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EXPLORATION RETENTION

LICENCE APPLICATION 104

(FORMERLY PART OF E.L. 4359)

13th September, 1983
to
12th September, 1989

Applicant:	Ashton Mining Limited
Sheet Reference:	Calvert Hills (SE 53-8) 1:250,000 Wallhallow (SE 53-7) 1:250,000
Submitted to:	Department of Mines & Energy

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October, 1989

CR89/700

ABSTRACT

During the period 13th September, 1983 to 12th September, 1989, Ashton Mining Limited as Manager of the A.D.E. Joint Venture carried out an extensive exploration program within E.L. 4359 aimed at the location of kimberlite pipes.

Results of the program identified an anomalous diamond zone within the southern portion of the licence which was considered to represent a possible economic alluvial diamond source.

The anomalous diamond zone is both structurally and sedimentologically complex. In order to adequately test the true potential of the zone, further time is required by the A.D.E. Joint Venture to resolve these complexities. It is for this reason that the Joint Venture has applied for an Exploration Retention Licence (namely E.R.L. (A) 104) covering the major portion of the anomalous zone originally located within E.L. 4359.

This confidential report gives details of the work conducted within the application area of E.R.L. (A) 104 only, formerly part of E.L. 4359. All work conducted within the remaining portion of E.L. 4359 is presented in a separate final report to the Department.

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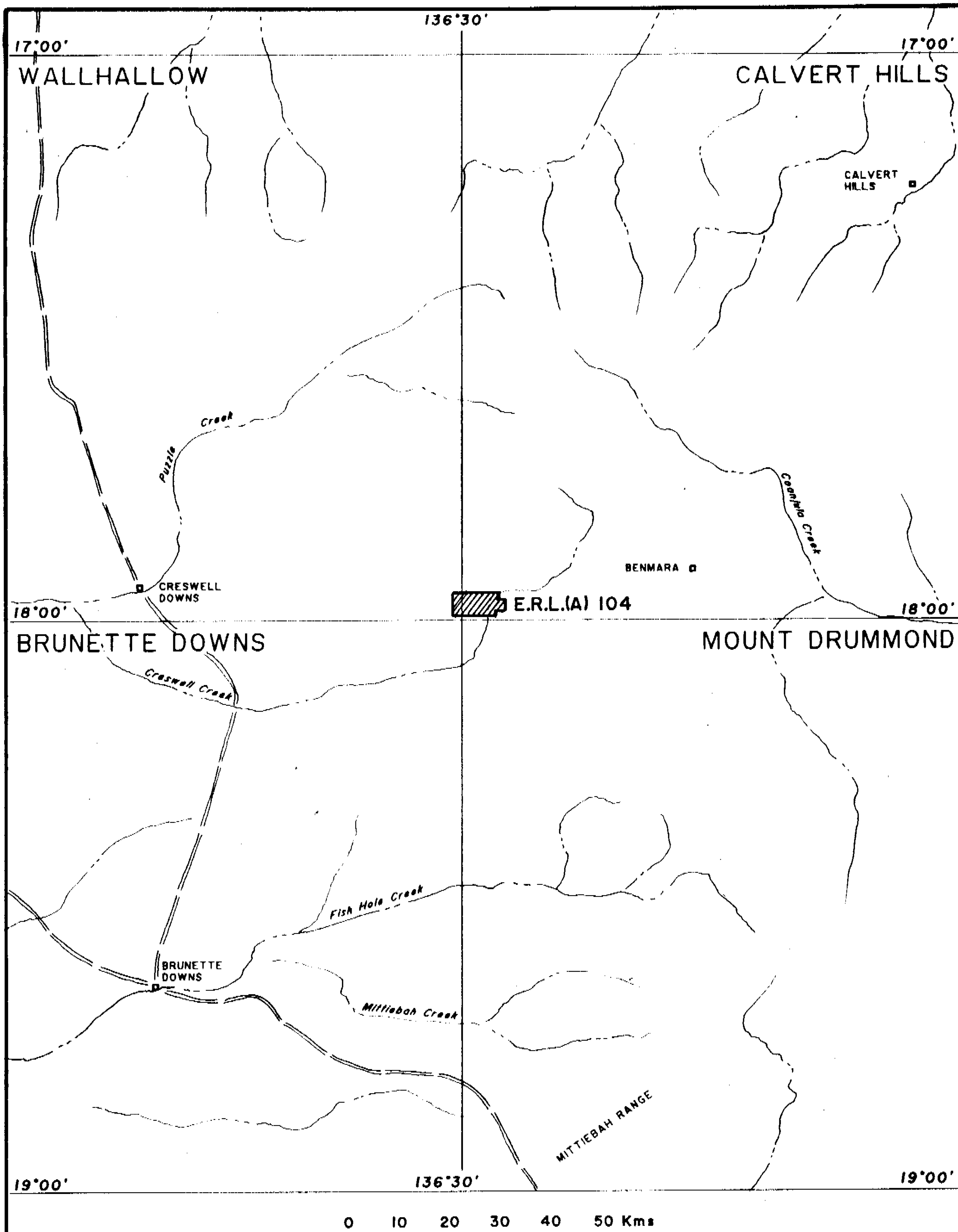


FIGURE 1

LOCATION PLAN

1.00 INTRODUCTION

An application for an Exploration Retention Licence covering an area of 3,990 hectares in the Creswell Creek locality, on the Calvert Hills and Wallhallow 1:250,000 sheets was lodged with the Department of Mines and Energy, Darwin on 14th September, 1989. (refer to Figure 1).

The application, now designated E.R.L. (A) 104 originally formed part of Exploration Licence 4359 which was granted to Plenty River Mining Company (N.T.) on 13th September, 1983. The licence was subject to an option agreement with the A.D.E. Joint Venture comprising Ashton Mining Limited, Aberfoyle Exploration Limited, Australian Diamond Exploration N.L. and Fibade Pty. Limited. The title was later transferred to Ashton Mining Limited, the transfer being approved by the Department of Mines and Energy on 9th April, 1984.

During the period 13th September, 1983 to 12th September, 1989, an extensive exploration program was conducted within E.L. 4359 in search of kimberlite pipes. Results of the program identified an area within the southern portion of the licence which was considered to warrant additional assessment . It is for this reason that the Joint Venture has applied for an Exploration Retention Licence (namely E.R.L. (A) 104) over this portion of the licence area. The remaining part of E.L. 4359 was allowed to expire with effect from 13th September, 1989.

This is a confidential report giving details of the work carried out within the application area of Exploration Retention Licence 1Ø4, as a former part of E.L. 4359, during the period 13th September, 1983 to 12th September, 1989. All work conducted within the remaining area of E.L. 4359 is given in a separate final report to the Department.

For convenience, expenses incurred for the work conducted within E.R.L. (A) 1Ø4 (formerly part of E.L. 4359) have been included in the final expenditure statement for Exploration Licence 4359.

2.00 GRAVEL SAMPLING PROGRAM

2.10 Field Phase

The gravel sampling program undertaken within E.R.L. (A) 104 was carried out as part of a larger regional program conducted by the A.D.E. Joint Venture in the Calvert Hills - Wallhallow area. Prior to the commencement of field work, gravel sample locations were plotted in the office on the Puzzle and Coanjula 1:100,000 sheets so that sample sites tested the available drainage. As the drainage in the area is relatively sparse, this resulted in only 9 regional gravel samples being taken within the application area.

During the field program, individual gravel sample sites were selected on the basis of the quality of the available heavy mineral traps in the vicinity of the preselected site, care being taken to sample the most suitable trap site. Helicopter was the most practical mode of transport as it had the advantage of ease of access and navigation and enabled the geologist to scan the region for suitable trap sites.

Once a suitable gravel sample site was located, approximately 40 kg of gravel were gathered, sieved and the minus 4mm fraction collected for laboratory examination. Generally the minus 4mm samples weighed 30 to 35 kg. The sample sites were accurately plotted in the field on a prepared 1:100,000 base plan. All sample locations are given on Plan 1.

Nine aditional follow-up gravel samples (CAL 60-68) were collected to test whether the excellent result obtained for regional sample CAL 17 could be repeated.

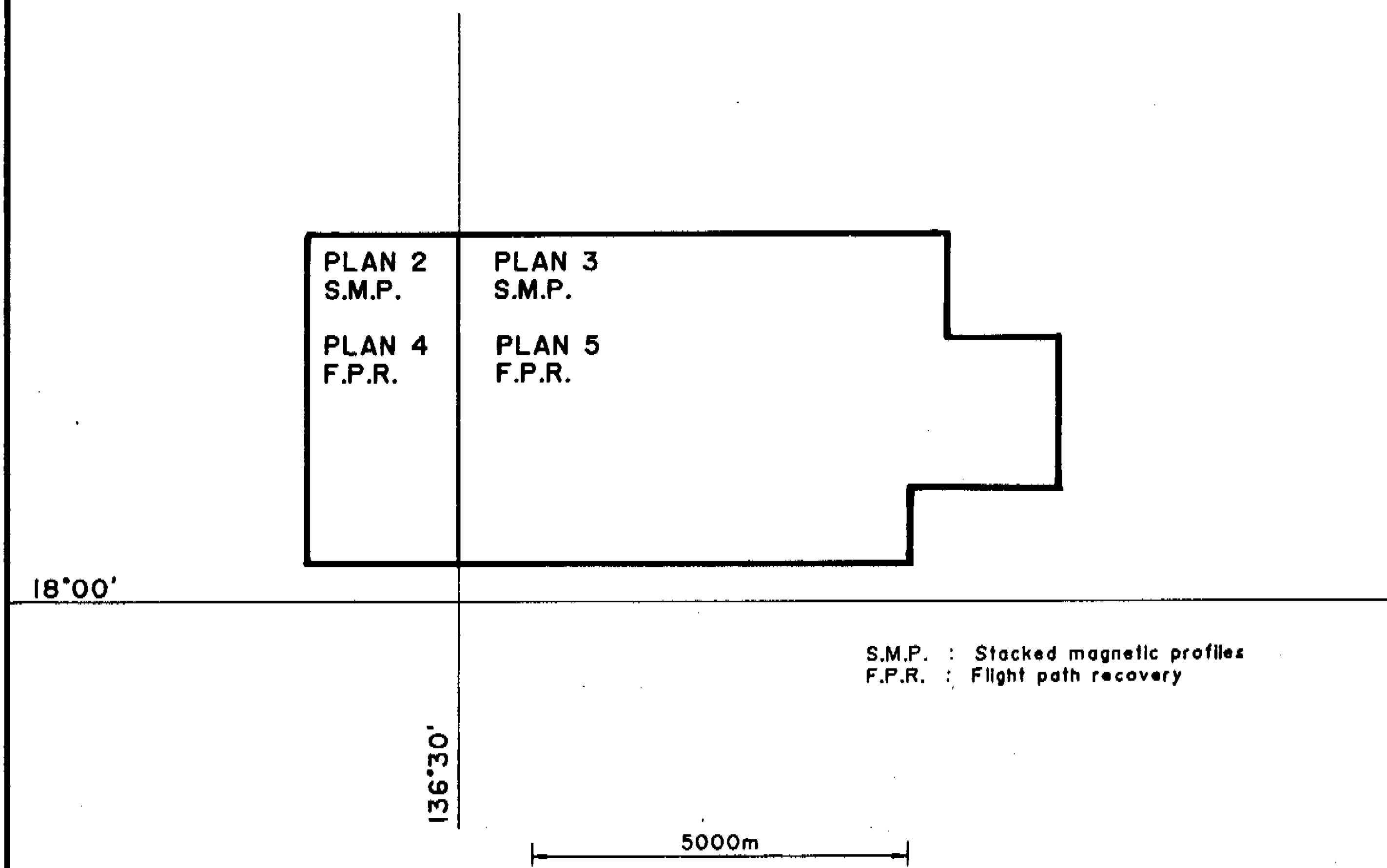
2.20 Laboratory Phase

The samples were processed at the Ashton Mining Limited laboratory in Perth where they were concentrated by Wilfley Table and heavy liquid separation techniques.

The heavy liquid used was tetrabromoethane with a specific gravity of 2.96. The concentrates were then screened into various size fractions, further concentrated, where required, by magnetic and electrostatic separation techniques and a comprehensive grain by grain examination carried out on the minus 1.0mm plus 0.4mm fractions.

Of the 18 gravel samples collected within E.R.L. (A) 104, eleven contained no detectable kimberlite indicator minerals. Twelve microdiamonds and one zircon were recovered from the seven remaining samples.

A listing of laboratory results for the relevant samples (CAL 17, CAL 60-68, CAL 251, CAL 1089-1091, CAL 1093-1095 and CAL 1286) is included in Appendix 1.



E.R.L.(A) 104

AIRBORNE MAGNETIC SURVEY
PLAN LOCATION
FIGURE 2

3.00 AIRBORNE MAGNETIC SURVEY

A fixed wing airborne magnetic survey was flown by Geometrics International Incorporation over the entire application area of E.R.L. 104. Refer to Figure 2 for plan locations.

This work was carried out as part of a larger regional airborne magnetic program by the A.D.E. Joint Venture in the Calvert Hills - Wallhallow area. Flight line spacing was 300 metres with lines oriented in a north-south direction. Additional survey specifications are listed in the legend to all airborne magnetic plans.

Results within E.R.L. (A) 104 are presented as stacked profiles and flight path recovery plans (refer to Plans 2 to 5).

The data collected from the survey was interpreted by Ashton Mining geologists. No magnetic anomalies were delineated within the area of the application.

TABLE 1

SPECIFICATIONS AIRBORNE THEMATIC MAPPER SURVEY.

Instrument: Daedalus 1268 Scanner (11 channels)

Channels available:

Channel	Wave Length (μm)
1	0.42 - 0.45
2	0.45 - 0.52
3	0.52 - 0.6
4	0.605 - 0.625
5	0.63 - 0.69
6	0.695 - 0.75
7	0.76 - 0.9
8	0.91 - 1.05
9	1.55 - 1.75
10	2.08 - 2.35
11	8.5 - 13

Aircraft: Beech King Air

Flying Altitude: 8000 metres above ground level

Ground Element Size: 20m x 20m

Flight Times: 0930 hours to 1430 hours

Azimuth of Runs: North or South

Overlap between runs: 40%

4.00 AIRBORNE THEMATIC MAPPER SURVEY

An airborne thematic mapper survey, undertaken on behalf of the A.D.E. Joint Venture by the National Safety Council of Australia, Victorian Division ("NSCA"), was flown over the whole of the application area of E.R.L. 104. Specifications for the survey are given in Table 1.

Thematic mapping was chosen over other remote sensing exploration methods as it had the advantage of using an eleven channel scanner giving a larger number of spectral bands which can be discriminated and because all data collected is digitized allowing for the greatest flexibility in manipulation of the data.

Within E.R.L. (A) 104 the exploration method of thematic mapping was aimed primarily to enhance or distinguish between a possible kimberlite body and its surrounding overburden of undifferentiated Cainozoic laterite, sand and soils.

The scanner data in the form of 'quick look paper prints' collected from the airborne thematic survey, together with all relevant aerial photography, was forwarded to Hunting Geology and Geophysics (Australia) Pty Limited for examination.

The procedure used by Hunting in such an examination is listed below:

1. Monoscopic examination of aerial photography.
2. Identification of anomalies from Step 1 on scanner data.
3. Examination of 11 channels of scanner data.
4. Identification of additional anomalies from Step 3 on aerial photography.
5. Stereoscopic examination of all anomalies on aerial photography where stereoscopic coverage was available.
6. Grading of anomalies.

The targets selected by Hunting were rated on a lowest, low, medium or high priority scale. Grading was established solely on the appearance of the anomalous zones without consideration of their position in regard to regional tectonic structures, or their apparent age in relation to residual surfaces.

Within the application area of Exploration Retention Licence 104, thematic maping failed to locate a single anomaly worthy of follow-up investigations.

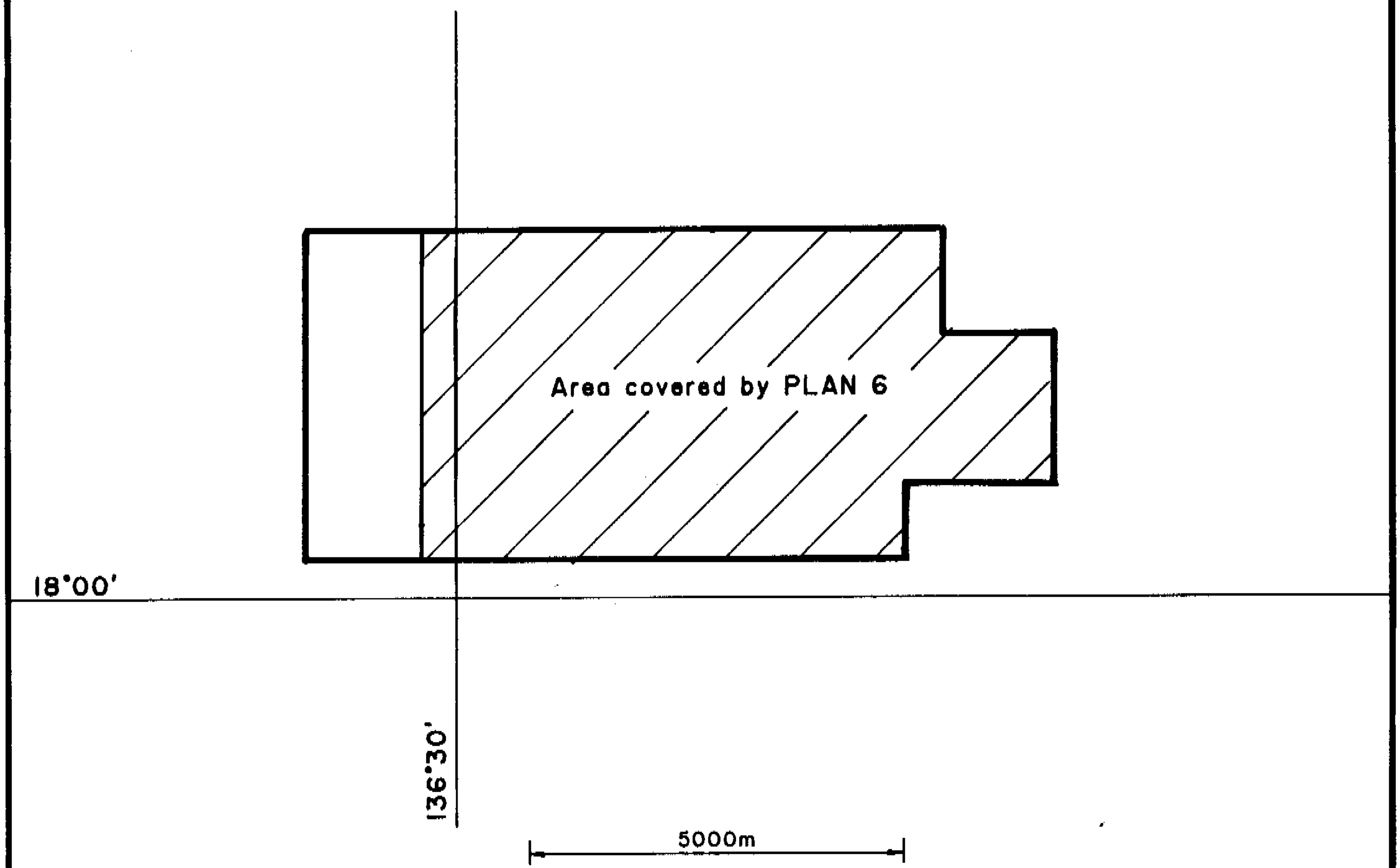
5.00 PHOTOGEOLOGY

Following examination of the air photography used by Hunting in conjunction with thematic mapper and previous sampling results, a number of photo features within the Coanjula area were identified by Ashton Mining staff, one of which was located within E.R.L. (A) 104. This photo feature, identified within the southern portion of the application area, was selected for inclusion in the A.D.E. diamond drilling program. The criteria for selection being the proximity to known microdiamond concentrations, the distinctness and discrete nature of the feature and strong scanner and airphoto association.

Drilling operations were carried out on behalf of the A.D.E. Joint Venture by core drilling contractors, Longyear Australia Pty. Limited. A truck mounted type-H22 rig was used for both open hole and diamond coring.

Diamond drillhole CJ 168 on photo feature 609 (the locations of which are given in Plan 1) which was drilled to a depth of 65.9 metres, was found to intersect weathered porphyritic volcanics and metasediments.

Drill core recovered from the program was logged in the field by Ashton Mining geologists. A representative drill log incorporating core recovery, magnetic susceptibility data and lithological interpretation is included in Appendix 2.



E.R.L.(A) 104

INPUT SURVEY
PLAN LOCATION
FIGURE 3

ASHTON MINING LIMITED / A.D.E. JOINT VENTURE   E.R.L.(A) 104   OCTOBER, 1989

6.00 INPUT SURVEY

6.10 General

In airborne time domain electromagnetic (INduced PUlsed Transient or INPUT) survey was flown by Geoterrex Pty. Limited over approximately 70 percent of the application area of E.R.L. 104 (refer to Figure 3). This work was carried out as part of a larger regional Input program by the A.D.E. Joint Venture in the Coanjula area. Specifications for the survey are given in Table 2 and results for the area flown within E.R.L. (A) 104 are presented in Plan 6.

TABLE 2

SPECIFICATIONS REGIONAL INPUT SURVEY

Aircraft:	Super Canso PBY-5A
Traverse line direction:	North-South
Traverse line spacing:	250 metres
Average line length:	30.5 kilometres
Nominal aircraft terrain clearance:	120 metres (INPUT transmitter, altimeter and magnetometer)
Nominal bird terrain clearance:	60 metres (INPUT receiver)
Nominal aircraft speed:	60 metres per second
Navigation:	Visual
Equipment:	Barringer "INPUT" Mark V-12
	Scintrex cesium vapour optical absorption magnetometer
	MADACS digital acquisitor system
	Geocam 70 SF 35mm continuous strip tracking camera
	Sperry Stars AA200 radio altimeter system
	RMS GR33 analogue chart recorder

6.20 Interpretation and Follow-up

The data collected from the survey was interpreted by Geoterrex Pty. Limited. Since the Input response of kimberlite material depends upon the state of weathering of that material it was conceivable that such a target could be found to exhibit anomalous behaviour in three different ways:

1. High apparent conductivity in a conductive host (Labelled CC)
2. Low apparent conductivity in a conductive host (Labelled RC)
3. High apparent conductivity in a resistive host (Labelled CR)

The fourth combination (Resistive Kimberlite in a resistive host) was not detectable.

Potential targets were selected and labelled as belonging to one of the above groups. The anomalous zones were then rated as having either first or second priority mainly according to their shape and location. The apparent conductivity and anomaly profile shape was not considered diagnostic for CC and RC-type targets, although for CR-type anomalies, the anomaly shape served to indicate that the target had either sharp or diffuse edges.

Guidelines used by Geoterrex Pty. Ltd in the rating of anomalous zones with regard to category type are listed on the following page.

Priority Ratings - CC and RC Categories

Priority 1 - Zones which appear to be isolated, are approximately equidimensional and are clearly defined with respect to the host.

Priority 2 - Zones which exhibit anomalies whose amplitudes are similar to Priority 1 targets but which have excessive strike extent or less clear definition.

CR Category

Priority 1 - Zones which appear to be isolated, are approximately equidimensional and are clearly defined with respect to the host. They preferably show indications of sharp boundaries.

Priority 2 - Zones which exhibit amplitudes similar to Priority 1 targets but which display excessive strike extent or less clear definition.

Within E.R.L. (A) 104, a single Priority 1 target was outlined, the location of which is given on Plans 1 and 6. The relevant comments by Geoterrex regarding this anomaly are given below:

Anomalous Zone	:	IC-23
Flight Lines	:	2271, 2281
Category	:	CC-1
Interpreted Dimensions	:	800m x ?m
Apparent Thickness	:	Unreliable results - in excess of 50m
Comments	:	The anomalous zone coincides with a confined area of black soil between "hills" but this is not thought to be the sole cause since the black soil immediately south is not as conductive. Possible Other Source: Conductive metamorphic basement.

After field inspection of Anomaly IC-23 selected by Geoterrex, the target was chosen for inclusion in the A.D.E. diamond drilling program.

Within the application area of E.R.L. 104, diamond drillhole CJ 113, which was drilled to a depth of 67.95m, was found to intersect a sequence of interbedded metasediments comprising sandstones, mudstones and micaceous phyllite/schist. A representative drill log incorporating core recovery, magnetic susceptibility data and lithological interpretation is included in Appendix 2.

7.00 GRAVEL SEARCH PROFILES

7.10 General

In order to locate gravels suitable for bulk sampling, two lines of shallow RAB (Rotary Air Blast) holes were drilled in the eastern and central portions of the application area. The 'gravel lines' ranged from 850 to 950 metres in length, with drillholes at 50 metre spacings, drilled to bedrock.

Within E.R.L. (A) 104, thirty eight RAB holes, corresponding to a total depth of 438 metres, were completed during this initial drilling phase.

Drill spoils produced from the RAB holes were gathered, sieved and the minus 4mm fraction collected for laboratory examination. A total of 121 drill spoil samples were collected within the area of application E.R.L. 104.

The location of the lines is shown on Plan 1 and all sample intervals are given on Plans 7 and 8.

7.20 Laboratory Phase

All drill spoil samples collected during the RAB drilling program were forwarded to the Ashton Mining Limited laboratory in Perth for processing and observation.

Twenty three microdiamonds and one macrodiamond (eight of these stones being identified in a single drill spoil sample taken from Line W) were recovered through laboratory observation of the 121 drill spoil samples collected within E.R.L. (A) 1Ø4.

A listing of laboratory results for the relevant samples (CAL 1693-1759 and CAL 2279-2338) is included in Appendix 1.

8.00 FOLLOW-UP INVESTIGATIONS - LINE W AREA

8.10 Summary

The recovery of ten microdiamonds and one macrodiamond from drill spoil samples collected from RAB hole CJ189, the northernmost hole on Line W, prompted a follow-up drilling/ sampling program within the application area.

Follow-up work comprised the completion of several RAB drill lines and extensions to pre-existing lines (a total of 382 holes, approximately 9,200 metres), diamond drilling of five holes (855 metres) aimed at defining stratigraphic and structural relationships and to provide split core material for petrology, bulk drill spoil and costean sampling, accompanied by detailed geological mapping.

8.20 RAB Drilling

8.21 Field Phase

The high incidence of microdiamonds identified by previous RAB drilling of Line W prompted a follow-up RAB drilling program within E.R.L. (A) 104. Fifteen lines of shallow RAB holes, together with an additional six holes, four to extend Line W 200 metres to the northwest and two holes perpendicular to Line A, were completed as part of this follow-up drilling program.

The RAB lines (87/5, 87/8, 87/13 - 87/16, 87/21 and 88/22 - 88/29 inclusive) ranged from 900m to approximately 4.4km in length, with initial drill holes at either 100m, 150m or 200m intervals, drilled to bedrock. Additional close spaced RAB drilling in the vicinity of positive results on Line 87/5 was completed with holes at 50m intervals, drilled to a maximum depth of 30 metres. Redrilling and sampling of one RAB hole on Line 87/8 (CJ449) and six holes on Line 87/14 (CJ518 - CJ520 and CJ531 - CJ533 inclusive) were also undertaken to determine whether laboratory results for samples collected from these holes could be duplicated.

Within the application area of Exploration Retention Licence 104, 371 RAB holes, corresponding to a total depth in excess of 9,000 metres, were completed.

Drill spoils produced from the RAB drilling program were gathered, sieved and the minus 4mm fraction collected for laboratory examination. Generally, the minus 4mm samples weighed 25 to 40kg. A total of 632 drill spoil samples were collected within the application area.

The location of the lines is shown on Plan 1 and all sample intervals are given on Plans 8 to 10.

8.22 Laboratory Phase

All drill spoil samples collected during the RAB drilling program were forwarded to Ashton Mining's Perth laboratory where they were processed and observed in the manner outlined in Section 2.20.

Of the 632 drill spoil samples collected within the licence, 462 contained no detectable kimberlite indicator minerals. Five hundred and seven microdiamonds and six macrodiamonds were recovered from the 170 remaining samples. In addition, three chromite grains were identified through laboratory observation of the samples but these were considered to be of non-kimberlitic origin.

A listing of laboratory results for all drill spoil samples is included in Appendix 1.

8.30 Costean Sampling

A series of four costeans were excavated in the vicinity of Line W in the south eastern sector of E.R.L. (A) 104 in order to expose and sample bedrock in this portion of the application area.

The costeans, namely CAL-C1 to CAL-C4, were excavated to the west of Line W along Line 87/5 at intervals of 150 metres. Due to a thick clay/soil cover (up to six metres in CAL-C1) bedrock, comprising siltstones and fine grained sandstone, was only reached in two of the four costeans, CAL-C2 and CAL-C3 at a depth of 5 and 5.5 metres respectively. One five-bag bedrock sample, in the order of 80-100kg, was collected from each of these two costeans. The location of both costeans and corresponding samples is given on Plan 1.

Following collection, the costean samples were dispatched from the field to the Ashton Mining laboratory in Perth, where they were washed, dried and crushed using a disc pulveriser and 'jaw crusher' to a size fraction of 2mm. The samples were then processed and observed in the usual manner as outlined in Section 2.2Ø.

