Haoma Mining NL

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Australian Stock Exchange
Level 4, North Tower, Rialto
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MELBOURNE, VIC 3000

October 31, 2017

Dear Sir,

ACTIVITIES REPORT FOR THE QUARTER ENDED SEPTEMBER 30, 2017 – HIGHLIGHTS

- **Group Consolidated Financial Result:**
  Haoma Mining's unaudited consolidated financial result for the three months ended September 30, 2017 was a before tax loss of $1.50 million after interest of $0.47 million, depreciation and amortisation of $0.05 million, and development and test work expenditure of $0.62 million.

- **'Flat – watermelon seed-like' nuggets recovered from Conglomerate Formations near Comet Mine:**

  On October 16, 2017 Haoma advised shareholders that a **large number of 'flat' gold nuggets** (Figure 11) and 'fine' gold (Figure 12) were collected from the conglomerate outcrop 'C2' (Figure 8 to 10) located to the South West of the Comet Mine near Marble Bar.

  At area 'C2' the 'flat' gold nuggets (Figure 11) were collected over a 150 metre section (20-40 metre wide) of the strike zone which is approximately 3 kilometres long. The nuggets were collected just below the surface of the conglomerate using a hammer and/or pick.

  Other gold nuggets (Figure 16) were also collected from conglomerate outcrop area 'C3' (Figure 13 to 15) located to the North West of the Comet Mine.

  Haoma believes it has now discovered at Comet Mine area 'C2' a significant 'gold bearing conglomerate' which had previously not been identified.

Figure 11: Nuggets collected from area C2 – Conglomerates to the South West of the Comet Mine, total weight of nuggets 33.167g

Figure 12: Fine gold collected in area C2 – Conglomerates to the South West of the Comet Mine, total sample weight 0.183g

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1. GROUP CONSOLIDATED RESULT TO SEPTEMBER 30, 2017

Haoma Mining NL Consolidated Profit & Loss	2016/17 1st Qtr ($m)	2016/17 Full Year ($m)	**2017/18 1st Qtr ($m)**	**2017/18 YTD ($m)**
Operating Revenue:				
Gold & Silver Sales	-	-	**-**	**-**
Royalties	-	0.08	**-**	
Retail Sales & Misc.	0.03	0.12	**0.04**	**0.04**
Test work	0.10	0.10	-	
Other Income	0.25	0.29	**-**	
Operating Revenue	0.38	0.59	**0.04**	**0.04**
Operating profit (loss) before interest, depreciation, amortisation, exploration & development costs:	0.12	(0.56)	**(0.36)**	**(0.36)**
Interest	(0.46)	(1.80)	**(0.47)**	**(0.47)**
Depreciation & amortization	(0.05)	(0.19)	**(0.05)**	**(0.05)**
Exploration, development & test work	(0.72)	(2.14)	**(0.62)**	**(0.62)**
Operating (loss) before tax	(1.11)	(4.69)	**(1.50)**	**(1.50)**

1.1 Haoma's Group Consolidated Result

Haoma Mining's unaudited consolidated financial result for the three months ended September 30, 2017 was a before tax loss of $1.50 million after interest of $0.47 million, depreciation and amortisation of $0.05 million, and development and test work expenditure of $0.62 million.

1.2 Funding of Operations

Funding for Haoma's operations is presently being provided by The Roy Morgan Research Centre Pty Ltd, a company owned and controlled by Haoma's Chairman, Gary Morgan. Interest on debt to Roy Morgan Research Centre accrues at the 30 day commercial bill rate plus a facility margin of 1%.

At September 30, 2017 the principal debt to The Roy Morgan Research Centre Pty Ltd was $40.28 million. Interest accrued for the 3 months to September 30, 2017 was $458,412. Total interest accrued and unpaid to September 30, 2017 is $30.45 million.

The Roy Morgan Research Centre Pty Ltd has advised that that no net debt repayment will be required until Haoma's annualised EDITDA exceeds $15 million per annum and that debt repayments will not exceed 50% of Haoma's EBITDA in any year.

2.0 OPERATIONS AT BAMBOO CREEK, WESTERN AUSTRALIA

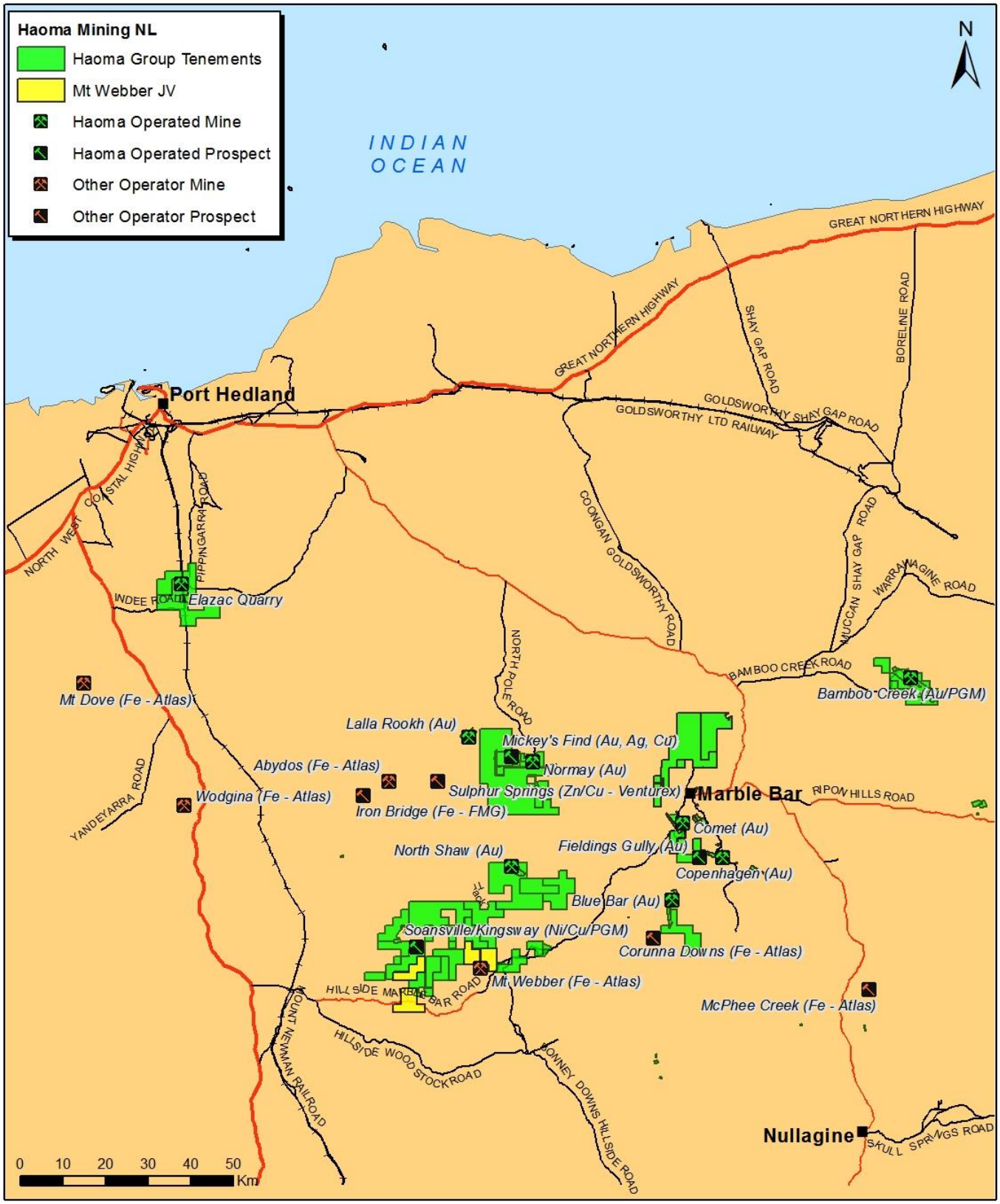


Figure 1: Location map of Haoma Mining NL Pilbara mining tenements. (Yellow areas show Haoma joint venture tenements with Atlas Iron.)

2. EXPLORATION ACTIVITIES IN WESTERN AUSTRALIA

2.1 Haoma Mining recovers 'flat – watermelon seed-like' nuggets from Conglomerate Formations at the Comet Mine near Marble Bar

Recent 'flat' gold nugget (also known as 'watermelon seed-like') discoveries by Artemis Resources (ASX: ARV) and Novo Resources (TSX-V: NVO) at 'Comet Well' and 'Purdy's Reward', and by De Grey Mining (ASX: DEG) at 'Louden's Patch' and on yesterday at Jarret Well' & 'Steel Well' have resulted in an increase in gold exploration throughout the Pilbara Region in known areas of outcropping conglomerates containing Fortescue Group rock types – a thick pile of sedimentary and volcanic rocks overlying the older Archean basement rocks (Warrawoona Group) of the Pilbara region.

On October 5, 2017 Haoma shareholders were advised tenements held at Bamboo Creek (Figure 1 & 2-4) and Comet Mine, near Marble Bar, (Figure 1 & 5-7) contained conglomerate materials in the Hardey Sandstone Formations, within the Fortescue Group.

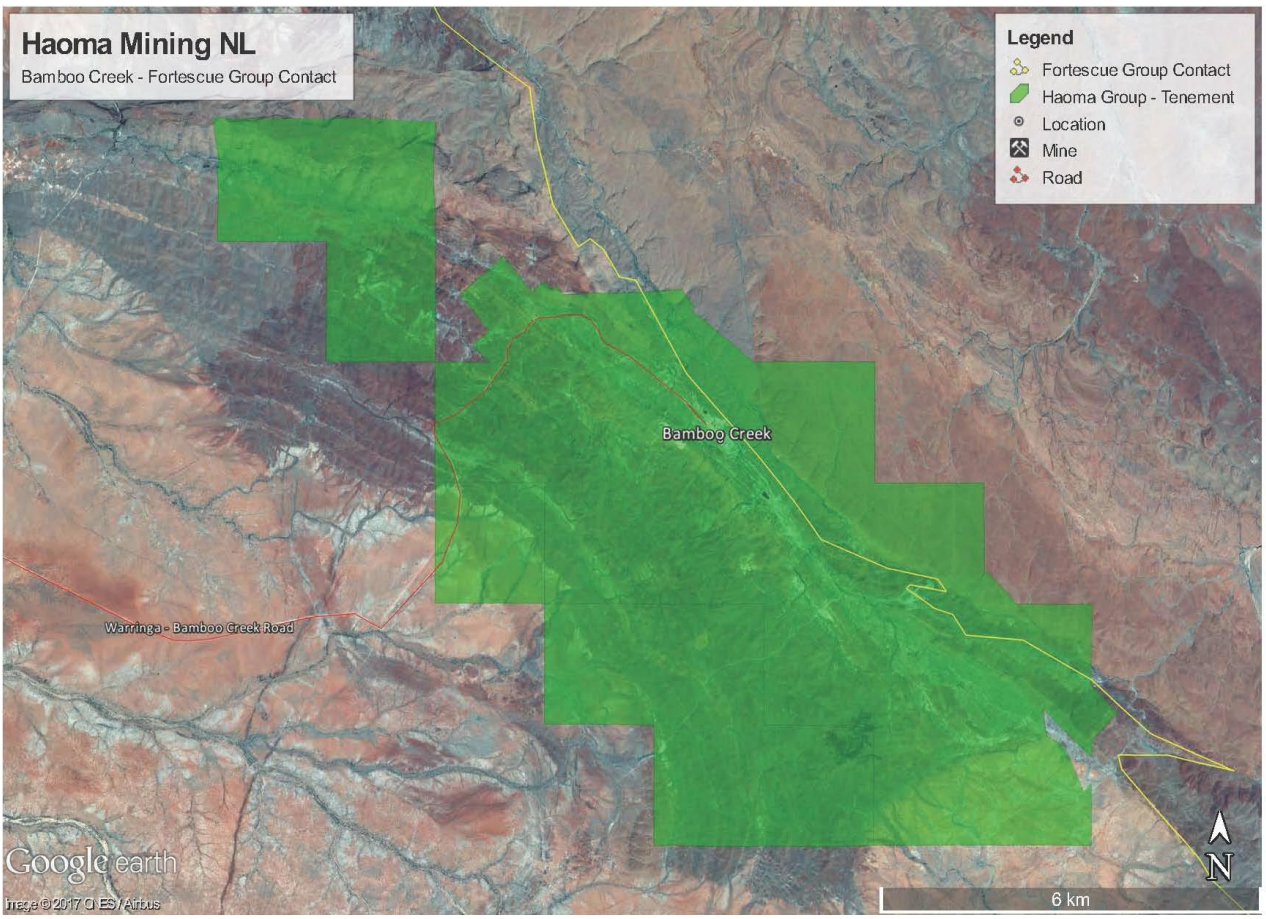


Figure 2: Haoma Mining, Google earth – Bamboo Creek Tenements and Fortescue Group contact.

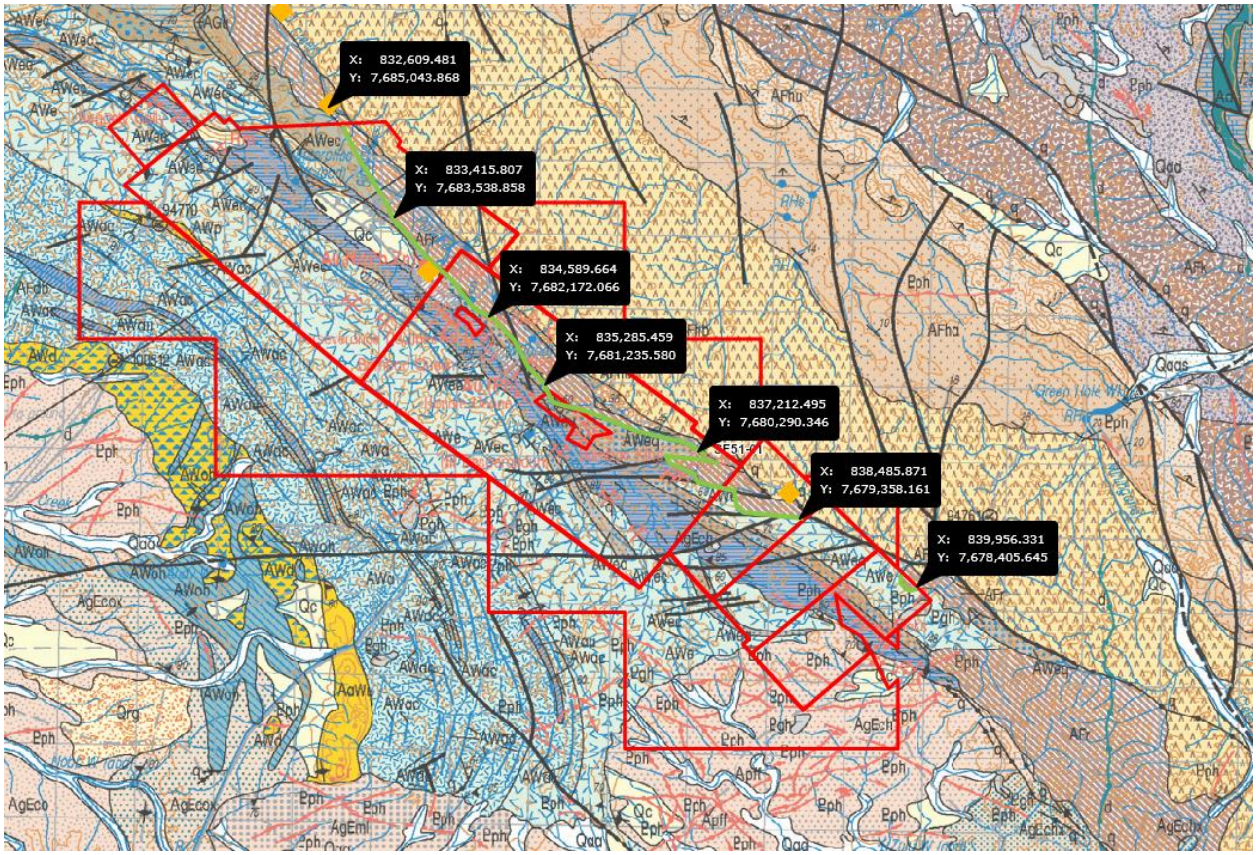


Figure 3: Haoma Mining, Earth geology – Bamboo Creek tenements.

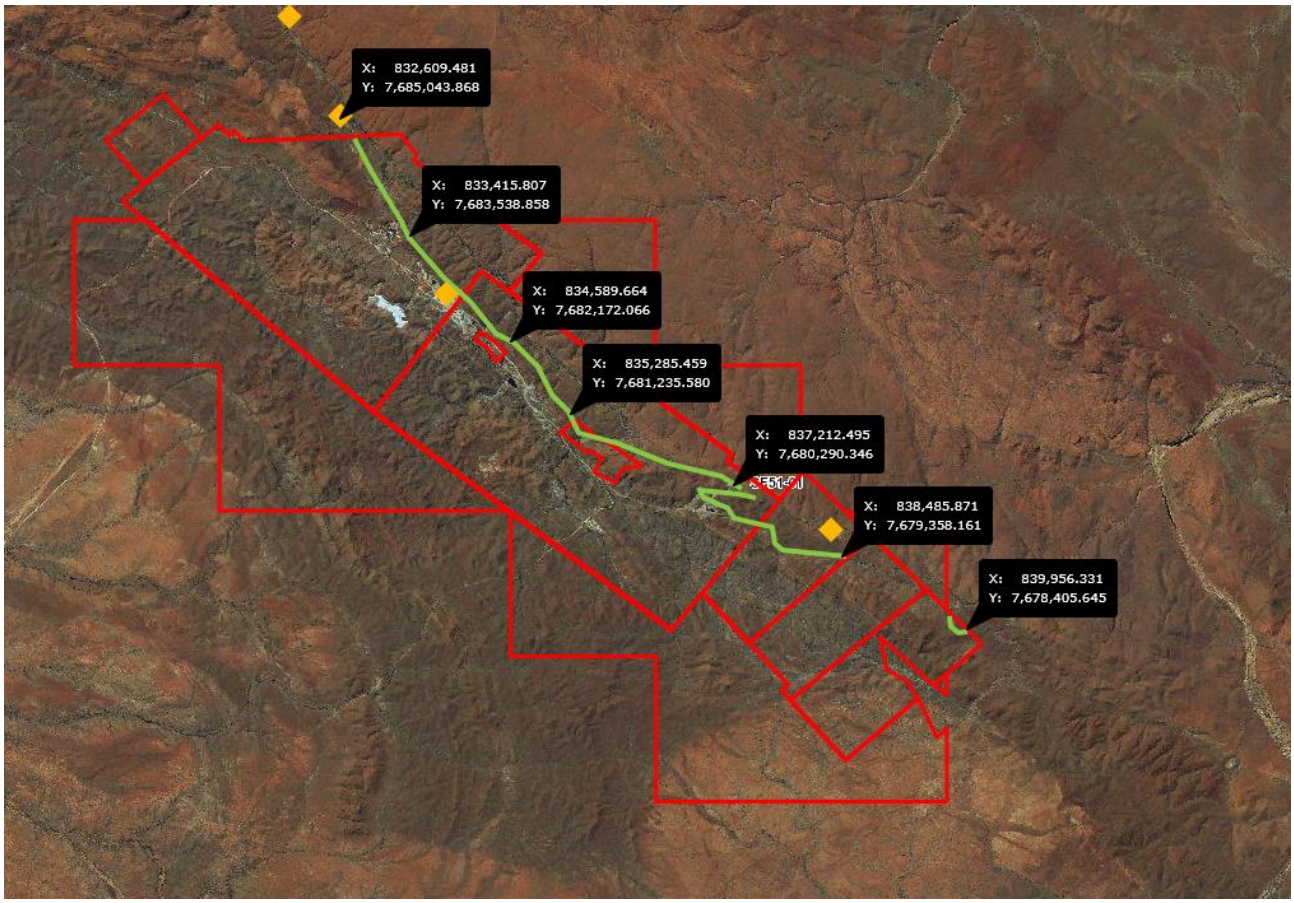


Figure 4: Haoma Mining, Google earth – Bamboo Creek tenements showing Conglomerate Formations and Fortescue Group contact.

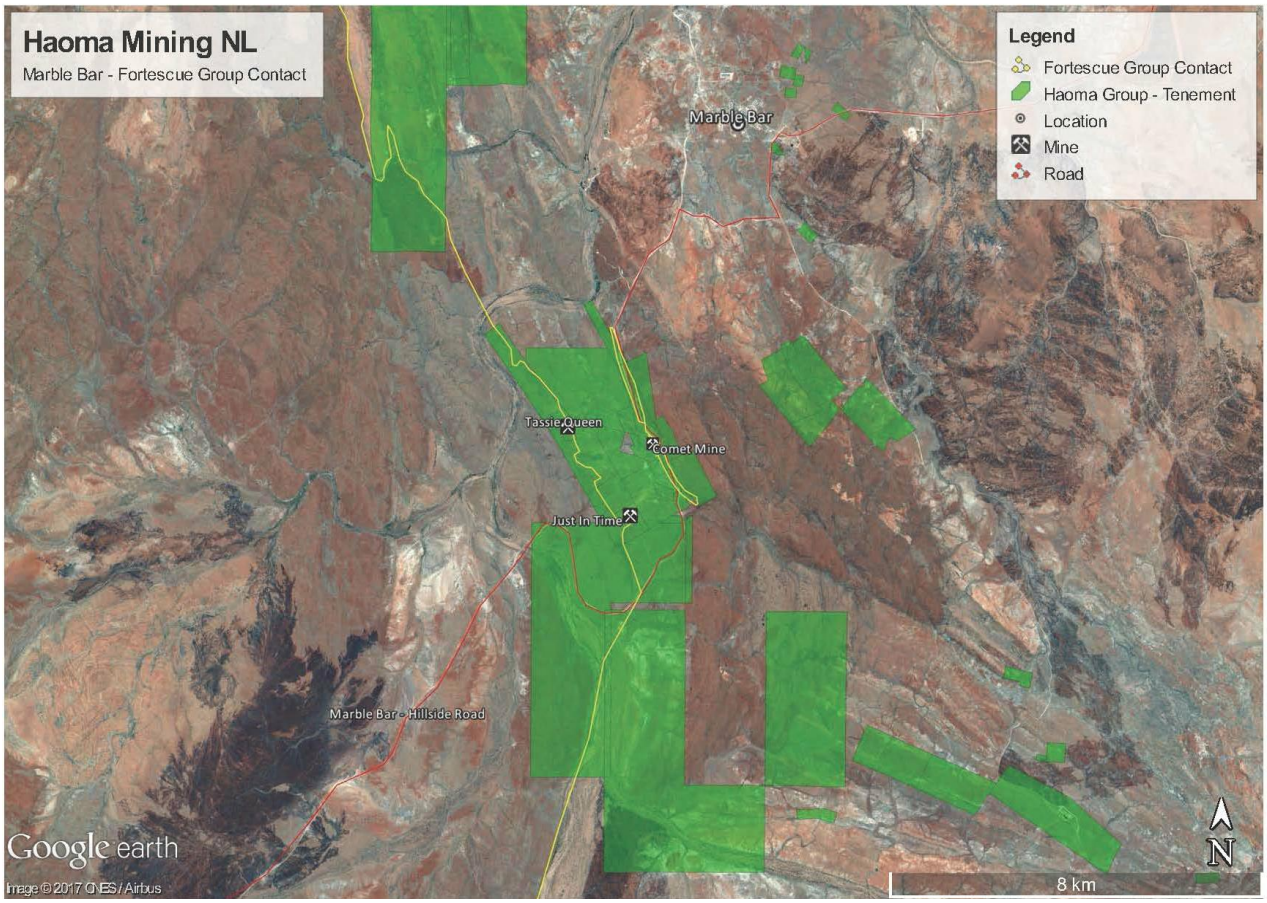


Figure 5: **Haoma Mining, Google earth – Comet Mine near Marble Bar tenements and Fortescue Group contact.**

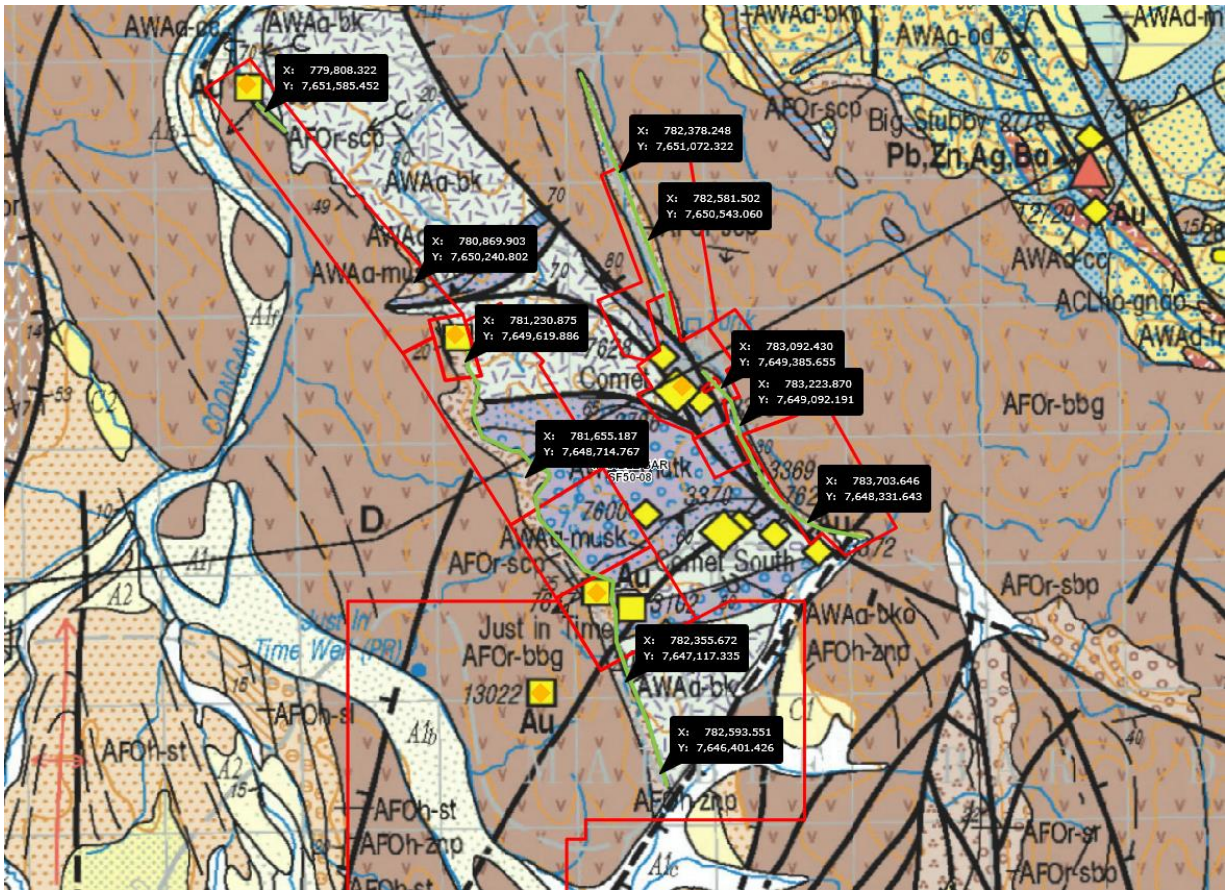


Figure 6: **Haoma Mining, Earth geology – Comet Mine near Marble Bar tenements.**

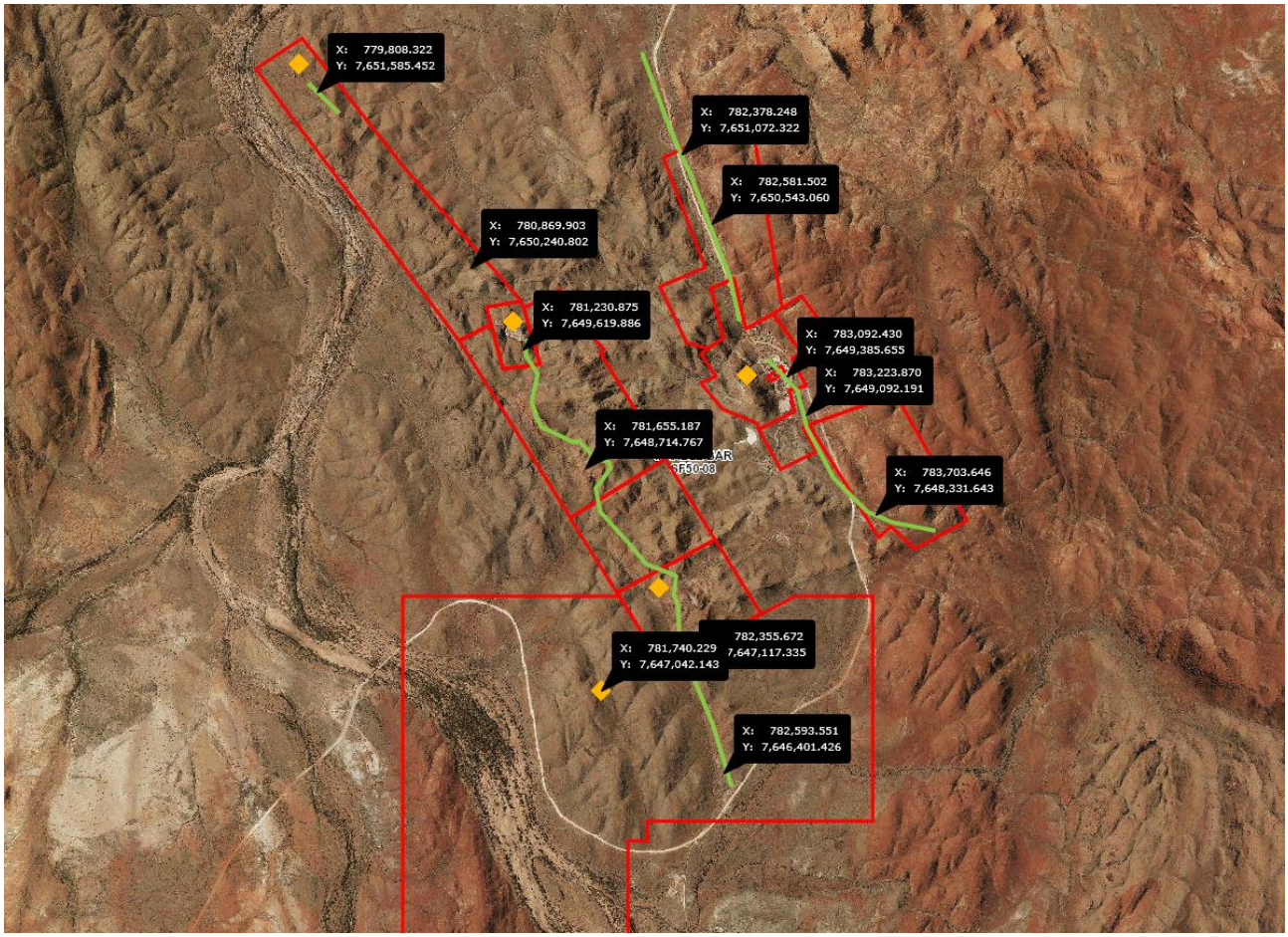


Figure 7: Haoma Mining, Google earth – Comet Mine near Marble Bar tenements that contain Conglomerate Materials in the Hardey Sandstone Formations.

While the estimated age of the Conglomerate Formations has not been determined, due to the complex structural history of the Pilbara region, on October 5, 2017(Reference A) shareholders were advised the Conglomerate Formations occur near the basal contact zones of the "Lower Proterozoic Fortescue Group" which are shown on Earth geology (Figure 3, 6 & 18). The Fortescue Group are known to overlie the ca 3300 to 3500Ma old Archaean basement unconformity which is evidently highly prospective for gold.

On October 11, 2017 Haoma personnel with metal detectors commenced surface sampling of Fortescue Group type rocks at 4 locations at Bamboo Creek and 3 locations at the Comet Mine near Marble Bar. Bulk samples of approximately 50kg were collected from the seven conglomerate outcrop areas (C1 to C7). Those samples are now being processed and analysed at Haoma's Bamboo Creek laboratory.

On October 16, 2017(Reference B) Haoma advised shareholders that **a large number of 'flat' gold nuggets** (Figure 11) and 'fine' gold (Figure 12) were collected from the conglomerate outcrop area 'C2' (Figure 8 to 10) located to the South West of the Comet Mine near Marble Bar.

At area 'C2' a large number of 'flat' gold nuggets (Figure 11) were metal detected and collected over a 150 metre section (20-40 metre wide) of the strike zone which was then believed to be approximately 3 kilometres long. The nuggets were collected just below the surface of the conglomerate using a hammer and/or pick.

Other gold nuggets (Figure 16) were metal detected and collected from conglomerate outcrop 'C3' (Figure 13 to 15) located to the North West of the Comet Mine.

In area 'C2' Haoma's personnel metal detected randomly over a 150 metre section of the conglomerate outcrop. **Conglomerate Formations in area 'C2' can be seen to extend for many kilometers. 'Pink' soil markings in Figures 8, 9 & 10 below show nugget locations.**

On October 18, 2017 Haoma Directors advised the ASX they would not divulge the location of the Comet Mine areas 'C1', 'C2' and 'C3' as follows:

"Haoma will not release co-ordinates or other details that would define the exact locations as this would expose Haoma to significant tenement security issues.
It is also not possible to provide a JORC statement simply around gold nuggets. We have limited the scope of the announcement to a report advising that we have found many nuggets at two locations and we will investigate further.
We have provided photographic evidence of the nuggets and of the locations where they were collected."

During the current Quarter bulk samples from both areas 'C2' and 'C3' will be recovered and initial processing on site at the Comet Mine. Some bulk samples will then be sent to Bamboo Creek for further processing.

Figure 8: Conglomerates in area C2 – South West of the Comet Mine.

<u>Figure 9:</u> Conglomerates in area C2, looking to the South West of the Comet Mine.

<u>Figure 10:</u> Conglomerates in area C2 – South West of the Comet Mine showing conglomerate extensions looking north.

Figure 11: **Nuggets collected from area C2 Conglomerate Formations to the South West of the Comet Mine, total weight of nuggets 33.167g.**

Figure 12: **'Fine' gold collected from area C2 Conglomerate Formations to the South West of the Comet Mine, total sample weight 0.183g.**

Figure 13: **Conglomerates in area C3 – North West of the Comet Mine.**

Figure 14: **Conglomerates to the North West of the Comet Mine.**

Figure 15: **Close up view of the conglomerates to the North West of the Comet Mine.**

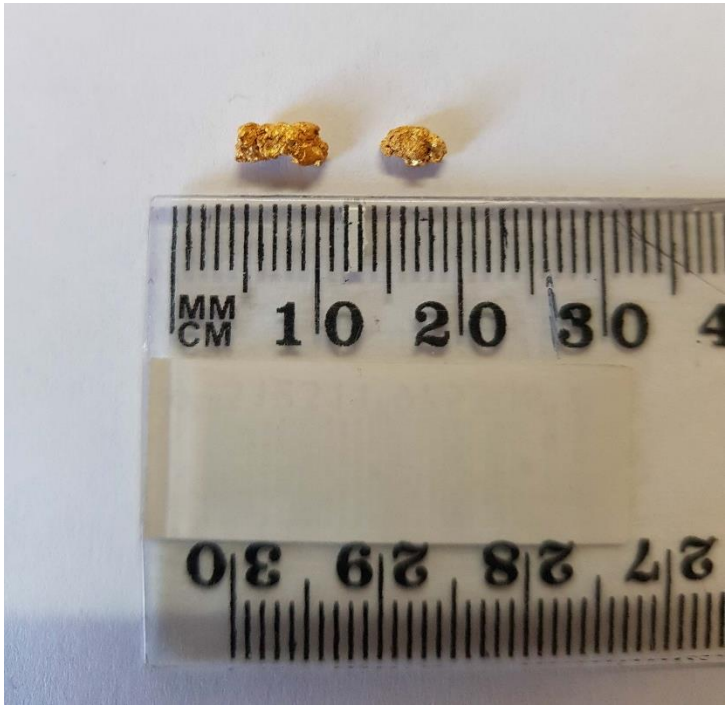


Figure 16: **Nuggets collected from area C3 Conglomerate Formations to the North West of the Comet Mine, total sample weight 0.639g.**

Figure 17 : **Comet Mine sample of Pyritic Conglomerate Material, Marble Bar, WA.**

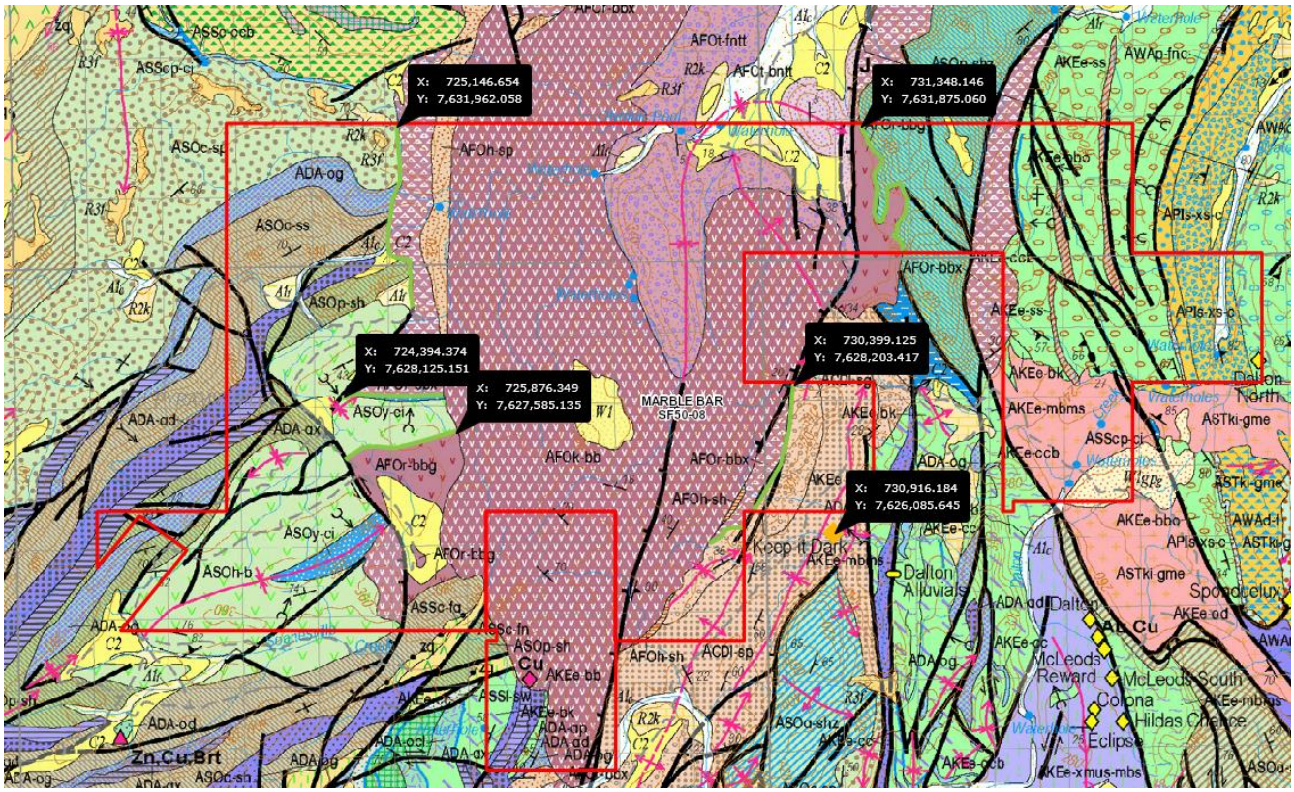


Figure 18: Earth geology – Haoma Mining, Soansville tenements.

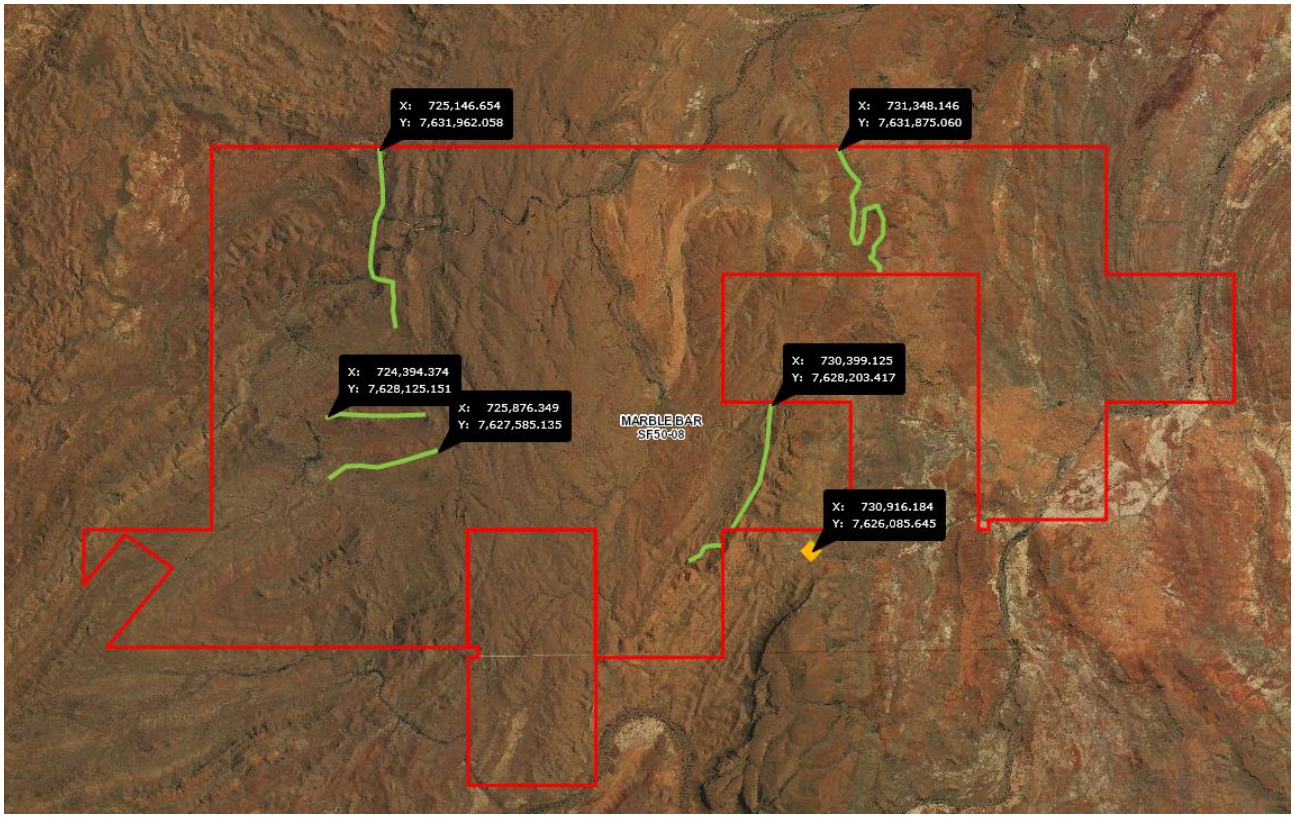


Figure 19: Haoma Mining, Google earth – Soansville tenements showing Conglomerate Formations and Fortescue Group contact.

