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EL 1005

YANINEE

PROGRESS AND FINAL REPORTS TO LICENCE SURRENDER FOR THE PERIOD 2/6/82 TO 1/12/84

Submitted by
Carpentaria Exploration Co. Pty Ltd
1984

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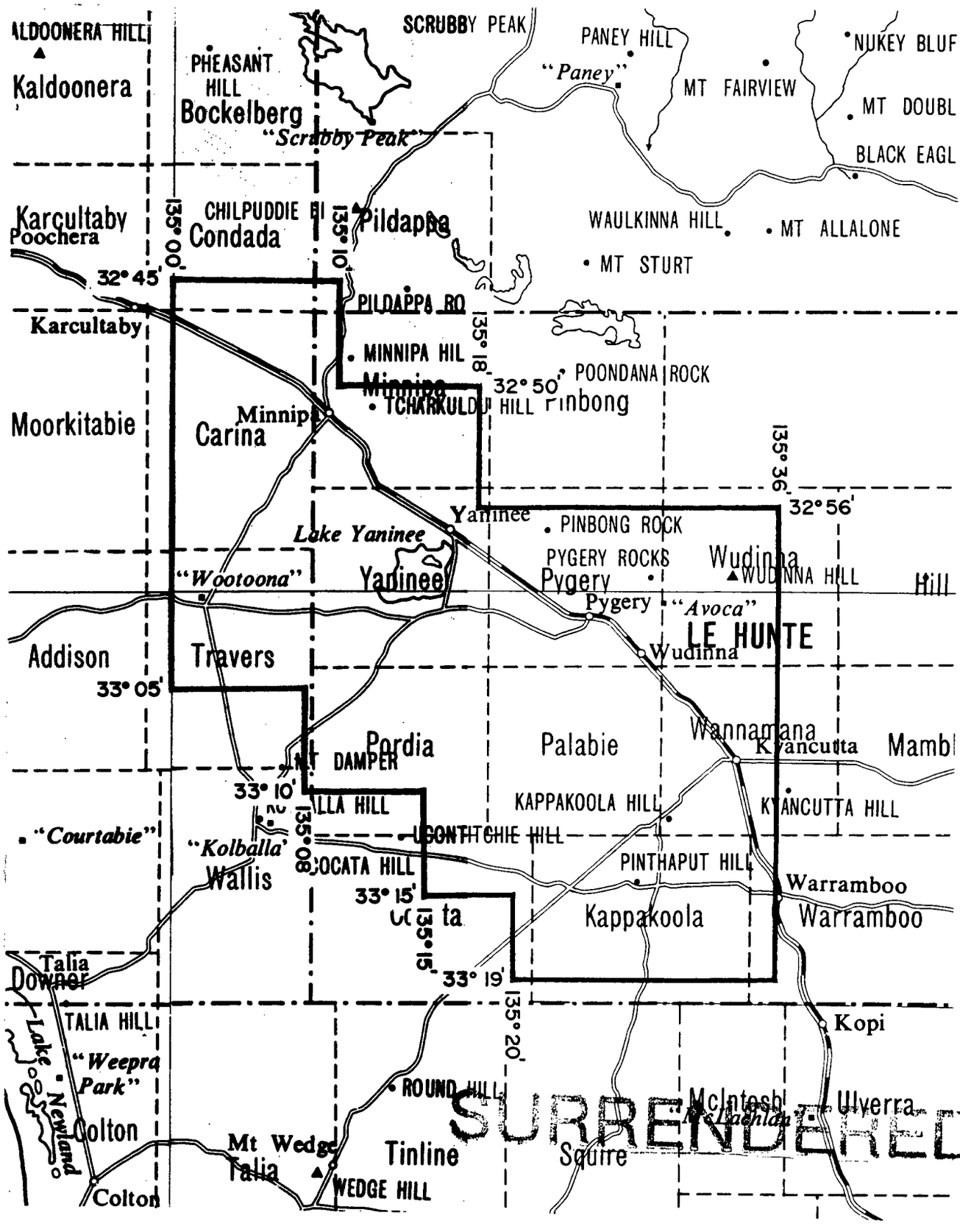
PRIMARY INDUSTRIES AND RESOURCES SA

CONTENTS ENVELOPE 5449

TENEMENT: E.L. 1005 - Yaninee.

TENEMENT HOLDER: Carpentaria Exploration Company Pty. Ltd.

SCHEDULE A



SCALE 1:500,000

KILOMETRES 10 0 10 20 30 40 50 KILOMETRES

APPLICANT: **CARPENTARIA EXPLORATION COMPANY PTY. LTD.**

DM: **680/81** AREA: **2276** square kilometres

1:250000 PLANS: **YARDEA KIMBA**

LOCALITY: **YANINEE AREA – EYRE PENINSULA**

DATE GRANTED: **2·6·82** DATE EXPIRED: **1·6·83**

EL No: **1005**

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

EXPLORATION LICENCE NO. 1005 "YANINEE"

PROGRESS REPORT FOR QUARTER ENDED MARCH 31, 1984

This report covers the work carried out on the Yaninee area which is the last remaining current exploration licence over the Narlaby Palaeochannel. It covers the period from January 1, 1984 to March 31, 1984.

1. TERMS AND CONDITIONS

The exploration licence covers an area of 2276 km^2 and was granted on June 2, 1982 for a term of one year. The expenditure commitment is $70 000.

2. EXPLORATION

No work concerning uranium exploration was carried out during the quarter. We are now interested in exploration for base metals in the south-east corner of the area. The western end of the Warramboo Magnetic anomaly is located in this area.

A trial INPUT survey was flown over this area and preliminary results showed the presence of two minor anomalies. Results will be forwarded next quarter.

It is planned to carry out approximately 5000 m of RAB drilling early in the next quarter.

3. EXPENDITURE

A statement of expenditure is appended.

.....
for G. Hooper
Geologist

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

EXPLORATION LICENCE NO. 1005 "YANINEE"

PROGRESS REPORT FOR QUARTER ENDED JUNE 1, 1984

This report covers the work carried out on the Yaninee area during the period April 1, 1984 to June 1, 1984, the expiry date of the current licence.

1. TERMS AND CONDITIONS

The exploration licence covers an area of 2276 km^2 and was granted on June 2, 1982 for a term of one year. It was subsequently renewed for a further twelve months. The expenditure commitment for the two year term is $140 000. We have now applied for an extension of the licence which is due to expire on June 1, 1984.

2. EXPLORATION

The INPUT data is still not in a form suitable for presenting to the Department. This is currently being produced and will be submitted at a later date.

A RAB drilling programme of 66 holes totalling 2192 m has been completed over the western end of the Warramboo magnetic anomaly. Assay results are still awaited. Drill hole logs and a location plan will be submitted when completed.

3. EXPENDITURE

A statement of expenditure is appended.

To be forwarded

for G. Hooper
Geologist

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

EXPLORATION LICENCE NO. 1005 "YANINEE"

PROGRESS REPORT FOR QUARTER ENDED SEPTEMBER 1, 1984

This report covers the work carried out on the Yaninee area during the period June 1, 1984 to September 1, 1984.

1. TERMS AND CONDITIONS

The exploration licence covers an area of 2276 km^2 and was granted on June 2, 1982 for a term of one year. It was subsequently renewed twice for a further two years. The expenditure commitment for the three year term is $170 000.

2. EXPLORATION

Drill hole logs from the previously reported RAB drilling programme have been completed and are included with this report. Drawings Nos. 30692 and 30693, which show the drill hole locations and the geochemical assay results are also included.

The INPUT data has now been finalised. and appended is the report on the survey by Geoterrex. Drawing No. 30685 shows the flight line paths while Drawing No. 30686 shows the location and type of anomalies detected by the survey.

3. EXPENDITURE

A statement of expenditure is appended.

.....
for G. Hooper
Geologist

PROSPECT YAMINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 1

LOCATION 8km NW Warrambool

ROTARY AIR BLAST DRILL HOLE LOG

HOLE CO-ORDINATES 549800E 6326810N — TD 24m

006

SAMPLE N°	ANALYSES ppm/%	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715751				CALCRETE		
52						
53				SANDY CLAY orange brown		
54				minor grey green		
55				SILTY SAND pale brown F gr.		
56		10		SAND F gr white partly silicified.		
57				orange		
58				dark grey brown		
59				SAND very F gr, black		
60						
61		20				
715762				SILT black		
				HOLE ABANDONED		
		30				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : MC RAE TR3 — LOGGED BY : G. HOOPER

DRILLER : P. NITSCHKE — DATE DRILLED : 5/4/84

SCALE : 1:500 — DRG/CODE No. :

PROSPECT YANINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

HOLE N° KRAB 2

LOCATION 3·5 Km NNW Warrambo

ROTARY AIR BLAST DRILL HOLE LOG

HOLE CO-ORDINATES 553920E. 6324770N TD 20m

007

SAMPLE N°	ANALYSES ppm/%	DEPTH METRES	LOG	DESCRIPTION	REMARKS
715763				SAND f gr pale brown	
64				calcrete bands	
65				CLAYEY SAND f gr grey to pink brown	
66					
67					
		10			
68				CLAYEY SAND f gr dark grey	
69					
70					
71					
715772				CLAYEY SAND very f gr grey	
		20		HOLE ABANDONED	

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: INGERSOLL RAND TR3

DRILLER: P. WITSCHKE

SCALE: 1:500

LOGGED BY: P BANKS

DATE DRILLED: 5/4/84

DRG/CODE No:

PROSPECT YANINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

HOLE N° KRAB 3

LOCATION 3·5 Km NNW Warrambo

ROTARY AIR BLAST DRILL HOLE LOG

008

HOLE CO-ORDINATES 554050E 6324380N

T.D. 14m

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	Au	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715773								SANDY SOIL brown minor calcrete		
74								SANDY CLAY pale brown		
75								" red brown		
76								SAND f gr orange		
77								BEDROCK highly weathered, white clay, a		
78						10		qtz, probably a gneissic rock		
715779	8	6	6	<1	0.08			HOLE STOPPED, no penetration		
						20				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING. RAND TR3

DRILLER : P. MITSCHKE

SCALE : 1 : 500

LOGGED BY : G. HOOPER

DATE DRILLED : 5/4/84

DRG/CODE No :

PROSPECT YANINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

HOLE N° KRAB 4

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 3·5 Km NNW Warrambo

HOLE CO-ORDINATES 554000E 6324480N

TD 14m

309

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	Au	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715780								SAND & CALCRETE F gr pale brown		
81										
82								SAND F gr grey to brown, silcreted		
83					0·04		+	BEDROCK ? weathered GRANITE		
84					0·06		+	grey med. gr q/z + clay		
85					<·01	10				
715786	8	8	2	<1	<·01		+	trace muscovite		
						20				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING. RAND TR3

DRILLER : P. NITSCHKE

SCALE : 1:500

LOGGED BY : P BURKS

DATE DRILLED : 5/4/84

DRG/CODE No.:

PROSPECT YANINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

HOLE N° KRAB 5

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION . 3·5Km NNW Warramboo

HOLE CO-ORDINATES 553970E 6324580N TD 16m

SAMPLE N°	ANALYSES ppm/%	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715787				SAND & CALCRETE F gr pale orange brown		
88						
89				CLAYEY SAND pale brown		
90				SAND F gr white & silcreted		
91		10		" F gr pale brown to dark brown.		
92						
93						
715794				HOLE ABANDONED - due to caving		
		20				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING. RAND TR3

DRILLER : P. MITSCHKE

SCALE :

LOGGED BY : P BIVES

DATE DRILLED : 5/4/84

DRG/CODE No :

PROSPECT YANINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

HOLE N° KRAB 6

LOCATION 3.0 Km NNW Warrambo

HOLE CO-ORDINATES 554120E 6324290N

TD 18m

011

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715795								SANDY SOIL & CALCRETE		
96										
97							Fe Fe	FERRICRETE hard, dark purple		
98								SAND F gr yellow		
99										
715800						10		BEDROCK ? highly weathered METASEDIMENT m gr q/z, mved sericite/brown clay		
01										
02	20	16	22	<1						
								16-18m no sample taken, highly contaminated		
						20				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING. RAND TR3

DRILLER : P NITSCHKE

SCALE :

LOGGED BY : G. HOOPER

DATE DRILLED : 5/4/84

DRG/CODE No. :

PROSPECT YANINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

HOLE Nº KRAB7

012

LOCATION 3.1 km [illegible]

HOLE CO-ORDINATES 554190E [illegible] 6324210N
[illegible] 24m

SAMPLE Nº	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715803								SAND • f gr, pale brown		
04								CALCRETE		
05								SAND ferricreted • silcreted		
06								" f gr, silcreted.		
07								BEDROCK, highly weathered grey to pale brown		
08						10		m gr qtz, weathered feldspar		
09								• sericite, f gr black mineral		
10	34	26	30	<1				(?Brit)		
11								? METASEDIMENT		
12										
13						20				
715814										
						30				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING. RAND TR3

DRILLER: P NITSCHKE

SCALE: 1:500

LOGGED BY: P BINKS

DATE DRILLED: 5/4/84

DRG/CODE No:

PROSPECT YANINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

HOLE N° KRAB 8

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 30 Km NNW Warriamboo

HOLE CO-ORDINATES 554260E 6324130N TD 16m

013

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715815							CALCRETE		
16							CLAYEY SAND orange brown minor grey green		
17									
18							SILTY SAND F gr red brown + orange		
19							BEDROCK highly weathered c gr g/z + white clay		
20	22	24	12	<1	10				
21							" F-m gr g/z + grey clay ? GNEISS		
715822									
					20				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING. RAND TR3

DRILLER : P. NITSCHKE

SCALE : 1:500

LOGGED BY : G. HOOPER

DATE DRILLED : 5/4/84

DRG/CODE No.:

PROSPECT YANINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

HOLE N° YCAB 9

014

LOCATION 2·9 Km NNW Warrambool

HOLE CO-ORDINATES 554290E 6324040N RL 24m

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS
715823							SAND f gr pale brown	
24							CLAYEY SAND red brown	
25							SAND pale to red brown, Ferricreted & silcreted.	
26								
27					10			
28								
29							SAND F gr, pale to dark brown	
30								
31								
32					20		? BEDROCK, highly weathered, grey clayey sand	
33							? METASEDIMENT	
715834	10	75	8	<1				
					30			

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING. RAND TR3

DRILLER : P. NITSCHKE

SCALE : 1:500

LOGGED BY : P BANKS

DATE DRILLED : 5/4/84

DRG/CODE No.:

PROSPECT YIMINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

HOLE N° KRAB 10

LOCATION 78 km NW Warrambo

HOLE CO-ORDINATES 554420E 6323950N T.D. 18m

SAMPLE N°	ANALYSES ppm/%	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715835				SAND Fgr, calcareous		
36						
37				SAND Ferricreted & silcreted		
38						
39			Sil	SILCRETE white-yellow		
40		10		SAND Fgr dark red brown, Ferricreted.		
41				SAND Fgr grey white		
42						
715843						
		20		HOLE ABANDONED.		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: JNG RAND TR3 | LOGGED BY: G. HOOPER

DRILLER: P NITSCHKE | DATE DRILLED: 5/4/84

SCALE: 1:500 | DRG/CODE No:

PROSPECT YANINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 11

LOCATION 2·7 Km NNW Warrambo

ROTARY AIR BLAST DRILL HOLE LOG

HOLE CO-ORDINATES 554490E 6323870N T.D. 24m

015

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715844							SAND & CALCRETE f gr pale brown		
45									
46							CLAYEY SAND f gr pale red brown		
47							" " red brown		
48					10		SAND ferricreted & silcreted		
49									
50							SAND. f gr pale brown, with silcrete bands		
51									
52									
53							SAND f gr dark brown		
54					20				
715855	50	26	120	<1			BEDROCK m-c gr gtz, musc & clay (after felds) ? weathered gneiss (one fragment of f gr wthd metased. with black mineral possibly after magnetite		
					30		HOLE ABANDONED - due to collapsing sand.		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING. RAND TR3 — LOGGED BY : P BANKS

DRILLER : P. NITSCHKE — DATE DRILLED : 6/4/84

SCALE : 1:300 — DRG/CODE No :

PROSPECT YAMINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 12

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 2·6km NNW Warrumbo 6323790N

HOLE CO-ORDINATES 554570E 6323790N T.D. 16m

018

SAMPLE N°	ANALYSES ppm/%	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715856				SAND f gr orange		
57				SILTY SAND f gr pink, calcareous		
58				" " minor silcrete bands		
59				CLAYEY SAND orange		
60				SAND & SILCRETE yellow - brown		
61		10				
62				FERRICRETED SAND		
715863				SAND f-m gr red brown		
				HOLE ABANDONED		
		20				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : INV. RAND TR3 — LOGGED BY : G. HOOPER

DRILLER : P. NITSCHKE — DATE DRILLED : 6/4/84

SCALE : 1:500 — DRG/CODE No.:

PROSPECT YANINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 13

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 2.5 Km NNW [illegible]

HOLE CO-ORDINATES 554640 6323710N T.D. 48m

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	IN mm METRES	LOG	DESCRIPTION	REMARKS
715864							SAND & CALCRETE f gr pale brown	
65								
66								
67							CLAYEY SAND f gr red brown	
68					10		SAND Ferricreted & silcreted red brown	
69								
70								
71								
72							BEDROCK highly weathered pale grey qtz, white clay sericite rock (? wthd GNEISS)	
73					20			
74								
75								
76							grey	
77								
78							" dark grey biotite, qtz, wthd feldspar rock (biotite SCHIST)	
79					30			
80								
81								
82	60	14	190	<1				
83								
84					40		more qtz rich.	
85								
86								
715887	80	6	120	<1				
					50			

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING. RAND TR3 | LOGGED BY: P BINKS

DRILLER: P NITSCHKE | DATE DRILLED: 6/4/84

SCALE: 1:500 | DRG/CODE No:

PROSPECT YARRINEE CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° KRAB 14

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 2.4 Km NNW Warrambo

HOLE CO-ORDINATES 554720N 6,323,620N R.L. 31m

918

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH IN METRES	LOG	DESCRIPTION	REMARKS	WATER
715888							Stony Soil orange		
89							SILT & CALCRETE yellow pink & calcareous		
90									
91							CLAYEY SAND orange brown		
92							SILT pink white & silcrete		
93					10		FERRICRETED SAND red to red br.		
94									
95							BEDROCK highly weathered m gr gtz & cream clay		
96									
97					20		" greyish, pale brown - cream brown sericite, gtz, trace biotite		
98									
99									
900							" grey & greenish wthrd c gr feldspar & biotite minor m-c gr gtz feldspar biotite GNEISS.		
01									
02									
715903	50	16	190	<1	30				
					40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING RAND TR3 | LOGGED BY : G. HOOPER

DRILLER : P. NITSCHKE | DATE DRILLED : 6/4/84

SCALE : 1:500 | DRG/CODE No:

PROSPECT YIPINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

HOLE N° KRAB 15

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 2.3 Km NNW Warrambo

HOLE CO-ORDINATES 554780E 6323550N T.D. 32m

719

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715904							SAND & CALCRETE pale brown		
05									
06							CLAYEY SAND red brown F gr.		
07							SAND yellow - silcreted.		
08					10		" - red brown, Ferricreted		
09									
10									
11									
12							BEDROCK grey q/tz, sericite, wtl Felds rock.		
13					20		(wthd GNEISS)		
14									
15									
16									
17									
18									
715919	22	10	18	<1	30				
					40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: P BINKS

DRILLER: P NITSCHKE | DATE DRILLED: 6/4/84

SCALE: 1:500 | DRG/CODE No:

PROSPECT YAMINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 16

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 2·2Km N Warramboo

HOLE CO-ORDINATES 554850E 6323470N — T.D. 32m

926

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS
715920							CALCAREOUS SOIL • cream white CALCRETE	
21								
22							CLAYEY SAND orange brown	
23							SAND F gr pale brown	
24							" yellow • silcreted.	
25					10		" red brown • Ferricreted.	
26								
27							BEDROCK highly weathered cream brown & yellowish clay minor q/z	
28								
29					20		" brown-grey green w/lthd Feldspar (sericitic) minor F-m gr q/z.	
30								
31								
32								
33								
34								
915935	70	20	34	<1	30		minor c gr green w/lthd Feldspars minor ? muscovite + wlt. biotite F gr black oxidised ? magnetite	
					40			

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING RAND TR3 — LOGGED BY : G. HOOPER