Both costean samples, namely CAL 2356 and CAL 2357, collected within E.R.L. (A) 1Ø4, were found to contain microdiamonds. Refer to Appendix 1 for the description of these stones.

8.4Ø Diamond Drilling

Following detailed geological mapping of the entire application area of E.R.L. 1Ø4, together with limited ground magnetic traversing in the vicinity Line W, five holes (CJ68Ø, CJ681, CJ682, CJ683 and CJ684) were completed within the application area as part of the A.D.E. Joint Venture's diamond drilling program. The program was undertaken to gain a better understanding of the stratigraphic and structural relationships in Area W and to provide split core for petrology and HF digestion.

Diamond drilling operations within E.R.L. (A) 1Ø4 were carried out on behalf of the joint venture by core drilling contractors, Leanda Drilling (Qld) Pty. Ltd. A skid-mounted 38 Longyear drill rig was used for diamond NQ coring.

Within E.R.L. (A) 104, five diamond drillholes, totalling 855 metres, were completed (refer to Plans 1 and 10 for drillhole locations). In addition, eleven RAB holes were completed as 'fill-in' and 'step out' holes in the vicinity of diamond drillholes CJ680 and CJ683 to further test the area. Seven drill spoil samples were taken for laboratory observation.

Diamond drillholes CJ680 and CJ681 were initially hammered to a depth of approximately 28 metres before actual coring commenced. Chips produced by the preliminary hammering phase were gathered, sieved and collected for laboratory observation. One thirty bag sample (approximately 450kg) was gathered from diamond drillhole CJ680 and one twenty bag rock chip/spoil sample (approximately 300kg) collected from hole CJ681. These samples were dispatched from the field to the Perth laboratory where they were processed and observed in the manner outlined in Section 2.20.

Drill core recovered from the program was progressively logged in the field by Ashton Mining geologists. Representative drill logs incorporating core recovery, magnetic susceptibility data (where warranted) and lithological interpretation for holes CJ680 to CJ684 are included in Appendix 2.

Igneous rocks were encountered (in varying degrees) in all five diamond drillholes completed within the Line W area.

Selective sampling of representative sections of drill core from holes CJ680, CJ681 and CJ682, together with detailed sampling over 2 metre sections of holes CJ683 (36-220m) and CJ684 (51-94m) were completed with a total of 113 samples collected for acid digestion/diamond observation and 35 samples taken for petrological examination.

All split core samples collected for diamond work were forwarded to the Ashton Mining laboratory in Perth, where they were washed, dried and crushed (to minus 4mm) prior to digestion in hydrofluoric acid. The samples were then further processed, concentrated and observed in the manner outlined in Section 2.20.

8.41 Results

Of the seven drill spoil samples taken from the eleven RAB holes drilled as follow-up to diamond drillholes CJ680 and CJ683, two samples were found to be devoid of kimberlitic minerals. Seven microdiamonds were recovered from the five remaining samples.

Sixty seven and one hundred and sixty nine microdiamonds from CAL 3145 and CAL 3146 respectively were identified through laboratory observation of 'bulk' rock chip/soil samples collected from the top of holes CJ680 and CJ681.

Laboratory processing of the 113 core samples collected for diamond analysis from drillholes CJ680, CJ681, CJ683 and

CJ684 failed to identify any diamonds or kimberlite indicator minerals in the samples. Three of the core samples, namely CAL 3177, CAL 3178 and CAL 3250 were found to contain chromite grain(s), however these were considered to be of non-kimberlitic origin.

A listing of the results for the relevant 'bulk' and drill core samples examined for diamonds, CAL 3145 - CAL 3259 is included in Appendix 1.

Detailed observation of samples submitted for petrology confirm the presence of volcanic rocks of trachytic/latitic to andesitic compositions within E.R.L. (A) 104. Petrological descriptions for the samples are included in Appendix 2 and all sample locations are given on the corresponding drill logs.

9.00 DATA REVIEW

As part of an extensive geological/economic assessment of the Coanjula region, the A.D.E. Joint Venture engaged a recognised and independent diamond consultant to review all data gathered by the joint venture relating to the application area of E.R.L. 104.

The review, which extended over a period of approximately six months, involved examination of the joint venture's extensive sampling database together with all RAB and diamond drilling results, geological mapping and interpretation of airborne magnetic, thematic mapper and Input surveys.

It was concluded by Dr. Bram Janse that the anomalous diamond zone within E.R.L. (A) 104 holds potential for a possible economic alluvial diamond source. Although the diamonds found to date are small and grades appear relatively low, the zone displays similarities with known alluvial diamond deposits in Ghana (West Africa). The Ghanian deposits have been mined since 1924 and produced approximately 100 million carats to date with present reserves of the same order of magnitude.

The anomalous diamond zone is both structurally and sedimentologically complex. In order to adequately test the true potential of the zone, further time is required by the

A.D.E. Joint Venture to resolve these complexities. It is for this reason that the Joint Venture has applied for an Exploration Retention Licence (namely E.R.L. (A) 104) covering the major portion of the anomalous diamond zone originally located within E.L. 4359.

APPENDIX 1

Results of Laboratory Examinations

RESULTS OF LABORATORY EXAMINATIONS

E.R.L. (A) 1Ø4 (FORMERLY PART OF E.L. 4359)

The following fractions of each sample were studied:

-1.Ø mm	+Ø.8 mm;	denoted by +Ø.8
-Ø.8 mm	+Ø.5 mm;	denoted by +Ø.5
-Ø.5 mm	+Ø.4 mm;	denoted by +Ø.4

Sample No		Results	Comments
CAL	17	5 -Ø.4 DIAMOND	5 STONES: 1 +Ø.3 cube, pink brown, partly corroded, hole, turbid. 1 +Ø.3 x Ø.2 fragment creamy, turbid frosted surface, corner of a cube(?) 1 +Ø.3 x Ø.2 fragment frosted, translucent white, clear, one rounded surface some hummocks. 1 +Ø.2 round faced octahedron, white, clear, inclusions. 1 +Ø.3 x Ø.2 flat irregular fragment turbid green, crushed. 1 +Ø.4 ZIRCON white, anhedral.
CAL	6Ø	Nil	
CAL	61	1 -Ø.4 DIAMOND	1 +Ø.15 x Ø.15 STONE sub-rounded, irregular, pale translucent pink. Some triangular surfaces, good lustre (octahedral related structure).
CAL	62	Nil	
CAL	63	Nil	
CAL	64	Nil	

Sample No	Results	Comments
CAL 65	Nil	
CAL 66	1 -Ø.4 DIAMOND	1 +Ø.25 x Ø.15 STONE fragment, all faces are cleavage or fractures, white with some grey inclusions.
CAL 67	1 -Ø.4 DIAMOND	1 +Ø.23 x Ø.2 x Ø.15 STONE anhedral, yellow-green, generally rough, dull surfaces with some smooth rounded lustrous surfaces, sub-translucent.
CAL 68	Nil	
CAL 251	2 -Ø.4 DIAMOND	2 STONES: 1 +Ø.3Ø x Ø.15 x Ø.15 STONE irregular, white, translucent, multiple fractures, small black inclusions. 1 +Ø.15 x Ø.15 xØ.15 STONE yellow, dodecahedral(?) with part broken off, internal fractures.
CAL 1Ø89	Nil	
CAL 1Ø9Ø	Nil	
CAL 1Ø91	Nil	
CAL 1Ø93	1 -Ø.4 DIAMOND	1 +Ø.13 x Ø.13 x Ø.13 STONE white, translucent cube. GARNETS x 3 almandine.
CAL 1Ø94	Nil	
CAL 1Ø95	1 -Ø.4 DIAMOND	1 +Ø.15 x Ø.13 x Ø.12 STONE pale cream-brown, turbid cube with corner missing.
CAL 1286	Nil	
CAL 1693	Nil	
CAL 1694	Nil	
CAL 1695	Nil	

Sample No	Results	Comments
CAL 1695	Nil	
CAL 1696	Nil	
CAL 1697	Nil	
CAL 1698	1 -0.4 DIAMOND	1 +0.14 x 0.12 x 0.12 STONE grey, distorted cube, sub-translucent - inclusions(?).
CAL 1699	Nil	
CAL 1700	Nil	
CAL 1701	Nil	
CAL 1702	Nil	
CAL 1703	Nil	
CAL 1704	Nil	
CAL 1705	Nil	
CAL 1706	Nil	
CAL 1707	Nil	
CAL 1708	Nil	
CAL 1709	Nil	
CAL 1710	Nil	
CAL 1711	Nil	
CAL 1712	Nil	

Sample No	Results	Comments
CAL 1713	Nil	
CAL 1714	Nil	
CAL 1715	Nil	
CAL 1716	Nil	
CAL 1717	Nil	
CAL 1718	Nil	
CAL 1719	Nil	
CAL 1720	Nil	
CAL 1721	Nil	
CAL 1722	Nil	
CAL 1723	Nil	
CAL 1724	Nil	
CAL 1725	2 -0.4 DIAMOND	2 STONES: 1 +0.34 x 0.32 x 0.14 STONE part of a brown cube with radial internal structure, rounded edges. 1 +0.20 x 0.20 x 0.18 STONE cream cube intergrowth with purple spot.
CAL 1726	Nil	
CAL 1727	Nil	
CAL 1728	Nil	
CAL 1729	2 -0.4 DIAMOND	2 STONES: 1 +0.57 x 0.43 x 0.37 STONE irregular, green. 1 +0.24 x 0.22 x 0.20 STONE cream, part of a cube with brown spot.

Sample No	Results	Comments
CAL 1730	Nil	
CAL 1731	Nil	
CAL 1732	Nil	
CAL 1733	Nil	
CAL 1734	1 -0.4 DIAMOND	1 +0.40 x 0.30 x 0.27 STONE colourless, irregular with octahedral affinities, some inclusions.
CAL 1735	Nil	
CAL 1736	Nil	
CAL 1737	Nil	
CAL 1738	1 -0.4 DIAMOND	1 +0.20 x 0.10 x 0.10 STONE irregular, very pale brown, radial fracture surfaces.
CAL 1739	Nil	
CAL 1740	Nil	
CAL 1741	Nil	
CAL 1742	Nil	
CAL 1743	Nil	
CAL 1744	Nil	
CAL 1745	Nil	
CAL 1746	Nil	
CAL 1747	Nil	

Sample No	Results	Comments
CAL 1748	Nil	
CAL 1749	Nil	
CAL 1750	Nil	
CAL 1751	Nil	
CAL 1752	Nil	
CAL 1753	1 -0.4 DIAMOND	1 +0.25 x 0.25 x 0.25 STONE cream opaque cube.
CAL 1754	Nil	
CAL 1755	Nil	
CAL 1756	Nil	
CAL 1757	Nil	
CAL 1758	Nil	
CAL 1759	Nil	
CAL 2285	Nil	
CAL 2286	1 -0.4 DIAMOND	1 +0.10 x 0.10 x 0.10 STONE pale brown/cream, opaque cube.
CAL 2287	Nil	
CAL 2288	Nil	
CAL 2289	Nil	
CAL 2290	Nil	
CAL 2291	Nil	

Sample No	Results	Comments
CAL 2292	Nil	
CAL 2293	Nil	
CAL 2294	1 -0.4 DIAMOND	1 +0.15 x 0.15 x 0.10 STONE yellow, translucent, part of a cube.
CAL 2295	Nil	
CAL 2296	Nil	
CAL 2297	Nil	
CAL 2298	Nil	
CAL 2299	Nil	
CAL 2300	Nil	
CAL 2301	Nil	
CAL 2302	Nil	
CAL 2303	Nil	
CAL 2304	Nil	
CAL 2305	Nil	
CAL 2306	1 -0.4 DIAMOND	1 +0.14 x 0.13 x 0.12 STONE pale pinkish, sub-translucent, rounded, resorbed cube.
CAL 2307	Nil	
CAL 2308	Nil	
CAL 2309	Nil	

Sample No	Results	Comments
CAL 2310	Nil	
CAL 2311	Nil	
CAL 2312	Nil	
CAL 2313	Nil	
CAL 2314	Nil	
CAL 2315	Nil	
CAL 2316	Nil	
CAL 2317	Nil	
CAL 2318	Nil	
CAL 2319	Nil	
CAL 2320	Nil	
CAL 2321	Nil	
CAL 2322	Nil	
CAL 2323	Nil	
CAL 2324	Nil	
CAL 2325	Nil	
CAL 2326	Nil	
CAL 2327	Nil	
CAL 2328	Nil	

Sample No	Results	Comments
CAL 2329	Nil	
CAL 2330	Nil	
CAL 2331	Nil	
CAL 2332	1 -0.4 DIAMOND	1 +0.30 x 0.21 x 0.20 STONE part of a brown, turbid cube.
CAL 2333	Nil	
CAL 2334	Nil	
CAL 2335	Nil	
CAL 2336	Nil	
CAL 2337	3 -0.4 DIAMOND	3 STONES: 1 +0.35 x 0.25 x 0.15 STONE irregular, colourless, triangular stepped areas and light resorption. 1 +0.30 x 0.25 x 0.25 STONE irregular, pale brown, translucent, cleavage and hackly surfaces. 1 +0.15 x 0.15 x 0.15 STONE turbid, brown cube.
CAL 2338	1 +0.4 DIAMOND 7 -0.7 DIAMOND	8 STONES: 1 +0.51 x 0.45 x 0.40 STONE irregular, yellow, multifaceted, resorbed with glide plane and grooves. 1 +0.25 x 0.25 x 0.25 STONE pink/brown opaque cube. 1 +0.22 x 0.22 x 0.22 STONE pale brown, translucent, resorbed cube. 1 +0.15 x 0.15 x 0.15 STONE pink, opaque cube. 2 +0.15 x 0.15 x 0.15 STONES green cubes. 2 +0.15 x 0.15 x 0.15 STONES translucent, almost colourless cubes.
CAL 2356	2 -0.4 DIAMOND	2 STONES: 1 +0.14 x 0.14 x 0.14 STONE pale brown, opaque cube. 1 +0.15 x 0.15 x 0.15 STONE irregular, rounded, colourless, translucent.

Sample No	Results	Comments
CAL 2357	9 -0.4 DIAMOND	9 STONES: 1 +0.11 x 0.11 x 0.10 STONE irregular, white. 1 +0.18 x 0.15 x 0.15 STONE irregular, colourless. 1 +0.15 x 0.15 x 0.15 STONE irregular, yellow. 2 +0.15 x 0.15 x 0.15 STONES pale brown cubes. 1 +0.20 x 0.20 x 0.20 STONE pale green, turbid cube with twin growths. 2 +0.12 x 0.12 x 0.12 STONES irregular - one green, one cream. 1 +0.12 x 0.10 x 0.12 STONE clear, colourless octahedron.
CAL 2514	Nil	
CAL 2515	Nil	
CAL 2516	Nil	
CAL 2517	Nil	
CAL 2518	Nil	
CAL 2519	Nil	
CAL 2522	Nil	
CAL 2523	Nil	
CAL 2524	7 -0.4 DIAMOND	7 STONES: 1 +0.30 x 0.30 x 0.20 STONE part of a zoned, green cube. 1 +0.21 x 0.20 x 0.20 STONE brown, cube. 1 +0.35 x 0.22 x 0.20 STONE colourless, irregular fragment. 1 +0.25 x 0.20 x 0.20 STONE brown, part of a cube. 1 +0.14 x 0.14 x 0.14 STONE brown cube. 1 +0.18 x 0.15 x 0.12 STONE irregular, green. 1 +0.10 x 0.10 x 0.10 STONE pale mauve cube.
CAL 2525	1 -0.4 DIAMOND	1 +0.17 x 0.15 x 0.15 STONE irregular, colourless, rounded, fractured, inclusions.

Sample No	Results	Comments
CAL 2526	9 -Ø.4 DIAMOND	9 STONES: 1 +Ø.35 x Ø.3Ø x Ø.3Ø STONE green cube intergrowth. 1 +Ø.3Ø x Ø.28 x Ø.2Ø, 1 +Ø.25 x Ø.25 x Ø.25 STONES both brown cubes. 1 +Ø.4Ø x Ø.27 x Ø.2Ø STONE irregular, grey, corroded. 1 +Ø.15 x Ø.15 x Ø.Ø9 STONE pale green, part of a cube. 1 +Ø.19 x Ø.15 x Ø.12 STONE irregular, colourless. 1 +Ø.13 x Ø.11 x Ø.11 STONE brown, 1 +Ø.1Ø x Ø.Ø9 x Ø.Ø8 STONE green - both intergrowth of cubes. 1 +Ø.1Ø xØ.1Ø xØ.1Ø STONE green cube.
CAL 2527	1 -Ø.4 DIAMOND	1 +Ø.2Ø x Ø.2Ø x Ø.16 STONE irregular, brown.
CAL 2528	1 +Ø.4 DIAMOND 8 -Ø.4 DIAMOND	1 +Ø.5Ø x Ø.4Ø x Ø.4Ø STONE dark green cube intergrowth with frosted, etched surfaces. 1 +Ø.55 x Ø.33 x Ø.25 STONE pale green, irregular. 1 +Ø.2Ø x Ø.2Ø x Ø.2Ø STONE pale pink, turbid, part of a cube. 1 +Ø.25 x Ø.24 x Ø.24 STONE colourless, fractured, rounded, irregular. 1 +Ø.32 x Ø.2Ø x Ø.1Ø STONE colourless, irregular. 1 +Ø.2Ø x Ø.2Ø x Ø.18 STONE green, turbid cube. 1 +Ø.2Ø x Ø.2Ø x Ø.1Ø STONE irregular, pale brown, granular, turbid. 1 +Ø.2Ø x Ø.18 x Ø.1Ø STONE irregular, pale green, turbid. 1 +Ø.1Ø x Ø.1Ø x Ø.1Ø STONE green cube aggregate(?).
CAL 2529	1 +Ø.4 DIAMOND	1 +Ø.4Ø x Ø.3Ø x Ø.3Ø STONE grey twinned cube, frosted, etched and sugary surfaces.
CAL 253Ø	Nil	
CAL 2531	Nil	
CAL 2532	Nil	
CAL 2533	Nil	
CAL 2534	Nil	

Sample No	Results	Comments
CAL 2535	Nil	
CAL 2611	1 -0.4 DIAMOND	1 +0.18 x 0.18 x 0.15 STONE yellow, turbid, part of a cube.
CAL 2612	1 +0.4 DIAMOND 5 -0.4 DIAMOND	6 STONES: 1 +0.40 x 0.40 x 0.40 STONE green cube, bevelled striated edges, square to square/rounded depressions in centre of faces. Cube texture on base of depressions not parallel with crystal outline. 1 +0.28 x 0.25 x 0.17 STONE irregular fractured, pale green. 1 +0.32 x 0.25 x 0.10 STONE colourless, fracture fragment. 1 +0.20 x 0.15 x 0.15 STONE irregular, colourless. 1 +0.18 x 0.15 x 0.14 STONE irregular, colourless. 1 +0.12 x 0.10 x 0.10 STONE green, frosted cube.
CAL 2613	Nil	
CAL 2614	Nil	
CAL 2615	3 -0.4 DIAMOND	3 STONES: 1 +0.25 x 0.25 x 0.20 STONE pale yellow, translucent cube. 1 +0.20 x 0.20 x 0.20 STONE turbid, pink cube. 1 +0.10 x 0.10 x 0.08 STONE turbid, pale green, part of a cube.
CAL 2616	Nil	
CAL 2617	Nil	
CAL 2618	1 -0.4 DIAMOND	1 +0.20 x 0.20 x 0.20 STONE brown, turbid cube.
CAL 2619	Nil	
CAL 2620	Nil	
CAL 2621	Nil	
CAL 2622	1 -0.4 DIAMOND	1 +0.17 x 0.15 x 0.15 STONE brown, sugary surfaced cube.
CAL 2623	Nil	

Sample No	Results	Comments
CAL 2624	Nil	
CAL 2625	1 -0.4 DIAMOND	1 +0.20 x 0.19 x 0.18 STONE cloudy, brownish green, round edged cube.
CAL 2626	2 -0.4 DIAMOND	2 STONES: 1 +0.21 x 0.20 x 0.15 STONE colourless, irregular fracture fragment. 1 +0.22 x 0.22 x 0.13 STONE pale brown, irregular, opaque.
CAL 2627	Nil	
CAL 2628	Nil	
CAL 2629	7 -0.4 DIAMOND	7 STONES: 1 +0.36 x 0.22 x 0.22 STONE irregular, colourless. 1 +0.20 x 0.20 x 0.18 STONE mauve, part of a cube. 1 +0.19 x 0.17 x 0.11 STONE irregular, yellow. 1 +0.12 x 0.11 x 0.10 STONE pale mauve cube. 1 +0.22 x 0.12 x 0.09 STONE irregular, grey. 1 +0.15 x 0.12 x 0.10 STONE irregular, green. 1 +0.13 x 0.13 x 0.08 STONE pale mauve, part of a zoned cube.
CAL 2630	1 -0.4 DIAMOND	1 +0.11 x 0.11 x 0.11 STONE turbid, pale brown cube.
CAL 2631	6 -0.4 DIAMOND	6 STONES: 1 +0.50 x 0.40 x 0.40 STONE turbid, grey, multiple twinned cube. 1 +0.25 x 0.25 x 0.20 STONE turbid, cream, part of a cube. 1 +0.20 x 0.20 x 0.20 STONE turbid, orange cube. 1 +0.20 x 0.20 x 0.12 STONE irregular, turbid, grey. 1 +0.25 x 0.15 x 0.15 STONE part of a cream cube. 1 +0.12 x 0.12 x 0.10 STONE irregular, turbid, green.
CAL 2632	1 -0.4 DIAMOND	1 +0.33 x 0.30 x 0.12 STONE irregular, pink, fracture fragment.
CAL 2633	3 -0.4 DIAMOND	3 STONES: 1 +0.25 x 0.25 x 0.25 STONE turbid, cream, twinned cube. 1 +0.12 x 0.12 x 0.10 STONE turbid, cream, part of a cube. 1 +0.12 x 0.12 x 0.15 STONE turbid, grey, part of a cube.

Sample No	Results	Comments
CAL 2634	5 -0.4 DIAMOND	5 STONES: 1 +0.20 x 0.15 x 0.15 STONE irregular, green, translucent. 1 +0.18 x 0.18 x 0.18 STONE cream, translucent cube. 1 +0.12 x 0.12 x 0.12 STONE pale orange, opaque cube. 2 +0.30 x 0.25 x 0.25 STONES irregular, cream.
CAL 2635	Nil	
CAL 2636	Nil	
CAL 2637	1 -0.4 DIAMOND	1 +0.11 x 0.10 x 0.08 STONE irregular, colourless.
CAL 2638	4 -0.4 DIAMOND	4 STONES: 1 +0.37 x 0.23 x 0.20 STONE irregular, pale yellow fragment. 1 +0.20 x 0.15 x 0.12 STONE irregular, green cube aggregate. 1 +0.12 x 0.12 x 0.12 STONE irregular, colourless. 1 +0.18 x 0.17 x 0.10 STONE irregular, pale green, zoned.
CAL 2639	6 -0.4 DIAMOND	6 STONES: 1 +0.20 x 0.20 x 0.15 STONE pale yellow, opaque cube. 1 +0.15 x 0.15 x 0.15 STONE pale brown, turbid cube. 1 +0.30 x 0.30 x 0.30 STONE irregular, pale yellow. 1 +0.25 x 0.20 x 0.10 STONE irregular, grey. 1 +0.10 x 0.10 x 0.05 STONE irregular, yellow laminate. 1 +0.15 x 0.10 x 0.10 STONE irregular, pale brown.
CAL 2640	5 -0.4 DIAMOND	5 STONES: 1 +0.32 x 0.32 x 0.32 STONE brown, opaque cube. 1 +0.20 x 0.15 x 0.15 STONE pink, opaque aggregate. 1 +0.15 x 0.15 x 0.12 STONE pale brown cube. 1 +0.30 x 0.20 x 0.10 STONE fine grained, opaque, cream aggregate. 1 +0.12 x 0.12 x 0.12 STONE pale brown, translucent, cubo-octahedral.
CAL 2641	6 -0.4 DIAMOND	6 STONES: 1 +0.28 x 0.28 x 0.20 STONE part of a pale green cube. 1 +0.29 x 0.18 x 0.18 STONE irregular, cream. 1 +0.20 x 0.19 x 0.17 STONE part of a pale green cube. 1 +0.18 x 0.15 x 0.14 STONE irregular, pale green. 1 +0.15 x 0.13 x 0.11 STONE irregular, pale brown. 1 +0.10 x 0.10 x 0.10 STONE green/dark brown cube.

Sample No	Results	Comments
CAL 2642	4 -Ø.4 DIAMOND	4 STONES: 1 +Ø.2Ø x Ø.2Ø x Ø.2Ø STONE turbid, pink, cube. 1 +Ø.29 x Ø.2Ø x Ø.18 STONE colourless, cube. 1 +Ø.2Ø x Ø.2Ø x Ø.18 STONE irregular, granular, cream, very poor quality. 1 +Ø.12 x Ø.12 x Ø.12 STONE colourless cube.
CAL 2643	Nil	
CAL 2644	Nil	
CAL 2645	Nil	
CAL 2646	Nil	
CAL 2647	1 -Ø.4 DIAMOND	1 +Ø.2Ø x Ø.2Ø x Ø.2Ø STONE cream cube.
CAL 2648	Nil	
CAL 2649	Nil	
CAL 265Ø	1 -Ø.4 DIAMOND	1 +Ø.15 x Ø.14 x Ø.14 STONE cream, opaque cube.
CAL 2651	Nil	
CAL 2652	Nil	
CAL 2653	1 -Ø.4 DIAMOND	1 +Ø.22 x Ø.22 x Ø.2Ø STONE cream cube aggregate.
CAL 2654	2 -Ø.4 DIAMOND	2 STONES: 1 +Ø.2Ø x Ø.15 x Ø.14 STONE pale brown cube aggregate. 1 +Ø.1Ø x Ø.1Ø x Ø.Ø9 STONE green cube.
CAL 2655	Nil	
CAL 2656	Nil	
CAL 2657	Nil	

Sample No	Results	Comments
CAL 2658	Nil	
CAL 2659	4 -0.4 DIAMOND	4 STONES: 1 +0.50 x 0.40 x 0.38 STONE irregular, colourless, clear, resorbed. 1 +0.38 x 0.35 x 0.22 STONE irregular, colourless, fracture fragment. 1 +0.15 x 0.13 x 0.13 STONE pale pink cube intergrowth. 1 +0.11 x 0.10 x 0.10 STONE part of a pink cube.
CAL 2660	1 +0.4 DIAMOND 3 -0.4 DIAMOND 1 +0.4 CHROMITE	4 STONES: 1 +0.40 x 0.40 x 0.38 STONE grey, translucent cube with high lustre surfaces, rounded corners and edges, sculptured faces. 1 +0.28 x 0.24 x 0.12 STONE colourless fracture fragments. 1 +0.12 x 0.11 x 0.11 STONE very pale green cube. 1 +0.10 x 0.10 x 0.09 STONE part of a pale pink cube. 1 +0.4 CHROMITE poor quality (partly altered), some resorption of octahedral shape - not of interest.
CAL 2661	2 -0.4 DIAMOND	2 STONES: 1 +0.21 x 0.20 x 0.18 STONE brown cube aggregate. 1 +0.17 x 0.15 x 0.15 STONE part of a green cube.
CAL 2662	2 -0.4 DIAMOND	2 STONES: 1 +0.30 x 0.23 x 0.20 STONE bright yellow, complex cube aggregate, rounded, resorbed. 1 +0.15 x 0.14 x 0.10 STONE irregular, pink fragment.
CAL 2663	Nil	
CAL 2664	Nil	
CAL 2665	1 -0.4 DIAMOND	1 +0.20 x 0.20 x 0.20 STONE pale brown, translucent cube, slight resorption.
CAL 2666	2 -0.4 DIAMOND	2 STONES: 1 +0.20 x 0.20 x 0.10 STONE yellow cube. 1 +0.10 x 0.12 x 0.12 STONE turbid, pink cube.
CAL 2667	1 -0.4 DIAMOND	1 +0.14 x 0.12 x 0.09 STONE irregular, colourless, rounded, resorbed
CAL 2668	1 -0.4 DIAMOND	1 +0.12 x 0.10 x 0.10 STONE irregular, white, opaque.

