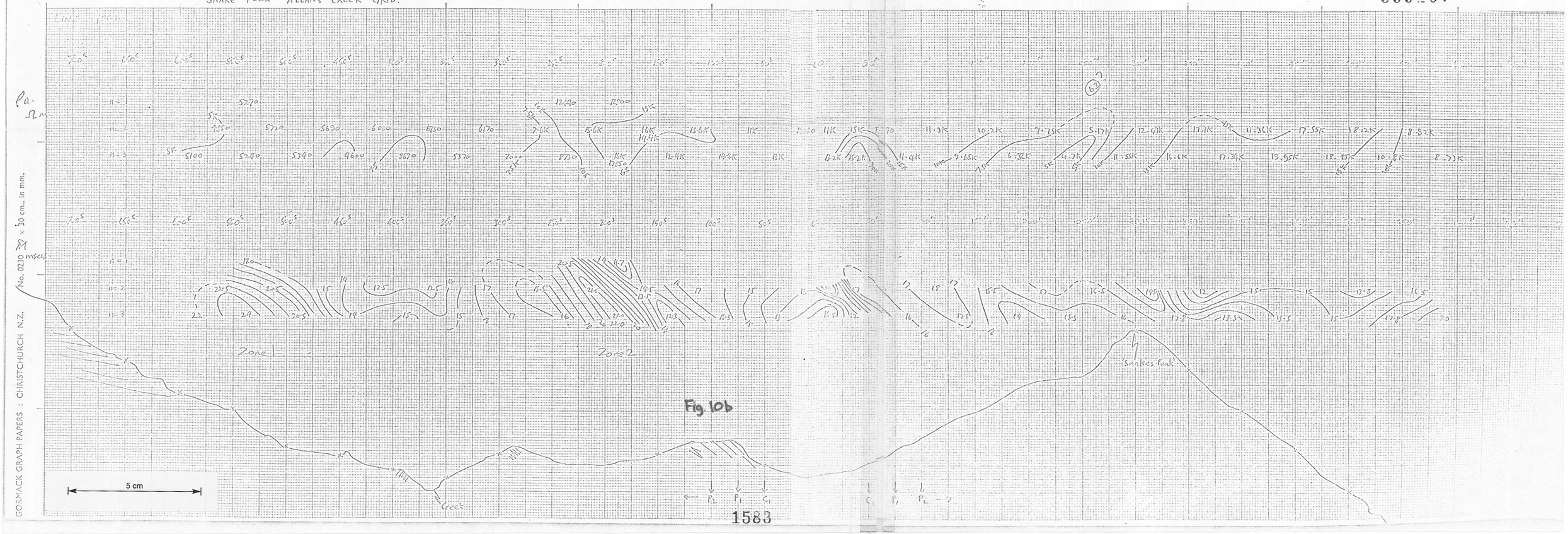


Fig. 10b

GORMACK GRAPH PAPERS : CHRISTCHURCH N.Z. No. 0230 mm × 30 cm., in mm.

GEOTERREX (K. & B.). FINDON'S GRID LINE 125N PROFILES. 599168 TUES FEB 26, 74.

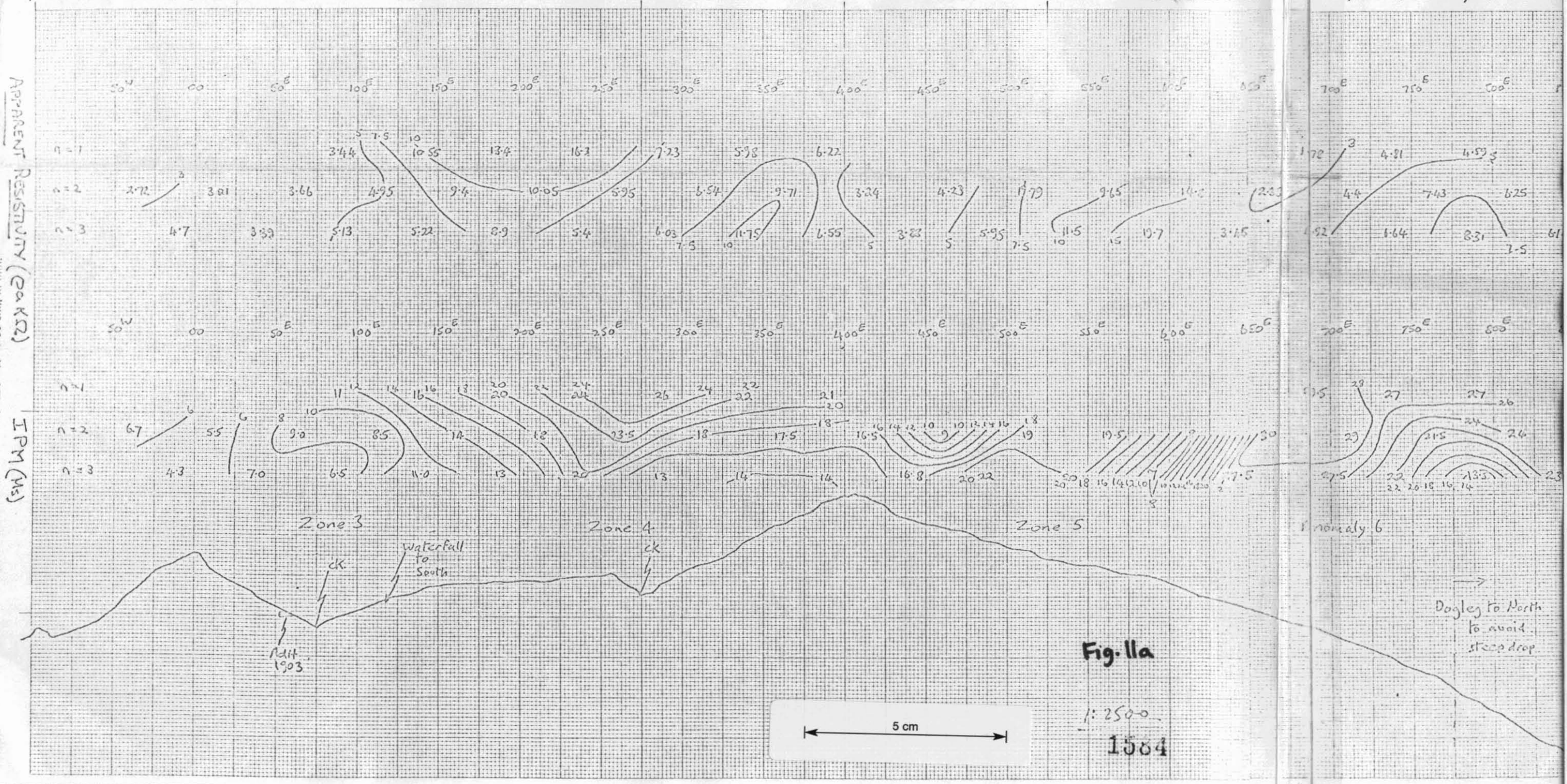


Fig. 11a

1:250

1564

GORMACK GRAPH PAPERS : CHRISTCHURCH N.Z. No. 0230 19 x 30 cm. in m.m.

599169

GEOTEPREX

FIELD DATA (TNC). FINDONS GRID.

Line 00

Mon Feb 25, 74

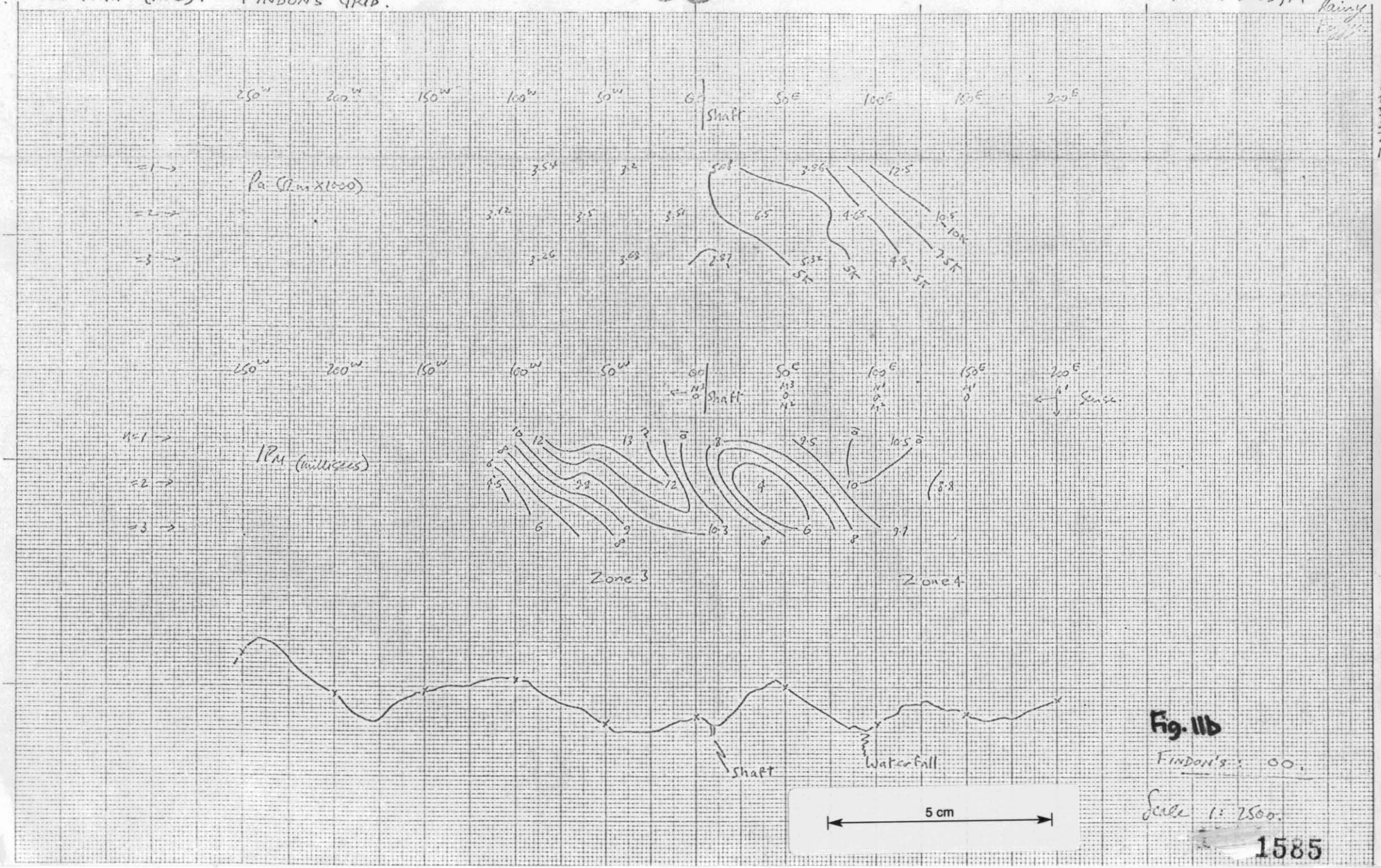


Fig. 11b

FINDON'S : 00.