The Conglomerate Formations near the Comet Mine had previously been explored by both the Stubbs Family (previous owners of the Comet Mine, see SH&MT Stubbs 1992/93 & 1993/94 Exploration Reports: WAMEX, Mines Department Index, M8113–A39484 & 42569) and BHP Minerals on behalf of Haoma. Both reported **only a small number of nuggets without finding *"a gold bearing conglomerate"*.**

Haoma believes it has now discovered at area C2 a significant 'gold bearing conglomerate' which had previously not been identified.

Ground exploration activities conducted near the Comet Mine in 1992-1994 identified alluvial gold in the area. It is known that in areas of conglomerate outcropping as described above, alluvial gold will provide a marker for possible identification of gold bearing conglomerate.

Exploration Reports for the 1992-94 exploration programs (EL45/1059) submitted to the Department of Mines ('DMP') noted that *"Pan sampling of creeks in this area was carried out in areas with outcrops of decomposed conglomerates, looking for alluvial free gold, which may lead us to a gold bearing conglomerate. We were unable to find any trace of free gold."* Copies of the reports obtained from the DMP are attached as Appendices 1A and 1B.

Details on Pilbara geology and conglomerate locations are documented in detail by Arthur H Hickman in "Geology of the Pilbara Block and its Environs", Bulletin 127, Geological Survey of Western Australia (1983).

In addition Novo Resources Corp's has recently released details on their exploration results at their Purdy's Reward **gold project near Karratha in the Western Pilbara –** October 17, 2017 release by Toronto Stock Exchange – Venture Exchange (TSX-V) listed entity Novo Resources Corp.

(http://www.novoresources.com/_resources/news/2017-10-17.pdf)

Novo's release provides the following information on their **Karratha Gold Project:**

Gold mineralization at Karratha is hosted by a sequence of conglomerate beds, fossil gravel horizons, ranging from a few meters to approximately 20 meters thick comprising the base of a much thicker package of sedimentary and volcanic rocks called the Fortescue Group. Rocks of the Fortescue Group were deposited between 2.78 and 2.63 years ago upon 3.0-3.7 billion year old igneous and metamorphic rocks that make up the Pilbara craton, an ancient piece of Earth's crust.

Over the past year, local metal detectorists have excavated gold nuggets originating from weathered conglomerate along an eight-kilometer, southwest-trending corridor between the Purdy's Reward prospect (please refer to the Company's news releases dated May 26 and August 15, 2017) and Comet Well (please refer to the Company's news releases dated April 11, June 26, and August 3, 2017). These gold-bearing conglomerates dip gently southeastward under cover at angles of between 2 and 20 degrees. The Company secured 100% control over approximately 7,000 sq km in areas along strike and down dip from Purdy's Reward and Comet Well through aggressive staking earlier this year. Novo believes that these gold-bearing conglomerates may underlie significant areas within the greater Fortescue basin.

In the Company's news release dated July 12, 2017, Novo discussed discovery of gold nuggets in a bulk sample collected from a trench at the Purdy's Reward prospect. Metallurgical test work conducted on this sample was discussed in the Company's news release issued August 8, 2017. The weighted average grade of two splits of this bulk sample was 67.08 gpt Au. Approximately 82% of the gold in this sample was determined to be coarse, mainly nuggets displaying several interesting characteristics. These are commonly flattened with rounded edges giving them an appearance similar to watermelon seeds.

Most are coarse, +2 mm and are not attached to quartz or other minerals. Gold is of high purity, +96%, much higher than the gold content of nuggets derived from basement-hosted lode gold deposits from the Pilbara region that commonly display purities of 70-90%. *Nuggets display crenulated surfaces thought derived from burial and compaction within a sandy matrix.*

In addition to coarse gold, this metallurgical test confirmed a significant fine-grained gold component is present in these conglomerates. Such fine gold, if it is indeed disseminated throughout the conglomerates, could prove important to help evaluate grade and continuity of this deposit.

Dr. Quinton Hennigh, the Company's, President and Chairman and a Qualified Person as defined by National Instrument 43-101, has approved the technical contents of this news release.

Relevance to Haoma Shareholders:

Many Haoma shareholders and ASX investors would be aware of the recent announcements and press publicity regarding the new discoveries of significant numbers of gold nuggets in Conglomerate Formations located in the **Western Pilbara Region** of Western Australia. Following Haoma's October 5, 2017 announcement, shareholders would be aware that the major discoveries were potentially of relevance to Haoma and them as shareholders, but without further information they have no way of understanding why those **Western Pilbara Region** announcements are of significance to Haoma and other mineral exploration companies who hold **Eastern Pilbara tenements which contain Conglomerate Formations.**

Since the weekend some investors may have a better understanding since reading The Weekend Australian (October 28, 2017) article *"The Pilbara is a goldmine for some"* and comments by Cliff Lawrenson, CEO, Atlas Iron regarding their **Eastern Pilbara Region** tenements – some of Atlas Iron tenements are jointly held with Haoma, see Figure 1.

The **Eastern Pilbara Region** is significantly upgraded with Haoma's latest discovery of a large number of 'flat' gold nuggets (Figure 11) and 'fine' gold (Figure 12) collected from the conglomerate outcrop area 'C2' (Figure 8 to 10) located in Comet Mine tenements near Marble Bar.

Haoma is being advised by Professor Peter Scales, Department of Chemical Engineering, University of Melbourne. (Reference C)

Haoma is awaiting a formal report form Professor Peter Scales and others who are currently determining the likely origins of nuggets from the Comet and Bamboo Creek Conglomerates formations using microprobe and other specialised techniques.

The August 1996 BHP Mineral SEM analysis (See Appendix 2) of gold nuggets from Comet Mine Conglomerate Formation area 'C1' (See Table 1 below); and recent University of Melbourne SEM analysis of nuggets and 'fine' gold from area 'C2' (See Table 1 below and Figure 11 & 12) suggest there are two different populations of nuggets within the Comet Mine Conglomerates.

In August 1996 two different nugget populations was referred to by Robert Skrzeczynski, Exploration Manager Operations, BHP Minerals, Australia in his report to Haoma – see Appendix 2.

Table 1: SEM analysis of gold nuggets and 'fine' gold from Comet Mine Conglomerate Foundations – in August 1996 and October 2017

1) BHP Minerals Report, August 1996 – Table1, SEM silver bearing gold composition:

Gold from Comet Mine area 'C1'

Sample 1 – gold 91.12%, silver 8.88%

Sample 2 – gold 100%

Sample 3 – (i) gold 89.51%, silver 10.49%, (ii) gold 88.70%, silver 11.30%

Sample 4 – gold 92.69%, silver 7.31%

Sample 5 – gold 90.92%, silver 9.08%

2) Haoma Mining, October 2017 – SEM silver bearing gold composition:

Nuggets from Comet Mine area 'C2'

Sample 1 – gold 98.92%, silver 1.08%

Sample 2 – gold 99.94%, silver 0.06%

'Fine' gold from Comet Mine area 'C2'

Sample 1 – gold 100%

Sample 2 – gold 94.16%, silver 5.84%, (ii) gold 98.10%, silver 1.90%

Sample 3 – gold 100%

The above SEM analysis of gold nuggets and 'fine' gold from Comet Mine Conglomerate Formations shows the Comet Mine tenements contains highly prospective gold targets for ongoing exploration.

During the Quarter additional metal detecting and sampling will be conducted at other Haoma tenements that contain Conglomerate Formations, namely at:

- Soansville (about 100 km south-west from the Comet Mine – see Figure 1 and 18 & 19),
- Bamboo Creek – see Figure 1,
- Marble Bar– see Figure 1, and
- Blue Bar – see Figure 1.

The nature, character, lateral extent and thickness of the Conglomerate Formations located in the above areas will be assessed to determine future exploration activity.

2.2 Haoma Mining Elazac Process Test Results (Reference D)

Shareholders were advised in the Haoma July 2017 Quarterly Report (see Appendix 3) test work using the Elazac Process measured significant quantities of precious metals in concentrates recovered after processing Bamboo Creek Tailings and Mt Webber iron ore fines.

During the Quarter test work concentrated on determining the most cost efficient Bamboo Creek Plant configuration to continuously process Bamboo Creek Tailings. The Bamboo Creek Plant configuration is now designed so Haoma can continuously process Bamboo Creek Tailings on a commercial basis.

In addition to being able to recover commercial quantities of gold from Bamboo Creek Tailings recent Elazac test work showed additional 'concentrate' of precious metals consisting mainly of PGM can also be recovered with gold and silver. It is anticipated this 'PGM concentrate' will need to be sent to Europe or South Africa for refining.

Modifications to the Bamboo Creek Plant will take place once bulk ore samples from Bamboo Creek and the Comet Mine Conglomerate Formations have been processed through the Bamboo Creek Plant. The Directors anticipate conglomerate ore test work using the Bamboo Creek Plant will be completed during the current Quarter.

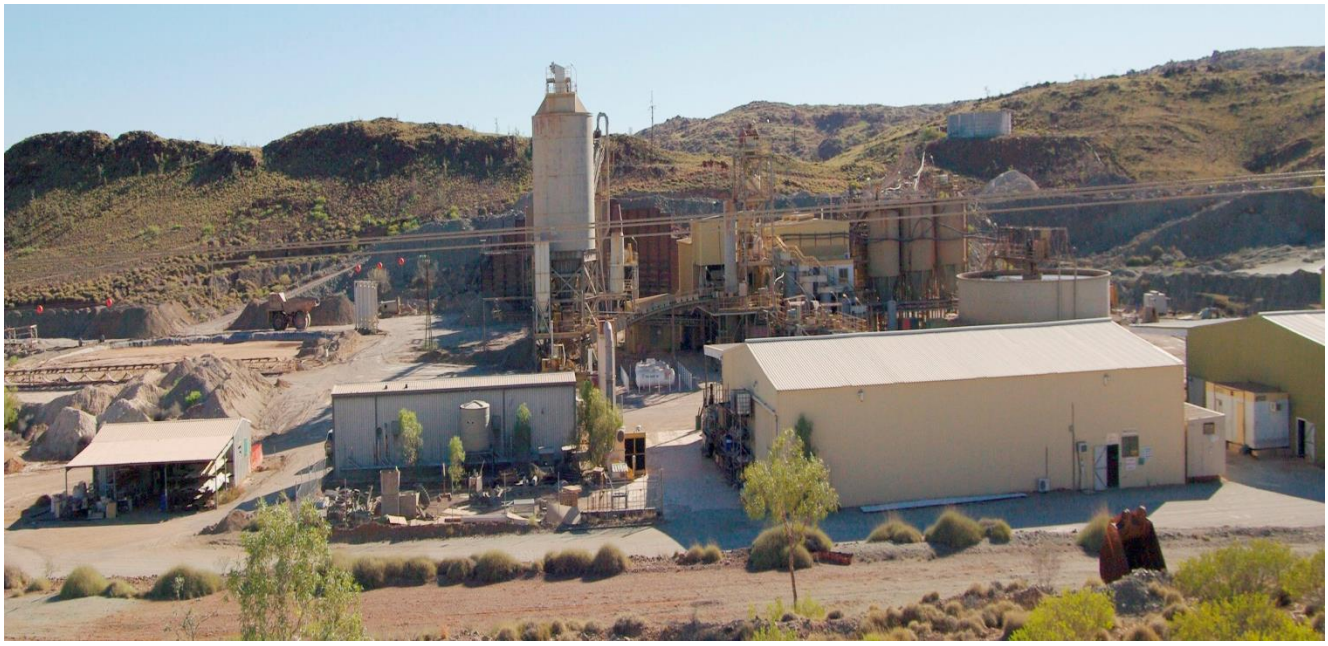


Figure 20: Bamboo Creek Processing Plant looking north, Conglomerate Formations behind range.

3. EXPLORATION ACTIVITIES IN THE RAVENSWOOD DISTRICT, QUEENSLAND

3.1 Proposed Sale of Ravenswood Tenements

(Mining Leases 1325, 1330, 1415, 1483, 1529, 10315, Exploration Lease 8771 and Mining Claims 2205 & 2206)

Haoma's Directors are negotiating with Resolute Mining Limited for the sale of seven mining and exploration leases and two mining claims at Ravenswood, North Queensland. (Tenements are owned by Haoma's wholly owned subsidiary, Kitchener Mining NL.) Details on Haoma's Queensland tenements were included as Appendix 3 to Haoma Mining's Activities Report for the Quarter Ended September 30, 2016.

Haoma will retain Mining Leases ML1326 and ML10275 located near to Ravenswood and the Ravenswood Top Camp Motel facility.

The retention of the two mining leases provides Haoma with flexibility to establish its own base for reprocessing concentrates recovered under the **Sub-lease Agreement**.

Figure 21 below shows the location of each of Haoma's Ravenswood tenements including those which are proposed to be sold to Resolute if an Agreement is completed.

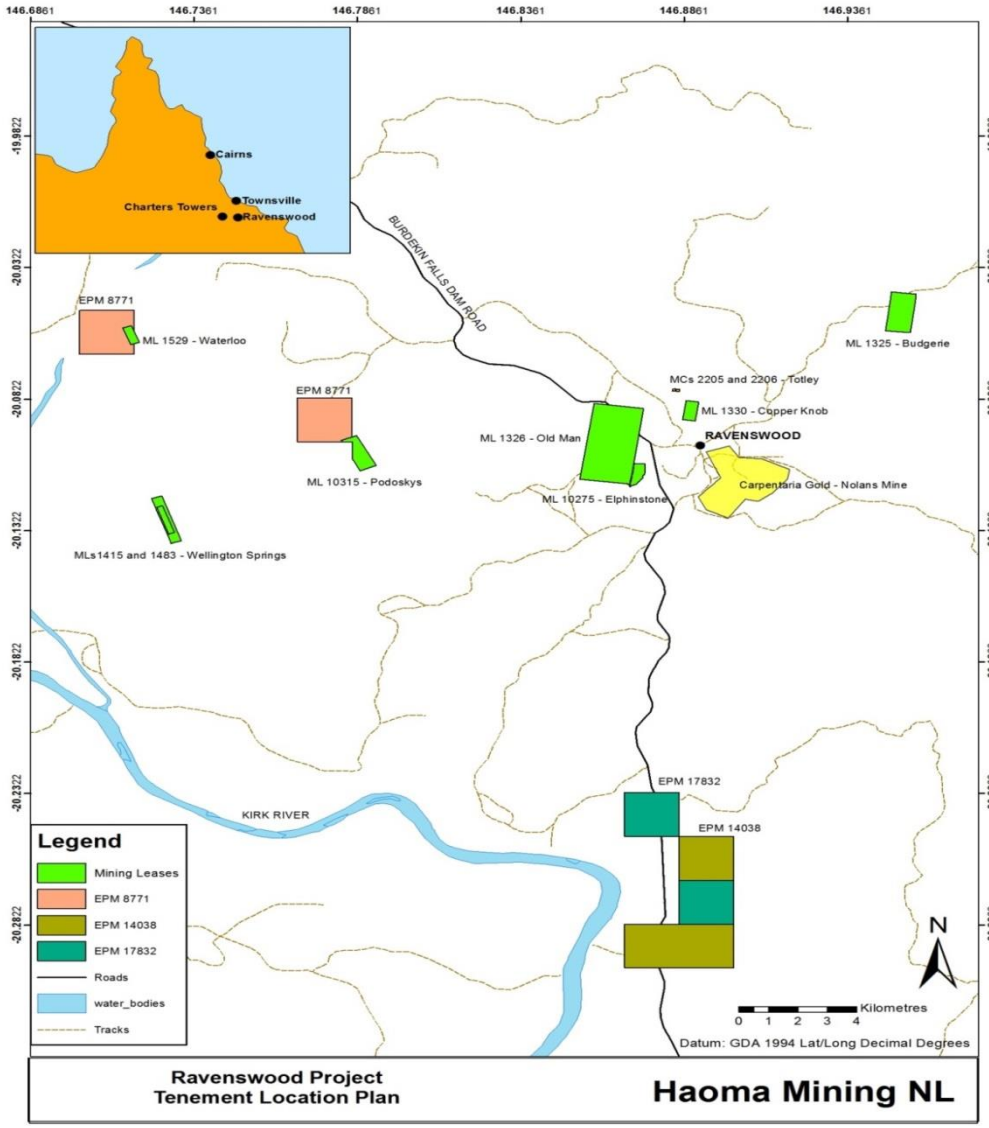


Figure 21: Haoma Mining Ravenswood tenements

ML 1325 – Eight Mile, Budgerie
ML 1326 – Old Man
ML 1415 – Wellington Springs
ML 1483 – Wellington Springs No 2
ML 1529 – Waterloo
ML 10315 – Podosky's
EPM 8771 – Barrabas
MC 2205 – Totley North No 1
MC 2206 – Totley North No 2
ML 1330 – Copper Knob
ML 10275 – Elphinstone One
EPM 14038 – Robe Range
EPM 17832 – Robe Range East

4. HAOMA'S OTHER ACTIVITIES

4.1 Update on Haoma Agreement with Calidus Resources – 'Right to Mine' Klondyke and Warrawoona Group Tenements with 'Option to Purchase' (M45/521, M45/672, M45/679, M45/682, M45/240/ M45/671, M45/547)

Haoma has previously advised shareholders that Calidus Resources Limited is conducting an extensive exploration program at its Warrawoona Gold Project in the East Pilbara. This work program includes in-fill drilling at Haoma's Warrawoona and Klondyke leases. Calidus has an 'Option to Purchase' the Haoma Mining Leases. Details below and other details were released in Haoma's Quarterly Activities Report to March 31, 2017.

As a result of recent Calidus announcements detailing assay results from their in-fill drilling program at Haoma's Warrawoona and Klondyke leases, Haoma expects Calidus to soon exercise their 'Option to Purchase' Haoma's Warrawoona and Klondyke leases.

If Calidus exercises their 'Option to Purchase' the consideration received by Haoma will be:

- $500,000, and
- 37,500,000 Calidus Resources shares or payment of $750,000 at the election of Haoma Mining.

The last sale price of Calidus Resources shares on October 31, 2017 was 4.4 cents.

In addition to the above, the Agreement grants Haoma "*a full free and exclusive licence to treat any Alluvial or Scree Resources and the tailings and waste dumps arising from the Mining undertaken on the Klondyke Project Tenements*". The Klondyke Project Tenements include the Tenements subject to the Agreement and all other tenements of Calidus is the registered holder that are located within 25 kilometres of any of the Tenements.

4.2 Update on Haoma Agreement with DeGrey Mining Ltd – 'Right to Explore and Mine' (E45/2983)

On October 27, 2016 Haoma shareholders were advised that an Agreement had been signed with DeGrey Mining Ltd in respect to a portion of Haoma's Exploration Lease at Cookes Hill (E45/2983) to grant DeGrey an exclusive five year right to enter the Tenement for the purposes of mineral exploration and to mine and process all Minerals with the exception of Alluvial or Scree Resources and Pegmatic Minerals on the specified area of the lease.

The consideration given by DeGrey for the Right to Explore and Mine included the issue of 5 million DeGrey Mining share options with an exercise price of $0.058 per share and an expiry date of 9 months from the date of issue. The share options were issued on December 7, 2016 with an expiry date of September 6, 2017.

On September 5, 2017 Haoma Mining exercised a share option, for the total exercise price of $290,000, for De Grey Mining NL to issue 5 million De Grey Mining Ltd shares to Haoma Mining. The last sale of De Grey shares on October 31, 2017 was 25 cents.

4.3 Cookes Hill (E45/2983, Including BGC Tribute Agreement to Mine Dolerite from Haoma's Cookes Hill Quarry (M45/1005)

Haoma's Elazac Quarry at Cookes Hill for the last 10 years has been operated by BGC Contracting Pty Ltd to supply hard rock for Pilbara infrastructure construction including new railway lines and roads. In February 2015 BGC Contracting put the Elazac Quarry on 'care and maintenance'. The BGC contract with Haoma expired this year and BGC did not renew their contract to operate the Elazac Quarry.

Haoma has resumed control of the Elazac Quarry and commenced negotiations with a number of potential customers for the supply of hard rock material.

4.4 Trading at Haoma's Top Camp Facility, Ravenswood, Queensland

Haoma's 'Activities Report for the Quarter Ended March 31, 2017' advised shareholders that major refurbishment works to the 'Top Camp' accommodation facility located at Ravenswood, Queensland had been completed.

'Top Camp' is now running at a higher occupancy rate resulting in a corresponding increase in revenue. The Directors wish to acknowledge and thank Sue Kennedy and her support team at Top Camp for the revitalisation of Top Camp which is now a valuable Haoma asset.

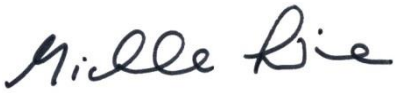
4.5 Annual General Meeting

The 2017 Annual General Meeting of Haoma Mining NL will be held at Tonic House, 386 Flinders Lane Melbourne on Thursday November 30, 2017 commencing at 10.00am.

All shareholders are encouraged to attend. Further information may be obtained from the Company Secretary, Jim Wallace on 03 92245142 or by email to haoma@roymorgan.com.

Yours sincerely,

Gary C Morgan, B Comm. – Economics & Pure Mathematics/Statistics, University of Melbourne
Chairman



Michele Levine, BSc. Master Environmental Studies, University of Melbourne
Director

References:

A Information in Section2.1 of this report that relates to conglomerate formations was compiled by David Mellor who was at the time a full-time employee of Haoma and a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). David Mellor has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. David Mellor consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

B Information & data in Section 2.1 of this report as it relates to a large number of 'flat' gold nuggets (Figure 11) were metal detected and collected over a 150 metre section in area 'C2' is based on information compiled by Mr. Peter Cole who is an expert in regard to this type of sampling mineral outcrops . Mr. Cole has worked in the mining industry for over 30 years and has been associated with Haoma for more than 20 years.

C Information & data in Section 2.1 of this report as it relates to determining the likely origins of nuggets from the Comet and Bamboo Creek Conglomerates formations using microprobe and other specialised techniques is prepared by Professor Peter Scales, Department of Chemical Engineering, University of Melbourne. Professor Peter Scales has worked with and been associated with Haoma Mining and Elazac Mining for more than 20 years.

D Information & data in Section 2.2 of this report as it relates to Metallurgical Results is based on information compiled by Mr. Peter Cole who is an expert in regard to this type of metallurgical test work. The results relate to testing the effectiveness of a new method of assaying for gold and other mineral content (the Refined Elazac *Assay* Method) and a new method for extraction of gold and other minerals from the ore (the Refined Elazac *Extraction* Method). These methods are together referred to as the Elazac Process. The information reported relates solely to ongoing test work in relation to bringing the Elazac Process to commercial realisation. Mr. Cole has worked in the mining industry for over 30 years and has been associated with the development of the Elazac Process over a long period (approximately 15 years). Mr. Cole is one of only a few people with sufficient relevant knowledge and experience to report results in relation to test work on the Refined Elazac *Assay* Method and Refined Elazac *Extraction* Method. Mr. Cole has consented to the inclusion in this report of the information and data in the form and context in which it appears.

Appendix 1A:

SH&MT Stubbs 1992/93 Exploration Reports:
WAMEX, Mines Department Index, M8113–A39484)

EXPLORATION REPORT

17/09/92 TO 16/09/93

EXPLORATION LICENCE 45/1059

MARBLE BAR DISTRICT, WESTERN AUSTRALIA

REF. NO. M8113

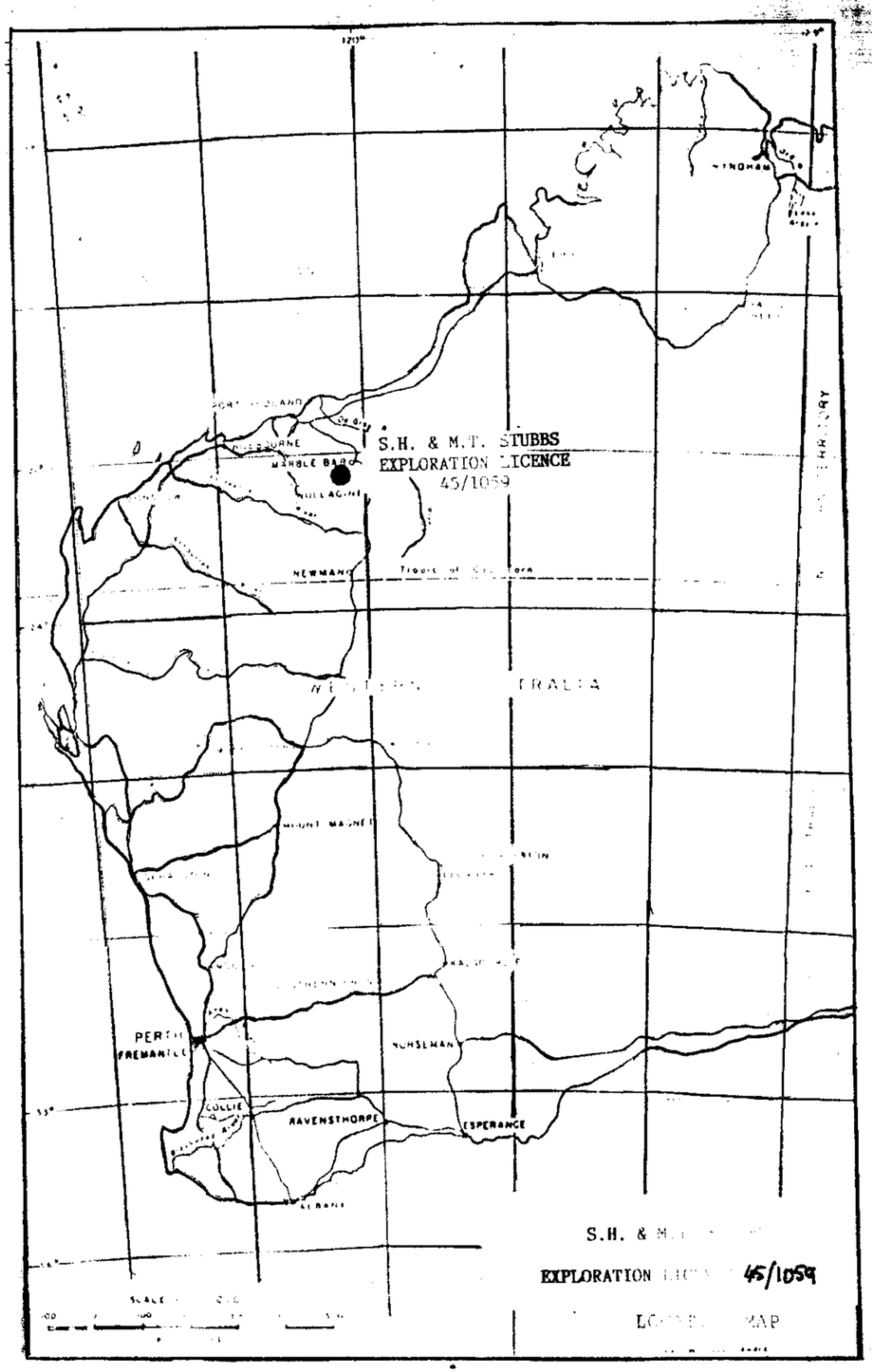
S.H. & M.T. STUBBS

COMET GOLD MINE

P.O. BOX 10, MARBLE BAR, 6760

WESTERN AUSTRALIA

PHONE: (091) 761 015 FACSIMILE: (091) 761 129



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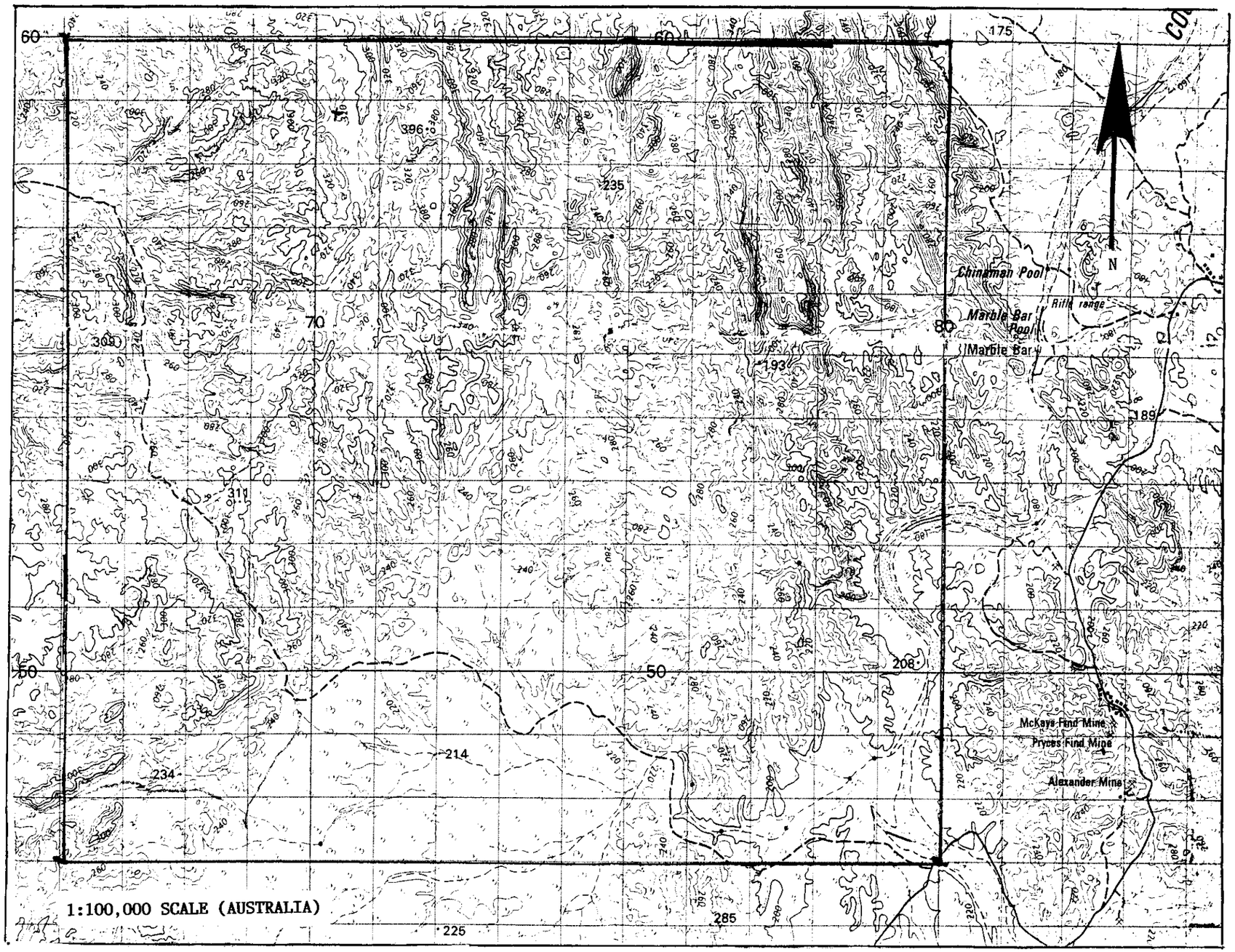


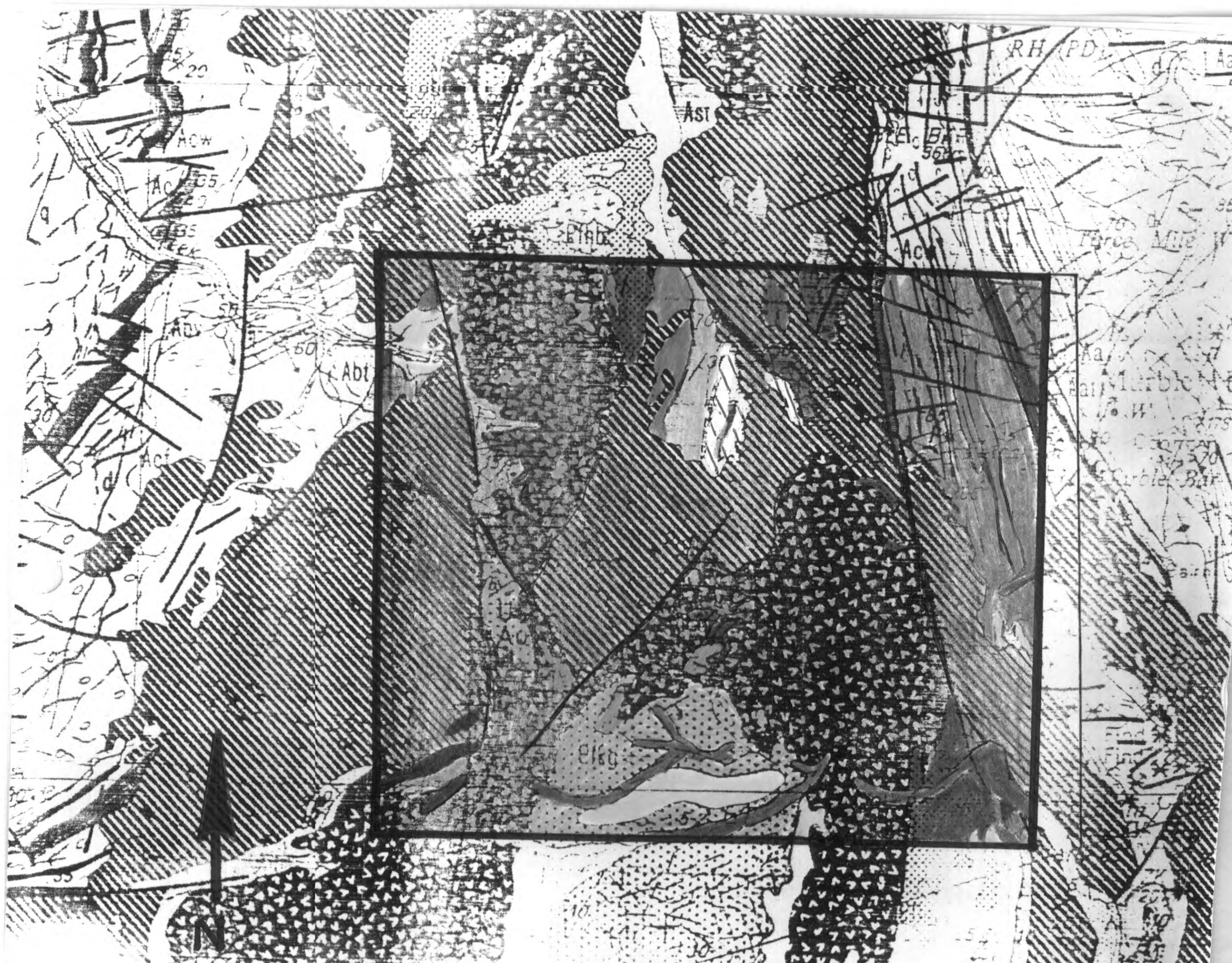
PART OF NATIONAL TOPOGRAPHICAL
MAP SERIES SHEET NO: 2855 MARBLE BAR

S.H. & M.T. STUBBS

EXPLORATION LICENCE 45/1059

PILBARA GOLD FIELDS, W.A.

A39484



S.H. & M.T. STUBBS

EXPLORATION LICENCE 45/1059

DIAGRAMMATIC SECTION

TRANSVERSE MERCATOR PROCECTION

ZONE 2 AUSTRALIA SERIES

A39484

REFERENCE

QUATERNARY

Transported sand; some salt dunes. Nature of underlying rock uncertain
Qk Heavy soil (gilgai) - clay and basaltic boulders

Qr Qg Qk

TERTIARY

Tp Pisolitic limonite and goethite deposits, many containing basalt ooids
Td Ferruginous duricrust of the **Hamersley Surface**. Some consolidated breccia. In places grades downslope into Tp
Tc Vuggy white opaline silica above gravel and siltstone. Correlative with the **Oakover Formation**

LOWER PROTEROZOIC — Fortescue Group

MADDINA BASALT: vesicular and amygdaloidal basalt

KURUNA SILTSTONE: siltstone, pisolitic tuff and carbonate

NYMERINA BASALT: massive and coarse textured with flows of vesicular basalt

TUMBIANA FORMATION:

Meentheena Carbonate Member: banded dark grey siliceous limestone, some tuff. Stromatolites

Mingah Tuff Member: pisolitic tuff with mudstone, shale and local basalt

KYLENA BASALT: vesicular and amygdaloidal basalt, some pillow and columnar jointed flows

Local sandstone and grit

Local basaltic agglomerate

HARDEY SANDSTONE: sandstone, grit and conglomerate, commonly arkosic and containing current structures. Minor shale, tuff
Local basalt and agglomerate

Tuff, siltstone and mudstone. Pisolitic and ooidal beds

Sandstone, grit and conglomerate (well sorted)

Correlated with **Glen Herring Shale**

Basalt with local agglomerate and tuff

MOUNT ROE BASALT: amygdaloidal, vesicular, columnar jointed, pillow and massive basalt, some distinctive plagioclase-phyric flows

Pg Pc

Pd Rp Pm

Dolerite dyke

Ad Am Ar Apa

Ad Dolerite dyke
Am Micrographic dyke
Ar Rhyolite or dacite dyke
Apa Felsic porphyry
Af Felsite
Apf Dark felspar-quartz-biotite porphyry. **Boobina Porphyry**
p Pegmatite
q Quartz vein
Chert (tectonically controlled)

Ast

ARCHAEAN

Ac Acq Acw Acj Acf Aci

Ac Chert (not subdivided)
Acq Quartzite or meta-chert
Acw Black/white and grey/white banded chert, some dark chert
Acj Red/white banded chert
Acf Ferruginous chert
Aci Banded iron formation, jaspilite

Aa Aat Aav

Aa Rhyolite to dacite lava; massive, porphyritic, vesicular, columnar jointed and pillow varieties
Aat Tuff
Aav Agglomerate

Ab Abm Ao Adi

Abm Generally dendritic hornblende-chlorite rock, locally vesicular
Ao Gabbro. Some layered varieties
Adi Diorite

Au Aua Auc Aup Aul Aut Aux

Au Ultramafic rock (not subdivided)
Aua Amphibole rock (tremolite/actinolite ± chlorite), generally schistose
Auc Serpentinite
Aup Peridotite and dunite. Light green and medium to coarse grained
Aul Pyroxene peridotite. Black, coarse grained olivine phyric. Includes phlogopite lherzolite
Aut Talc schist, mostly with chlorite, actinolite and carbonate
Aux Pyroxenite

A39484

S.H. & M.T. STUBBS

EXPLORATION LICENCE 45/1059

PILBARA GOLD FIELDS, W.A.

PART OF MINES DEPT TENEMENT PLAN

- MARBLE BAR
GLEN HERRING

A39484

MARBLE BAR (1:50,000)

AREA A

AREA B

E45/1059

A2906 Common

A1363

A12752 Water

Shady Camp Well

Timber

COONGAN

Loc 70 3116/9922
Loc 72 3116/10118
Loc 73 3116/10151
Loc 74 3116/9892
Loc 75 3116/9970
Loc 76 3116/9830

AA24096 Loc 18 Parks & Recn

Chinaman Pool

The Marble Bar

Marble Bar Pool

MC 7996

MC 7997

MC 7998

MC 7999

MC 7998

L45/14

MARBLE BAR DAMSITE

Refer to PWD

P45/2006

MC 7643

M45/296

MC 1032

A13676 Timber

M45/297

MAB116

35'

70

40'

180000mE

E45/1059

Limestone Well

A12773 Water

Just In Time Well

A13676 Timber

E45/130

MARBLE BAR DAMSITE

Refer to PWD

kilometres

0 1.0 2.0 3.0 4.0 5.0

1:50,000 SCALE

GLEN HERRING (1:50,000)

EGINBAH

3114
1244

N

RIVER

A39484

S.H. & M.T. STUBBS

REPORT FOR EXPLORATION LICENCE 45/1059

17/09/92 TO 16/09/93

FURTHER TO THE INITIAL REPORT IN THE YEAR ENDING 16/09/92, EXTENSIVE GROUND PROSPECTING WAS CARRIED OUT INSIDE THE AREA

21° 09' 30" TO 21° 11' S
AND
119° 36' TO 119° 38' E

WITH VERY DISAPPOINTING RESULTS. NO FURTHER GOLD VALUES FOUND. SEE MAP "AREA A" FOR DETAILS OF GEOLOGY.

FURTHER GROUND PROSPECTING WAS ALSO CONTINUED IN AREA

21° 11' TO 21° 12' S
AND
119° 40' TO 119° 41' E

A CONGLOMERATE AREA WITH GOLD VALUES HAS BEEN INDENTIFIED AND FURTHER GEOLOGICAL WORK IS CONTINUING.
SEE MAP "AREA B" FOR ASSAY RESULTS.