DRILLER : P. NITSCHKE — DATE DRILLED : 6/4/82

SCALE : 1 : 500 — DRG/CODE No.:

PROSPECT YAMINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 17

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 2·1 Km N Warrawagine

HOLE CO-ORDINATES 554920E 6323390N T.D. 24m

021

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715936								SAND & CALCRETE F gr		
37										
38								CLAYEY SAND red brown		
39								SAND red br to purple, ferricreted.		
40										
41						10		BEDROCK highly weathered grey to cream sericitic wtkd Felds. rock		
42										
43										
44								" cream grey sericite wtd Felds rock with <10% qtz		
45										
46						20				
715947	34	6	12	<1				? biotite GNEISS		
						30				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: P BINKS

DRILLER: P MITCHKE | DATE DRILLED: 6/4/84

SCALE: 1:500 | DRG/CODE No.:

PROSPECT YANINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

HOLE Nº KRAB 18

LOCATION 2 km N Warramboo

HOLE CO-ORDINATES 534980E 6323310N

6 323 310N

T.D. 24m

022

SAMPLE Nº	Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS
715948								CALCRETE	
49									
50								CLAYEY SAND orange minor pale green	
51								SAND silcreted minor ferricrete pale yellow brown	
52									
53						10		BEDROCK highly weathered, purplish yellow clay	
54									
55								" cream to pale br clay f-m gr qtz	
56									
57								" dark grey brown mud sericite minor m gr qtz + biotite possibly large wh. feldspars (1cm) schistose.	
58						20			
715959	75	32	195	<1					
						30			

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3

DRILLER: P NITSCHKE

SCALE: 1:500

LOGGED BY: G. HOOPER

DATE DRILLED: 7/4/84

DRG/CODE No:

PROSPECT YANINEE CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° KRAB 19

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1·9 Km N Warrawi Creek

HOLE CO-ORDINATES 555060E 6,323,240N RL 210 ±4m

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS
715960								SAND & CALCRETE F gr pale br.	
61								CLAYEY SAND F gr red br	
62									
63									
64								SAND F gr red br to yellow, Ferricrete.	
65									
66									
67								BEDROCK highly weathered pale grey wtl. felds some qtz grains	
68									
69								" grey sericite, wtl felds, qtz rock	
70									
715971	200	10	16	<1				" dark grey " with black v f gr mineral ? marcasite	

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: P BANKS

DRILLER: P. NITSCHKE | DATE DRILLED: 7/4/84

SCALE: 1:500 | DRG/CODE No.:

PROSPECT YAMINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 20

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1·8Km N Warramboo

HOLE CO-ORDINATES 555130E 6323150N — T.D. 32m

024

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715972								SILTY SOIL & CALCRETE. brown		
73								CALCRETE		
74								CLAYEY SAND orange brown		
75								SAND F gr pink brown, Ferricreted in part.		
76						10		SAND wlite - pale yellow, silcreted.		
77								" red brown, Ferricreted.		
78								BEDROCK highly weathered, pale to wlite clay		
79								" " grey brown & wlite clay minor f-m gr q/z		
80										
81						20		" grey brown clay minor sericite after feldspars & f-m gr q/z minor dissem. oxiol. pyrr magnetite		
82										
83										
84										
85								" f-m gr q/z & wthrd feldspars minor vc gr q/z. 1 fresh plag minor 2° pyrite. vf gr.		
86										
715987	16	26	18	<1		30				
						40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: JMG RAND TR3 — LOGGED BY: G. HOOPER

DRILLER: P. NITSCHKE — DATE DRILLED: 7/4/84

SCALE: 1:500 — DRG/CODE No:

PROSPECT YANINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.
ROTARY AIR BLAST DRILL HOLE LOG

HOLE N° KRAB 21

LOCATION 1·7 Km N Warramboo

HOLE CO-ORDINATES 555,900E 6,323,060N

T.D. 58m

025

SAMPLE N°	Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715988								SAND • pale brown f. gr. CALCRETE		
89										
90								CLAYEY SAND F gr red brown.		
91										
92										
93						10		SAND Fgr pale brown, silcreted.		
94										
95								BEDROCK highly wthed GNEISS, pale green with Feldspars, qtz, sericite		
96										
97										
98						20		" totally wthed GNEISS with bands of limonite (wet samples)		
99	36	50	40	<1						
716000										
01										
02										
03						30		" Soupy samples - red brown no Fragments		
04										
05										
06										
07										
08						40				
09										
10										
11										
12						50				
13										
14										
15										
716016	18	18	65	<1				Sample washed, abundant magnetite Probably a banded magnetite GNEISS.		
						60		HOLE ABANDONED - hard ground.		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3

DRILLER: P. NITSCHKE

SCALE: 1:500

LOGGED BY: P. BINKS

DATE DRILLED: 7/4/84

DRG/CODE No:

PROSPECT YAMINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 22

LOCATION 1.6 km N Warrambine — ROTARY AIR BLAST DRILL HOLE LOG

HOLE CO-ORDINATES 555250E 6322,960N 70 35m

026

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH IN METRES	LOG	DESCRIPTION	REMARKS	WATER
716017							SANDY SOIL pale brown		
18							CALCRETE		
19							CLAYEY SAND orange brown		
20									
21									
22					10		SAND F gr silcreted minor Ferricrete		
23									
24							BEDROCK highly weathered q/z + clay/sericite yellow-white minor purple.		
25									
26					20		" green brown sericitic clay		
27									
28							" dark grey F-m gr q/z + sericite minor F gr 2° pyrite		
29							" grey sericite + clay after feldspar minor q/z		
30									
31							" red brown, Ferruginous hem, sericite F-m gr q/z minor cream clay after feldspar.		
716032	100	8	240	<1	30				
					40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : IMS RMD TR3 — LOGGED BY : G. HOOPER

DRILLER : P NITSCHKE — DATE DRILLED : 7/4/87

SCALE : 1 : 500 — DRG / CODE No. :

PROSPECT YANINEE

LOCATION 1·5 Km N Werramboo

HOLE CO-ORDINATES 555290E 6322860N T.D. 40m

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

HOLE N° KRAB 23

027

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716033								SAND & CALCRETE F gr pale brown		
34										
35								CLAYEY SAND F gr red brown		
36										
37										
38						10				
39								SAND pale brown, silcreted		
40								BEDROCK white clay		
41								" green grey wthd felds, sericite		
42								qtz with small nodules &		
43						20		patches of black v fg mineral		
44								Probably a wthd GNEISS.		
45										
46										
47										
48						30				
49										
50										
51										
716052	70	26	95	<1		40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: WG RAND TR3 | LOGGED BY : P BANKS

DRILLER : P. NITSCHKE | DATE DRILLED : 7/4/82

SCALE : 1:500 | DRG/CODE No.:

PROSPECT YANINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 24

LOCATION 1·4 Km N Warrinilma — ROTARY AIR BLAST DRILL HOLE LOG — 028

HOLE CO-ORDINATES 555340E 6323770N 76 32m

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716053								SILTY SOIL brown		
54								CALCRETE		
55								CLAYEY SAND orange brown		
56										
57								FERRICRETE		
58						10		SILCRETE		
59								SAND F gr yellow		
60								BEDROCK wh,lt • yellow clay + m gr g/z		
61										
62										
63						20				
64								" grey brown clay after feldspar		
65								• m gr g/z.		
66										
67										
716068	44	32	8	<1		30				
						40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY : G. HOOPER

DRILLER : P NITSCHKE | DATE DRILLED : 7/4/84

SCALE : 1:500 | DRG/CODE No :

PROSPECT VANINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 25

LOCATION 1·3 Km N Warranilna

ROTARY AIR BLAST DRILL HOLE LOG

HOLE CO-ORDINATES 555390E 6327650N — TD 24m

029

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS
716069							SAND & CALCRETE f gr pale brown	
70								
71							CLAYEY SAND f gr red brown	
72								
73								
74					10		SAND f gr ferricreted	
75							" " silcreted.	
76								
77							BEDROCK white clay (wtd felds) & qtz	
78							remnant foliation	
79					20			
716080	10	8	10	<1			trace of f gr black mineral probably a wtherd GNEISS.	
					30			

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 — LOGGED BY : P BINKS

DRILLER : P NITSCHKE — DATE DRILLED : 9/4/84

SCALE : 1:500 — DRG/CODE No:

PROSPECT YANINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

HOLE N° KRAB 26

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1·2 Km N Warramboo

HOLE CO-ORDINATES 555440E 6322560N 6,322,560N 76 40m

080

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	Au	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716081								SILTY SOIL & CALCRETE brown		
82								CALCRETE		
83								CLAYEY SAND orange brown		
84										
85								" + silcrete		
86						10				
87								BEDROCK highly weathered. yellow owlite sericite + qtz minor purplish staining		
88										
89										
90								" " + yellow clay		
91					<·01	20				
92					"			" red brown clay / sericite + F-m gr qtz		
93					"					
94	24	12	28	<1	"					
95					"					
96						30				
97										
98	26	22	24	<1				" yellow green mica + qtz		
99										
716100	60	20	140	<1		40		" dark green, mainly chlorite / biotite + minor F-m gr qtz biotite SCHIST.		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: IMC RAND TR3 | LOGGED BY: G. HOOPER

DRILLER: P. NITSCHKE | DATE DRILLED: 9/4/64

SCALE: 1: 500 | DRG / CODE No:

PROSPECT YANINEE | CARPENTARIA EXPLORATION COMPANY PTY. LTD. | HOLE No KCRB 27

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1·1 Km N Warramboo

HOLE CO-ORDINATES 555490E 6322460N   T.D. 32m

SAMPLE No	Cu	Pb	Zn	Ag	Au	DEPTH METRES	DESCRIPTION	REMARKS	WATER
716101							SAND " F gr pale brown		
02							CALCRETE		
03							CLAYEY SAND F gr red brown		
04									
05									
06						10	" cream with silcrete bands		
07									
08							BEDROCK white clay (wthed feldspar) + qtz		
09							" " with Fe staining		
10									
11	40	14	32	<1	0.04	20			
12					0.04				
13					0.05		" pale grey green wthed biotite qtz SCHIST		
14					<.01				
15					"				
716116	28	14	48	<1	"	30			
						40			

ANALYSES ppm/%

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING RAND TR3

DRILLER : P. NITSCHKE

SCALE : 1 : 500

LOGGED BY : P BINKS

DATE DRILLED : 9/4/84

DRG/CODE No :

PROSPECT YANINEE. CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° YRAB 28

LOCATION 1.0 Km N Werrambee ROTARY AIR BLAST DRILL HOLE LOG

382

HOLE CO-ORDINATES 555520E 6822370N TD 32m

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
								SILTY SOIL & CALCRETE pale brown		
7/6117								CALCRETE		
18								CLAYEY SAND orange brown		
19										
20										
21								FERRICRETE, siliceous		
22						10		BEDROCK highly weathered partly silicified & ferruginous		
23										
24										
25								" " & clayey		
26						20		" cream clay, sericite & q/z		
27								" orange brown & reddish ferrug clay & f-m gr q/z		
28										
29								" grey green, minor brown clay sericite & f-m gr q/z		
30										
31						30				
7/6132	16	8	34	<1						
						40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: G. HOOPER

DRILLER: P. NITSCHKE | DATE DRILLED: 9/4/84

SCALE: 1:500 | DRG/CODE No:

PROSPECT YANINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 29

LOCATION 0·9km N Warrimbo — ROTARY AIR BLAST DRILL HOLE LOG — 6,322,250N see plan

HOLE CO-ORDINATES 555550E 6322150N — T.D. 32m

733

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716133							SAND & CALCRETE F gr pale brown		
34									
35							CLAYEY SAND F gr red brown		
36									
37									
38					10		SAND F gr Ferricreted		
39							" " silcreted.		
40	30	<4	12	<1			BEDROCK white clay (wth Feldspar) & qtz		
41	12	6	40	<1			" Fe stained white clay & qtz		
42	16	<4	18	<1					
43	12	<4	16	<1	20		" white clay & qtz with		
44	12	26	14	<1			disseminated ? hem. after magnetite		
45	8	26	26	<1					
46	10	270	12	<1			? magnetite spotted GNEISS		
47	12	760	8	<1					
716148	14	510	10	<1	30				
					40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: P BANKS

DRILLER: P NITSCHKE | DATE DRILLED: 9/4/84

SCALE: 1:500 | DRG/CODE No.:

PROSPECT YAVINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

HOLE N° RAB 30

LOCATION 0·8 km N Warrambo

HOLE CO-ORDINATES 555570E 6,322150N 7.D 40m

084

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716149								CALCRETE		
50										
51								CLAYEY SAND orange brown		
52								SAND orange brown		
53								" partly silcreted.		
54						10				
55								" white, silcreted.		
56										
57										
58								BEDROCK yellow clay afmgrg/z minor Fe spotting		
59						20		" pink brown		
60								" red brown clay minor yellowgreen.		
61										
62										
63								" yellow-white clay ° m gr g/z.		
64						30				
65										
66										
67								" grey brown "		
716168	46	55	28	<1		40		" grey-grey brown ° white clay ° g/z trace 2° pyrite		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING RAND TR3 | LOGGED BY : G. HOOPER

DRILLER : P NITSCHKE | DATE DRILLED : 9/4/84

SCALE : 1 : 500 | DRG/CODE No.:

PROSPECT YANNEE CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE No. KRAB 31

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 0·4km S Warramboo

HOLE CO-ORDINATES 555550E 6320970N -1D 32m

035

SAMPLE No	ANALYSES ppm/% Cu	Pb	Zn	Ag	Au	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
71669								SAND & CALCRETE F gr pale brown		
70										
71								CLAYEY SAND F gr red brown		
72										
73										
74						10		SAND, silcreted.		
75								BEDROCK pale red br clay with Fe staining		
76								" cream to pale br. clay (wthd feldsp)		
77										
78										
79						20				
80										
81					<001					
82					"			" brown clay & qtz, wthd mica - Fe stained.		
83	34	6	36	<1	"			probably mic. qtz SCHIST		
71684	16	8	28	<1	"	30		" pale green clay		
						40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: P BINKS

DRILLER: P NITSCHKE | DATE DRILLED: 9/4/84

SCALE: 1:500 | DRG/CODE No:

PROSPECT YANNIKEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

HOLE N° KRAB 32

036

LOCATION 0·5 Km S Warrambo

HOLE CO-ORDINATES 555550E 6320870N TD 32m

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716185							SILTY SOIL & CALCRETE		
86									
87							CLAYEY SAND orange brown & green.		
88									
89					10		" + silcrete		
90									
91							BEDROCK highly weathered white clay & f-m gr qtz minor black iron spotting		
92									
93									
94					20				
95							" yellow & cream sericitic clay & qtz, gneissic		
96									
97									
98							" grey brown sericitic clay & qtz muck purple black iron spotting		
99					30				
716200	85	14	8	<1					
					40				

REASON FOR HOLE :

DRILL TYPE: ING RAND TR3

DRILLER: P. NITSCHKE

SCALE: 1:500

LOGGED BY: G. HOOPER

DATE DRILLED: 9/4/84

DRG/CODE No:

PROSPECT YANINEE CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° KRAB 33

LOCATION 0·6 Km S Warramboo ROTARY AIR BLAST DRILL HOLE LOG

HOLE CO-ORDINATES 555500E 6320770N T.D. 32m

087

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	Au	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716201								SAND & CALCRETE f gr pale brown		
02										
03								CLAYEY SAND f gr red brown		
04										
05								SAND f gr ferricreted.		
06						10		" " silcreted.		
07								BEDROCK cream to pale br clay (w felds) qtz + f gr qtz		
08										
09								? hematite after magnetite		
10										
11						20				
12										
13										
14					<·01			" grey green clay, qtz, sericite with f gr ? hem after magnetite		
15					0·02					
716216	20	8	10	<1	0·02	30		? banded magnetite bearing GNEISS		
						40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: P BINKS

DRILLER: P NITSCHKE | DATE DRILLED: 9/4/84

SCALE: 1:500 | DRG/CODE No:

PROSPECT YANINEE. CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° KRAB 34

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 0.7 Km S Warrumbungle

HOLE CO-ORDINATES 555550E 6320670N 6,320,670N T.D. 32m

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		IN PIN METRES	LOG	DESCRIPTION	REMARKS	WATER
716217								CALCRETE		
18								CLAYEY SAND orange brown		
19										
20										
21								FERRICRETE & SILCRETE		
22						10				
23								BEDROCK highly wtred white-yellow clay		
24										
25										
26						20				
27										
28								" grey green Felds, bio/chl GNEISS		
29								Fresh plag minor Fe staining		
30										
31								20-40% biotite/chlorite		
716232	40	14	55	<1		30				
						40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY : G. HOOPER

DRILLER: P. NITSCHKE | DATE DRILLED: 9/4/84

SCALE: 1 : 500 | DRG/CODE No:

PROSPECT YANNEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 35

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 0·8 Km S Warrambo

HOLE CO-ORDINATES 555540E 6320570N — T.D. 40m

039

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS
7/6233							SAND & CALCRETE f gr pale brown	
34								
35							CLAYEY SAND f gr red brown	
36								
37					10			
38							SAND f gr ferricreted.	
39							" f gr silcreted & ferricreted.	
40								
41								
42					20		BEDROCK pale br limonite stained qtz & clay (wthd Feldspar) probably wth. GRANITE GNEISS	
43								
44								
45								
46								
47					30			
48								
49							" grey weathered GNEISS with fine gr ?hem after magnetite.	
50								
51								
7/6252	14	14	10	<1	40			

WATER

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: MG RAND TR3 — LOGGED BY: P BANKS

DRILLER: P NITSCHKE — DATE DRILLED: 10/4/84

SCALE: 1:500 — DRG/CODE No:

PROSPECT YAMATEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 36

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 0·9km S Warramboo

HOLE CO-ORDINATES 555540E 6320470N — T.D. 32m

040

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716253								SOIL & CALCRETE		
54								CLAYEY SAND orange		
55										
56										
57										
58						10				
59								SILCRETE slightly ferruginous		
60								BEDROCK silicified cap on wh.ite siliceous wthed bedrock		
61										
62								" highly weathered pale brown clay + qtz		
63						20				
64								" brown to yellow brown wthed feldspar biot. GNEISS		
65										
66										
67								" grey green GNEISS with minor hem staining		
716268	18	6	46	<1		30				
						40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING RAND TR3 | LOGGED BY : G. HOOPER

DRILLER : P. NITSCHKE | DATE DRILLED : 10/4/84

SCALE : 1:500 | DRG/CODE No.:

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

HOLE N° KRAB 37

PROSPECT YARINEE

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1·0 Km S Warramboo

HOLE CO-ORDINATES 555540E 6320370N T.D. 32m

041

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716269							SAND & CALCRETE F gr pale br		
70							CLAYEY SAND F gr red brown		
71									
72									
73					10		SAND F gr slightly silcreted & ferricreted		
74									
75									
76							BEDROCK cream brown clay & qtz ? wtred gneiss		
77									
78					20		" pale brown lim stained clay & qtz		
79									
80									
81							" green brown wtred biotite GNEISS		
82									
83					30				
716284	22	8	55	<1					
					40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3

DRILLER: P WITSCHKE

SCALE: 1:500

LOGGED BY: P BINKS

DATE DRILLED: 10/4/84

DRG/CODE No.:

PROSPECT YANINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

HOLE N° KRAB 38

LOCATION 0.6 km SW Warrambool

HOLE CO-ORDINATES 555000E 6321020N T.D. 40m

042

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716285							SOIL & CALCRETE		
86									
87							CLAYEY SAND orange		
88									
89									
90					10		SAND pale brown partly silicified		
91							SAND f gr white - pale brown		
92							SILCRETE white		
93							BEDROCK pale brown sil. gneissic rock		
94									
95					20				
96							" Ferruginous sil rock, purple brown minor yellow		
97									
98							" wthd gneissic rock yellow green clay & f gr qtz		
99									
300					30				
1							" wthd GNEISS purple brown & minor yellow green		
2									
3							" grey white qtz felds GNEISS minor f gr 2° pyrite		
716304	14	6	24	<1	40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3

DRILLER: P. NITSCHKE

SCALE: 1:500

LOGGED BY: G. HOOPER

DATE DRILLED: 10/4/84

DRG/CODE No:

PROSPECT YANINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

HOLE N° KRAB 39

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 0·7 Km SW WARRAMBOO

HOLE CO-ORDINATES 554930E 6320950N TD 48m

048

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716305								SAND° F gr pale brown.		
6								CRETE		
7								CLAYEY SAND F gr red brown.		
8								SAND F gr red brown		
9										
10						10				
11								SAND F gr red br, silcreted.		
12								BEDROCK white clay ° g/z		
13								w Hard ? GRANITE GNEISS		
14										
15						20				
16										
17										
18										
19										
20						30				
21										
22										
23										
24										
25						40				
26										
27										
716328	10	60	10	<1						
						50				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: IMG RAND TR3

DRILLER: P. NITSCHKE

SCALE: 1:500

LOGGED BY: P BINKS

DATE DRILLED: 10/4/84

DRG/CODE No:

PROSPECT YANINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

HOLE N° KRAB 40

044

LOCATION 0·7km SW Warramboo

HOLE CO-ORDINATES 5548600E 6320900N T.D. 32m

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	Au	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716329								SILTY SOIL		
30								SANDY SILT light brown		
31								CLAYEY SAND orange		
32										
33										
34						10		SAND orange Fericreted.		
35								BEDROCK brown. light brown Ferrug silicified rock.		
36										
37								" Lightly weathered ?GNEISS		
38								white clay & minor Fmgr qtz		
39						20				
40										
41										
42										
43					0·07					
716344	10	75	6	<1	0·07	30				
						40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: G. HOOPER

DRILLER: P NITSCHKE | DATE DRILLED: 10/4/84

SCALE: 1 : 500 | DRG/CODE No:

PROSPECT YANACE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 41

LOCATION 0.8 Km SW Warrambo — ROTARY AIR BLAST DRILL HOLE LOG

HOLE CO-ORDINATES 55.4790E . 6320.850N — T D 40m

345

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS
716504							SAND F gr pale brown	
5								
6							CLAYEY SAND F gr red brown	
7							SAND F gr red brown	
8					10		" F gr Ferricreted.	
9							CLAY-SAND Silcreted. (top of bedrock)	
10							BEDROCK cream clay (wh Feldspar) & q/z wh ? GNEISS	
11								
12								
13					20			
14							" lim. a hem stained wh red ? GNEISS	
15								
16								
17								
18					30		" pale br lim stained wh red GNEISS	
19								
20								
21								
22								
716523	10	18	16	<1	40			

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 — LOGGED BY : P. BINKS

DRILLER : P WITSCHKE — DATE DRILLED : 11/4/64

SCALE : 1 : 500 — DRG/CODE No :

PROSPECT YANINEE   CARPENTARIA EXPLORATION COMPANY PTY. LTD.   HOLE N° KRAB 42

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 0·9km SW Warrimbo

046

HOLE CO-ORDINATES 554720E 6320800N   TD 42m

SAMPLE Nº	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716524								SILTY SOIL + CALCRETE light brown		
25										
26								CLAYEY SILT orange brown		
27										
28								BEDROCK purplish pink + cream white clay + F gr qtz minor Ferrug bands ? altered garnets		
29						10				
30										
31										
32										
33										
34						20				
35										
36										
37								" cream yellow - yellow clay + Fgr qtz		
38										
39						30				
40										
41										
42										
716543	36	20	90	<1		40		" yellow green lightly weathered ? biotite GNEISS		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: MG RAB 7R3

DRILLER: P. MITSCHKE

SCALE: 1:500

LOGGED BY: G. HOOPER

DATE DRILLED: 11/4/84

DRG/CODE No:

PROSPECT WANINEE CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° RAB 43

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1·0 km SW Warramboo

HOLE CO-ORDINATES 554640E 6320740N T.D. 40m

347

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
715484								SILTY SOIL & CALCRETE		
85										
86								CLAYEY SAND orange		
87								BEDROCK highly weathered, pale purple & cream white clay, top 8m minor ferrug boxwork.		
88										
89						10				
90										
91										
92										
93										
94						20				
95										
96										
97								" red white gneissic rock		
98								" white " "		
99						30		" orange " "		
500								" grey green biotite felds GNEISS minor limonitic patches.		
1										
2										
715503	24	8	46	<1		40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: G. HOOPER

DRILLER: P. NITSCHKE | DATE DRILLED: 11/4/84

SCALE: 1:500 | DRG/CODE No:

PROSPECT YANINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 44

LOCATION 1·1 km SW Warrambee

ROTARY AIR BLAST DRILL HOLE LOG

HOLE CO-ORDINATES 554560E 6320680N T.D. 46m

748

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716461							SAND & CALCRETE F gr pale brown		
62									
63							CLAYEY SAND F gr red brown		
64							BEDROCK red brown to maroon limonite stained clay (wthrd felds) & qtz		
65									
66					10				
67							" grey to dark grey manganese & limonite stained wthrd felds & qtz boxworks after pyrite or garnet		
68									
69	18	42	38	<1					
70									
71					20				
72									
73									
74									
75									
76					30				
77									
78									
79									
80	30	<4	70	<1					
81					40				
82									
716483	32	<4	90	<1			hole stopped by hard siliceous limonite & manganese stained rock ? garnets.		
					50				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY : P BINKS

DRILLER : P NITSCHKE | DATE DRILLED : 11/4/84

SCALE : 1 : 500 | DRG/CODE No :

PROSPECT YANINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N°KRAB 45

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 12km SW Warrambo

HOLE CO-ORDINATES 554480E 6320620N — T.D 40m

349

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	Au	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716345								SAND & CALCRETE F gr pale brown		
46										
47								CLAYEY SAND F gr red brown		
48								BEDROCK . purple brown clay (wthd felspar)		
49								qtz with wthd mica after 22m		
50						10		limonite stained		
51								- wthd GNEISS		
52										
53										
54										
55						20				
56										
57										
58										
59										
60						30				
61								" brown limonite stained		
62								wthd GNEISS		
63					0.05					
716364	65	55	60	<1	0.06	40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 — LOGGED BY : P BANKS

DRILLER : P. NITSCHKE — DATE DRILLED : 11/4/84

SCALE : 1:500 — DRG/CODE No :

PROSPECT Yimmez

CARPENTARIA EXPLORATION COMPANY PTY. LTD.
ROTARY AIR BLAST DRILL HOLE LOG

HOLE N° KRAB 46

050

LOCATION 1.3 km SW Warramboo

HOLE CO-ORDINATES 554400E 6320560N   T.D. 40m

SAMPLE N°	Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716365								SILTY SOIL pale br		
66										
67								CLAYEY SAND orange brown		
68								BEDROCK highly wthed pink red clay + f gr qtz		
69						10				
70										
71										
72										
73								" white clay + qtz		
74								" red brown clay + qtz		
75						20				
76								" white clay + f-m gr qtz, gneissic		
77								" pink red clay + qtz		
78										
79						30				
80								" brown clay f-m gr qtz		
81										
82								" white clay f-m gr qtz		
83								" green brown, f-m gr qtz + ? biotite (biotite GNEISS)		
716384	18	14	100	<1		40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3

DRILLER: P. NITSCHKE

SCALE: 1:500

LOGGED BY: G. HOOPER

DATE DRILLED: 11/4/84

DRG/CODE No:

PROSPECT YAMMET — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 47

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1·4 Km SW Warramboo

HOLE CO-ORDINATES 554320E 6,320,500N T.D. 40m

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	Au	DEPTH IN METRES	LOG	DESCRIPTION	REMARKS	WATER
716385								SAND • CALCRETE f gr pale brown		
86										
87								CLAYEY SAND F gr red brown		
88										
89								BEDROCK · red br lim • hem stained clay • qtz		
90						10				
91								" cream highly leached clay (wthd Felds.) qtz with few ? hematite grains after magnetite		
92										
93										
94						20				
95										
96										
97										
98										
99								" red brown hem. stained ?GNEISS		
400						30		" cream to pale brown highly leached ? GNEISS		
1					<·01					
2					"					
3					"					
716404	34	8	65	<1	"	40		" Khaki wthd GNEISS with biotite		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 — LOGGED BY: P BINKS

DRILLER: P NITSCHKE — DATE DRILLED: 11/4/84

SCALE: 1:500 — DRG/CODE No.:

PROSPECT YANIREE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 48

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1·5 km SW Warramboo

HOLE CO-ORDINATES 554740E 6320440N — T.D. 40m

352

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716405								SILTY SOIL pale br		
6								CLAYEY SAND orange		
7										
8										
9								BEDROCK · Ferrug sand / wtkd bedrock.		
10						10		" red brown ferrug.		
11										
12								" orange red "		
13										
14								" highly wtkd white cream cky		
15						20		(wtkd felds) · f–m gr q/z		
16										
17										
18										
19										
20						30				
21										
22										
23	10	<4	12	<1				" grey green wtkd ? GNEISS		
716424	14	<4	10	<1		40		" yellow green " " iron spotting after magnetite.		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING RAND TR3 | LOGGED BY : G. HOOPER

DRILLER : P NITSCHKE | DATE DRILLED : 11/4/84

SCALE : 1 : 500 | DRG/CODE No :

PROSPECT YANIREE CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° RAB 77

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1·6 km SW Warramboo

HOLE CO-ORDINATES 554160E 6320380N TD 32m

053

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS
716425								SAND & CALCRETE f gr pale brown	
26									
27								CLAYEY SAND f gr red brown	
28									
29								SAND f gr Ferricreted	
30						10			
31									
32									
33								BEDROCK cream to pale br clay (wtd felds) q/z with dissem ?hem after magnetite	
34									
35						20		? wtkd magnetite GNEISS	
36									
37									
38									
39									
716440	10	14	14	<1		30			
						40			

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: IMG RAND TR3 | LOGGED BY: P BINKS

DRILLER: P. NITSCHKE | DATE DRILLED: 11/4/84

SCALE: 1:500 | DRG/CODE No:

PROSPECT YANNEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

HOLE N° KRAB 50

LOCATION 1·7 km SW Warramboo

HOLE CO-ORDINATES 554080E 6320330N T.D 40m

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716441								SILTY SOIL & CALCRETE light brown		
42										
43								CLAYEY SAND red brown		
44								SAND f gr red brown, ferruginous		
45										
46						10		SILCRETE white		
47								BEDROCK white - cream clay (wlk felds)		
48								f-m gr qtz (wlked GNEISS)		
49										
50						20				
51										
52										
53										
54										
55								" pale brown clay & qtz		
56						30		" dark yellow " "		
57										
58								" yellow green wlked GNEISS.		
59										
716460	10	26	8	<1		40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: G. HOOPER

DRILLER: P NITSCHKE | DATE DRILLED: 11/4/64

SCALE: 1:500 | DRG/CODE No.:

PROSPECT YAMINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N KRMS 51

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION C·8 Km W Warramboo

HOLE CO-ORDINATES 554660E 6321500N — TD 40m

355

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716544								SAND & CALCRETE f gr pale br		
45										
46								CLAYEY SAND f gr red brown		
47								BEDROCK red brown hem & lim. stained clay (wthd Felds) & qtz wthd ?GNEISS		
48						10				
49										
50										
51										
52										
53								" cream wthd ?GNEISS		
54						20		" red brown & brown hem stained ?GNEISS		
55										
56										
57										
58										
59						30				
60								" green brown wthd biotite GNEISS		
61										
62										
716563	70	22	110	<1		40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: P BINNS

DRILLER: P NITSCHKE | DATE DRILLED: 11/4/84

SCALE: 1:500 | DRG/CODE No:

PROSPECT YAMINEE

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

HOLE N° KRAB 52.

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 0·9Km W Warramboo

HOLE CO-ORDINATES 5545606E 6320520N T.D 40m

056

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716564								SAND & CALCRETE f gr pale brown		
65										
66								CLAYEY SAND f gr red brown		
67								BEDROCK cream to pale br clay & qtz		
68						10		" purple brown hem. stained wthd micaceous GNEISS		
69										
70										
71										
72										
73						20				
74										
75										
76										
77										
78						30				
79								" khaki brown wthd biotite GNEISS.		
80										
81										
82										
716583	110	55	130	<1		40				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: IMG BMD TR3 | LOGGED BY: P BINKS

DRILLER: P. NITSCHKE | DATE DRILLED: 12/4/84

SCALE: 1:500 | DRG/CODE No:

PROSPECT YANINEE. CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N ARB 33

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1·0 Km W Warrambo

HOLE CO-ORDINATES 554460E 6325200N T.D. 46m

057

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716584								SILTY SOIL		
85								CLAYEY SAND light brown		
86								SILCRETE & FERRICRETE red brown & white		
87										
88										
89						10				
90								BEDROCK cream white & purplish clay & F-m gr q/z partly Ferrug.		
91										
92										
93								" purple brown clay & q/z partly Ferrug.		
94						20				
95								" white sericite/clay & q/z		
96										
97								" yellow brown limonitic clay & F-m gr q/z		
98										
90						30				
600										
1										
2										
3								" yellow green wtk. biotite GNEISS		
4						40				
5										
716606	12	18	55	<1						
						50				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3	LOGGED BY: G. HOOPER
DRILLER: P NITSCHKE	DATE DRILLED: 12/4/84
SCALE: 1:500	DRG/CODE No:

PROSPECT YANINEE CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° KRAB 54

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1·1 Km W Warrambee

HOLE CO-ORDINATES 554360E · 6321520N T.D. 46m

058

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716607								SAND & CALCRETE f gr pale brown		
8										
9								CLAYEY SAND f gr red brown		
10								SAND f gr Ferricreted.		
11								BEDROCK · Ferricreted clay a g/z		
12						10		" hem. stained clay (wtlled felds) a g/z		
13								" cream to pale br wtl ?GNEISS		
14										
15										
16										
17						20				
18										
19										
20										
21										
22						30		" brown to red brown hem. stained wtlled sericitic GNEISS		
23										
24										
25										
26										
27						40				
28										
29										
716630	14	32	60	<1				" green grey wtlled biotite GNEISS		
						50				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: P BINKS

DRILLER: P NITSCHKE | DATE DRILLED: 12/4/84

SCALE: 1:500 | DRG/CODE No:

PROSPECT YARRAWEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 55

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1·2 Km W Warramboo

HOLE CO-ORDINATES 554260E 6321520N T.D. 40m

059

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716631								SILTY SOIL & CALCRETE pink brown		
32								CLAYEY SAND brown		
33										
34										
35								SILCRETE & FERRICRETE brown-white		
36						10				
37								BEDROCK white clay & F-m gr qtz		
38										
39								" brown to yellow green & white		
40								clay & qtz, ?gneissic		
41						20				
42								" white clay & qtz.		
43								" yellow brown clay & qtz		
44										
45										
46						30				
47										
48										
49										
716650	20	16	120	<1		40		" dark green ? biotite SCHIST minor F gr qtz.		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY : G. HOOPER

DRILLER : P NITSCHKE | DATE DRILLED : 12/4/84

SCALE : 1 : 500 | DRG/CODE No.:

PROSPECT YANIKEE CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N RAB 56

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1·3 Km W Warrambee

HOLE CO-ORDINATES 554160E 6321520N 554,160E 6321520N T.D. 40m

060

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716651							SAND & CALCRETE F gr pale brown		
52									
53							CLAYEY SAND F gr red brown		
54									
55					10				
56							SAND - F gr brown, Ferricrete & silcrete!		
57									
58									
59									
60					20		BEDROCK cream to pale br clay (wthd Felds) qtz & sericite (wthd ? GNEISS)		
61									
62									
63									
64									
65					30				
66									
67									
68									
69									
716670	22	24	38	<1	40		" grey green wthd biotite GNEISS		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: P BANKS

DRILLER: P NITSCHKE | DATE DRILLED: 12/4/84

SCALE: 1:500 | DRG/CODE No:

PROSPECT YANNEE. CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N ZANS 37

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1.4 km W Warramboo

HOLE CO-ORDINATES 5540mE 6321520N T.D. 40m

061

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS
							SILTY SOIL + CALCRETE	
716671							CLAYEY SAND orange brown	
72								
73								
74								
75								
76					10		SAND F gr orange	
77								
78							FERRICRETE + SILCRETE brown	
79								
80							BEDROCK siliceous, purple brown/lite	
81					20			
82							" white clay + qtz	
83								
84							" purple + white clay minor qtz	
85							" pale brown, red br + white clay minor qtz	
86					30			
87							" gneissic looking sericite + F gr qtz	
88							" grey green + dark grey biotite ?GNEISS minor pink red Fe stained qtz	
89								
716690	130	60	24	<1	40			

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING RAND TR3 | LOGGED BY : G. HOOPER

DRILLER : P NITSCHKE | DATE DRILLED : 12/4/84

SCALE : 1 : 500 | DRG/CODE No.:

PROSPECT YARRIE CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1.5 Km W Warriam Doo

HOLE CO-ORDINATES 553960E 6321520N T.D. 40m

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716691								SAND & CALCRETE f gr pale brown		
92										
93								CLAYEY SAND f gr red brown		
94										
95						10		SAND f gr red-brown with clay bands.		
96										
97								" f gr pale brown to brown silcreted & ferricreted		
98										
99										
700						20				
1										
2										
3										
4								SAND & CLAY f gr yellow br - dark br.		
5										
6						30		BEDROCK grey green clay (with feldspar & qtz wthd ? GNEISS		
7										
8										
9										
716710	26	6	22	<1		40		minor 2° pyrite		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: INC RAND TR3 | LOGGED BY: P BIRKS

DRILLER: P. NITSCHKE | DATE DRILLED: 13/4/84

SCALE: 1 : 500 | DRG/CODE No:

PROSPECT WALLACE CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE No. 363

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1.6 km W Warrambo

HOLE CO-ORDINATES 553866E 6321520N T.D. 30m

SAMPLE No°	ANALYSES ppm/%	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716711				SILTY SOIL & CALCRETE		
12						
13				CLAYEY SAND orange brown		
14						
15		10		SAND f gr brown ferricreted in part		
16						
17				SILCRETE		
18						
19						
20		20		CLAY grey green & pink red mmm q/z		
21						
22				" grey green & yellow		
23				SAND f-m gr well rounded q/z lim yellow to red.		
24						
716725		30		" f gr red brown ferricreted black hem cement		
				HOLE ABANDONED.		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: IR RAND TR3 | LOGGED BY: G. HOOPER

DRILLER: P. MISCHKE | DATE DRILLED: 14/4/64

SCALE: 1:500 | DRG/CODE No.:

PROSPECT YINNIETTE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° LRAB 60

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 1·8 Km W Warrambo

HOLE CO-ORDINATES 553660E 6321520N TD 30m

364

SAMPLE N°	ANALYSES ppm/%	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716726				SAND & CALCRETE f gr pale brown.		
27						
28				CLAYEY SAND f gr red brown		
29				SAND f gr brown		
30		10		" f gr red brown ferricreted.		
31						
32						
33						
34				" f gr cream to pink silcreted.		
35		20				
36				" red brown to dark brown		
37						
38						
39						
716740		30		HOLE ABANDONED - no return damp sand.		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 — LOGGED BY: P BIVES

DRILLER: P. NITSCHKE — DATE DRILLED: 14/4/84

SCALE: 1:500 — DRG/CODE No:

PROSPECT [illegible]

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

HOLE N° KRAB 61

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 2·2 km W Warrambo

HOLE CO-ORDINATES 553270E 6321550N TD 28m

365

SAMPLE N°	ANALYSES ppm/%	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716741				SILTY SOIL		
42				CALCRETE		
43						
44				CLAYEY SAND orange		
45				" orange brown & grey green		
46		10				
47						
48				SAND Fgr, Ferricreted.		
49				" Fgr wh.ite, silcreted		
50				" Fgr orange red		
51		20				
52				" Fgr yellow br		
53				" Fgr black br		
716754				" Fgr black & minor bl/ CLAYEY SILT.		
		30		HOLE ABANDONED		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: G. HOOPER

DRILLER: P NITSCHKE | DATE DRILLED: 14/4/64

SCALE: 1:500 | DRG/CODE No.:

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

HOLE N KRAB 02

ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT [illegible]

LOCATION 2.5 Km W Warrambo

HOLE CO-ORDINATES 552930E 6321750N   T.D. 24m

368

SAMPLE No	ANALYSES ppm/%	DEPTH METRES	DESCRIPTION	REMARKS	WATER
716755			SAND & CALCRETE F gr pale brown		
56					
57			CLAYEY SAND F gr red brown		
58					
59					
60		10			
61			SAND yellow, silcreted.		
62			" F gr yellow		
63			" F gr yellow to brown		
64					
65		20			
716766			CLAYEY SAND F gr grey black		
			HOLE ABANDONED – no return, damp sample		
		30			

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3

DRILLER: P NITSCHKE

SCALE: 1:500

LOGGED BY: P BINKS

DATE DRILLED: 14/4/84

DRG/CODE No:

PROSPECT YAMINEE — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° YRAB 63

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 4·3 Km NW Warramboo

HOLE CO-ORDINATES 551700E 6323640N TD 24m

367

SAMPLE N°	ANALYSES ppm/%	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716767				SANDY SOIL		
68				SAND Fgr calcareous		
69						
70				CLAYEY SAND orange br		
71		10		SAND Fgr red brown partly ferricrete!		
72				SILCRETE		
73				SAND Fgr bright yellow		
74				" Fgr pale brown		
75				" Fgr brown grey		
76		20		SILTY CLAY black minor silty sand		
77						
716778				HOLE ABANDONED		
		30				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE : ING RAND TR3 | LOGGED BY : G HOOPER

DRILLER : P NITSCHKE | DATE DRILLED : 14/4/84

SCALE : 1 : 500 | DRG/CODE No :

PROSPECT YINNIETZ — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 64

LOCATION 4·2 Km NW Warrambo

ROTARY AIR BLAST DRILL HOLE LOG

068

HOLE CO-ORDINATES 552010E 6324230N TD 12m

SAMPLE N°	ANALYSES ppm/%	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716779				CALCRETE		
80						
81				CLAYEY SAND brown.		
82				FERRICRETE		
83				SAND. orange br with Ferricrete bands		
716784				HOLE ABANDONED – No return, damp.		