Scale 1: 2500.

1585

GORMACK GRAPH PAPERS : CHRISTCHURCH N.Z. No. 0230 19 x 30 cm., in mm.

GEOTERREX 85 925
FIELD DATA (TNC) FINDON'S GRID 200 S 599170

SUN FEB 24, 74.

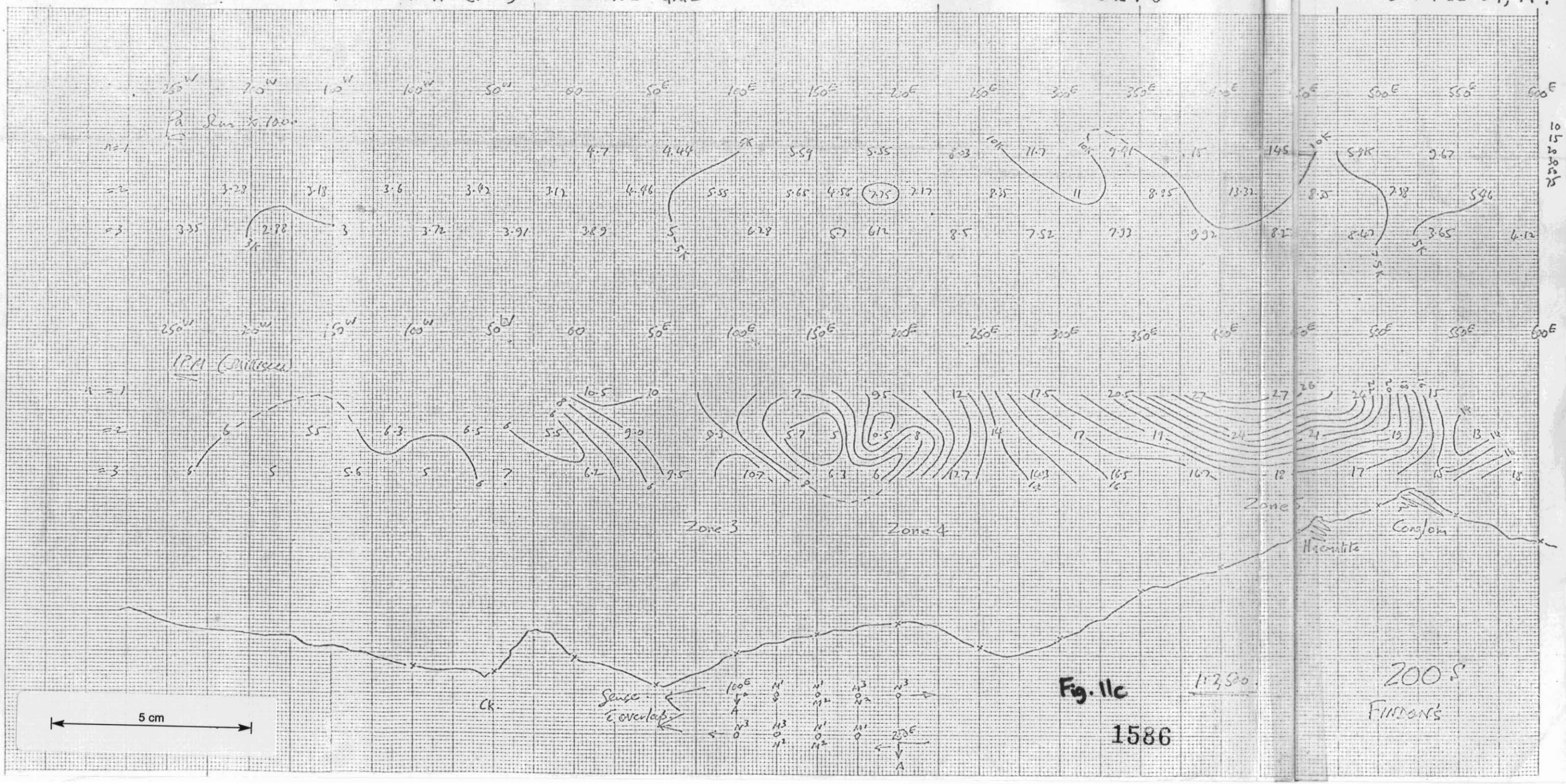


Fig. 11c

1:2500

1586

GEOTERREX FIELD DATA KLB.

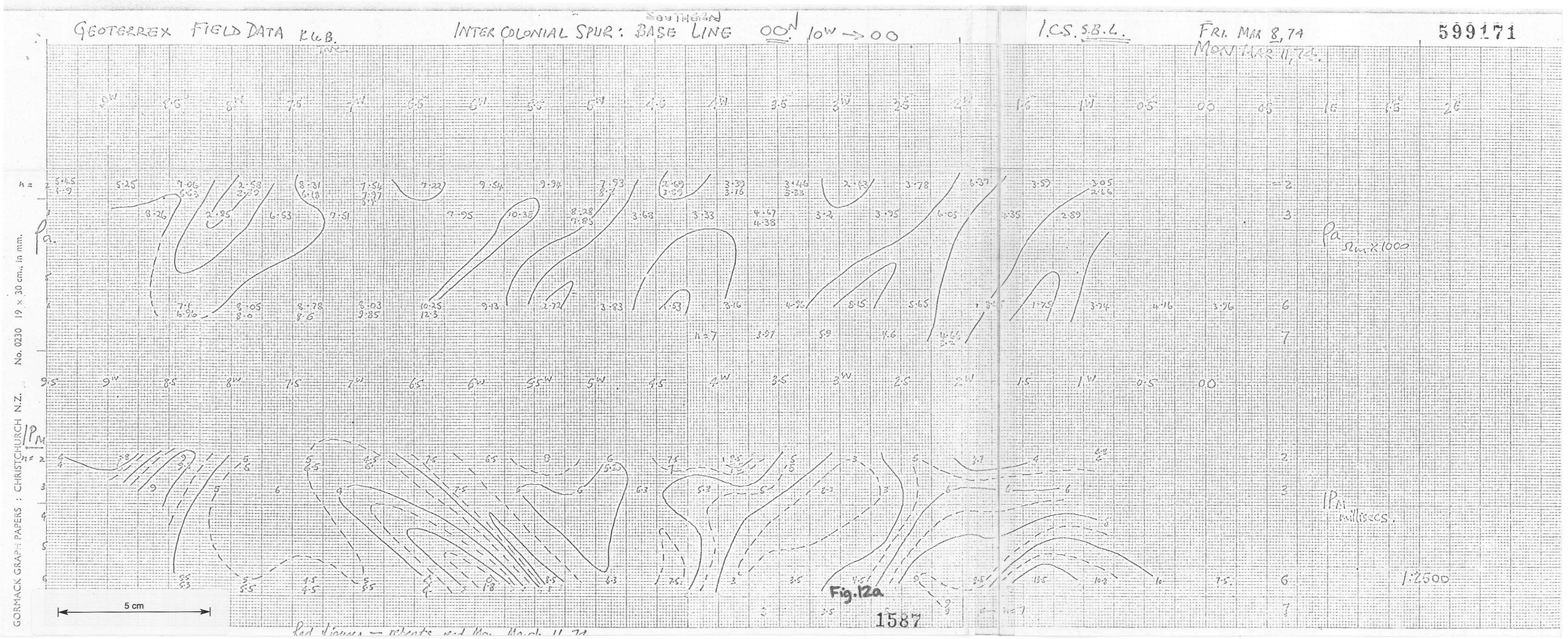
INTER COLONIAL SPUR: BASE LING SOUTHERN 00N 10W → 00

I.C.S. S.B.L.

FRI. MAR 8, 74

MON MAR 11, 74.

599171



GORMACK GRAPH PAPERS : CHRISTCHURCH N.Z. No. 0230 19 x 30 cm., in mm.