Sample No	Results	Comments
CAL 2669	1 -0.4 DIAMOND	1 +0.20 x 0.19 x 0.19 STONE pale brown cube aggregate.
CAL 2670	4 -0.4 DIAMOND	4 STONES: 1 +0.23 x 0.23 x 0.23 STONE pale brown, sugary cube. 1 +0.20 x 0.18 x 0.17 STONE part of a brown cube. 1 +0.18 x 0.16 x 0.16 STONE green cube aggregate. 1 +0.10 x 0.10 x 0.10 STONE green cube.
CAL 2671	1 -0.4 DIAMOND	1 +0.10 x 0.10 x 0.05 STONE part of a pale pink, turbid cube.
CAL 2672	2 -0.4 DIAMOND	2 STONES: 1 +0.21 x 0.20 x 0.15 STONE irregular, pale brown. 1 +0.10 x 0.10 x 0.10 STONE cream cube.
CAL 2673	1 -0.4 DIAMOND	1 +0.13 x 0.10 x 0.10 STONE part of a pale pink, sugary cube.
CAL 2674	Nil	
CAL 2675	2 -0.4 DIAMOND	2 STONES: 1 +0.20 x 0.20 x 0.20 STONE cream, opaque cube. 1 +0.22 x 0.20 x 0.15 STONE part of a pink, resorbed cube.
CAL 2676	1 -0.4 DIAMOND	1 +0.14 x 0.14 x 0.10 STONE part of a grey cube.
CAL 2677	Nil	
CAL 2678	1 -0.4 DIAMOND	1 +0.12 x 0.12 x 0.12 STONE grey cube.
CAL 2679	1 -0.4 DIAMOND	1 +0.20 x 0.20 x 0.18 STONE clear, almost colourless, octahedral.
CAL 2680	Nil	
CAL 2681	Nil	
CAL 2682	1 -0.4 DIAMOND	1 +0.14 x 0.10 x 0.10 STONE green cube intergrowth.
CAL 2683	Nil	
CAL 2684	Nil	

Sample No	Results	Comments
CAL 2685	1 -0.4 DIAMOND	1 +0.11 x 0.11 x 0.10 STONE pale brown, turbid cube.
CAL 2686	1 -0.4 DIAMOND	1 +0.11 x 0.10 x 0.10 STONE colourless, part of a cube.
CAL 2687	Nil	
CAL 2688	Nil	
CAL 2689	Nil	
CAL 2690	Nil	
CAL 2691	Nil	
CAL 2692	Nil	
CAL 2693	Nil	
CAL 2694	Nil	
CAL 2695	Nil	
CAL 2696	Nil	
CAL 2697	Nil	
CAL 2698	Nil	
CAL 2699	1 -0.4 DIAMOND	1 +0.20 x 0.18 x 0.12 STONE very pale pink, part of a cube.
CAL 2700	2 -0.4 DIAMOND	2 STONES: 1 +0.35 x 0.30 x 0.30 STONE irregular, colourless (broken into four pieces). 1 +0.25 x 0.20 x 0.20 STONE turbid, cream, part of a cube.
CAL 2701	1 -0.4 DIAMOND	1 +0.25 x 0.21 x 0.15 STONE irregular, colourless.

Sample No	Results	Comments
CAL 2702	2 -0.4 DIAMOND	2 STONES: 1 +0.15 x 0.13 x 0.10 STONE irregular, pale brown. 1 +0.10 x 0.09 x 0.09 STONE green, part of a cube.
CAL 2703	Nil	
CAL 2704	1 -0.4 DIAMOND	1 +0.15 x 0.15 x 0.15 STONE turbid, pink cube.
CAL 2705	1 +0.4 DIAMOND 1 -0.4 DIAMOND	2 STONES: 1 +0.45 x 0.45 x 0.40 STONE granular, grey, irregular aggregate. 1 +0.26 X 0.24 X 0.12 STONE irregular, pale brown fragment, one finely felted cube surface.
CAL 2706	Nil	
CAL 2707	4 -0.4 DIAMOND	4 STONES: 1 +0.25 x 0.20 x 0.20 STONE pale pink, sugary cube. 1 +0.18 x 0.15 x 0.15 STONE very pale yellow cube. 1 +0.15 x 0.15 x 0.14 STONE pink cube intergrowth. 1 +0.20 x 0.12 x 0.07 STONE pale brown, irregular, zoned fragment.
CAL 2708	3 -0.4 DIAMOND	3 STONES: 1 +0.38 x 0.22 x 0.20 STONE irregular, grey. 1 +0.20 x 0.18 x 0.15 STONE brown, part of a cube. 1 +0.21 x 0.15 x 0.12 STONE irregular, brown.
CAL 2709	5 -0.4 DIAMOND	5 STONES: 1 +0.27 x 0.25 x 0.13 STONE irregular, green. 1 +0.18 x 0.15 x 0.15 STONE pale green, part of a cube. 1 +0.20 x 0.18 x 0.10 STONE irregular, colourless fragment. 1 +0.24 x 0.11 x 0.10 STONE irregular, colourless fragment. 1 +0.10 x 0.10 x 0.10 STONE green cube .
CAL 2710	2 -0.4 DIAMOND	2 STONES: 1 +0.24 x 0.20 x 0.20 STONE orange/brown intergrowth of cubes. 1 +0.24 x 0.20 x 0.10 STONE irregular, pale pink.
CAL 2711	1 -0.4 DIAMOND	1 +0.15 x 0.15 x 0.12 STONE irregular, turbid, grey, part of a cube.

Sample No	Results	Comments
CAL 2712	5 -0.4 DIAMOND	5 STONES: 1 +0.40 x 0.35 x 0.20 STONE irregular, colourless. 1 +0.27 x 0.25 x 0.25 STONE brown, part of a cube, well zoned. 1 +0.20 x 0.18 x 0.15 STONE pink, part of a cube. 1 +0.21 x 0.15 x 0.15 STONE irregular, very pale yellow, octahedral shield growth. 1 +0.17 x 0.17 x 0.10 STONE very pale pink, part of a cube.
CAL 2713	18 -0.4 DIAMOND	18 STONES: 4 +0.20 x 0.20 x 0.20 STONES turbid, pink cubes. 5 +0.20 x 0.20 x 0.20 STONES irregular, colourless. 1 +0.35 x 0.30 x 0.30 STONE irregular, colourless. 1 +0.30 x 0.25 x 0.25 STONE irregular, pale yellow. 1 +0.22 x 0.20 x 0.18, 1 +0.20 x 0.20 x 0.15, 1 +0.18 x 0.15 x 0.12, 1 +0.18 x 0.12 x 0.10, 1 +0.15 x 0.12 x 0.10, 1 +0.14 x 0.11 x 0.11, 1 +0.12 x 0.10 x 0.10 - all 7 STONES irregular, cream, turbid.
CAL 2714	5 -0.4 DIAMOND	5 STONES: 1 +0.25 x 0.20 x 0.18 STONE part of a turbid, pale brown cube. 1 +0.25 x 0.20 x 0.21 STONE irregular, turbid, grey/green. 1 +0.15 x 0.15 x 0.15 STONE pale brown cube. 1 +0.18 x 0.15 x 0.15 STONE irregular, pink, opaque. 1 +0.12 x 0.12 x 0.10 STONE irregular, turbid, brown.
CAL 2715	5 -0.4 DIAMOND	5 STONES: 1 +0.25 x 0.25 x 0.25 STONE turbid, pink cube. 2 +0.20 x 0.20 x 0.20 STONES turbid, pink cubes. 1 +0.20 x 0.20 x 0.18 STONE colourless, clear with complex shape. 1 +0.12 x 0.10 x 0.10 STONE irregular, almost colourless.
CAL 2716	Nil	
CAL 2717	Nil	
CAL 2718	Nil	
CAL 2719	Nil	
CAL 2720	Nil	

Sample No	Results	Comments
CAL 2721	Nil	
CAL 2722	1 -0.4 DIAMOND	1 +0.15 x 0.15 x 0.15 STONE pale brown, part of a cube.
CAL 2723	Nil	
CAL 2724	Nil	
CAL 2725	Nil	
CAL 2726	Nil	
CAL 2727	Nil	
CAL 2728	Nil	
CAL 2729	Nil	
CAL 2730	Nil	
CAL 2731	Nil	
CAL 2732	Nil	
CAL 2733	Nil	
CAL 2734	Nil	
CAL 2735	Nil	
CAL 2736	Nil	
CAL 2737	Nil	
CAL 2738	Nil	
CAL 2739	Nil	

Sample No	Results	Comments
CAL 274Ø	Nil	
CAL 2741	Nil	
CAL 2742	Nil	
CAL 2743	Nil	
CAL 2744	Nil	
CAL 2745	Nil	
CAL 2746	Nil	
CAL 2747	Nil	
CAL 2748	Nil	
CAL 2749	Nil	
CAL 275Ø	Nil	
CAL 2751	Nil	
CAL 2752	Nil	
CAL 2753	Nil	
CAL 2754	1 -Ø.4 DIAMOND	1 +Ø.1Ø x Ø.1Ø x Ø.1Ø STONE corroded, pale pink cube with radial structure.
CAL 2755	1 -Ø.4 DIAMOND	1 +Ø.15 x Ø.12 x Ø.1Ø STONE irregular, colourless.
CAL 2756	1 -Ø.4 DIAMOND	1 +Ø.18 x Ø.13 x Ø.13 STONE part of a turbid, pink cube.
CAL 2757	2 -Ø.4 DIAMOND	2 STONES: 1 +Ø.18 x Ø.18 x Ø.18 STONE orange/brown cube. 1 +Ø.14 x Ø.14 x Ø.12 STONE irregular, grey.

Sample No	Results	Comments
CAL 2758	3 -0.4 DIAMOND	3 STONES: 1 +0.25 x 0.25 x 0.10 STONE piece of a turbid, cream cube. 1 +0.12 x 0.12 x 0.12 STONE pale yellow cube. 1 +0.10 x 0.10 x 0.10 STONE ragged, opaque, pinkish cube.
CAL 2759	Nil	
CAL 2760	4 -0.4 DIAMOND	4 STONES: 1 +0.25 x 0.20 x 0.20 STONE green intergrowth of cubes. 1 +0.12 x 0.10 x 0.10 STONE part of a very pale brown cube. 1 +0.10 x 0.10 x 0.10 STONE part of a cream cube. 1 +0.10 x 0.09 x 0.09 STONE irregular, cream.
CAL 2761	4 -0.4 DIAMOND	4 STONES: 1 +0.27 x 0.17 x 0.13 STONE colourless, very irregular. 1 +0.15 x 0.12 x 0.12 STONE brown cube aggregate. 1 +0.20 x 0.10 x 0.10 STONE irregular, brown fragment. 1 +0.10 x 0.10 x 0.10 STONE brown cube.
CAL 2762	Nil	
CAL 2763	8 -0.4 DIAMOND	8 STONES: 1 +0.25 x 0.20 x 0.20 STONE irregular, clear, colourless. 4 +0.15 x 0.15 x 0.15 STONES yellow, turbid, cubes. 1 +0.15 x 0.15 x 0.12 STONE turbid, pink cube. 1 +0.30 x 0.25 x 0.25 STONE irregular, part of a cream, opaque cube. 1 +0.25 x 0.25 x 0.25 STONE (est) turbid, pink cube (broken into nine pieces).
CAL 2764	5 -0.4 DIAMOND	5 STONES: 1 +0.42 x 0.30 x 0.22 STONE green fragment of cube aggregates. 1 +0.30 x 0.20 x 0.18 STONE part of a green cube. 1 +0.15 x 0.15 x 0.15 STONE pale green cube. 1 +0.15 x 0.15 x 0.15 STONE part of a colourless cube. 1 +0.12 x 0.11 x 0.11 STONE colourless cube.

Sample No	Results	Comments
CAL 2765	8 -0.4 DIAMOND	8 STONES: 1 +0.40 x 0.30 x 0.25 STONE irregular, pale brown. 1 +0.30 x 0.28 x 0.23 STONE irregular, pale green. 1 +0.28 x 0.25 x 0.18 STONE irregular, colourless, inclusions. 1 +0.20 x 0.14 x 0.14 STONE irregular, colourless. 1 +0.20 x 0.15 x 0.15 STONE part of a brown cube. 1 +0.12 x 0.12 x 0.12 STONE pale green, cubo-octahedral. 1 +0.10 x 0.10 x 0.10 STONE cream cube. 1 +0.10 x 0.10 x 0.10 STONE pale green cube.
CAL 2766	4 -0.4 DIAMOND	4 STONES: 1 +0.27 x 0.25 x 0.25 STONE green cube. 1 +0.20 x 0.20 x 0.20 STONE pale pink cube. 1 +0.17 x 0.17 x 0.17 STONE green, cubo-octahedral. 1 +0.18 x 0.18 x 0.13 STONE irregular, brown.
CAL 2767	9 -0.4 DIAMOND	9 STONES: 1 +0.26 x 0.15 x 0.15 STONE purple cube intergrowth. 1 +0.20 x 0.17 x 0.17 STONE irregular, pale green. 1 +0.19 x 0.19 x 0.10 STONE irregular, colourless. 1 +0.17 x 0.17 x 0.15 STONE cream cube intergrowth. 1 +0.15 x 0.15 x 0.10 STONE part of a green cube. 1 +0.14 x 0.14 x 0.10 STONE pale brown cube intergrowth. 1 +0.12 x 0.12 x 0.12 STONE colourless, complex cube. 1 +0.10 x 0.10 x 0.10 STONE irregular, brown. 1 +0.14 x 0.10 x 0.10 STONE irregular, cream.
CAL 2768	1 -0.4 DIAMOND	1 +0.40 x 0.20 x 0.20 STONE turbid, cream, multiple twinned aggregate of cubes.
CAL 2769	Nil	
CAL 2770	2 -0.4 DIAMOND	2 STONES: 1 +0.20 x 0.20 x 0.20 STONE turbid, brown cube. 1 +0.35 x 0.20 x 0.20 STONE green, turbid, twinned cube.

Sample No	Results	Comments
CAL 2771	7 -Ø.4 DIAMOND	7 STONES: 1 +Ø.43 x Ø.23 x Ø.22 STONE irregular, colourless, complex shape - some octahedral faces. 1 +Ø.38 x Ø.25 x Ø.13 STONE irregular, grey, many inclusions. 1 +Ø.28 x Ø.25 x Ø.25 STONE irregular, colourless. 1 +Ø.25 x Ø.18 x Ø.15 STONE irregular, colourless. 1 +Ø.15 x Ø.15 x Ø.15 STONE green, cubo-octahedral. 1 +Ø.2Ø x Ø.2Ø x Ø.1Ø STONE irregular, colourless. 1 +Ø.15 x Ø.15 x Ø.1Ø STONE irregular pale brown.
CAL 2772	1 -Ø.4 DIAMOND	1 +Ø.12 x Ø.1Ø x Ø.Ø8 STONE irregular, pale brown fragment.
CAL 2773	Nil	
CAL 2774	2 -Ø.4 DIAMOND	2 STONES: 1 +Ø.12 x Ø.12 x Ø.12 STONE green, turbid, cube shaped. 1 +Ø.11 x Ø.11 x Ø.1Ø STONE irregular, colourless.
CAL 2775	1 -Ø.4 DIAMOND	1 +Ø.25 x Ø.25 x Ø.25 STONE pale yellow, distorted cube.
CAL 2776	Nil	
CAL 2777	2 -Ø.4 DIAMOND	2 STONES: 1 +Ø.2Ø x Ø.2Ø x Ø.15 STONE irregular, cream, turbid, one cleavage surface. 1 +Ø.1Ø x Ø.1Ø x Ø.1Ø STONE turbid, cream cube.
CAL 2778	1 +Ø.4 DIAMOND 4 -Ø.4 DIAMOND	5 STONES: 1 +Ø.4Ø x Ø.4Ø x Ø.4Ø STONE dark green cube with frosted, etched surfaces. 1 +Ø.22 x Ø.22 x Ø.22 STONE green, turbid cube. 1 +Ø.12 x Ø.12 x Ø.12 STONE pink cube. 1 +Ø.12 x Ø.12 x Ø.13 STONE irregular, turbid, part of a pink cube. 1 +Ø.12 x Ø.12 x Ø.22 STONE colourless, irregular shard.
CAL 2779	1 -Ø.4 DIAMOND	1 +Ø.1Ø x Ø.1Ø x Ø.1Ø STONE turbid, pink cube.
CAL 2780	1 -Ø.4 DIAMOND	1 +Ø.2Ø x Ø.18 x Ø.12 STONE irregular, colourless.
CAL 2781	Nil	

Sample No	Results	Comments
CAL 2782	Nil	
CAL 2783	Nil	
CAL 2784	Nil	
CAL 2785	Nil	
CAL 2786	Nil	
CAL 2787	Nil	
CAL 2788	Nil	
CAL 2789	3 -Ø.4 DIAMOND	3 STONES: 1 +Ø.2Ø x Ø.2Ø x Ø.2Ø STONE colourless, octahedral, translucent, numerous internal flaws. 1 +Ø.15 x Ø.15 x Ø.15 STONE irregular, turbid, cream. 1 +Ø.15 x Ø.12 x Ø.12 STONE part of a pink, turbid cube.
CAL 279Ø	Nil	
CAL 2791	5 -Ø.4 DIAMOND	5 STONES: 1 +Ø.2Ø x Ø.2Ø x Ø.2Ø STONE pale green cube. 1 +Ø.15 x Ø.12 x Ø.12 STONE brownish cube aggregate. 1 +Ø.12 x Ø.12 x Ø.12 STONE cream cube. 1 +Ø.15 x Ø.12 x Ø.1Ø STONE irregular, brown. 1 +Ø.1Ø x Ø.1Ø x Ø.Ø9 STONE part of a cream cube.
CAL 2792	Nil	
CAL 2793	Nil	
CAL 2794	Nil	
CAL 28Ø1	Nil	
CAL 28Ø2	Nil	

Sample No	Results	Comments
CAL 2803	Nil	
CAL 2804	Nil	
CAL 2805	Nil	
CAL 2806	Nil	
CAL 2807	Nil	
CAL 2808	Nil	
CAL 2809	Nil	
CAL 2810	Nil	
CAL 2811	Nil	
CAL 2812	Nil	
CAL 2813	Nil	
CAL 2814	Nil	
CAL 2815	Nil	
CAL 2816	Nil	
CAL 2817	Nil	
CAL 2818	Nil	
CAL 2819	Nil	
CAL 2820	Nil	
CAL 2821	Nil	

Sample No	Results	Comments
CAL 2822	Nil	
CAL 2823	Nil	
CAL 2824	Nil	
CAL 2825	Nil	
CAL 2826	Nil	
CAL 2827	Nil	
CAL 2828	Nil	
CAL 2829	Nil	
CAL 2830	Nil	
CAL 2831	Nil	
CAL 2832	Nil	
CAL 2833	Nil	
CAL 2834	Nil	
CAL 2835	Nil	
CAL 2836	Nil	
CAL 2837	Nil	
CAL 2838	Nil	
CAL 2839	Nil	
CAL 2840	Nil	

Sample No	Results	Comments
CAL 2841	Nil	
CAL 2842	Nil	
CAL 2843	Nil	
CAL 2844	Nil	
CAL 2845	Nil	
CAL 2846	Nil	
CAL 2847	Nil	
CAL 2848	Nil	
CAL 2849	Nil	
CAL 2850	Nil	
CAL 2851	Nil	
CAL 2852	Nil	
CAL 2853	Nil	
CAL 2854	Nil	
CAL 2855	Nil	
CAL 2856	Nil	
CAL 2857	Nil	
CAL 2858	Nil	
CAL 2859	Nil	

Sample No	Results	Comments
CAL 2860	Nil	
CAL 2861	3 -0.4 DIAMOND	3 STONES: 1 +0.28 x 0.28 x 0.15 STONE part of pale brown cube. 1 +0.20 x 0.20 x 0.10 STONE irregular, pale brown. 1 +0.10 x 0.10 x 0.10 STONE cream, granular cube.
CAL 2862	4 -0.4 DIAMOND	4 STONES: 1 +0.20 x 0.20 x 0.18 STONE part of a pink cube. 1 +0.11 x 0.11 x 0.08 STONE pale pink, part of a cube. 1 +0.12 x 0.10 x 0.10 STONE cream cube aggregate. 1 +0.20 x 0.18 x 0.18 STONE cream cube aggregate.
CAL 2863	4 -0.4 DIAMOND	4 STONES: 1 +0.28 x 0.25 x 0.13 STONE pale brown, cube aggregate. 1 +0.31 x 0.22 x 0.17 STONE colourless cleavage fragment. 1 +0.20 x 0.15 x 0.13 STONE green cube aggregate. 1 +0.15 x 0.15 x 0.11 STONE brown cube.
CAL 2864	2 -0.4 DIAMOND	2 STONES: 1 +0.31 x 0.25 x 0.20 STONE irregular, cream aggregate. 1 +0.25 x 0.15 x 0.15 STONE cream-grey, cube aggregate.
CAL 2865	1 -0.4 DIAMOND	1 +0.20 x 0.15 x 0.15 STONE part of a pink cube.
CAL 2866	4 -0.4 DIAMOND	4 STONES: 1 +0.21 x 0.21 x 0.20 STONE green, opaque cube. 1 +0.30 x 0.30 x 0.25 STONE irregular, pink, opaque. 1 +0.10 x 0.15 x 0.10 STONE irregular, yellow, opaque. 1 +0.12 x 0.12 x 0.11 STONE irregular, pink, opaque.
CAL 2867	Nil	
CAL 2868	2 -0.4 DIAMOND	2 STONES: 1 +0.20 x 0.20 x 0.20 STONE grey-green, opaque cube. 1 +0.20 x 0.15 x 0.15 STONE irregular, yellow-grey, translucent.
CAL 2869	2 -0.4 DIAMOND	2 STONES: 1 +0.28 x 0.24 x 0.20 STONE irregular, colourless. 1 +0.15 x 0.14 x 0.14 STONE brown cube.
CAL 2870	3 -0.4 DIAMOND	3 STONES: 1 +0.38 x 0.35 x 0.30 STONE irregular, brown. 1 +0.20 x 0.20 x 0.20 STONE brown cube. 1 +0.12 x 0.11 x 0.11 STONE brown cube.

Sample No	Results	Comments
CAL 2871	1 -Ø.4 DIAMOND	1 +Ø.5Ø x Ø.2Ø x Ø.2Ø STONE irregular, almost colourless, smooth convoluted surfaces.
CAL 2872	2 -Ø.4 DIAMOND	2 STONES: 1 +Ø.3Ø x Ø.2Ø x Ø.2Ø STONE pink/orange, part of a cube. 1 +Ø.11 x Ø.11 x Ø.11 STONE brown, cubo-octahedral.
CAL 2873	Nil	
CAL 2874	Nil	
CAL 2875	Nil	
CAL 2876	Nil	
CAL 2877	1 -Ø.4 DIAMOND	1 +Ø.24 x Ø.22 x Ø.2Ø STONE irregular, pale yellow.
CAL 2878	Nil	
CAL 2879	Nil	
CAL 288Ø	Nil	
CAL 2881	Nil	
CAL 2882	Nil	
CAL 2883	1 -Ø.4 DIAMOND	1 +Ø.15 x Ø.15 x Ø.13 STONE turbid, pink cube.
CAL 2884	1 -Ø.4 DIAMOND	1 +Ø.12 x Ø.11 x Ø.1Ø STONE part of a brown cube.
CAL 2885	2 -Ø.4 DIAMOND	2 STONES: 1 +Ø.25 X Ø.24 X Ø.24 STONE colourless cube. 1 +Ø.18 x Ø.18 x Ø.12 STONE irregular, green, turbid.
CAL 2886	2 -Ø.4 DIAMOND	2 STONES: 1 +Ø.15 x Ø.15 x Ø.15 STONE turbid, green cube. 1 +Ø.13 x Ø.1Ø x Ø.1Ø STONE irregular, pink, turbid.

Sample No	Results	Comments
CAL 2887	1 -0.4 DIAMOND	1 +0.13 x 0.13 x 0.07 STONE part of a pale brown cube, radial structure .
CAL 2888	1 -0.4 DIAMOND	1 +0.22 x 0.15 x 0.12 STONE irregular, pale brown, granular texture.
CAL 2889	Nil	
CAL 2890	2 -0.4 DIAMOND	2 STONES: 1 +0.20 x 0.20 x 0.20 STONE pale pink cube. 1 +0.24 x 0.19 x 0.15 STONE part of a cream cube.
CAL 2891	Nil	
CAL 2892	Nil	
CAL 2893	Nil	
CAL 2894	Nil	
CAL 2895	Nil	
CAL 2896	Nil	
CAL 2897	2 -0.4 DIAMOND	2 STONES: 1 +0.25 x 0.25 x 0.20 STONE irregular, greenish grey, zoned (broken into two parts). 1 +0.18 x 0.15 x 0.15 STONE irregular, very pale pink, turbid.
CAL 2898	Nil	
CAL 2899	Nil	
CAL 2900	Nil	
CAL 2901	Nil	
CAL 2902	Nil	
CAL 2903	Nil	

Sample No	Results	Comments
CAL 2904	Nil	
CAL 2905	Nil	
CAL 2906	Nil	
CAL 2907	Nil	
CAL 2908	Nil	
CAL 2909	Nil	
CAL 2910	1 -0.4 DIAMOND	1 +0.12 x 0.11 x 0.11 STONE pink cube.
CAL 2911	Nil	
CAL 2912	Nil	
CAL 2913	1 -0.4 DIAMOND	1 +0.15 x 0.12 x 0.10 STONE irregular, brown.
CAL 2914	Nil	
CAL 2915	Nil	
CAL 2916	Nil	
CAL 2917	Nil	
CAL 2918	Nil	
CAL 2919	Nil	

Sample No	Results	Comments
CAL 2920	6 -0.4 DIAMOND	6 STONES: 1 +0.27 x 0.25 x 0.10 STONE irregular, brown fragment. 1 +0.23 x 0.21 x 0.21 STONE irregular, brown. 1 +0.19 x 0.17 x 0.15 STONE green cube aggregate. 1 +0.18 x 0.18 x 0.15 STONE irregular, pink, zoned (in 2 parts). 1 +0.17 x 0.13 x 0.13 STONE cream cube aggregate. 1 +0.10 x 0.10 x 0.07 STONE irregular, cream.
CAL 2921	3 -0.4 DIAMOND	3 STONES: 1 +0.37 x 0.31 x 0.20 STONE brown, zoned, part of a cube. 1 +0.40 x 0.25 x 0.20 STONE brown, zoned, part of a cube. 1 +0.12 x 0.12 x 0.10 STONE (approx) irregular, pale brown, granular (in 3 parts).
CAL 2922	1 -0.4 DIAMOND	1 +0.30 x 0.20 x 0.15 STONE irregular, colourless, rounded.
CAL 2923	1 -0.4 DIAMOND	1 +0.11 x 0.11 x 0.12 STONE part of a pink, turbid cube.
CAL 2924	2 -0.4 DIAMOND	2 STONES: 1 +0.18 x 0.18 x 0.18 STONE brown cube. 1 +0.20 x 0.20 x 0.10 STONE irregular, cream, zoned.
CAL 2925	1 -0.4 DIAMOND	1 +0.12 x 0.10 x 0.10 STONE irregular, colourless.
CAL 2926	3 -0.4 DIAMOND	3 STONES: 1 +0.38 x 0.45 x 0.30 STONE irregular, colourless. 1 +0.20 x 0.20 x 0.20 STONE irregular, cream, turbid. 1 +0.10 x 0.10 x 0.10 STONE chip of a pink, turbid cube.
CAL 2927	Nil	
CAL 2928	1 -0.4 DIAMOND	1 +0.15 x 0.15 x 0.15 STONE cubo-octahedral, almost colourless.
CAL 2929	2 -0.4 DIAMOND	2 STONES: 1 +0.30 x 0.20 x 0.20 STONE part of a turbid, pink cube. 1 +0.20 x 0.20 x 0.15 STONE irregular, clear, colourless, resorption on old fractures.
CAL 2930	1 -0.4 DIAMOND	1 +0.15 x 0.15 x 0.15 STONE pale green, turbid cube.