ASSAY METHOD:

2 KG CHIP ROCK SAMPLES WERE COLLECTED IN FIELD. TOTAL SAMPLE WAS CRUSHED IN LABORATORY - JAW CRUSHER, THEN SPLIT USING STANDARD LABORATORY SPLITTER. A SAMPLE OF 500 GRM WAS RETAINED THEN GROUND IN ROTARY CRUSHER TO REDUCE SIZE TO 100% = 3 MM. AFTER MIXING, A 30 GRM SAMPLE WAS FINELY CRUSHED IN VIBRATING CRUSHER TO DUST.

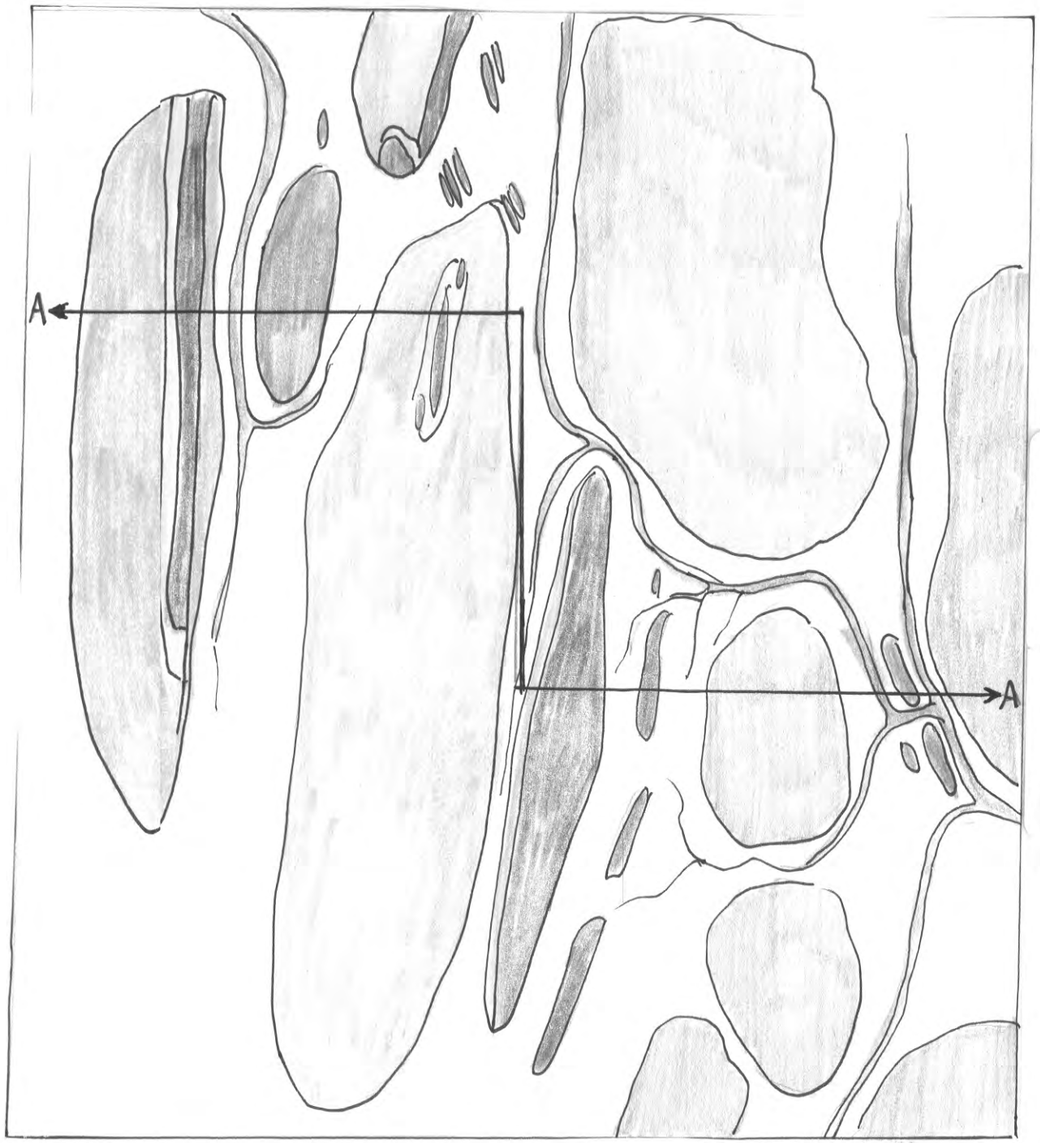
8 GRM SAMPLES WERE ASSAYED USING AQUA REGIA DIGESTION, AND GOLD CONTENT MEASURED USING A ATOMIC ABSORPTION SPECTROPHOTOMETER. DETECTION AVAILABLE DOWN TO 0.05 GRM/T.

MAPPING:

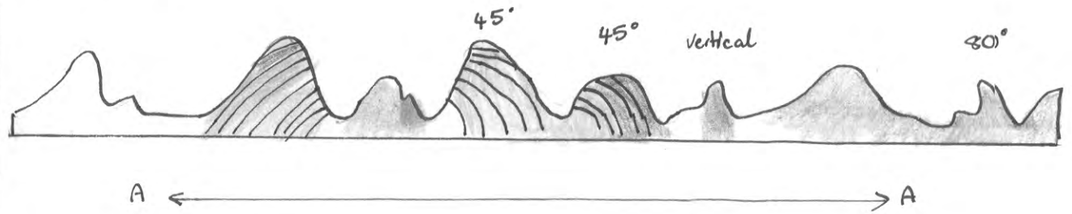
GEOLOGICAL SKETCHES AND MAPPING CARRIED OUT WERE ROUGH FOR FIELD WORK ONLY. WE HAVE ENDEAVOURED TO PUT THESE INTO A FORMAT THAT CAN BE USEFUL.

EXTENSIVE GROUND PROSPECTING ON FOOT, WAS NECESSARY DUE TO THE TERRAIN. THIS WAS NOT ONLY TIME CONSUMING, BUT LIMITED THE AREA WE COULD COVER IN A CONCENTRATED SURVEY.

FEW ASSAYS WERE ACTUALLY TAKEN FOR THE GROUND COVERAGE DUE TO THE VERY LITTLE SURFACES FREE OF JASPER AND BASALT LAVA FLOWS.



LOOKING NORTH



KEY

- BANDED IRON
- BASALT
- SANDSTONE (HARDY)
- CHIRT
- SEDIMENTS. SANDSTONE (NOT HARD) + SLATE. SLATE TENDS TO BE ON THE BOTTOM
- CONGLOMERATE
- JASPER/CHIRTY

MAP AREA A

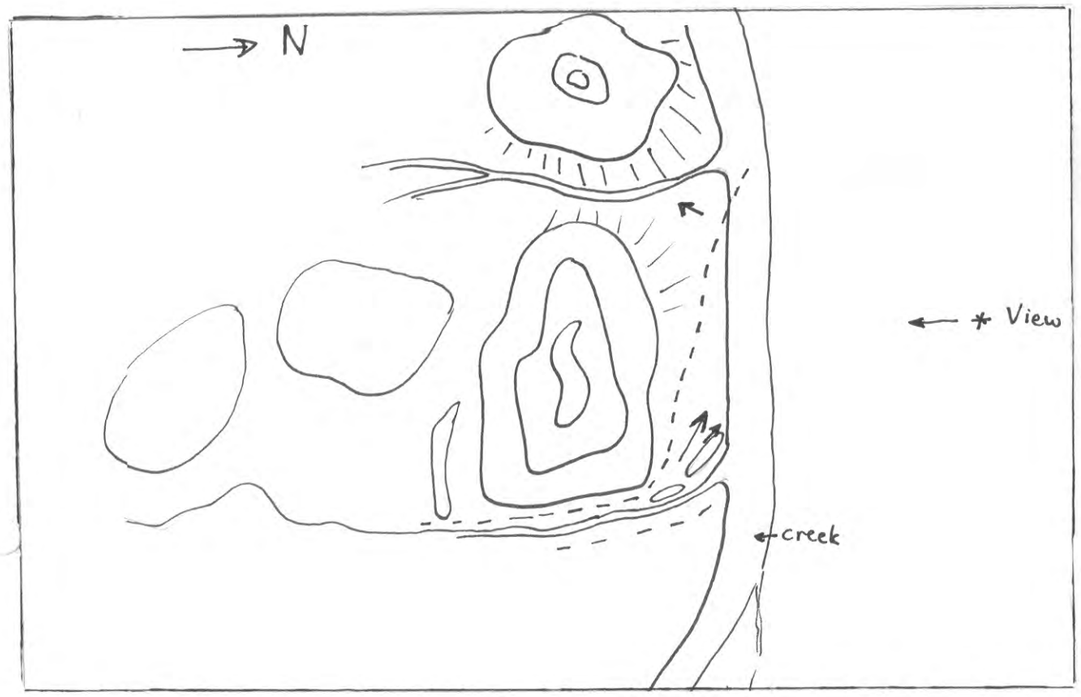
ASSAY RESULTS

0909	NIL
0910	NIL
0911	NIL
0912	NIL
0913	NIL
0914	NIL
0915	NIL
0916	NIL
0917	NIL
0918	NIL
0919	NIL
0920	NIL

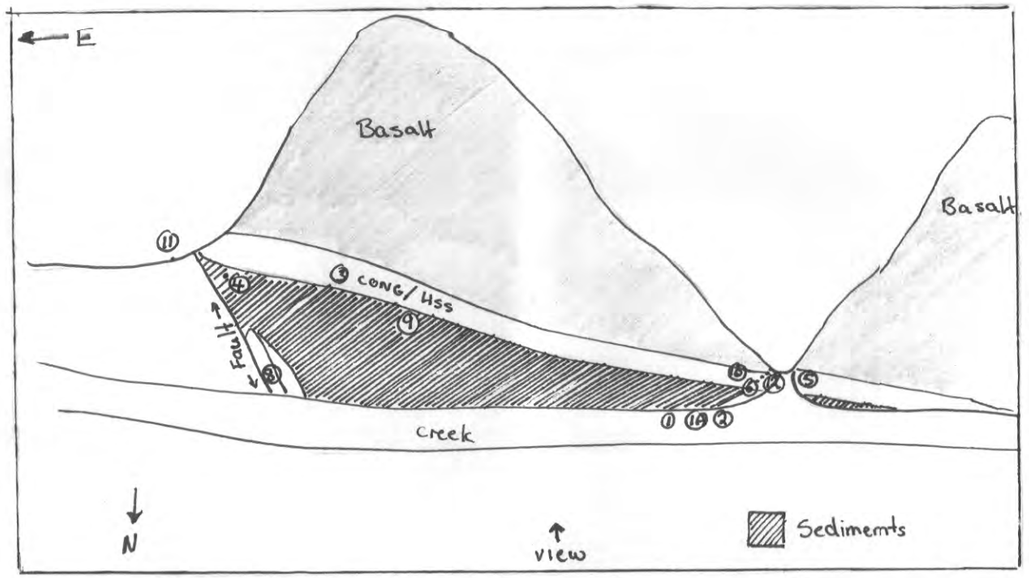
S.H. & M.T. STUBBS

EXPLORATION LICENCE 45/1059

17/09/92 TO 16/09/93



Plan View



Elevation View

MAP AREA B

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EXPLORATION LICENCE 45/1059

17/09/92 TO 16/09/93

ASSAY RESULTS

GORGE	
1	5.09
1a	6.60
2	1.30
3	0.20
4	1.10
5	7.40
6	0.50
7	0.10
8	0.20
9	1.00
10	3.10
11	0.10
12	2.50
3226	NIL
3227	0.1
3228	NIL
3229	0.2
3230	NIL

Appendix 1B:

SH&MT Stubbs 1993/94 Exploration Reports:
WAMEX, Mines Department Index, M8113–A42569)

EXPLORATION REPORT

17/09/93 TO 16/09/94

EXPLORATION LICENCE 45/1059

MARBLE BAR DISTRICT, WESTERN AUSTRALIA

REF. NO. M8113

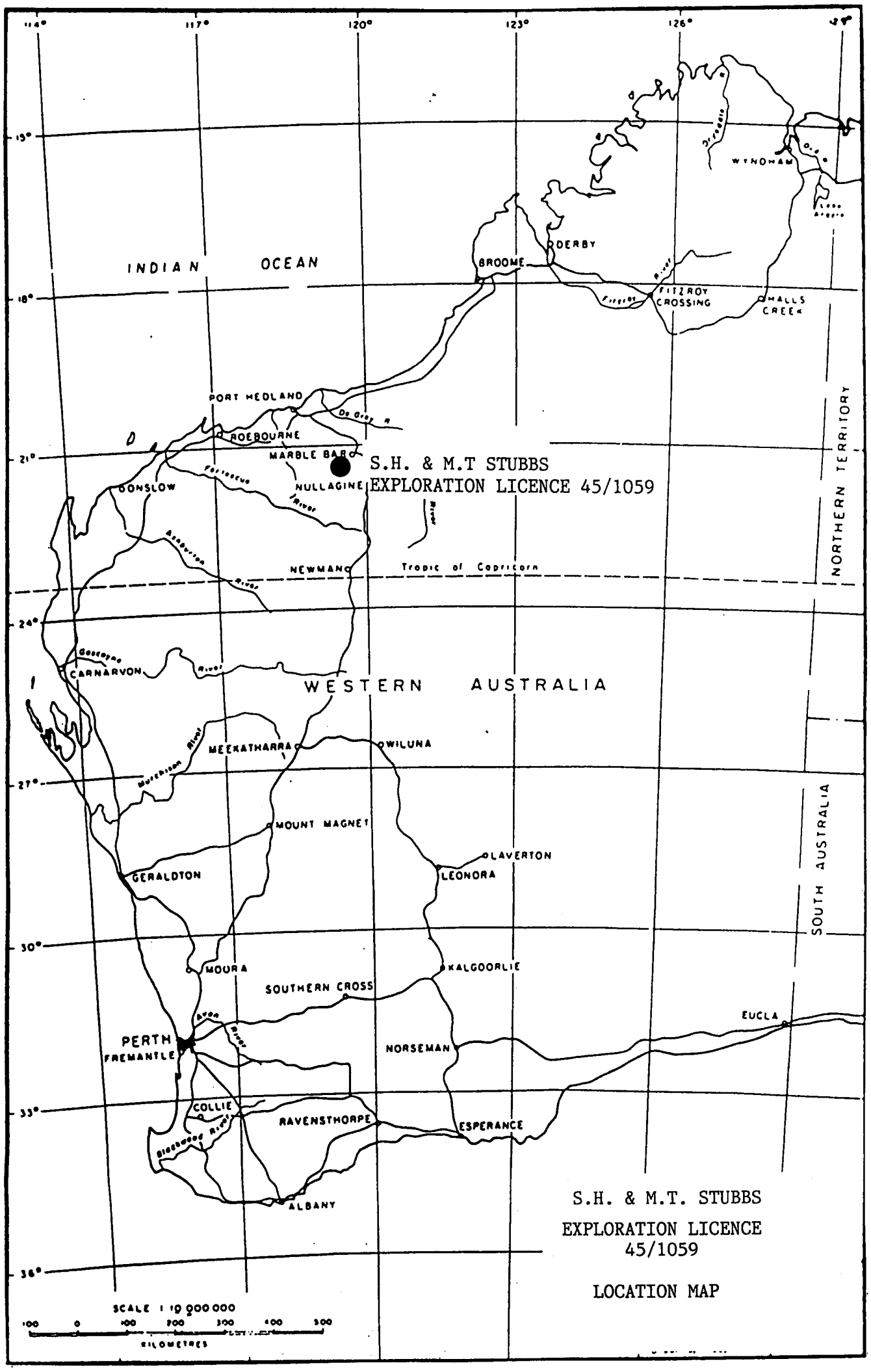
S.H. & M.T. STUBBS

COMET GOLD MINE

P.O. BOX 10, MARBLE BAR, 6760

WESTERN AUSTRALIA

PHONE: (091) 761 015 FACSIMILE: (091) 761 129

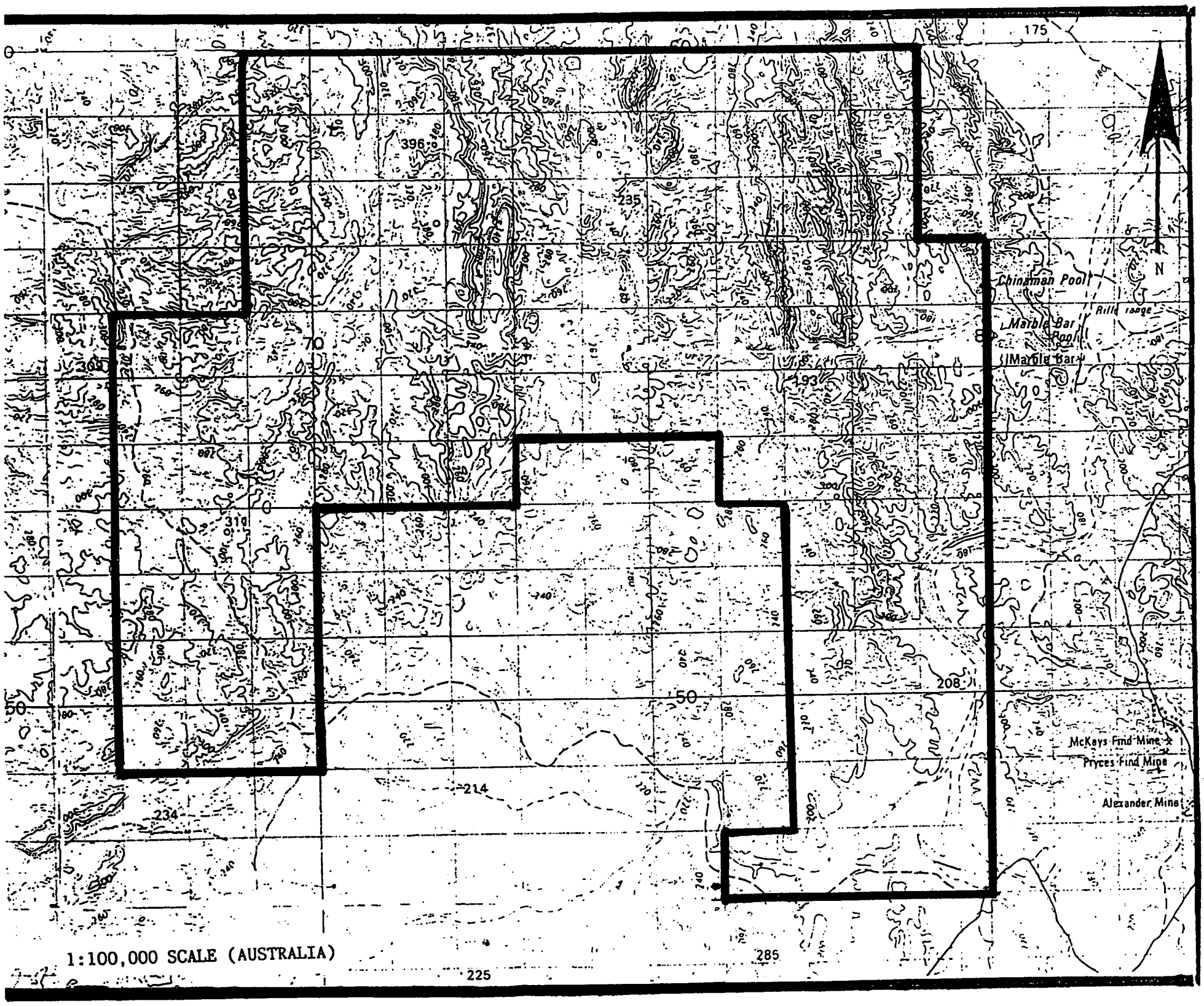


S.H. & M.T. STUBBS

EXPLORATION LICENCE
45/1059

LOCATION MAP

CONTENTS:

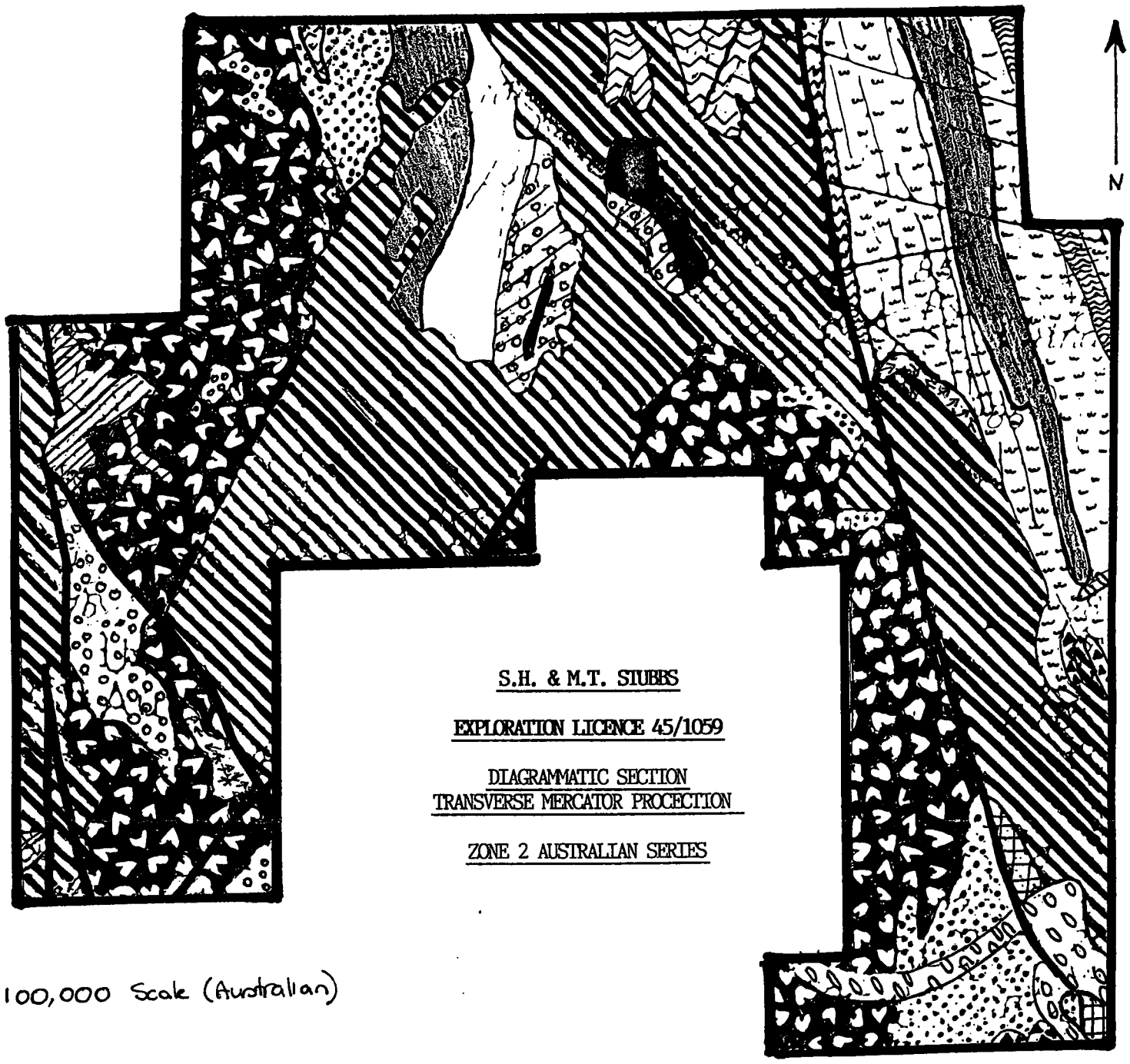


PART OF NATIONAL TOPOGRAPHICAL MAP SERIES SHEET NO.: 2855 MARBLE BAR

S.H. & M.T. STUBBS

EXPLORATION LICENCE
45/1059

PILBARA GOLD FIELDS



S.H. & M.T. STUBBS

EXPLORATION LICENCE 45/1059

DIAGRAMMATIC SECTION
TRANSVERSE MERCATOR PROCECTION

ZONE 2 AUSTRALIAN SERIES

1:100,000 Scale (Australian)

Pfr .... **MOUNT ROE BASALT**

Pth .... **HARDEY SANDSTONE**

Pthst TUFF, SILTSTONE & MUDSTONE

Pthg SANDSTONE, GRIT & CONGLOMERATE

Pthb BASALT WITH LOCAL AGGLOMERATE & TUFF

.... **KYLENA BASALT**

LOCAL SANDSTONE & GRIT

LOCAL BASALTIC AGGLOMERATE

Qu .... ALLUVIUM - SAND & GRIT

.... CONGLOMERATE USUALLY POLYMICTIC

As... SEDIMENTARY ROCKS

Ast..GRIT & SANDSTONE WITH SOME CONGLOMERATE

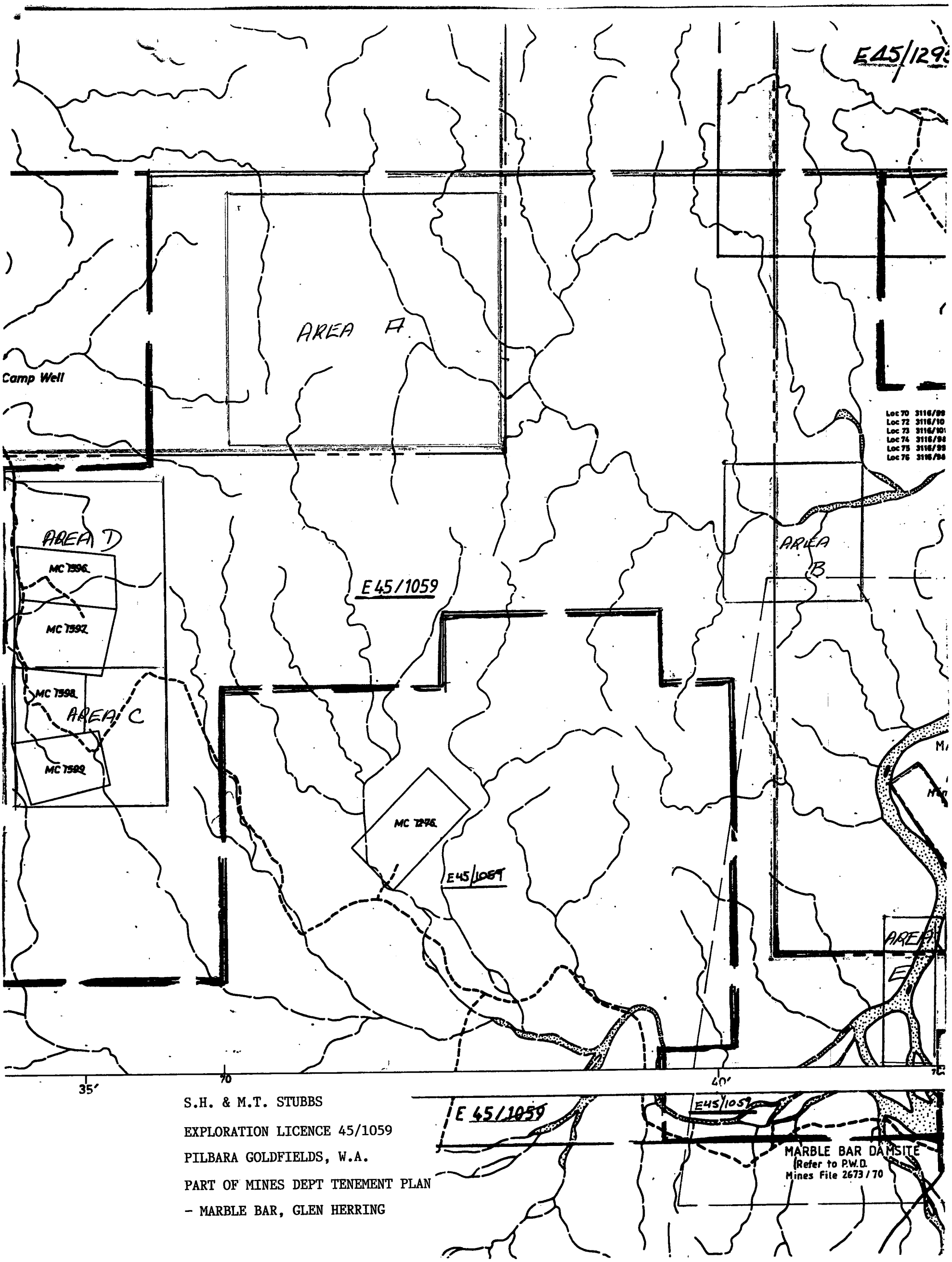
Asc..CONGLOMERATE, GENERALLY POLYMIC ALSO CONTAINING QUARTZ

Aa..RHYOLITE TO DACITE LAVA

Ab... BASALT AND ANDESITC

ABV...AGGLOMERATE

ACW..BLACK/WHITE AND GREY/WHITE BANDED CHERT



S.H. & M.T. STUBBS

EXPLORATION LICENCE 45/1059

PILBARA GOLDFIELDS, W.A.

PART OF MINES DEPT TENEMENT PLAN

- MARBLE BAR, GLEN HERRING

S.H. & M.T. STUBBS

REPORT FOR EXPLORATION LICENCE 45/1059

17/09/93 TO 16/09/94

AREA, BLOCK B - In reference to 1992-93 report.

Further sampling and surface inspection failed to reveal any significant extensions to the zone containing gold. The enrichment would appear to be on a fault line running east-west, across the conglomerate.

To further evaluate this zone, drilling would be required, and to this end further field work is being planned, with possible drilling in 1995.

BLOCK C

Further sampling and mapping was carried out in this area refer Table 1. Drawing 2 & 3.

Gold values were encountered in the conglomerates, but due to the overlay of basalt, drilling would be necessary to further evaluate this location. To this end, further field work will be necessary.

Numerous alluvial samples were taken in creeks and scree, without success.

Location C Table 1.

Assays

2392	1.5 gm
2391	0.5 gm
2390	16.0 gm
2389	3.5 gm

BLOCK D

Pan sampling of creeks in this area was carried out in areas with outcrops of decomposed conglomerates, looking for alluvial free gold, which may lead us to a gold bearing conglomerate. We were unable to find any trace of free gold. The conglomerates are mostly flat lying, except when lifted or distorted by the basalt flows. We were unable to prospect to the east of Area D, owing to very rough basalt flows.

BLOCK E

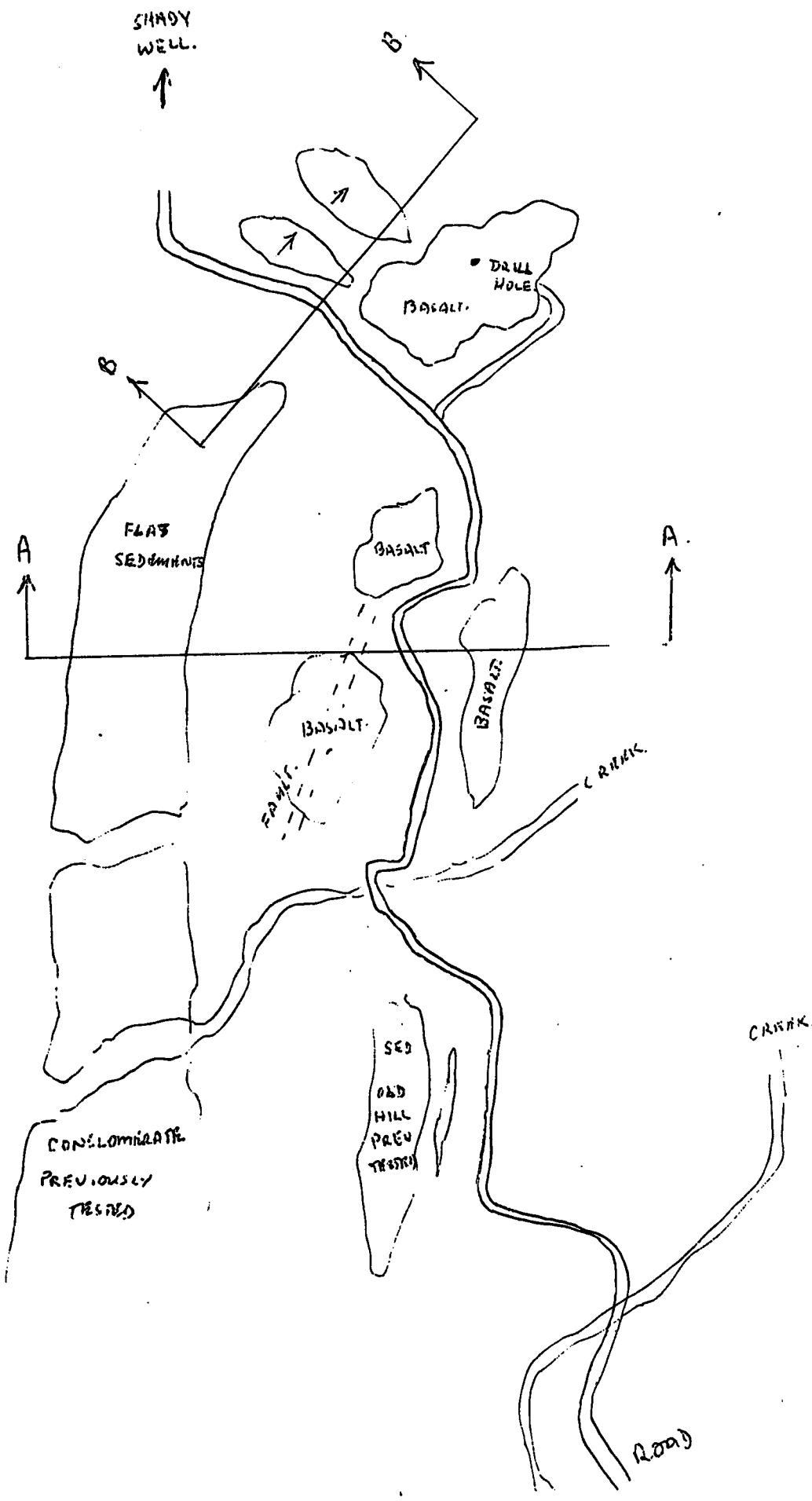
A further area near the Coongan River was prospected, looking for outcrops of conglomerate, but this area mainly consisted of basalt lava flows, which covered all other rock types.

S.H. & M.T. STUBBS E.L. 45/1059 17/09/93 TO 16/09/94

EXPLORATION LICENSE

LOCATION C.

DRAWING 2

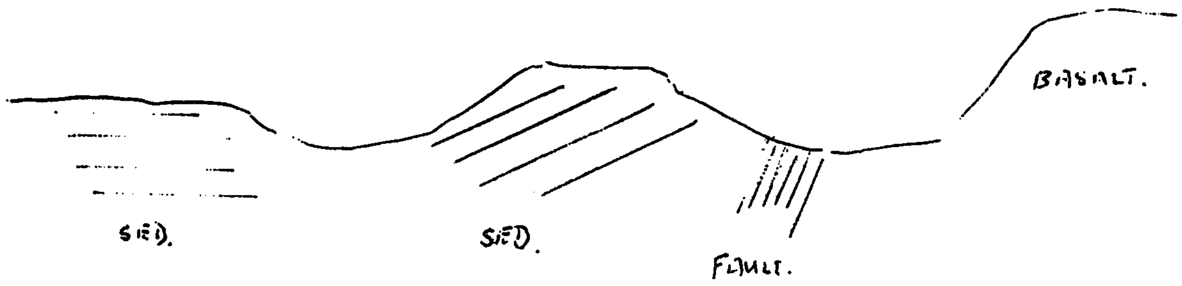


A 2489

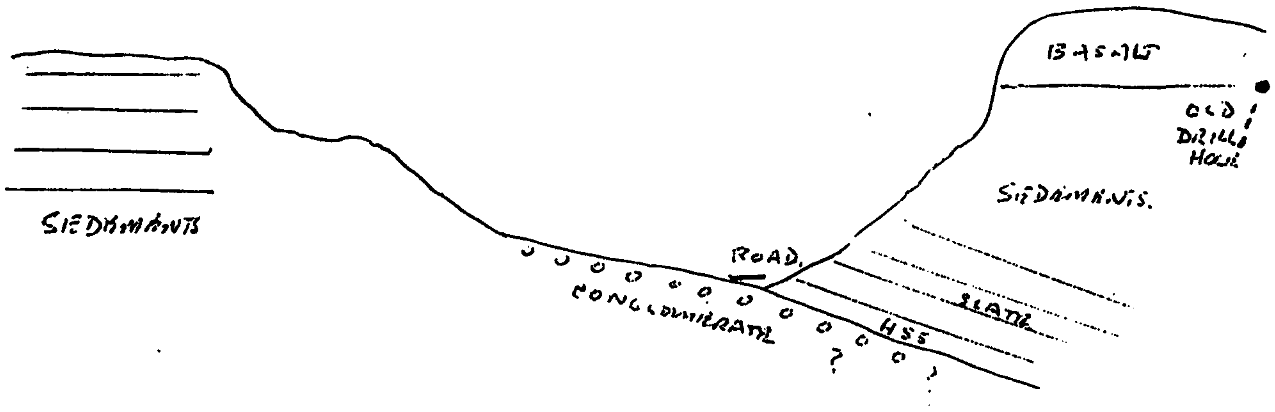
S.H. & M.T. STUBBS E.L. 45/1059 17/09/93 TO 16/09/94

EXPLORATION LICENSE

LOCATION C.
DRAWING 3.



A - A



B - B

A 42569

Appendix 2:

BHP Minerals Report

BHP

Exploration
BHP Minerals

8 August 1996

Mr Gary Morgan
Elazac Mining Pty Ltd
GPO Box 2282U
MELBOURNE VIC 3001

Dear Gary,

RE: INTERNAL COMPOSITION OF GOLD NUGGETS FROM THE COMET CONGLOMERATE

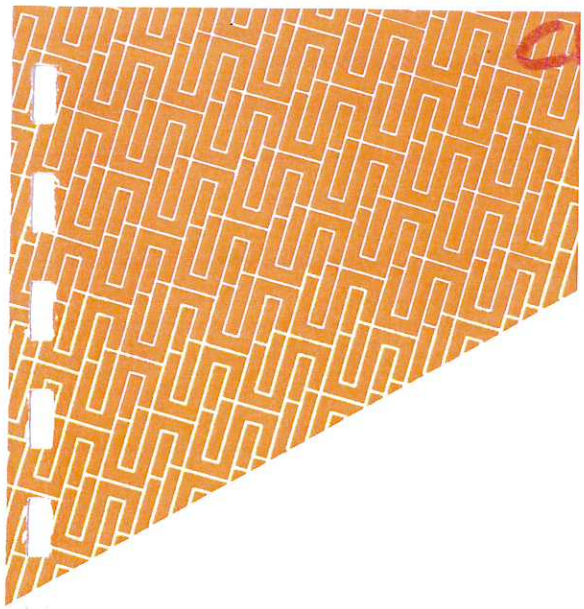
Please find attached your copy of the findings from further SEM analysis of sectioned gold nuggets from the Comet Conglomerate.

The results are quite interesting in that they show that all the nuggets are of hydrothermal origin. The earlier work was misleading in that the supergene (later weathering) rims were masking the true origin of the nuggets in some cases.

This, to us, means that the gold in the conglomerate (or at least some of the gold) is probably related to cross structures (as it is at Just-in-Time) and not of original detrital origin. This may restrict the lateral continuity of the gold content of the conglomerate.

Yours sincerely,

R SKRZECZYNSKI
Exploration Manager Operations - Australia



BHP Minerals

Exploration Department

The Exploration Department is a part of the New Business Development Division of BHP Minerals which is a Business Group of The Broken Hill Proprietary Company Limited A.C.N. 004 028 077

Exploration Petrology Section
BHP Research

Memorandum

26 July, 1996

TO: R Skrzeczynski, Exploration, Brisbane

cc: L. Ellingford, TIS Brisbane, then circulate to: G. Murphy, D. Hedger

FROM: D Gilbert, Exploration Melbourne

OUR REF: CM7424;DJG:NC; EPM 96/284 (GSZ)

INCLUSION MINERALOGY, GANGUE MINERALOGY AND INTERNAL COMPOSITION OF ELUVIAL GOLD NUGGETS, COMET CONGLOMERATE, BAMBOO CREEK AREA, PILBARA, W.A.

SUMMARY and CONCLUSIONS

[see Figures 1 to 50, Table 1 and Plates 1 to 3, MRL25546 (i) & (ii)].

1. These sectioned gold nuggets show internal compositional variations and inclusions which were not evident in the earlier SEM qualitative analysis of the surficial features (see CM7416). Consequently their genesis has been revised, where they now all appear to be of hydrothermal origin, sometimes with a narrow discontinuous rim of pure supergene gold.
2. The silver content of these eluvial gold nuggets is variable, ranging from zero (grain 2) to 11.30% (grain 3). The average silver content of the silver-bearing gold nuggets is 9.41%. Deleterious elements such as mercury are absent.
3. Most of these hydrothermal gold nuggets contain minute sulphide inclusions such as chalcopyrite (most common), galena, pyrite and cobaltite (rare), where the latter occurs as an euhedral orthorhombic crystal in the nugget of pure gold (grain 2).
4. Associated gangue minerals include quartz, kaolinitic clay (some with fine pure supergene gold inclusions), iron-stained calcium aluminium silicate phase (? altered epidote or plagioclase)epidote, calcite (minute inclusions in quartz), goethite, leucoxene and chrome spinel (detrital grain adjacent to gold nugget no. 3). Minute inclusions of a sodium magnesium aluminium silicate phase occur in the chrome spinel, where these may represent dravidic tourmalines, though confirmatory boron could not be determined by SEM.

5. Minute inclusions of a copper-tin phase (61.31% Cu, 38.69% Sn) occur in the silver-bearing gold comprising grain 3. This copper-tin phase is of uncertain origin, where it may possibly represent contamination. However it does not have the composition of commercial bronze (90% Cu, 10% Sn), which suggests a possible natural occurrence.