Fig. 12a

1587

Red Lines = repeats red Mon March 11 74

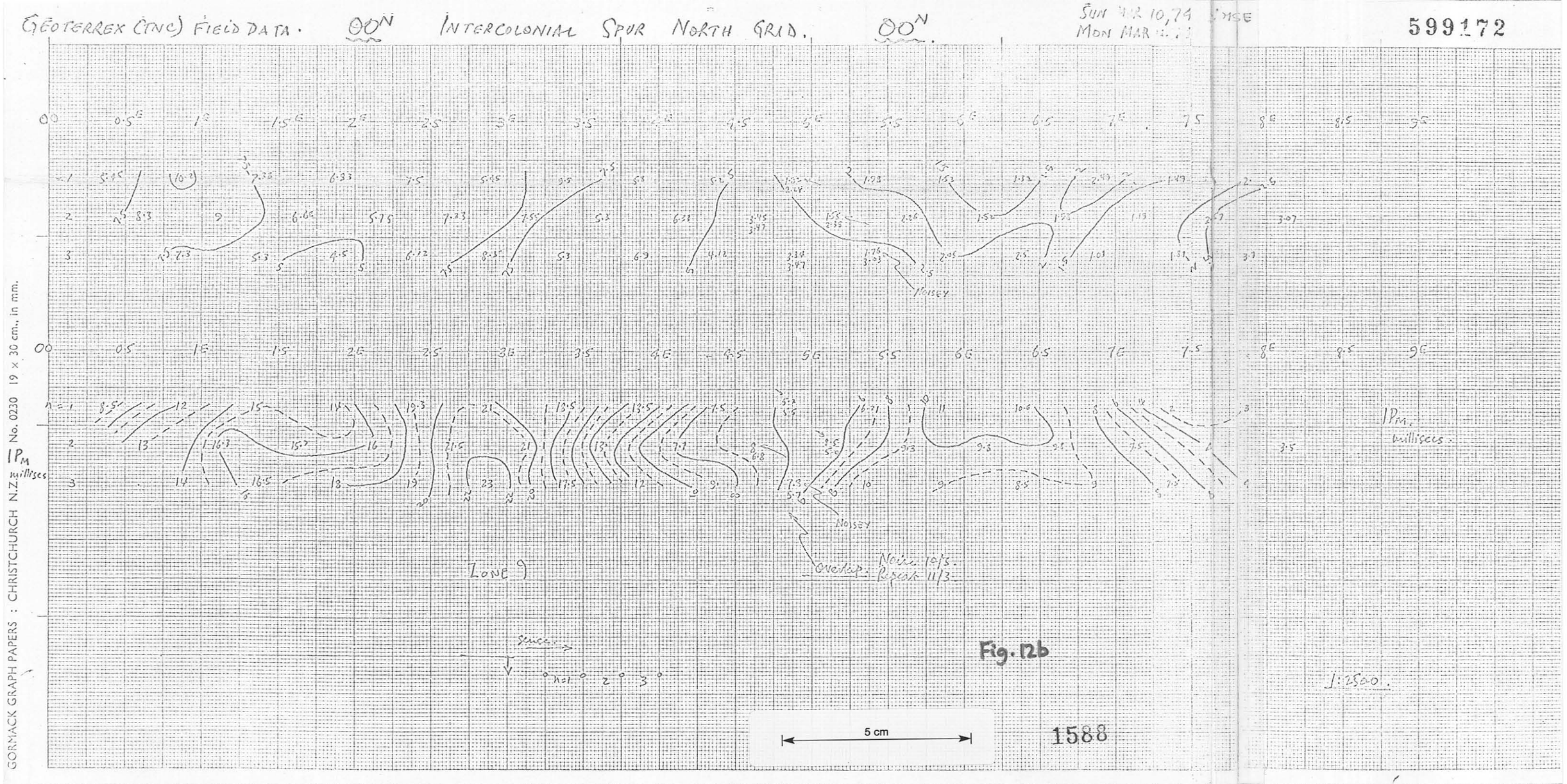


Fig. 12b

GORMACK GRAPH PAPERS : CHRISTCHURCH N.Z. No. 0230 19 x 30 cm., in mm.

GEOTERREX (UNE) FIELD DATA IN INTER COLONIAL SPUR NORTH GRID. CHARGEABILITY (modified). APPARENT RESISTIVITY (Ω.m)

IN 589173 SAT MAR 3,74.

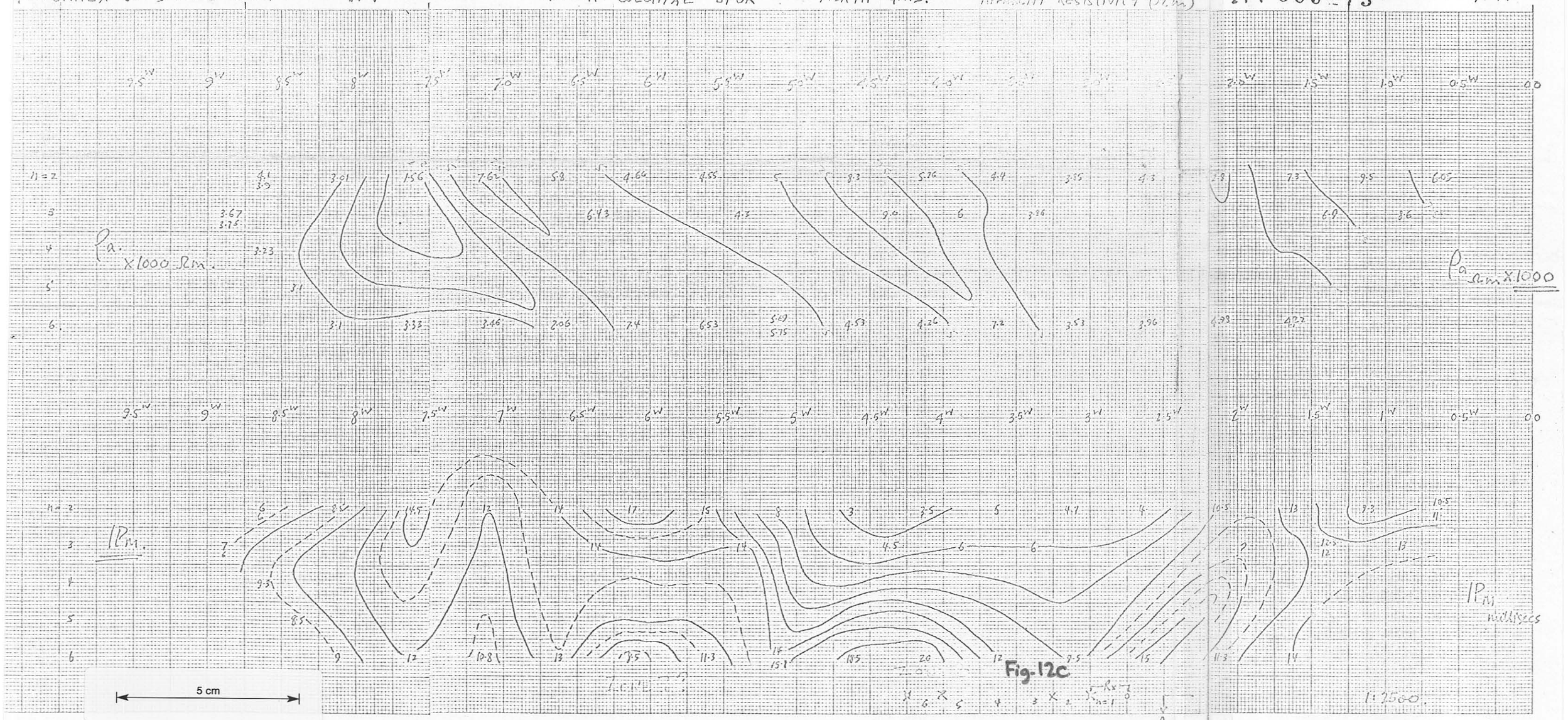


Fig. 12c

1589

LINE IN. I.C.S.

COLONIAL SPUR (NORTH GRID) LINE 2N.

THURS FEB 28, 74
FRI FEB 29, 74

599174

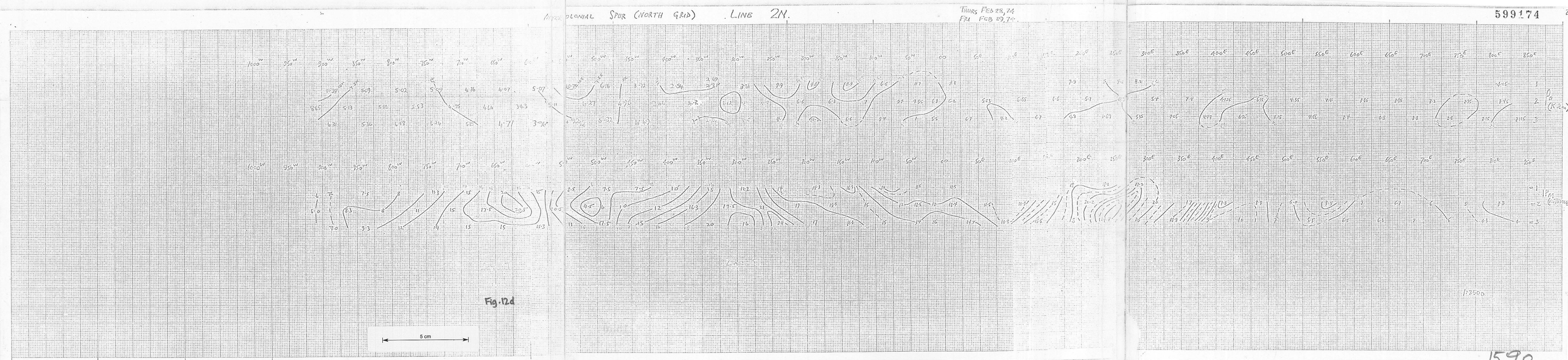


Fig. 12d

5 cm

1590

GEOTERREX (K. Le B.) FIELD DATA — INTER COLONIAL SPUR (NORTH) — 3N — 599175 — 14/3/74.