Sample No	Results	Comments
CAL 2931	3 -Ø.4 DIAMOND	3 STONES: 1 +Ø.6Ø x Ø.4Ø x Ø.3Ø STONE irregular, almost colourless, most surfaces cleavage or fracture. 1 +Ø.3Ø x Ø.22 x Ø.18 STONE irregular, colourless, most surfaces are cleavages. 1 +Ø.2Ø x Ø.2Ø x Ø.12 STONE grey, almost transparent, part of a dodecahedron.
CAL 2932	7 -Ø.4 DIAMOND	7 STONES: 1 +Ø.35 x Ø.3Ø x Ø.3Ø STONE brown, opaque cube. 1 +Ø.25 x Ø.25 x Ø.25 STONE colourless, part of an octahedron. 1 +Ø.15 x Ø.15 x Ø.15 STONE orange, opaque cube. 1 +Ø.15 x Ø.2Ø x Ø.15 STONE twinned, grey cube. 1 +Ø.12 x Ø.12 x Ø.12 STONE green, opaque cube. 2 +Ø.1Ø x Ø.1Ø x Ø.1Ø STONES cubes, one green, one cream.
CAL 2933	2 -Ø.4 DIAMOND	2 STONES: 1 +Ø.18 x Ø.18 x Ø.17 STONE brown cube. 1 +Ø.13 x Ø.1Ø x Ø.1Ø STONE pale brown cube with side growth.
CAL 2934	2 -Ø.4 DIAMOND	2 STONES: 1 +Ø.12 x Ø.12 x Ø.12 STONE pale brown, opaque cube. 1 +Ø.12 x Ø.12 x Ø.15 STONE cream, opaque cube.
CAL 2935	Nil	
CAL 2936	Nil	
CAL 2937	Nil	
CAL 2938	Nil	
CAL 2939	Nil	
CAL 294Ø	Nil	
CAL 2941	Nil	
CAL 2942	Nil	

Sample No	Results	Comments
CAL 2943	Nil	
CAL 2944	1 -0.4 DIAMOND	1 +0.20 x 0.15 x 0.12 STONE irregular, colourless, transparent.
CAL 2945	Nil	
CAL 3002	Nil	
CAL 3003	Nil	
CAL 3004	Nil	
CAL 3005	Nil	
CAL 3006	Nil	
CAL 3007	Nil	
CAL 3008	Nil	
CAL 3009	Nil	
CAL 3010	Nil	
CAL 3011	Nil	
CAL 3012	Nil	
CAL 3013	Nil	
CAL 3014	Nil	
CAL 3015	Nil	
CAL 3016	Nil	
CAL 3017	Nil	

Sample No	Results	Comments
CAL 3018	Nil	
CAL 3019	Nil	
CAL 3020	Nil	
CAL 3021	Nil	
CAL 3022	Nil	
CAL 3023	Nil	
CAL 3024	Nil	
CAL 3025	Nil	
CAL 3026	Nil	
CAL 3027	Nil	
CAL 3028	Nil	
CAL 3029	1 -0.4 DIAMOND	1 +0.09 x 0.09 x 0.09 STONE dodecahedral, clear, colourless.
CAL 3030	Nil	
CAL 3031	Nil	
CAL 3032	Nil	
CAL 3033	Nil	
CAL 3034	Nil	
CAL 3035	Nil	
CAL 3036	Nil	

Sample No	Results	Comments
CAL 3037	Nil	
CAL 3038	Nil	
CAL 3039	Nil	
CAL 3040	Nil	
CAL 3041	Nil	
CAL 3042	Nil	
CAL 3043	Nil	
CAL 3044	Nil	
CAL 3045	Nil	
CAL 3046	Nil	
CAL 3047	Nil	
CAL 3048	Nil	
CAL 3049	Nil	
CAL 3050	Nil	
CAL 3051	Nil	
CAL 3052	Nil	
CAL 3053	Nil	
CAL 3054	Nil	
CAL 3055	Nil	

Sample No	Results	Comments
CAL 3056	Nil	
CAL 3057	Nil	
CAL 3058	Nil	
CAL 3059	Nil	
CAL 3060	Nil	
CAL 3061	Nil	
CAL 3062	Nil	
CAL 3063	Nil	
CAL 3064	Nil	
CAL 3065	Nil	
CAL 3066	Nil	
CAL 3067	Nil	
CAL 3068	1 -0.4 DIAMOND	1 +0.15 x 0.15 x 0.15 STONE pale pink cube.
CAL 3069	Nil	
CAL 3070	Nil	
CAL 3071	Nil	
CAL 3072	Nil	
CAL 3073	Nil	
CAL 3074	Nil	

Sample No	Results	Comments
CAL 3115	6 -0.4 DIAMOND	6 STONES: 1 +0.25 x 0.25 x 0.25 STONE pale brown cube. 1 +0.15 x 0.15 x 0.15 STONE pink, turbid, part of a cube. 1 +0.25 x 0.30 x 0.25 STONE irregular, pale yellow. 1 +0.12 x 0.13 x 0.12 STONE twinned green cube. 1 +0.13 x 0.13 x 0.10 STONE green, part of a cube. 1 +0.12 x 0.12 x 0.10 STONE irregular, colourless.
CAL 3116	1 -0.4 DIAMOND	1 +0.10 x 0.10 x 0.10 STONE pale orange cube (broken in half).
CAL 3117	8 -0.4 DIAMOND	8 STONES: 1 +0.20 x 0.20 x 0.20 STONE colourless cube. 1 +0.20 x 0.20 x 0.15 STONE part of yellow cube. 1 +0.15 x 0.16 x 0.16 STONE irregular, yellow. 1 +0.12 x 0.12 x 0.12 STONE turbid, grey cube. 2 +0.13 x 0.12 x 0.12 STONES irregular, pink aggregates. 1 +0.12 x 0.12 x 0.10 STONE irregular, dark yellow. 1 +0.10 x 0.10 x 0.10 STONE colourless, dodecahedral.
CAL 3118	1 -0.4 DIAMOND	1 +0.12 x 0.12 x 0.10 STONE irregular, clear, colourless, most surfaces are cleavage or fractures.
CAL 3119	Nil	
CAL 3121	Nil	
CAL 3122	Nil	
CAL 3123	1 -0.4 DIAMOND	1 +0.13 x 0.10 x 0.10 STONE irregular, turbid, cream.
CAL 3124	Nil	
CAL 3125	Nil	
CAL 3126	Nil	
CAL 3127	Nil	
CAL 3128	Nil	

Sample No	Results	Comments
CAL 3129	1 -Ø.4 DIAMOND	1 +Ø.2Ø x Ø.1Ø x Ø.1Ø STONE irregular, turbid, cream/grey.
CAL 313Ø	Nil	
CAL 3131	Nil	
CAL 3132	Nil	
CAL 3138	2 -Ø.4 DIAMOND	2 STONES: 1 +Ø.2Ø x Ø.2Ø x Ø.2Ø STONE white, granular cube. 1 +Ø.15 x Ø.12 x Ø.1Ø STONE irregular, colourless.
CAL 3139	1 -Ø.4 DIAMOND	1 +Ø.2Ø x Ø.23 x Ø.18 STONE clear, colourless, octahedral with some irregularities.
CAL 314Ø	6 -Ø.4 DIAMOND	6 STONES: 1 +Ø.22 x Ø.22 x Ø.13 STONE part of yellow, opaque cube. 1 +Ø.2Ø x Ø.2Ø x Ø.2Ø STONE grey, opaque cube. 1 +Ø.25 x Ø.2Ø x Ø.2Ø STONE irregular, colourless. 1 +Ø.12 x Ø.12 x Ø.12 STONE cream cube. 1 +Ø.12 x Ø.1Ø x Ø.1Ø STONE yellow aggregate. 1 +Ø.12 x Ø.1Ø x Ø.1Ø STONE irregular, pale brown.
CAL 3141	3 -Ø.4 DIAMOND	3 STONES: 1 +Ø.35 x Ø.35 x Ø.22 STONE part of a pale brown cube. 1 +Ø.2Ø x Ø.2Ø x Ø.2Ø STONE green cube. 1 +Ø.1Ø x Ø.1Ø x Ø.1Ø STONE pale brown cube.
CAL 3142	Nil	
CAL 3143	Nil	
CAL 3144	1 -Ø.4 DIAMOND	1 +Ø.15 x Ø.1Ø x Ø.1Ø STONE part of a colourless, distorted cube.
CAL 3145	67 -Ø.4 DIAMOND	Twenty bag sample (Line 87/15) 67 -Ø.4 STONES: 5Ø irregular or fibrous cubes; 9 irregular, colourless; 8 convoluted cubes or cubo-octahedrons. (Size ranges between Ø.45 and Ø.1Ømm).

Sample No	Results	Comments
CAL 3146	169 -Ø.4 DIAMOND	Thirty bag sample (Line 87/13) 169 -Ø.4 STONES: 16 colourless - 3 octahedral, 13 irregular; 16 cubes - pink, brown & colourless (various convoluted forms); 137 cubes, aggregates and irregulars.
CAL 3147	Nil	
CAL 3148	Nil	
CAL 3149	Nil	
CAL 315Ø	Nil	
CAL 3151	Nil	
CAL 3152	Nil	
CAL 3153	Nil	
CAL 3154	Nil	
CAL 3155	Nil	
CAL 3156	Nil	
CAL 3157	Nil	
CAL 3158	Nil	
CAL 3159	Nil	
CAL 316Ø	Nil	
CAL 3161	Nil	
CAL 3162	Nil	
CAL 3163	Nil	

Sample No	Results	Comments
CAL 3164	Nil	
CAL 3165	Nil	
CAL 3166	Nil	
CAL 3167	Nil	
CAL 3168	Nil	
CAL 3169	Nil	
CAL 317Ø	Nil	
CAL 3171	Nil	
CAL 3172	Nil	
CAL 3173	Nil	
CAL 3174	Nil	
CAL 3175	Nil	
CAL 3176	Nil	
CAL 3177	1 -Ø.4 CHROMITE	1 +Ø.1 CHROMITE euhedral with lustrous surfaces - uninteresting
CAL 3178	4 -Ø.4 CHROMITE	CHROMITE four very small grains - uninteresting.
CAL 3179	Nil	
CAL 318Ø	Nil	
CAL 3181	Nil	
CAL 3182	Nil	

Sample No	Results	Comments
CAL 3183	Nil	
CAL 3184	Nil	
CAL 3185	Nil	
CAL 3186	Nil	
CAL 3187	Nil	
CAL 3188	Nil	
CAL 3189	Nil	
CAL 3190	Nil	
CAL 3191	Nil	
CAL 3192	Nil	
CAL 3193	Nil	
CAL 3194	Nil	
CAL 3195	Nil	
CAL 3196	Nil	
CAL 3197	Nil	
CAL 3198	Nil	
CAL 3199	Nil	
CAL 3200	Nil	
CAL 3201	Nil	

Sample No	Results	Comments
CAL 3202	Nil	
CAL 3203	Nil	
CAL 3204	Nil	
CAL 3205	Nil	
CAL 3206	Nil	
CAL 3207	Nil	
CAL 3208	Nil	
CAL 3209	Nil	
CAL 3210	Nil	
CAL 3211	Nil	
CAL 3212	Nil	
CAL 3213	Nil	
CAL 3214	Nil	
CAL 3215	Nil	
CAL 3216	Nil	
CAL 3217	Nil	
CAL 3218	Nil	
CAL 3219	Nil	
CAL 3220	Nil	

Sample No	Results	Comments
CAL 3221	Nil	
CAL 3222	Nil	
CAL 3223	Nil	
CAL 3224	Nil	
CAL 3225	Nil	
CAL 3226	Nil	
CAL 3227	Nil	
CAL 3228	Nil	
CAL 3229	Nil	
CAL 3230	Nil	
CAL 3231	Nil	
CAL 3232	Nil	
CAL 3233	Nil	
CAL 3234	Nil	
CAL 3235	Nil	
CAL 3236	Nil	
CAL 3237	Nil	
CAL 3238	Nil	
CAL 3239	Nil	

Sample No	Results	Comments
CAL 3240	Nil	
CAL 3241	Nil	
CAL 3242	Nil	
CAL 3243	Nil	
CAL 3244	Nil	
CAL 3245	Nil	
CAL 3246	Nil	
CAL 3247	Nil	
CAL 3248	Nil	
CAL 3249	Nil	
CAL 3250	1 +0.4 CHROMITE 1 -0.4 CHROMITE	1 +0.4, 1-0.4 CHROMITE octahedral - no interest.
CAL 3251	Nil	
CAL 3252	Nil	
CAL 3253	Nil	
CAL 3254	Nil	
CAL 3255	Nil	
CAL 3256	Nil	
CAL 3257	Nil	

Sample No	Results	Comments
CAL 3258	Nil	
CAL 3259	Nil	
CAL 3266	Nil	
CAL 3267	Nil	
CAL 3268	Nil	
CAL 3269	6 -0.4 DIAMOND	6 STONES: 1 +0.40 x 0.30 x 0.30 STONE clear, colourless, dodecahedral. 1 +0.40 x 0.30 x 0.20 STONE irregular, almost colourless. 1 +0.20 x 0.15 x 0.15 STONE irregular, pink. 2 +0.12 x 0.12 x 0.12 STONES irregular, turbid, pink. 1 +0.10 x 0.10 x 0.10 STONE green, opaque cube.
CAL 3270	Nil	
CAL 3271	17 -0.4 DIAMOND	17 STONES: 4 +0.1 x 0.1 x 0.1 STONES turbid pink cubes. 3 +0.2 x 0.2 x 0.2 STONES irregular grey turbid. 1 +0.2 x 0.18 x 0.15 STONE, 1 +0.18 x 0.15 x 0.12 STONE, 1 +0.15 x 0.15 x 0.1 STONE pink aggregates. 1 +0.18 x 0.18 x 0.14 STONE, 1 +0.18 x 0.12 x 0.12 STONE, 1 +0.12 x 0.12 x 0.10 STONE irregular pink. 1 +0.18 x 0.15 x 0.15 STONE black irregular aggregate. 1 +0.45 x 0.4 x 0.4 STONE, 1 +0.25 x 0.25 x 0.20 STONE, 1 +0.2 x 0.2 x 0.2 STONE irregular and colourless .
CAL 3272	Nil	
CAL 3273	Nil	
CAL 3274	Nil	
CAL 3275	Nil	

Sample No	Results	Comments
CAL 3276	Nil	
CAL 3277	2 +Ø.4 CHROMITE	2 +Ø.4 CHROMITE black, octahedral - no interest.
CAL 3278	Nil	
CAL 3279	Nil	
CAL 3294	Nil	
CAL 33Ø8	Nil	
CAL 33Ø9	Nil	
CAL 331Ø	Nil	
CAL 3311	Nil	
CAL 3312	Nil	
CAL 3313	Nil	
CAL 3314	Nil	
CAL 3315	1 -Ø.4 DIAMOND	1 +Ø.2Ø x Ø.15 x Ø.15 STONE colourless, rough octahedron with frosted surfaces.
CAL 3316	Nil	
CAL 3317	Nil	
CAL 3318	Nil	
CAL 3319	Nil	
CAL 332Ø	Nil	

Sample No	Results	Comments
CAL 3321	Nil	
CAL 3322	Nil	
CAL 3323	Nil	
CAL 3324	Nil	
CAL 3325	Nil	
CAL 3326	Nil	
CAL 3327	Nil	
CAL 3328	Nil	
CAL 3329	Nil	
CAL 3330	Nil	
CAL 3333	Nil	
CAL 3334	Nil	
CAL 3335	Nil	
CAL 3336	Nil	
CAL 3337	Nil	
CAL 3338	Nil	
CAL 3339	1 -0.4 DIAMOND	1 +0.10 x 0.10 x 0.10 STONE green, opaque cube.
CAL 3340	Nil	
CAL 3341	Nil	

Sample No	Results	Comments
CAL 3342	Nil	
CAL 3343	Nil	
CAL 3346	Nil	
CAL 3347	Nil	
CAL 3348	Nil	
CAL 3349	Nil	
CAL 3350	Nil	
CAL 3351	Nil	
CAL 3352	Nil	
CAL 3353	Nil	
CAL 3354	Nil	
CAL 3355	Nil	
CAL 3356	Nil	
CAL 3357	Nil	
CAL 3358	Nil	
CAL 3359	Nil	
CAL 3360	Nil	
CAL 3361	Nil	

Sample No	Results	Comments
CAL 3362	9 -Ø.4 DIAMOND	9 STONES: 1 +Ø.35 x Ø.3Ø x Ø.3Ø STONE irregular, translucent, colourless, octahedral structure. 1 +Ø.25 x Ø.25 x Ø.25 STONE irregular, colourless. 3 +Ø.15 x Ø.15 x Ø.15 STONES yellow-brown cubes. 3 +Ø.15 x Ø.15 x Ø.1Ø STONES irregular, 2 cream 1 brown. 1 +Ø.1Ø x Ø.1Ø x Ø.1Ø STONE cubo-octahedral, pale yellow, translucent.
CAL 3363	13 -Ø.4 DIAMOND	13 STONES: 4 +Ø.2 x Ø.2 x Ø.2 STONES opaque, cream/grey cubes. 1 +Ø.2 x Ø.2 x Ø.15 STONE irregular, cream. 4 +Ø.13 x Ø.13 x Ø.13 STONES cubes - 1 green 1 pink 2 cream. 1 +Ø.15 x Ø.15 x Ø.1Ø STONE, 1 +Ø.1 x Ø.1 x Ø.1 STONE both irregular, turbid pink. 1 +Ø.15 x Ø.15 x Ø.1Ø STONE clear, colourless, irregular. 1 +Ø.13 x Ø.13 x Ø.13 STONE clear, pale yellow, octahedral.
CAL 3364	3 -Ø.4 DIAMOND	3 STONES: 1 +Ø.2Ø x Ø.2Ø x Ø.15 STONE turbid, cream cube (broken into three parts). 1 +Ø.18 x Ø.18 x Ø.18 STONE pink cube. 1 +Ø.15 x Ø.15 x Ø.13 STONE clear, colourless, irregular with some octahedral features.
CAL 3365	2 -Ø.4 DIAMOND	2 STONES: 1 +Ø.15 x Ø.15 x Ø.15 STONE pale green, opaque cube. 1 +Ø.1Ø x Ø.1Ø x Ø.1Ø STONE irregular, pale pink-brown, opaque.
CAL 3366	3 -Ø.4 DIAMOND	3 STONES: 1 +Ø.3Ø x Ø.3Ø x Ø.3Ø STONE green cube. 1 +Ø.2Ø x Ø.12 x Ø.1Ø STONE colourless, irregular fragment. 1 +Ø.1Ø x Ø.1Ø x Ø.1Ø STONE part of a yellow cube.
CAL 3367	2 -Ø.4 DIAMOND	2 STONES: 1 +Ø.15 x Ø.15 x Ø.1Ø STONE turbid, pale brown cube fragment. 1 +Ø.13 x Ø.1Ø x Ø.1Ø STONE turbid, pink, irregular fragment.

Sample No	Results	Comments
CAL 3368	6 -0.4 DIAMOND	6 STONES: 1 +0.3 x 0.3 x 0.25 STONE green aggregates of cubes. 1 +0.3 x 0.2 x 0.2 STONE green, turbid. 1 +0.2 x 0.2 x 0.2 STONE pale pink, aggregate of cubes. 1 +0.25 x 0.2 x 0.15 STONE irregular, colourless. 1 +0.2 x 0.1 x 0.1 STONE irregular, brown. 1 +0.13 x 0.12 x 0.10 STONE colourless, rounded, resorbed beyond dodecahedral.
CAL 3369	Nil	
CAL 3370	2 -0.4 DIAMOND	2 STONES: 1 +0.20 x 0.20 x 0.10 STONE cream, turbid, irregular. 1 +0.10 x 0.08 x 0.08 STONE very pale pink, part of a cube.
CAL 3371	5 -0.4 DIAMOND	5 STONES: 1 +0.25 x 0.25 x 0.25 STONE brown cube. 1 +0.30 x 0.25 x 0.25 STONE brown, clear, octahedral, composed of triangular plates. 1 +0.22 x 0.18 x 0.08 STONE colourless, irregular fragment with inclusions. 1 +0.10 x 0.10 x 0.08 STONE pale brown, part of a cube. 1 +0.10 x 0.10 x 0.08 STONE irregular, pale green, zoned.
CAL 3372	Nil	
CAL 3373	Nil	
CAL 3374	Nil	
CAL 3375	Nil	
CAL 3376	Nil	
CAL 3377	Nil	
CAL 3378	Nil	
CAL 3379	Nil	

Sample No	Results	Comments
CAL 3380	Nil	
CAL 3381	Nil	
CAL 3382	Nil	
CAL 3383	Nil	
CAL 3384	Nil	
CAL 3385	Nil	
CAL 3386	Nil	
CAL 3387	Nil	
CAL 3388	Nil	
CAL 3389	Nil	
CAL 3390	Nil	
CAL 3391	Nil	
CAL 3392	3 -0.4 DIAMOND	3 STONES: 1 +0.45 x 0.38 x 0.30 STONE very pale yellow, cubo-dodecahedral with octahedral plates on the corners. 1 +0.35 x 0.25 x 0.15 STONE irregular, colourless. 1 +0.25 x 0.18 x 0.15 STONE grey, irregular with inclusions.
CAL 3393	Nil	
CAL 3394	Nil	

Sample No	Results	Comments
CAL 3395	4 -0.4 DIAMOND	4 STONES: 1 +0.40 x 0.30 x 0.20 STONE turbid, pink, irregular, part of a cube. 1 +0.15 x 0.15 x 0.15 STONE yellow cube. 1 +0.15 x 0.15 x 0.15 STONE irregular, part of a pink cube. 1 +0.20 x 0.20 x 0.20 STONE twinned, turbid, pink cube aggregate.
CAL 3396	Nil	
CAL 3397	Nil	
CAL 3398	Nil	
CAL 3399	1 -0.4 DIAMOND	1 +0.12 x 0.12 x 0.12 STONE colourless, irregular cleavage fragment.
CAL 3400	Nil	
CAL 3404	Nil	
CAL 3405	Nil	
CAL 3406	Nil	
CAL 3407	Nil	
CAL 3408	Nil	
CAL 3409	Nil	
CAL 3410	Nil	
CAL 3411	Nil	
CAL 3412	Nil	
CAL 3413	Nil	

Sample No	Results	Comments
CAL 3414	Nil	
CAL 3415	Nil	
CAL 3416	Nil	
CAL 3417	Nil	
CAL 3418	Nil	
CAL 3419	Nil	
CAL 3420	Nil	
CAL 3421	Nil	
CAL 3422	Nil	
CAL 3423	Nil	
CAL 3424	Nil	
CAL 3425	Nil	
CAL 3426	Nil	
CAL 3427	5 -0.4 DIAMOND	5 STONES: 1 +0.18 x 0.18 x 0.17 STONE brown cube. 1 +0.15 x 0.15 x 0.13 STONE brown cube aggregate. 1 +0.17 x 0.15 x 0.15 STONE pale brown, part of a cube. 1 +0.12 x 0.12 x 0.10 STONE green, irregular. 1 +0.10 x 0.10 x 0.08 STONE green, part of a cube.
CAL 3428	Nil	

Sample No	Results	Comments
CAL 3429	6 -0.4 DIAMOND	6 STONES: 1 +0.30 x 0.25 x 0.20 STONE brown, part of a cube. 1 +0.25 x 0.25 x 0.25 STONE pale yellow, plane faced cubo-dodecahedron. 1 +0.13 x 0.13 x 0.13 STONE greenish cube. 1 +0.25 x 0.15 x 0.11 STONE irregular, pale brown. 1 +0.30 x 0.20 x 0.10 STONE irregular, pale brown. 1 +0.30 x 0.15 x 0.10 STONE irregular, grey.
CAL 3430	6 -0.4 DIAMOND	6 STONES: 1 +0.20 x 0.18 x 0.10 STONE colourless, irregular. 1 +0.15 x 0.15 x 0.10 STONE brown, irregular. 1 +0.30 x 0.25 x 0.22 STONE brown, irregular. 1 +0.20 x 0.20 x 0.20 STONE pink cube with white coat and brown spot. 1 +0.15 x 0.15 x 0.12 STONE green, part of a cube. 1 +0.15 x 0.15 x 0.12 STONE green, part of a cube.
CAL 3431	2 -0.4 DIAMOND	2 STONES: 1 +0.20 x 0.20 x 0.20 STONE pink, turbid cube. 1 +0.12 x 0.12 x 0.10 STONE irregular, turbid, cream.
CAL 3432	Nil	
CAL 3442	Nil	
CAL 3443	Nil	
CAL 3444	Nil	
CAL 3452	2 -0.4 DIAMOND	2 STONES: 1 +0.25 x 0.20 x 0.20 STONE green aggregate of cubes with brown spot. 1 +0.10 x 0.10 x 0.10 STONE cream cube.
CAL 3453	Nil	
CAL 3465	Nil	
CAL 3466	Nil	
CAL 3467	Nil	
CAL 3478	Nil	

Sample No	Results	Comments
CAL 3479	Nil	
CAL 3480	Nil	
CAL 3481	Nil	
CAL 3482	Nil	
CAL 3483	Nil	
CAL 3484	Nil	
CAL 3485	Nil	
CAL 3486	Nil	
CAL 3487	Nil	
CAL 3496	Nil	
CAL 3497	Nil	
CAL 3498	1 -0.4 DIAMOND	1 +0.18 x 0.18 x 0.18 STONE cream cube.
CAL 3499	1 -0.4 DIAMOND	1 +0.30 x 0.25 x 0.25 STONE cream, frosted intergrowth of cubes.
CAL 3500	Nil	
CAL 3501	Nil	
CAL 3510	Nil	
CAL 3511	Nil	
CAL 3512	Nil	
CAL 3513	Nil	

Sample No	Results	Comments
CAL 3514	Nil	
CAL 3520	1 -0.4 DIAMOND	1 +0.21 x 0.16 x 0.14 STONE irregular, cream, brown spot.
CAL 3521	1 -0.4 DIAMOND	1 +0.22 x 0.14 x 0.11 STONE very pale yellow, plane faced, octahedron with part missing.
CAL 3522	1 -0.4 DIAMOND	1 +0.17 x 0.11 x 0.11 STONE brown cube with octahedral corners, sugary surface, small side growth.
CAL 3523	2 -0.4 DIAMOND	2 STONES: 1 +0.22 x 0.20 x 0.13 STONE irregular, corroded. 1 +0.18 x 0.12 x 0.10 STONE irregular, colourless.
CAL 3524	Nil	
CAL 3525	Nil	
CAL 3526	2 -0.4 DIAMOND	2 STONES: 1 +0.2 x 0.18 x 0.18 STONE pale brown aggregate, broken into two pieces. 1 +0.17 x 0.17 x 0.17 STONE pale brown cube.
CAL 3532	Nil	
CAL 3533	Nil	
WAL 405	1 -0.4 DIAMOND	1 +0.33 x 0.30 x 0.20 STONE, irregular, grey, blocky, platy.
WAL 406	Nil	
WAL 407	Nil	
WAL 408	Nil	
WAL 409	1 -0.4 DIAMOND	1 +0.30 x 0.25 x 0.17 STONE irregular, brown with greenish tinge.

Sample No	Results	Comments
WAL 41Ø	4 -Ø.4 DIAMOND	4 STONES: 1 +Ø.2Ø x Ø.18 x Ø.18 STONE very pale green, cubo-octahedral. 1 +Ø.2Ø x Ø.16 x Ø.15 STONE green, part of cube. 1 +Ø.15 x Ø.15 x Ø.13 STONE green cube. 1 +Ø.18 x Ø.18 x Ø.15 STONE irregular, cream, opaque.
WAL 411	Nil	
WAL 412	Nil	
WAL 413	Nil	
WAL 414	Nil	
WAL 415	Nil	
WAL 416	Nil	
WAL 417	Nil	
WAL 418	4 -Ø.4 DIAMOND	4 STONES: 1 +Ø.64 x Ø.32 x Ø.27 STONE colourless, clear, cleavage fragment. 1 +Ø.18 x Ø.12 x Ø.1Ø STONE brown, intergrowth. 1 +Ø.12 x Ø.12 x Ø.12 STONE brown cube. 1 +Ø.15 x Ø.1Ø x Ø.1Ø STONE irregular, cream aggregate.
WAL 419	Nil	
WAL 42Ø	Nil	
WAL 421	Nil	
WAL 457	Nil	

Sample No	Results	Comments
WAL 458	9 -0.4 DIAMOND	9 STONES: 1 +0.35 x 0.29 x 0.12 STONE irregular, grey inclusions. 1 +0.31 x 0.25 x 0.15 STONE colourless cleavage fragment. 1 +0.20 x 0.20 x 0.18 STONE brown cube. 1 +0.24 x 0.19 x 0.19 STONE green, cubo-octahedral. 1 +0.22 x 0.15 x 0.15 STONE irregular, cream. 1 +0.20 x 0.14 x 0.10 STONE irregular, brown. 1 +0.16 x 0.12 x 0.10 STONE irregular, brown. 1 +0.11 x 0.10 x 0.10 STONE grey cube. 1 +0.15 x 0.10 x 0.10 STONE irregular, cream.
WAL 459	11 -0.4 DIAMOND	11 STONES: 1 +0.28 x 0.26 x 0.26 STONE cream, frosted cube. 1 +0.28 x 0.25 x 0.20 STONE cream aggregate. 1 +0.22 x 0.22 x 0.20 STONE cream cube. 1 +0.3 x 0.3 x 0.28 STONE part of a cube. 1 +0.2 x 0.2 x 0.2 STONE brownish cube. 1 +0.3 x 0.2 x 0.1 STONE colourless fragment. 1 +0.13 x 0.13 x 0.13 STONE greenish resorbed cube with side growth. 1 +0.2 x 0.13 x 0.13 STONE colourless fragment. 1 +0.14 x 0.12 x 0.12 STONE irregular, green. 1 +0.11 x 0.10 x 0.09 STONE irregular, green. 1 +0.11 x 0.1 x 0.1 STONE irregular, pale brown.
WAL 460	Nil	
WAL 461	3 -0.4 DIAMOND	3 STONES: 1 +0.15 x 0.15 x 0.12 STONE pale yellow, cubo-octahedral. 1 +0.15 x 0.12 x 0.12 STONE mid green, plane faced octahedron. 1 +0.15 x 0.13 x 0.09 STONE pale brown, radial structured fragment.

APPENDIX 2.

Drill Logs and Petrology.