   During the fire assaying process it is known that certain impurities such as copper can carry gold into the cupel, which could explain some gold loss (Gasparrini, 1993). However this particular copper-tin phase, if natural, is in fact very rare and it would therefore be difficult to explain significant loss of gold.

6. Two generations of gold are evident in nugget no 3, comprising an earlier interpreted subrounded porous detrital grain (10.49% Ag) surrounded by second generation whiter higher silver gold (11.30% Ag) of hydrothermal origin. This may have some exploration significance for Rand-style gold mineralisation in the lower Proterozoic Comet Conglomerate.

REFERENCES

Gasparrini, C (1993), Gold and other precious metals from ore to market. Springer-Verlag.

Gilbert, D J (1996), Morphology and qualitative SEM analysis of eluvial gold nuggets collected near the Lower Proterozoic Comet Conglomerate, Pilbara Region, W.A. (CM7416).

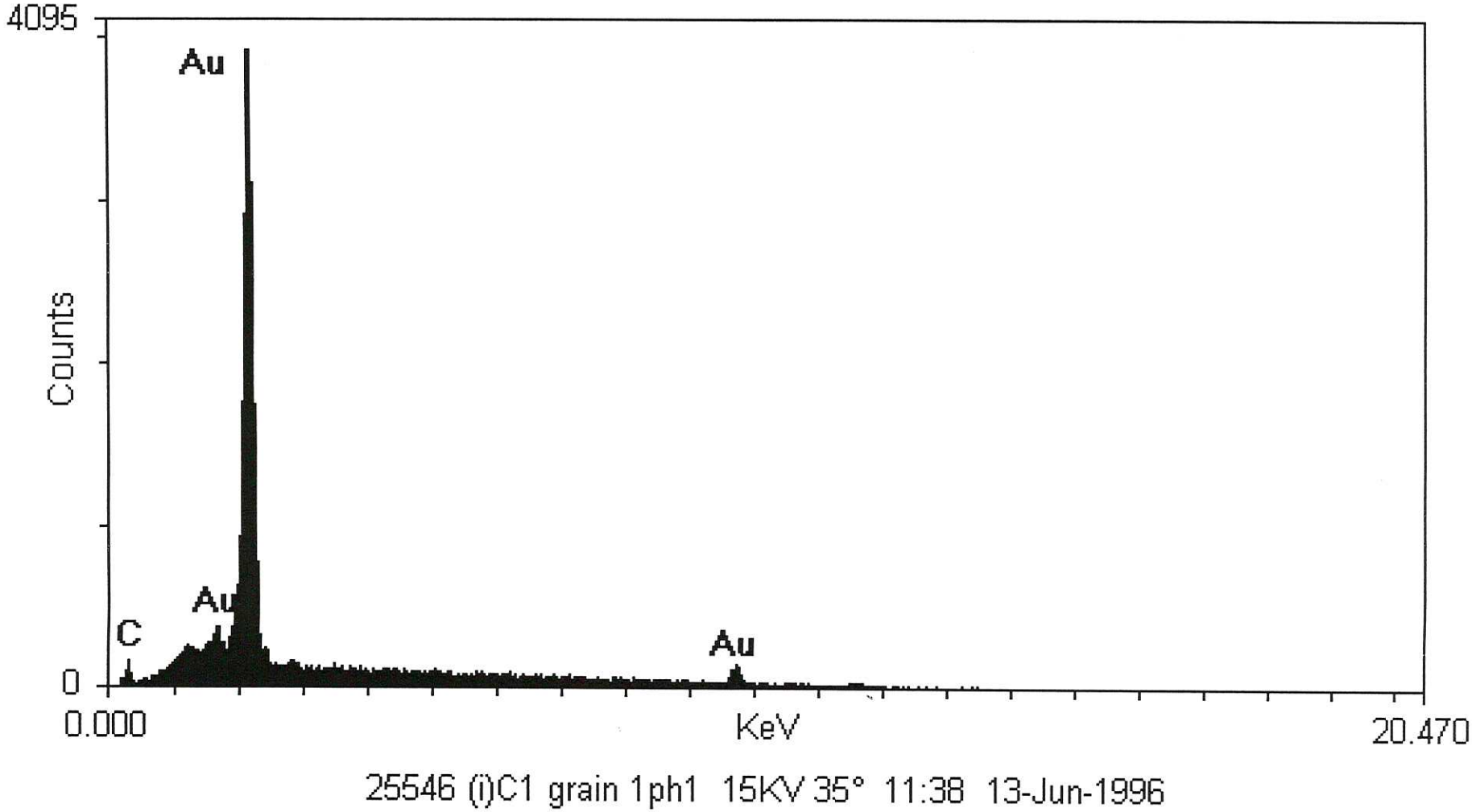
David J Gilbert

D J Gilbert
Senior Project Petrologist

TABLE 1 SEM QUALITATIVE/QUANTITATIVE ANALYSIS OF SECTIONED GOLD NUGGETS, COMET CONGLOMERATE, BAMBOO CREEK AREA, PILBARA, W.A.

Sample No. Gold nugget or grain no.	*SEM qualitative/quantitative analysis of gold in sectioned nuggets.*	*SEM qualitative/quantitative analysis of inclusions within gold nuggets and associated gangue coatings.*	*Revised genetic implications and comments.*
MRL25546 (i) (polished section) Grain 1 (See Plate 1a)	This nugget shows a discontinuous rim of pure orange-coloured gold (see Figure 1), surrounding a core of whiter silver-bearing gold (see Figures 2, 6, 9). According to EDS normalised quantitative analysis, the silver bearing gold comprises 91.12% Au, 8.88% Ag. Reference to Plate 1a, shows an inclusion of kaolinitic clay with finely intergrown pure gold, both of supergene origin (see Figures 7 & 8).	This gold nugget contains the inclusions listed below: (i) kaolinite (see Figures 3 and 7) (ii) galena (see Figure 4) (iii) goethite of supergene origin (see Figure 5)	This nugget comprises a core of silver-bearing gold (8.88% Ag), surrounded by a narrow discontinuous rim of pure supergene gold. The silver-bearing gold contains rare galena inclusions (2 microns), substantiating hydrothermal origin. The original diagnosis is not quite correct (see CM7416), where the surface analysis was obviously taken within the rim of pure supergene gold. However other supergene minerals are present including goethite and kaolinitic clay, where fine grained pure gold is intergrown with the latter.
MRL25546 (i) (polished section) Grain 2 (see Plate 1b, 1c, 1d)	Silver was not detected in several point analyses taken inside this gold nugget (see Figures 14, 15, 20, 23).	This gold nugget contains the inclusions listed below: (i) chalcopyrite (see Figures 10, 16) (ii) quartz (see Figures 11, 18, 19) (iii) cobaltite (euhedral crystal; see Figure 17). Reference to Figure 19, shows that traces of Mg, Al are present in the quartz suggesting that it replaced an earlier phyllosilicate (?chlorite). This particular gold nugget is partly surrounded by quartz (see Figures 13, 21), containing minute inclusions of epidote (see Figure 12) and calcite (see Figure 22). Traces of leucoxene also appear to be present.	Internally, this nugget comprises pure gold, which was originally thought to indicate supergene origin (see CM7416). However the presence of minute inclusions of chalcopyrite and euhedral cobaltite prove hydrothermal origin. This gold nugget is partly surrounded by ? hydrothermal quartz which contains minute inclusions of calcite and suspected epidote (propylitic assemblage).

Sample No. Gold nugget or grain no.	*SEM qualitative/quantitative analysis of gold in sectioned nuggets.*	*SEM qualitative/quantitative analysis of inclusions within gold nuggets and associated gangue coatings.*	*Revised genetic implications and comments.*
MRL25546 (ii) (polished section) Grain 5 (see Plate 3)	This nugget comprises whiter silver-bearing gold (see Figures 47, 50), sometimes with a discontinuous rim of orange-coloured pure supergene gold (see Figure 49). A normalised quantitative EDS analysis of the whiter silver-bearing gold core material gives: 90.92% Au, 9.08% Ag.	Minute sulphide inclusions in this gold nugget include: (i) chalcopyrite (see Figure 46, Plate 3a) (ii) pyrite (see Figure 48, Plate 3b).	This gold nugget comprises a core of hydrothermal silver-bearing gold (9.08% Ag), surrounded by a discontinuous rim of pure supergene gold. Hydrothermal origin for this nugget is substantiated by the presence of minute chalcopyrite and pyrite inclusions in the silver-bearing gold. The original gold analysis was obviously taken in the supergene rim (see CM7416), leading to the incorrect conclusion that the whole gold nugget was of supergene origin. In actual fact, silver-bearing gold of hydrothermal origin is partly rimmed with pure supergene gold.


4095
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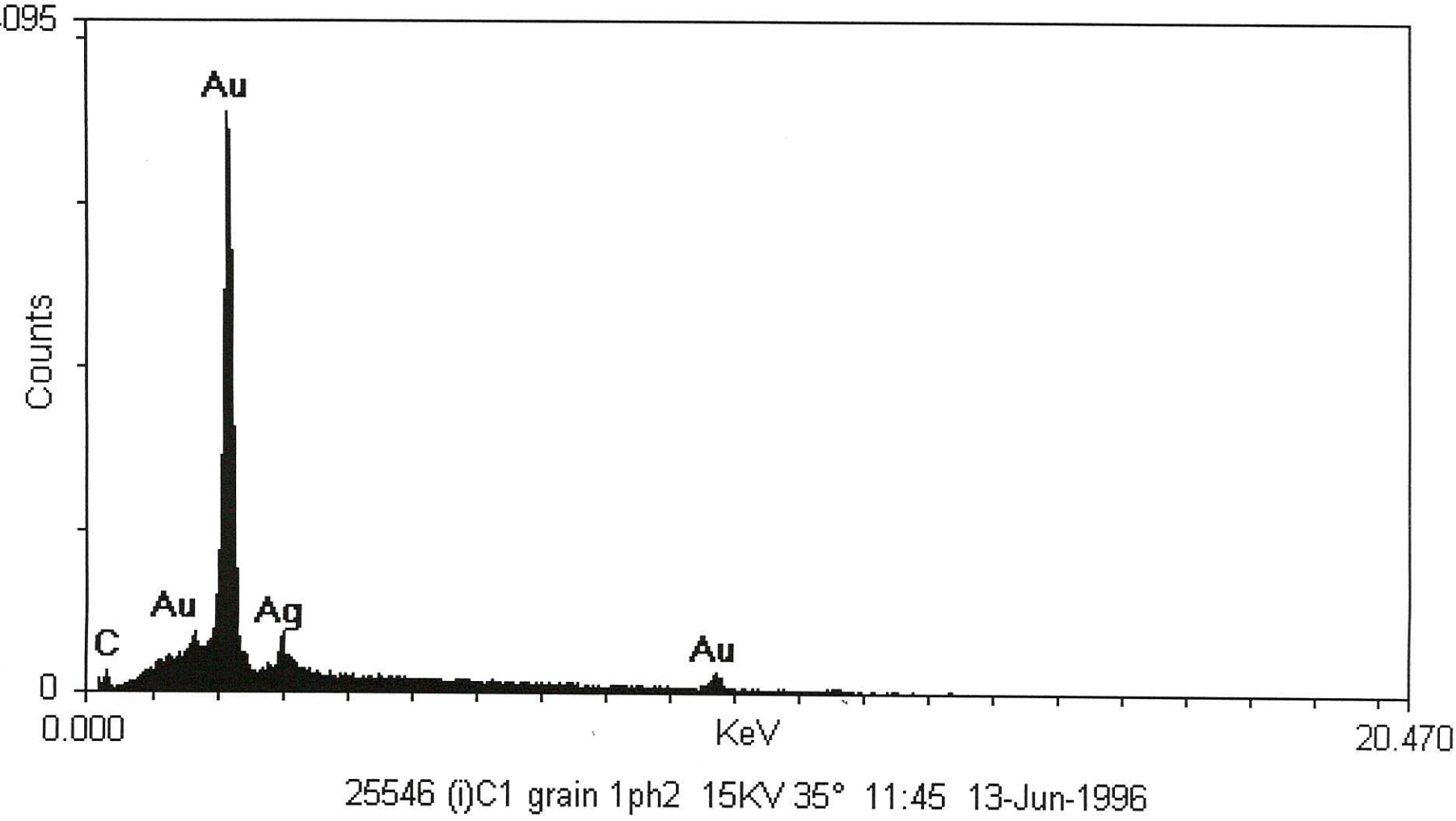
Counts
Au
C
Au
0
0.000
KeV
20.470
25546 (i)C1 grain 1ph1 15KV 35° 11:38 13-Jun-1996

Fig 1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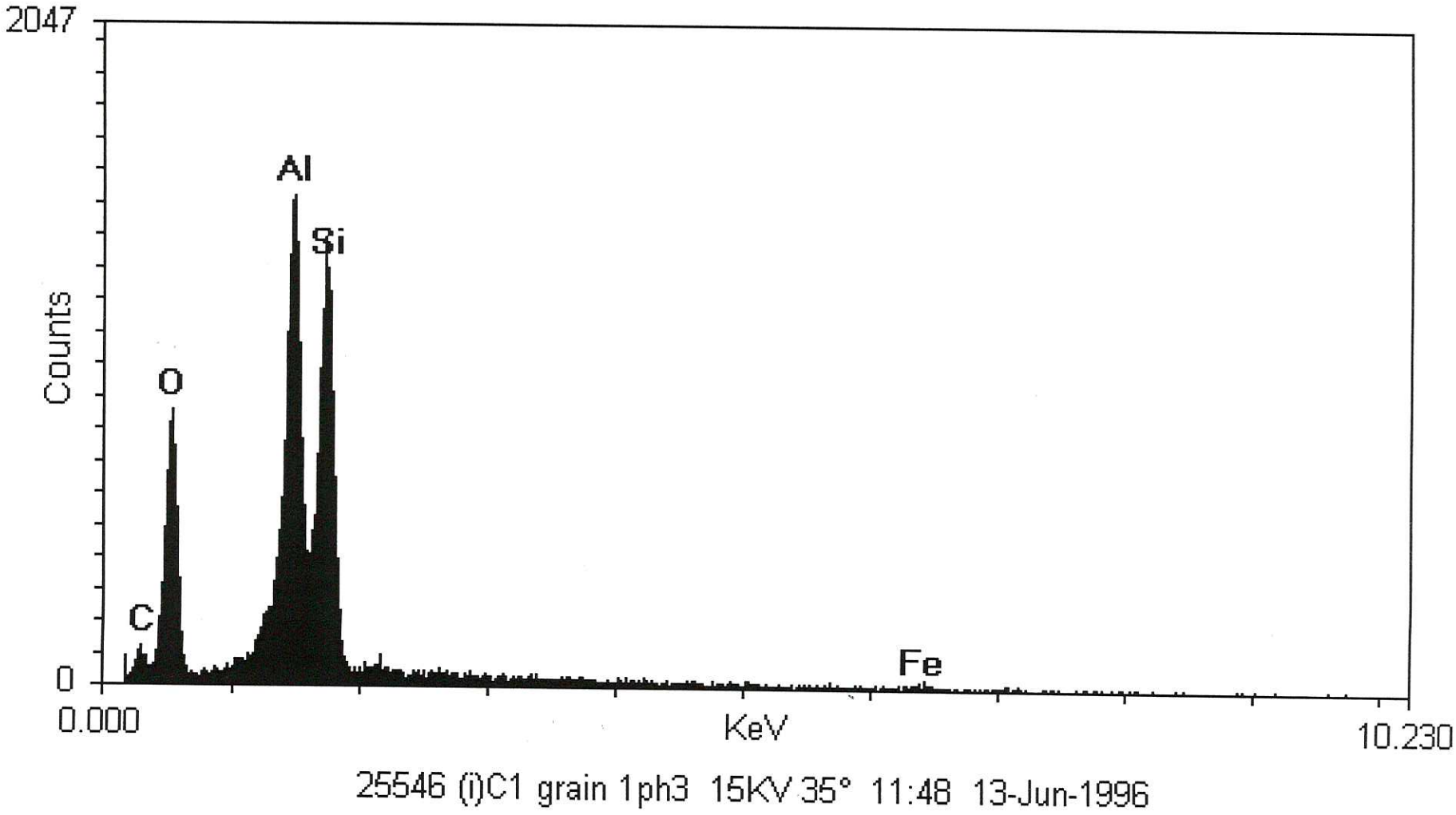
Counts
0
Au
Au
Ag
C
Au
0.000
KeV
20.470
25546 (i)C1 grain 1ph2 15KV 35° 11:45 13-Jun-1996

Fig 2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Counts
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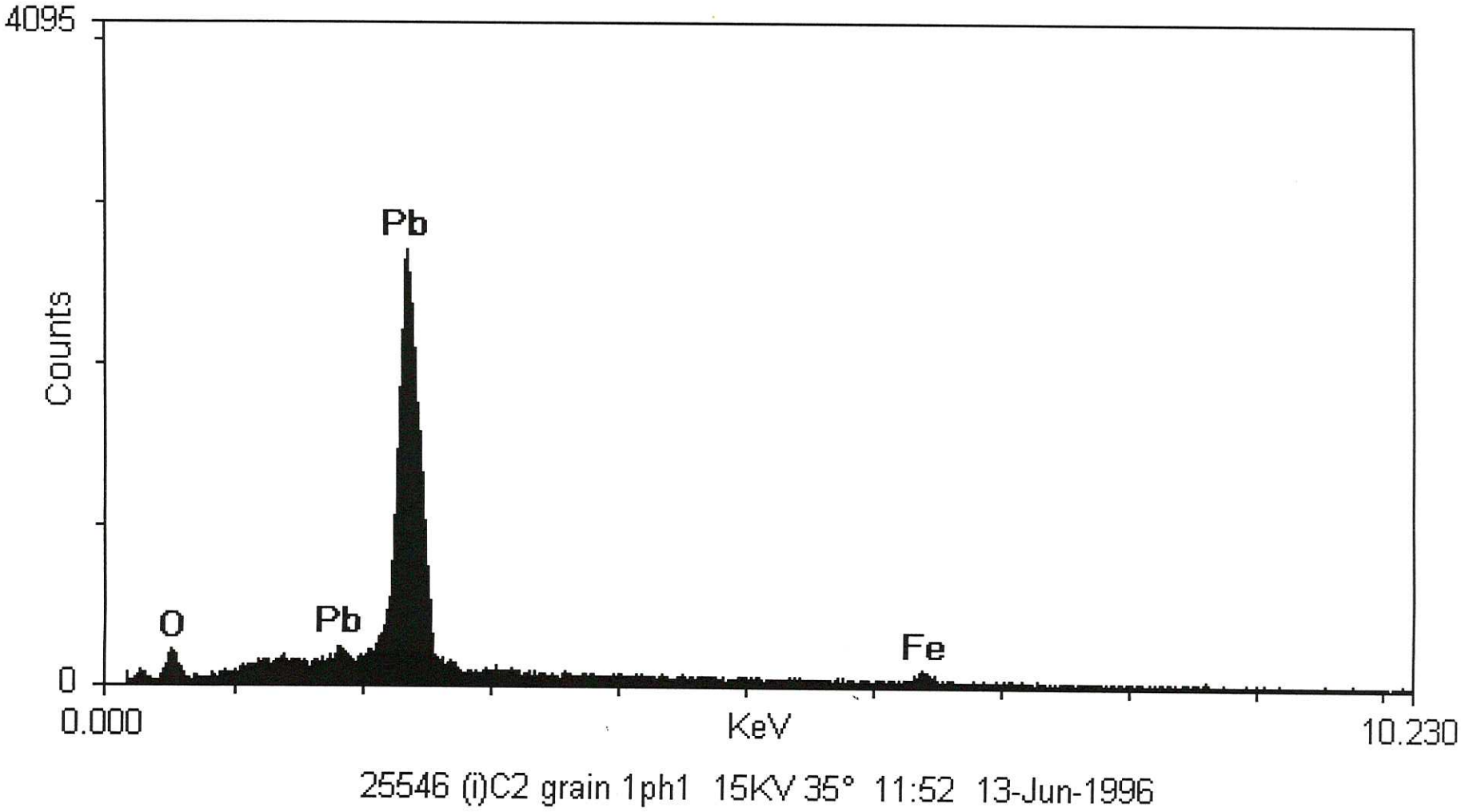
Al
Si
O
C
Fe
0.000
KeV
10.230
25546 (i)C1 grain 1ph3 15KV 35° 11:48 13-Jun-1996

Fig 3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Counts
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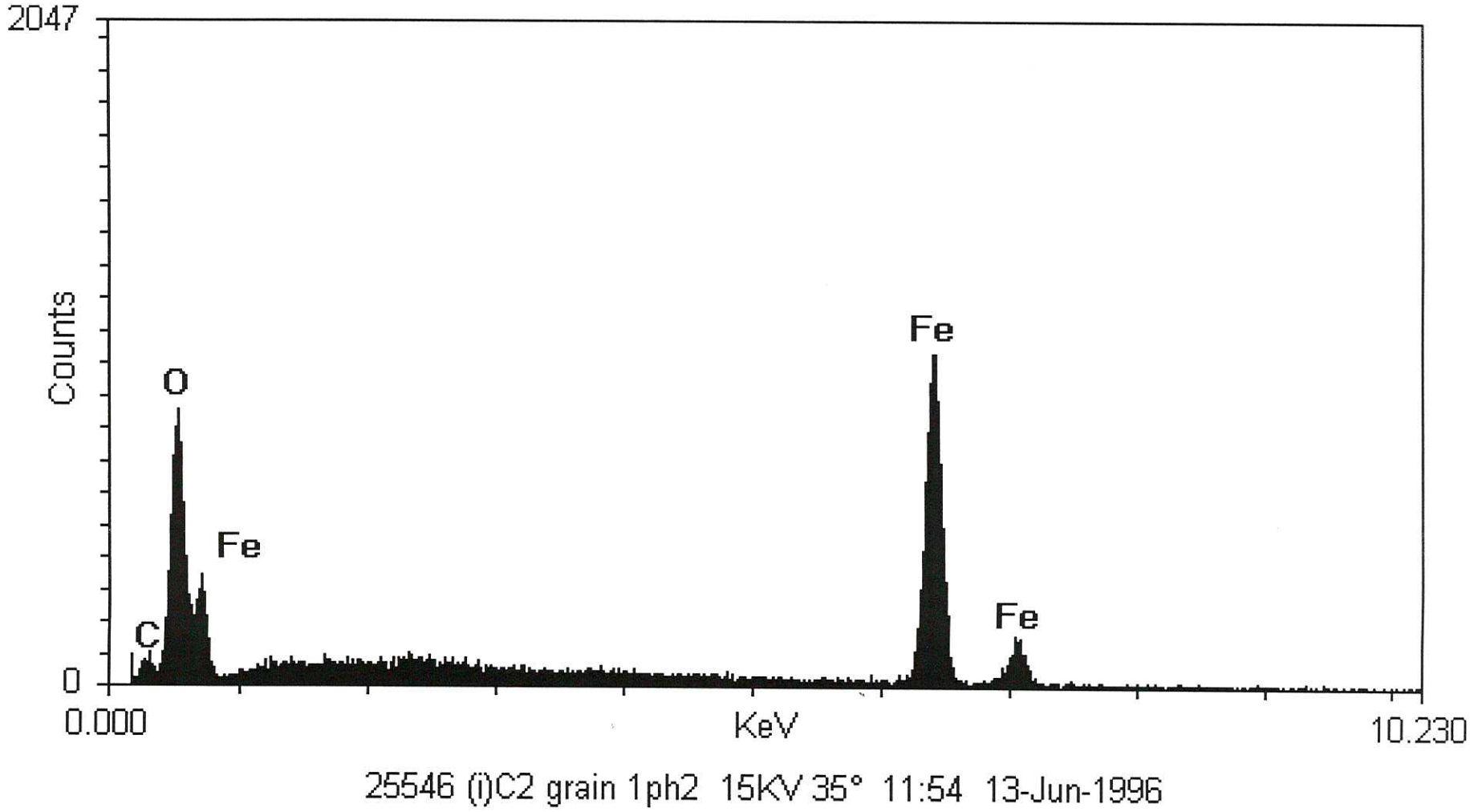
Pb
O
Pb
Fe
0.000
KeV
10.230
25546 (i)C2 grain 1ph1 15KV 35° 11:52 13-Jun-1996

Fig 4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Counts
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O
Fe
C
Fe
Fe
0.000
KeV
10.230
25546 (i)C2 grain 1ph2 15KV 35° 11:54 13-Jun-1996

Fig5

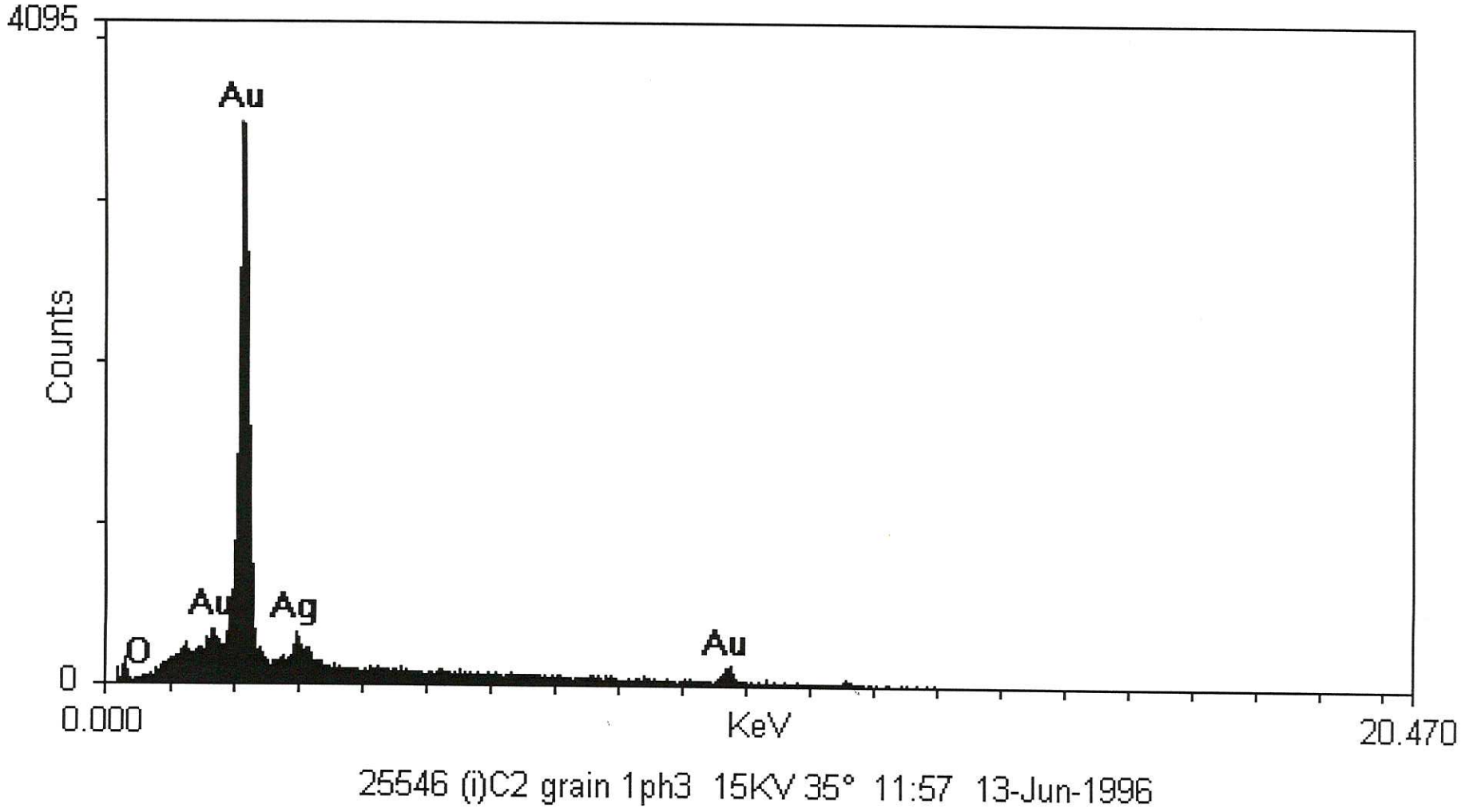
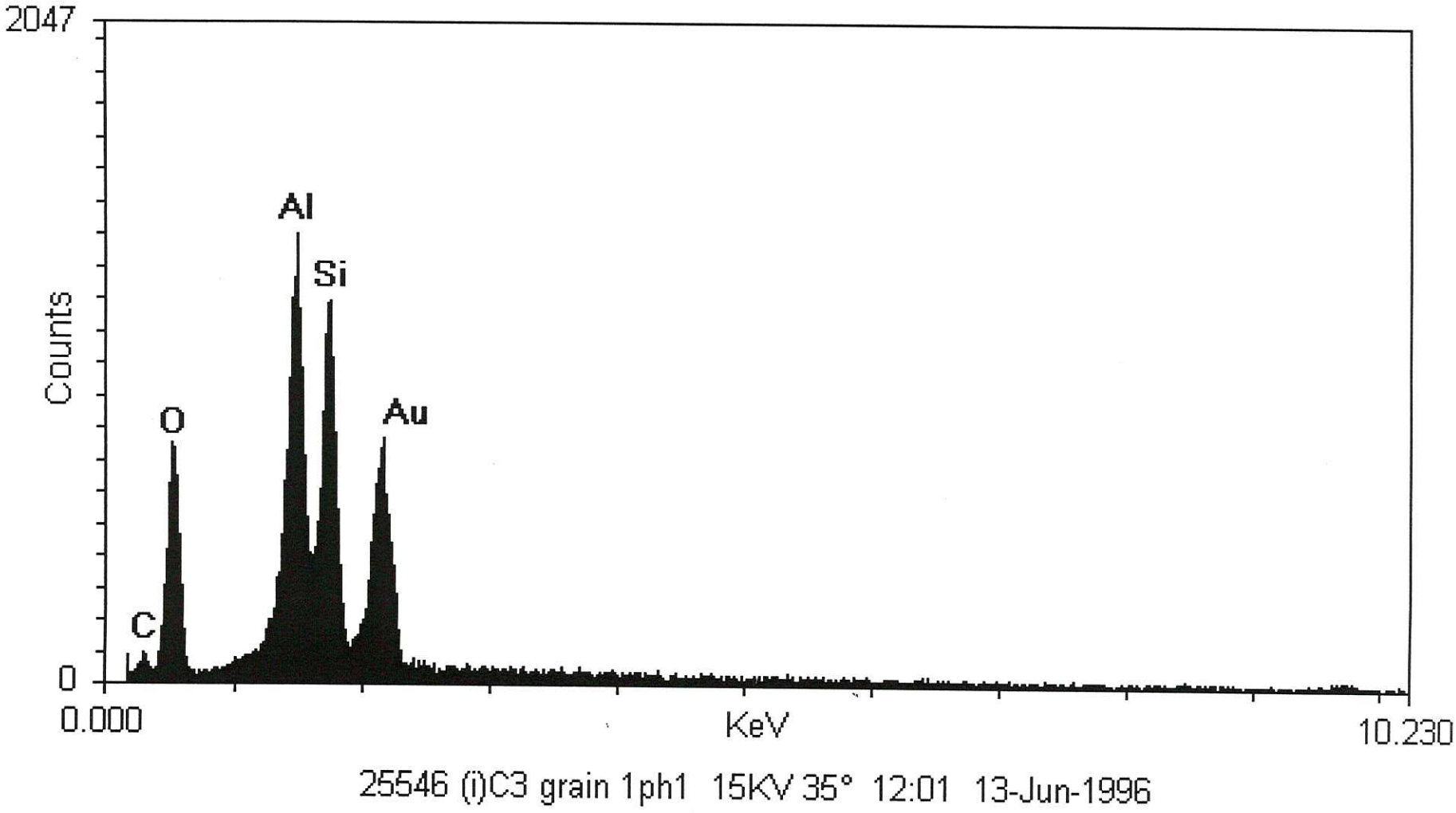

4095
Counts
0
Au
Au
Ag
O
Au
0.000
KeV
20.470
25546 (i)C2 grain 1ph3 15KV 35° 11:57 13-Jun-1996

Fig 6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Counts
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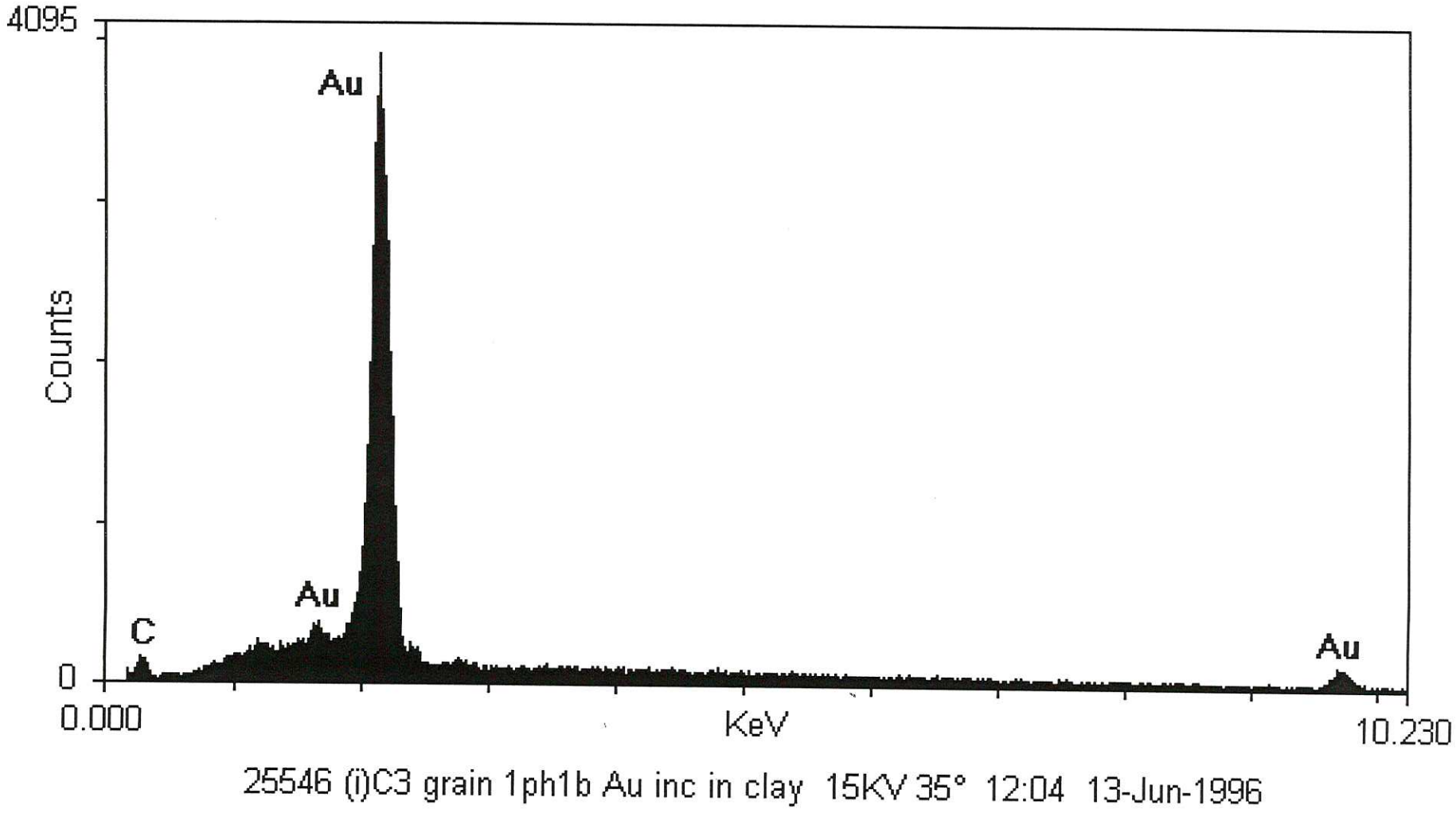
Al
Si
O
Au
C
0.000
KeV
10.230
25546 (i)C3 grain 1ph1 15KV 35° 12:01 13-Jun-1996

Fig 7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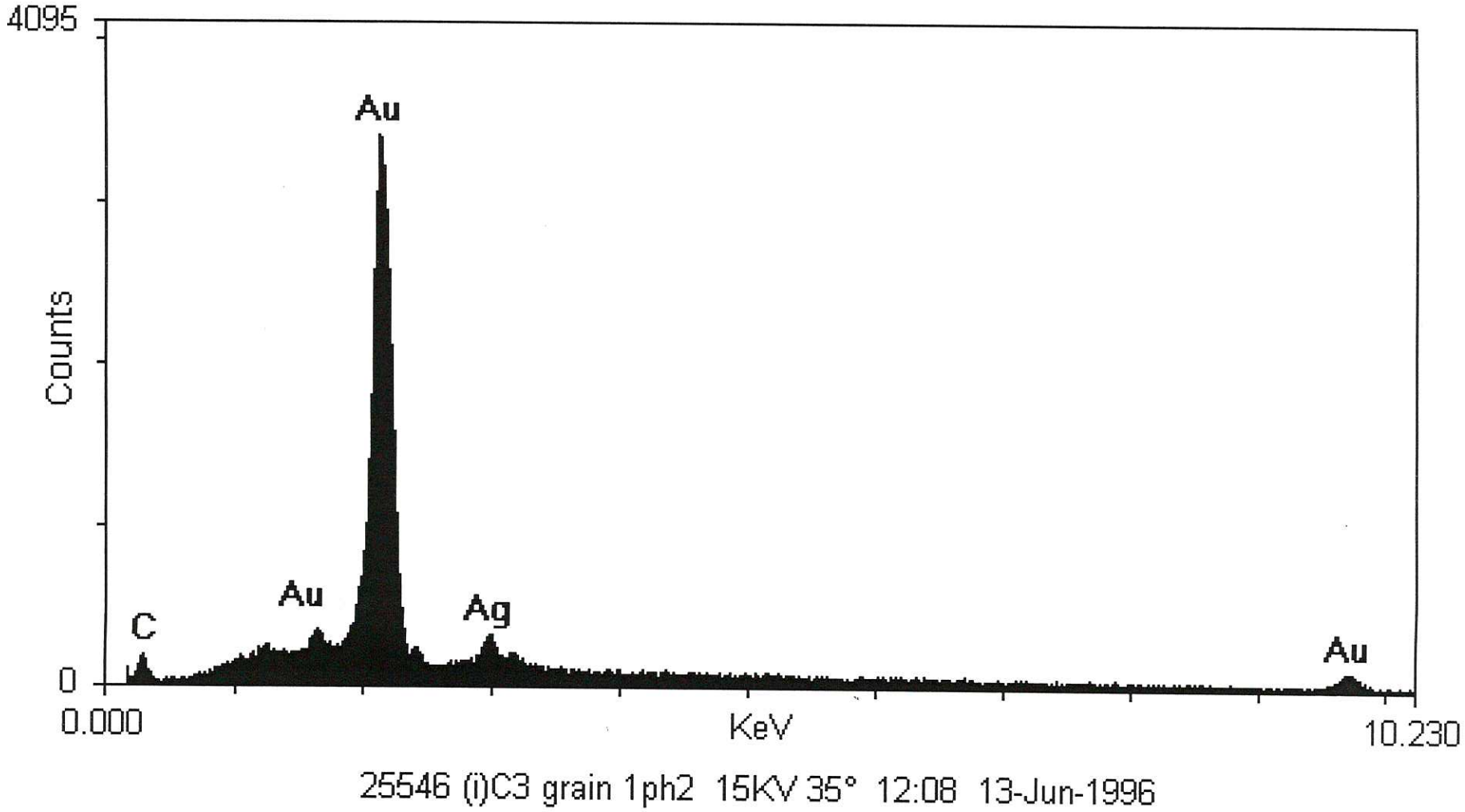
Au
C
Au
0.000
KeV
10.230
25546 (i)C3 grain 1ph1b Au inc in clay 15KV 35° 12:04 13-Jun-1996

Fig 8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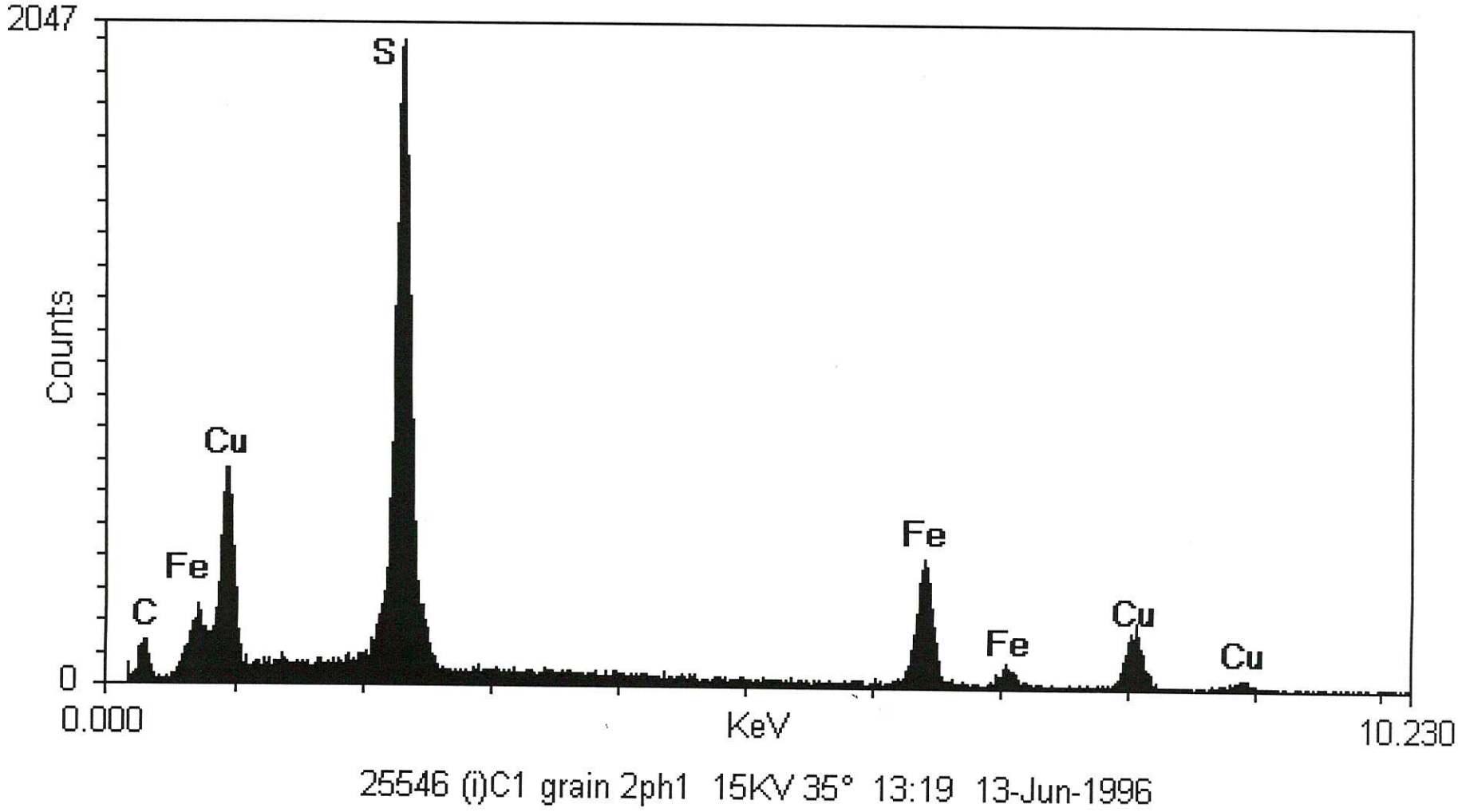
Counts
0
Au
Au
C
Ag
Au
0.000
KeV
10.230
25546 (i)C3 grain 1ph2 15KV 35° 12:08 13-Jun-1996