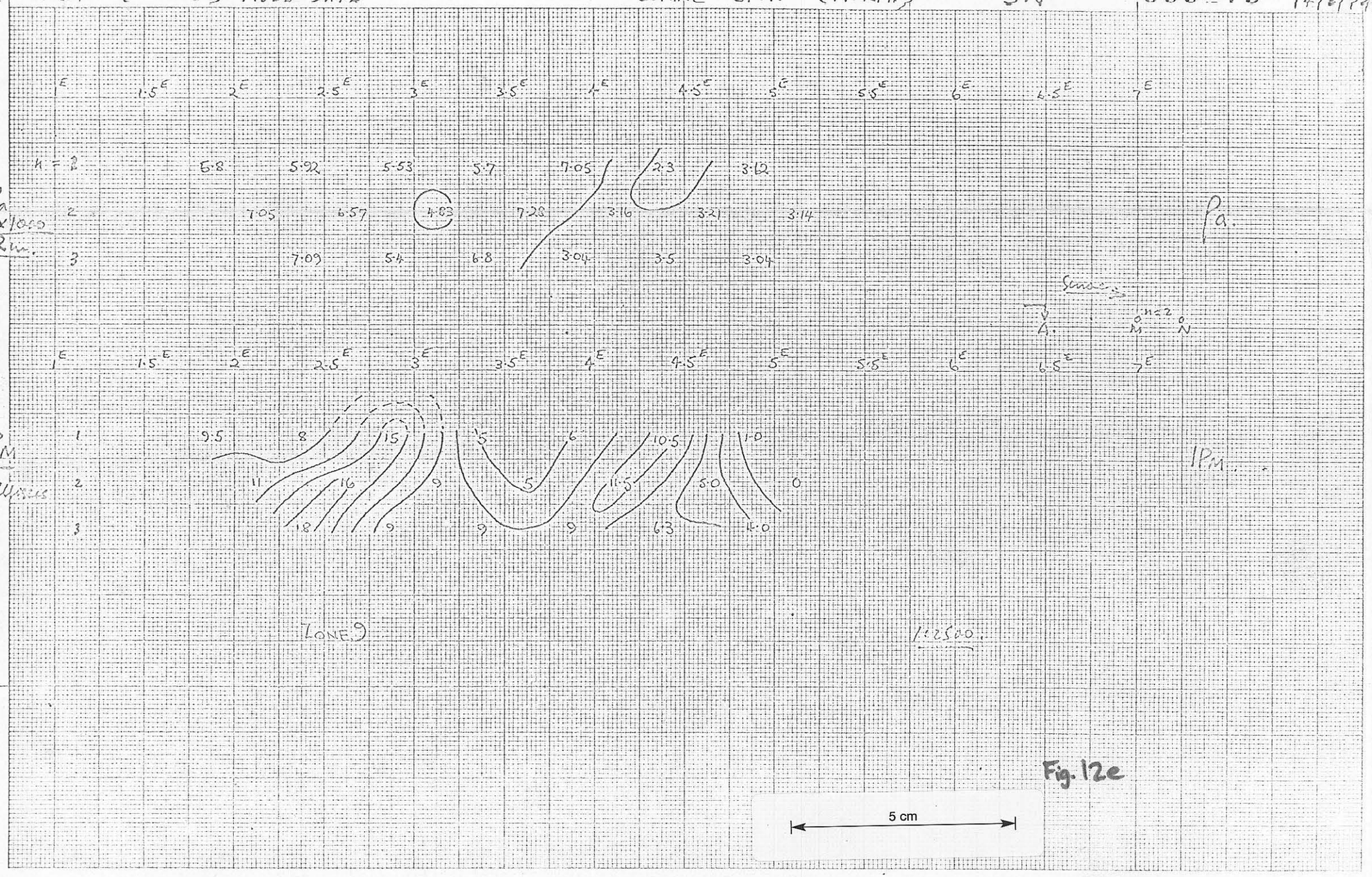


Fig. 12e

5 cm

1591

GORMACK GRAPH PAPERS : CHRISTCHURCH N.Z. No. 0230. 19 × 30 cm., in mm.

GORMAN GRAPH PAPERS : CHRISTCHURCH N.Z. No. 0230 19 x 30 cm., in mm.

3N GEOTERREX (TWE) FIELD DATA.

INTERCOLONIAL SPUR (NORTH) 3N. 5 cm 599176 15/3/74.

Pa x1000 Spun

Spun

1:2500

Pa millivolts

NUMEROUS POSSIBILITIES

Zone 7 Zone 8

Chlorite pyrite

Fig. 12f

1532

LINE 400S

Uncorrected slope distance

Base Line 00 — 50E — 100 — 150 — 200 — 250 — 300 — 350 — 400E

Pa (Ω m)

n=1: 5420 — 4160 — 1090 — 523 — 1070 — 1550 — 1220 — 1720

n=2: 2820 — 1530 — 1330 — 805 — 1450 — 1560 — 1590

n=3: 1340 — 1720 — 1560 — 1070 — 1410 — 1930

Uncorrected slope distance

Base Line 00 — 50E — 100 — 150 — 200 — 250 — 300 — 350 — 400E

IPm (millisecs)

n=1: 19·8 — 21·5 — 24·0 — 17·3 — 12·5 — 4·0 — 4·0 — 5·5

n=2: 24·0 — 27·0 — 17·5 — 14·0 — 13·0 — 2·8 — 3·3

n=3: 24·0 — 21·5 — 15·4 — 14·4 — 13·0 — 2·3

Surface — Electrode spread

depth = 50 m — 50m

depth = 100 m — 100m

depth = 150 m — 150m

depth = 200 m

Depth = 235 m

Approximate position of drill-hole in I.P. pseudo-section assuming a 2/3 correspondence between I.P. penetration and depth.

Base Line 00 — Graded Footpath — 50E — TURAM ANOMALY (B.M.R. 1959) — 100E — 150E Graded Footpath — 200E — 250E Bulldozed Road — 300E — 350E Bulldozed Road — 400E

Z 142000 } (4675/403E projected)
Z 142001 }

Cu 0·5% 2·0m — Cu 0·5% 2·0m — Tx — (Zone of sulphides >10%) — DILLON'S N°1 ADIT (projected)

Cu 0·9% 8·0m — Tx highly indurated (zone of sulphides >10%) — Ah — Tx — Tx (f.g.) — Ah — Tx — PEARCE'S ADIT (projected) — Txl — Tx — Txl

Hem. indurated — Tx — Txl — Tx — 71·9m — Haematite-indurated — Txl — Tx

329·8m — Mvvw Py — Mw Py — Mvw Py, Cpy — Mvvw Py — Mvw Py — Mvvw Py — Tx — Txl — Mvw Py, Cpy, Gal — Tx — Txl — Ah — Tx — Mvvw Py — TI — Txl

Strong I.P Effects — (Zone of chloritic alteration)

? ? ? ? ? ?

$\epsilon_1 Lp$

ϵ_2 Tx/Txl

LEGEND

CAMBRIAN

Flanking Pyroclastics ϵ_2

- Tx — Crystal Tuff: showing ignimbrite flow texture. Schistose.
- Txl — Crystal-Lithic Tuff: clasts (2cm–20cm) poorly sorted but orientated in a crystal tuff matrix: represents pyroclastic flow material. Schistose.
- TI — Lithic Tuff: clasts (1cm–4cm) streaked out in f.g. matrix of ash: represents air fall material. Schistose.
- Ah — Ash: f.g. highly silicified cherty material, massive

Central Core Rhyolites ϵ_1

- Lp — Massive Lavas: porphyritic, with characteristic saccharoidal texture, grey-purple. Frequent zones of pink, cherty haematite-rich material containing haematite-magnetite veinlets

Mineralisation (Total sulphides)

- Mvvw — Py : pyrite
- Mvw — Cpy : chalcopyrite
- Mw — Gal : galena
- □ — Assay >0·5 % Cu

5 cm

Drill Section in Plane of the Hole

599177

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

EL 13/65 Jukes Darwin
East Darwin

DRILL HOLE PROFILES: Z142000 & Z142001

Collar 4675/403E

Projected on to Line 400 S

SCALE: 1:1000	Date: 22/4/74	DRAWING No.
DRAWN BY: J.C.	Approved:	

1593 Fig 13a

Line 150 N

Uncorrected slope distance

100W 50 0 50 100 150 200E

Pa (Ω m)

n=1 2800 1785 1230 890 1615 1650 2500

n=2 1468 1110 870 1280 1630 1900

n=3 1559 1065 1080 1040 1970 1800

Uncorrected slope distance

100W 50 0 50 100 150 200E

IPm (millisecs)

n=1 26·0 13·5 26·5 18·0 10·0 14·4 7·0 — 50m

n=2 9·5 24·0 20·8 16·5 8·8 11·9 — 100m

n=3 15·0 19·0 20·0 16·0 7·8 9·8 — 150m

Surface

Electrode spread

depth = 50m

depth = 100m

depth = 150m

depth = 200m

Depth = 243 m

Approximate position of drill-hole in I.P. pseudo-section assuming a 2/3 correspondence between I.P. penetrations and depth.

100W 75W 50W 25W 00 25E 50E 75E 100E 125E

$\epsilon_1 Lp$ Central Core:
massive porphyritic lavas containing haematite-magnetite veinlets

ϵ_2 Tx/Txl Flanking Pyroclastics: Crystal Tuffs, Crystal-Lithic Tuffs.

Z 142002 (125N/188E projected)

DARWIN PTY ADIT

Tx

Txl aggomerate size clasts (pyroclastic surge material)

Mvvw Py, Cpy, Gal

Mvw Py, Cpy, Gal

Txl haematite indurated

Mvvw Py, Cpy

Mvvw Py

Mvvw Cpy

Mvvw Cpy

Mvvw Py, Cpy

Mvvw Py, Cpy

3313m

Lp

Strong I.P. Effects

5 cm

Drill Section in Plane of the Hole

599178

LEGEND

CAMBRIAN

Flanking Pyroclastics ϵ_2

Tx — Crystal Tuff: showing ignimbrite flow texture. Schistose

Txl — Crystal-Lithic Tuff: clasts (2cm–20cm) poorly sorted but orientated in crystal tuff matrix: represents pyroclastic flow material. Minor airfall material intercalations. Schistose

Central Core Rhyolites ϵ_1

Lp — Massive Lavas: porphyritic, with characteristic saccaroidal texture, grey-purple. Frequent zones of pink, cherty, haematite-rich material containing haematite-magnetite veinlets

Mineralisation (Total sulphides)

Mvvv
Mvw
Mw

Py: pyrite
Cpy: chalcopyrite
Gal: galena

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

EL 13/65 Jukes Darwin
East Darwin

DRILL HOLE PROFILE: Z 142002

Collar 125N/188E

Projected on to Line 150 N

SCALE: 1:1000	Date: 21/4/74	DRAWING No.
DRAWN BY: J.C.	Approved.	