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: G. HOOPER

DRILLER: P NITSCHKE | DATE DRILLED: 14/4/64

SCALE: 1:500 | DRG/CODE No:

PROSPECT YAMINER CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° KRAB 65

LOCATION 1.1Km SW Warramboo ROTARY AIR BLAST DRILL HOLE LOG

HOLE CO-ORDINATES 554600E 6320710N T.D. 52m

369

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag		DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716813								SAND & CALCRETE f gr pale br		
14										
15								CLAYEY SAND f gr red br		
16								SAND f gr yellow silcreted.		
17								BEDROCK purple hem stained q/z & sericite wthd ? GNEISS		
18						10				
19										
20										
21										
22								" brown lim. stained wthd ? GNEISS		
23						20				
24								" brown to grey lim & manganese stained wth ? GNEISS		
25										
26	75	20	46	<1						
27										
28						30		" brown & purple lim. & hem stained wthd ? GNEISS		
29										
30										
31										
32										
33						40				
34	130	12	85	<1						
35										
36								" green brown wthd ? GNEISS		
37										
716838	75	24	140	<1		50		HOLE STOPPED - in hard q/z, felt, ?amph ? banded GNEISS		
						60				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 | LOGGED BY: P BINKS

DRILLER: P NITSCHKE | DATE DRILLED: 15/4/84

SCALE: 1:500 | DRG/CODE No:

PROSPECT YARRAWOOD — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° KRAB 66

LOCATION 1·1 Km SW Warrambool — ROTARY AIR BLAST DRILL HOLE LOG

HOLE CO-ORDINATES 554520E 6320650N — T.D. 56m

370

SAMPLE N°	ANALYSES ppm/% Cu	Pb	Zn	Ag	DEPTH METRES	LOG	DESCRIPTION	REMARKS	WATER
716785							SAND & CALCRETE		
86									
87							CLAYEY SAND orange.		
88							BEDROCK highly wthrd gneissic rock pale red br - pink br		
89									
90					10				
91									
92									
93									
94									
95					20				
96									
97									
98	75	130	60	<1			" grey gneissic rock with patches of manganese		
99									
800					30		" brown - grey brown mic. ?magnetite GNEISS		
1									
2									
3	40	10	85	<1			occassional manganiferous bands		
4									
5					40				
6									
7							" grey brown - green mic. magnetite GNEISS		
8									
9									
10					50				
11									
716812	34	14	85	<1			" purple br magnetite GNEISS f-m gr q/z + magnetite (30%)		
					60				

REASON FOR HOLE :

OTHER DETAILS :

DRILL TYPE: ING RAND TR3 — LOGGED BY : G. HOOPER

DRILLER : P. NITSCHKE — DATE DRILLED : 15/4/84

SCALE : 1:500 — DRG/CODE No :

LOGISTICS REPORT

AIRBORNE ELECTROMAGNETIC AND MAGNETIC SURVEY

BARRINGER "INPUT" SYSTEM

OF THE

KYANCUTTA AREA

SOUTH AUSTRALIA

FOR

CARPENTARIA EXPLORATION COMPANY PTY. LIMITED

BY

GEOTERREX PTY. LIMITED

Sydney, Australia
January, 1984

G. Nader
Geophysicist

TABLE OF CONTENTS

I. INTRODUCTION

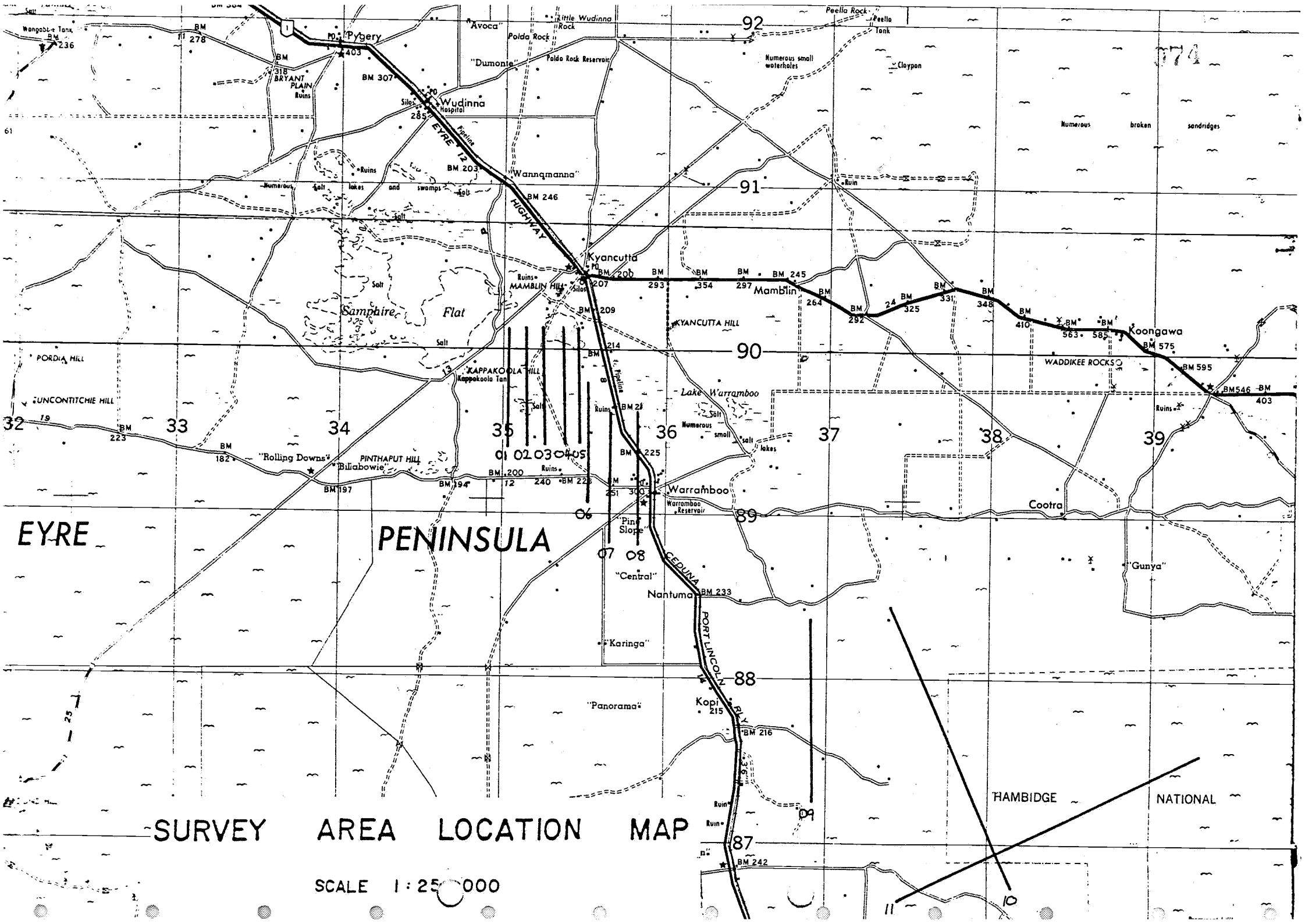
On December 1, 1983, Geoterrex Pty. Limited flew a combined electromagnetic and magnetic survey over the Kyancutta region of South Australia on behalf of Carpentaria Exploration Company Pty. Limited. The base for the duration of the survey was Whyalla.

Eleven profiles were flown for a total of approximately 100 kms.

The project was conducted with a Super Canso PBY-5A under registration VH-EXG, which is operated by J.C. Sleigh Aviation for Geoterrex Pty. Limited and was equipped with:-

- a Barringer Mark V 12 channel EM system
- a Geometrics G803 nuclear precession magnetometer
- a Geoterrex MADACS digital acquisition system
- a Sperry RT220 radar altimeter
- a 50 Hz monitor
- a Geocam 705 35mm continuous strip tracking camera
- a Honeywell 1912 visicorder.

Navigation was by visual means from high level black and white RC9 photographs, at 1:40,000. The aircraft was operated at a mean terrain clearance of 120 metres.


EYRE PENINSULA
SURVEY AREA LOCATION MAP
SCALE 1:25 000
Pygery
Wudinna
Hospital
Avoca
"Dumonte"
Polda Rock
Polda Rock Reservoir
Little Wudinna Rock
Peella Rock
Peella Tank
Numerous small waterholes
Cloypon
Numerous broken sandridges
BRYANT PLAIN Ruins
EYRE HIGHWAY
Pipeline
"Wannqmanna"
Kyancutta
PO
MAMBLIN HILL
Ruins
Silos
Salt
Sampaire Flat
Numerous Salt lakes and swamps
KYANCUTTA HILL
Mamblin
Koongawa
WADDIKEE ROCKS
Lake Warramboo
Numerous small salt lakes
PORDIA HILL
JUNCONTITCHIE HILL
KAPPAKOOLA HILL
Kappakoola Tan
"Rolling Downs"
Biliabowie
PINTHAPUT HILL
Warramboo
Warramboo Reservoir
Cootra
"Pine Slope"
"Central"
Nantuma
"Karinga"
"Panorama"
"Gunya"
CEDUNA
PORT LINCOLN
RLY
Kopi
Ruin
BM 242
HAMBIDGE
NATIONAL
92
91
90
89
88
87
32
33
34
35
36
37
38
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06
07
08
09
10
11

II. PERSONNEL

The following Geoterrex personnel anticipated in the field phase of the survey:-

Pilot	J. Edwards
Co-pilot	T. McKenzie
Aircraft mechanic	W. Mitchell
Electronics technician	B. Woolfrey
Data Compiler	C. Worsley

The project was supervised by Mr. G. Butt and Mr. G. Nader of Geoterrex Pty. Limited in consultation with Mr. N. Sheard of Carpentaria Exploration Company Pty. Limited.

III. DATA PRESENTATION

The original visicorder records of the raw INPUT, altitude and magnetic data are presented bound in line number order. All calibration data is included and a copy of the analogue format is shown in Figure 2 of Appendix A.

The one roll of negative 35mm continuous strip tracking film is delivered and appropriately labelled.

The 1:40,000 aerial photography bearing all of the recovered points, along with the tracking film is provided for accurate location of any followup investigation.

The flight log which contains all relevant information regarding the collection of geophysical data is also presented.

Interpretation overlays to the 1:40,000 Government photography.

077

IV. INTERPRETATION OF THE SURVEY DATA AND RECOMMENDATIONS

From the INPUT data acquired over the Kyancutta area, it is considered that within this area, airborne electromagnetic prospecting would not be a suitable technique in the direct search for massive sulphides. The eleven INPUT profiles flown, show that the area is very conductive and in most cases the INPUT response can be modelled to fit a homogeneous half space. The high conductivity which in places is less than 0.5 (ohmetres), is most likely due to the high level of salt content within the overlying sediments.

Three INPUT anomalies have been selected for consideration as possible bedrock conductors. Two of the anomalies occur on line 008.1N at fiducials 528030 and 528480. At both these locations the INPUT signature shows a marked increase in conductivity, whereby the fast time constant channels indicates that the anomaly at fiducial 528030 is narrow and sharp, particularly on the early channels. The anomaly at fiducial 528480 is somewhat broader in width but does show an apparent association to a 200 nT magnetic high.

The third selected anomaly occurs on line 009.1S at fiducial 532980. At this location, the INPUT response is very narrow (as indicated by the fast time constant channels) and coincides with the northern flank of a 400 nT magnetic high. This INPUT anomaly is possibly situated at a geological contact which is reflected in the INPUT data by a decrease in the early channel amplitudes from north to south across the anomalous zone.

Within the normal interpretation guidelines of INPUT data, all three selected anomalies would have a low priority rating. However, if the location of these anomalies occur within a geologically prospective area where no cultural source is evident, then followup is recommended with emphasis on geochemical sampling.

Powerline interference as indicated by the 50 Hz monitor is prominent throughout most of the area, however this external noise source is only weakly reflected in the INPUT data.

It should be borne out that even though the test area is very conductive, the INPUT system can be useful as a mapping technique. This is best illustrated on profiles 001.1 to 008.1 where conductive trends have been delineated. These trends may correlate to weathered lithological units or alternatively represent variations in the conductivity-thickness product of the overburden.

In the latter case, if the conductivity is generally uniform throughout the area, then it is possible to indirectly map sedimentary channels by determining changes in the overburden thickness. This geophysical appraisal may be significant if mineralization is expected to occur within such channels. Geoterrex has an automatic interpretation routine which can quantitatively evaluate and fit the INPUT data to a Half Space, thick sheet and thin sheet model.

In conclusion, the test area is not considered favourable to electromagnetic prospecting for the direct search of massive sulphides, especially if such prospective targets occur at depth. The very high conductivity of the surface layers would most likely mask any potential bedrock conductor within this region unless it occurred very near to surface.

The use of INPUT for indirect mapping of tertiary channels has good potential in this area.

Respectfully submitted,
GEOTERREX PTY. LIMITED

G. L. Nader

G. NADER
GEOPHYSICIST

APPENDIX A

INPUT EQUIPMENT AND PROCEDURES

1. BARRINGER INPUT SYSTEM

a) General:

The INPUT (Induced Pulse Transient) method is based upon the study of the decay of secondary electromagnetic fields created in the ground by short pulses generated from an aircraft. The time-varying characteristics of the decay curve are analysed and interpreted in terms of information concerning the conductivity characteristics of the terrain.

The principle of separation in time between the production of the primary field and the detection of the measured secondary signal gives rise to an excellent signal-to-noise ratio and an increased depth of penetration compared to conventional continuous wave electromagnetic systems. It also makes the INPUT system relatively independent of air turbulence.

At a normal survey altitude of 120 metres above terrain, the typical effective depth penetration is estimated at about 180 metres below surface, depending on the conductivity contrast between the conductive body and surrounding rocks, the size and

attitude of the conductor and the presence or lack of conductive overburden. In optimum conditions a penetration of 210 metres subsurface can be achieved.

One of the major advantages of the INPUT method lies in good differentiation between flat-flying surface conductors and bedrock conductors so that the latter can be detected even under a relatively thick cover. Typical uses involve the search for sedimentary sulphides in thick basins and the search for graphitic lithologies under younger cover.

However, the application of the airborne INPUT electromagnetic method is limited to the solution of problems that are characterized by a reasonable resistivity contrast. The method is not considered to be applicable to the direct search for disseminated mineralization, except where a resistivity contrast exists.

b) Equipment:

The INPUT system was developed by Barringer Research Limited of Toronto, Canada.

The transmitted primary field is discontinuous in nature (Fig. 1A) with each pulse lasting 1000 micro-seconds; the pulse repetition rate is 288 per second.

The electromagnetic pulses are created by means of powerful electrical pulses fed into a 3-turn shielded transmitting loop surrounding the survey aircraft and fixed to the nose and tail of the fuselage and to the wing tips.

The secondary field reception is made by means of a receiving coil wound on a ferrite rod and mounted in a "bird" towed behind the aeroplane on a 140 metre co-axial cable. The axis of the pick-up coil is horizontal and parallel to the flight direction and a Faraday shield is used to reduce noise levels. Periods of 2400 microseconds between successive primary pulses (Fig. 1B) are used for detecting the secondary field and the transient voltage (Fig. 1C) thus produced corresponds in time to the decay of the eddy currents in the ground.

The analysis of the bird signal is made in the INPUT receiver by sampling the decay curve at 12 points, or gates, the centre and width of which have a fixed relationship with respect to time zero (t_o) corresponding to the termination of the pulses. The centres of the 12 sampling gates are set at a mean delay of 300, 400, 500, 600, 700, 800, 950 , 1100, 1300, 1500, 1800 and 2100 micro-seconds after time zero (Fig. 1D).

The signals received at each sampling gate are processed in two multi-channel receivers to give one set of six and one set of twelve continuously varying analogue voltages. Each trace represents the coherent integration of one channel of the transient sample, the time constant of integration being variable. Presently, one set of twelve channels is recorded at a time constant of 2.6 seconds (Standard Resolution Channels, SRC), the other set of six at a time constant of 0.6 seconds (High Resolution Channels, HRC).

This integration delay plus the time separation between the receiving bird and tracking camera installed in the aircraft introduces a delay which has to be taken into consideration and corrected prior to correlating the electromagnetic data with the other simultaneously recorded data. This delay is approximately 4 seconds for the normal time constant and 2 seconds for the fast time constant.

c) Compensation Procedure

During primary field transmission eddy currents are induced in the aircraft frame as well as in conductive ground. The airframe eddy currents produce a secondary

field which needs to be cancelled out in order to measure the ground-related effects. To compensate for this effect a special device is used which feeds into each channel of the INPUT receiver a signal equal in amplitude and waveform but opposite in polarity to the signal induced by the airframe eddy current. The compensation signal is derived from the voltage induced in the receiving coil by the primary field; this voltage is constantly proportional to the inverse cube of the distance between the bird and the aircraft. Thus, swinging of the bird and changes of coupling are automatically corrected. The compensation adjustment is a simple procedure carried out during flight at a terrain clearance of 600 metres to eliminate the interference of ground conductors.

d) Time Sharing

In order to operate both the INPUT system and the proton magnetometer system simultaneously, the INPUT transmitter is switched off each second for a time period long-enough to allow for a noise free magnetometer reading. The affect of this switching can be seen as a 1 Hertz ripple on the HRC INPUT channels.

II. MAGNETOMETER

The magnetometer is a Geometrics G-803 nuclear precession unit especially adapted to operate in conjunction with the INPUT equipment. Readings are taken every 1.0 second with a sensitivity of plus or minus 1 nanotesla and recorded at a full scale of 5 inches for 200 nanoteslas. The coarse trace is recorded at a full scale of 5 inches for 1,000 nanoteslas. The sensing head is mounted at the end of a 3 metre stinger, on the tail of the PBY aircraft.

III. SPECTROMETER (Optional)

A Nuclear Data 256 channel spectrometer is used. Its input is taken from the photomultiplier tubes attached to either 16 or 33 litres of NaI detectors, through an Ortec summing amplifier. Separate amplification is available for each individual detector to allow correct photomultiplier output voltage matching. The detectors are mounted in insulated containers and maintained at a constant temperature above the ambient temperature. The analogue voltage outputs from the photomultiplier tubes, which represent the gamma ray spectrum, are fed to the spectrometer (ADC) and converted into digital signals. These digital signals are then processed by the Madacs acquisition system. The acquisition system also

measures "live-time" which is the total time per sample period in which the ADC is processing incoming analogue signals.

The equivalent energy values for the various channel positions are noted in Appendix B. (No spectrometer data was acquired.)

For calibration purposes software routines are employed which allow:

- calculation and adjustment of both thorium and cesium window positions as a channel number. This channel number is comparable with the expected peak channel location. This check is accurate to .01 of a channel window width (0.12 KeV).

  The use of both thorium and cesium peaks ensures the spread of the 256 channels is linear.
- display of the thorium or cesium photopeak on the oscilloscope or on the analogue chart, in order to allow calculation of system resolution. These peaks can be plotted for individual crystals or for the entire crystal array.
- automatic calculation of the various window responses to either a uranium or thorium source. The background values are automatically subtracted from the data recorded in the presence of either source and results are displayed on the television monitor.