Drillhole : **CJ113**

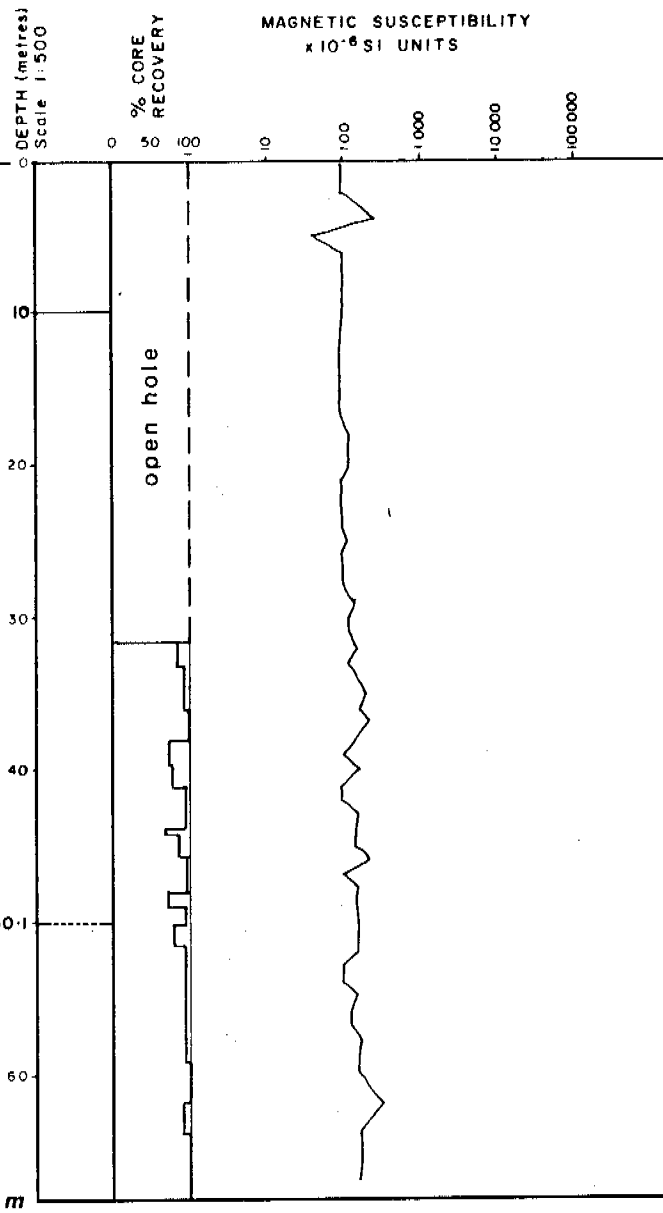
Input anomaly : **IC-23**

Grid position : **590106 (AMG)**

Overburden*

Interbedded silicified , feldspathic sandstone , mudstone , metasediments and micaceous phyllite/schist

base of weathering



End of hole 67.95m

*Overburden : Includes black soil,unconsolidated to semiconsolidated Cretaceous(?) and other sediments

Drillhole : **CJ168**

Photo feature : **609**

Grid position : **624100 (AMG)**

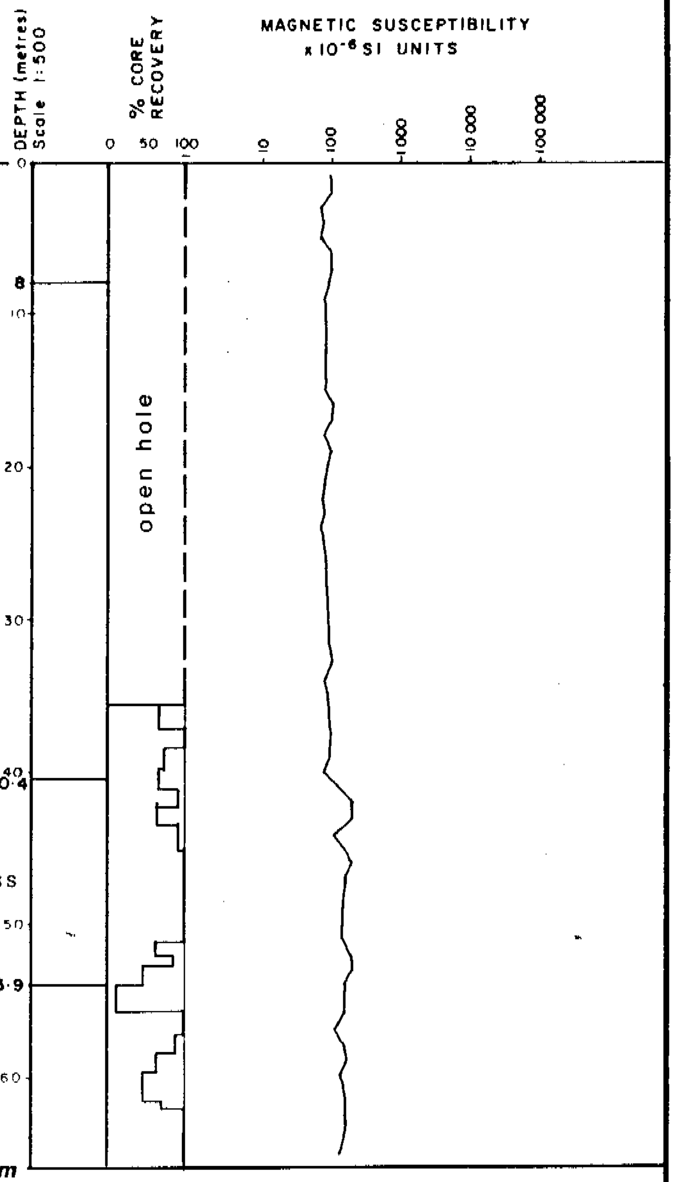
Overburden*

Weathered metasediments

Weathered,porphyritic volcanic with felsic? groundmass

Weathered metasediments

End of hole 65.9m

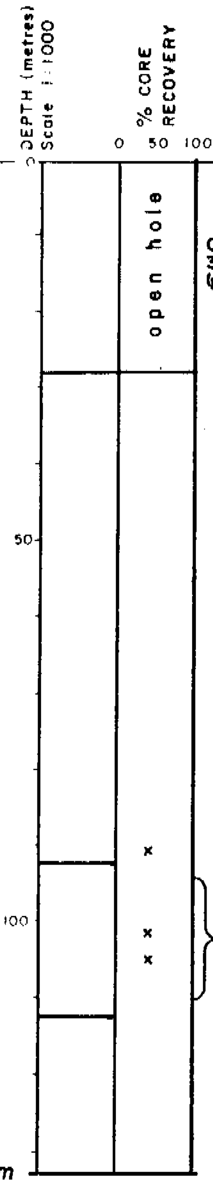


*Overburden : Includes black soil,unconsolidated to semiconsolidated Cretaceous(?) and other sediments

Drillhole : **DDH CJ680**

Line W area, at CJ480 on 87/13

Declination 88°



CAL3146
30 bag rock chip/spoil sample
(previously reported)

Open hole ; overburden and metasediments

Metasediments, interbedded siltstones and mudstones

petrology sample CJ680-1 at 92m

Pink and grey, fine to medium grained igneous rock

CAL3147

petrology sample CJ680-2 at 101.5m

petrology sample CJ680-3 at 105m

Metasediments, interbedded siltstones and mudstones

End of hole 132.6m

SAMPLE CJ 680-1

Name: Altered porphyritic trachyte-andesite

Mineralogy:

Phyllosilicates (colourless to very pale green)	~40%
Chlorite	~37%
?Feldspar/zeolite	~15%
Opaque oxides (altered)	~4%
?Serpentine	~2%
Quartz	~2%

The rock is highly altered and none of the primary minerals has survived the alteration processes.

Relict textures indicate that the chlorite pseudomorphs mainly mafic crystals, probably pyroxene and/or amphibole. Some chlorite may partly pseudomorph feldspar.

The phyllosilicate, which has a high birefringence and is very fine-grained, seems to pseudomorph feldspar.

The mineral designated as "?feldspar/zeolite" is very fine-grained and difficult to positively identify. It occurs mainly as a replacement phase in the groundmass. Some of the mineral also occurs in thin veins that cut the rock.

It is concluded that the primary mineralogy of the rock was dominated by feldspar and pyroxene (and/or amphibole). Some of the former mafic crystals were 8-sided and were therefore presumably pyroxene.

Textures:

The rock is porphyritic, containing 15-20% phenocrysts (now altered) set in a very fine-grained matrix. The phenocrysts were mostly euhedral and ranged up to 2.5 mm in diameter. They appear to have comprised mainly feldspar and pyroxene (subordinate).

The matrix appears to have consisted of microlaths (generally <0.1 mm long) of pyroxene/amphibole and feldspar. Fine-grained opaques (~0.02-0.05 mm) were liberally distributed throughout the matrix. The opaque crystals were equant to elongate but now have irregular margins, probably the result of the alteration of the rock.

The sample has a weak flow texture. Parallel to the flow texture is a very fine-grained, ~8 mm wide vein which seems to be chilled against the host rock. The vein seems to be fairly similar in composition to the host and therefore probably represents a separate injection of the parent magma (i.e. multiple intrusion).

Discussion:

Because it is not absolutely clear that the very fine-grained phyllosilicate pseudomorphs feldspar, and that if it was feldspar, whether it was plagioclase or alkali feldspar, the true identity of the rock speculative. Intuitively, it is considered that feldspar was a dominant component of the rock and that much of it was alkali feldspar. Hence the parent rock may have had a trachytic to andesitic composition, depending on the relative proportions of alkali feldspar to plagioclase. The porphyritic nature of the rock suggests that it represents either a lava flow, a shallow intrusive, or a chilled margin of a larger intrusive body.

SAMPLE CJ 680-2

Name: Altered fine- to medium-grained monzodiorite/monzogabbro

Mineralogy:

Feldspar (moderately to strongly altered)	~53%
Chlorite (after mafic phase)	~35%
Quartz	~8%
Opaque oxides	~3%
Apatite	~1%

Feldspar is the dominant mineral in the rock. There appears to be two types present, one of which is moderately euhedral, lath-like and fairly strongly altered (e.g. sericitised). The other is anhedral, has mainly an interstitial habit and is generally unaltered. It is assumed that the altered feldspar is probably plagioclase and the unaltered feldspar is alkali feldspar. If this is correct, plagioclase predominates slightly over alkali feldspar.

Chlorite comprises at least two varieties, one with a very low birefringence and another with a low to moderate birefringence. Chlorite generally appears to have replaced pyroxene.

Textures:

The rock is fine- to medium-grained, weakly porphyritic, but overall is characterised by a fairly uniform intergranular to sub-ophitic texture. It generally consists of a meshing framework of feldspar (?plagioclase) and altered pyroxene laths (which average ~0.7 mm) with interstitial alkali feldspar and quartz. However, about 2% of the rock is composed of slightly larger crystals (up to 2 mm in size) of pyroxene (altered) and subordinate feldspar.

Opaque oxides were equant to elongate (up to 0.25 mm long) and mostly euhedral. They have now been variably altered and have lost most of their former euhedralism.

Apatite is strongly needle-like, extending up to 0.5 mm long and 0.02 mm wide.

Discussion:

The rock is much coarser grained than CJ 480 92 m and has a texture characteristic of hypabyssal crystallisation. If CJ 480 92 m and CJ 480 101.5 m are from the same body, then CJ 480 92 m probably represents a chilled margin.

Assuming that plagioclase is the dominant feldspar in the sample, the rock is probably best described as a fine- to medium-grained monzodiorite (i.e. micro-monzodiorite) or monzogabbro (= syenogabbro). An accurate petrographic name is not possible because (i) the proportions of plagioclase to alkali feldspar and (ii) the composition of the former plagioclase are not known.

SAMPLE CJ 680-3

Name: Altered fine- to medium-grained monzodiorite/monzogabbro; partly carbonated

Mineralogy:

Feldspar (moderately altered)	~45%
Chlorite (after mafic phase)	~38%
Quartz	~8%
Carbonate	~5%
Opaque oxides	~3%
Apatite	~1%

The feldspar in the rock appears to be predominantly albitic plagioclase. It is moderately haematite-stained, variably sericitised and in places carbonated. The albitic composition of the plagioclase is probably a secondary feature related to the alteration of the rock.

Chlorite pseudomorphs a former mafic phase, presumably pyroxene and/or amphibole.

Carbonate occurs in several different habits; replacing plagioclase, replacing the rock, and locally occurring in thin veins.

Textures:

The rock is fine- to medium-grained with an intergranular to sub-ophitic texture. Plagioclase crystals form an "open" framework. Between the plagioclase laths, which are mainly subhedral to euhedral and up to 1 mm long (average ~0.6 mm), occur laths and small plates of chloritised ?pyroxene, and minor amounts of quartz, alkali feldspar and opaque oxides. Some of the quartz has a sub-ophitic habit.

Like CJ 480 101.5 m, the sample is weakly porphyritic, having contained a few phenocrysts (up to 2 mm in size) of pyroxene and feldspar.

Along one edge of the thin section there is a 14 x 4 mm aggregate of fine-grained quartz. The quartz is well crystallised and has a moderate metamorphic appearance. It is not clear if the aggregate represents a recrystallised quartz vein or is a ?sedimentary xenolith.

Discussion:

The rock is very similar to CJ 480 101.5 m in texture and mineralogy. The main difference is that this rock is partly carbonated. Also, it is clear in this rock that plagioclase predominates over alkali feldspar. Accordingly, the rock is a micro-monzodiorite or monzogabbro. Which one it is depends on the original composition of the plagioclase.

Drillhole : DDH CJ681

Line W area, at CJ500 on 87/15

Declination 84°

DEPTH (metres) Scale 1:500 | % CORE RECOVERY 0 50 100

Open hole ; overburden, metasediments

open hole

CAL3145
20 bag rock chip/spoil sample
(previously reported)

Metasediments, interbedded siltstones and mudstones

Red, fine grained igneous rock

59.0 – 59.7 CAL3148 also *petrology sample CJ681-1*

Metasediments, interbedded siltstones and mudstones

End of hole 80m

SAMPLE CJ 681-1

Name: Highly altered porphyritic (vitrophyric) ?andesite-basalt

Mineralogy:

Colourless phyllosilicates (very fine-grained)	~50%
Haematite (very fine-grained)	~30%
Quartz	~15%
Pale green phyllosilicate	~5%
?Rutile	minor

The rock has been highly altered, chiefly ?sericitised/ kaolinised, ferruginised and silicified. Consequently, the original mineralogy of the rock is difficult to determine. It seems that the very fine-grained colourless phyllosilicate may pseudomorph feldspar and that the greenish phyllosilicate may pseudomorph former ?pyroxene. Much of the dusty haematite possibly pseudomorphs a former glassy mesostasis.

At a very rough approximation, the parent rock may have contained ~40% feldspar, ~40% glass and ~20% pyroxene.

Textures:

The parent rock was strongly porphyritic, and possibly partly vesicular. It contained ~30% phenocrysts of subhedral to euhedral feldspar, and a few percent phenocrysts of pyroxene. The phenocrysts extended up to 4 mm long but averaged ~1.5 mm in size.

The phenocrysts were set in a very fine-grained matrix which seems to have been largely glassy. Numerous microlites of feldspar and pyroxene were probably once present.

Discussions:

The original mineralogy and thus composition of the rock are largely unknown. However, it is believed that the rock was probably intermediate to basic in composition. Hence the parent rock may have been a porphyritic (vitrophyric) andesite or basalt.

Drillhole : **DDH CJ682**

Line W area, 180m E of CJ526 (87/14)
between 87/14 & 88/23

DEPTH (metres) Scale 1:2000

% CORE RECOVERY

0 50 100

0

open hole

Open hole ; overburen, (?)trachytic volcanic

30.

50

Cream to grey-green, moderately to highly weathered and fractured, fine grained volcanic

84.8

petrology sample 731 at 92.3m

100

petrology sample 732 at 117.5m

petrology sample 733 at 148.4m

150

petrology sample 734 at 182.2m

200

Grey-green, unaltered, moderately to highly fractured, fine grained (?)trachytic volcanic

petrology sample 735 at 223.2m

250

petrology sample 736 at 256.3m

petrology sample 749 at 270m

petrology sample 750 at 290m

300

petrology sample 751 at 310.6m

petrology sample 752 at 330m

End of hole 331m

SAMPLE 731

<u>Name:</u> Medium-grained (micro) monzogabbro; moderately to strongly altered

<u>Minerals:</u>

Plagioclase (labradorite, variably altered to white mica)	~42%
Amphibole, green (after pyroxene)	~40%
Alkali feldspar	?~8%
Quartz	~5%
Fe-Ti oxides (partly leucoxenised)	~3%
Hornblende (greenish brown)	~1%
Apatite	minor

Plagioclase crystals show continuous normal zoning; cores are generally ~An56-60 and rims are andesine in composition. In some parts of the thin section the plagioclase has been albitised.

<u>Textures:</u>

The rock is mainly medium-grained, with a hypidiomorphic-granular texture. However, in a number of places there are irregular patches, up to ~8 mm in size, which are much finer grained and more felsic than the host rock. These zones may represent segregations of late-stage differentiated liquid.

Plagioclase crystals are lath to tabular in form and average 1-1.5 mm long, but range up to 2.5 mm in length. Most are euhedral to subhedral, but many have partly corroded margins. The former pyroxene crystals were slightly smaller (most 0.5-1.0 mm) than the plagioclase crystals, and were prismatic to weakly platy. Pyroxene crystallised simultaneously with, to slightly later than plagioclase and because of this in some places it is moulded about the plagioclase crystals. In other areas of the rock the interstices between the plagioclase and pyroxene crystals are occupied by alkali feldspar and quartz.

These two minerals commonly occur in very fine-grained granophyric intergrowths. Some quartz has an ophitic platy form.

Fe-Ti oxide crystals generally have euhedral margins, although commonly with skeletal interiors. The crystals average ~0.5 mm but range up to 1.5 mm in size. The size and shape of the crystals are generally more appropriate for crystallisation under moderate, rather than rapid, cooling rates.

Discussion:

The rock has a texture which suggests that it crystallised in a hypabyssal environment. It is on average finer grained than sample 730 and the plagioclase crystals are more lath shaped than those in sample 730. In addition, the rock is more heterogeneous than 730 because it contains patches of fine-grained felsic material. The texture of the rock is generally too coarse-grained for it to be considered a volcanic extrusive.

Because of the above reasons the sample is thought not to be a true latite or andesite and is probably best to be called by its hypabyssal-plutonic equivalent. The most appropriate name is probably monzogabbro because of (i) the presence of moderate amounts of alkali feldspar and (ii) the labradoritic composition of the plagioclase. As the rock is medium-grained, but ranges from fine- to medium-grained, the prefix "micro" is probably warranted.

The origin of the fine-grained felsic patches is possibly related to the injection of differentiated liquid from other parts of the rock body before it had completely solidified. The migration and collection of the fluids may have been responsible for the corrosion of some of the earlier formed plagioclase crystals.

SAMPLE 732

<u>Name:</u> Medium-grained (micro) monzogabbro, with glassy patches; moderately to strongly altered

<u>Minerals:</u>

Plagioclase (labradorite-andesine, variably replaced by white mica)	~40%
Amphibole-chlorite (after pyroxene)	~27%
Devitrified glassy material (greenish brown)	~27%
Fe-Ti oxides	~3%
Quartz	~1-2%
Apatite	minor

Plagioclase shows continuous normal zoning. Several crystals have cores of composition ~An50.

The former pyroxene appears to have been mostly clinopyroxene, although several pseudomorphs have textures suggesting that orthopyroxene may have been present as well.

Alkali feldspar was not positively identified but it is probably a major component of the devitrified glassy material.

<u>Textures:</u>

The rock is mainly medium-grained but comprises a mixture of hypidiomorphic granular and hyalopilitic-hyalophitic textures. The two types of textures are fairly evenly distributed throughout the rock. The hyalopilitic-hyalophitic domains are more easily distinguished because of the murky brown colour of the altered glass. These former glassy domains, which have irregular outlines, are up to ~8 mm in size.

Plagioclase crystals vary from lath-shaped to tabular and are mostly euhedral to subhedral, although many have cuspate to corroded margins. A few of the laths have skeletal forms.

Corroded and skeletal crystals of plagioclase are more prevalent in the glassy-dominated zones of the rock. Plagioclase crystals average 1-1.5 mm in length but range up to 3 mm long. Laths are typically 0.2-0.3 mm wide whereas the tabular crystals commonly exceed 1 mm in width.

Former pyroxene crystals were mostly prismatic, euhedral to subhedral, and slightly smaller than plagioclase.

Fe-Ti oxide crystals are relatively coarse (extending up to 2 mm in maximum length) and range from massive to skeletal. The crystals are usually euhedral to subhedral or in the case of the skeletal grains, at least have euhedral to subhedral margins. As with sample 731, the size of the crystals is more appropriate for moderate cooling rates rather than rapid ones.

The sample is locally sheared and the shear zones have been filled with mixtures of chlorite, carbonate and feldspar.

Discussion:

Except for the presence of former glassy material, the sample is fairly similar to 731. The glassy material suggests the rock had a more complex origin. The hypidiomorphic-granular portions of the rock probably represent crystallisation of the parent "monzogabbroic" magma under hypabyssal conditions. The glassy material implies that before the monzogabbroic rock had completely solidified, it was intruded by substantial volumes of liquid which cooled relatively rapidly. The liquid may have been derived from the primary source of the parent magma or it may have been late-stage fractionated material (as suggested for the origin of the very fine-grained felsic zones in sample 731).

Accordingly, the rock is probably best described as a medium-grained (micro) monzogabbro (or monzodiorite).

SAMPLE 733

Name: Medium-grained (micro) monzogabbro, with fine-grained felsic patches; moderately to strongly altered

Minerals:

Plagioclase (labradorite, variably replaced by white mica)	~40%
Amphibole-chlorite (after pyroxene)	~25%
Fine-grained felsic aggregates - abundant alkali feldspar (reddish brown appearance)	~25%
Carbonate (after pyroxene)	~5%
Fe-Ti oxides (variably leucoxenised)	~3%
Quartz	~2%
Apatite	minor

Plagioclase crystals show continuous normal zoning. Their cores are ~An60.

The fine-grained felsic aggregates are probably relatively coarsely recrystallised glass. The aggregates seems to be dominated by alkali feldspar, but probably also contain quartz. The feldspar is moderately clouded with dusty ?haematite, thus producing the reddish brown colour of the patches.

Textures:

The rock is mainly medium-grained with a hypidiomorphic-granular texture. However, it has a heterogeneous texture because of the presence of the fine-grained felsic patches. These patches are up to 10 mm in size although some are much smaller and just occur interstitially to the plagioclase.

Plagioclase crystals vary from lath- to tabular-shaped and are mostly euhedral to subhedral, although some have cuspate to corroded margins. Several have skeletal forms. Most plagioclase crystals average 1-1.5 mm in size, but others extend up to 3 mm long.

Former pyroxene crystals were mostly prismatic, euhedral to subhedral, and slightly smaller than plagioclase crystal. A few crystals extended up to 3 mm in length.

Fe-Ti oxide crystals range from massive to skeletal and range up to 1.5 mm in size, although the average size is ~0.5 mm. The crystals are euhedral to subhedral, or in the case of the skeletal grains, they at least have euhedral to subhedral margins.

The rock is moderately veined by various combinations of carbonate, chlorite and ?feldspar.

Discussion:

The sample is very similar to 731 and 732, and most of the descriptions and comments made for those samples are appropriate for this one. The only real difference between this sample and 732 is the degree of crystallinity of the brownish felsic material. In this sample it is a fine-grained felted aggregate of chiefly alkali feldspar. In 732 it is cryptocrystalline devitrified glassy material. However, both probably had a similar origin; e.g. segregations of late-stage residual liquids.

The felsic patches in this rock are virtually identical to those in 731. The difference is in the amount; this sample contains more than 731.

A minor difference between this sample and 732 is the partial replacement of some of the former pyroxene by carbonate in this sample.

SAMPLE 734

Name: Medium-grained (micro) monzogabbro, with glassy patches; moderately to strongly altered

Discussion:

The rock is virtually identical to sample 732 and the description and comments made for that sample are equally appropriate for this one.

The sample contains brownish patches of devitrified glassy material and this is the only significant difference between it and samples 731 and 733, which contain brownish patches of fine-grained felsic/feldspathic material.

SAMPLE 735

Name: Medium-grained (micro) monzogabbro, with glassy patches; moderately to strongly altered

Discussion:

This sample is similar to 732 and 734 and the description and comments made for 732 are equally appropriate for this one.

The rock is more highly veined than either 732 or 734. Veins filled with various combinations of carbonate, chlorite and ?feldspar constitute 5-10% of the rock.

SAMPLE 736

Name: Medium-grained (micro) monzogabbro, with fine-grained felsic patches; moderately to strongly altered

Discussion:

This sample is very similar to 731 and 733, and the descriptions and comments made for those rocks apply equally well to this one.

In summary, samples 731-736 are very similar. They differ slightly in the form of the brownish felsic/glassy material. Samples 731, 733 and 736 contain patches which are composed of fine-grained feldspathic material, whereas samples 732, 734 and 735 contain patches which are composed of devitrified glassy material.

Sample 730 is different from the 731-736 group because it is slightly coarser grained and because it lacks the felsic/glassy patches. However, the primary mineralogy of the rock, textures, and alteration products all indicate that it is related to the group.

SAMPLE 749

Name: Medium-grained (micro) monzodiorite/monzogabbro, with fine-grained felsic patches; moderately altered

Minerals:

Plagioclase (variably sericitised)	~35%
Fine-grained felsic patches (pale reddish brown)	~30%
Amphibole-chlorite mixtures (after pyroxene)	~30%
Fe-Ti oxides (variably leucoxenised)	~3%
Chlorite-green phyllosilicate (in veins)	~1%
Sulphide	minor

Plagioclase is partly albitised but many crystals show relic igneous zoning and have sodic labradorite (~An56) cores.

The fine-grained patches are mainly composed of devitrified glass, much of it which appears to be feldspathic. Alkali feldspar is assumed to be present. Acicular crystals of plagioclase and former pyroxene constitute the remainder of the fine-grained felsic patches.

Amphibole-chlorite mixtures range from green to blue-green and seem to be composed principally of amphibole (e.g. actinolite). In many places small amounts of relic brownish green hornblende are present.

Fe-Ti oxides range from weakly to completely leucoxenised. Their crystal form and internal textures indicate that they originally crystallised as titaniferous magnetite.

Textures:

The rock has a composite texture. Much of it is medium-grained with a hypidiomorphic-granular to subophitic texture whereas other parts of it, specifically where there are interstitial areas of fine-grained (devitrified) felsic material, has an intersertal texture.

Plagioclase is lath- to tabular-shaped, mostly subhedral, although moderately corroded, and averages 1.0-1.5 mm in maximum length. However, the crystals extend up to 3 mm long in places.

Former pyroxene was prismatic to mildly subophitic and ranged from subhedral to anhedral. Most crystals were in the 0.5-1.5 mm size range although very rarely there were some up to 4.5 mm long.

Fe-Ti oxides occurred mainly as euhedral-subhedral octahedra averaging ~0.4 mm in diameter, but extending up to ~0.7 mm. Many now have a skeletal-corroded form, probably indicative of partial resorption and/or changes associated with leucoxenisation processes.

As mentioned, the fine-grained felsic patches, which are up to ~10 mm in diameter, largely consist of devitrified glass. They contained minor micro-phenocrysts (typically acicular and up to 0.8 mm long) of pyroxene and plagioclase. Their contact with the host rock is irregular, and the glassy material commonly merges with surrounding interstitial glassy areas.

<u>Discussion:</u>

The sample is a comparatively fresh micro monzodiorite/ monzogabbro and is fairly similar to those described previously (e.g. 731-737, 740-741). Comments made for those samples apply equally well to this one.

It is envisaged that the rock formed in an hypabyssal environment. However, before complete solidification of the magma, ?filter-pressed residual liquids were emplaced into the

749 (cont.)

medium-grained rock and eventually crystallised to form the fine-grained felsic patches and interstitial glass.

Unlike some of the other monzodiorites/monzogabbros described previously, this one is only weakly veined and deformed.

SAMPLE 750

<u>Name:</u> Medium-grained (micro) monzodiorite/monzogabbro, with fine-grained felsic patches; moderately altered

<u>Minerals:</u>

The mineralogy of this rock is very similar to that of 749.

Slight differences include the general lack of "sericite" alteration and the presence of minor carbonate (in thin veins) in this rock. Because plagioclase is virtually unaltered it has a fairly pristine, waterclear appearance.

Plagioclase is zoned from cores of ~An60 (labradorite) to rims of ~An40 (andesine).

<u>Textures:</u>

Texturally the rock is virtually identical to 749.

<u>Discussion:</u>

The sample is essentially identical to 749. It is just a little "fresher" in that plagioclase has not been sericitised. All the comments made for 749, and the other samples mentioned therein, apply to this rock.

SAMPLE 751

Name: Medium-grained (micro) monzodiorite/monzogabbro, with fine-grained felsic patches; moderately altered

Minerals:

The mineralogy of this rock is very similar to that of 749.

Plagioclase is moderately sericitised but not quite to the same degree as it is in 749.

Minor carbonate, in veins, is also present in this rock.

Textures:

Texturally the rock is virtually identical to 749.

Discussion:

The sample is essentially identical to 749. All the comments made for 749, and other samples mentioned therein (e.g. 731-737, 740-741), apply equally to this rock.

SAMPLE 752

Name: Medium-grained (micro) monzodiorite/monzogabbro, with fine-grained felsic patches; moderately altered

Minerals:

The mineralogy of the sample is very similar to that of 749.

Plagioclase is sericitised to about the same degree.

Textures:

Texturally the rock is virtually identical to 749.