1554 Fig 13b

LINE 00 N

Uncorrected slope distance

100W 50 00 50 100 150E

Pa (Ω m)

n=1 5475 3280 1340 920 1570 2090

n=2 2820 1255 1035 1310 2080 3100

n=3 3100 1570 1440 1500 2080 3000

Uncorrected slope distance

100W 50 00 50 100 150E

IPm (millisecs)

n=1 19·0 27·0 32·0 26·3 13·8 12·8

n=2 30·0 36·0 25·5 23·5 14·5 12·0

n=3 31·5 31·0 24·0 23·5 20·5 14·5

Surface

depth = 50m

depth = 100m

depth = 150m

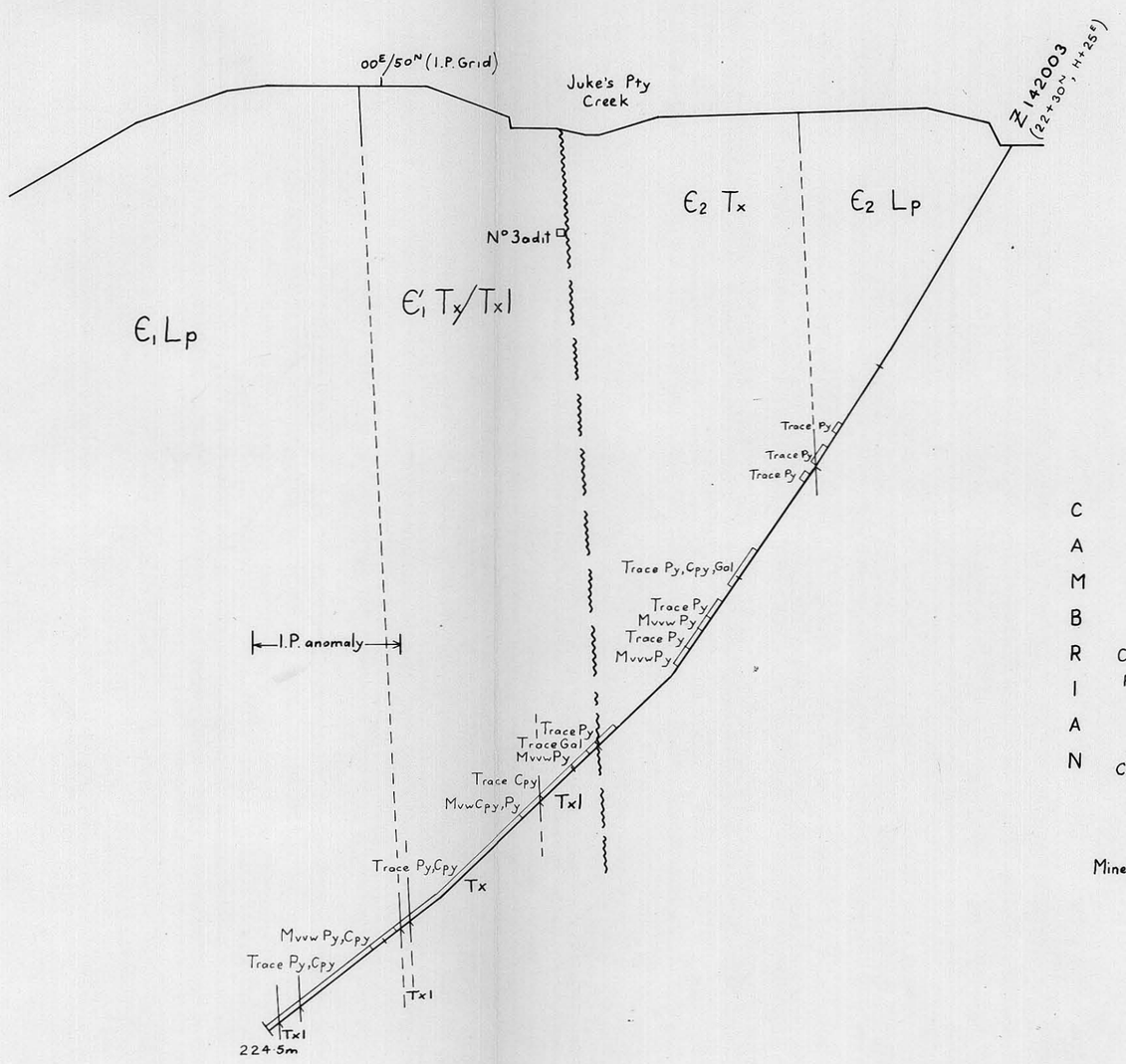
Electrode Spread

— 50m

— 100m

— 150m

Approximate position of drill-hole in I.P. pseudo-section assuming a 2/3 correspondence between I.P. penetration and depth.



LEGEND

CAMBRIAN

Flanking Pyroclastics ϵ_2

- Lp — Massive Lava: porphyritic with quartz feldspar phenocrysts up to 5mm.
- Tx — Crystal Tuff: fine to medium grained, often massive.

Central Core Pyroclastics ϵ_1'

- Txl — Crystal-Lithic Tuff: clasts (2-3cm) set in fine-grained chloritic matrix.
- Tx — Crystal Tuff: quartz phenocrysts up to 4mm, fine grained chloritic matrix.

Central Core Rhyolites

- Lp — Massive Lavas: porphyritic with characteristic saccaroidal texture, grey-purple colour.

Mineralization (Total sulphides)

- Trace — Py : pyrite
- Mvvw — Cpy : chalcopyrite
- Mvw — Gal : galena

Drill Section in Plane of the Hole 599179

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

EL 13/65 Jukes Darwin

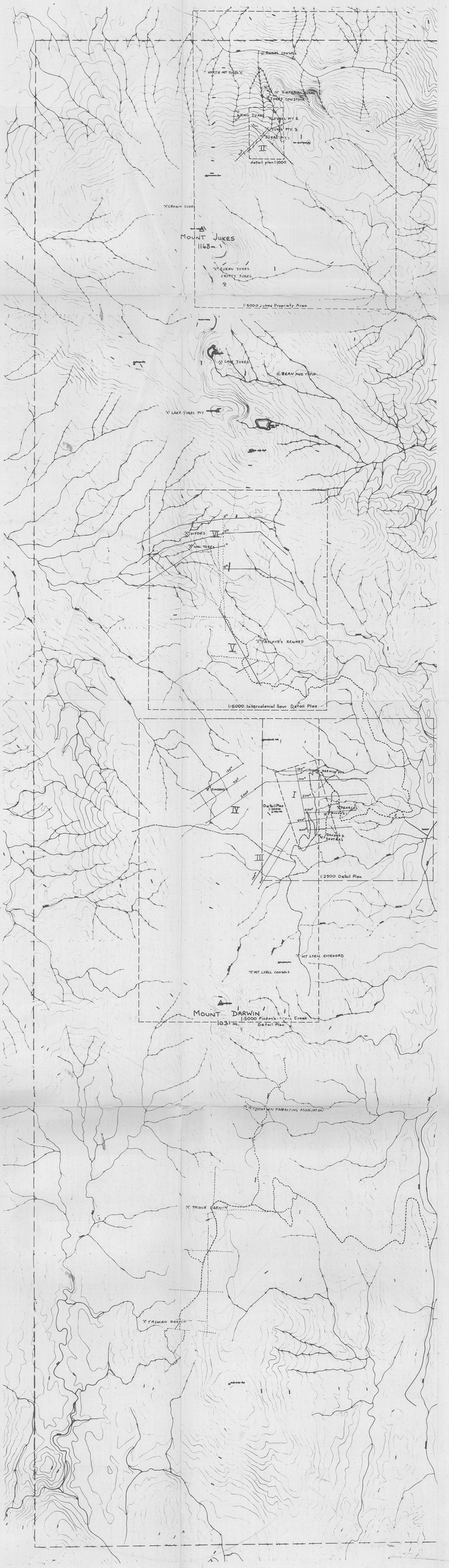
Jukes Proprietary

DRILL HOLE PROFILE: Z 142003

SCALE: 1:1000	Date: 23/4/74	DRAWING No
DRAWN BY: J.C.	Approved	

1585

Fig 14a



LEGEND.

INAL grid lines:
I East Darwin
II Jukes Pty.
III Allan's Creek
IV Fiedens
V South Intercolonial Spur
VI Hydes-Hal Jukes (N. intercolonial Spur)

Detail Areas

INAL bush tracks

BHP bulldozed grid lines
at Intercolonial Spur
and Darwin Plateau.

BULLDOZED ACCESS ROADS

OLD ADITS

5 cm

599180

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA.

E.L. 13/65 JUKES - DARWIN.