They are then recorded on the flight log by the operator.

- memory storage of spectral data. This data can be plotted at any stage during a flight or at the end of flight, even after the system has been powered down.

A software facility is also provided to enable correction for compton scattering effects on the analogue data (not the digital data).

IV. TRACKING CAMERA

The tracking camera is a 35mm continuous strip camera equipped with a wide angle lens. The 35mm film is synchronized with the geophysical record by means of fiducial marks printed every 2.0 seconds. These time readings are not from an incrementing counter, they are read from digital information provided by the MADACS system.

V. ALTIMETER

A Sperry radar altimeter is used. This instrument has an accuracy of +/- 2.5%. Data is recorded in units of feet.

VI. Hz MONITOR

A Hz monitor tuned to the local domestic power distribution frequency, is employed to assist in the detection of powerlines and their resultant anomalies.

VII. MADACS DIGITAL ACQUISITION SYSTEM

The MADACS is a computer based software system using an Interdata processor, model 6/16 with 32k memory. This computer is linked with a Digi-Data, model 1600 magnetic tape drive with a true read after write feature which allows checking of the recording process as many times as the particular application permits. The checking procedure includes elimination of errors due to bad tape spots. Use of multiple buffers permits recording and processing data simultaneously with acquisition of new data, with no resulting dead time.

The system uses a Cybernex TV monitor to display acquired data and operator messages and is fully interactive with a Cybernex alpha numeric keyboard which can be used remotely for special installations.

The key feature of this system is that all the data collecting, verifying, buffering and recording is software-controlled and thus may be economically

altered to fit almost any requirements. Many critical parameters are automatically monitored during flight, with visual and aural alarms provided.

Survey parameters are displayed during flight in the same units as the basic sensor, making operator comparisons simple. A suite of programs is provided for checking and trouble-shooting the hardware.

The MADACS is used to control and command the operation of all three geophysical systems (INPUT, magnetometer and spectrometer) as well as ancillary equipment such as the camera, altimeter, tape drive, analogue chart recorders and sometimes electronic navigation systems. The basis is a precision clock recording time to 0.1 seconds. Time is digitally recorded in seconds after midnight, so that a six figure number such as 360000 corresponds to a time of ten a.m. Fiducials are generated on digital tape, camera and analogue chart at two second intervals. The fiducial numbers do not increment by units; they are in fact calculated from the time by the computer. Using this method, any data are uniquely defined by their flight number and their time. This system thus does not require digital recording of line numbers, part numbers or direction, thus avoiding a source of digital recording errors.

INPUT and altitude data are digitally recorded five times each second. Either SRC or HRC data can be recorded on digital tape, but not both. 12 channels are recorded plus transmitter current and altitude. Digital INPUT data can be positive or negative depending on the zero level voltage dictated by the compensation circuitry. The output voltages of the INPUT receiver are converted to digital units by analogue-to-digital converters (ADC's) and it is here that gains are adjusted to ensure that in conductive areas large anomaly amplitudes (large output voltages) can be kept within the dynamic range of the ADC's.

Magnetic data are recorded once per second and to an accuracy of 1nT. However the software allocates two decimal places to these readings to allow for future replacement of the G803 with a more sensitive instrument.

Radiometric data is accumulated over one second periods. Channels 1 through to 255 are recorded between thresholds set according to Appendix B. Channel 0 records counts in a higher MeV range which corresponds to cosmic gamma radiation. The counts accumulated within certain energy windows, corresponding to those radioactive isotopes of most interest, are calculated from Channels 0 to 255 by the computer and recorded separately each second. These windows are those commonly used for thorium, uranium, potassium, total count and cosmic, as

well as an additional uranium window termed auxiliary uranium.

Spaces are left in the format for frame number (if a frame camera is used) and for navigation information (if an electronic navigation system is used).

Manual information such as start time and flight number are keyed in each morning at the start of the flight.

The MADACS system is provided with 12 digital-to-analogue converters (DAC's) to provide outputs to the analogue recording units. The DAC's can be individually subjected to a software routine which checks that their response to a complete range of digital inputs is linear.

VIII. DIGITAL RECORDING

600 or 1200 foot tapes are written in IBM compatible binary with full parity, cyclic redundancy and longitudinal check characters. Read-after-write checking ensures data is correctly recorded. The recording density is 800 b.p.i. and the recording format is described in Appendix B.

IX. ANALOGUE RECORDING

The MADACS system controls a read-after-write facility whereby most of the analogue channels are read after the data are recorded onto digital tape. Altitude, radiometric and magnetic data are programmed for automatic zero calibration at the start of each flight line.

a) Honeywell Visicorder

This is an optical galvanometer recorder used to record INPUT, magnetic and Hz monitor data. An example of its analogue output is displayed in Figure 2.

The data traces, in order from the top of the chart, are:

- 50 Hz monitor.
- 12 SRC INPUT channels.
- altimeter (read-after-write).
- total magnetic field (2000nT FSD) (read-after-write).
- total magnetic field (200nT FSD) (read-after-write).
- six HRC INPUT channels (read-after-write). (Pairs of channels have been summed.)

The fiducial system is used to generate vertical "event" lines on the charts. Lines every 10 seconds are dual, and the dual lines every 50 seconds are labelled with their appropriate time value. Time increases from left to right.

The SRC INPUT data deflect downwards for positive anomalies.

The HRC INPUT and magnetic data deflects upwards for positive anomalies.

During calibration procedures, a test signal of known strength is used to generate from the INPUT receivers an analogue response of known amplitude on each channel. Generally one of two standard sets of amplifications is used, depending whether the survey is to be flown in a generally conductive or generally resistive area. The actual gains used are noted in Appendix B.

b) Mars 6 Recorder (Optional).

Radiometric, altitude and magnetic data are recorded on this 6 - channel, heat pen recorder. Figure 3 shows the usual arrangement of channels on this recorder. Provision is made in the software for full scale values to be changed for each channel, depending on activity in the area to be surveyed. Time increases from right to left and is indicated by an event mark every 10 seconds. These event marks are annotated at regular intervals with their appropriate time values.

Thorium, uranium, potassium and total count values

all increase upwards as do the terrain clearance and Magnetic data increase upwards.

X. PROCEDURES

a) Field Operations:

The flight line spacing is normally in the range of 200 metres to 1 kilometre. During survey flights, the altitude of the aircraft is maintained at approximately 120 metres above the ground with the bird flying about 40 metres above the ground.

The heading of the aircraft is such that two adjacent lines are normally flown in opposite directions. Visual navigation is based on airphoto mosaics or in some cases on topographic maps of suitable scale.

During surveys the calibration of the altimeter is checked by flying straight and level over the runway at a barometric altitude AGL of 120 metres. The compensation adjustment is checked during ferry from the base to the survey area.

b) Calibration

Before each flight the gains and zero levels for each INPUT channel are checked and adjusted if necessary. This is carried out at an altitude of 600 metres, away from ground effects. These items are again monitored

during each flight and at the end of each flight. The information is recorded on digital tape and analogue chart. If the survey area is resistive, the zero levels are best determined from data recorded over the resistive regions at normal survey altitude. While at 600 metre altitude the compensation procedure is followed to ensure effects of airframe transients are cancelled. Any adjustments are made prior to zero level monitoring since compensation adjustments affect zero level voltages.

All checks and adjustments are performed at high altitude where they can be clearly monitored and recorded for subsequent digital processing.

If radiometric data is being collected a test line may be required before and after each flight. Background gamma radiation levels are monitored and recorded at high altitude during the INPUT calibration procedures. Spectrum positioning checks and source checks are performed before and after each flight.

c) Compilation

At the end of each flight, all records and films are developed, edited and all synchronized fiducial marks are checked. Then, the actual flight path recovery is made by picking visible marks common to both 35mm

film and photo mosaics.

Identified points with their time value are plotted on the mosaic. Then, the electromagnetic anomalies are transferred from the records onto a mosaic overlay by interpolation according to their own fiducial number.

The position of the INPUT anomalies must be corrected to take into account the separation between the bird and the aircraft as well as the delay introduced in the integration circuitry. This offset, or lag, is plotted towards the smaller fiducial numbers (to the left on the record). It varies, depending whether the SRC or HRC data is used.

The INPUT anomalies are represented on a map by means of symbols that condense the most significant characteristics:

i) the location of the centre and half-peak width of the electromagnetic anomaly.

ii) the number of INPUT channels affected by a noticeable deflection.

iii) an estimate of the CTP and its match to a vertical half plane, horizontal thin sheet or half space model.

iv) the peak amplitudes of the fourth and eleventh channels in ppm.

v) the altitudes at which the anomalies were recorded

vi) the amplitude of any magnetic features which coincide with INPUT anomalies;

vii) associated response on the Hertz monitor.

The only subjective elements introduced by this processing are in the decision as to whether a deflection corresponds to a genuine anomaly or to a noise source (electrostatic atmospheric discharge, compensation noise, etc.) and in the correlation of the anomalies from line to line to delineate a conductive zone.

To aid in this correlation process various computer products can be utilized. These are profile maps or contour maps of one or more channels, multiplots or printouts showing calculated parameters such as decay time constant or half-space model correlation. These latter parameters can also be contoured or plotted as profile maps.

INPUT SIGNAL

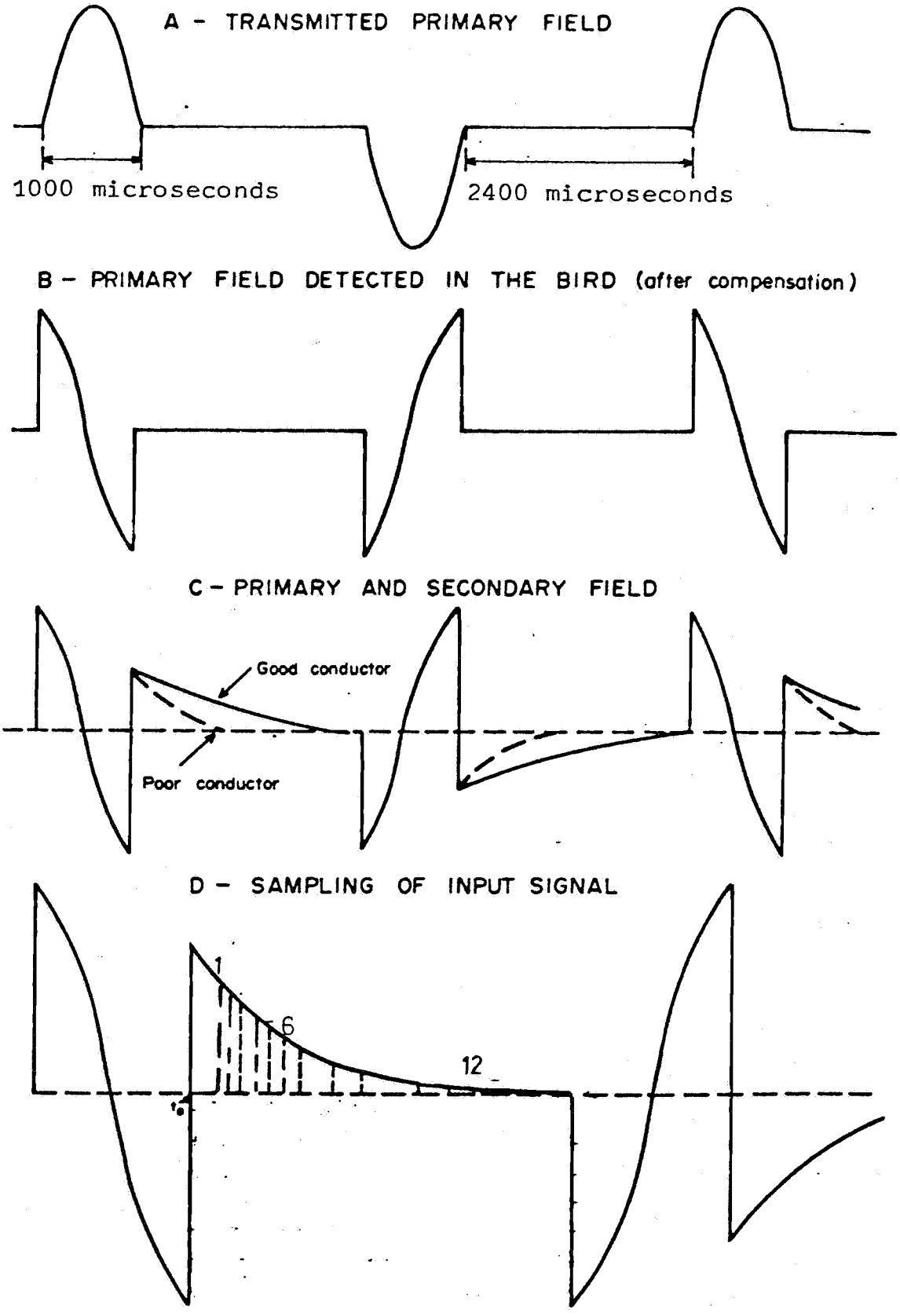


FIGURE I.

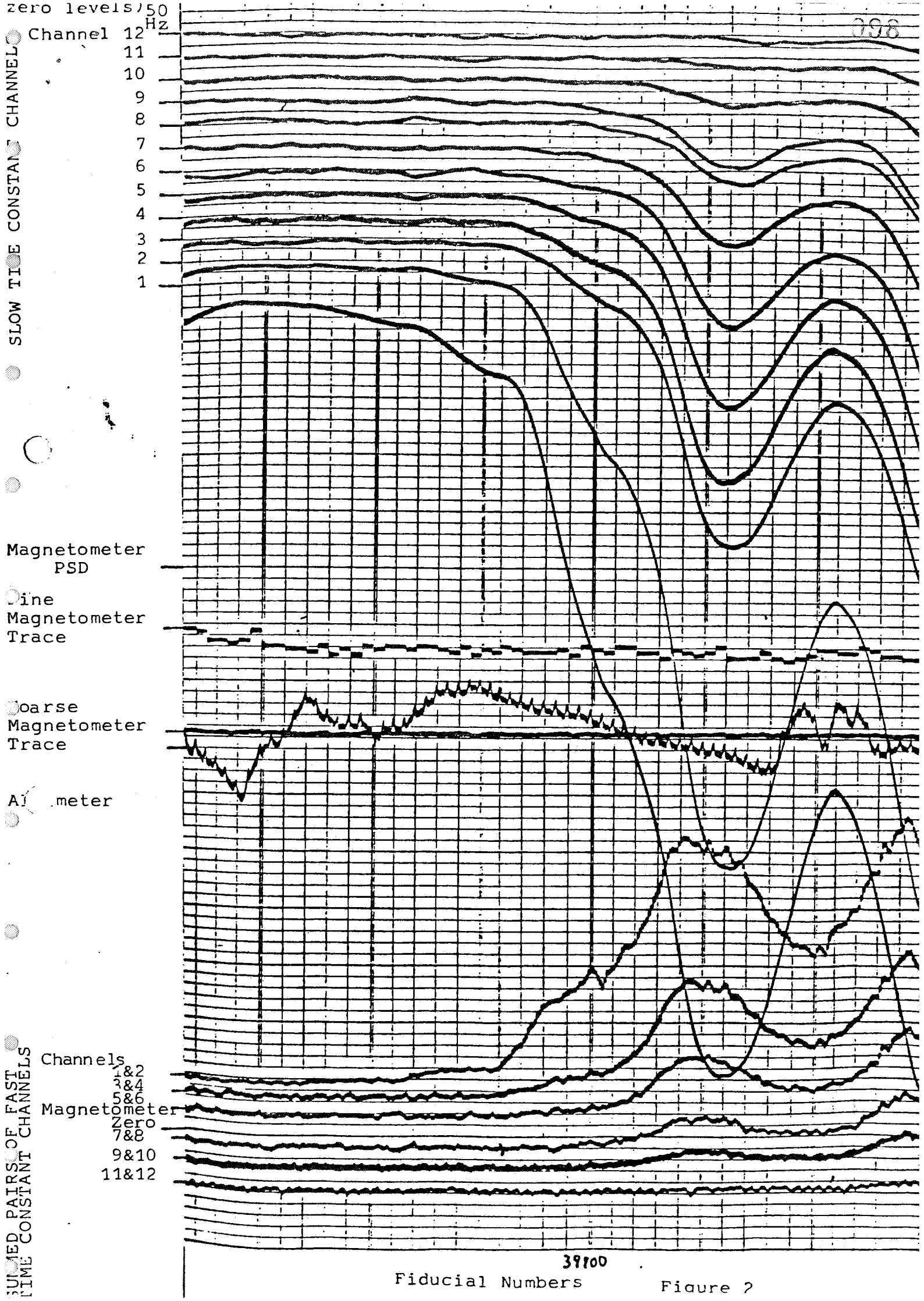

zero levels) 50 Hz
Channel 12
11
10
9
8
7
6
5
4
3
2
1
SLOW TIME CONSTANT CHANNELS
Magnetometer PSD
Fine Magnetometer Trace
Coarse Magnetometer Trace
Magnetometer
Channels 1&2
3&4
5&6
Magnetometer Zero
7&8
9&10
11&12
FAST TIME CONSTANT CHANNELS
39100
Fiducial Numbers

Figure 2

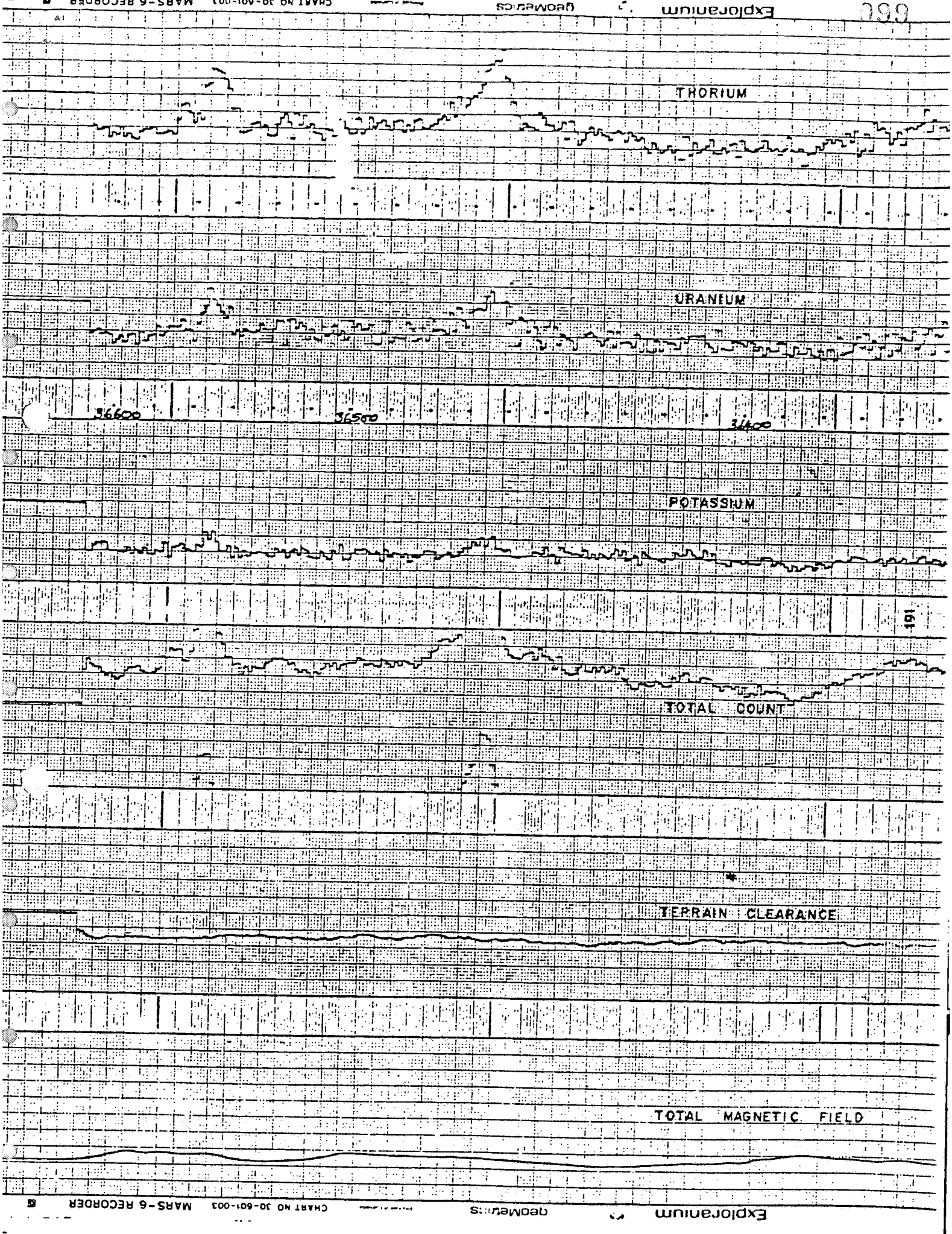

THORIUM
URANIUM
36600
36500
36400
POTASSIUM
191
TOTAL COUNT
TERRAIN CLEARANCE
TOTAL MAGNETIC FIELD

FIGURE 3

INSTRUMENT SPECIFICATIONS AND CALIBRATIONS

1. INPUT MARK V-12

Transmitter height above ground level (agl) = 120 metres
Receiver height (a.g.l.) = 40 metres
Transmitter Receiver Separation = 107 metres

Transmitter : Half sine wave current pulse
Repetition rate = 288 pulses per second
Pulse width = 1.0 millisecond

Receiver

Channel No.	Channel Centre	Channel Width	Approximate Settings Sensitivity (or gain)
1	300	200	2 mV = 1.3" chart deflection
2	400	200	1.7"
3	500	200	1.7"
4	600	200	2.0"
5	700	200	2.1"
6	800	200	2.1"
7	950	300	2.2"
8	1100	400	2.6"
9	1300	400	3.0"
10	1500	600	2.7"
11	1800	600	3.2"
12	2100	600	3.6"

* All times are in microseconds after transmitter turn off.