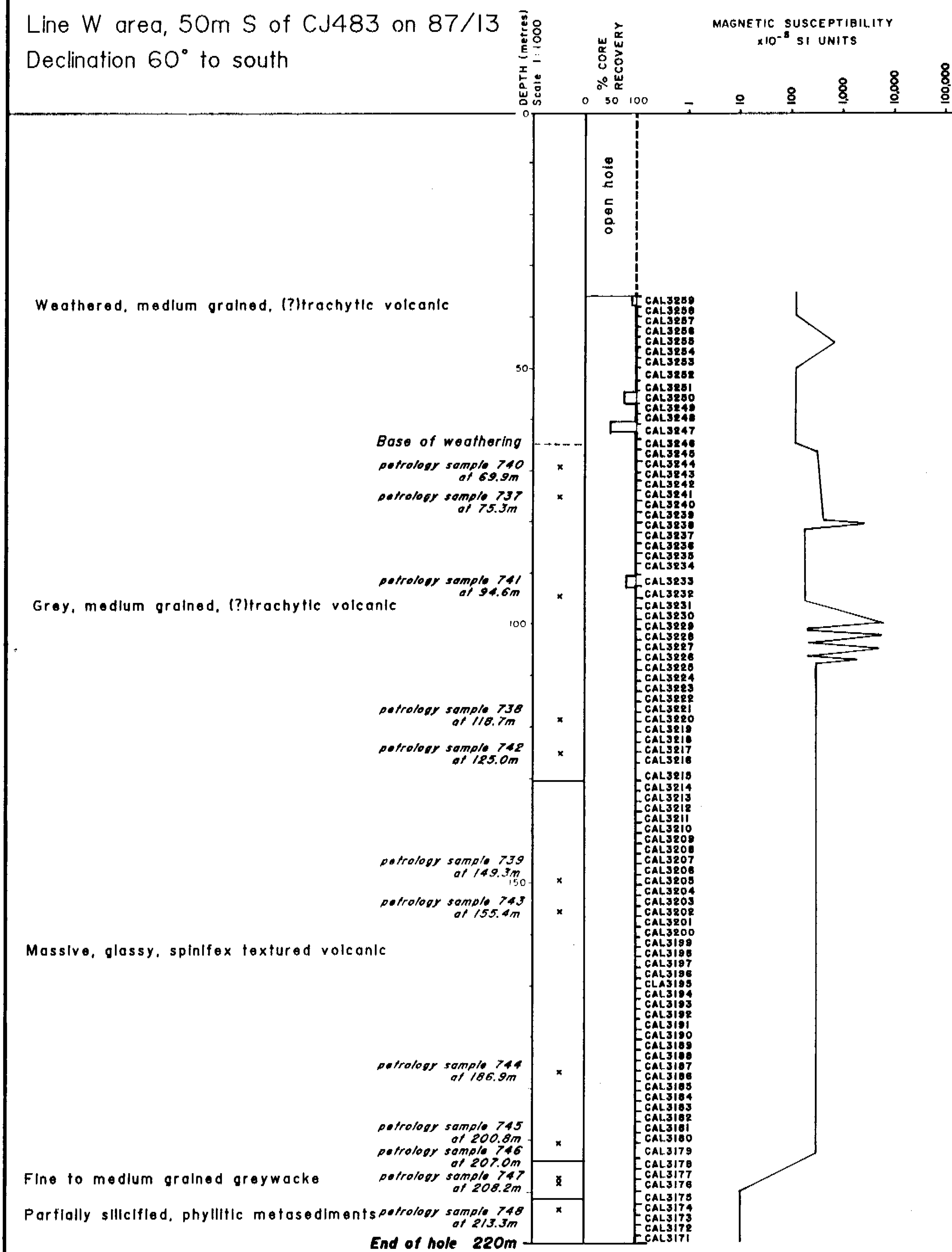
Discussion:

The sample is essentially identical to 749. All the comments made for 749, and other samples mentioned therein (e.g. 731-737, 740-741), apply equally to this rock.

Drillhole : **DDHCJ683**

Line W area, 50m S of CJ483 on 87/13

Declination 60° to south



SAMPLE 740

Name: Fine- to medium-grained (micro) monzodiorite/monzogabbro, with fine-grained felsic patches; moderately to strongly altered

Minerals:

Plagioclase (moderately "sericitised")	~40%
Amphibole-chlorite mixtures (fine-grained)	~30%
Fine-grained felsic patches	~25%
Opaque oxides (partly skeletal, strongly to completely leucoxenised)	~3%
Hornblende (dark green relic material)	minor
Chlorite-phyllosilicate	minor
Vein minerals (e.g. alkali feldspar-?zeolites, carbonate, quartz)	minor
Sulphide	trace

Plagioclase generally has an albite-oligoclase composition but this seems to be a consequence of alteration (e.g. sericitisation, chloritisation) of the rock. The original plagioclase presumably had an andesine-labradorite composition.

Relic textures indicate that most of the amphibole-chlorite mixtures pseudomorph former pyroxene. The pyroxene crystals were commonly rimmed by dark green hornblende. Some amphibole-chlorite occurs in micro-shears and in thin veins.

The fine-grained felsic patches consist mostly of feldspar, much of it probably having been derived from glassy material, and subordinate amounts of amphibole-chlorite (after pyroxene) and minor amounts of quartz and dusty opaque oxides. The felsic patches generally have a reddish brown appearance which may be indicative of the presence of alkali feldspar.

Textures:

The rock is mainly fine- to medium-grained with a hypidiomorphic-granular texture. However, it is also characterised by the presence of fine-grained felsic patches, which may be up to ~10 mm in diameter. Much of the felsic material occurs in interstitial areas between the plagioclase and former pyroxene crystals. These zones of the rock therefore have an intersertal texture.

Plagioclase crystals average ~1 mm in length but range up to 2.5 mm. They are mostly euhedral-subhedral and lath-shaped, although some are tabular. Many of the crystals are fractured and/or corroded and some even have skeletal forms. Plagioclase in the fine-grained felsic patches is highly acicular and the crystals are commonly in subradial arrangement. These features are probably indicative of rapid growth in a supercooled magma.

Former pyroxene was slightly finer grained (0.5-1.5 mm) than plagioclase. It occurred mainly as subhedral prismatic laths, although a small proportion of it was weakly subophitic.

Opaque oxide crystals averaged ~0.25 mm in diameter but ranged up to 0.6 mm in size. They were mainly euhedral-subhedral octahedra but many now have corroded to skeletal forms. As mentioned, the opaque oxides have been very strongly leucoxenised. The relic textures and the nature of the alteration products indicate that the parent mineral was mainly titaniferous magnetite.

Subsequent to solidification, the rock has been mildly deformed and fractured. There is some local shearing present. Most of the shears and fractures have been filled with chlorite or amphibole-chlorite mixtures. The shears and fractures are mostly sinuous and discontinuous, and show a variety of orientations.

740 (cont.)

Discussion:

From a comparison with written descriptions, the sample seems to be fairly similar to many of the (micro) monzodiorites/monzogabbros described previously (e.g. 737). Thus comments made for those samples generally apply to this one.

Basically, the rock seems to have crystallised in a hypabyssal setting. However, before complete solidification of the magma, it was "injected" by fractionated residual liquids, probably from other parts of the cooling rock mass, giving rise to the fine-grained felsic patches. The injection of the fractionated liquid may have been related to tectonism or compaction of the semi-crystalline body. Presumably the late-stage liquids caused partial resorption of the existing crystals and the tectonism/compaction caused deformation of some of the plagioclase crystals.

It is assumed that alkali feldspar is, or was, present in the rock. This assumption is the reason for having the prefix, "monzo", before the rock name.

SAMPLE 737

Name: Medium-grained (micro) monzodiorite/monzogabbro, with fine-grained felsic patches; moderately to strongly altered

Minerals:

Plagioclase (calcic andesine-sodic labradorite, moderately "sericitised")	~40%
Amphibole-chlorite mixtures (green, after pyroxene)	~30%
Fine-grained felsic patches (devitrified glass)	~25%
Opaque oxides (partly skeletal, more or less completely leucoxenised)	~3%
Hornblende (dark green)	minor
Quartz	minor
Sulphide	trace

The composition of the plagioclase is difficult to determine because of (i) a lack of suitably orientated grains, (ii) the moderate degree of alteration and, (iii) the presence of zoning. However, determinations on several grains which were nearly correctly orientated suggest compositions close to the range, An46-An50.

Former pyroxene is replaced by amphibole or amphibole-chlorite mixtures. The amphibole is probably actinolite. However, a small amount of hornblende (dark green) is present and this probably represents relic primary hornblende which crystallised on, and/or partly replaced, the pyroxene.

In addition to the above minerals, the rock is cut by numerous veins which are filled with chlorite-phyllosilicate mixtures.

Textures:

The rock is mainly medium-grained with a hypidiomorphic-granular texture. However, it is also characterised by the presence of fairly abundant pale brown patches of fine-grained felsic material. These felsic patches range in size from about 0.2 mm to over 10 mm. Most are irregular in shape, although the smaller ones commonly occupy the "triangular" spaces between the plagioclase and former pyroxene crystals. In these areas, where there is interstitial felsic material, the texture is intersertal. The fine-grained felsic material seems to be devitrified glass.

Most of the former pyroxene was subhedral to anhedral but in places it enclosed (small) plagioclase crystals. Thus, in part, the parent rock was weakly subophitic-ophitic as well.

Plagioclase is mainly tabular- to lath-shaped and subhedral, commonly with corroded margins. The crystals average ~1 mm in thin section but extend up to 2 mm in maximum length. In the felsic patches, acicular-skeletal plagioclase is generally present. A number of plagioclase laths in the rock are broken indicating brittle deformation of the sample.

Pyroxene crystals were on average slightly smaller than plagioclase crystals, but some of them extended up to 1.5 mm in size. Crystals ranged from discrete prismatic grains to those that were mildly ophitic. This textural evidence suggests that pyroxene crystallised simultaneously with to slightly later than plagioclase.

Opaque oxides (now more or less completely leucoxenised) averaged ~0.3 mm in diameter, although a few crystals were up to 0.8 mm in size. The crystals ranged from euhedral to skeletal. The skeletal form is probably the result of resorption and alteration, rather than of rapid crystallisation.

The felsic patches are predominantly composed of fine-grained mosaic-textured devitrified material which is moderately discoloured by ?haematite dusting. Because of the colouration, it is surmised that alkali feldspar is probably present. As mentioned, the felsic patches also contain acicular-skeletal plagioclase.

The rock has experienced some brittle deformation and contains veins and a number of "crush" zones.

Discussion:

The dominant hypidiomorphic-granular texture of the rock, its fine- to medium-grained nature, and the presence of former glassy zones, suggest that it crystallised in a hypabyssal environment. That is, it is too coarse-grained and well-crystallised to be considered a volcanic extrusive and not holocrystalline enough to be plutonic. Because the rock is probably not volcanic, terms like latite or andesite are not appropriate and it is best to call it by its hypabyssal (-plutonic) equivalent; e.g. monzodiorite/monzogabbro. As the rock is mainly medium-grained, but ranges from fine- to medium-grained, the prefix "micro" is probably warranted.

The origin of the fine-grained felsic patches is possibly related to the injection of differentiated liquid from other parts of the body before it had completely crystallised. The migration of the liquid may have been related to late-stage crustal tectonics or to compaction of the partly solid body. The process may also explain the fractured plagioclase crystals. The migration and collection of fluids may have been responsible for the corrosion of some of the plagioclase crystals.

The sample is similar to the 731-736 group that has been described previously.

SAMPLE 741

__Name:__ Fine- to medium-grained (micro) monzodiorite/monzogabbro. with fine-grained felsic patches; moderately to strongly altered

__Minerals:__

Similar to those in 740.

The plagioclase and fine-grained felsic patches are more Fe-stained than those in 740 and this gives the rock a slightly stronger reddish brown appearance under the microscope.

__Textures:__

Similar to those in 740.

__Discussion:__

The sample is basically a slightly more altered equivalent of 740. Comments made for that sample apply equally to this one.

As with 740, the rock has experienced a moderate degree of brittle deformation and veining. Many of the veins are discontinuous, subparallel, and/or in en echelon arrangement.

SAMPLE 738

Name: Fine- to medium-grained (micro) monzodiorite/monzogabbro, with fine-grained felsic patches; moderately to strongly altered

Minerals:

The mineralogy of the sample is very similar to that of 737.

The composition of much of the plagioclase seems to be albitic. However, this composition is believed to be secondary in origin because of the high degree of ("hydrothermal") alteration that the rock has undergone. Presumably the original plagioclase had an andesitic-labradoritic composition.

As with 737, the rock is moderately veined (and fractured). In addition to chlorite-phyllosilicate in the veins, there is also carbonate, quartz, and minor epidote (in some).

Textures:

Texturally, the rock is virtually just a finer grained equivalent of 737. It has an average grain size of ~0.7 mm, and only a small proportion of crystals exceed 1 mm in size. Also, plagioclase crystals are predominantly lath-shaped in this sample. In 737, there is roughly equal proportions of tabular and lath shaped crystals.

The fine-grained felsic patches are also smaller in this rock, rarely exceeding 5 mm in size.

Discussion:

The rock is a slightly finer grained equivalent of 737. If it belongs to the same body as sample 737, then it probably formed at a shallower depth or closer to the margin of the body.

SAMPLE 742

<u>Name:</u> Fine- (to medium-) grained micro monzodiorite/monzogabbro or ?trachyandesite/trachybasalt, with fine-grained felsic patches. Moderately to strongly altered and locally strongly deformed

<u>Minerals:</u>

The type of minerals present in the rock are similar to those in 740. However, there are slight differences in proportions of these minerals. For example, the green pseudomorphic minerals after former pyroxene seem to be dominated by chlorite-phyllosilicate and amphibole is subordinate.

In places the rock is strongly altered due to shearing and veining. Fine-grained epidote and quartz are abundant in these areas. On the other hand, randomly distributed thin shear zones-fractures are filled mainly with green chlorite-phyllosilicate. Carbonate is present locally.

<u>Textures:</u>

The rock is mainly fine-grained, and has an intergranular to intersertal texture. In places it is more hypidiomorphic-granular in character. The intersertal texture is produced by the fine-grained felsic patches being restricted largely to interstitial areas. Thus, the felsic patches in this rock are much smaller (<2 mm in size), and therefore less conspicuous, than those in samples 740-741. Consequently, the rock has a more homogeneous, even-grained appearance. This aspect, combined with the finer grain size, makes it difficult to tell if the rock is an intrusive or extrusive.

Plagioclase crystals are mostly lath-shaped and average ~0.6 mm long. Most are less than 1 mm long, and only rarely reach 1.2 mm in size.

Former Fe-Ti oxides, now more or less completely leucoxenised, were also smaller than those in 740-741. They average ~0.1-0.15 mm in diameter compared to ~0.25 mm in samples 740-741.

As mentioned, the rock is variably deformed and fractured. An incipient brecciated structure has developed locally.

Discussion:

In essence, the sample seems to be just a finer grained variety of 740-741. If the rock was examined in isolation it would be easy to classify it as an extrusive. However, because it is probably related to the coarser grained (micro) monzodiorite/monzogabbro, it is also likely to have had a hypabyssal origin. Thus, the rock name micro monzodiorite/monzogabbro is probably more accurate than the volcanic equivalent, trachyandesite/trachybasalt.

SAMPLE 739

Name: Fine-grained fan-spherulitic (variolitic) basic rock, weakly porphyritic (plagioclase-phyric); moderately to strongly altered. Either from an extrusive flow or a chilled margin.

Minerals:

Amphibole-chlorite (green)	~52%
Plagioclase	~45%
Leucoxene (after very fine-grained Fe-Ti oxides)	~3%

Amphibole-chlorite pseudomorphs former pyroxene and interstitial glassy material.

The present composition of the plagioclase seems to be albite-oligoclase, but this is probably not the original composition. As suggested for 738, the original composition of the plagioclase was probably andesitic-labradoritic.

In addition to the above minerals, the rock also contains quartz and green phyllosilicates (high birefringence) in veins, which make up ~3-5% of the thin section.

Textures:

The rock is fine-grained and weakly porphyritic (about 2% phenocrysts). It consists of phenocrysts of plagioclase (mostly less than 0.8 mm long, although one is 2.0 x 0.2 mm in size) which are set in a fine-grained "fan-spherulitic" (variolitic) groundmass.

Plagioclase phenocrysts are mostly lath shaped (rarely tabular) and commonly have acicular-skeletal overgrowths at their corners. Several of the phenocrysts are bent or multiply fractured/broken.

The groundmass was originally composed of intergrown fine-grained acicular crystals (microlites) of pyroxene and plagioclase, which formed fan to radial shaped clusters. Plagioclase in these clusters grew mostly as euhedral to subhedral skeletal crystals, generally averaging ~0.5 mm long but only ~0.02 mm wide. Both plagioclase and the former pyroxene microlites are commonly slightly deformed.

Between the plagioclase and pyroxene microlites there originally was some glass. This is now devitrified (brown amorphous material) and is dusted with very fine-grained leucoxene, presumably after former Fe-Ti oxides.

<u>Discussion:</u>

The rock has a basic composition and a texture which indicates that it crystallised very rapidly. It is therefore either an extrusive rock (e.g. ?basaltic) or is representative of a chilled margin of a hypabyssal-plutonic igneous body. Petrograpically, it is not possible to distinguish between the two. However, if the sample is from the same mass as 737 and 738, then it probably represents a chilled margin.

At first sight it looks as though the sample is too mafic to be related to 737 and 738. However, a chilled margin may be either more mafic or less mafic than rocks in the core of the body because of differentiation processes. In addition, there are similarities in mineralogy, alteration and deformation of the three rocks which suggests they may be related.

SAMPLE 743

Name: Porphyritic trachyandesite/trachybasalt; moderately to strongly altered

Minerals:

The minerals in the rock are similar to those in 742. However, the fine-grained felsic patches which are common in 740-742 and which are characterised by acicular plagioclase, are much finer grained in this rock and mainly consist of devitrified glass.

Secondary sulphides are slightly more abundant in this sample and are also coarser grained (up to 1 mm in size).

Textures:

The rock is fine-grained, porphyritic and originally had a glassy groundmass in many places. The phenocrysts consist of plagioclase and occur as lath- to tabular-shaped crystals up to 1.2 mm in size (average ~0.8 mm). They comprise about 5-8% of the rock and were originally euhedral-subhedral. However, most have been slightly modified (e.g. corroded) and many are fractured and/or bent.

The plagioclase phenocrysts are set in a base of acicular-skeletal plagioclase (typically ~0.4 mm long and ~0.05 mm wide), acicular pyroxene (now pseudomorphed by amphibole-chlorite mixtures) and devitrified glass.

The sample is locally strongly altered (e.g. epidote-quartz alteration) and contains up to 10% veins and thin shear zones. The veins and shear zones have produced a mild brecciated structure juxtaposing (micro) blocks (1-15 mm in size) of slightly different texture and/or composition.

743 (cont.)

Discussion:

Because the rock is porphyritic-vitrophyric it is petrographically logical to consider the sample as volcanic in origin (e.g. trachyandesite/trachybasalt). However, it is also possible that the rock comes from a chilled margin of an intrusive igneous body. This distinction can only be made on field criteria. Nevertheless, the rock seems to be related to 740-742.

The origin of the brecciated texture is not realy clear. It may be related to late-stage movement of the igneous mass as it cooled, perhaps immediately prior to complete solidification of the melt.

SAMPLE 744

<u>Name:</u> Devitrified glassy rock (?trachyandesite/trachybasalt), weakly porphyritic; very highly veined by "stockwork" quartz

<u>Minerals:</u>

1. Parent rock:

Devitrified glass (greenish brown murky mixture)	~97%
Plagioclase (skeletal microphenocrysts)	~1-2%
Sulphide	~1%

The devitrified glass seems to consist of mainly chlorite (-amphibole) and feldspar.

2. Veins:

Veins constitute up to 30% of the rock. Quartz is the dominant vein material but epidote and chlorite are prominent in places. Most of the sulphide is associated with the veins.

<u>Textures:</u>

The parent rock was weakly vitrophyric, having contained skeletal-acicular plagioclase crystals (up to 0.4 mm long) set in a glassy matrix. Subsequently the glass devitrified to a very fine-grained feathery, (variolitic) textured mixture of feldspar and pyroxene (now altered).

The second major feature of the rock is the dense veining. The veins are generally randomly orientated, commonly anastomosing, and variable in thickness (up to 2 mm wide). Some of the veins are deformed and the quartz in virtually all of the veins is either strained, sutured, or partly recrystallised.

Sulphide crystals range from anhedral to euhedral and average

~0.15 mm in diameter. The presence of some cubic forms suggests that pyrite is at least present.

Discussion:

The rock has a texture which indicates that it crystallised very rapidly. Either it is an extrusive or representative of a chilled margin of an intrusive body. This problem can only be solved satisfactorily from field relationships.

The sample seems to be intermediate to basic in composition and has a mineralogy not unlike that of the samples described previously (e.g. 743), although very much finer grained. Presumably, it had a trachyandesite/trachybasalt composition.

If the rock is related to 740-743, as the mineralogy tends to suggest, it may be representative of a chilled margin. Because of its former glassy nature, it may have been closer to the margin than sample 743.

SAMPLE 745

Name: (Meta) very fine-grained greywacke; feldspathic, foliated, deformed, veined

Minerals:

The mineral proportions listed below are only approximate because the rock is very fine-grained and it is difficult distinguishing quartz from feldspar in many cases.

Quartz	~42%
Chlorite (very fine-grained)	~40%
Feldspar (both plagioclase and alkali feldspar)	~15%
Leucoxene (after Fe-Ti oxides)	~3%
Zircon	rare
Apatite	rare
Sulphide	rare
White mica	rare
Tourmaline	rare

Feldspar seems to be predominantly plagioclase.

Textures:

The rock is very fine-grained, foliated and weakly to strongly veined and deformed. Most of the quartz and feldspar grains range between 0.06 and 0.1 mm in diameter, but extend up to ~0.3 mm in size. Chlorite is finer grained. Quartz and feldspar grains are mostly sub-angular to angular, but this may be related to metamorphism/alteration (e.g. chloritisation) of the rock. Locally there are zones of slightly different grain size but it is not clear if these zones reflect relic bedding or are a product of widespread deformation/shearing in the rock.

The rock contains at least two foliation directions, indicating polyphase deformation. Foliations are characterised by stretched-out trains of leucoxene, elongate quartz and feldspar, and by thin discontinuous layers of chlorite.

Veins are locally abundant. Some are associated with shearing and others are strongly deformed (e.g. folded); thus indicating several generation of veins. Shear directions are variable in the rock.

Discussion:

The rock is very fine-grained and in the Wentworth scale of grain size, falls into the very fine sand category. However, whether the rock is a metasediment or meta ash-tuff is not totally clear. Because of the presence of accessory zircon, apatite and tourmaline it is felt that the parent rock was more likely to have been a sediment than an ash-tuff. The presence of feldspar and chlorite, in addition to quartz, indicate that the parent (if sedimentary) was probably a very fine-grained greywacke.

As discussed, the rock has been polydeformed and variably sheared and veined.

SAMPLE 746

Name: Meta greywacke; fine- to very coarse-grained, lithic, feldspathic, Fe-stained, moderately deformed

Minerals:

Quartz	~35%
Lithic fragments	~26%
Feldspar (both alkali feldspar and plagioclase)	~26%
Chlorite-phyllosilicate	~8%
Leucoxene	~2%
Apatite	minor
Zircon	minor
Sulphide	rare
Tourmaline	rare

Lithic fragments consist mainly of fine-grained felsic volcanic rocks, with lesser amounts of fine-grained metasediments (e.g. phyllite) and quartz-feldspar composites. The felsic volcanics appear to have been vitrophyric-porphyritic, usually containing plagioclase phenocrysts. Former glassy material has been devitrified and/or recrystallised. Quartz-feldspar composites are fine-grained and probably represent hypabyssal material rather than plutonic granitic rocks. A few show granophyric textures.

Chlorite-phyllosilicate are secondary metamorphic phases and have developed from the lithic fragments and feldspar.

Feldspars are commonly Fe-stained.

In addition to the above minerals, some veins in the rock contain ?zeolite and carbonate.

Textures:

Despite being weakly metamorphosed and foliated, and having been moderately deformed and veined, primary textures have been fairly well preserved. The parent was mainly medium- to coarse-grained, although it ranged from very fine to very coarse (i.e. clasts extend up to 1.5 mm in maximum size). Consistent with this poorly sorted character of the rock is the predominance of sub-angular detrital grain shapes. However, it is also possible that some of the irregularities in the shape of the grains is related to metamorphism and/or deformation of the sample.

Veins and micro-shear zones constitute up to 10% of the rock. They have a variety of orientations. Several irregular, discontinuous "crush" zones (up to 0.5 mm wide) are locally present. In a few places it seems that there has been incipient brecciation, as evidenced by irregular foliation trends over distances of 1-3 mm. Quartz and feldspar grains in the rock are invariably moderately to strongly strained (i.e. dominated by undulose extinction), particularly quartz. It is not known if this strain is inherited from the source rocks or is the result of post-sedimentation deformation.

Former Fe-Ti oxide crystals averaged ~0.15 mm in diameter and rarely extended up to 0.25 mm.

Accessory zircon, apatite and tourmaline are sub-rounded although zircon commonly displays some relic crystal forms. The grains are generally less than 0.1 mm in size, but extend up to ~0.2 mm. Some zircon grains have internal crystal forms, indicating complex growth histories.

Discussion:

The parent greywacke was fairly immature. It was poorly sorted, contained poorly rounded detrital clasts, and contained fairly abundant "unstable" components such as feldspar and volcanic lithic fragments. Thus the sediment must have been deposited fairly close to its source rocks. Source rocks comprised felsic volcanics and fine-grained sediments (possibly including some low-grade metasediments). It is not sure if granitic rocks were present - the quartz and feldspar may have been derived from felsic volcanics.

Because felsic volcanic clasts are relatively common, it is perhaps interesting to speculate on whether or not there is a pyroclastic component in the rock. That is, could the sample be a mixture of pyroclastic and epiclastic components, i.e. a tuffite?

Subsequent to lithification the rock has been weakly metamorphosed and variably deformed and veined.

SAMPLE 747

<u>Name:</u> Fine-grained vitrophyric trachyandesite/trachybasalt; strongly altered, devitrified, moderately brecciated and veined

<u>Minerals:</u>

Feldspar (predominantly albitic plagioclase)	~35%
Devitrified glass (brownish)	~32%
Chlorite-phyllosilicate (murky brownish green)	~30%
Leucoxene (dusty material)	2-3%
Sulphide	rare

Feldspar occurs mainly as phenocrystic material and as acicular crystals in the devitrified glass.

Devitrified glass commonly seems to be partly composed of very fine-grained, equigranular-mosaic feldspar.

Chlorite-phyllosilicate is widely developed but is more concentrated in deformed zones of the rock.

In addition to the above minerals, carbonate and ?zeolite are present in veins, which make up ~10% of the sample. Some chlorite-phyllosilicate also occurs in a few veins.

<u>Textures:</u>

The sample is fine-grained, porphyritic-vitrophyric, micro-brecciated and fairly extensively veined. Feldspar (plagioclase) seems to have been the main phenocrystic phase. A small amount of pyroxene may have been present. Plagioclase occurs as small laths (commonly skeletal) averaging ~0.3-0.4 mm long, but extending up to 0.8 mm. Locally a few tabular shaped crystals are present.

Brecciation is a dominant feature of the rock. It seems to have developed as a result of shearing and fracturing which produced small blocks (1-8 mm in size) of the host rock that are variously rotated with respect to one another and are generally enveloped by sinuous-irregular shear zones. The shear zones are characterised by an abundance of fine-grained chlorite and therefore have a murky brownish green appearance.

Veining is also a prominent feature of the rock. Veins are discontinuous, irregular, anastomosing, and of variable width. Some are offset by micro-faults. Veins mainly contain carbonate (fine- to medium-grained) but some also contain chlorite-phyllosilicate and/or ?zeolite.

Discussion:

Petrographically, the rock has a "volcanic" appearance, but as discussed for samples 743-744, the fine-grained "volcanic" texture may in fact be indicative of rapid crystallisation at the margin of an igneous intrusion.

The composition of the rock is partly obscured by (i) chlorite alteration, (ii) veining, and (iii) the presence of glass (now devitrified). However, it is felt that it is intermediate to possibly basic. That is, petrographically the rock can be classified as a trachyandesite/trachybasalt.

The origin of the brecciation is not clear. It may be related to regional deformation or to "local" processes, such as brecciation as a result of localised movement along the contact zone of the igneous mass. This movement may have occurred while the igneous rock was cooling, but still at moderate temperatures.

SAMPLE 748

Name: Phyllite breccia; highly altered (e.g. silicified)

Minerals:

Phyllosilicate (colourless to pale brownish green, very fine-grained to cryptocrystalline)	~80%
Quartz (very fine-grained to cryptocrystalline)	~13%
Carbonate	~3%
Chlorite	~2%
?Zeolite	~1%
Sulphide	minor

Much of the material designated as phyllosilicate is probably chloritic. That designated as chlorite is different in that it has a distinct brighter green colour.

Textures:

The sample is dominated by a breccia structure and consists of angular to sub-angular fragments of phyllite which are set in a finer grained matrix of brecciated phyllite and very fine-grained-cryptocrystalline phyllosilicate-chlorite. In thin section the largest fragment is ~4 cm long and there is a continuous spectrum in size of the fragments down to ~0.1 mm. The phyllosilicate-chlorite matrix is generally foliated, sheared and locally folded. Many of the fragments contain a weak to moderate foliation which predates the brecciation of the rock. Silicification has obliterated the early foliation in some of the breccia fragments.