TOPOGRAPHICAL PLAN

Scale 1: 20,000	Date 10/11/73	Drawing No.
Drawn by R.J.D.	Approved D.R.	2468 H

1596

Boundary of E L 13/65

Mt Reed Volcanic Arc

Scg

Ocg I

Ocg II

Ecv

Egr

Edr

Mt Owen

Mt Hinsby

Core of West Coast Anticlinorium

Pre-cambrian Core of The Tasman Geanticline

Queenstown

Mt Lyell Mine

Linda Disturbance

Linda Fault

Δ Mt Owen

Δ Mt Lyell

Contemporaneous Faulting

Intense Folding

Intense Faulting

Strong Folding

Strong Faulting

Possible major fault

Strong Faulting

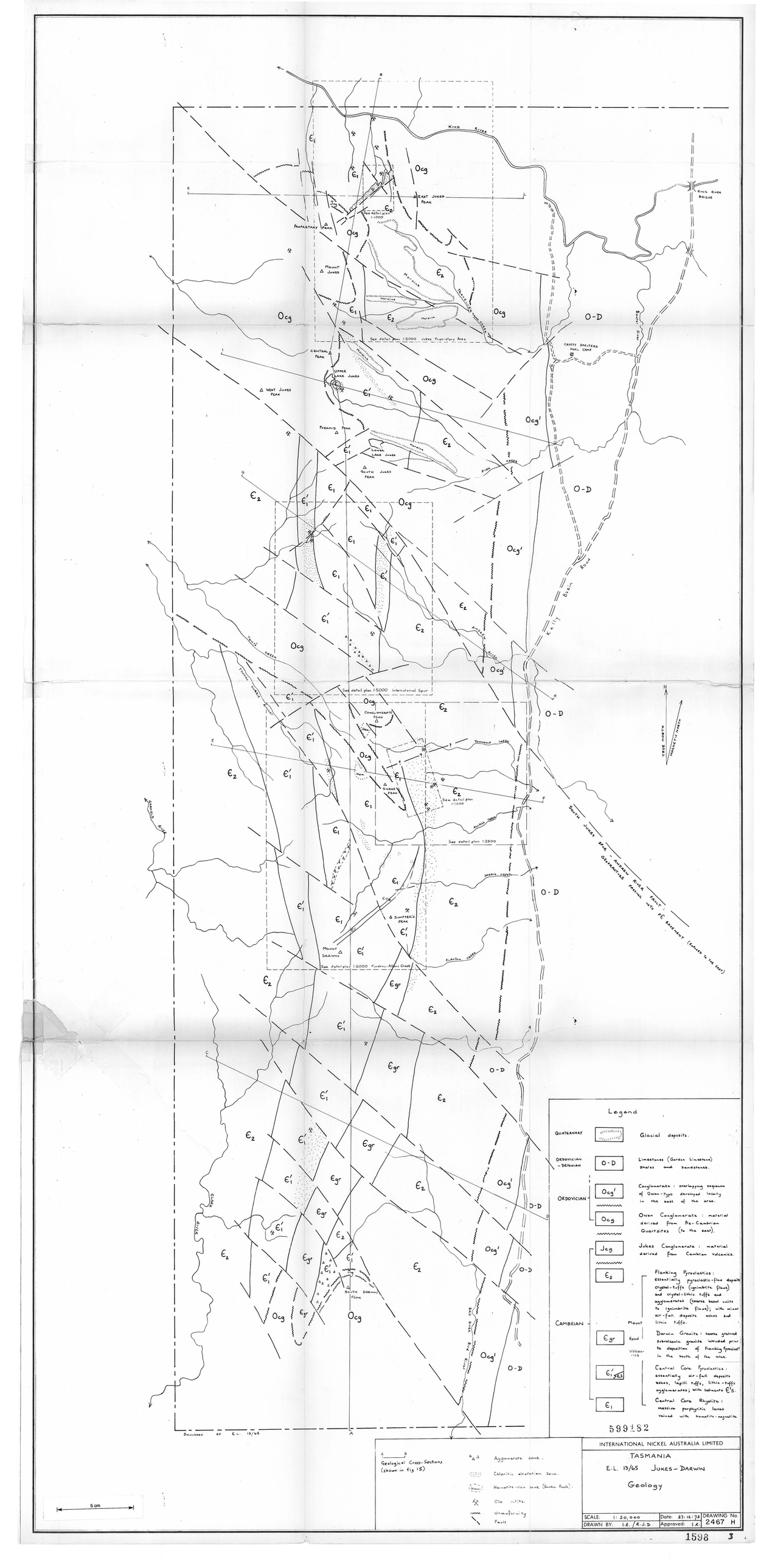
Strong Folding

Strong Faulting

Strong Folding

Strong Faulting

Strong Folding


King River
King River Bridge
East Jukes Peak
Preparatory Peak
Mount Jukes
Central Peak
Upper Lake Jukes
West Jukes Peak
Pyramid Peak
Lower Lake Jukes
South Jukes Peak
Crotty Smelters Mill Camp
Conglomerate Peak
Summit Peak
Sentinel Peak
Mount Darwin
South Darwin Peak
See detail plan 1:5000 Jukes Proprietary Area
See detail plan 1:5000 Intercolonial Spur
See detail plan 1:5000 Finders-Adams Creek
See detail plan 1:2000
See detail plan 1:1000
Boundary of E.L. 13/65
Legend
Quaternary — Glacial deposits.
Ordovician-Devonian — O-D — Limestones (Gordon Limestone) shales and sandstones.
Ordovician — Ocg' — Conglomerate: overlapping sequence of Owen-Fyge developed locally in the east of the area.
Ocg — Owen Conglomerate: material derived from Pre-Cambrian Quartzites (to the east).
Jcg — Jukes Conglomerate: material derived from Cambrian volcanics.
Cambrian — Mount Read Volcanics
ε2 — Flanking Pyroclastics: essentially pyroclastic-flow deposits crystal-tuffs (ignimbrite flows) and crystal-lithic tuffs and agglomerates (coarse based units to ignimbrite flows); with minor air-fall deposits ashes and lithic tuffs.
εgr — Darwin Granite: coarse grained subvolcanic granite intruded prior to deposition of Flanking Pyroclast in the south of the area.
ε'1 ε2 — Central Core Pyroclastics: essentially air-fall deposits ashes, lapilli tuffs, lithic-tuffs agglomerates; with subunits ε'5.
ε1 — Central Core Rhyolite: massive porphyritic lavas veined with hematite-magnetite
Geological Cross-Sections (shown in Fig 15)
Agglomerate zone.
Chloritic alteration zone.
Hematite-silica zone (Jukes Fault).
Old drillhole
Unconformity
Fault
599182
INTERNATIONAL NICKEL AUSTRALIA LIMITED
TASMANIA
E.L. 13/65 JUKES-DARWIN
Geology
SCALE: 1:20,000
Date: 27.12.72
DRAWING No. 2467 H
DRAWN BY: I.R. / A.J.D.
Approved: I.C.
5 cm
1598 3

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

E.L. 15/85 JUKES - DARWIN

Geological Cross Sections

(To accompany 1:20,000 Gurley Plan - Map 3)

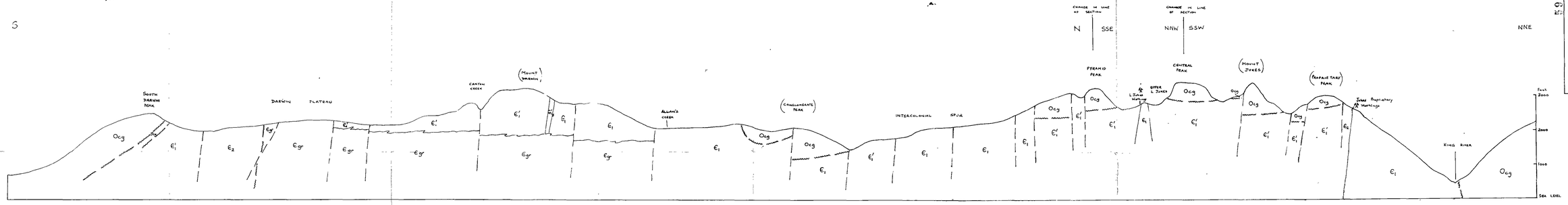
SCALE	1:20,000	Date 12.12.86	DRAWING No
DRAWN BY	L.A.C.	Approved	

5991983

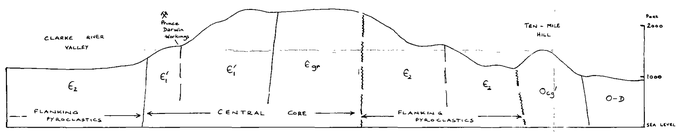
1559

3a

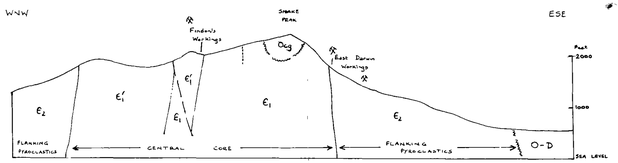
S



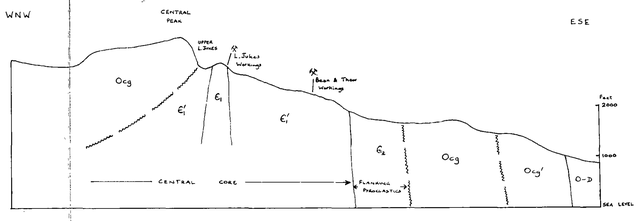
SECTION A - B



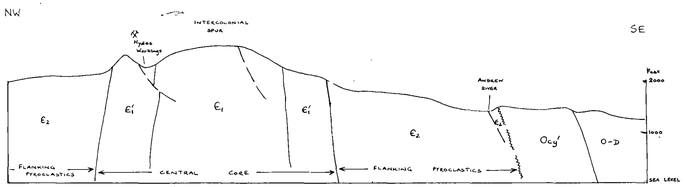
SECTION C - D



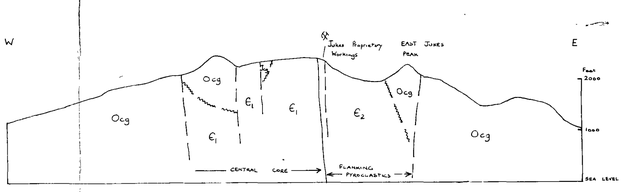
SECTION E - F



SECTION I - J

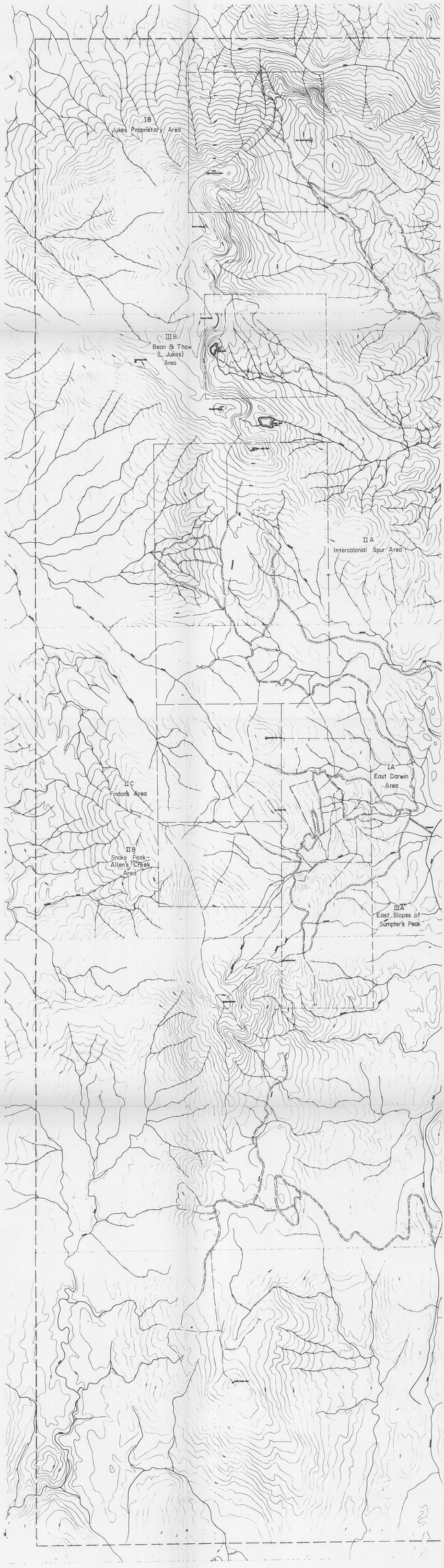


SECTION G - H



SECTION K - L

5 cm



LEGEND

Bulldozed roads

Bush tracks

Geological traverses (conducted during initial investigations)