Primary field signal measured at the receiver coil in normal configuration = 0.9 volts

1×10^6 parts per million = $\frac{1}{2}$ peak to peak primary field signal measured at the receiver in normal configuration.

100 digital units = 1" chart deflection.

Synchronisation lag: Slow time constant - 4.0 seconds (for vertical conductors)
Fast time constant - 2.0 seconds (for vertical conductors)

2. MAGNETOMETER

Geometrics G803 Proton Precession
Stinger Mounted

Sensor Height = 120 metres
Sample Interval = 1.0 second

Sensitivity = 1.0 nT

Full scale chart deflection = 200 nT (fine scale)

= 2000 nT (coarse scale)

3. ALTIMETER

Sperry RT 220 radar altimeter

Sample interval = 0.2 seconds

Accuracy = +/- 1.5% (+/- 2 metres at 120 metres)

Analogue chart Scale = 1" per 30 metres

4. ANALOGUE RECORDER

Honeywell Visicorder

Top - 50 Hz monitor

12 slow time constant INPUT traces (positive down)

Terrain clearance (positive down)

2 Magnetometer traces (positive up)

6 summed pairs of fast time constant INPUT traces (positive up)

Bottom - Fiducial numbers (Realtime, seconds after midnight)

Chart speed - 6" per minute.

5. FIELD TAPE FORMAT

The tape structure used on this survey is set to record INPUT, magnetic and radiometric data.

The following is the tape description for a single physical block:

Byte Position	Number of Bytes	Description
1-4	4	Block Number
5-6	2	Flight Number
7-8	2	Spare halfword
9-10	2	"
11-12	2	"
13-16	4	Magnetometer (0.01 nT)
17-18	2	(Thorium Count)
19-20	2	(Uranium Count)
21-22	2	(Auxillary Uranium Count)
23-24	2	(Potassium Count)
25-26	2	(Total Count)
27-28	2	(Cosmic Count)
29-30	2	(Live Time (milliseconds))
31-40	10	Input Channel 1 @ T-.9, .7, .5, .3, .1 secs.
41-50	10	Input Channel 2
51-60	10	" " 3
61-70	10	" " 4
71-80	10	" " 5
81-90	10	" " 6
91-100	10	" " 7
101-110	10	" " 8
111-120	10	" " 9
121-130	10	" " 10
131-140	10	" " 11
141-150	10	" " 12
151-160	10	" " 13
161-170	10	" " 14
171-180	10	" " 15
181-190	10	Altimeter @ T - .9, .7, .5, .3, .1 seconds
191-194	4	Time at end of sample
195-196	2	Fiducial number
197-198	2	(Doppler track or heading
199-318	120	Radiometric channels 0-59 2 bytes per channel
319-514	196	Radiometric channels 60-255 - 1 byte per channel
515-516	2	(Doppler along distance)
517-518	2	(Doppler cross distance)

* INPUT channels 13-15 are 50 Hz, loop current and primary Field.

* Unused fields are set to zero

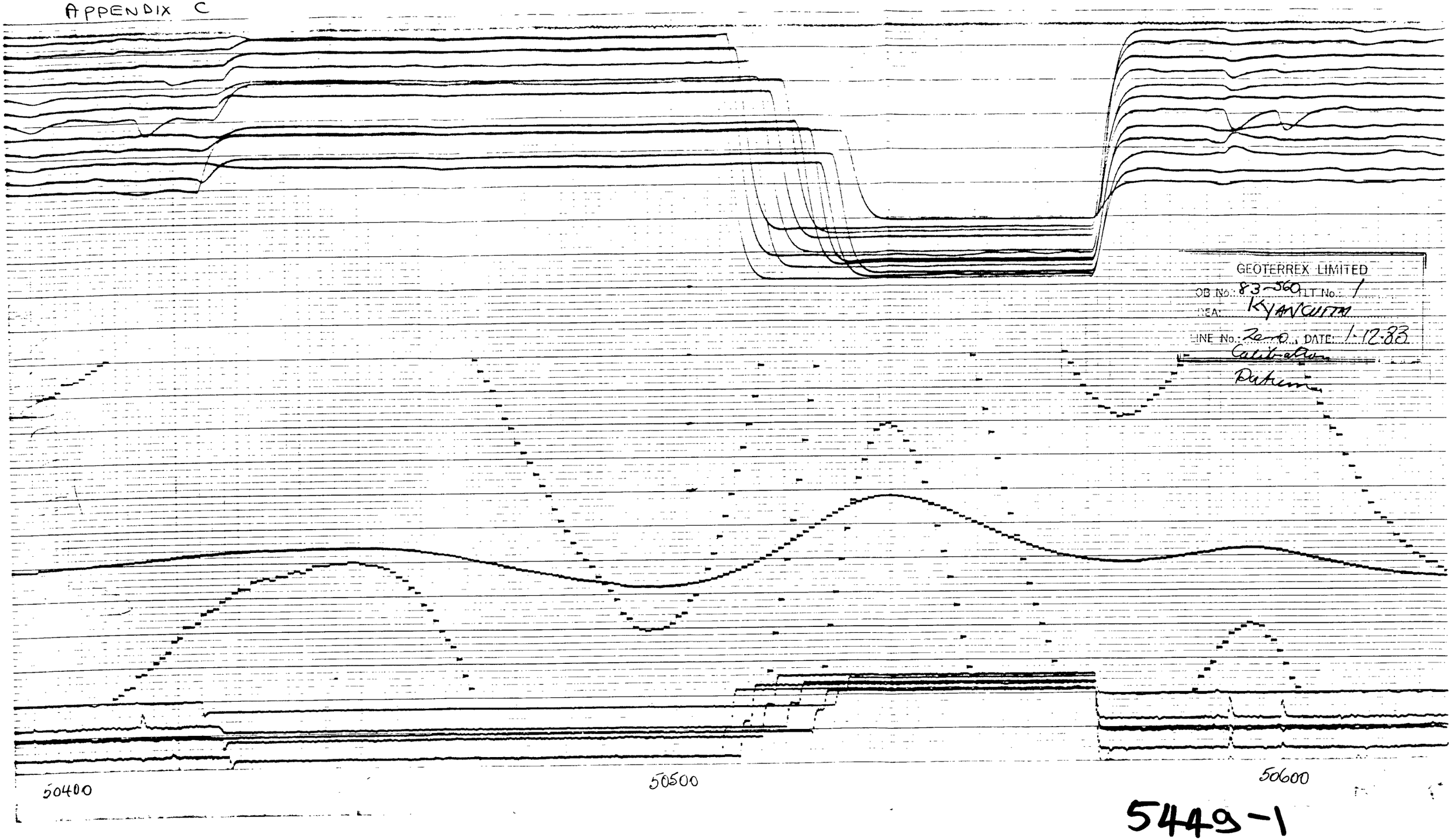
* Positions shown in parenthesis were not used for this job.

TAPE DENSITY - 9 track, 800 bpi

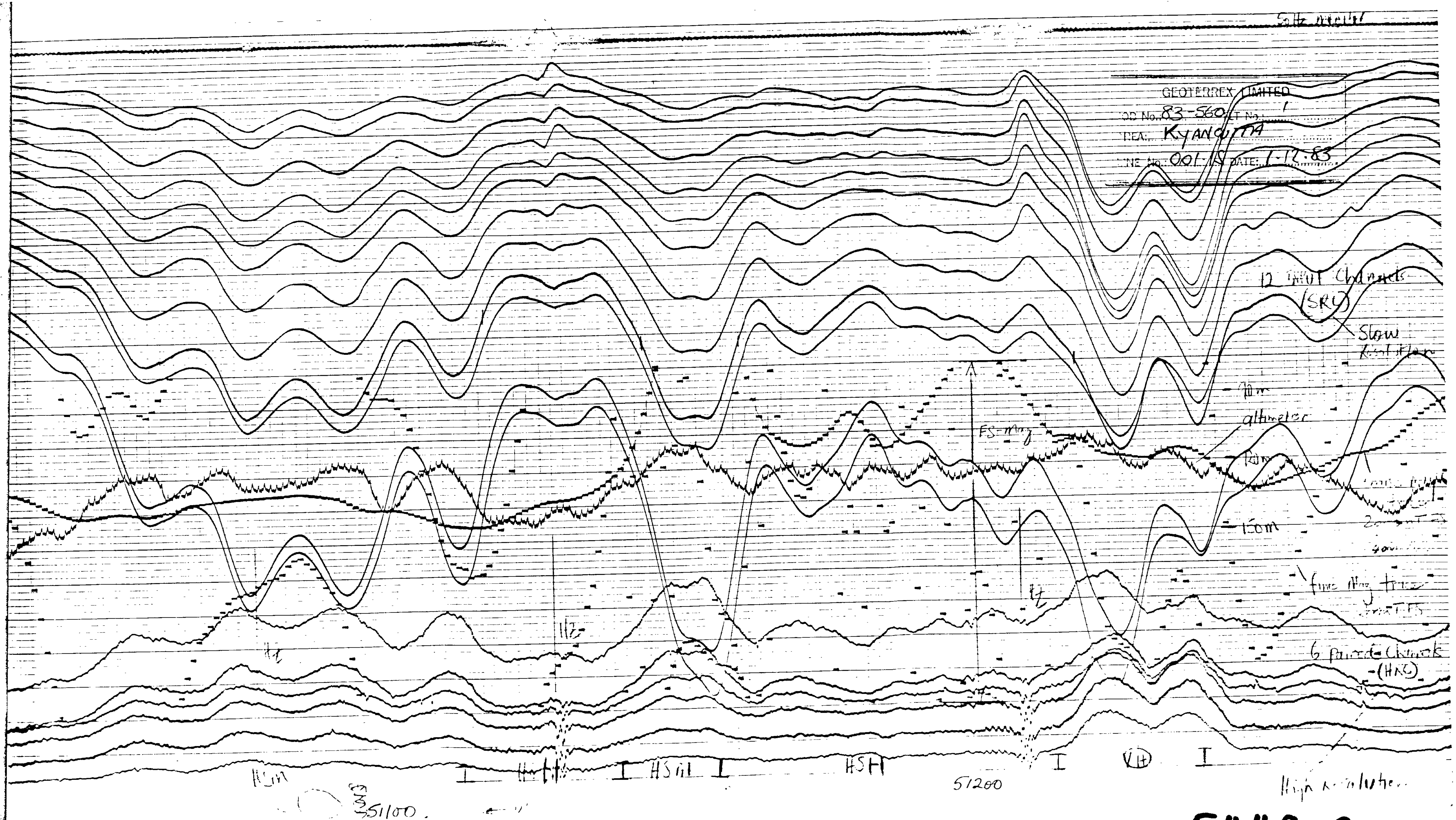
BLOCK SIZE - 518 bytes

RECORDING MODE- binary (IBM compatible)

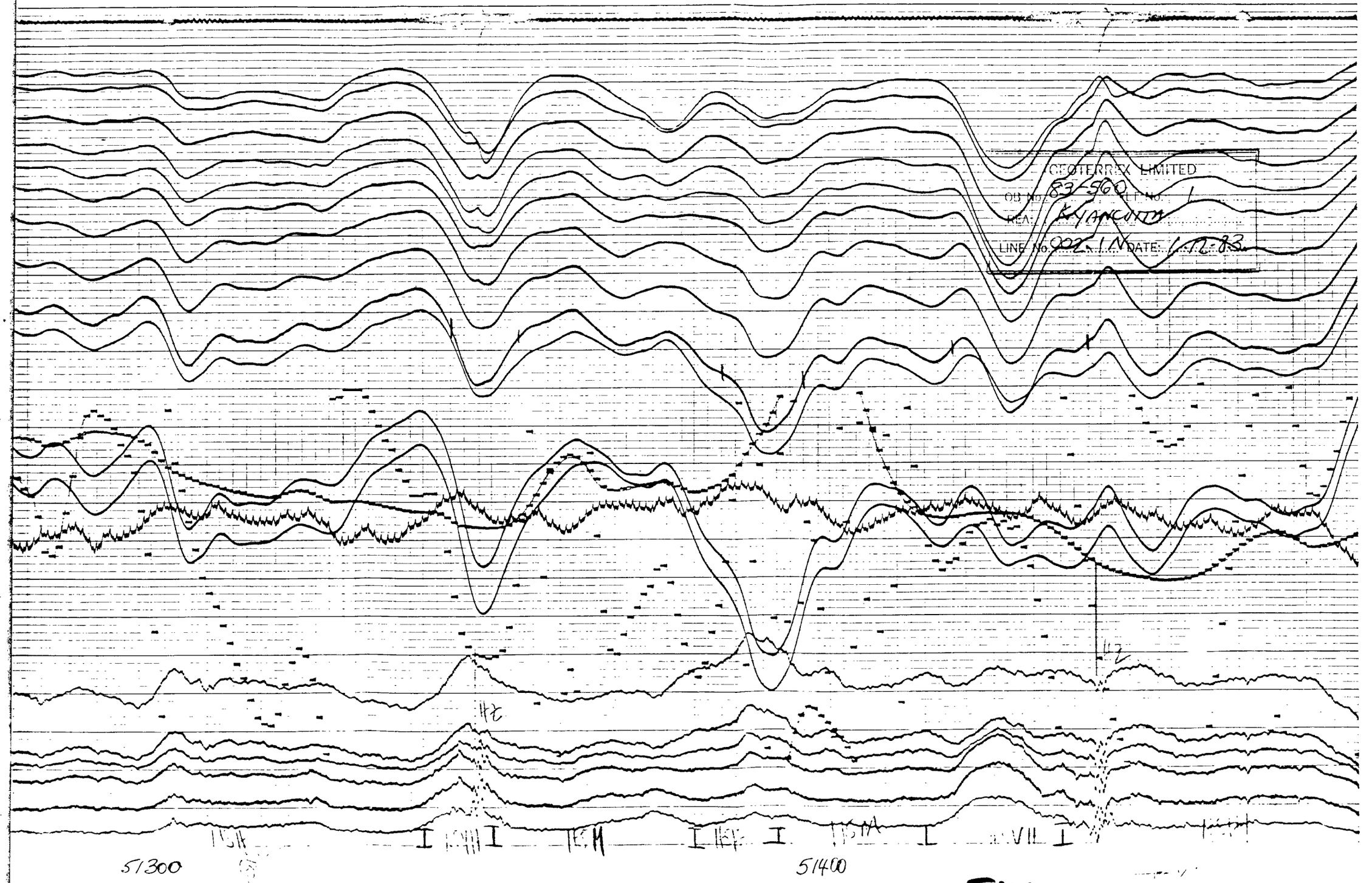
APPENDIX C



5449-1


GEOTERREX LIMITED
No. 83-560
KYANCUTTA
001.1S DATE: 1-12-83
12 INPUT Channels
(SRC)
Slow
altimeter
FS-Mag
150m
6 ... Channels
(HRC)
51100
51200
High resolution