Fig 9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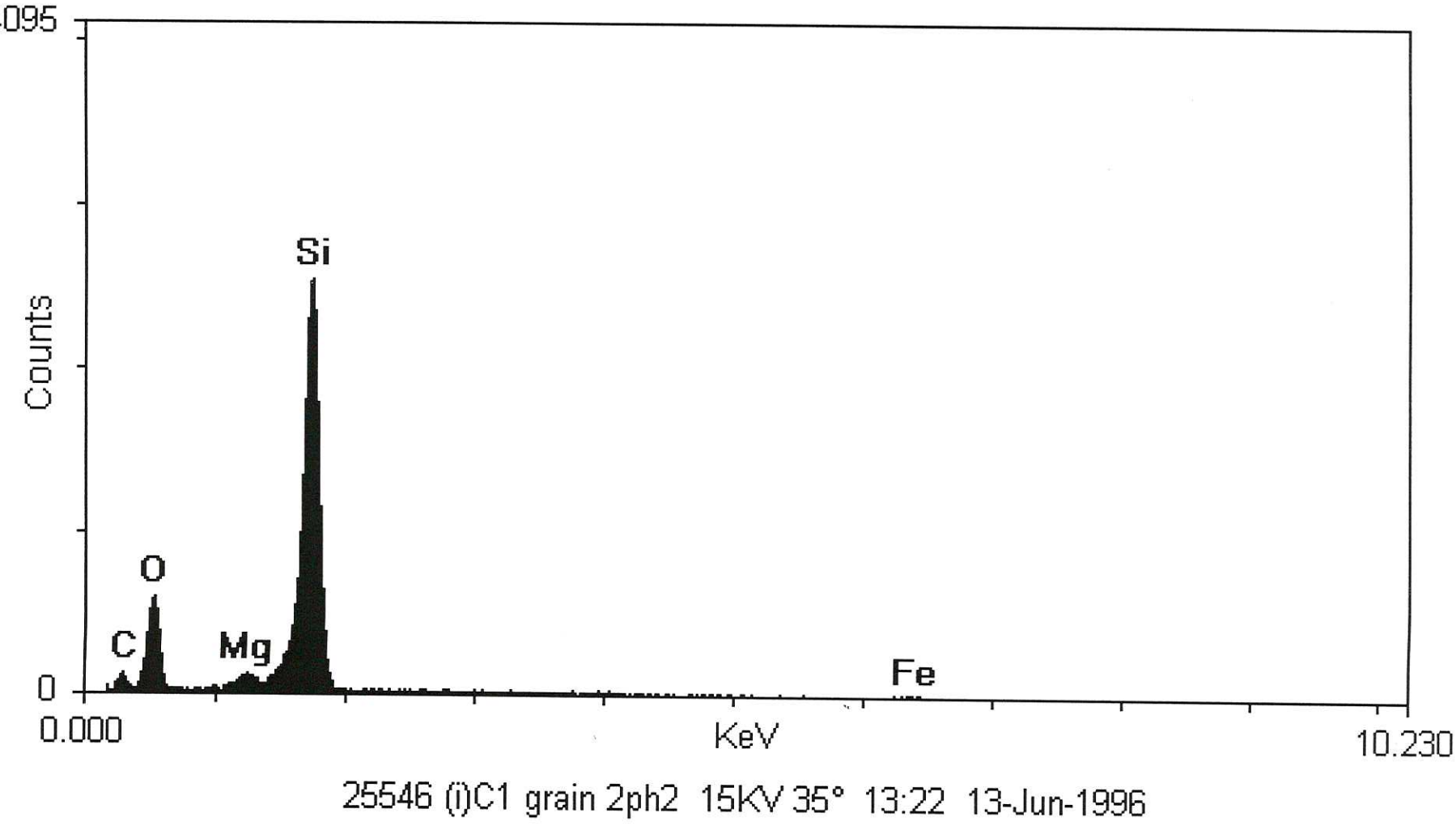
Counts
0
S
Cu
Fe
C
Fe
Fe
Cu
Cu
0.000
KeV
10.230
25546 (i)C1 grain 2ph1 15KV 35° 13:19 13-Jun-1996

Fig 10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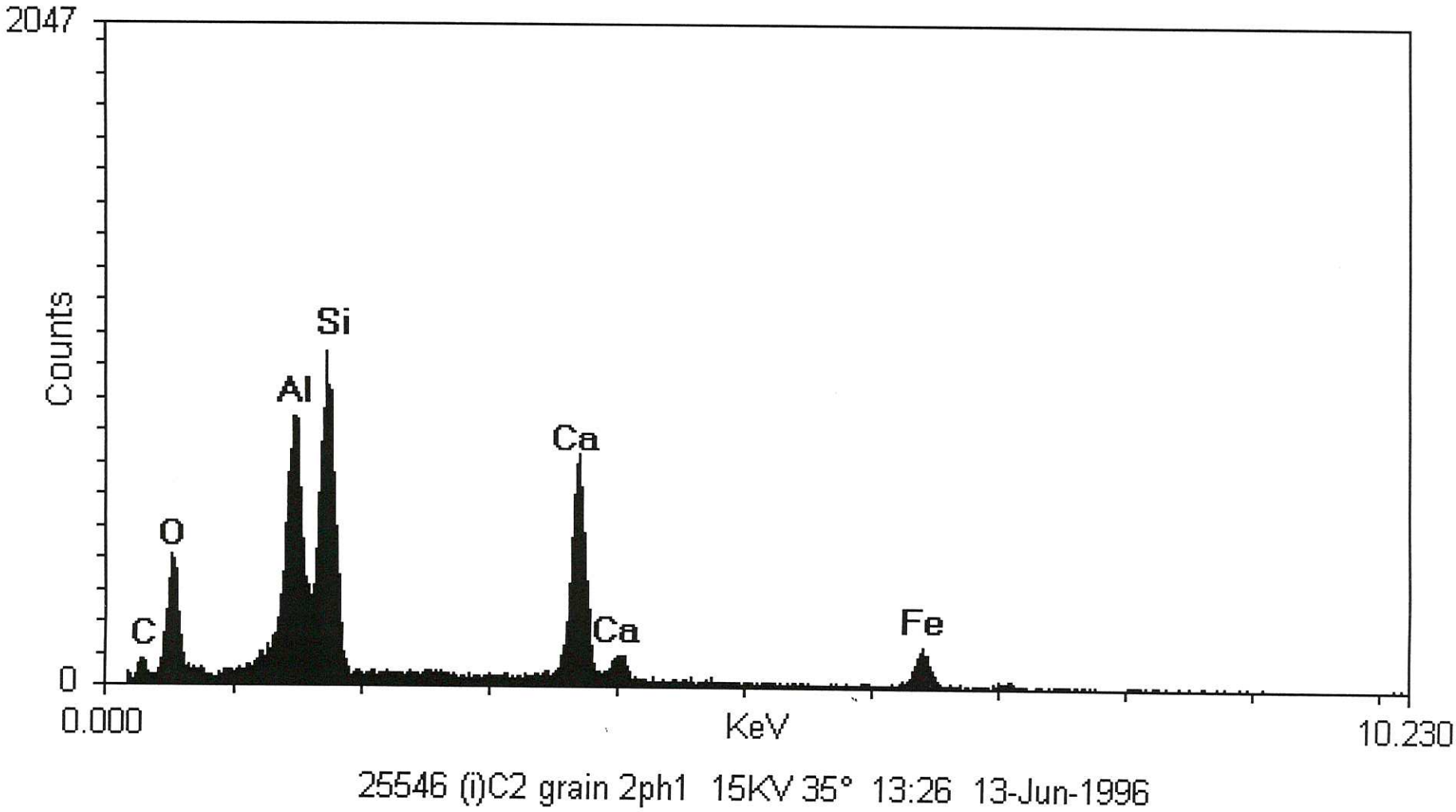
Counts
0
Si
O
C
Mg
Fe
0.000
KeV
10.230
25546 (i)C1 grain 2ph2 15KV 35° 13:22 13-Jun-1996

Fig 11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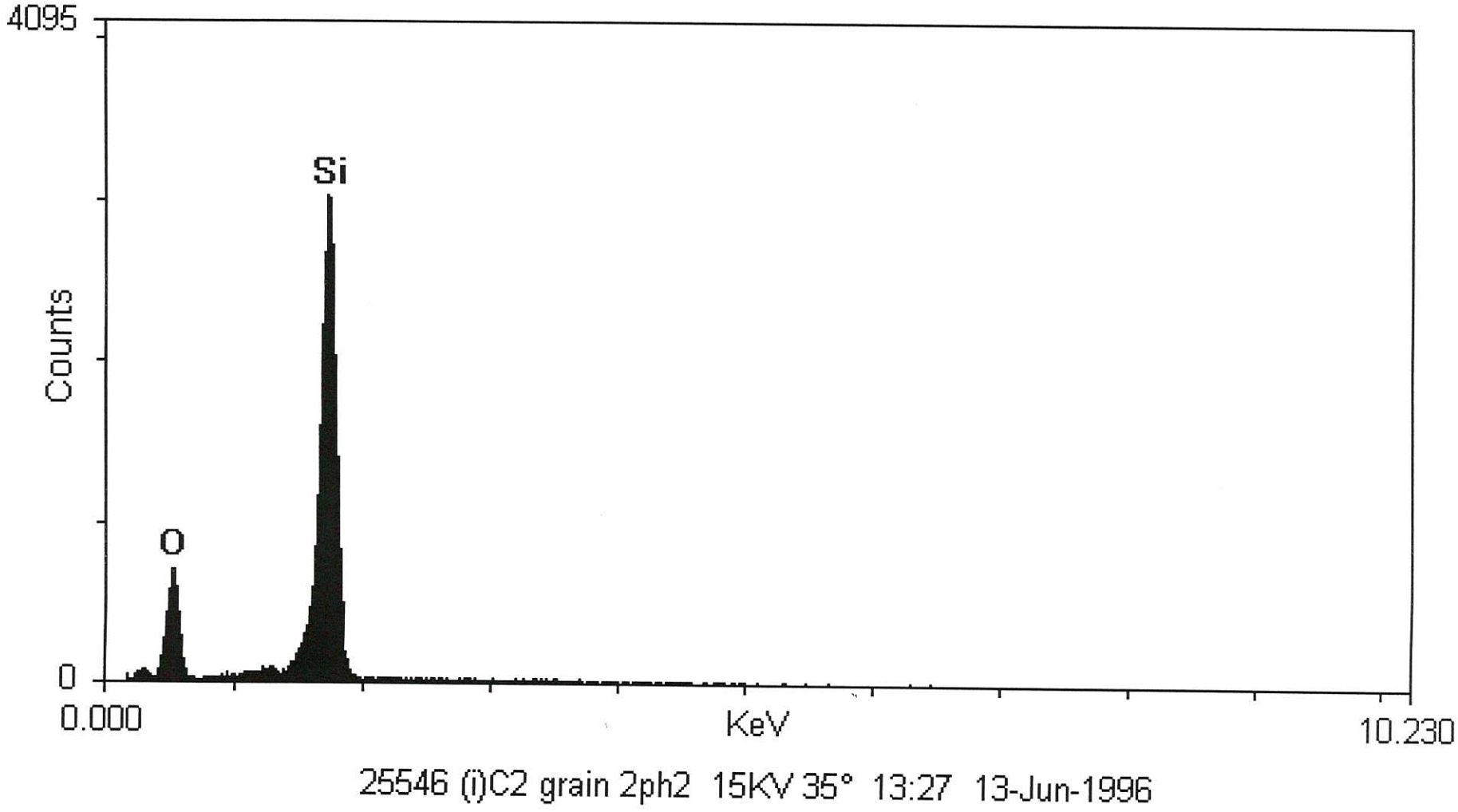
Counts
0
0.000
KeV
10.230
C
O
Al
Si
Ca
Ca
Fe
25546 (i)C2 grain 2ph1 15KV 35° 13:26 13-Jun-1996

Fig 12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Counts
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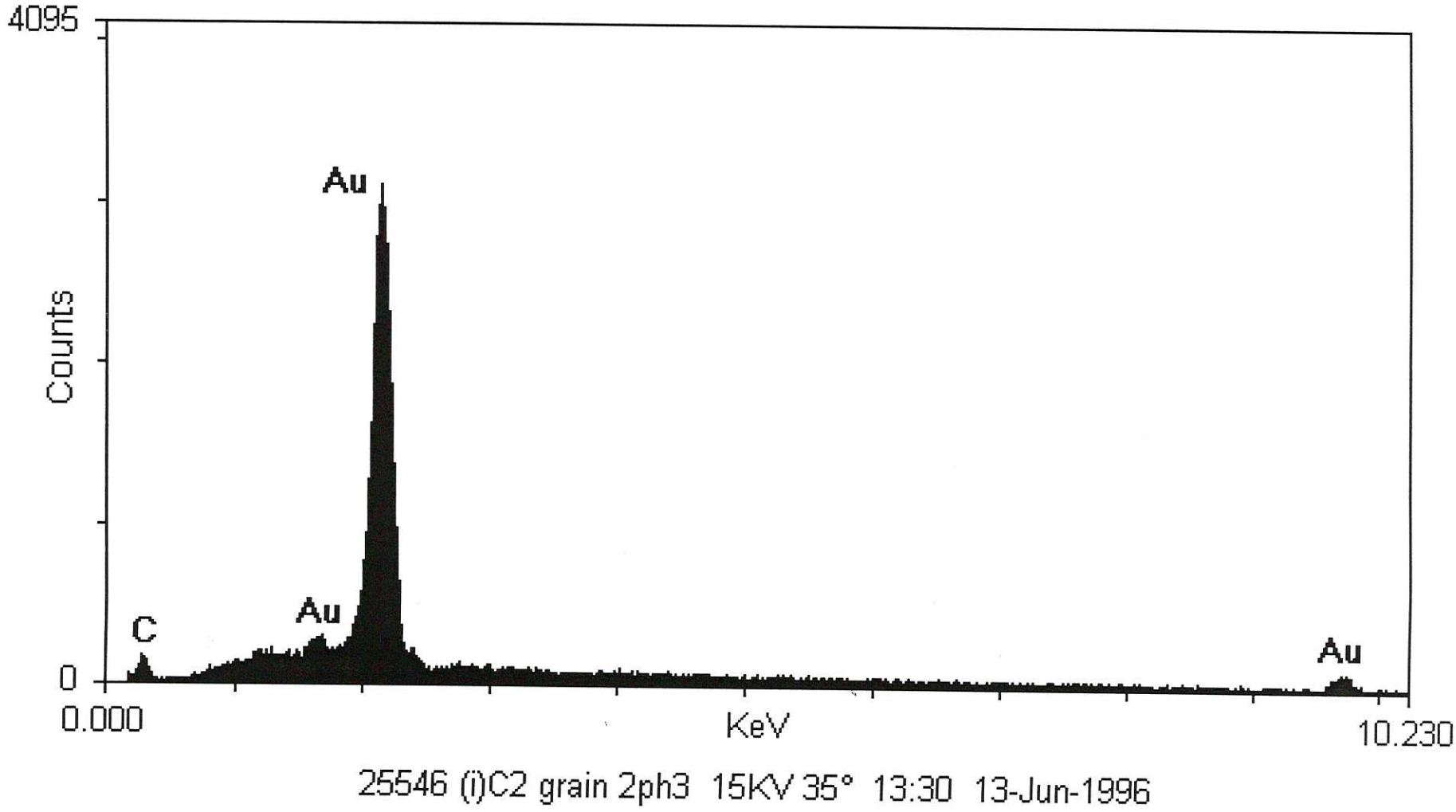
O
0
0.000
KeV
10.230
25546 (i)C2 grain 2ph2 15KV 35° 13:27 13-Jun-1996

Fig 13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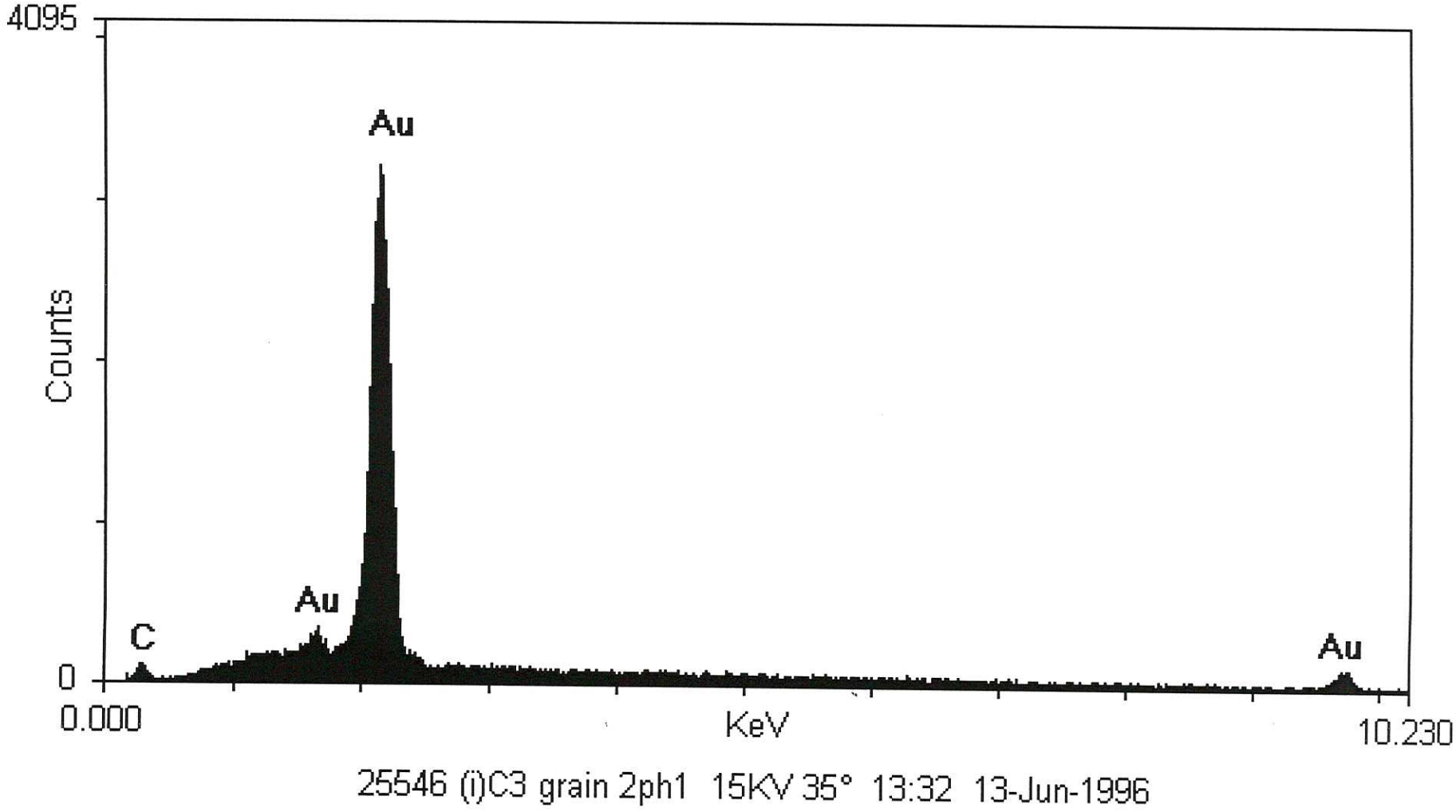
Au
Au
C
Au
0.000
KeV
10.230
25546 (i)C2 grain 2ph3 15KV 35° 13:30 13-Jun-1996

Fig 14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Counts
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Au
C
Au
0.000
KeV
10.230
25546 (i)C3 grain 2ph1 15KV 35° 13:32 13-Jun-1996

Fig 15

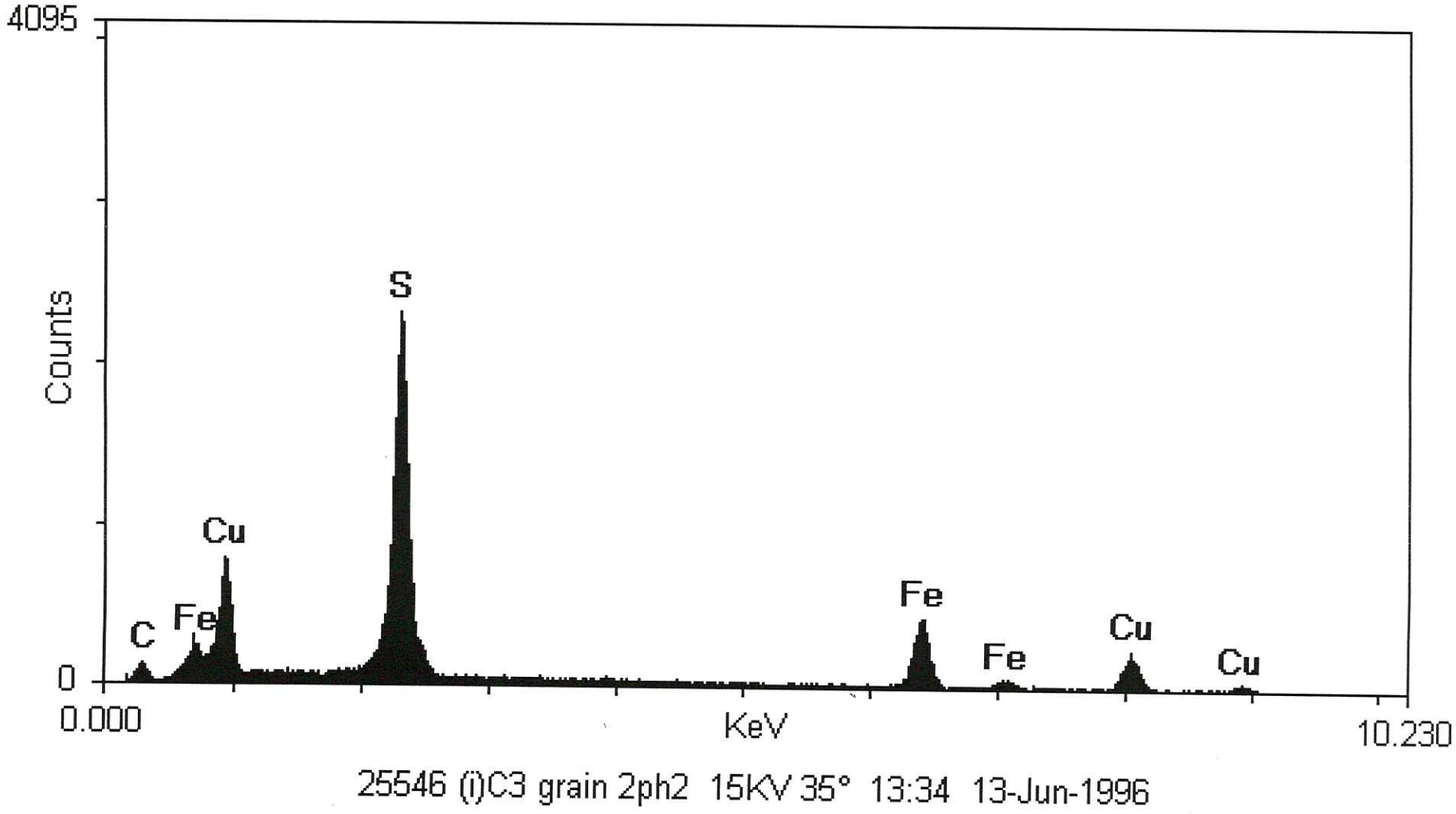

4095
Counts
0
0.000
KeV
10.230
S
Cu
Fe
C
Fe
Fe
Cu
Cu
25546 (i)C3 grain 2ph2 15KV 35° 13:34 13-Jun-1996

Fig 16

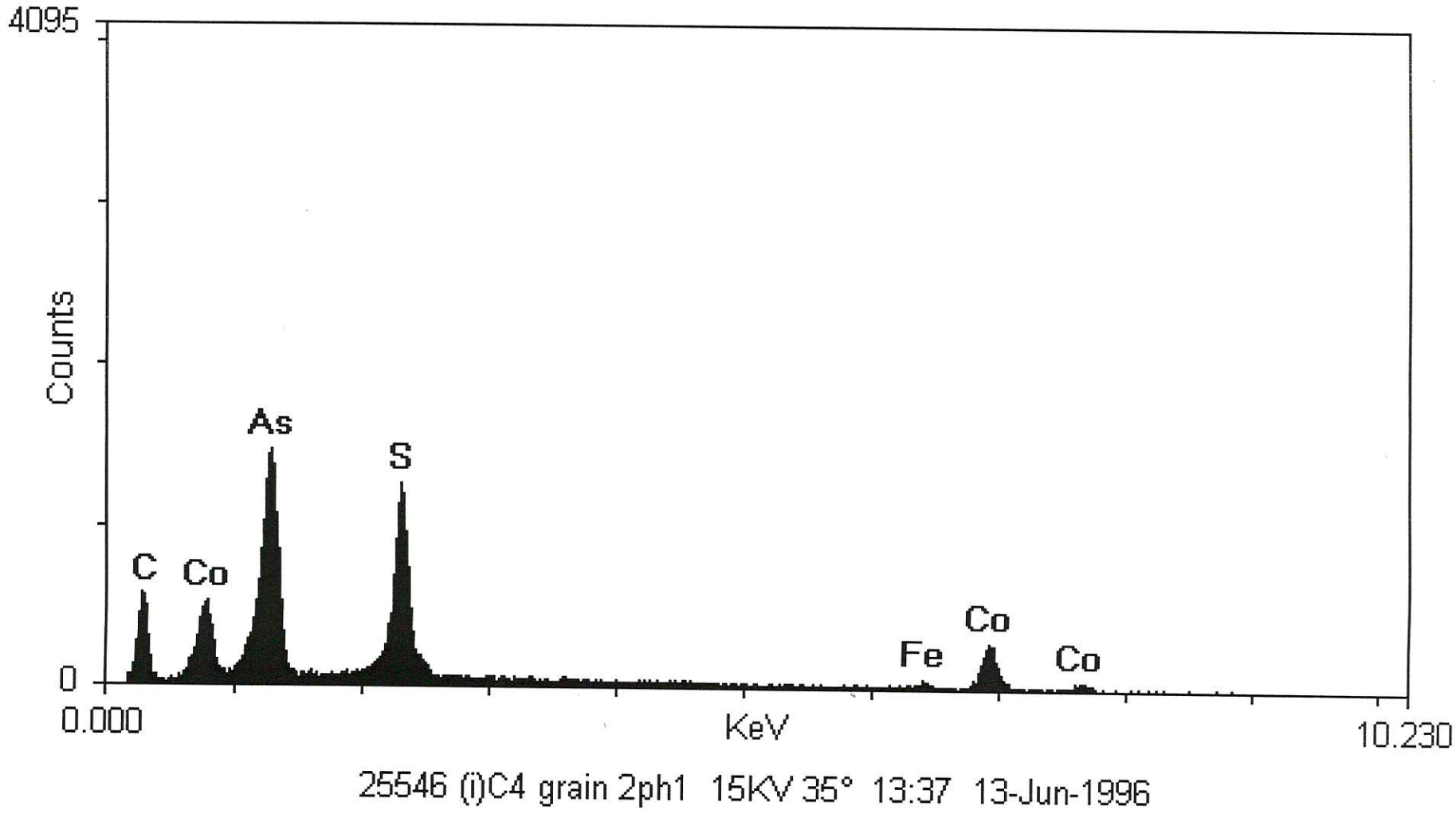
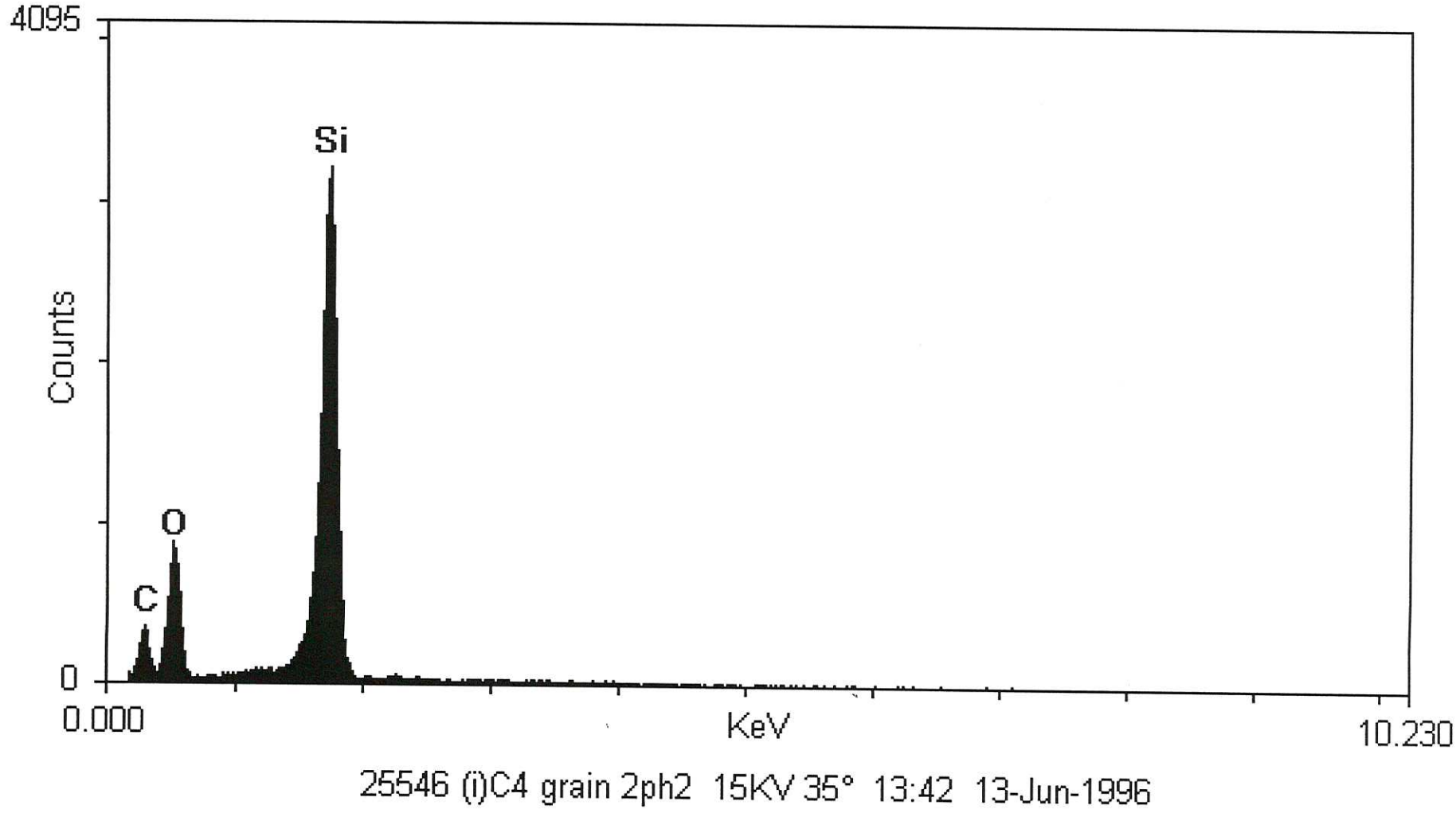

4095
Counts
0
0.000
KeV
10.230
C
Co
As
S
Fe
Co
Co
25546 (i)C4 grain 2ph1 15KV 35° 13:37 13-Jun-1996

Fig 17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Counts
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Si
O
C
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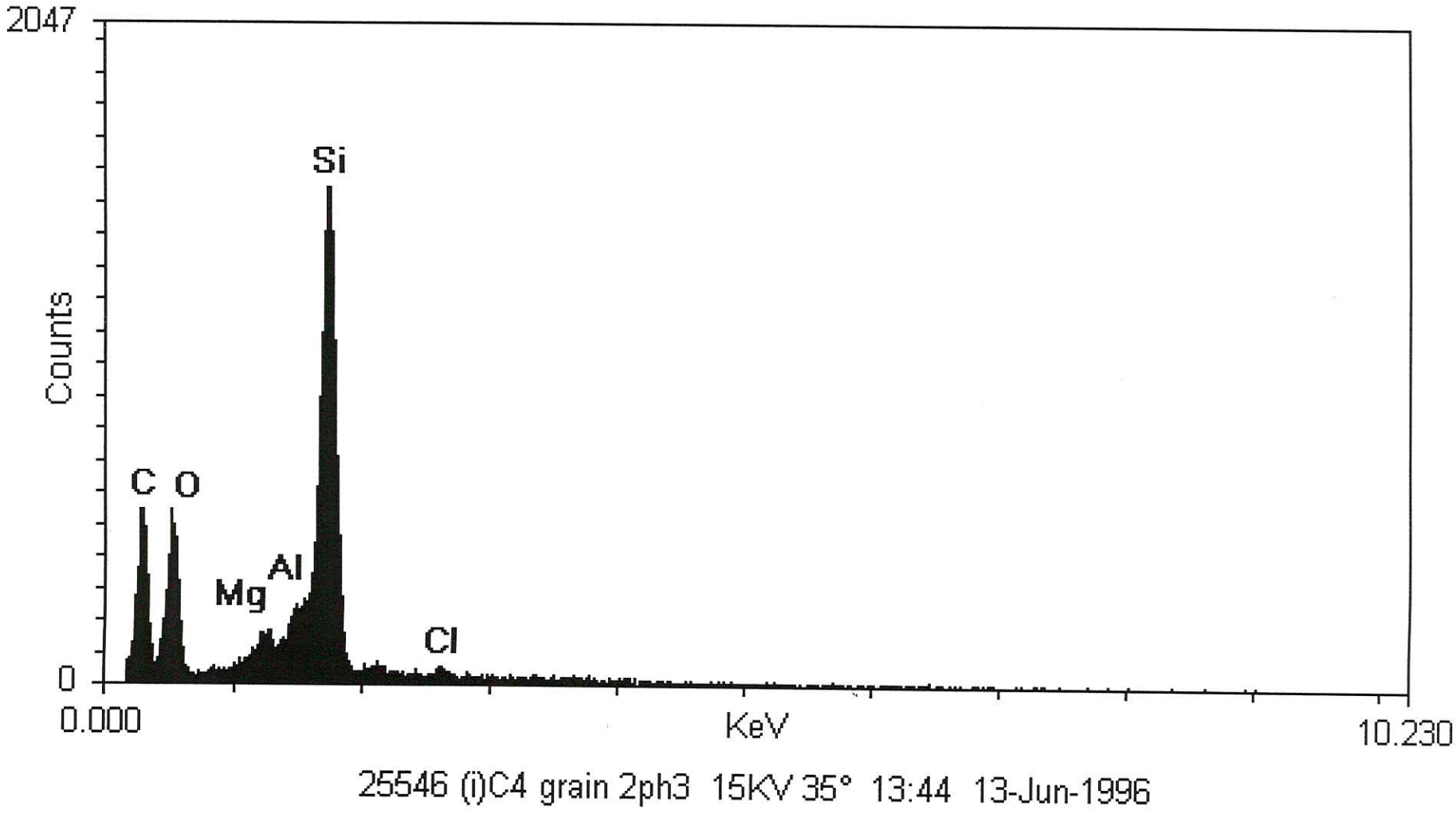
KeV
10.230
25546 (i)C4 grain 2ph2 15KV 35° 13:42 13-Jun-1996

Fig 18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Counts
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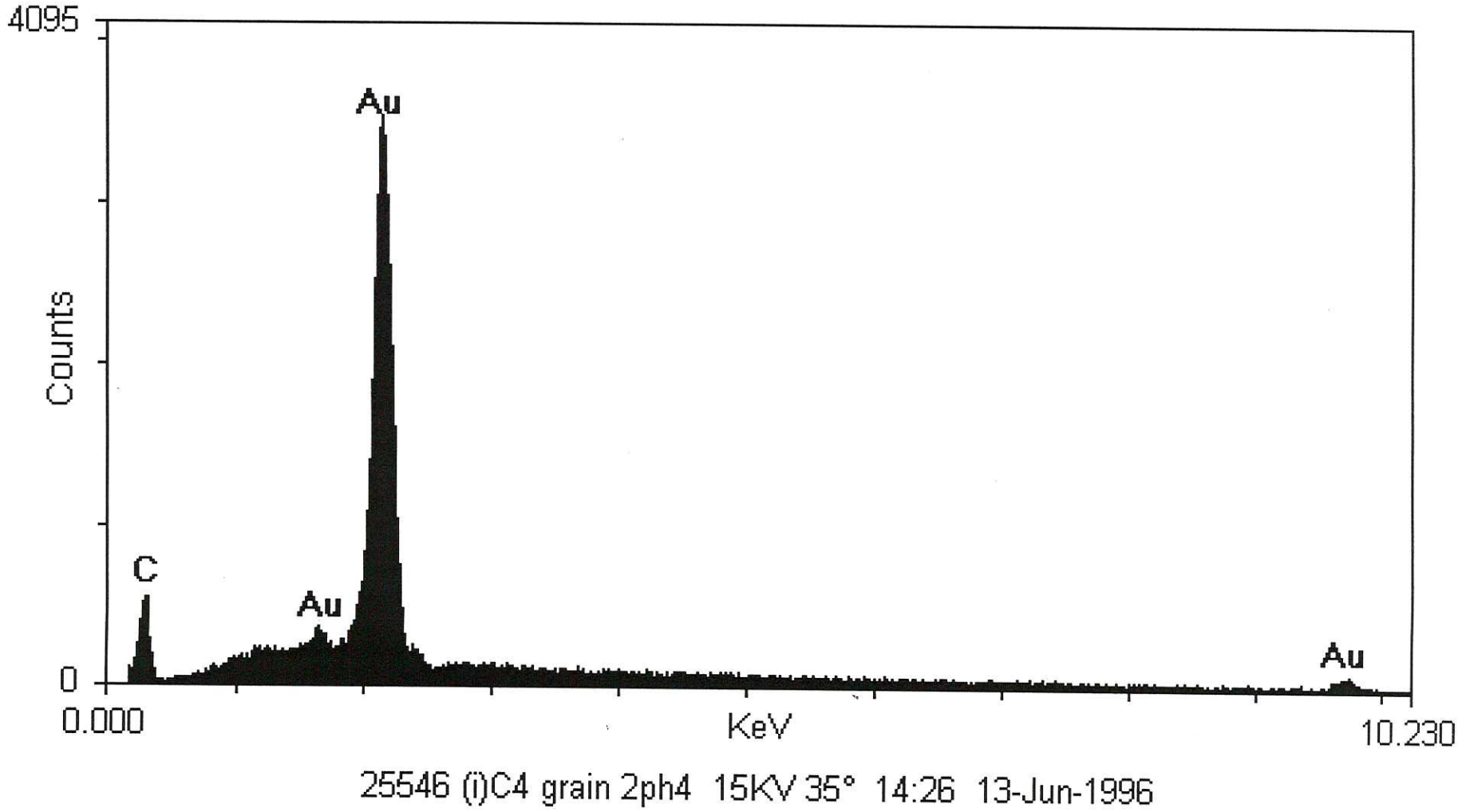
C
O
Mg
Al
Cl
0.000
KeV
10.230
25546 (i)C4 grain 2ph3 15KV 35° 13:44 13-Jun-1996