Areas selected for detail work:

First Priority I A
I B

Second Priority II A
II B
II C

Third Priority III A
III B

5 cm

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

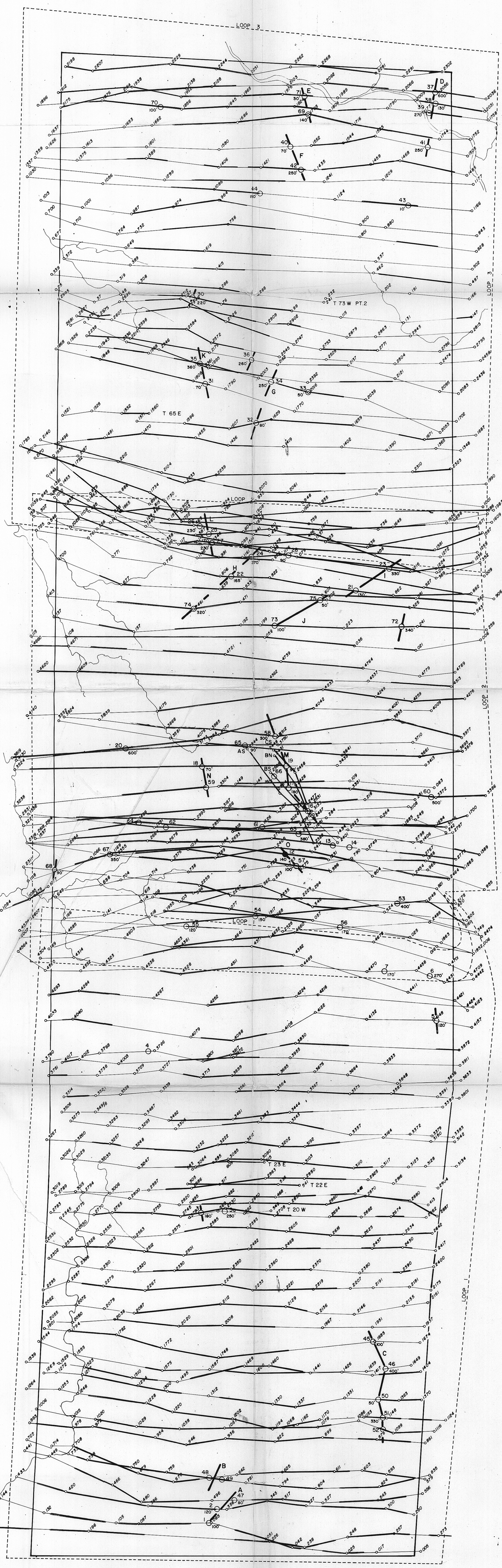
EL 13/65 JUKES – DARWIN

GEOLOGICAL TRAVERSES

599184

Scale: 1:20,000	Date: 11-6-74	Drawing No.
Drawn by: J.C.	Approved:	

1600 4



LEGEND

T 15 W —○1618— *Flight line showing line number and numbered tie points*

- ● *Category 1: σt > 100 MHOS, signal/noise > 2*
- ◐ *" 2: 10 ≤ σt ≤ 10 MHOS " " > 2*
- ○ *" 3: σt < 10 MHOS " " < 2*

27 ○ *Anomaly code number*

100' *Depth to current axis in feet*

C ——— *Conductor axis and reference code*

Lines for which the bird's altitude was lower than 400 ft. Results on these lines are expected to be relatively more reliable.

INTERNATIONAL NICKEL AUSTRALIA LIMITED

JUKES - DARWIN AREA
TASMANIA

TURAIR AIRBORNE
ELECTROMAGNETIC SURVEY
FLIGHT PATH AND ANOMALY PLAN

SURVEYED AND COMPILED BY
SEIGEL ASSOCIATES AUSTRALASIA PTY. LTD.
FEBUARY 1973

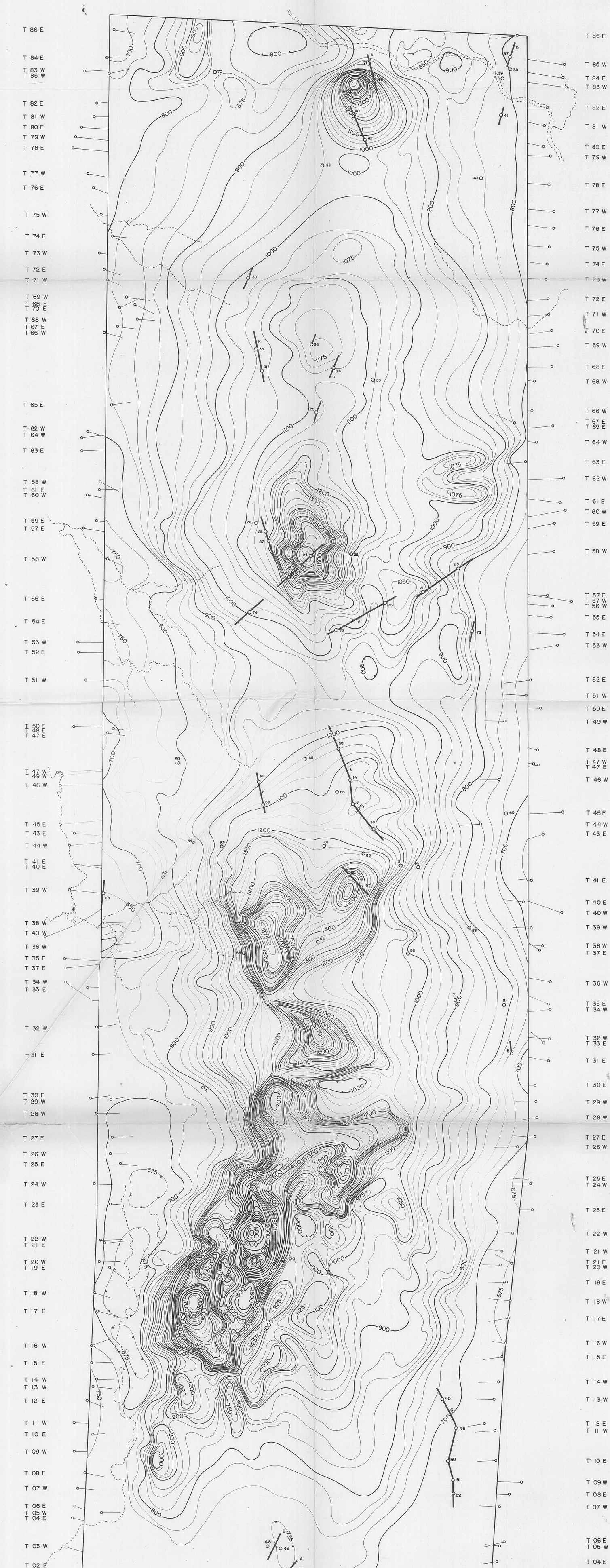
599185

5 cm

25 0 25 50
SCALE IN CHAINS

JOB N°. T 1033 SHEET 1 OF 1 PLATE 1

1601 5



LEGEND

T 15 W — *Extremities of flight line showing line number*

1000 / 900 — *Magnetic contours, contour interval 25 Gammas. Add 62,000 Gammas to values shown for total magnetic field intensity*

INTERNATIONAL NICKEL AUSTRALIA LIMITED

JUKES - DARWIN AREA
TASMANIA

AEROMAGNETIC CONTOUR PLAN

5 cm

SURVEYED AND COMPILED BY
SEIGEL ASSOCIATES AUSTRALASIA PTY. LTD.
FEBUARY 1973

599186

Chains 25 — 0 — 25 — 50 Chains

JOB Nº T 1033M — SHEET 1 OF 1 — PLATE 2

1602

CONGLOMERATE PEAK

SNAKE PEAK

Township Creek

Allan's Creek

"DARWIN"

Old Townsite

To Darwin Airport

To Stuart Highway

To Berrimah

Mt. Bundey Station

Old Darwin Township

True North

Magnetic North

5 cm

LEGEND.

	Ocg	Oolen Conglomerate Series Sandstones, grits and conglomerates
CAMBRIAN	Tlw	Water-laid Tuffs, fine grained, bedded. Seen as upper unit, in east.
	Tx	Crystal Tuffs, fine to medium grained grey-green rocks, with "porphyritic" appearance from quartz monocrysts and recrystallised glassy shards. Represent "ignimbrite" flows.
	ϵ_2 Txl	Crystal-Lithic Tuffs, medium-coarse grained heterogeneous rocks with grey-green tuff matrix containing clasts. Clasts measure 1cm to 10 x 20cm usually angular to well rounded. Represent clasts of porphyritic lavas but mainly tuffs, sometimes pyritic (i.e. "Pyrite Rocks") Represent basal parts of ignimbrite flows.
	ϵ_1 Lp	Lavas, porphyritic fine to medium grained pink stained. Commonly veined with magnetic - haematite. Interbedded with Tuffs (Ctc-Cm) base of unit at NE end of Edwin Hill

Sulphide mineralisations (Py & minor cpy) is associated with intense alteration zones in tuffs immediately flanking massive lenses

Geological boundary, inferred
Fault, inferred
Unconformity, inferred
Foliation
Grid Lines
Walking Tracks
Bituminised Roads
Contours (from 1:31,680 Black-up)
Adit
Costean
Mullock dump
Drill Hole
IP ANOMALY

BASE PLAN TAKEN FROM 1:2500 AIR-PHOTO ENLARGEMENTS

Position of grid information approximate only

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA 599187

E.L. 13/68 JUKES DARWIN.