5449-2


GEOTERREX LIMITED
OB No. 83-560 SET No. 1
AREA: KYANCUTTA
LINE No. 002-1N DATE: 1-11-83
51300
51400

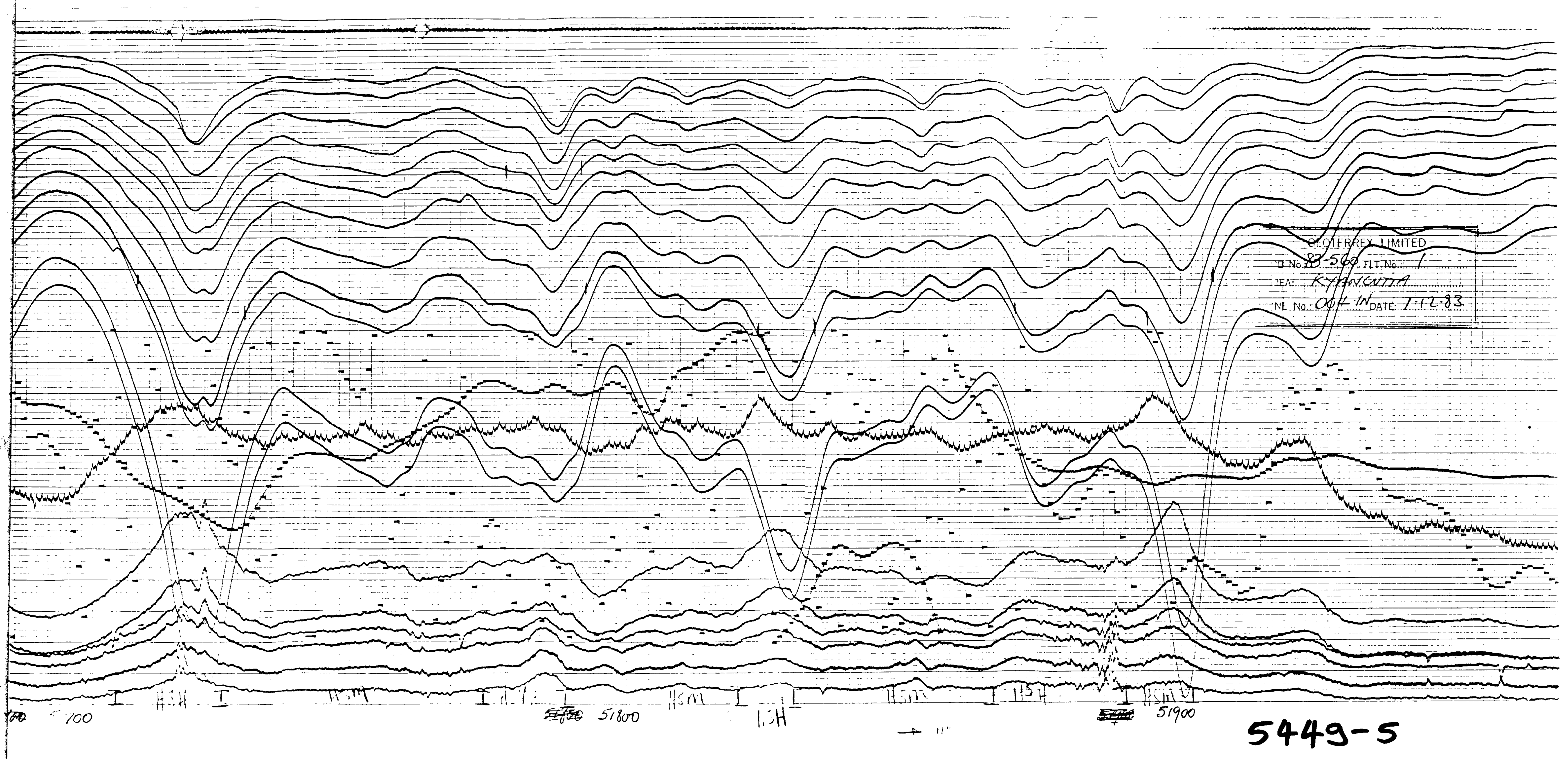
5449-3

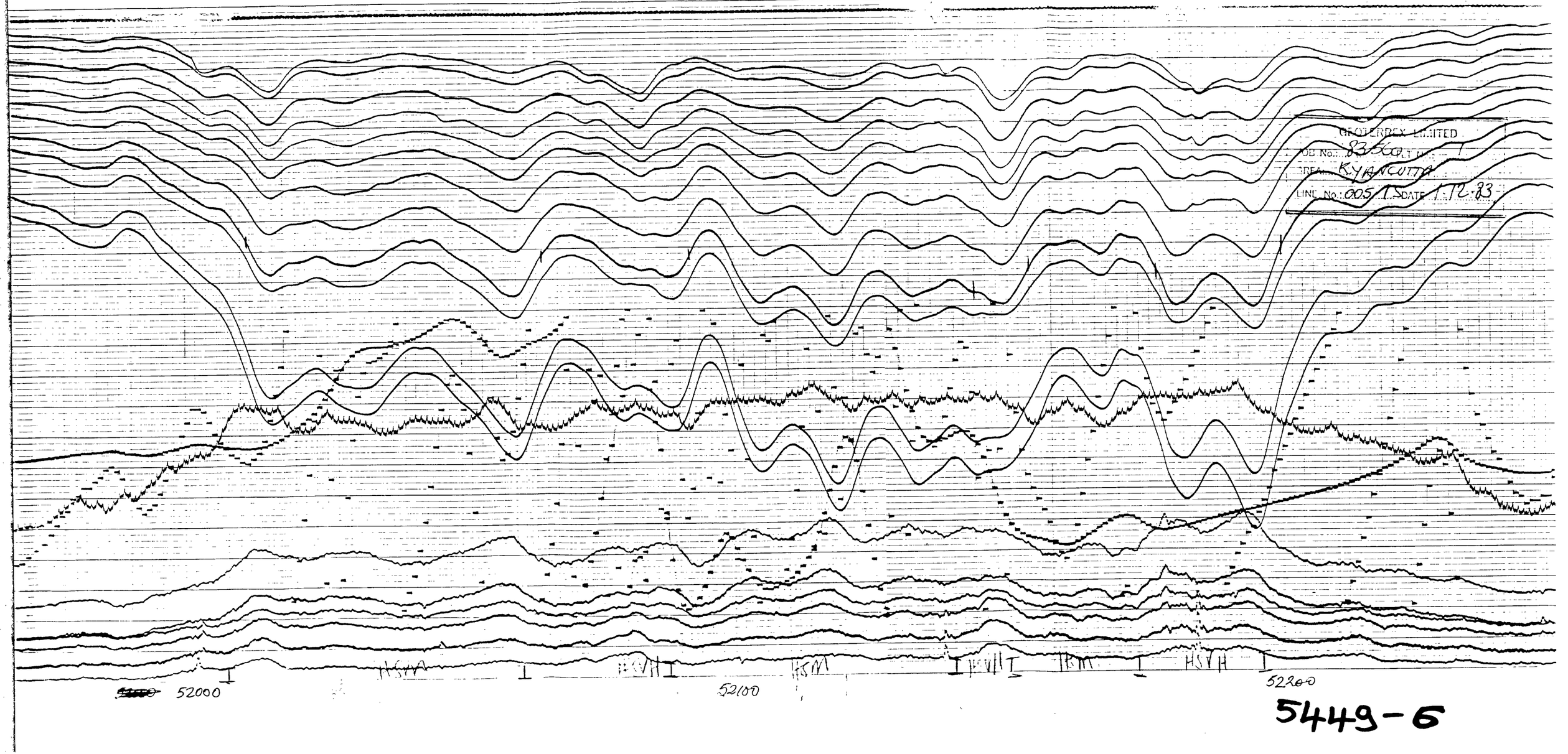
GEOTERREX LIMITED
83-560 FLT No.: 1
RYAN C, YT.
LINE No.: 003-1S DATE: 1-12-83.

51500.

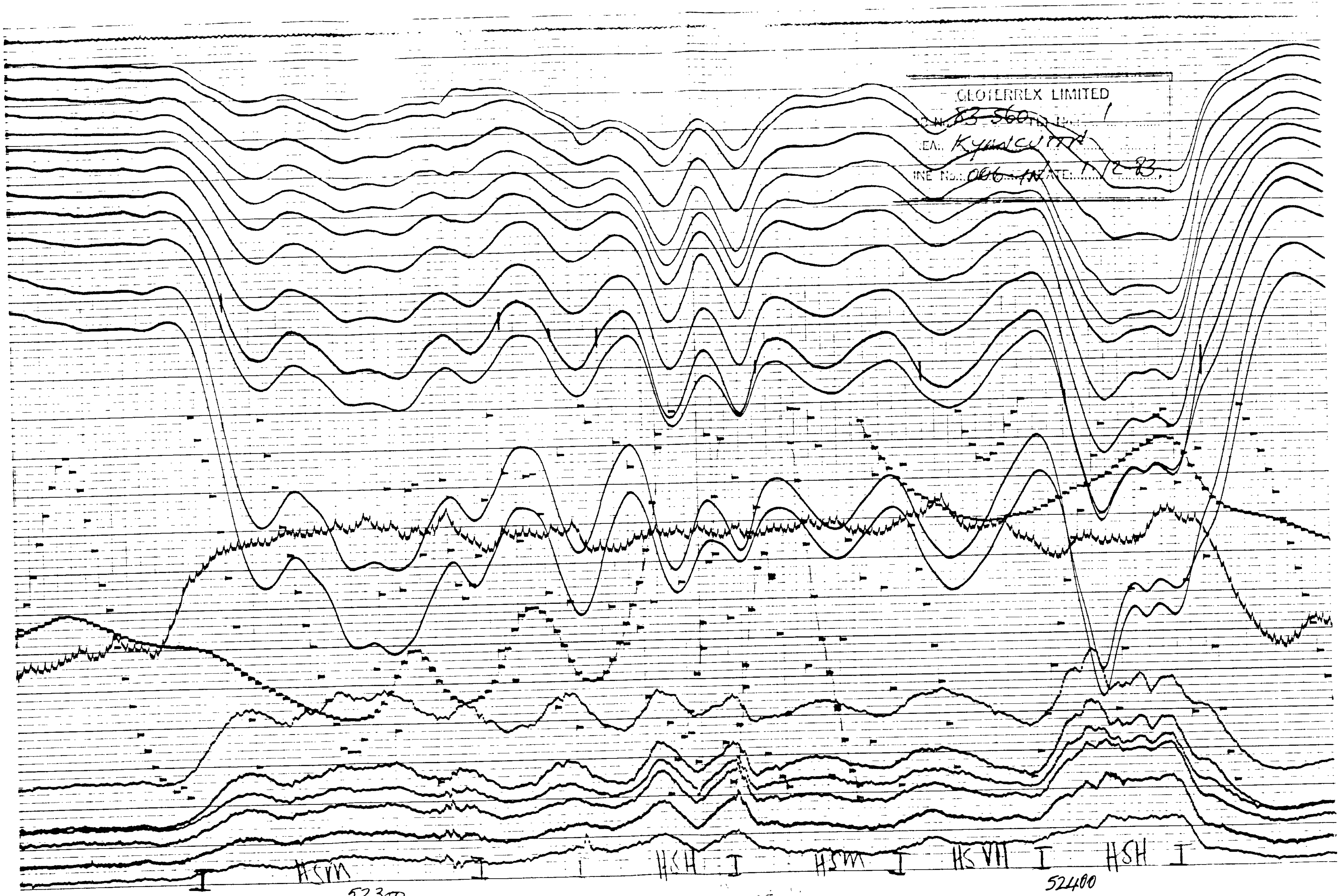
57600 51600

5449-4


GEOTERREX LIMITED
B No. 83-560 FLT No. 1
REA: KYANCUTTA
NE No. 004 IN DATE 1.12.83
51800
51900
5449-5

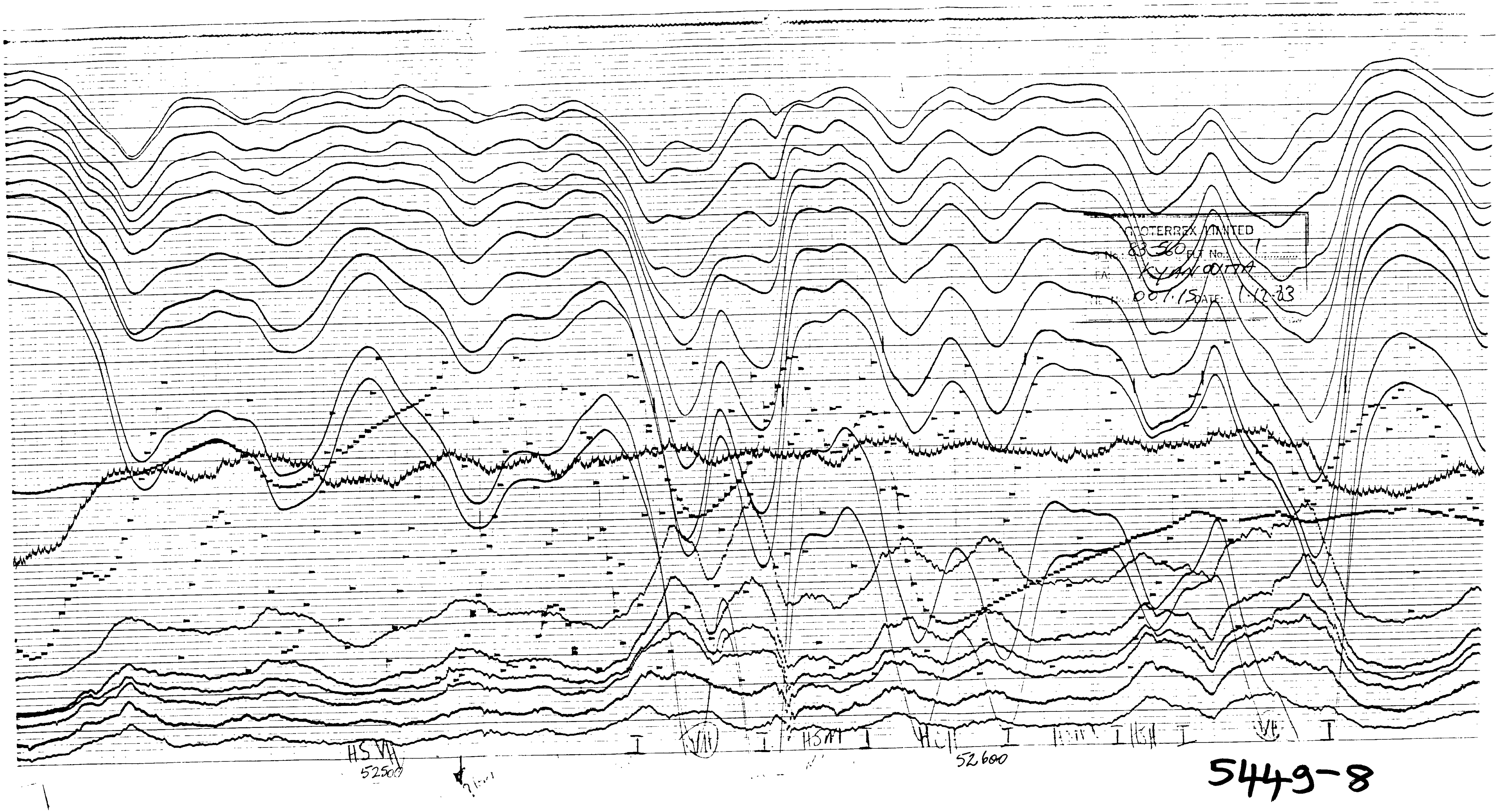

GEOTERREX LIMITED
JOB No.: 8356
AREA: KYANCUTTA
LINE No.: 005.1 DATE: 1-12-83
52000
52100
52200

5449-6

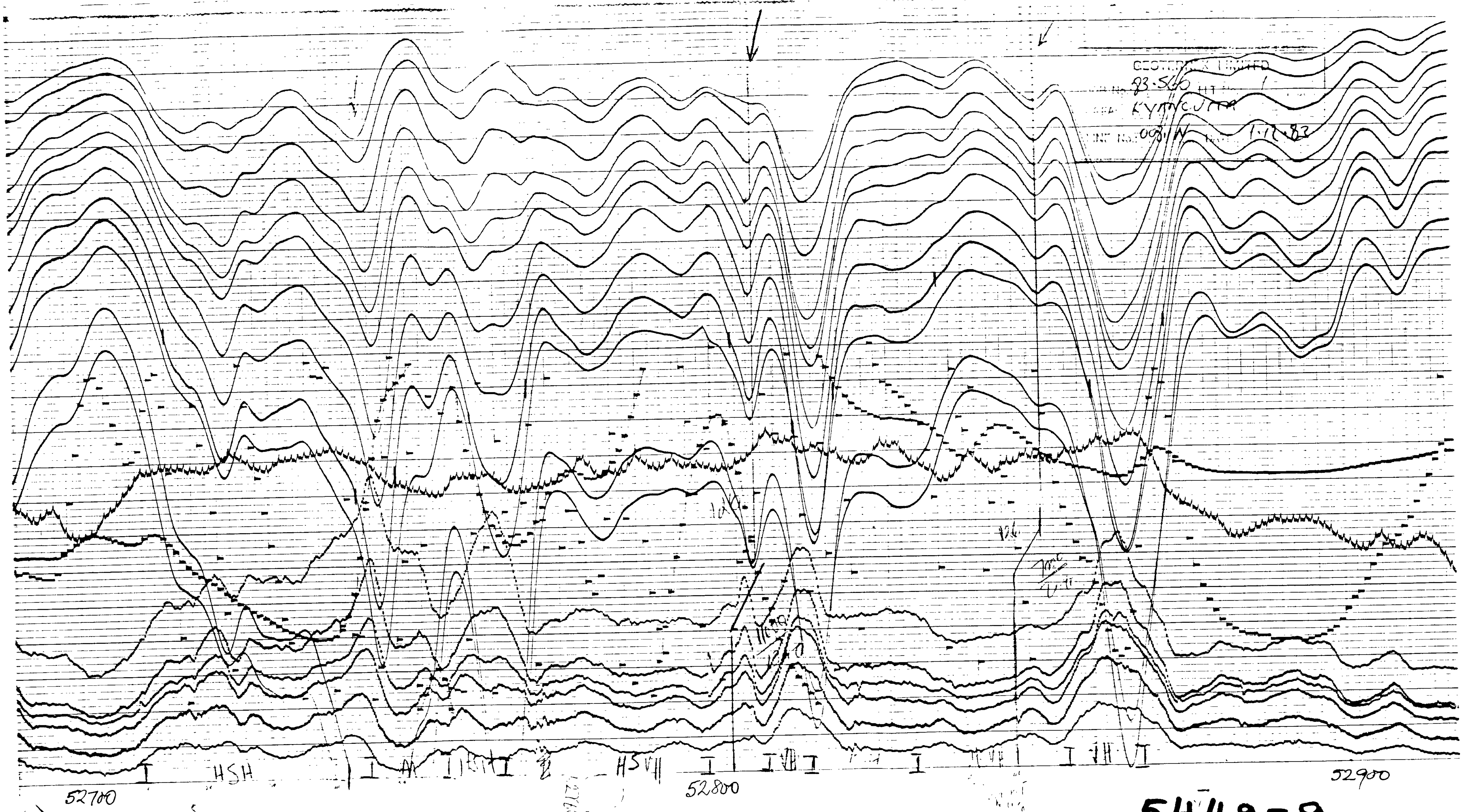


GEOTERREX LIMITED
83-560
1
Kyancutta
INE No.: 006
DATE: 1.12.83.
I
HSM
52300
I
I
HSH
I
HSM
I
HSVH
I
52400
HSH
I

5449-7

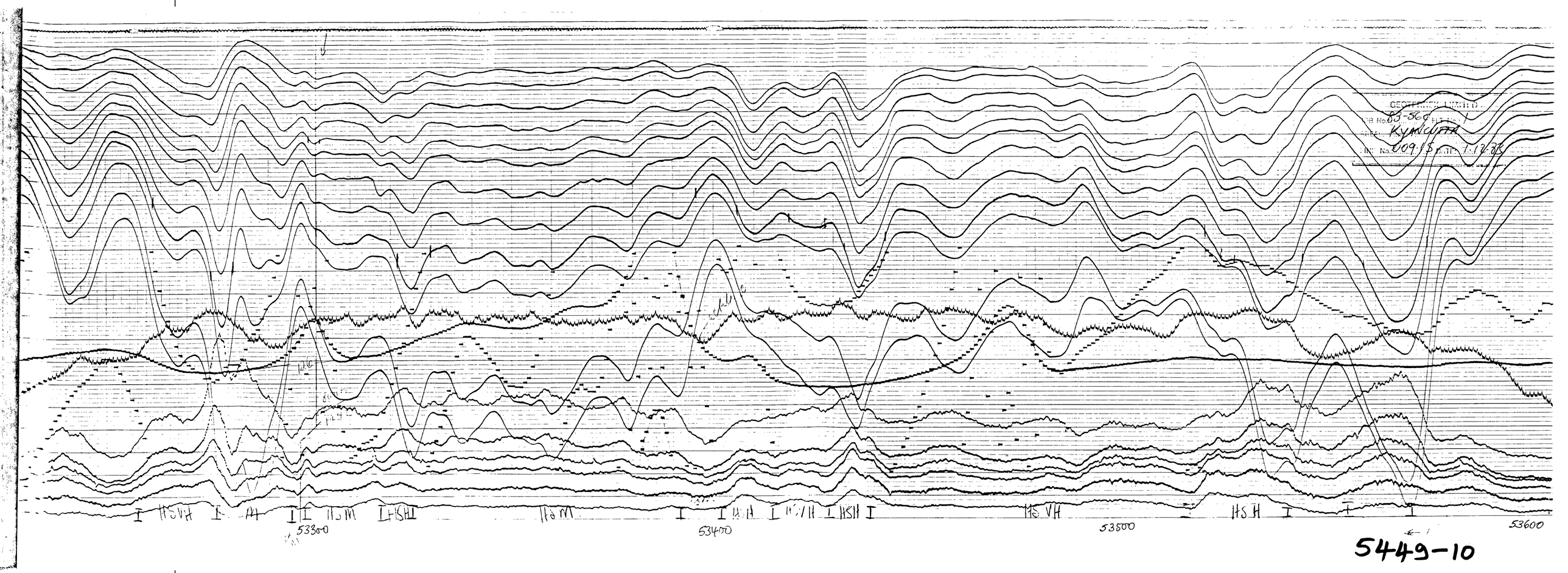

GEOTERREX LIMITED
No. 83-560 FLT No. 1
Kyancutta
001.15 DATE: 1.12.83
HS VH
52500
52600