Fig 19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Counts
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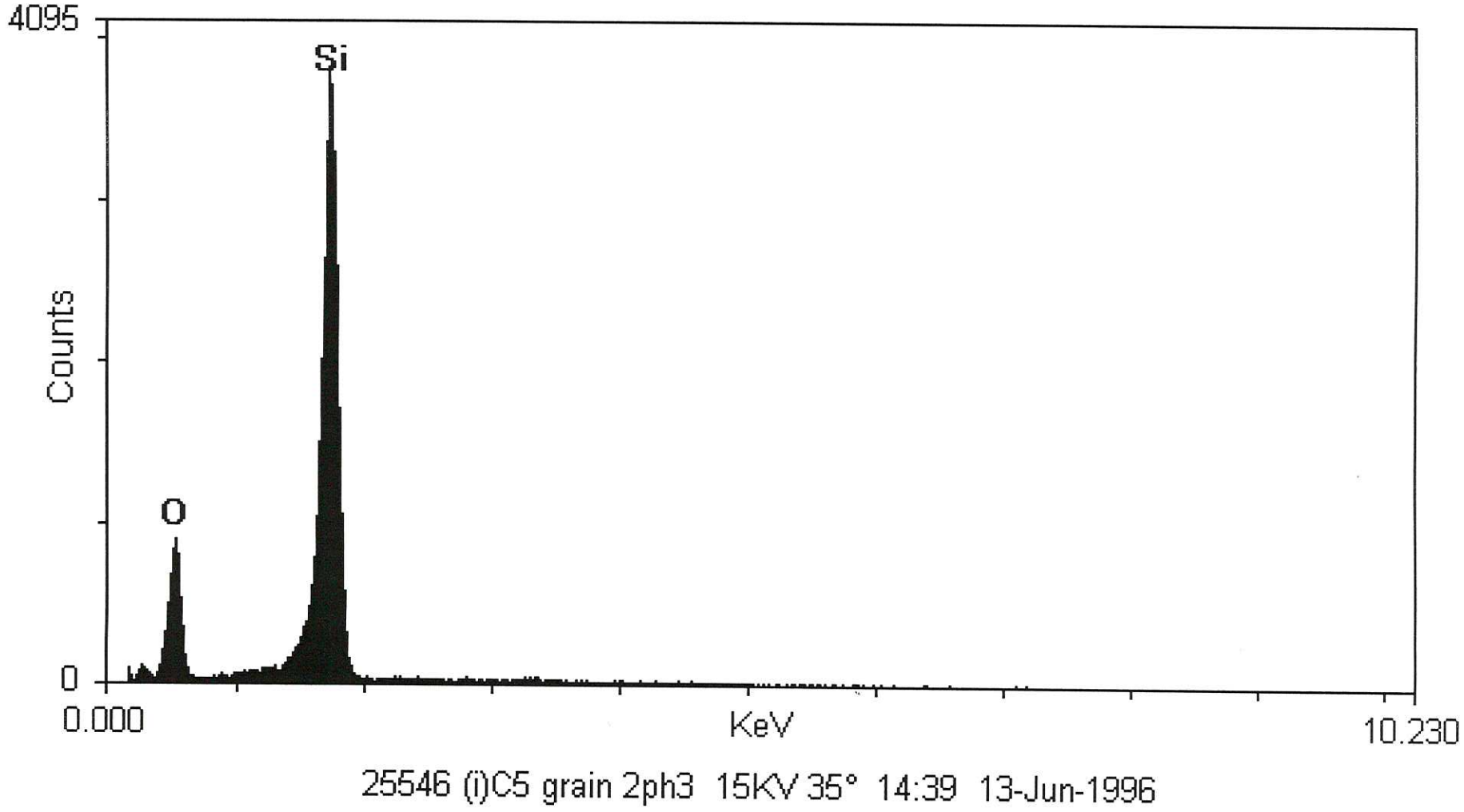
C
Au
Au
0.000
KeV
10.230
25546 (i)C4 grain 2ph4 15KV 35° 14:26 13-Jun-1996

Fig 20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Si
Counts
O
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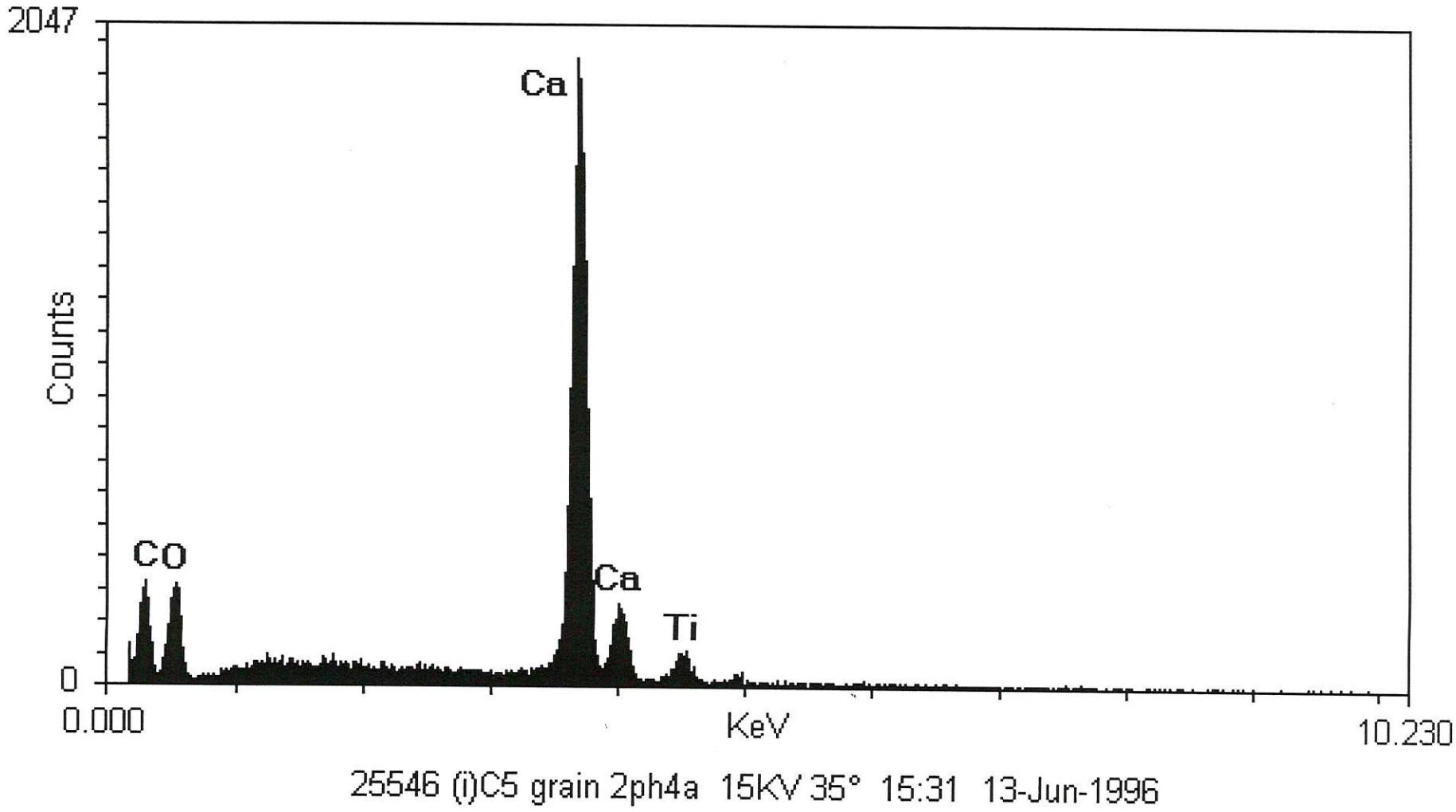
0.000
KeV
10.230
25546 (i)C5 grain 2ph3 15KV 35° 14:39 13-Jun-1996

Fig 21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Counts
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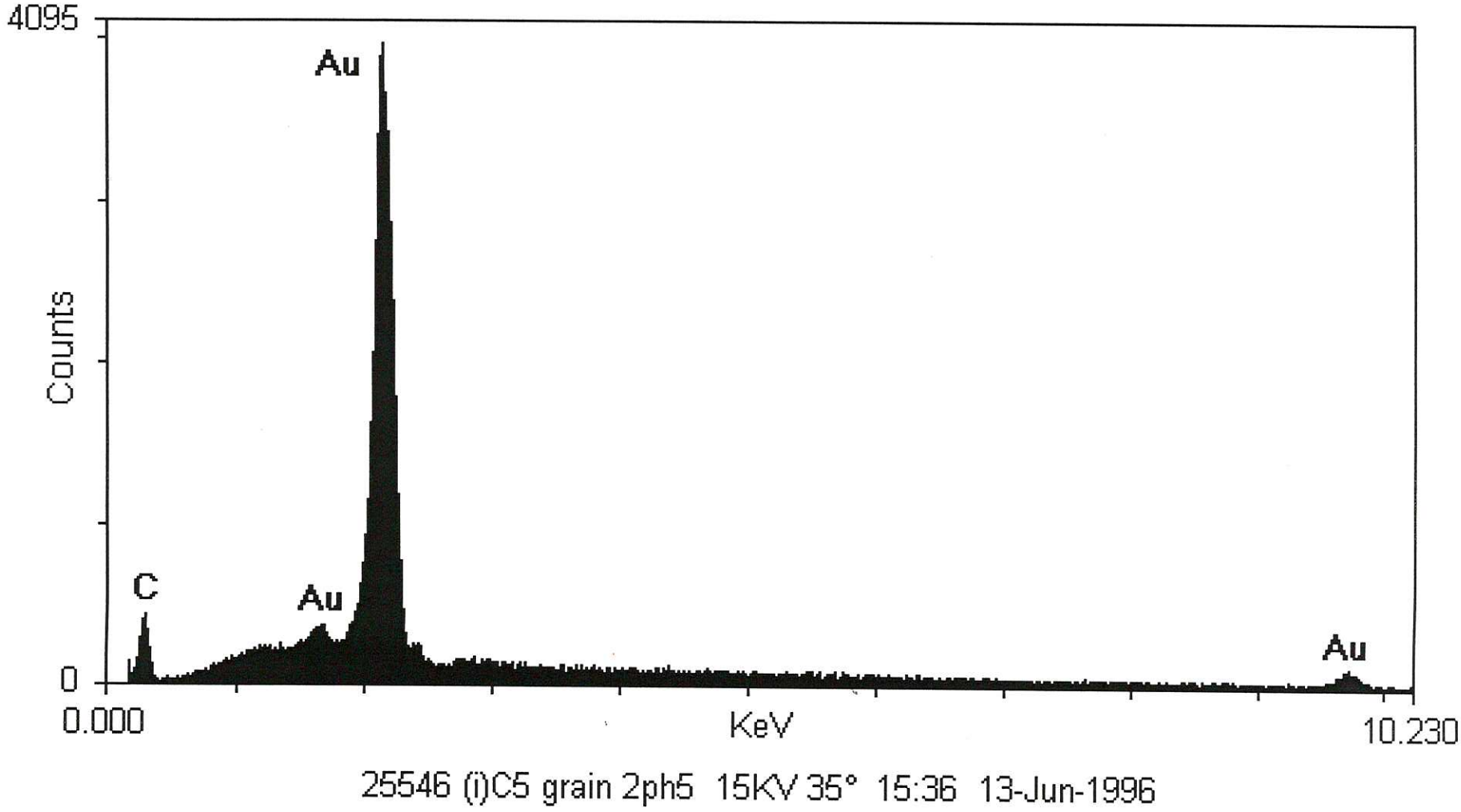
Ca
CO
Ca
Ti
0.000
KeV
10.230
25546 (i)C5 grain 2ph4a 15KV 35° 15:31 13-Jun-1996

Fig 22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Counts
C
Au
Au
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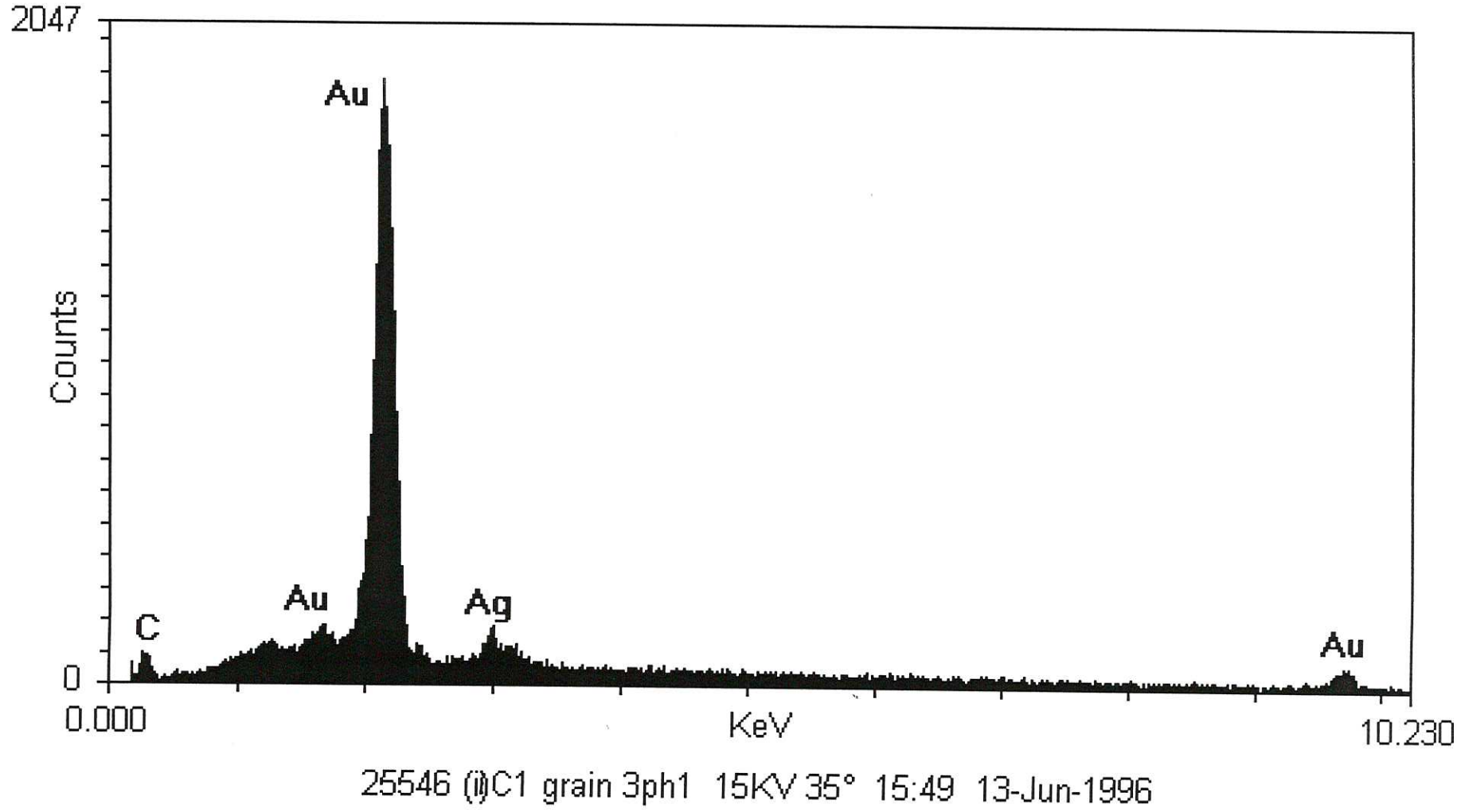
0.000
KeV
10.230
25546 (i)C5 grain 2ph5 15KV 35° 15:36 13-Jun-1996

Fig 23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Counts
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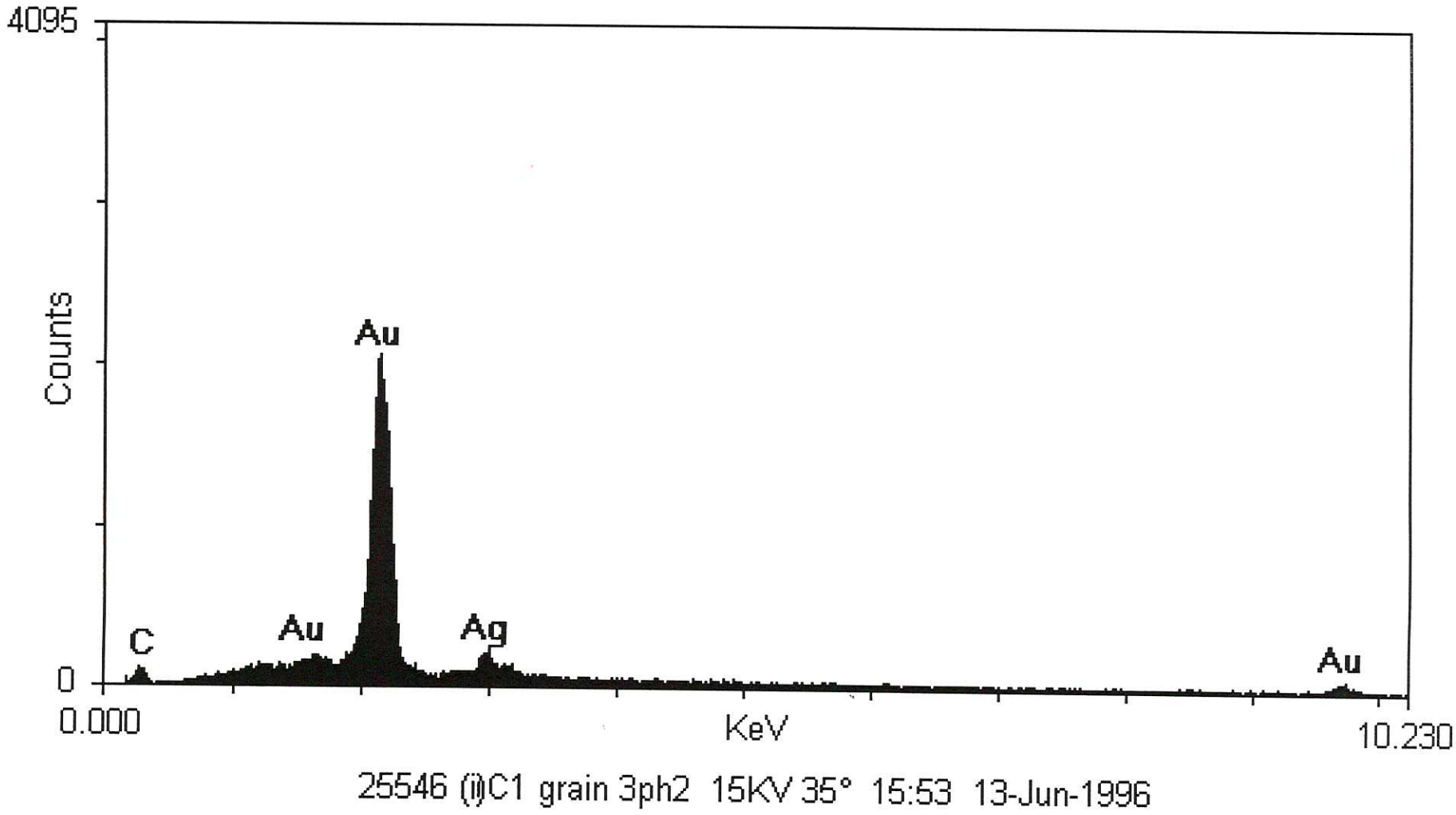
Au
Ag
C
Au
0.000
KeV
10.230
25546 (i)C1 grain 3ph1 15KV 35° 15:49 13-Jun-1996

Fig 24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Counts
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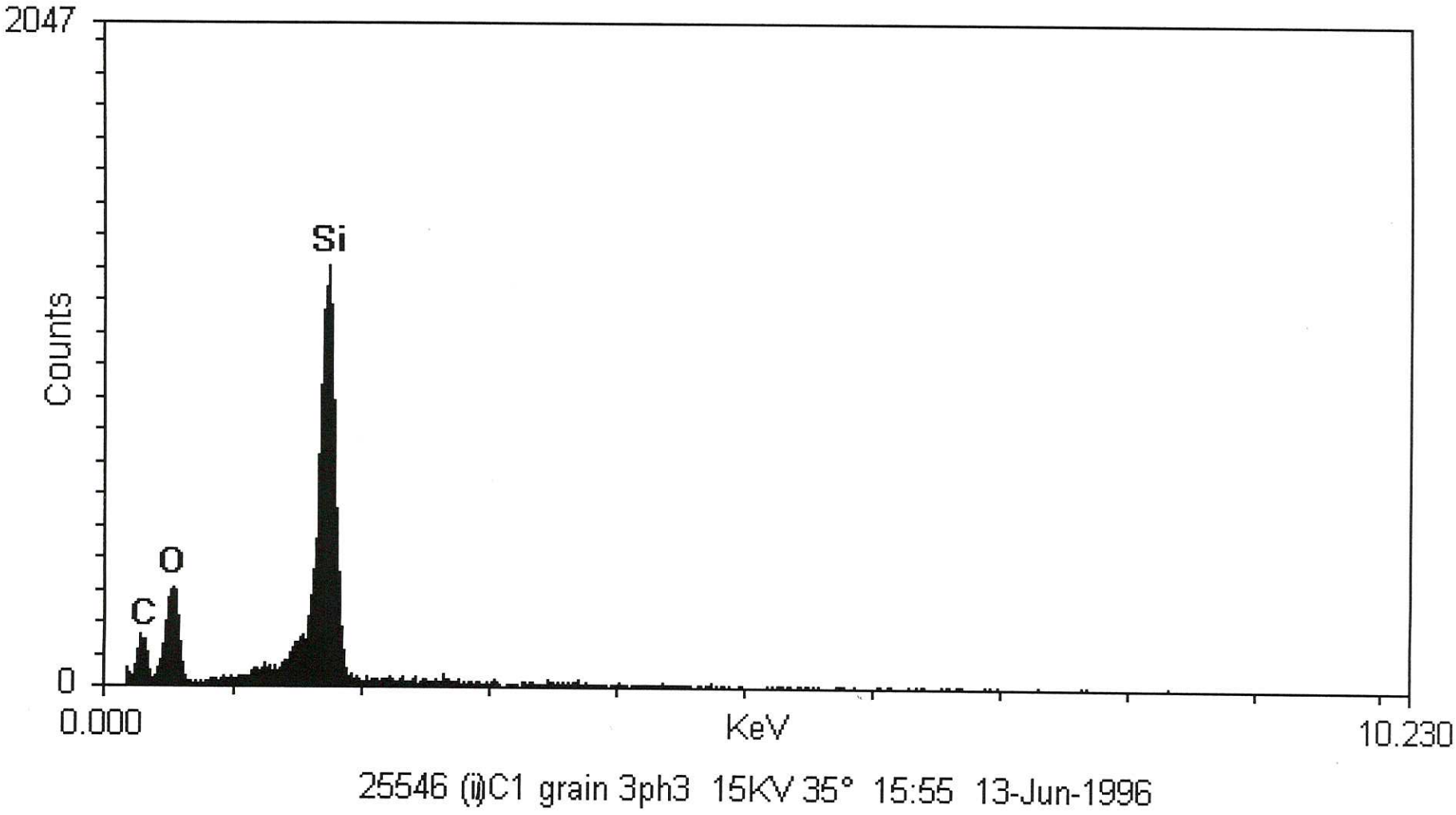
Au
C
Au
Ag
Au
0.000
KeV
10.230
25546 (i)C1 grain 3ph2 15KV 35° 15:53 13-Jun-1996

Fig 25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C
0.000
KeV
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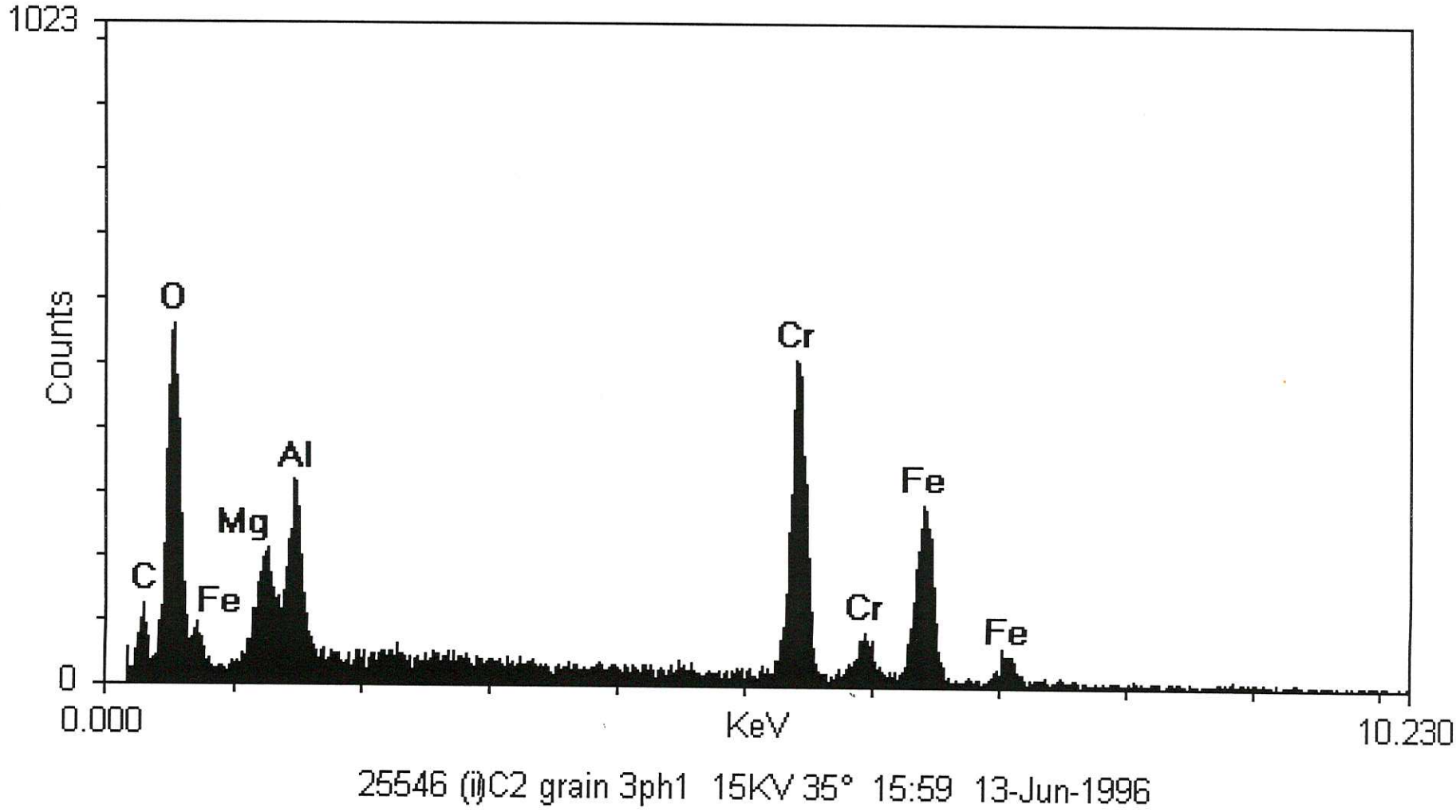
25546 (ij)C1 grain 3ph3 15KV 35° 15:55 13-Jun-1996

Fig 26


1023
Counts
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O
C
Fe
Mg
Al
Cr
Cr
Fe
Fe
0.000
KeV
10.230
25546 (i)C2 grain 3ph1 15KV 35° 15:59 13-Jun-1996

Fig 27

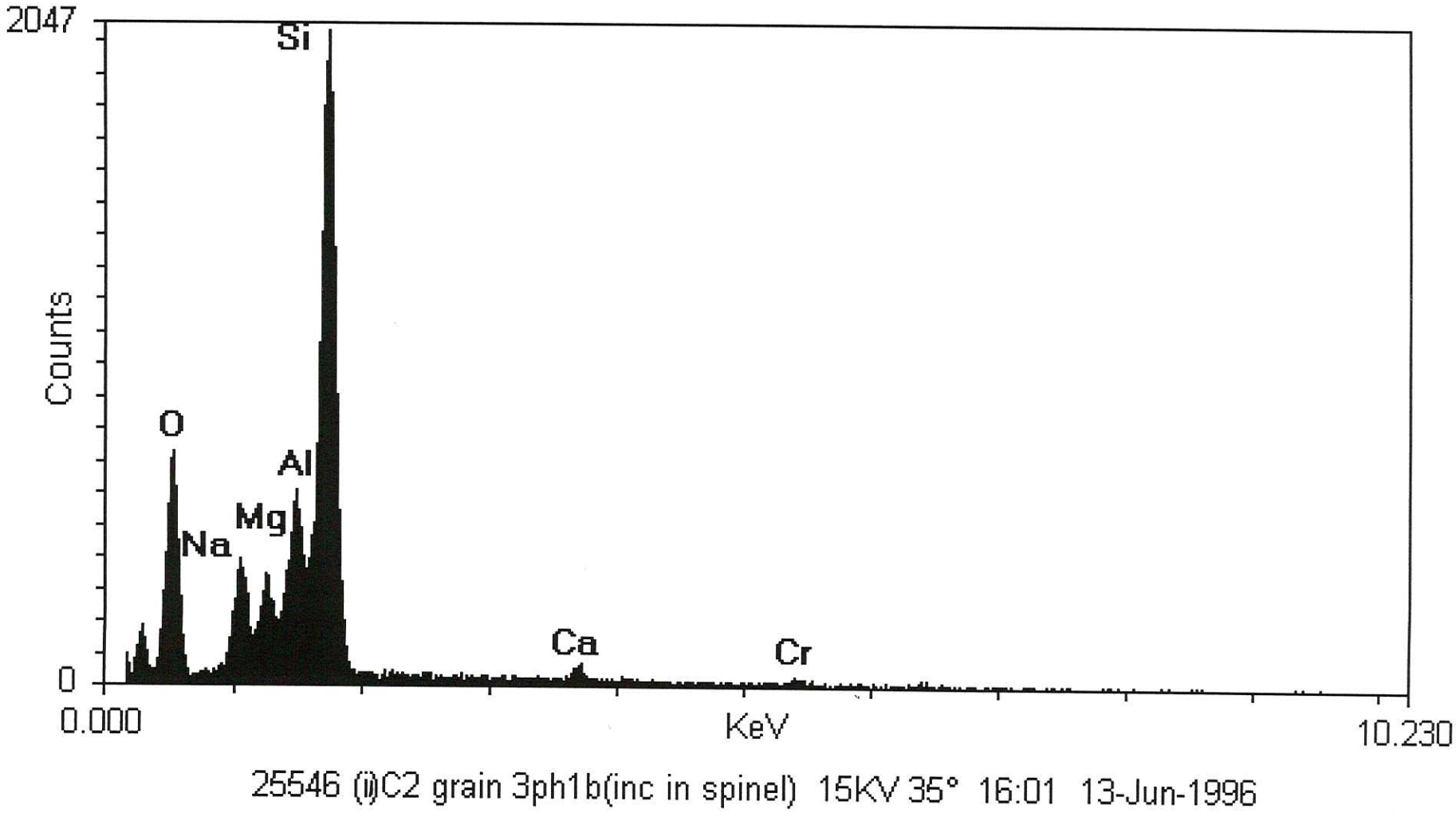

2047
Si
Counts
O
Al
Mg
Na
Ca
Cr
0
0.000
KeV
10.230
25546 (ii)C2 grain 3ph1b(inc in spinel) 15KV 35° 16:01 13-Jun-1996

Fig 28

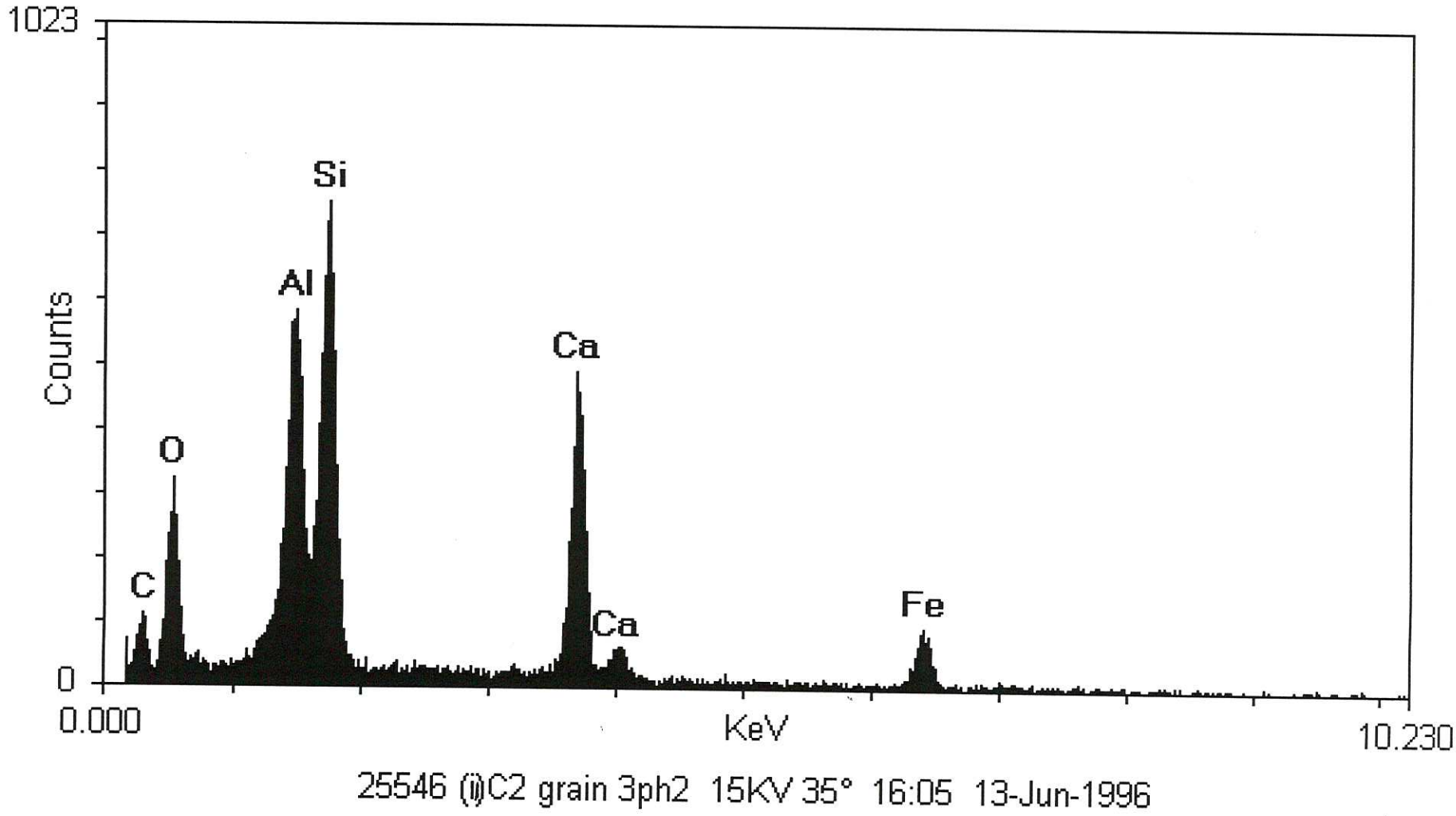

1023
Counts
0
0.000
KeV
10.230
C
O
Al
Si
Ca
Ca
Fe
25546 (i)C2 grain 3ph2 15KV 35° 16:05 13-Jun-1996

Fig 29

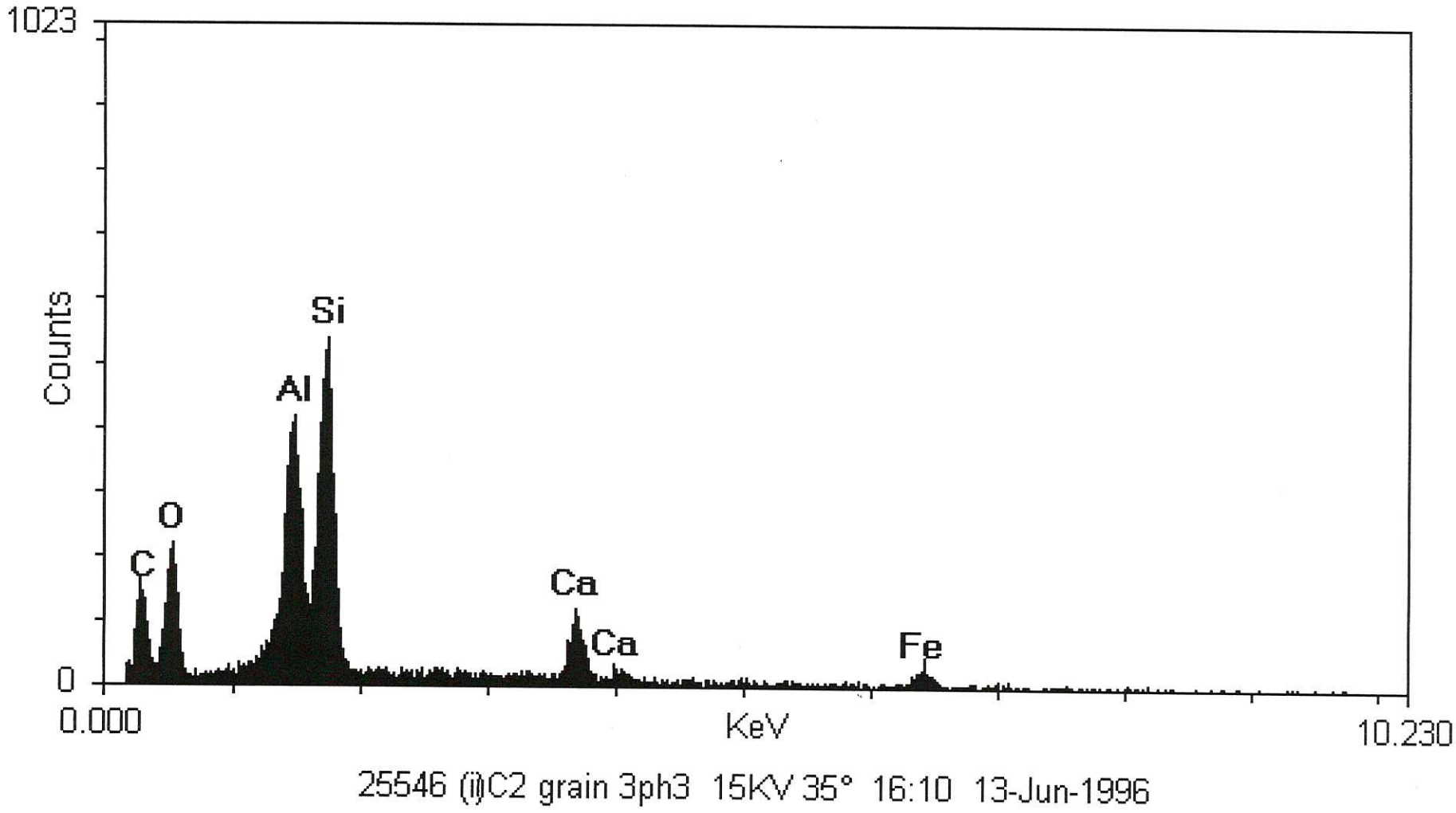
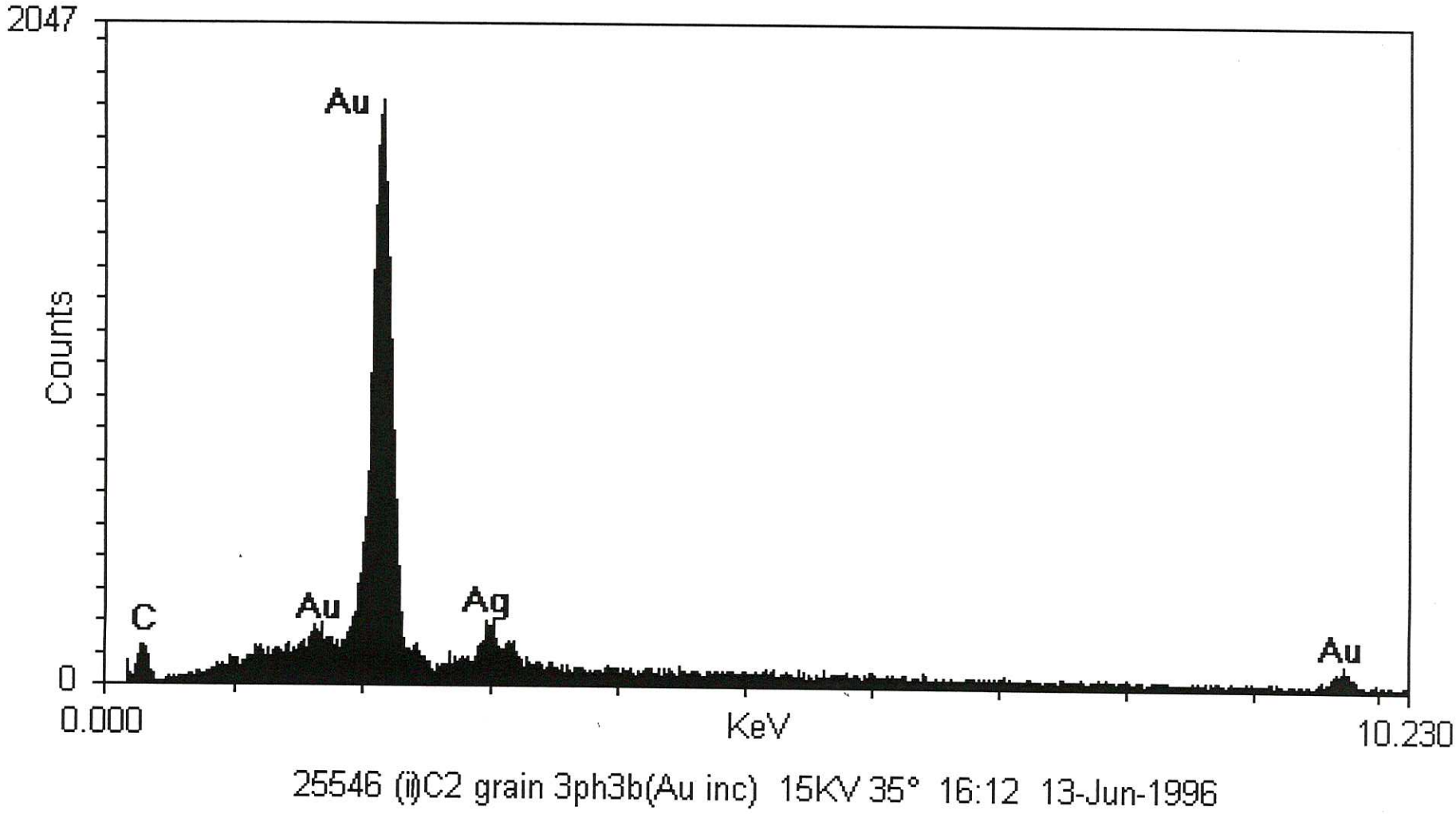