In addition to "blanket" silicification, much of the quartz occurs in veins. Carbonate is also mainly associated with veins.

748 (cont.)

Discussion:

The sample seems to have been a very fine-grained metasediment (e.g. phyllite) that was extensively brecciated. During and immediately after brecciation the sample was variably silicified and carbonated. Local shearing was developed during the breccia-forming event.

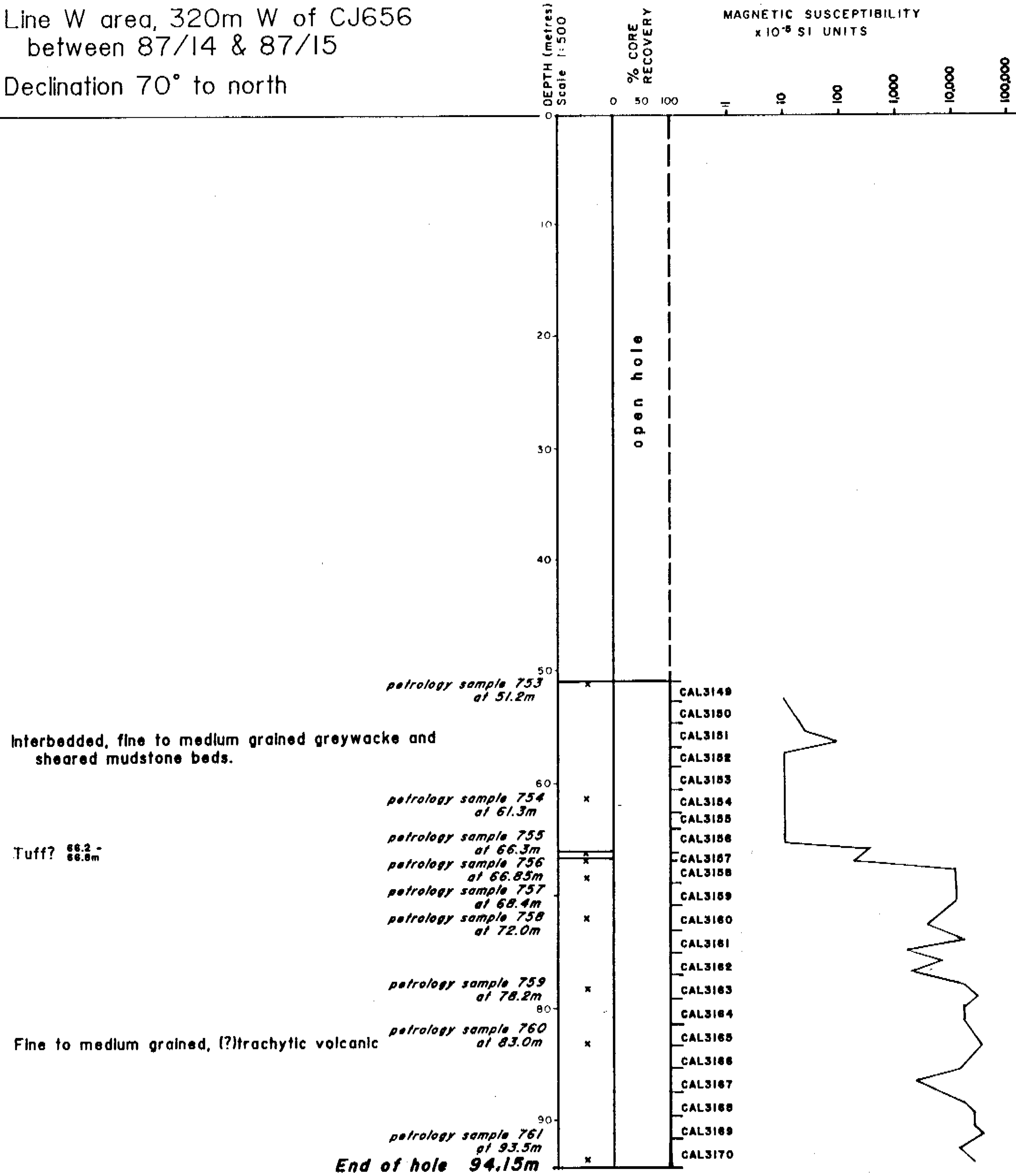
The brecciation in the rock is probably due to faulting/shearing, either as the result of normal crustal tectonics, or to the intrusion of an igneous body (i.e. the sample may be an intrusive breccia).

Are samples 747 and 748 spatially related? If they are, could the brecciation present in both of them be related to the same event?

Drillhole **DDH CJ684**

Line W area, 320m W of CJ656
between 87/14 & 87/15

Declination 70° to north



SAMPLE 753

Name: Meta greywacke; medium- to coarse-grained, lithic, feldspathic, Fe-stained, mildly foliated and deformed

Minerals:

Quartz	~37%
Lithic fragments (many Fe-stained)	~25%
Feldspar	~20%
White mica-pale green phyllosilicate	~15%
Leucoxene (after Fe-Ti oxides)	~2%
Zircon	minor
Apatite	minor
Tourmaline	minor
Sulphide	trace

Lithic clasts comprise mainly altered felsic volcanics and very fine-grained metasediments. The felsic volcanics are typically Fe-stained. They generally seem to have been vitrophyric with plagioclase phenocrysts (one clast also has a quartz phenocryst - which is 0.3 mm in diameter). However, some may have been totally glassy. All the former glass has been devitrified and with some of the clasts it is difficult distinguishing them from very fine-grained quartzo-feldspathic sediments that have been ferruginised. Metasedimentary clasts are mainly mica-rich phyllite and very fine-grained pelitic schists. Some very fine-grained sandstones/greywackes may be present. In many places, particularly where the rock has been foliated, the phyllitic and pelitic schist clasts merge imperceptibly with the phyllosilicate-rich matrix.

Feldspar consists of both plagioclase and alkali feldspar.

Zircon crystals range from slightly rounded to broken. Many have complex internal structures, such as euhedral cores surrounded by multiple growth textures.

Textures:

The rock is fairly homogeneous and even-grained with most clasts falling within the 0.25-1.0 mm size range (i.e. medium to coarse sand size), although a few clasts are up to 1.2 mm in maximum length. The sample is weakly foliated and mildly deformed; the latter being mainly evident in the high degree of straining of the quartz (and feldspar).

Original grain shapes (particularly of quartz) appear to have been mainly sub-angular. However, this feature is not always easy to determine because grain boundaries have been modified by low-grade metamorphism and recrystallisation, and in many places interlocking grains have developed. Clasts of feldspar commonly appear to have been sub-rectangular.

Discussion:

The sample is a fairly immature, although moderately sorted, lithic arkose/greywacke. The source area contained felsic volcanics and fine-grained sediments. Whether or not it contained granitic rocks is less clear. For instance, the quartz and feldspar in the sample may have been derived from felsic volcanics, as there is evidence of quartz ?phenocrysts in at least one of the fragments. However, the complexity of some of the zircon crystals in the sample suggest that they might have been derived from a granitic-gneiss terrain or from metasediments that were coarser grained than those that are present in the rock.

Felsic volcanic clasts are comparatively common in the rock, and as suggested for sample 746, is it possible that there was penecontemporaneous volcanism in the area? That is, does the greywacke have a minor pyroclastic component?

SAMPLE 754

<u>Name:</u> Meta greywacke; medium- to coarse-grained, lithic, feldspathic, Fe-stained, mildly foliated and deformed

<u>Minerals:</u>

The mineralogy of this sample is very similar to that of 753.

<u>Textures:</u>

As with the mineralogy, the textures in this sample are similar to those in 753.

The sample contains several micro shear zones and is cut by a number of thin veins. The shears and veins are mainly filled with quartz, usually associated with minor chlorite and/or carbonate.

One of the fine-grained igneous clasts contains a quartz crystal 0.6 mm in diameter. However, it is not clear if it is a phenocryst or xenocryst. Nonetheless, the size of the inclusion indicates that this could be the source of some of the discrete quartz clasts in the rock.

<u>Discussion:</u>

The sample is a fairly immature, although moderately sorted, lithic arkose/greywacke. It is very similar mineralogically and texturally to 753 and therefore presumably had a similar origin.

SAMPLE 755

<u>Name:</u> Meta ash-tuff; weakly foliated, strongly chloritised

<u>Minerals:</u>

Lithic clasts (mainly vitric volcanic material)	~50%
Chlorite	~40%
Feldspar (partly Fe-stained)	~3%
Carbonate	~2%
Quartz	~2%
Leucoxene	~2%
Sulphide (probably pyrite)	minor

The original mineralogy/composition of the rock is partly obscured by extensive chloritisation of the sample. It is not always clear if chlorite represents recrystallised matrix, altered lithic clasts, or altered feldspar clasts. Furthermore, some clasts, particularly many of the larger ones, are composed of polycrystalline quartz, or carbonate, or a combination of both. It is not clear if these clasts have been pseudomorphed by these minerals or are in fact primary.

The bulk of the lithic clasts consist of volcanic rock, most of which were glassy. Other lithic clasts in the sample include the carbonate and quartzitic materials mentioned above.

The volcanic clasts are mostly greenish brown and are dominated by devitrified textures, such as fan-spherulitic. Several of them contain plagioclase phenocrysts and this feature suggests that the glassy lithic fragments are intermediate to basic in composition, rather than ultrabasic.

Besides the glassy lithic fragments, there are some that are more crystalline and have intersertal to intergranular textures. These coarser grained volcanic clasts are dominated by feldspar and chlorite (secondary phase) and therefore indicate that the parent was intermediate to basic in composition. In a few places in the rock the coarser grained volcanic clasts are partly replaced by polycrystalline quartz and carbonate. This evidence tends to suggest that the quartzitic and carbonate clasts, which are up to 3.5 mm in diameter, are at least partly secondary in origin.

Cubes of sulphide, up to 0.4 mm in diameter, are present. Their crystal form and comparatively large size suggest that they are secondary (metamorphic) pyrite.

Textures:

The rock is dominated by a clastic texture comprising angular to sub-rounded clasts (0.05-4.0 mm) set in a very fine-grained matrix (now recrystallised chlorite). Clasts over 2 mm in size are rare and indeed most of the clasts in the rock are less than 0.6 mm in diameter.

The chlorite "matrix" is weakly foliated.

In a few places there is crude layering. However, it is not clear if this is relic bedding or tectonic in origin.

Discussion:

The rock is fairly unusual and quite different to any of those described previously. The predominance of vitric volcanic fragments, which span the entire grain size range of the rock (e.g. 0.05-4.0 mm), suggest that the rock is not a typical epiclastic sediment. It is highly likely that the rock is an ash-tuff.

An ash-tuff origin would explain the abundance of vitric fragments and poor sorting. It would also explain the scarcity

755 (cont.)

of primary quartz clasts and to a lesser degree, the low abundance of feldspar.

Whether or not the rock is a reworked pyroclastic is not clear. The vague suggestion of bedding could be attributed to reworking. However, primary pyroclastic deposits may also be bedded.

SAMPLE 756

Name: Fine- to medium-grained (micro) monzodiorite/monzogabbro, with fine-grained felsic patches; highly altered and Fe-stained, partly brecciated by late-stage ?magma injection

Minerals:

Plagioclase (highly altered)	~30%
Devitrified glass (Fe-stained)	~30%
Chlorite	~25%
Carbonate	~10%
Leucoxenised Fe-Ti oxides	~4%
Quartz	~1%

The sample is highly altered and Fe-stained and it is difficult recognising some of the original minerals. Under the microscope it has a fairly strong reddish brown appearance, although this is mottled by green chlorite patches.

Plagioclase is very highly to completely altered, largely to fine-grained sericite-phyllosilicate. Some plagioclase crystals are partly replaced by carbonate and/or chlorite.

However, most of the chlorite and carbonate in the rock appears to have replaced former pyroxene.

Textures:

Despite the alteration, primary textures are still discernible. The sample was a mixture of fine- to medium-grained hypidiomorphic-granular texture and fine- to medium-grained intersertal texture. Former plagioclase and pyroxene laths ranged up to ~1.5 mm in size. The intersertal textured portions of the rock contained glassy material which contained acicular plagioclase and pyroxene.

756 (cont.)

Fine-grained felsic patches, up to 3-4 mm in diameter, were also present.

Former Fe-Ti oxide crystals were mainly euhedral and ~0.3 mm in diameter (range = 0.1 to 0.5 mm). They are now completely leucoxenised. Many have skeletal forms, presumably the result of resorption and leucoxenisation.

A significant feature of the thin section is a 6-13 mm wide, fine-grained zone, which contains abundant "clasts" of the host rock. These clasts range in size from <0.1 mm to ~4.0 mm. In a few places the clasts have been pseudomorphed by carbonate or quartz, or by both. The matrix of this zone is dominated by very fine-grained chlorite.

In several places the fine-grained zone has extended into the host rock for short distances (e.g. up to 4 mm or so). The textural evidence suggests that the zone represents late-stage emplacement of magma into the host rock. The emplacement probably occurred along a fracture zone, thus accounting for the abundance of cognate clasts.

In addition to the above feature, the sample is weakly veined by various combinations of carbonate, quartz and chlorite.

Discussion:

The sample seems to be just a highly altered equivalent of the fine- to medium-grained (micro) monzodiorites/monzogabbros described previously. It consists of holocrystalline and hemi-crystalline areas as well as discrete fine-grained felsic patches. Comments made about the origin of other samples, e.g. 731-737, 740-741, 749-752, generally apply equally to this rock.

SAMPLE 757

<u>Name:</u> (Fine-) to medium-grained (micro) monzodiorite/monzogabbro with fine-grained felsic patches; highly altered and Fe-stained, moderately veined

The sample is very similar to 756. It is slightly coarser grained with former plagioclase crystals averaging ~1.0-1.2 mm (~0.8-1.0 mm in 756).

In addition, the fine-grained felsic patches are larger in this sample, extending up to ~8 mm in diameter.

There is no evidence of magma injection in this thin section. However, the sample is more highly veined than 756. It contains ~5-8% veins, which are composed of mainly carbonate and chlorite, and lesser quartz. These three minerals may occur separately, or in combination.

The sample is similar to those described previously. The main differences are in the degree of alteration and the amount of Fe-staining.

SAMPLE 758

<u>Name:</u> Mylonitised-sheared fine- to medium-grained (micro) monzodiorite/monzogabbro, with fine-grained felsic patches; highly altered and Fe-stained

The thin section comprises a highly altered fine- to medium-grained monzodiorite/monzogabbro which is cut by prominent mylonite-shear zones. In addition, the parent rock has been strongly veined (up to 20% in places) by carbonate and minor quartz. Chlorite-phyllosilicate alteration is common, locally. The parent rock contained fine-grained felsic patches, and was thus similar to many of the (micro) monzodiorites/monzogabbros described previously.

The mylonitic zones are highly ferruginised and up to ~10 mm wide. The zones are generally highly elongate lenses which may have sharp to diffuse contacts with the host rock. Carbonate veins commonly occur along the contact zones.

Within the mylonite zones the rock consists of numerous sub-rounded clasts of the host rock set in a very fine-grained - cryptocrystalline matrix (now highly ferruginised). The clasts average 0.1-0.2 mm in diameter but locally there are larger ones up to 2 mm in size.

At one end of the thin section there is a 5 mm wide zone which is similar to the material referred to in 756 as being brecciated by late-stage magma emplacement. This zone has a chloritic-rich matrix and is not as fine-grained nor as foliated as the mylonitic zones. It also contains Fe-Ti oxides (now leucoxenised). Thus, it seems that this zone may be the product of late-stage magma emplacement which caused local disruption and brecciation of the parent rock.

One carbonate vein (up to 7 mm wide), which occurs along a contact between mylonite and host rock, has internal textures indicating that carbonate crystals grew into a central cavity. The evidence suggests that, subsequent to the mylonite-forming stage (?compressive environment), the rock experienced tensional fracturing.

Carbonate veins within the "unaltered" host rock are irregular in form and orientation. Some appear to be truncated by the mylonite zones, thus suggesting their relatively early development.

SAMPLE 759

Name: Porphyritic (vitrophyric) latite-trachyandesite/ trachybasalt; moderately altered, veined and Fe-stained

Minerals:

Devitrified glass (greenish brown)	~55%
Feldspar (phenocrystic)	~30%
Chlorite	~6%
Fe-Ti oxides	~3%
Quartz (vein material)	~2-3%
Carbonate (vein material)	~2-3%
Sulphide	~1%

The devitrified glass consists of very fine-grained ?feldspar-quartz and chlorite. Microlites (up to 0.1 mm long) of feldspar were probably originally present in the glass. Although the composition of the former glass is not known, its general appearance hints at it being intermediate, or intermediate-basic.

Phenocrystic feldspar is largely untwinned and it is difficult to tell if it is plagioclase or alkali feldspar. However, some plagioclase is definitely present, although it is now represented by pseudomorphic albite.

Chlorite occurs in two forms. The first has been mentioned, namely the very fine-grained material partly making up the devitrified glass. The second is material which is greener and which occurs in veins, as a partial replacement phase of some of the feldspar phenocrysts, and as pseudomorphic material after former pyroxene.

Former pyroxene appears to have been relatively rare, probably comprising only several percent of the rock.

Sulphide grains occur mainly in clusters which are up to 3 mm in diameter. The individual grains are euhedral to anhedral and average ~0.2 mm in diameter (extend up to 0.5 mm).

Textures:

The rock is dominated by a vitrophyric texture comprising feldspar laths set in a former glassy base. A few pyroxene phenocrysts were present locally. In several places feldspar phenocrysts are densely clustered thus forming a mild framework. With glass in the interstices, these zones have a mild intersertal texture.

Feldspar phenocrysts are euhedral to subhedral, commonly skeletal, and up to 2 mm long (average ~1 mm). The crystals are strongly lath-shaped, although there are few stubby laths and rare tabular crystals. Many of the laths are bent or strained.

Imposed on the original igneous texture is a moderate amount of veining (~5%). Minor shearing has occurred along some of the veins.

Discussion:

The parent rock was distinctly vitrophyric and petrographically it is reasonable to consider it as an igneous extrusive or shallow intrusive. However, it is possible that it could be from a chilled margin of a hypabyssal intrusion.

Although the composition of the rock is not completely clear because of the abundance of former glass, feldspar phenocrysts are much more abundant than pyroxene and there is thus the impression that the composition is intermediate. In addition, it seems that some, to a moderate amount, of the feldspar could be alkali feldspar. Thus, the rock could be more latitic than trachybasaltic.

SAMPLE 760

<u>Name:</u> Fine- to medium-grained vitrophyric latite-trachyandesite/trachybasalt, with fine-grained felsic patches; moderately to strongly altered

<u>Minerals:</u>

Devitrified glass (greenish to brownish)	~40%
Feldspar (predominantly plagioclase, variably sericitised)	~30%
Chlorite-amphibole	~24%
Fe-Ti oxides	~3%
Carbonate (in veins)	~2%
Quartz	~1%
Sulphide	minor

Feldspar appears to have been mainly plagioclase. It is weakly to wholly "sericitised", and relic material has been albitised.

Chlorite-amphibole pseudomorphs former pyroxene.

<u>Textures:</u>

The sample is fine- to medium-grained and has a vitrophyric to intersertal texture. In vitrophyric portions, phenocrysts are "floating" in devitrified glass whereas in the intersertal portions, phenocrysts form a meshing framework and have interstices filled with devitrified glass. In places there are fine-grained felsic patches up to ~4 mm in size.

Plagioclase laths, which are really all phenocrysts, average ~0.8 mm long but extend up to 2 mm. They were originally euhedral-subhedral and some of them were skeletal. Subsequently, a small proportion of them were corroded and deformed.

Pyroxene was mainly acicular to lath-like and averaged ~0.5-0.8 mm long. However, some elongate laths were up to 4 mm long.

Fe-Ti oxides occur as small (average = 0.1 mm diameter, maximum = ~0.3 mm) euhedral octahedra, many of which have skeletal forms due to (magmatic?) resorption.

The sample consists of ~5% veins. These contain mainly carbonate and chlorite. Minor quartz may be present.

Discussion:

The sample generally has a texture that is consistent with a volcanic to shallow intrusive origin. However, the texture is also consistent with that of a chilled margin of hypabyssal-plutonic origin. The texture of the rock is intermediate between that of 759 and 749, for example.

SAMPLE 761

Name: Fine- to medium-grained vitrophyric latite-trachyandesite/ trachybasalt; moderately to strongly altered and veined

Minerals:

The minerals in the sample are similar to those of 759-760; just the porportions are slightly different. Plagioclase is slightly more altered than in 759-760 and the feldspar and devitrified glass are marginally more Fe-stained.

Textures:

The sample is fine- (to medium-) grained, and porphyritic-vitrophyric. Plagioclase and former pyroxene laths rarely extended up to 2 mm long.

The sample contains two types of plagioclase phenocrysts. The most abundant type is acicular to lath-shaped crystals; up to 2 mm long but usually less than 0.3 mm wide. The other type, which is relatively rare, consists of euhedral tabular-shaped crystals that are up to 2 mm long and 1 mm wide. These are distinctly different from the first type, being much broader.

Fe-Ti oxides are finer grained and more skeletal than those in 759-760. They are also moderately to strongly leucoxenised.

The sample is moderately veined (5-8%). Veins consist of various combinations of carbonate, chlorite and quartz.

Discussion:

The sample is fairly similar to 759-760, and therefore probably had a similar petrogenesis. It differs slightly from them in being more altered and having contained two types of plagioclase phenocrysts.

— — — Geological boundary

— — — Fault.

CAL1090 Gravel sample

IC23 ⊙ INPUT anomaly

PF609 ⊠ Airphoto anomaly

DDHCJ680 Diamond drillhole

Costean

Line 87/16 Rotary Air Blast drill line

Mss	Mittiebah Sandstone
Grn	Granite
Stv	Spinifex textured volcanics
Trv	Trachytic volcanics
Grw	Greywwackes
Flt	Felsic, lithic tuff
Ang	Andesite, granophyre

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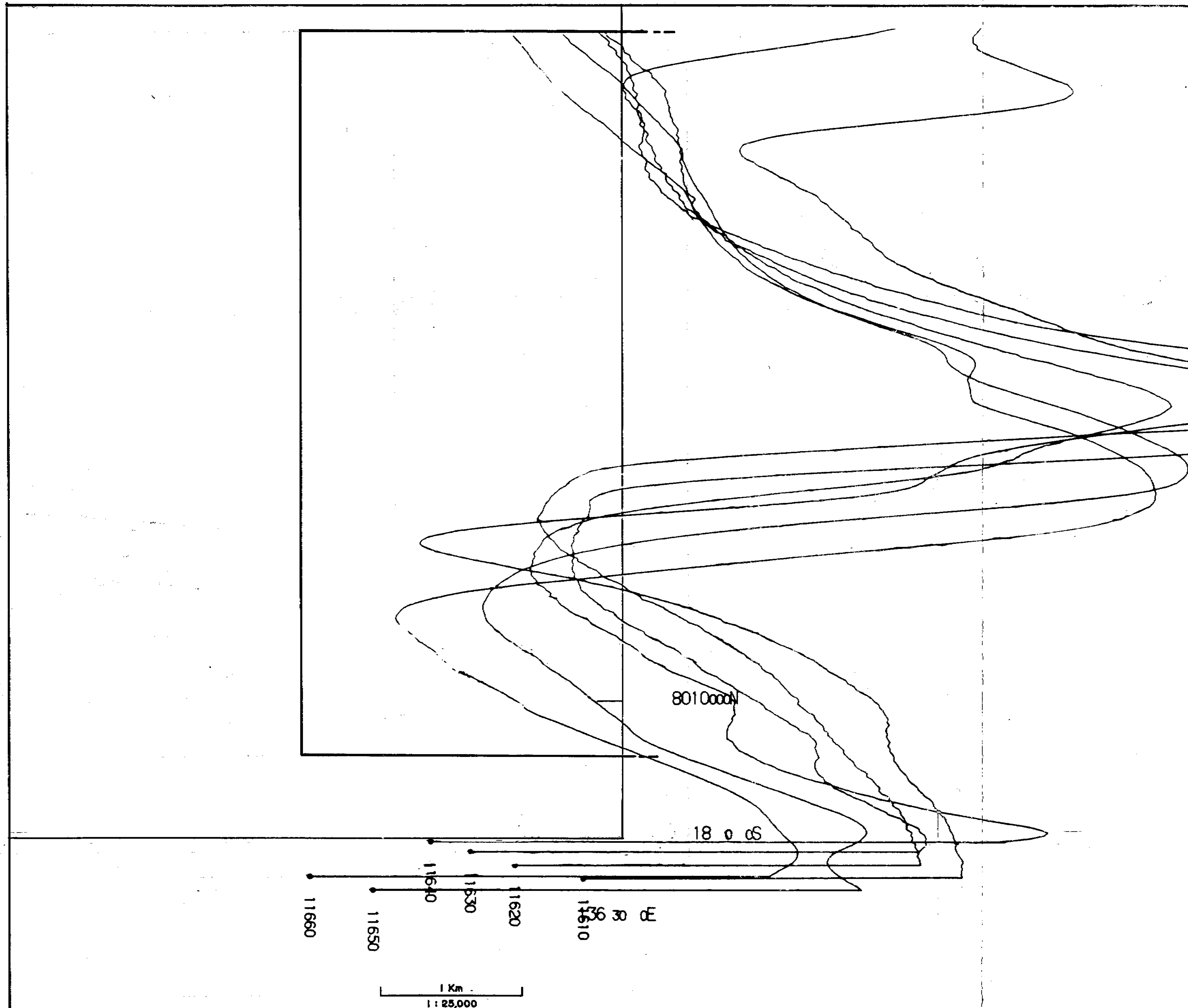
E.R.L.(A) 104

SAMPLE , ANOMALY AND DRILLHOLE LOCATIONS

PLAN I

OCTOBER, 1989

CR 89/700



AIRBORNE SURVEY SPECIFICATIONS

MAGNETOMETER :	Geometrics G813 recording at 0.2 nT
SPECTROMETER :	Geometrics GR800, detector volume 1024 cu.in. Differential recording Th.U.K. TOTAL COUNT
DATA RECORDIND :	Geometrics G714
RECORDING INTERVAL :	tie lines at 0.42 sec traverses o.33 & 0.42secs., airspeed 50 m/sec
FLIGHT PATH RECORD :	Geocam 35mm continuous tracking camera
NOMINAL TERRAIN CLEARANCE :	Both detectors in aircraft at 80m
NOMINAL LINE SPACING :	Traverse lines 300m , tie lines 5.0Km
FLIGHT LINE RECOVERY :	Visually to 1:25,000 photo enlargements

MAGNETIC STACKED PROFILES PLOT

Grid notation refers to Australian Map Grid Zone 53

Magnetics	: Levelled and diurnally corrected
IGRF(1980)	: Removed , datum 2000 nT added
Base value	: 1780 nT
Vertical scale	: 10 nT/cm

Flown by GEOMETRICS INT. CORP
Compiled by EXPLORATION COMPUTER SERVICES

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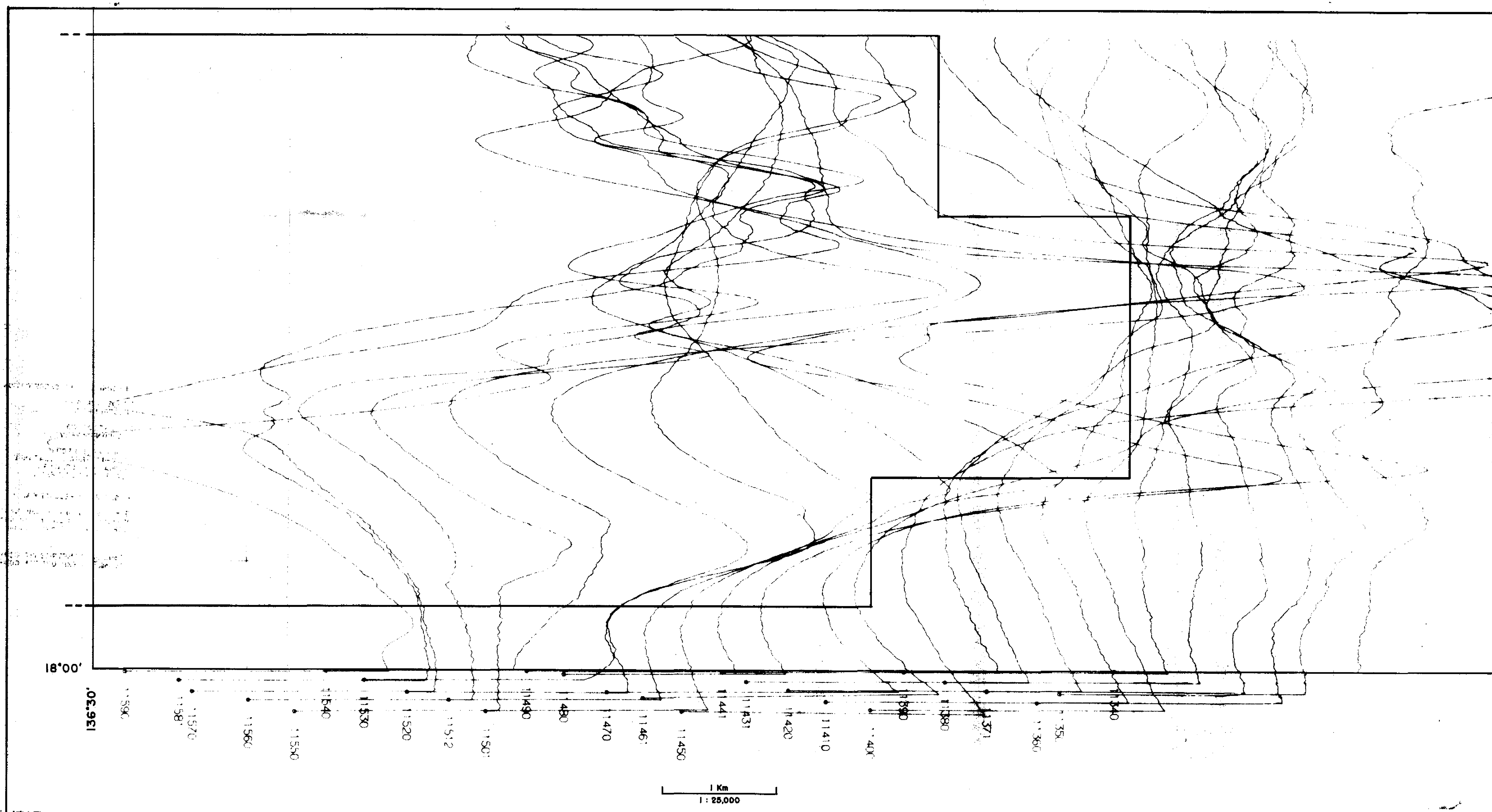
A.D.E. JOINT VENTURE