5449-8

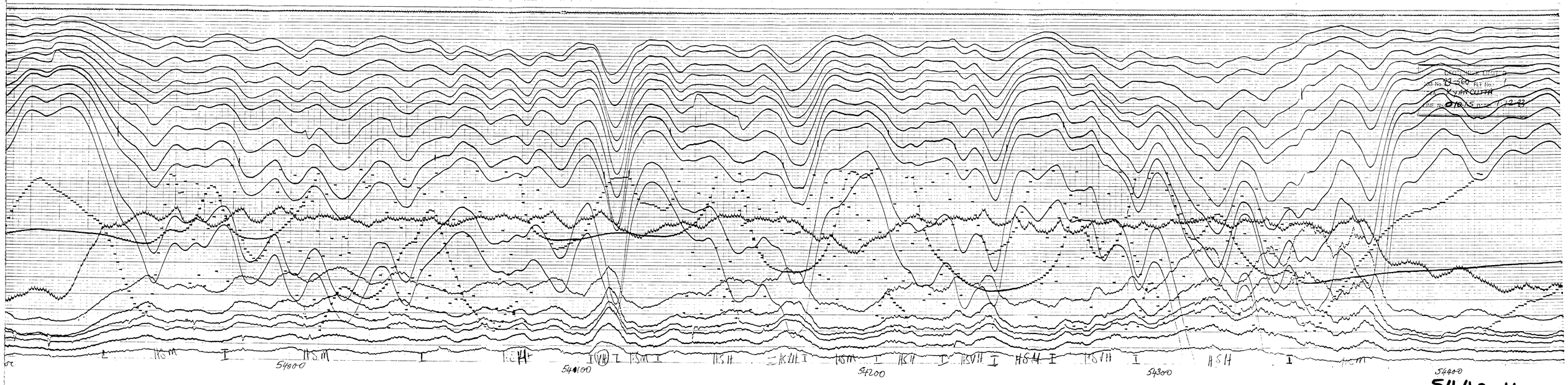


GEOTERREX LIMITED
93.560
KYANCUTTA
008 W
1.12.83
52700
52800
52900

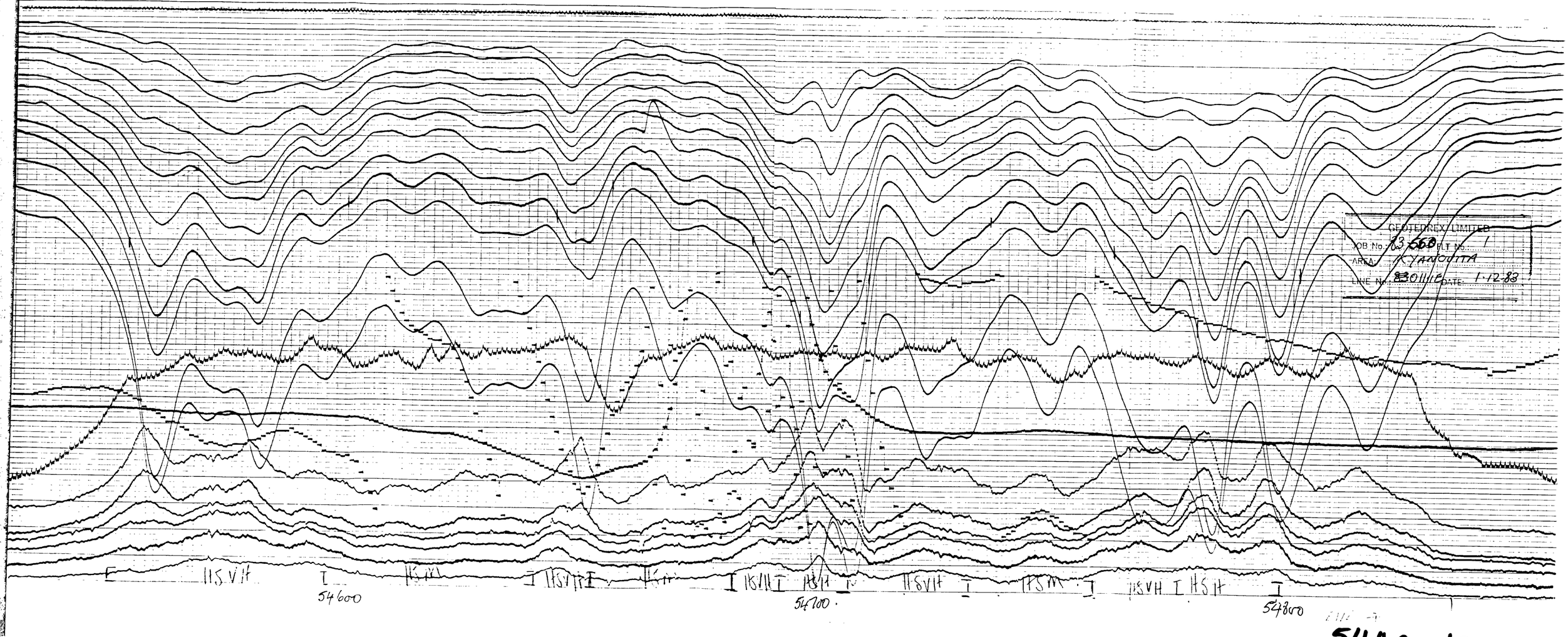
5449-9



5449-10



5449-11


GEOTERREX LIMITED
JOB No. 13560 FLT No. 1
AREA KYANOUTA
LINE No. 8301W DATE 1-12-88
54600
54700
54800

5449-12

GEOTERREX –

MAGNETICS/RADIOMETRICS
INPUT FLIGHT LOG

ANALOGUE FULL SCALES	MAG 2nd/2500 nT	MAGNETOMETER	
	K ..... cps	SENS. ..... nT	
	U ..... cps	RATE ..... sec.	
	Th ..... cps	DIGITAL DIURNAL	
	T.C. ..... cps	START	
COMPTON COEFF.	α	STOP	
	β	CAMERA 'f'	
	γ	INPUT RX 0·9 V	
	Crystal Vol	Gain	

DATE	1-12-83	FLT. NO.	1
JOB NO.	83-560		
AREA	KYANCUTTA		
A/C	VH-EXG		
BASE	WHYALLA		
PILOTS	MCKENZIE/EDWARD		
OPERATOR	WOOLAKEY		

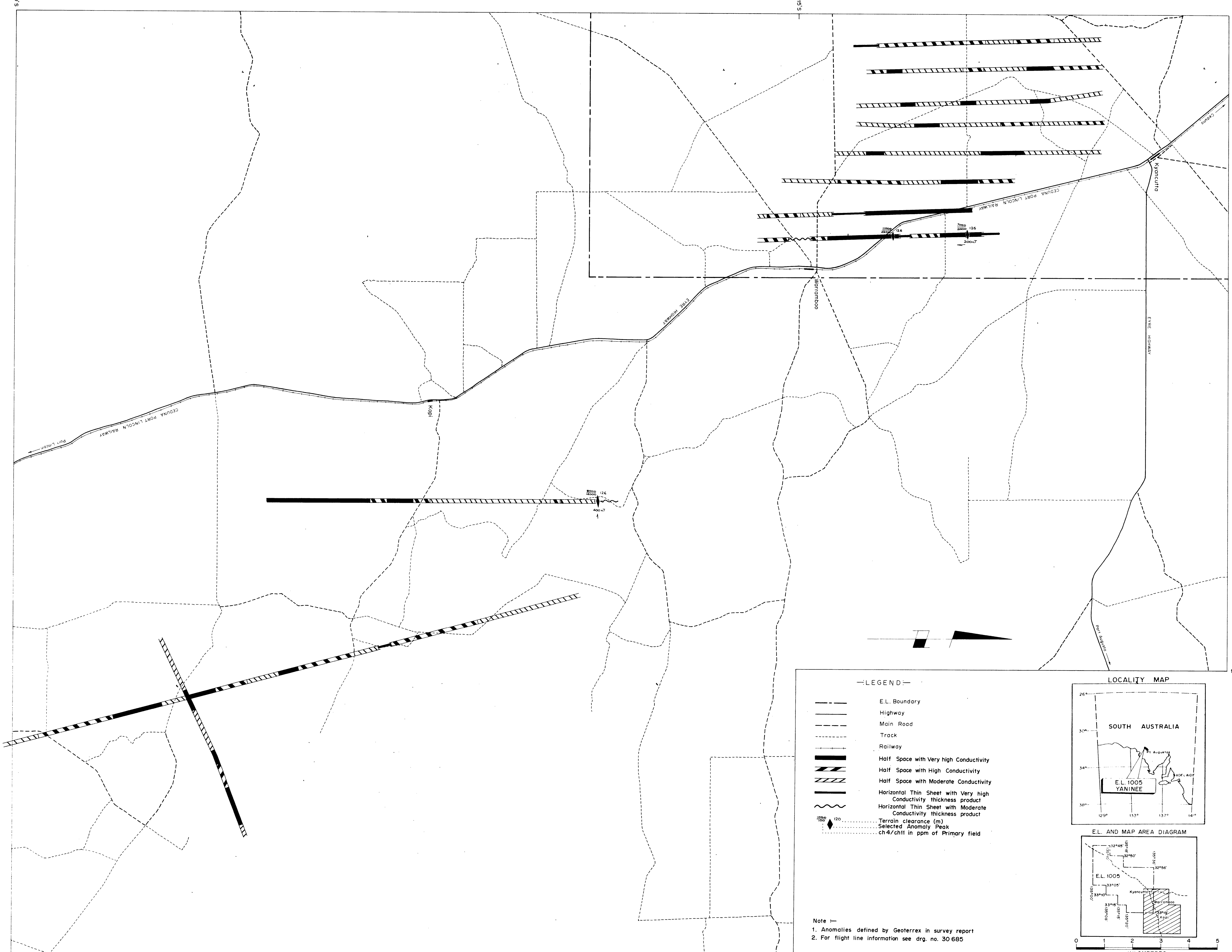
PRE-FLIGHT	Time		
U count, U source		U count, Th source	
Th count, U source		Th count, Th source	
K count, U source		K count, Th source	
T. count, U source		T. count, Th source	
Bal 4		Cal 4	

POST FLIGHT	Time		
U count, U source		U count, Th source	
Th count, U source		Th count, Th source	
K count, U source		K count, Th source	
T. count, U source		T. count, Th source	
Bal 4		Cal 4	

LINE	P/N	HDG	START	END	TIME	COMMENTS	RECOVERY
						50398 SKIN	
ZERO			50450	50500			
CAL			50530	50560			
DATUM			50580	50610			
001	1	S	51070	51240		(51090 MARK)	
002	1	N	51300	51460			
003	1	S	51500	51660			
004	1	N	51730	51880			
005	1	S	52000	52160			
006	1	N	52270	52420			
007	1	S	52470	52630			
008	1	N	52700	52800			
009	1	S	53260	53540			
010	1	S	53920	54370			
011	1	E	54590	54810		HREC at 54236	

Form 60 N.P.

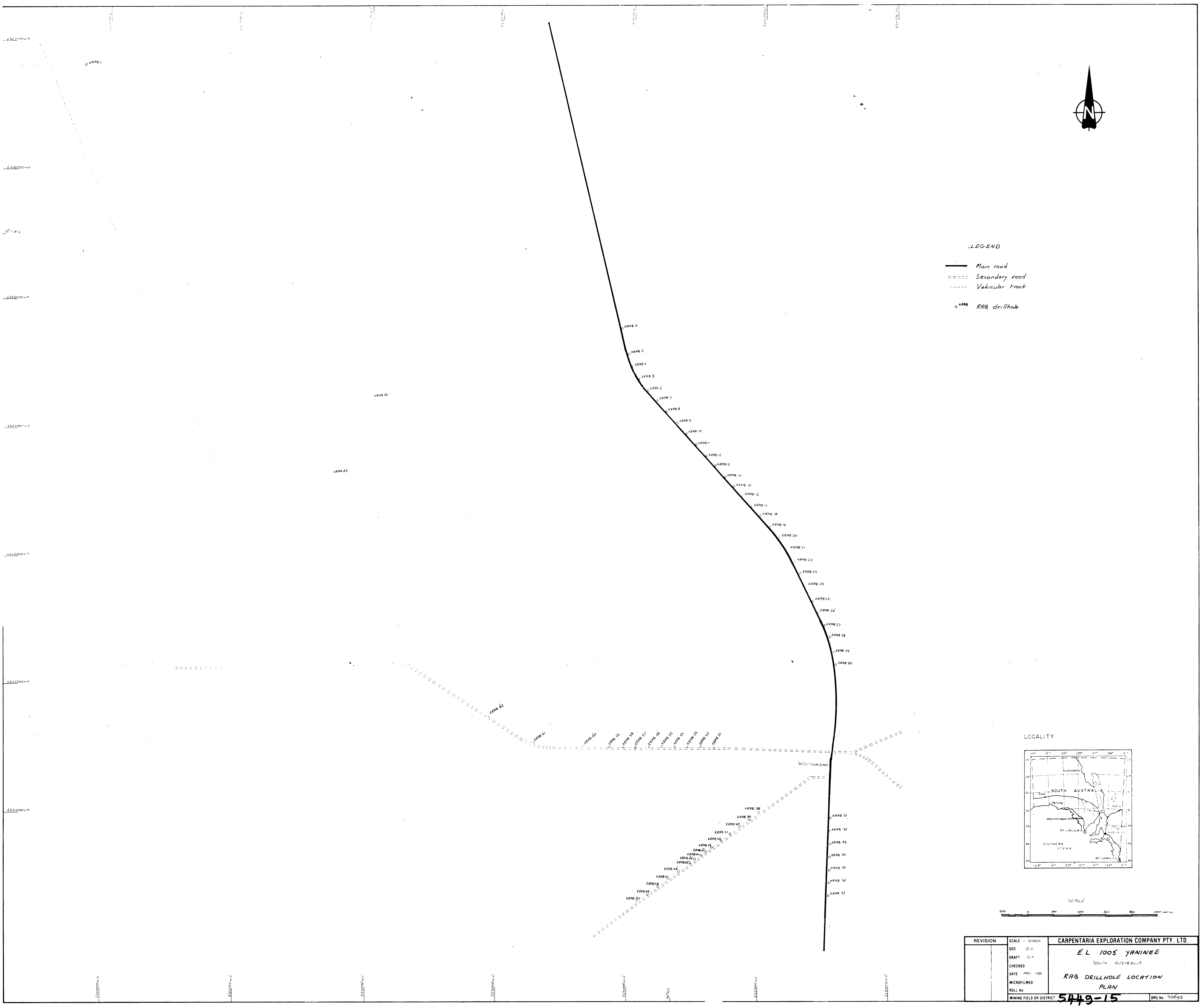
REVISION		
	SCALE 1:50 000	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
	GEO S.N.S.	E.L. 1005 YANINEE
	DRAFT GEO.	SOUTH AUSTRALIA
	CHECKED	
	DATE May 1984	FLIGHT LINE PATH
	MICROFILMED	
	ROLL No	5449-13
	MINING FIELD OR DISTRICT	DRG No.: 30 685


33°30'S
33°15'S
135°30'E
135°45'E
Kyancutta
Warramboo
Kopi
EYRE HIGHWAY
CEDUNA PORT LINCOLN RAILWAY
Port Lincoln
Port Augusta
LEGEND
E.L. Boundary
Highway
Main Road
Track
Railway
Half Space with Very high Conductivity
Half Space with High Conductivity
Half Space with Moderate Conductivity
Horizontal Thin Sheet with Very high Conductivity thickness product
Horizontal Thin Sheet with Moderate Conductivity thickness product
120 Terrain clearance (m)
Selected Anomaly Peak
ch4/ch11 in ppm of Primary field
LOCALITY MAP
SOUTH AUSTRALIA
E.L. 1005 YANINEE
E.L. AND MAP AREA DIAGRAM
E.L. 1005
33°15'
33°19'
135°08'
135°15'
135°20'
0 1 2 3 4 5
KILOMETRES

Note :—

1. Anomalies defined by Geoterrex in survey report
2. For flight line information see drg. no. 30 685

REVISION		
SCALE 1:50 000	CARPENTARIA EXPLORATION COMPANY PTY. LTD.	
GEO S.N.S.	E.L. 1005 YANINEE SOUTH AUSTRALIA Location & Type of INPUT Airborne EM Anomalies	
DRAFT Geo.		
CHECKED		
DATE May 1984		
MICROFILMED		
ROLL No	5449-14	
MINING FIELD OR DISTRICT		DRG No. 30 686



LEGEND
Main road
Secondary road
Vehicular track
KRAB RAB drillhole
LOCALITY
SOUTH AUSTRALIA
Warramboo
SCALE
200 0 200 400 600 800 1000 metres
REVISION
SCALE 1:10000
GEO GH
DRAFT GH
CHECKED
DATE MAY 1984
MICROFILMED
ROLL No
CARPENTARIA EXPLORATION COMPANY PTY. LTD.
E.L. 1005 YANINEE
SOUTH AUSTRALIA
RAB DRILLHOLE LOCATION PLAN
MINING FIELD OR DISTRICT 5449-15
DRG No 30692

6325000mN
6324000mN
6323000mN
6322000mN
6321000mN
552000mE
553000mE
554000mE
555000mE
556000mE
557000mE
558000mE

RAB
RAB 8, 2
RAB 6, 6
RAB 16, 22
RAB 26, 50
RAB 24, 12
RAB 75, 8
RAB 26, 120
RAB 6, 120
RAB 16, 190
RAB 10, 18
RAB 20, 34
RAB 6, 12
RAB 35, 195
RAB 10, 16
RAB 26, 18
RAB 18, 65
RAB 8, 240
RAB 26, 95
RAB 32, 8
RAB 8, 10
RAB 20, 140
RAB 14, 48
RAB 8, 34
RAB 510, 10
RAB 55, 28

RAB 6, 22
RAB 10, 60, 24
RAB 22, 38
RAB 20, 6, 120
RAB 14, 32, 60
RAB 12, 16, 55
RAB 110, 55, 130
RAB 20, 22, 110

Warrambo

16 C 8, 28
85 C 14, 8
20 C 8, 10
40 C 14, 55
14 C 14, 10
18 C 6, 46
22 C 8, 55

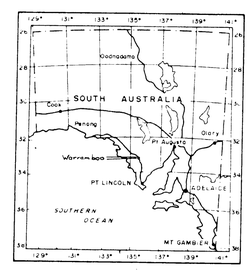
14 C 6, 22
10 C 60, 10
100 C 75, 6
100 C 8, 16
360 C 20, 90
210 C 8, 56
350 C 24, 140
330 C 14, 96
650 C 55, 80
18 C 14, 100
340 C 8, 65
14 C 24, 10
10 C 14, 14
100 C 26, 8

LEGEND

Main Road
Secondary road
Vehicular track
RAB drillhole
RAB Drillhole abandoned before reaching bedrock
8, 0, 8, 2 Copper, lead and zinc assay results (ppm)

NOTE All samples assayed for silver, all <1 ppm

LOCALITY



SCALE

200 0 200 400 600 800 1000 metres

REVISION			
	SCALE 1:10000	CARPENTARIA EXPLORATION COMPANY PTY. LTD.	
	GEO G.H	E.L. 1005 YANINEE	
	DRAFT G.H	SOUTH AUSTRALIA	
	CHECKED	RAB SAMPLE GEOCHEMISTRY	
	DATE MAY 1988		
	MICROFILMED		
	ROLL No.		
	MINING FIELD OR DISTRICT	5449-16	DRG No. 30693

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

EXPLORATION LICENCE NO.1005 "YANINEE"

PROGRESS AND FINAL REPORT FOR QUARTER ENDED DECEMBER 1, 1984

1. TERMS AND CONDITIONS

Exploration Licence No.1005 "Yaninee" was granted on June 2, 1982, for a term of one year with an expenditure commitment of $70 000. The Licence has subsequently been extended for a period of one year on two occasions. The Licence is located approximately 200 km west of Whyalla and covers an area of 2276 km².

The area was held previously for two years as Exploration Licence No.610. This Licence was granted on March 17, 1980.

2. EXPLORATION

The area was originally taken up for exploration for sandstone type uranium mineralization after uranium had been found in the Narlaby Palaeochannel to the north. A total of 5514 m of "open-hole" mud drilling was completed in 114 holes in 1980 and early 1981. This drilling revealed a major palaeochannel of Eocene age which is infilled with coarse, highly "reduced" sands. Traces of uranium mineralization were found in Pliocene sands overlying the palaeochannel. Results of this exploration were reported in Progress Reports on Exploration Licence No.610.

In May 1981 Carpentaria Exploration Company Pty. Ltd. entered into an expenditure agreement with SADME whereby individual commitments to each Licence in the "Narlaby" project were waived provided that the annual expenditure matched the total commitment of all the Licences. This was agreed to by SADME as major disequilibrium problems were causing severe problems in estimating grades of uranium mineralization in the Yaninee Licence area, and intensive drilling was needed in this area to solve the problem before further reconnaissance exploration was carried out. After the expenditure amalgamation, reporting on the Yaninee Licence was included with other Licences in the Narlaby Project Progress Reports.

Late in 1983 the emphasis of exploration was changed from uranium to the possibility of base and precious metal mineralization associated with banded iron formations in the Kopi area in the eastern part of the Licence. As there is no outcrop of basement rocks in this area an Input survey was flown in November 1983 over a series of elongate magnetic anomalies. This survey was followed up by a series of "RAB" holes which were drilled in April-May 1984. A total of 2192 m was drilled in 66 holes. Assays of basement samples for base and

2. EXPLORATION

precious metals were not encouraging and it was decided not to do any further work in the area. Results of the base metal exploration were presented to the Department in Progress Reports on Exploration Licence No.1005.

The Licence was surrendered early in October 1984.

3. EXPENDITURE

Individual statement of expenditure is appended.

for P.J. Binks

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

EXPLORATION LICENCE NO. 1005 "YANINEE"

FINAL STATEMENT OF EXPENDITURE.

	$	$
TOTAL - THIS PERIOD	Nil	Nil
Previously Reported		145 482
Total Project Expenditure To Date		$145 482

A.E. Covacich.