1023
Counts
0
Si
Al
O
C
Ca
Ca
Fe
0.000
KeV
10.230
25546 (i)C2 grain 3ph3 15KV 35° 16:10 13-Jun-1996

Fig 30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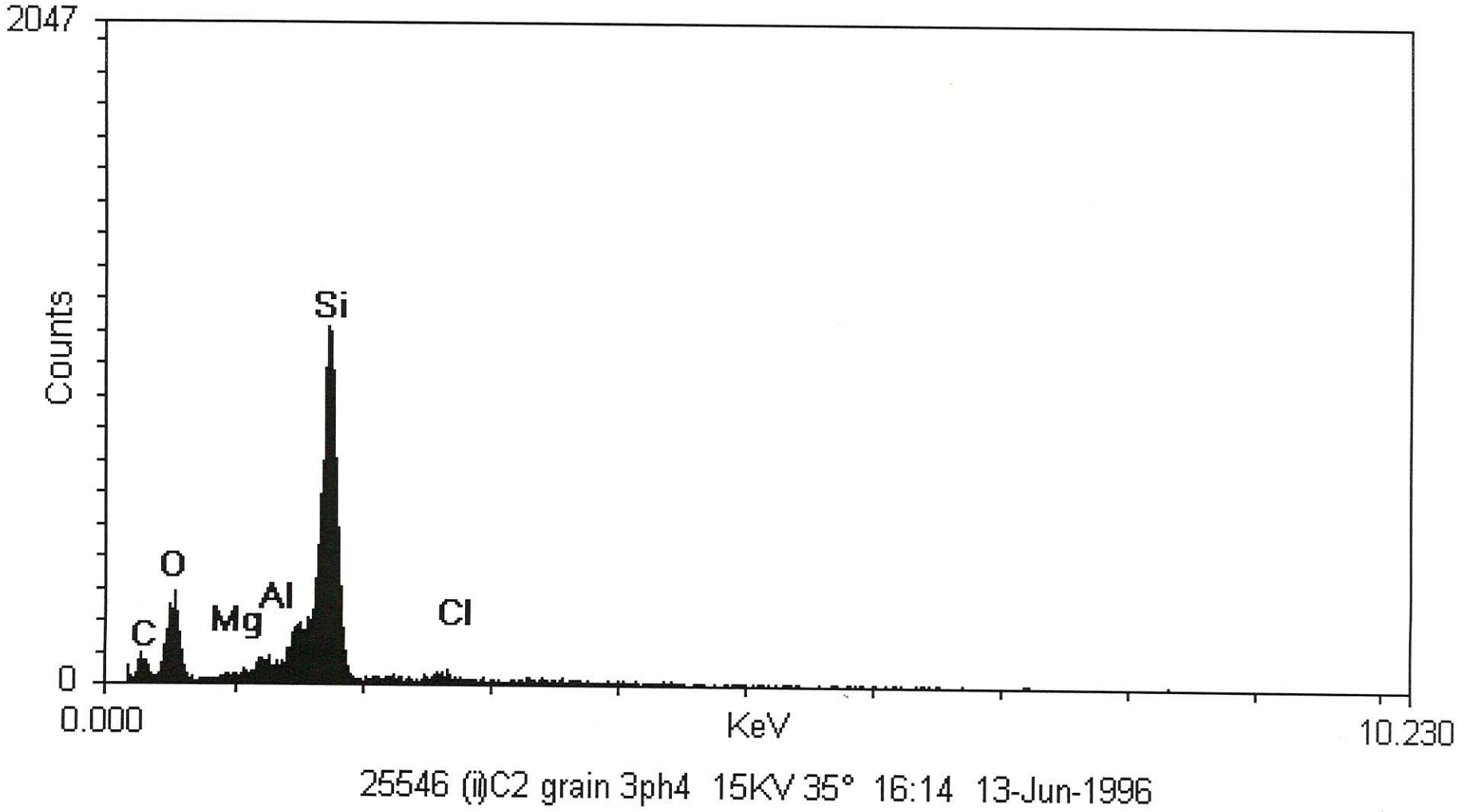
Au
Counts
C
Au
Ag
Au
0
0.000
KeV
10.230
25546 (ii)C2 grain 3ph3b(Au inc) 15KV 35° 16:12 13-Jun-1996

Fig 31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Counts
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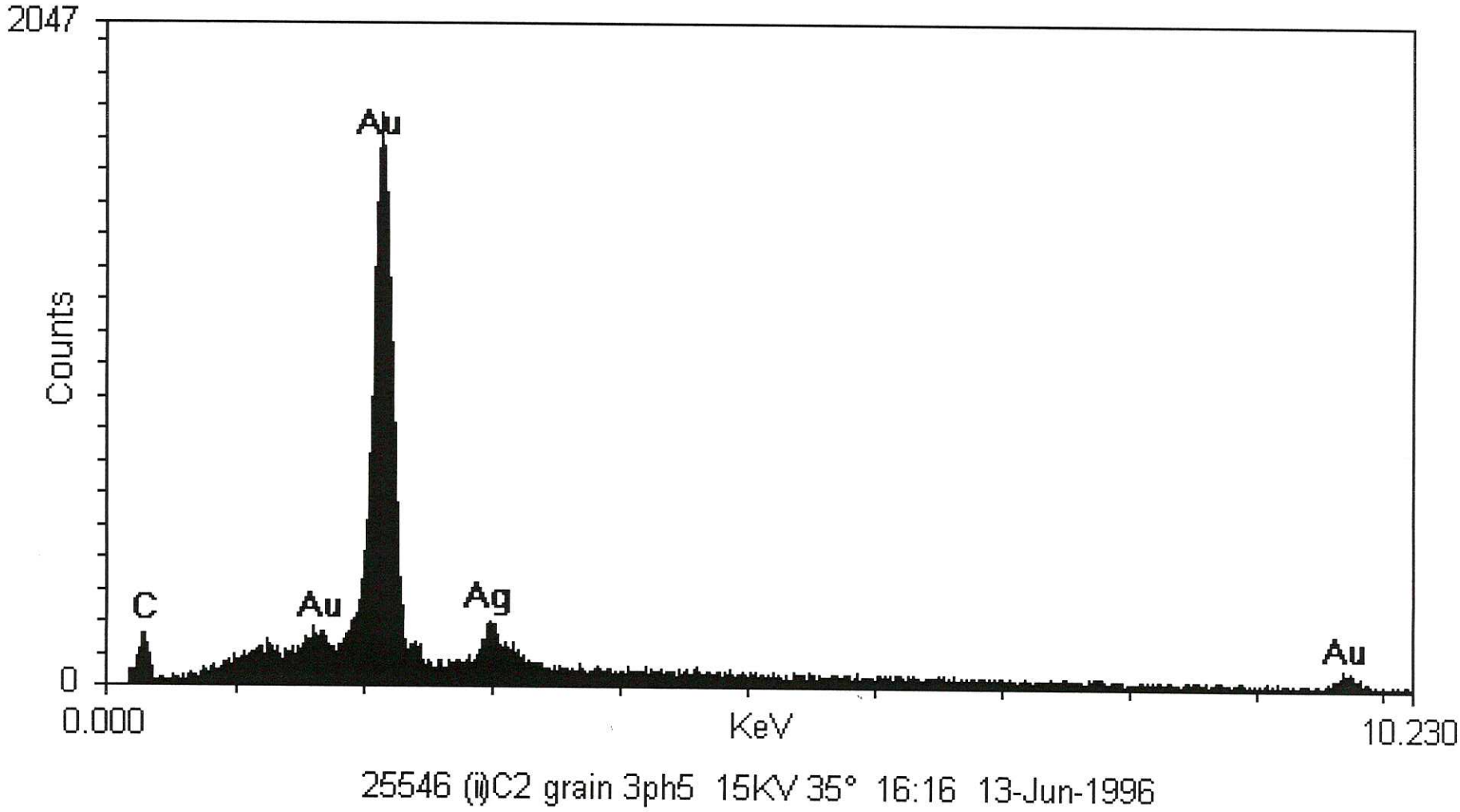
Si
O
C
Mg
Al
Cl
0.000
KeV
10.230
25546 (i)C2 grain 3ph4 15KV 35° 16:14 13-Jun-1996

Fig 32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Counts
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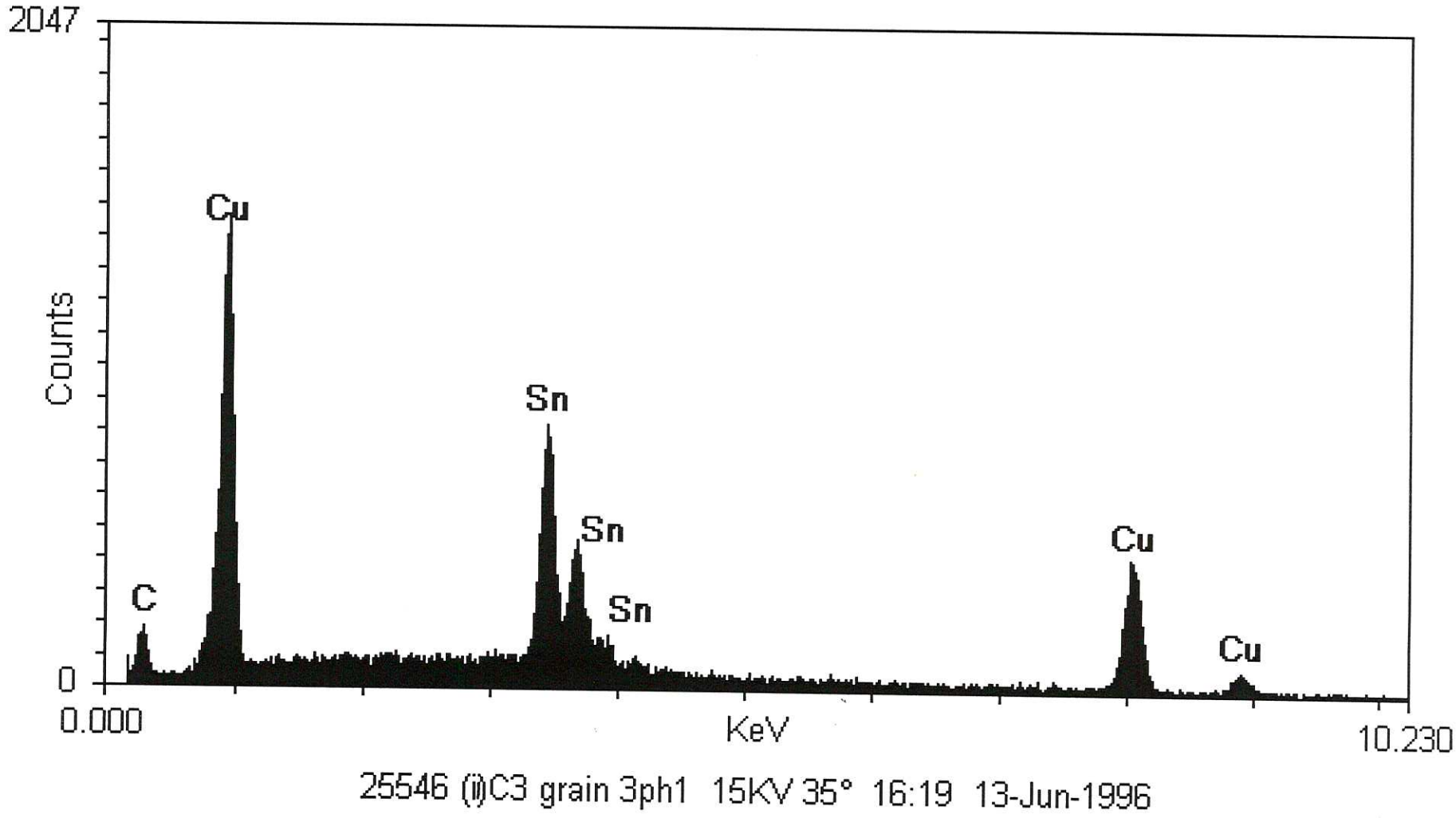
Au
C
Au
Ag
Au
0.000
KeV
10.230
25546 (i)C2 grain 3ph5 15KV 35° 16:16 13-Jun-1996

Fig 33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Counts
0
0.000
KeV
10.230
C
Cu
Sn
Sn
Sn
Cu
Cu
25546 (i)C3 grain 3ph1 15KV 35° 16:19 13-Jun-1996

Fig 34

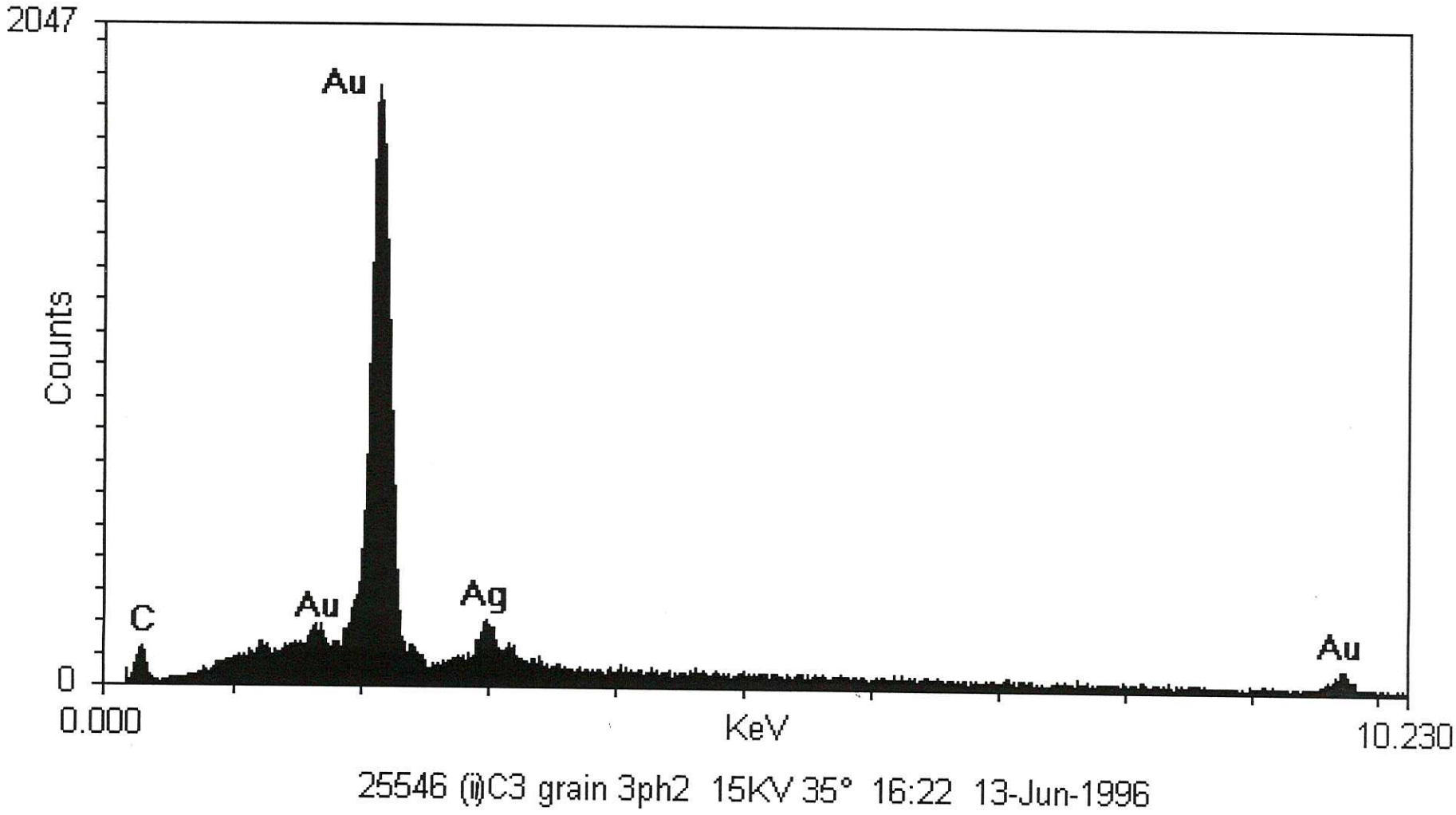
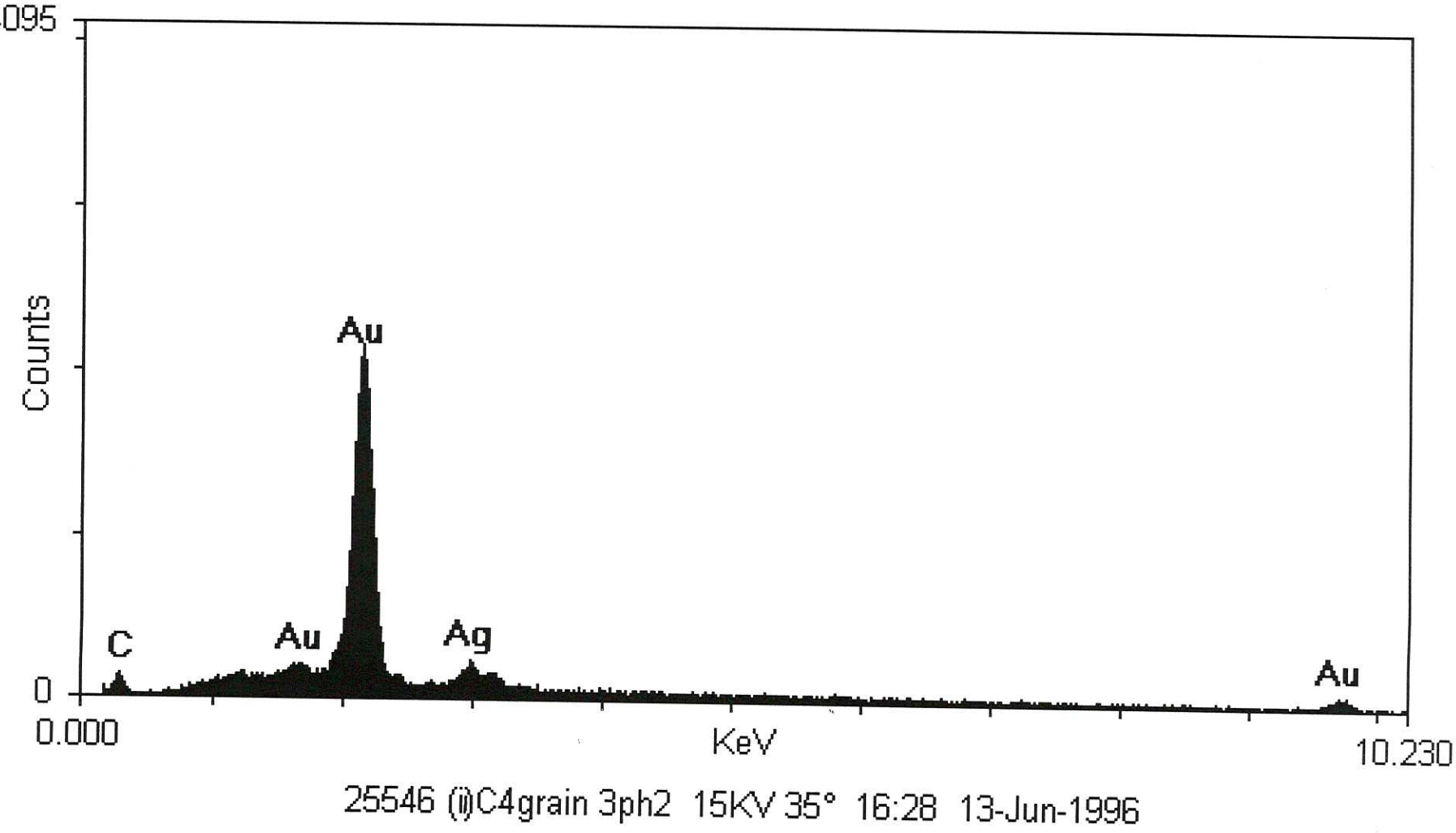

2047
Au
Counts
C
Au
Ag
Au
0
0.000
KeV
10.230
25546 (ii)C3 grain 3ph2 15KV 35° 16:22 13-Jun-1996

Fig 35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Counts
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0.000
Au
C
Au
Ag
Au
KeV
10.230
25546 (i)C4grain 3ph2 15KV 35° 16:28 13-Jun-1996

Fig 36

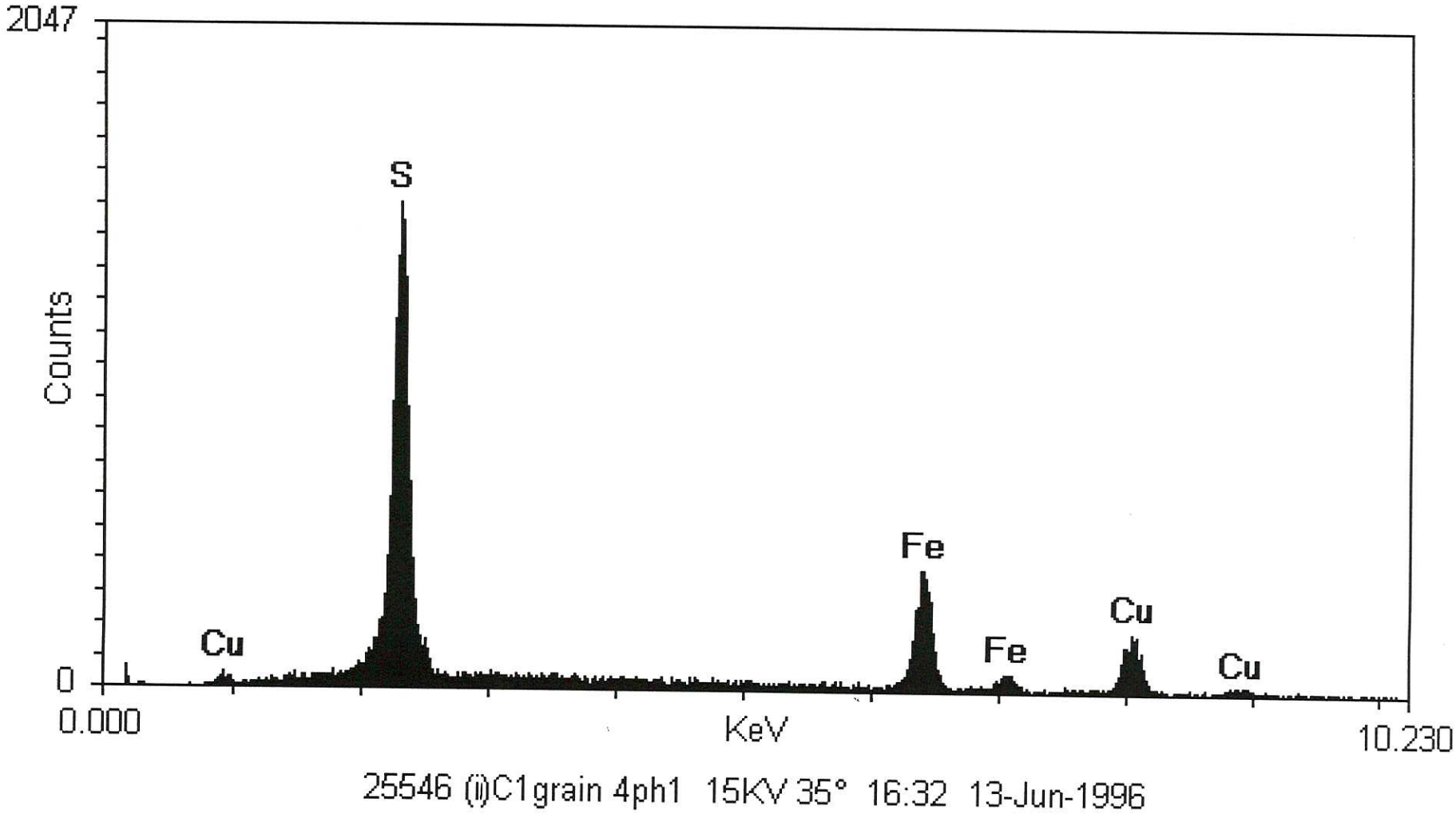

2047
Counts
0
S
Cu
Fe
Fe
Cu
Cu
0.000
KeV
10.230
25546 (i)C1grain 4ph1 15KV 35° 16:32 13-Jun-1996

Fig 37

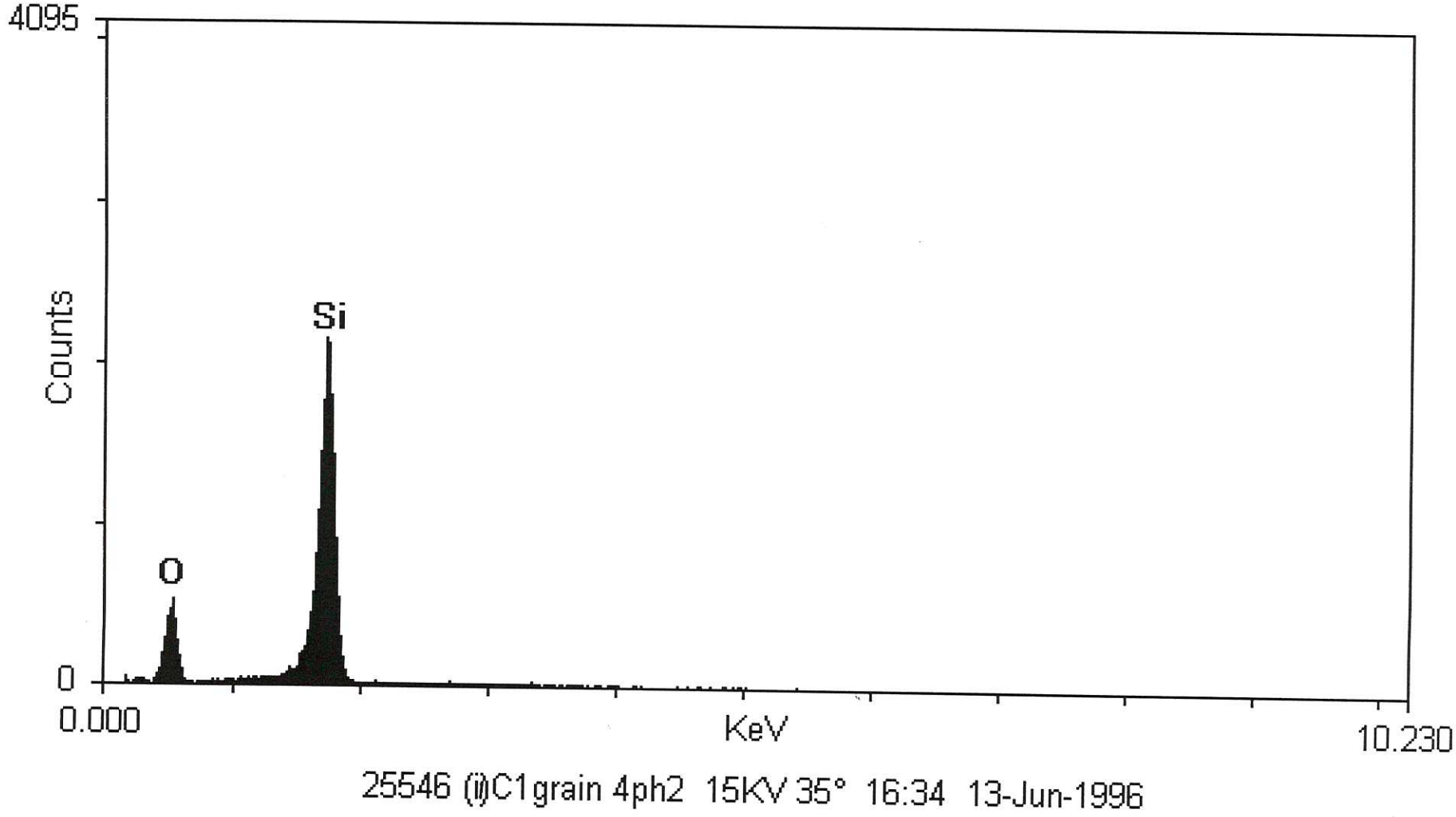

4095
Counts
Si
O
0
0.000
KeV
10.230
25546 (i)C1grain 4ph2 15KV 35° 16:34 13-Jun-1996

Fig 38

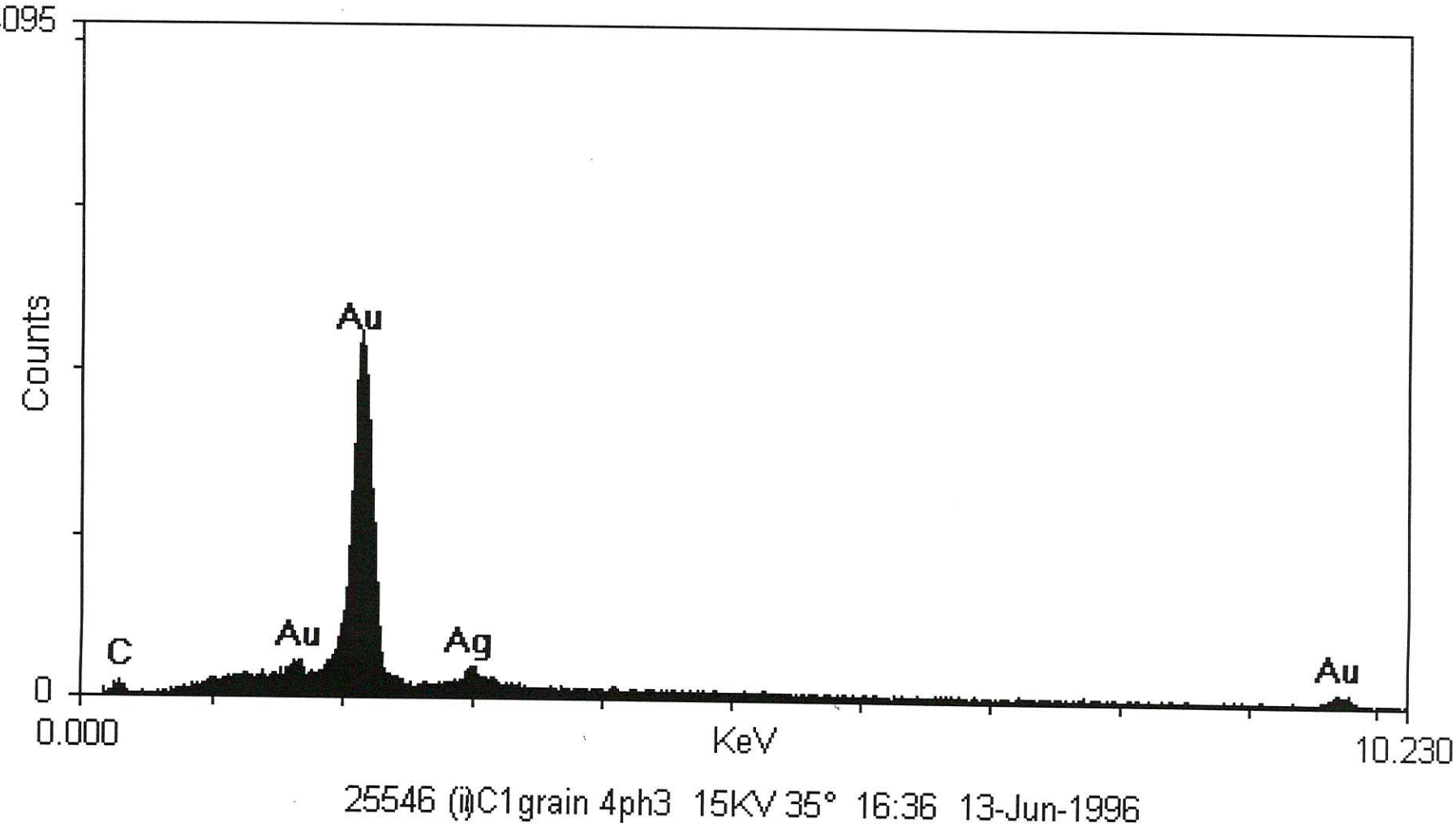

4095
Counts
0
0.000
KeV
10.230
C
Au
Au
Ag
Au
25546 (i)C1grain 4ph3 15KV 35° 16:36 13-Jun-1996

Fig 39

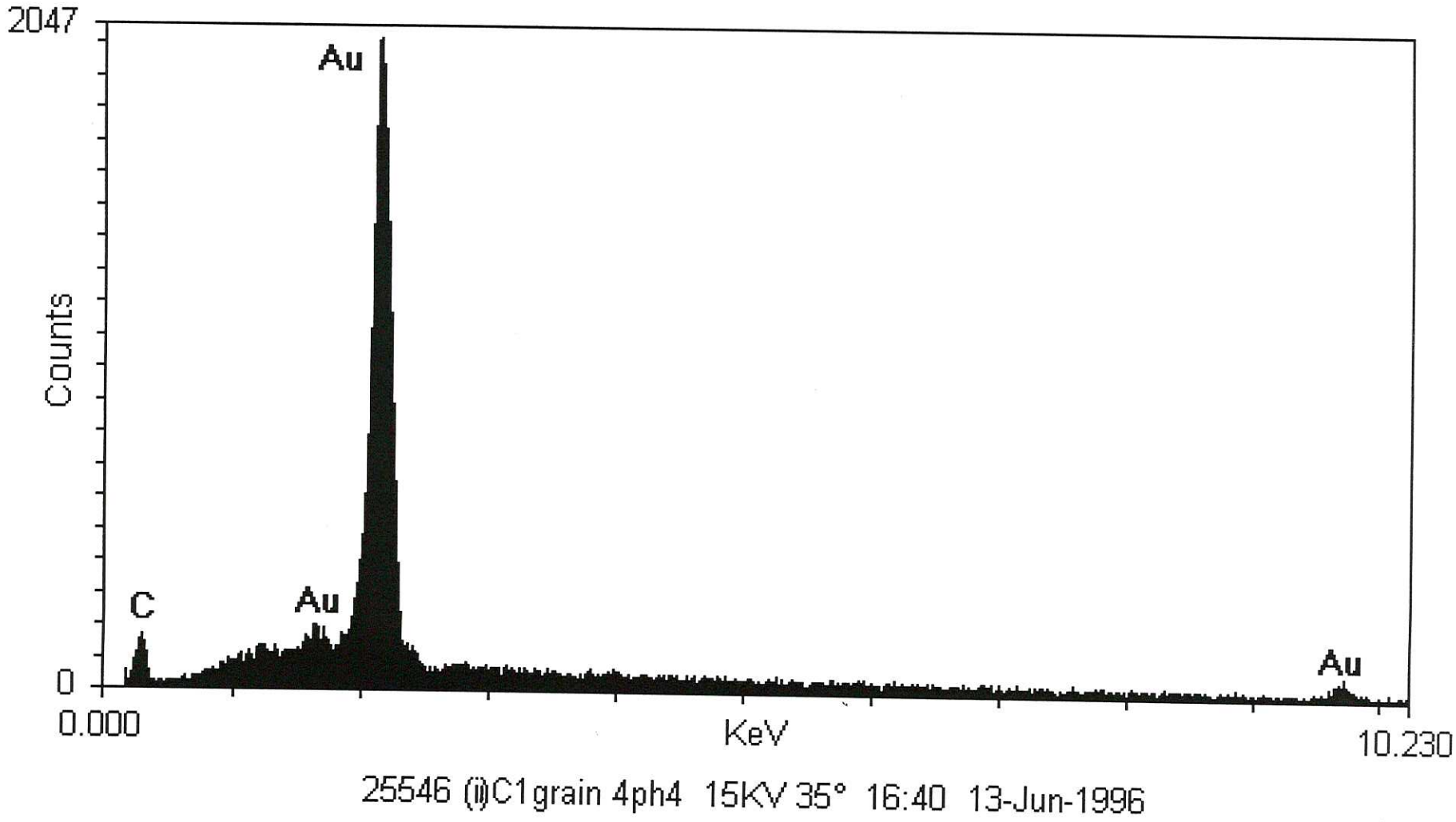

2047
Au
Counts
C
Au
0
Au
0.000
KeV
10.230
25546 (i)C1grain 4ph4 15KV 35° 16:40 13-Jun-1996

Fig 40

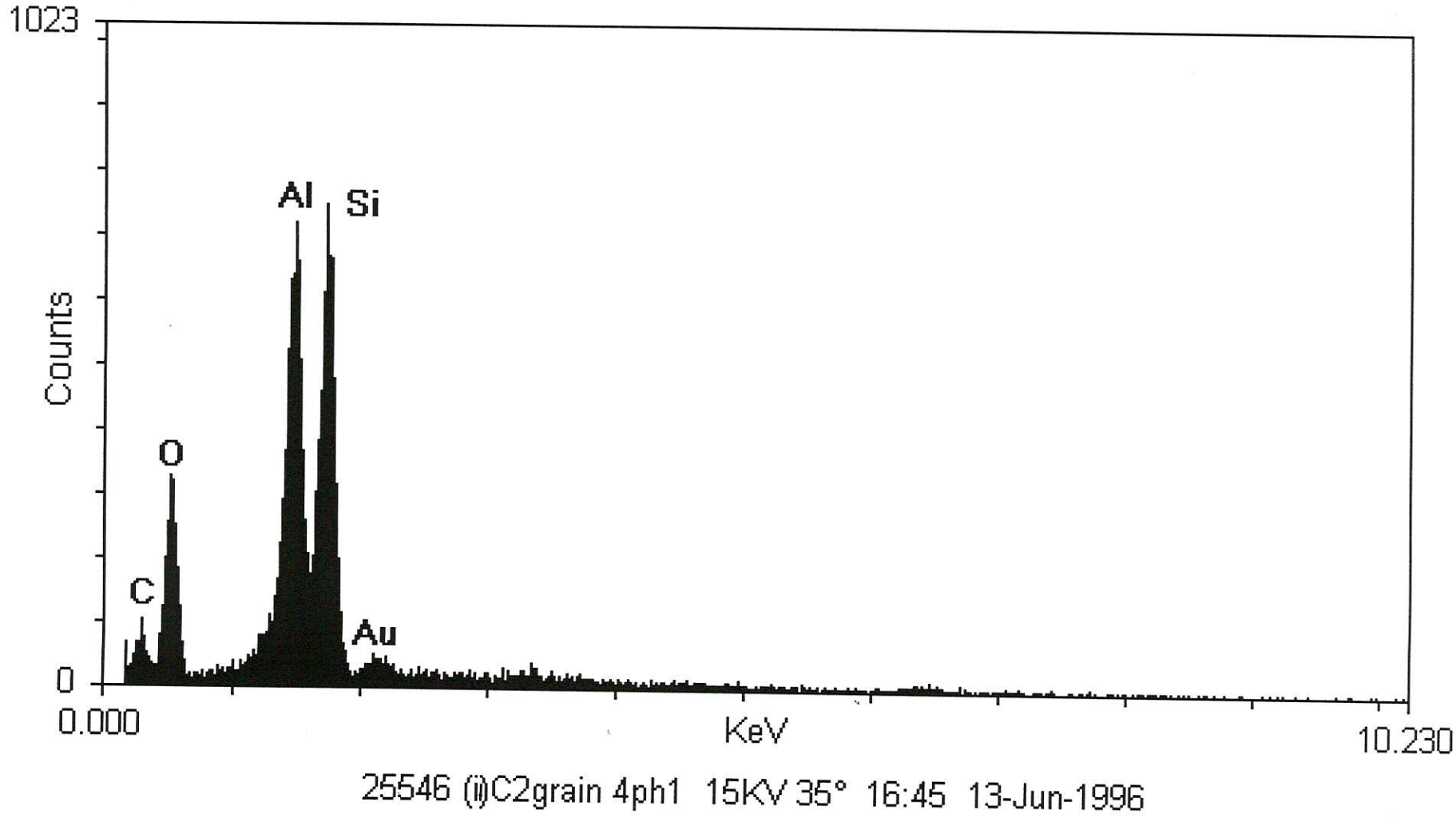

1023
Counts
0
Al
Si
O
C
Au
0.000
KeV
10.230
25546 (i)C2grain 4ph1 15KV 35° 16:45 13-Jun-1996

Fig 41

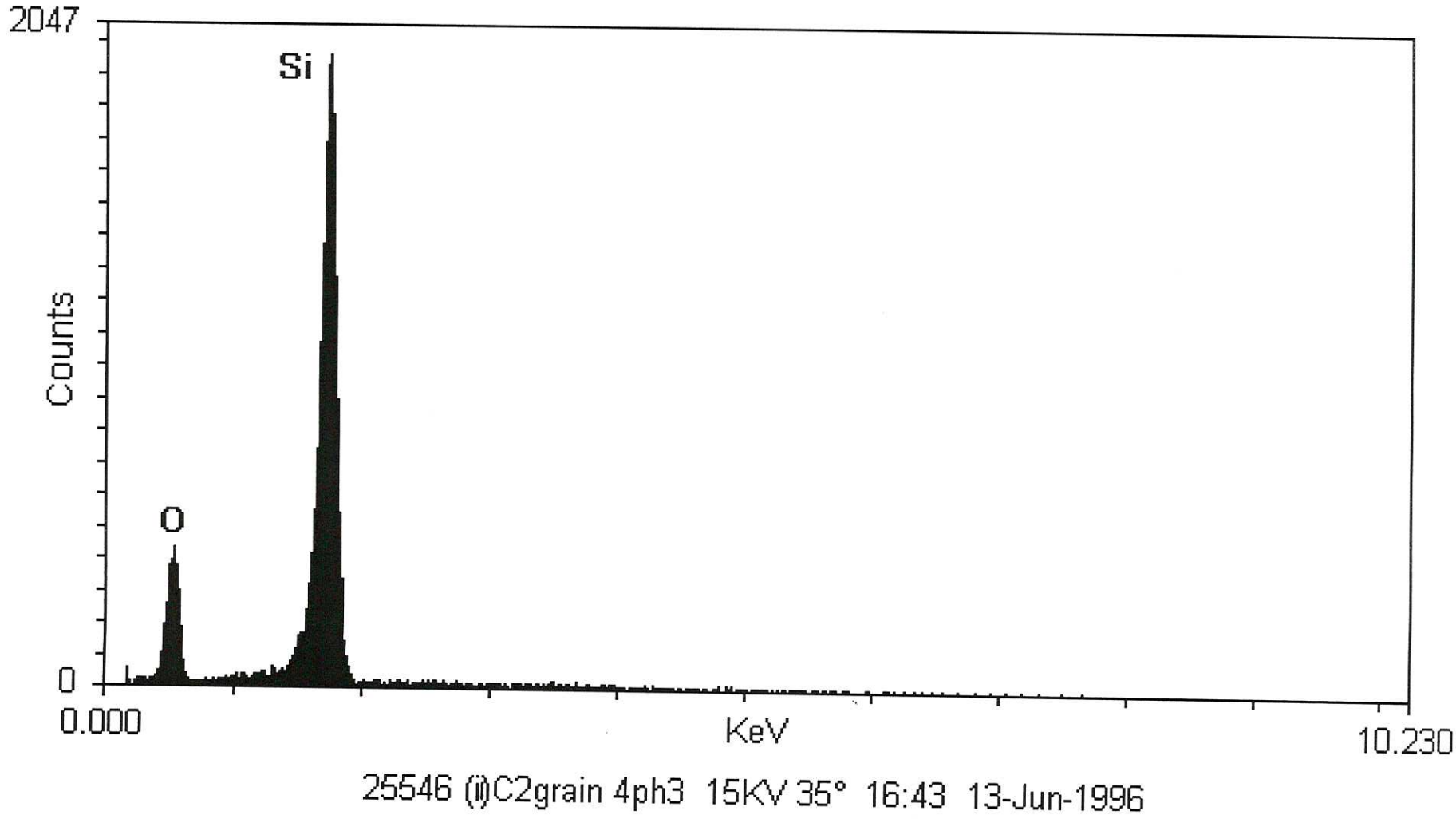
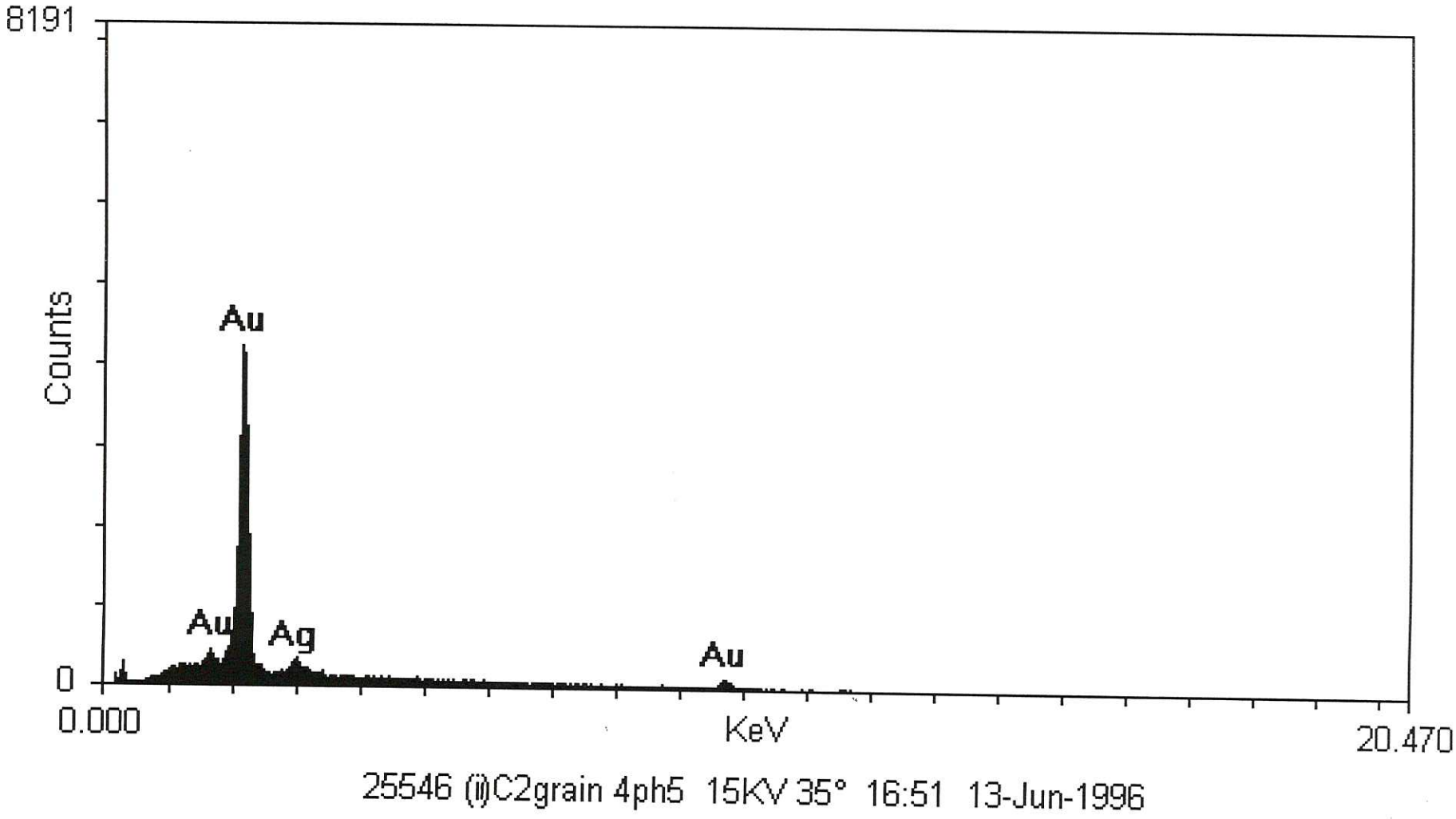