E.R.L.(A) 104
MAGNETIC STACKED PROFILES

PLAN 2

OCTOBER, 1989



AIRBORNE SURVEY SPECIFICATIONS

MAGNETOMETER :	Geometrics G813 recording at 0.2 nT
SPECTROMETER :	Geometrics GR800, detector volume 1024 cu.in. Differential recording Th.U.K. TOTAL COUNT
DATA RECORDIND :	Geometrics G714
RECORDING INTERVAL .	tie lines at 0.42 sec traverses o.33 & 0.42secs., airspeed 50 m/sec
FLIGHT PATH RECORD :	Geocam 35mm continuous tracking camera
NOMINAL TERRAIN CLEARANCE :	Both detectors in aircraft at 80m
NOMINAL LINE SPACING :	Traverse lines 300m , tie lines 5.0Km
FLIGHT LINE RECOVERY :	Visually to 1:25,000 photo enlargements

MAGNETIC STACKED PROFILES PLOT

Grid notation refers to Australian Map Grid Zone 53

Magnetics	: Levelled and diurnally corrected
IGRF(1980)	: Removed , datum 2000 nT added
Base value	: 1780 nT
Vertical scale	: 10 nT/cm

Flown by GEOMETRICS INT. CORP
Compiled by EXPLORATION COMPUTER SERVICES

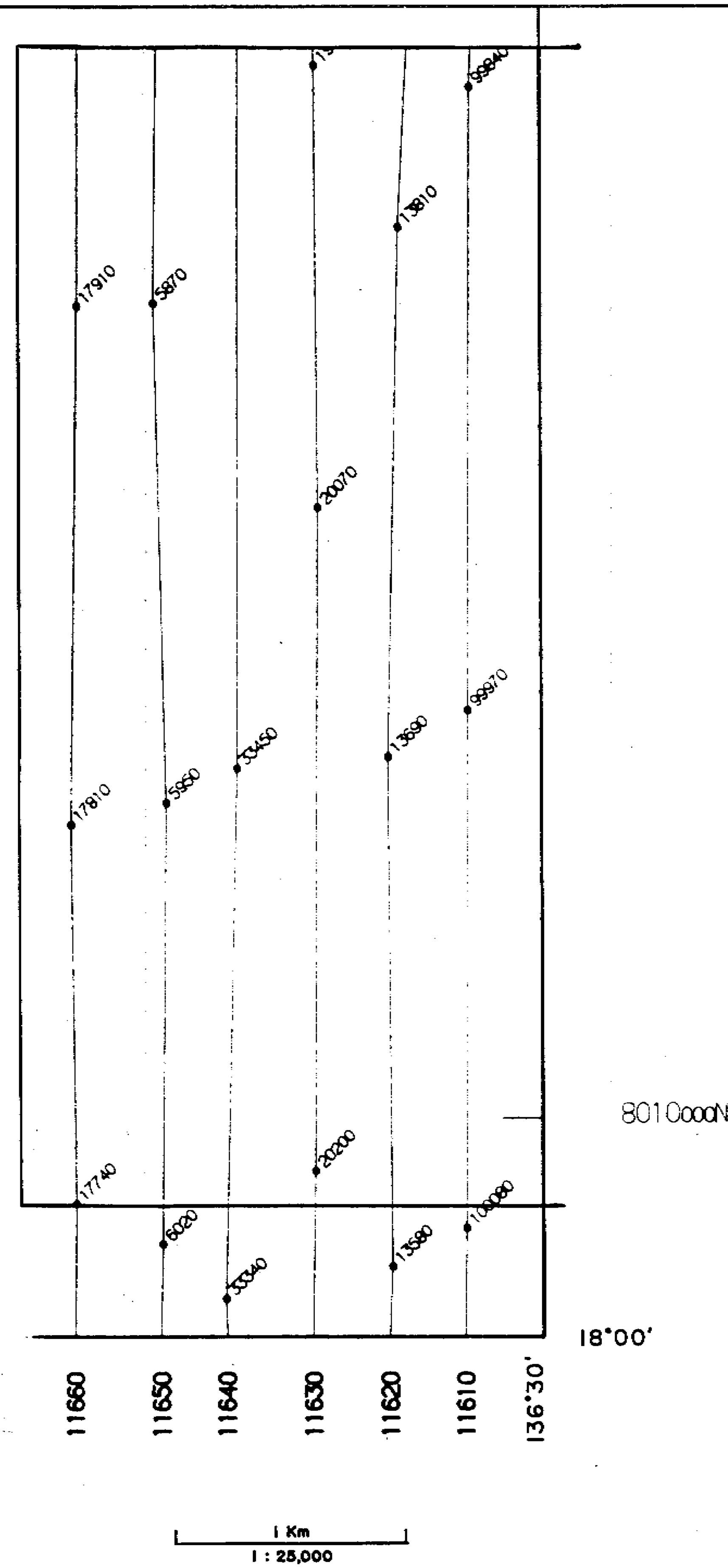
[redacted]

A.D.E. JOINT VENTURE

E.R.L.(A) 104
MAGNETIC STACKED PROFILES

PLAN 3

OCTOBER, 1989



AIRBORNE SURVEY SPECIFICATIONS

MAGNETOMETER :	Geometrics G813 recording at 0.2 nT
SPECTROMETER :	Geometrics GR800, detector volume 1024 cu.in. Differential recording Th.U.K. TOTAL COUNT
DATA RECORDIND :	Geometrics G714
RECORDING INTERVAL :	tie lines at 0.42 sec traverses o.33 & 0.42secs., airspeed 50 m/sec
FLIGHT PATH RECORD :	Geocam 35mm continuous tracking camera
NOMINAL TERRAIN CLEARANCE :	Both detectors in aircraft at 80m
NOMINAL LINE SPACING :	Traverse lines 300m , tie lines 5.0Km
FLIGHT LINE RECOVERY :	Visually to 1:25,000 photo enlargements

FLIGHT PATH RECOVERY MAP

Grid notation refers to Australian Map Grid Zone 53
Magnetics : Levelled and diurnally corrected
IGRF (1980) : Removed , datum 2000 nT added

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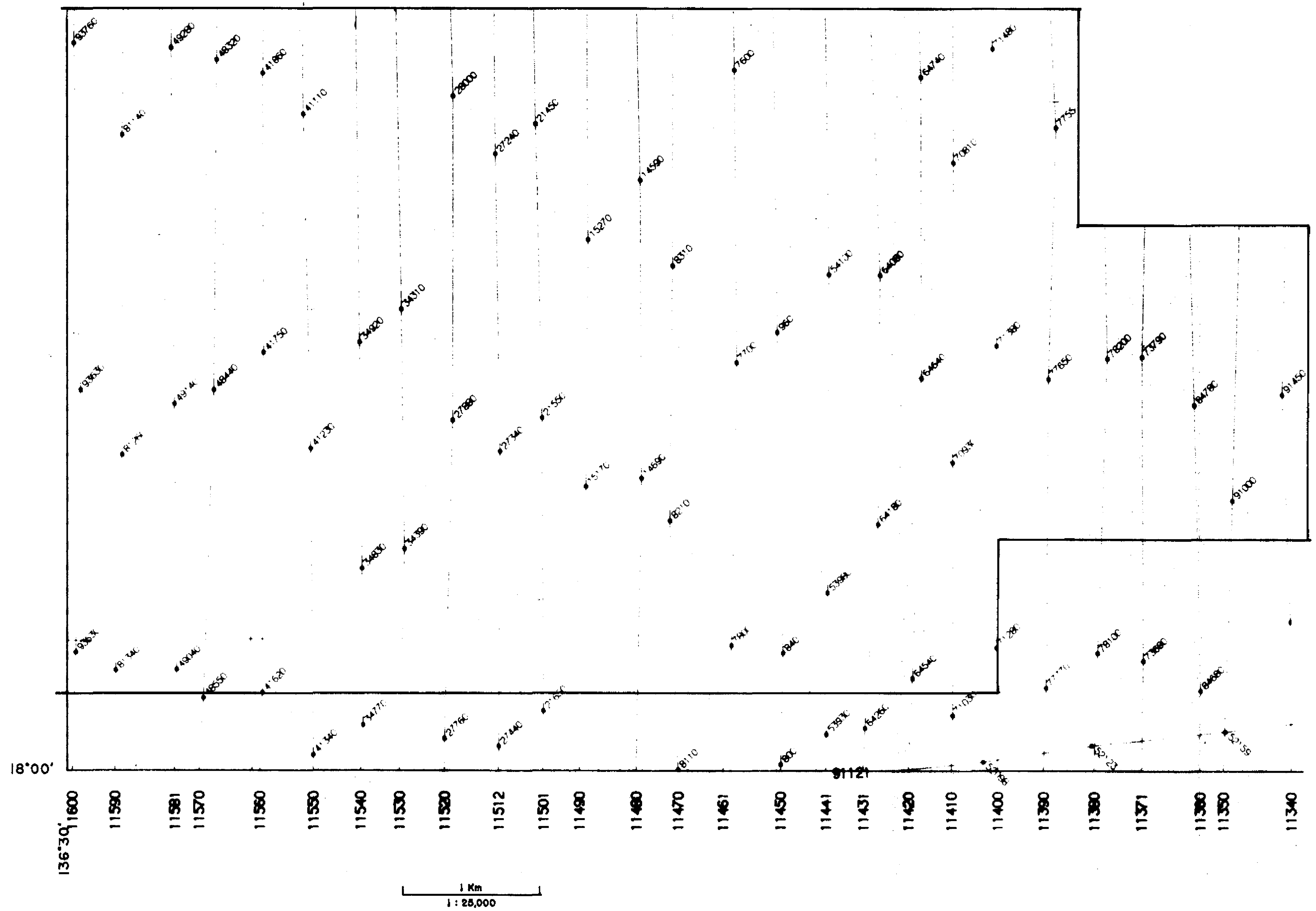
E.R.L.(A) 104
FLIGHT PATH RECOVERY

PLAN 4

OCTOBER, 1989



AIRBORNE SURVEY SPECIFICATIONS

MAGNETOMETER :	Geometrics 6813 recording at 0.2 nT
SPECTROMETER :	Geometrics GR800, detector volume 1024 cu.in. Differential recording Th.U.K. TOTAL COUNT
DATA RECORDIND :	Geometrics 6714
RECORDING INTERVAL :	tie lines at 0.42 sec traverses o.33 & 0.42secs., airspeed 50 m/sec
FLIGHT PATH RECORD :	Geocam 35mm continuous tracking camera
NOMINAL TERRAIN CLEARANCE :	Both detectors in aircraft at 80m
NOMINAL LINE SPACING :	Traverse lines 300m , tie lines 5.0Km
FLIGHT LINE RECOVERY :	Visually to 1:25,000 photo enlargements

FLIGHT PATH RECOVERY MAP

Grid notation refers to Australian Map Grid Zone 53
Magnetics : Levelled and diurnally corrected
IGRF (1980) : Removed , datum 2000 nT added

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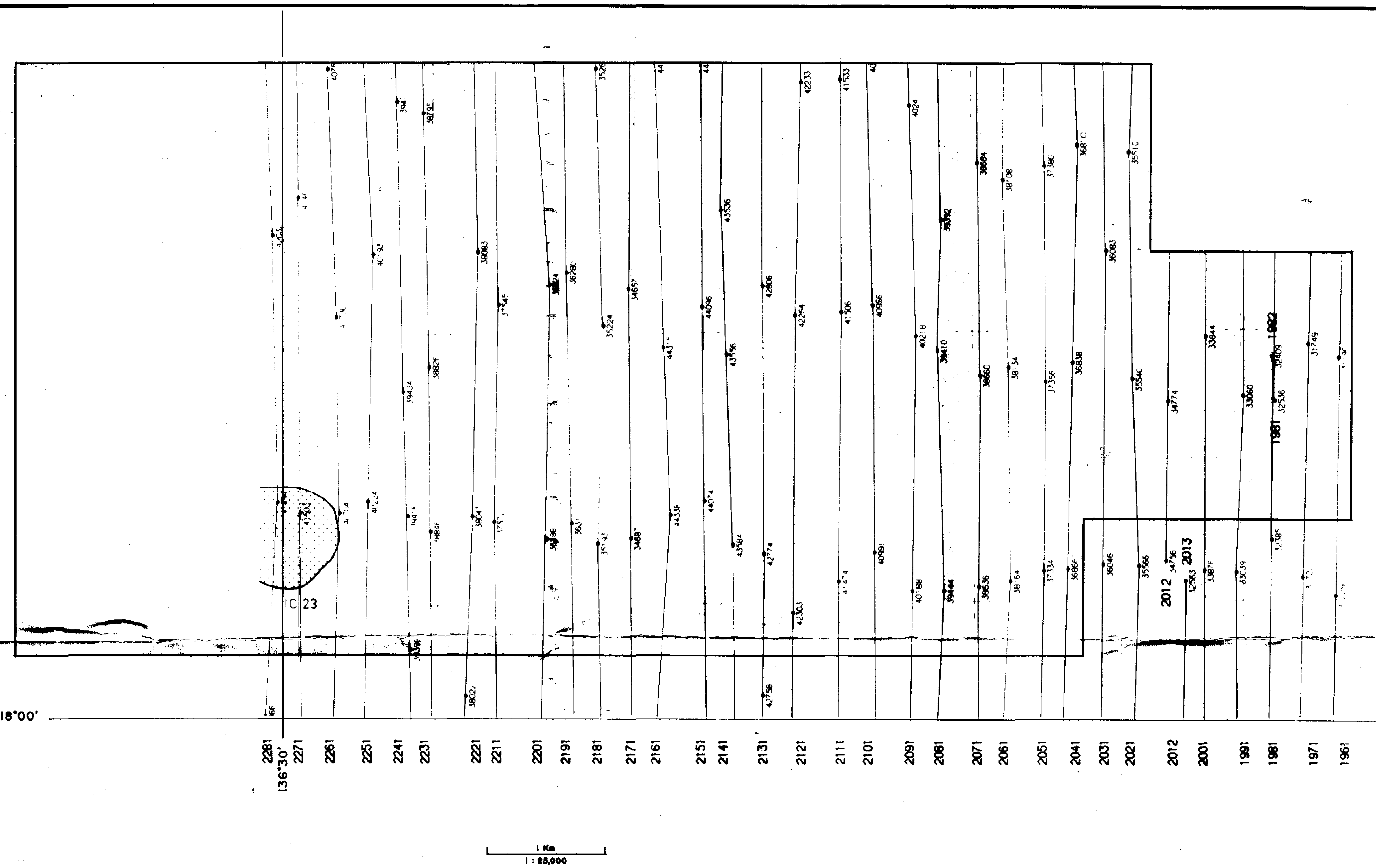
E.R.L.(A) 104
FLIGHT PATH RECOVERY

PLAN 5

OCTOBER, 1989



photography.

Selected Conductor IC14

Conductor Boundary ....

Inferred Conductor Boundary ....

Conductive Body in Conductive Host - First Priority........

Conductive Body in Conductive Host - Second Priority........

Conductive Body in Resistive Host - First Priority........

Conductive Body in Resistive Host - Second Priority........

Resistive Body in Conductive Host - First Priority........

Resistive Body in Conductive Host - Second Priority........

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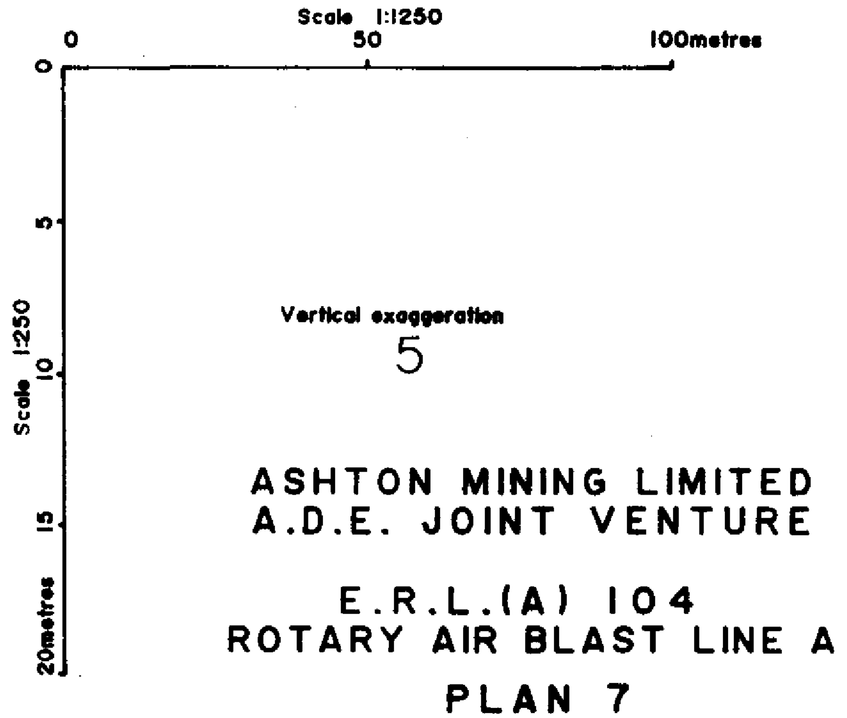
E.R.L.(A) 104
SELECTED CONDUCTOR MAP

PLAN 6

OCTOBER, 1989



For location see PLAN 1

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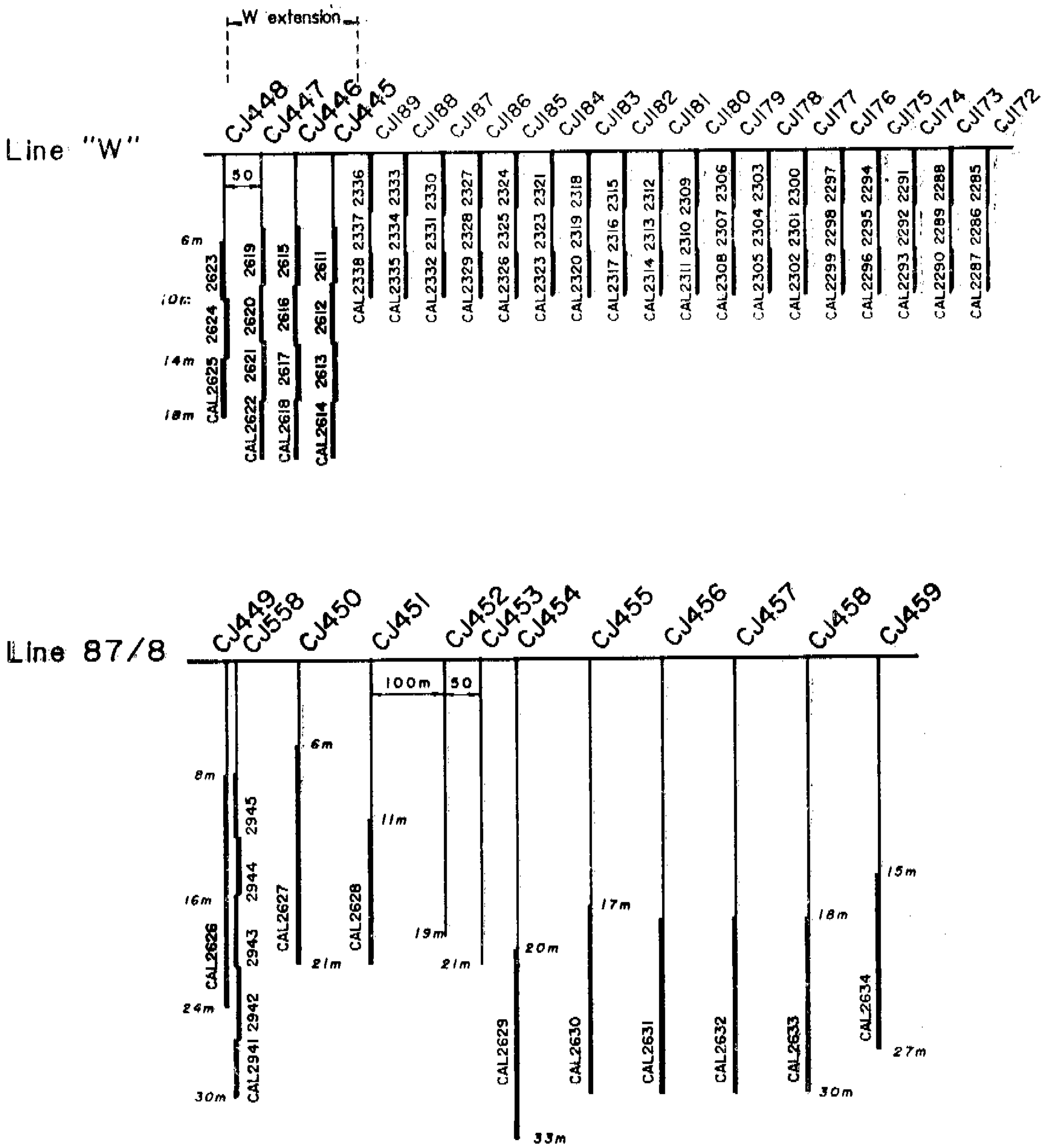
E.R.L.(A) 104
ROTARY AIR BLAST LINE A

PLAN 7

OCTOBER, 1989



Horizontal scale 1 : 10,000
Vertical scale 1 : 500
Vertical exaggeration x20

For locations see PLAN 1.

ROTARY AIR BLAST LINES "W" & 87/8

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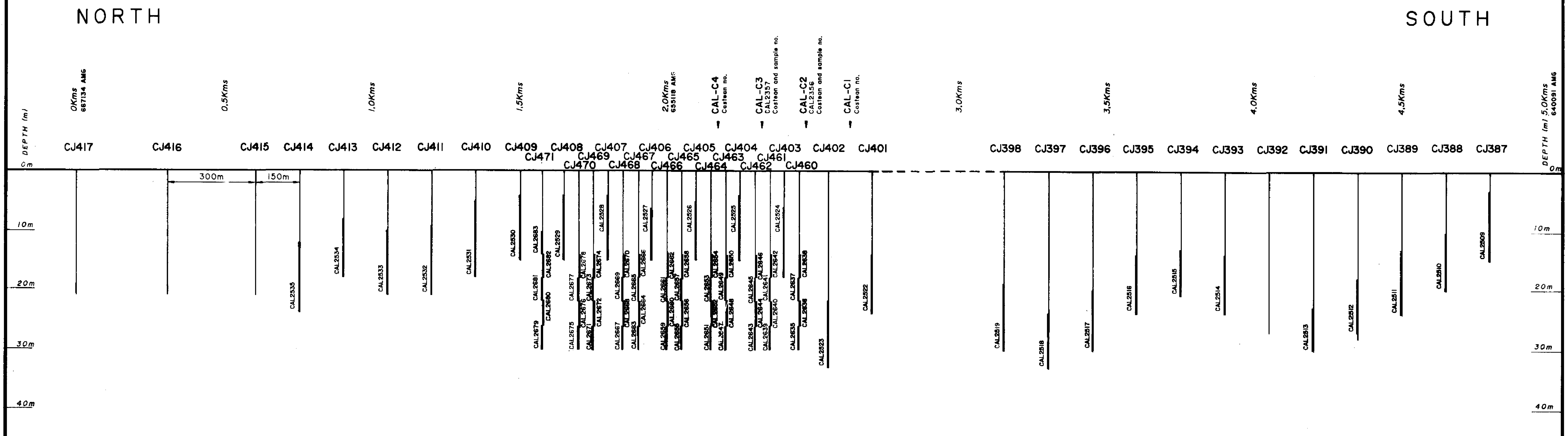

Horizontal scale 1 : 10,000
Vertical scale 1 :500
Vertical exaggeration x20

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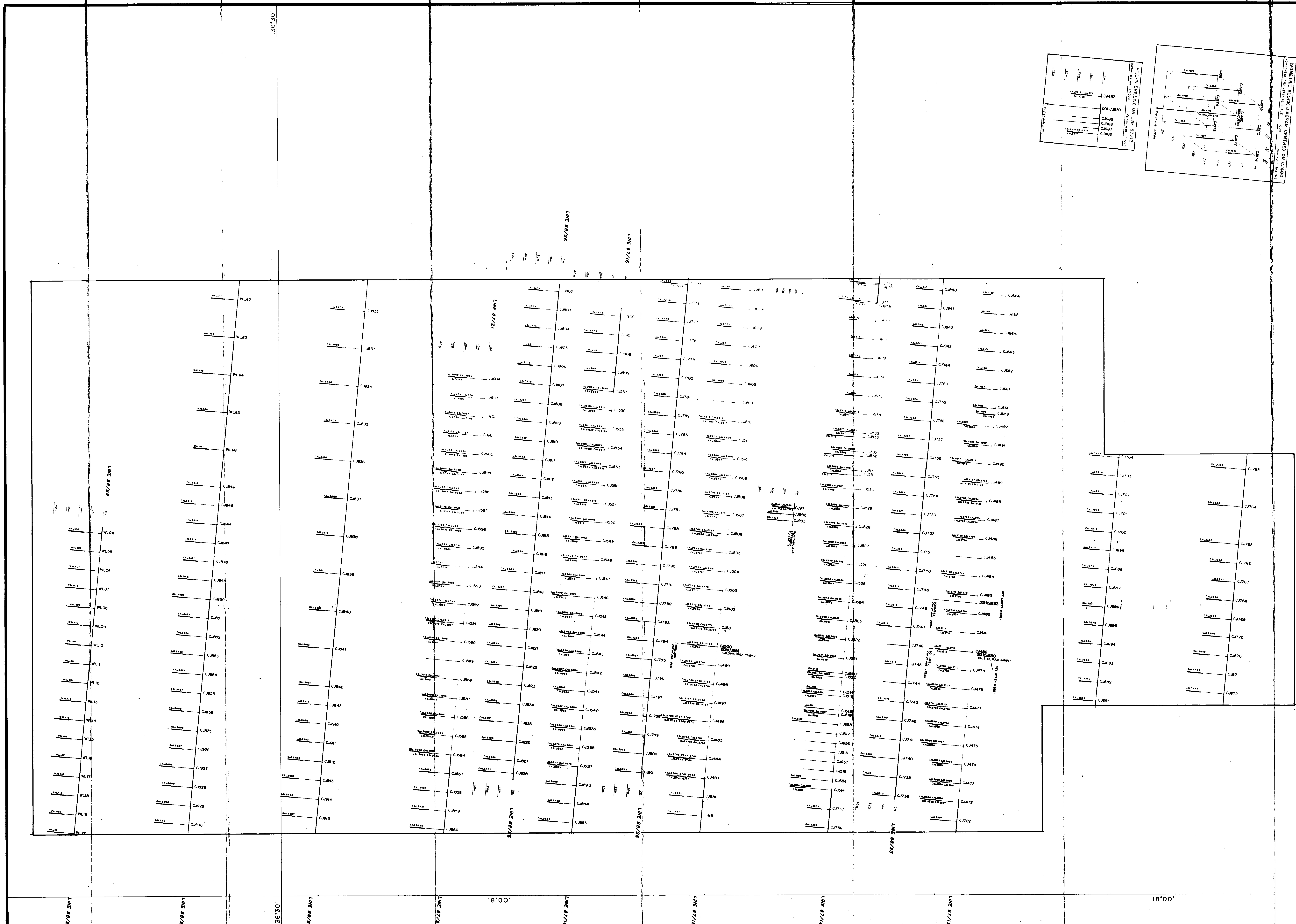
ROTARY AIR BLAST DRILL LINE 87/5

PLAN 9

OCTOBER, 1989



HORIZONTAL SCALE 1 : 10,000 (1cm = 100m)
VERTICAL SCALE 1 : 1,000 (1cm = 10m)
VERTICAL EXAGGERATION x10

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ROTARY AIR BLAST DRILLING - LINE PROFILES

PLAN 10

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