EAST DARWIN AREA

Geology

Scale: 1:2500	Date: 29:9:73	Drawing No.
Drawn by: I.R.	Approved:	

1603 7

Elevation Control Plan showing adits, drill sites
, roads + tracks.
'0' Datum is entrance to Pearce's adit (335m above SL)
Contours at 10 metre intervals
Drill hole Traces, approximation of positions only
because of magnetic deflection of the Compass card
by magnetite-hematite mineralisation in Central Core Lenses

5 cm

599188

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA

E.L. 13/65 JUKES - DARWIN.

EAST DARWIN AREA

ELEVATION CONTROL PLAN

Scale: 1: 1000	Date: 29: 9: 71	Drawing No.	
Drawn by: I.R.	Approved:		

1604

B

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA 99189

E.L. 13/65 JUKES - DARWIN

JUKES PTY.

Geology

Scale: 1:1000	Date: 5:10:73	Drawing No.
Drawn by: I.R.	Approved:	

1605 - 9

N

TRUE NORTH

MAGNETIC NORTH

Creek

Proprietary

Jukes

Lp

Txl

Tx

ϵ_1 Lp

ϵ_2 Tx/TxL

H 29

H 28

H 27

H 26

H 25

H 24

H 23

G 27

G 25

G 24

G 23

F 23

F 22

F 21

E 23

E 22

I 26

I 25

J 26

J 25

J 24

No2 Adit

No3 Adit

No1 Adit

No2 Tunnel

No3 Tunnel

No1 Tunnel

Un-named 5m adit

224.5m

INAL I.P. GRID ORIGIN 00E 00N

00N 150W

00N 100W

00N 50W

00N 50E

00N 100E

00N 150E

00N 200E

00E 250N

00E 200N

00E 150N

00E 100N

00E 50N

00E 50S

00E 100S

00E 150S

00E 200S

00E 250S

00E 300S

OZ142003

Bulldozed Road

29

28

27

26

25

24

23

22

21

20

19

18

E

F

G

H

I

J

LEGEND.

5 cm

CAMBRIAN

Flanking pyroclastic ϵ_2 (rhyolitic sequence)

Central core rhyolite ϵ_1

Tx Crystal tuffs

Txl Crystal - lithic tuffs

Lp Lavas, porphyritic (phenocrysts 2-5mm. across)

Lp Lavas, porphyritic (phenocrysts 1-2 mm) across)

Txl denotes strongly iron-stained outcrops of dark green chloritised tuffs

Txl & Lp " moderately " " of weakly chloritised tuffs & lavas

Outcrop boundary

Geological boundary observed.

" " inferred.

Fault inferred

Mullock dump

Adit

Winze

Costean

Creek

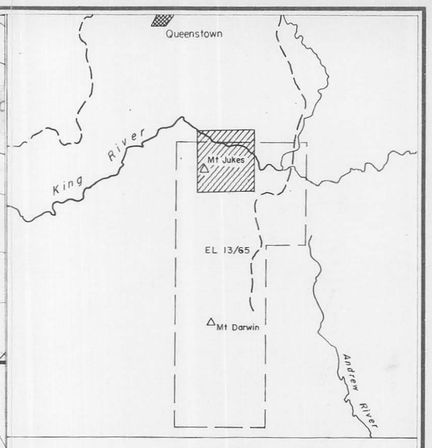
Bulldozed Road

OZ142003 Drill Site

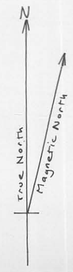
F21 B.H.P. Grid Peg

00S/50N I.N.A.L. " " (for I.P. Survey)

I.P. ANOMALY



LOCATION PLAN
Scale 1:250,000



5 cm

LEGEND

ORDOVICIAN
- Ocg — Owen Conglomerate: Sandstones, grits, + conglom.

CAMBRIAN
- Jcg — Jukes Conglomerate: material derived from Cambrian volcanics
- FLANKING PYROCLASTICS (RHYOLITIC SEQUENCE) ϵ_2
  - Tx — Crystal Tuffs
  - Txl — Crystal-Lithic tuffs
  - Lp — Lavas, porphyritic (phenoclasts 2-5mm across)
- CENTRAL CORE RHYOLITE ϵ_1
  - Lp — Lavas, porphyritic (phenoclasts 1-2mm across)
- Txl — Denotes strongly ironstained outcrops of dark green chloritized tuffs
- Txl+Lp — Denotes moderately ironstained outcrops of weakly chloritized tuffs + lavas

- Geological boundary observed.
- Geological boundary inferred.
- Fault inferred
- Adit
- Old workings
- Bulldozed road
- Drill site
- Creek
- Contours (from 31,680 blow-up)

599190

INTERNATIONAL NICKEL SOUTHERN EXPLORATION LIMITED

TASMANIA

EL 13/65 JUKES DARWIN

JUKE'S PROPRIETARY AREA

GEOLOGY

Scale: 1:5000	Date: 13·5·74	Drawing No.
Drawn by: J.C.	Approved:	

1606 16

ZONE 7
ZONE 8
ZONE 9
INTERCOLONIAL SHEAR
Hydes Creek
HYDE'S ADIT
HAL JUKES ADIT
TAYLORE'S REWARD ADIT
TURAIR 25
TURAIR 28
LINE 3N
LINE 2N
LINE 1N
LINE 0N
LINE 1S
LINE 2S
1000N
900E
800E
700E
Andrew River
To Darwin
Ocg
ϵ_2 Tx
ϵ_2 Txl
ϵ_1 Lp
ϵ_1 Txl
ϵ_1 Tx
?ϵ_2 Txl
?ϵ_1 Txl
Tp/Tx
Cpy as blebs & stringers (1cm x 8cm) in a green chloritic tuffite
BAP sampling Cu 0.9-1.5%
Cpy aggregates (0.5-5mm) as angular inclusions in lithic tuff
Cpy and Py finely disseminated in crystal-lithic tuffs at both of Pads
Cpy as blebs (<1cm wide) in quartz veins
Cpy & Py as disseminations
Cpy & Py as blebs (<1cm wide) in quartz veins
Cpy & Py as disseminations (<1cm) in lithic tuffs
Bleached zones
Silicified "bands" (<2m) of Py (<1%) in lithic tuffs
Cpy & Py as disseminations (<1%) in lithic tuffs
Cpy & Py as disseminations (<1%) in lithic tuffs
Cpy aggregates (0.5-5mm) as angular inclusions in lithic tuffs
Cpy aggregates (1-2mm) as angular inclusions in lithic tuffs
Cpy & Py as disseminations (<1%) in lithic tuffs
Cpy & Py as disseminations (<1%) in lithic tuffs
Cpy & Py as disseminations (<1%)

CONGLOMERATE PEAK

ANOMALY No 6

TURAIR 18

TURAIR 12

TURAIR 57

FINDON'S ADIT

MOUNT LYELL CONSOLS ADIT

MOUNT LYELL EXTENDED ADIT

SNAKE PEAK

SUMPTERS PEAK

MOUNT DARWIN

ZONE 1

ZONE 2

ZONE 3

ZONE 4

ZONE 5

Chloritic alteration in lavas, with fracturing

Chloritised lavas

Lenses of chloritised lavas

Barytes vein (0.5m thick)

Allan's Creek

Dardys Creek

Falls

Alteration Zone with disseminated pyrite

Chloritic

In coarse Breccia (0.3-5cm) aggregates of Cpy in lavas

In small costean Pyrite Bombs (40cm x 10cm)

EAST DARWIN AREA

$\epsilon_1 L_p$

$\epsilon_1 T_x/T_{xl}$

$\epsilon_1 T_{xl}$

$\epsilon_1 T_x/T_{xl}/Ah/T_L$

$\epsilon_1 T_{xl}$ Agg

$\epsilon_1 T_x/T_{xl}$

$\epsilon_1 L_p$ (hematite veined)

$\epsilon_1 T_{xl}$ (hematite veined by hematite-magnetite)

Ocg

$\epsilon_2 T_x/T_{xl}$

$\epsilon_1 T_x/T_{xl}/Ah/T_L$

$\epsilon_1 T/Ch$

$\epsilon_1 L_p/T_x/T_{xl}$

ϵ_{gr}

$\epsilon_2 T_x/T_{xl}$

1500' 1700' 1900' 2000' 2100' 2200' 2300' 2400' 2500' 2600' 2800' 3000' 3200' 3400'

600E 450E 300E 200W 125W 175W

LINE 125W LINE 50 LINE 100S LINE 50

N

True North

Magnetic North

5 cm

LEGEND:

ORDOVICIAN

Ocg — Owen Conglomerate: Sandstones, grits and conglomerates

MT. READ VOLCANICS:

ϵ_2 FLANKING PYROCLASTICS (RHYOLITIC)

Tx — Crystal-Tuff

Txl — Crystal-Lithic tuff

CAMBRIAN

ϵ DARWIN GRANITE

gr — Darwin Granite: subvolcanic, intrudes central core rhyolites. Clasts of granite observed in overlying Flanking Pyroclastics.

ϵ_1 CENTRAL CORE RHYOLITES

Tx — Crystal Tuff

Txl — Crystal-Lithic tuff

Agg — Agglomerates

TL — Lithic tuff (includes lapilli-tuffs)

Ah — Banded Ash

Ch — Chert (possibly water-laid ashes)

Lp — Lavas, massive pink porphyritic. Veined by hematite-magnetite

Geological boundary inferred.

Fault inferred.

Unconformity inferred.

I.P. ANOMALY (PLAN POSITIONS ARE APPROXIMATE)

I.P. ZONES & NUMBER

Old workings

Grid lines for I.P. surveys

O12 Turair Anomaly

Contours (in feet) taken from 1: 31,680 blow-up

INTERNATIONAL NICKEL AUSTRALIA LIMITED

TASMANIA. 599192

E.L. 13/65 JUKES DARWIN.

FINDON'S - ALLAN'S CREEK - SUMPTER'S PEAK AREA

Geology

Scale: 1: 5000 | Date 3 | 1: 74

Drawn by: R. J. D.

1608

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