2047
Si
Counts
O
0
0.000
KeV
10.230
25546 (ii)C2grain 4ph3 15KV 35° 16:43 13-Jun-1996

Fig 42


8191
Counts
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Au
Au
Ag
Au
0.000
KeV
20.470
25546 (i)C2grain 4ph5 15KV 35° 16:51 13-Jun-1996

Fig 43

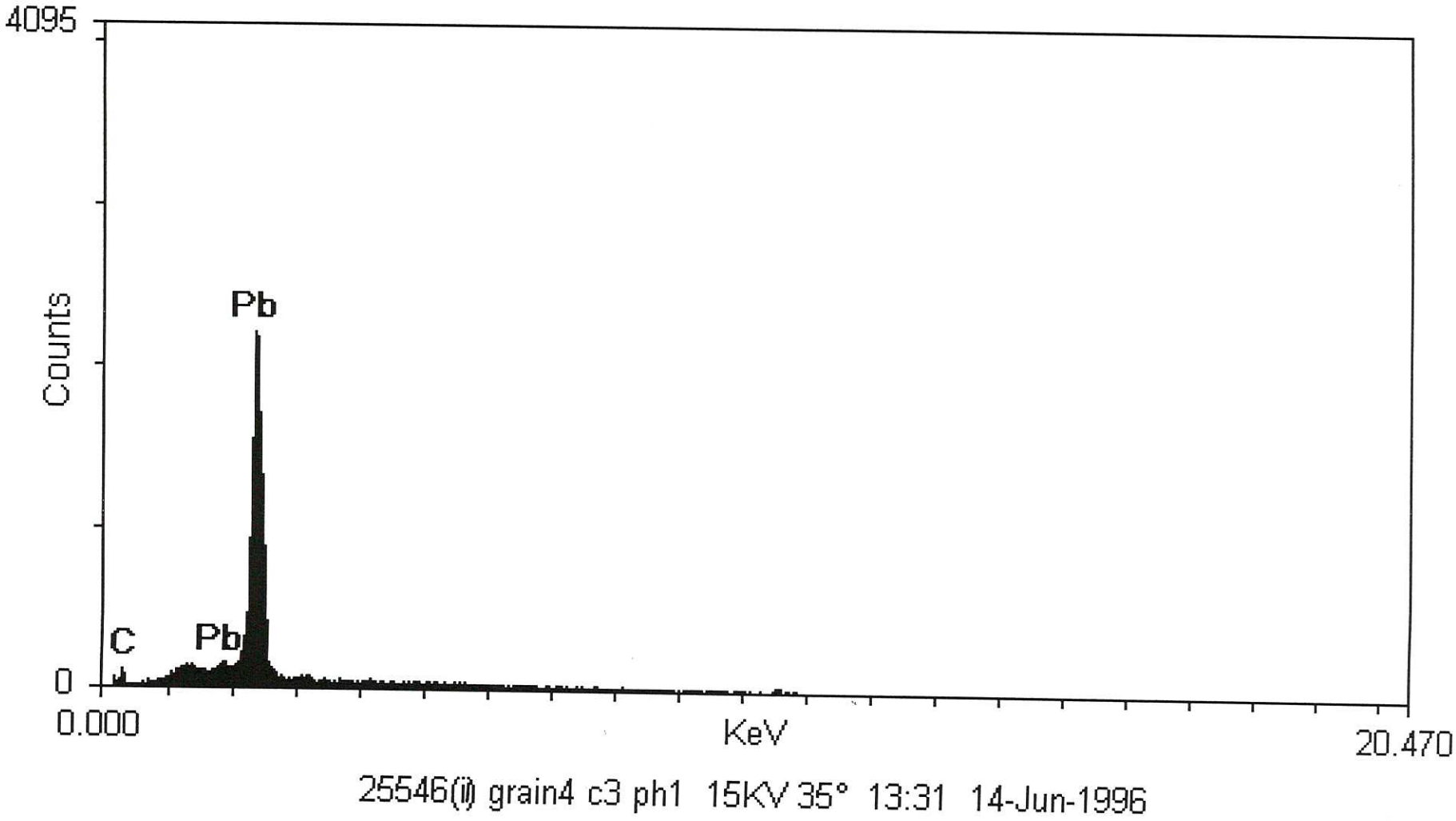

4095
Counts
Pb
C
Pb
0
0.000
KeV
20.470
25546(ii) grain4 c3 ph1 15KV 35° 13:31 14-Jun-1996

Fig 44

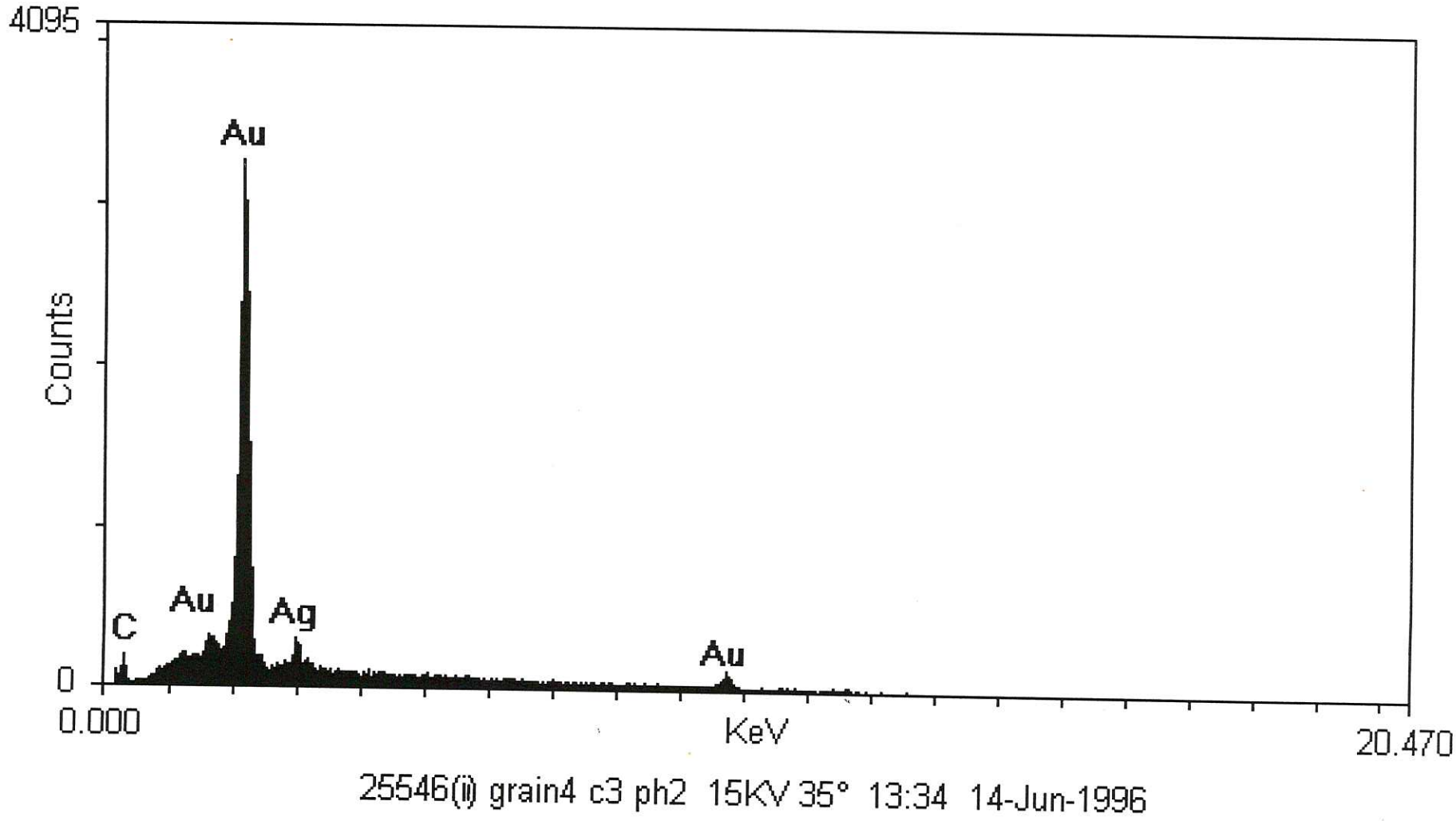

4095
Counts
0
0.000
Au
Au
Ag
C
Au
KeV
20.470
25546(ii) grain4 c3 ph2 15KV 35° 13:34 14-Jun-1996

Fig 45

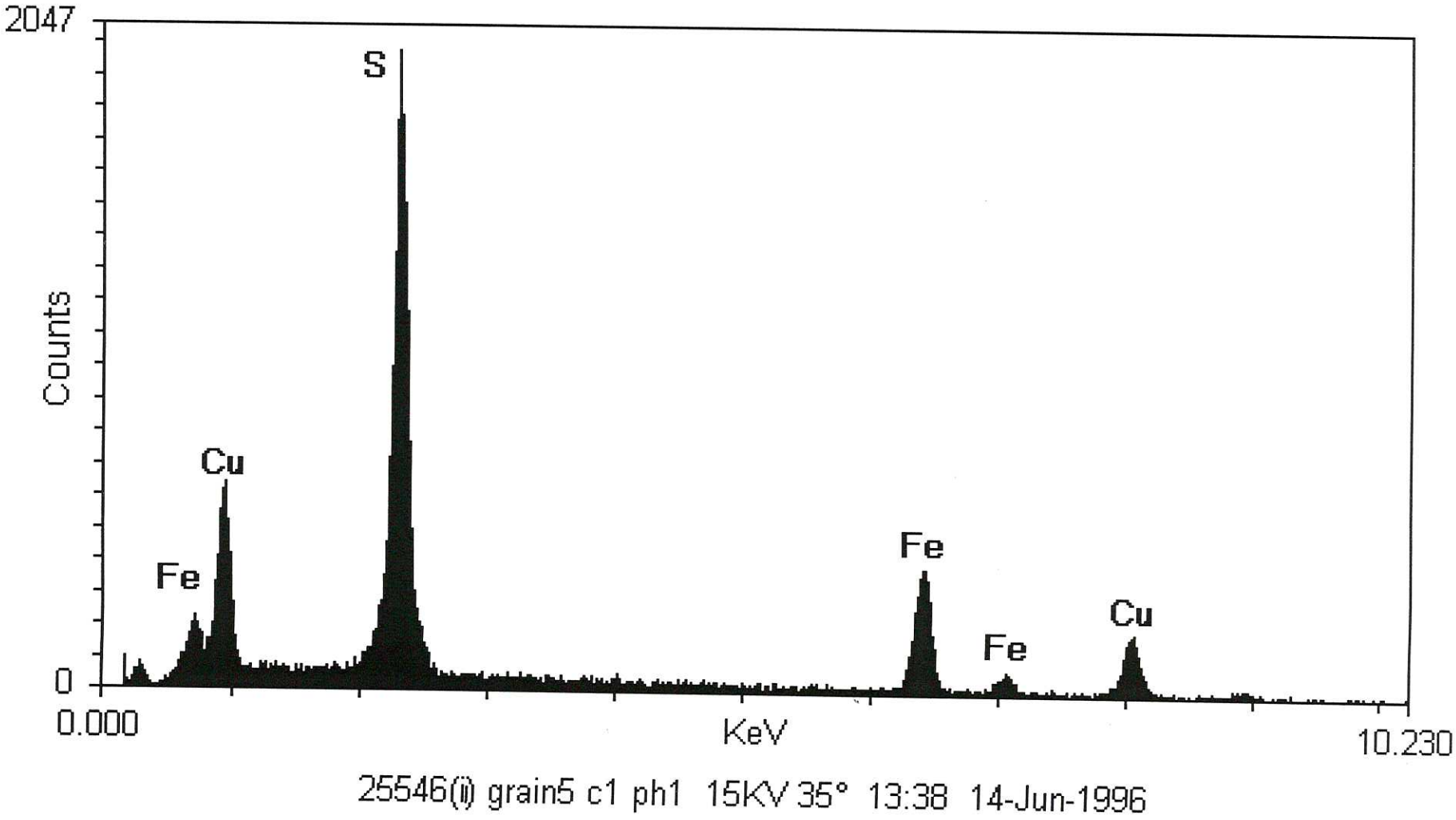

2047
Counts
0
S
Cu
Fe
Fe
Fe
Cu
0.000
KeV
10.230
25546(ii) grain5 c1 ph1 15KV 35° 13:38 14-Jun-1996

Fig 46

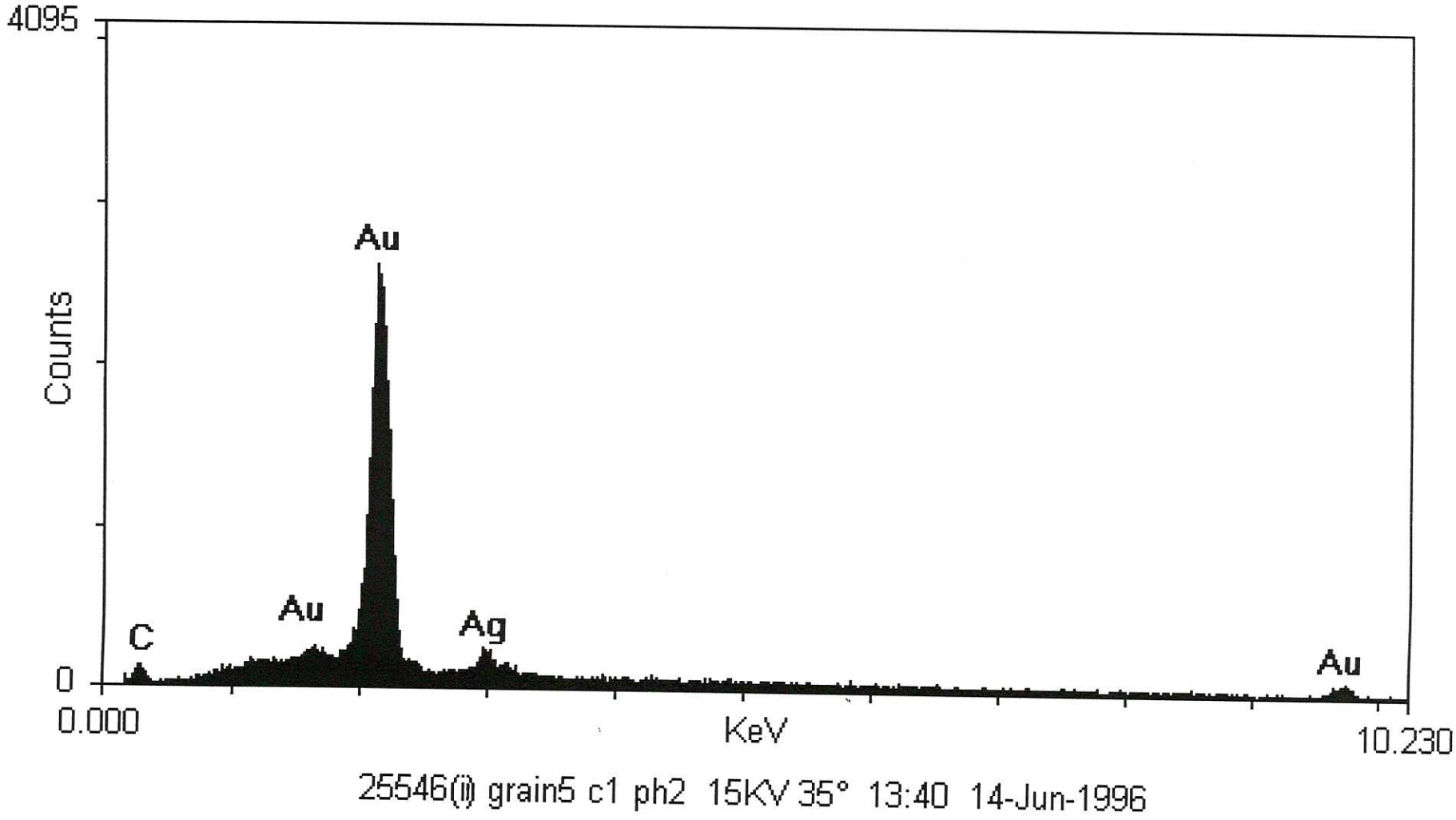

4095
Counts
0
0.000
KeV
10.230
Au
Au
Ag
C
Au
25546(ii) grain5 c1 ph2 15KV 35° 13:40 14-Jun-1996

Fig 47

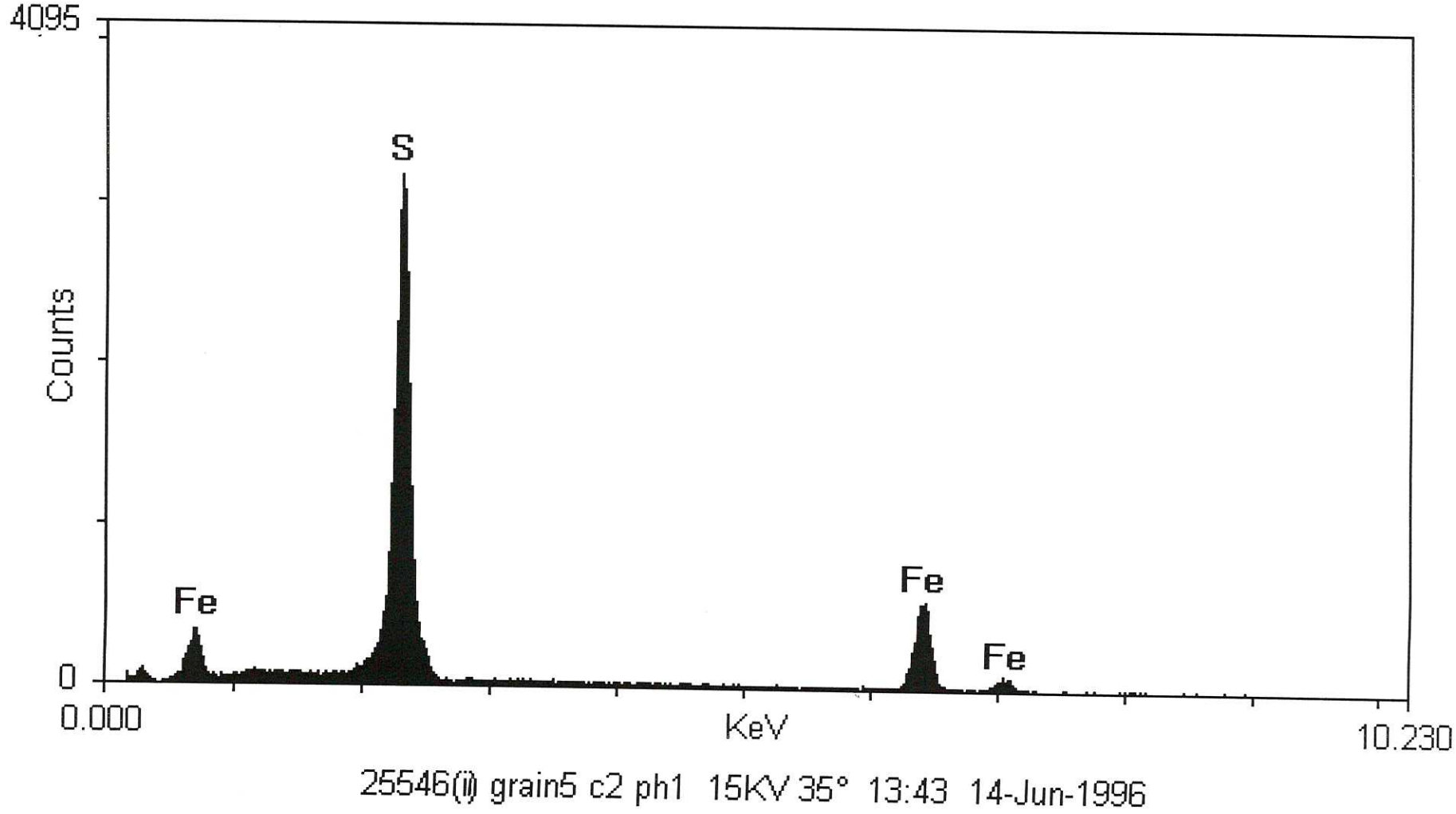

4095
Counts
0
0.000
S
Fe
Fe
Fe
KeV
10.230
25546(ii) grain5 c2 ph1 15KV 35° 13:43 14-Jun-1996

Fig 48

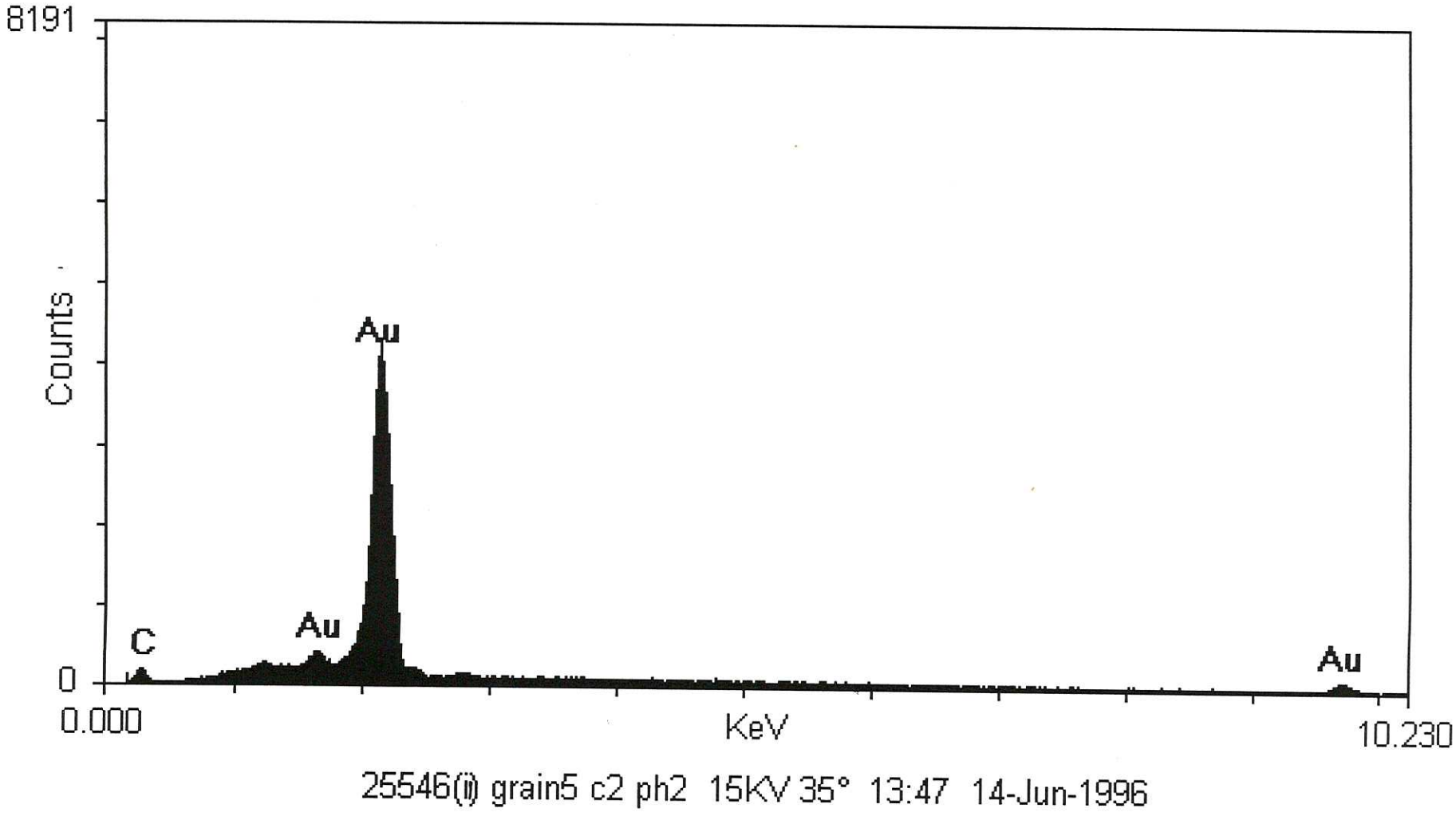

8191
Counts
0
Au
C
Au
Au
0.000
KeV
10.230
25546(ii) grain5 c2 ph2 15KV 35° 13:47 14-Jun-1996

Fig 49

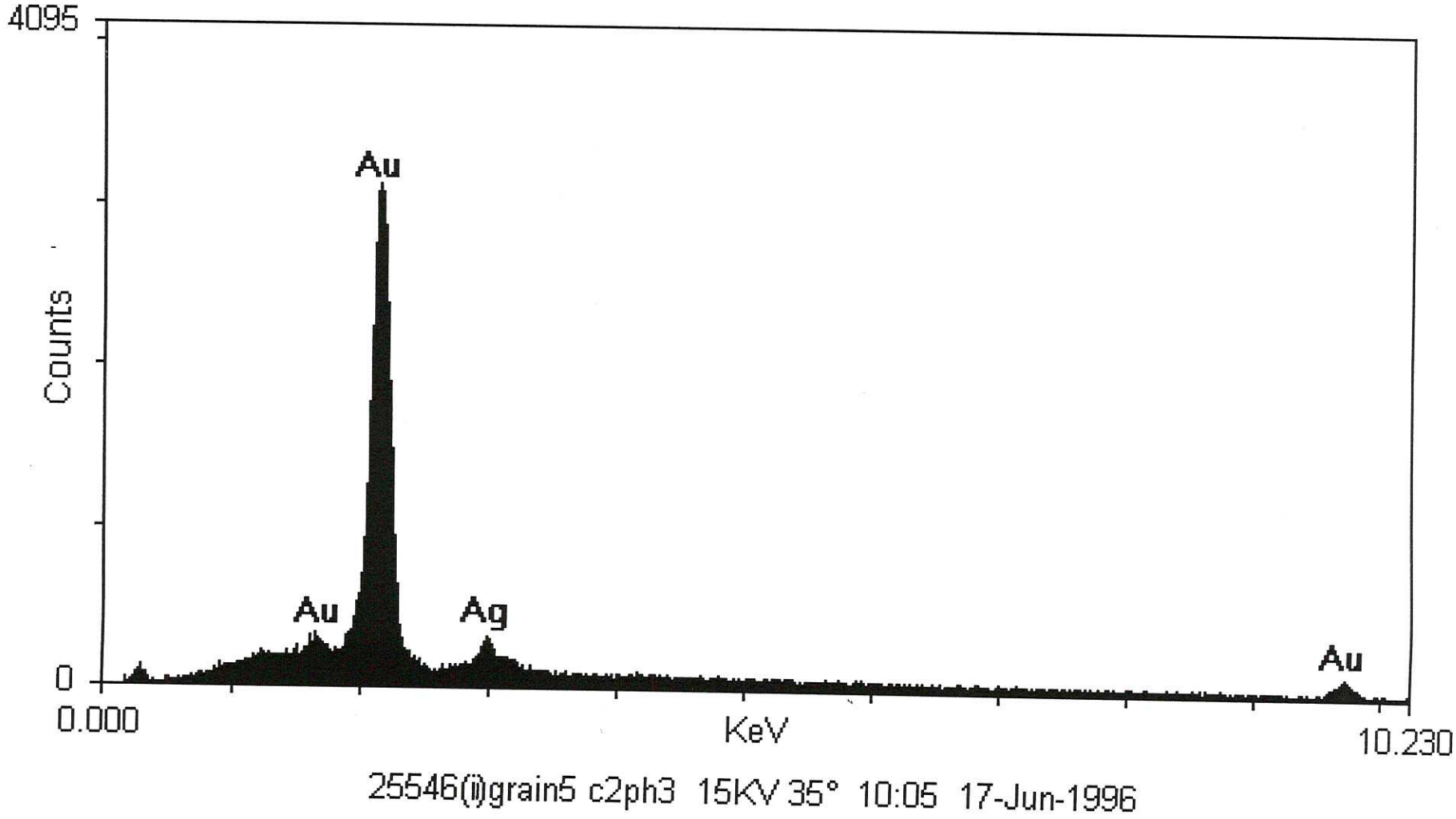

4095
Counts
0
Au
Au
Ag
Au
0.000
KeV
10.230
25546(ii)grain5 c2ph3 15KV 35° 10:05 17-Jun-1996

Fig 50

Plate 1

SEM photomicrographs of inclusions within sectioned gold nuggets, Comet Conglomerate, Bamboo Creek Area, Pilbara, W.A.

[MRL25546 (i)]

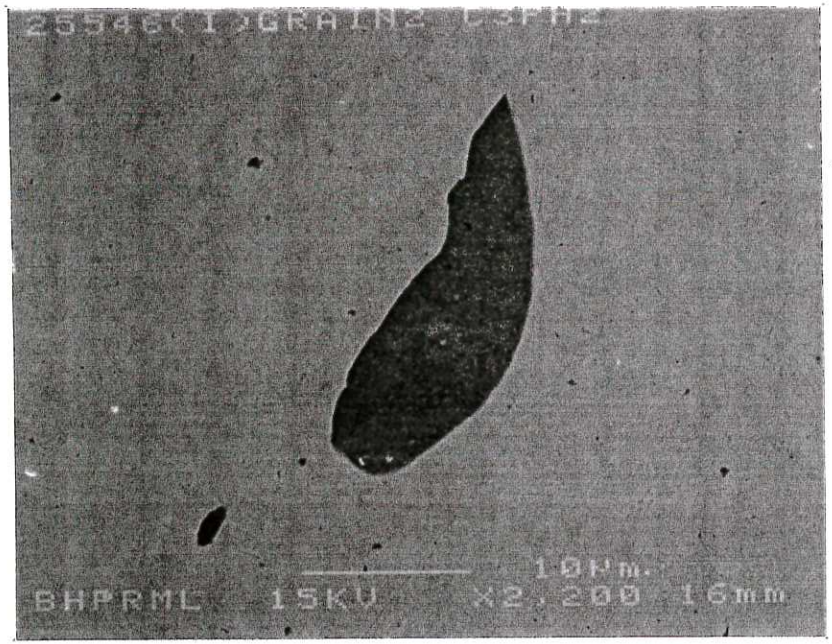
Bar scales shown in microns; individual photomicrographs arranged left to right:

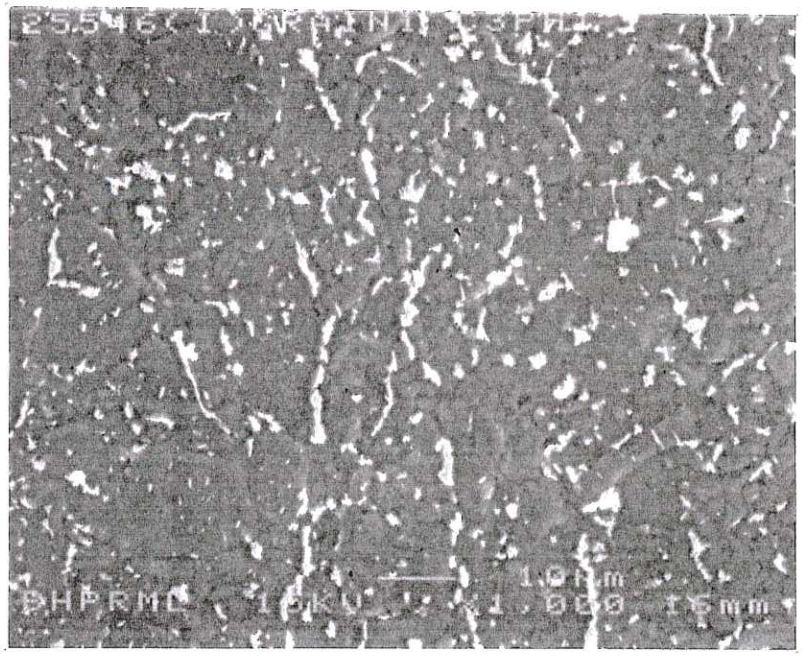
a Minute inclusions of supergene pure gold (white) within kaolinitic clay (grey). This intergrowth is located within a nugget of silver-bearing gold. Grain 1, C3, phases 1, 1b.

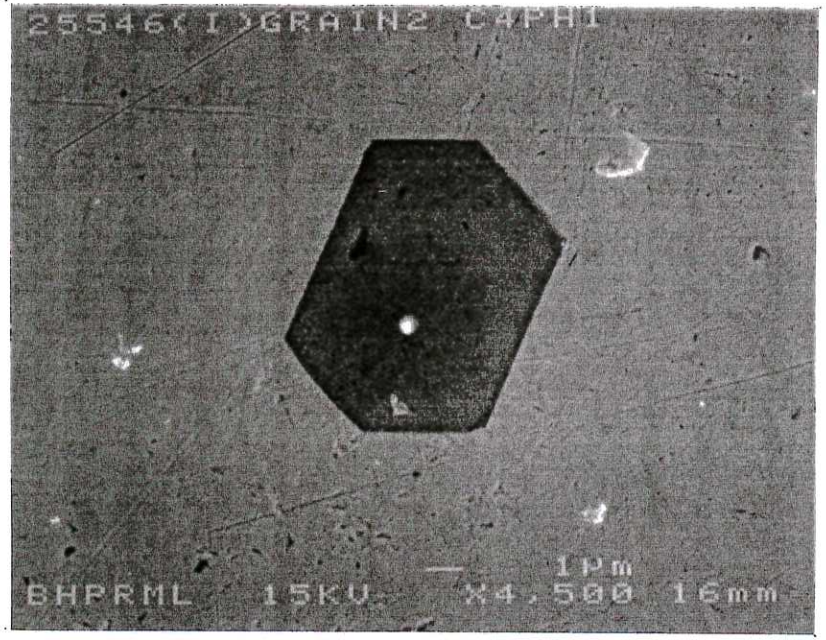
b Inclusion of chalcopyrite (centre, medium grey) within pure gold (light grey) Grain 2, C1, phase 1.

c Inclusion of chalcopyrite (medium grey) in pure gold (light grey). Grain 2, C3, phase 2.

d Euhedral orthorhombic crystal of cobaltite (Co As S) within pure gold. Grain 2, C4, phase 1.


10Pm
BHPRML 15KU X2,200 16mm


10Pm
BHPRML 15KU X1,000 16mm


25546(I)GRAIN2 C4PH1
1Pm
BHPRML 15KU X4,500 16mm

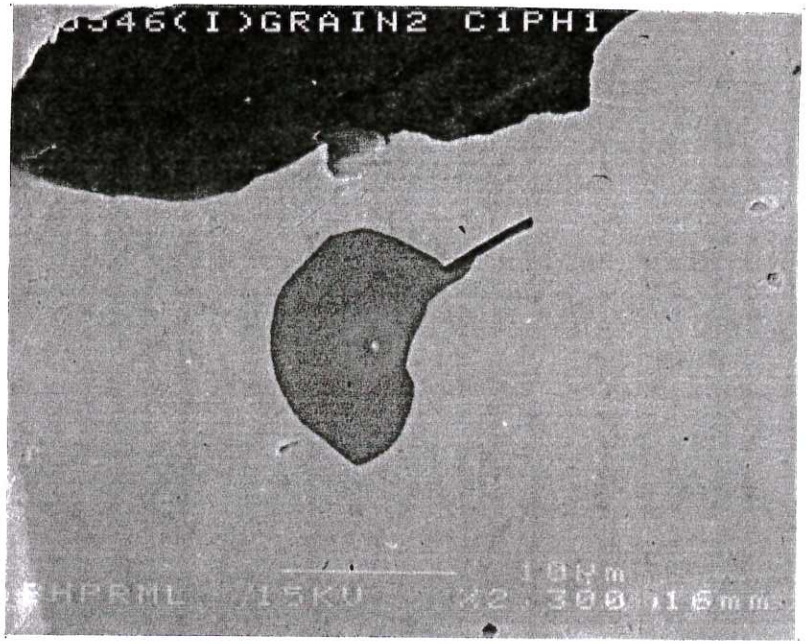

546(I)GRAIN2 C1PH1
10Pm
HPRML 15KU X2,300 16mm

Plate 2

SEM photomicrographs of inclusions and associated gangue minerals, sectioned gold nuggets, Comet Conglomerate, Bamboo Creek Area, Pilbara, W.A.

[MRL25546 (ii)]

Bar scales shown in microns; individual photomicrographs arranged left to right:

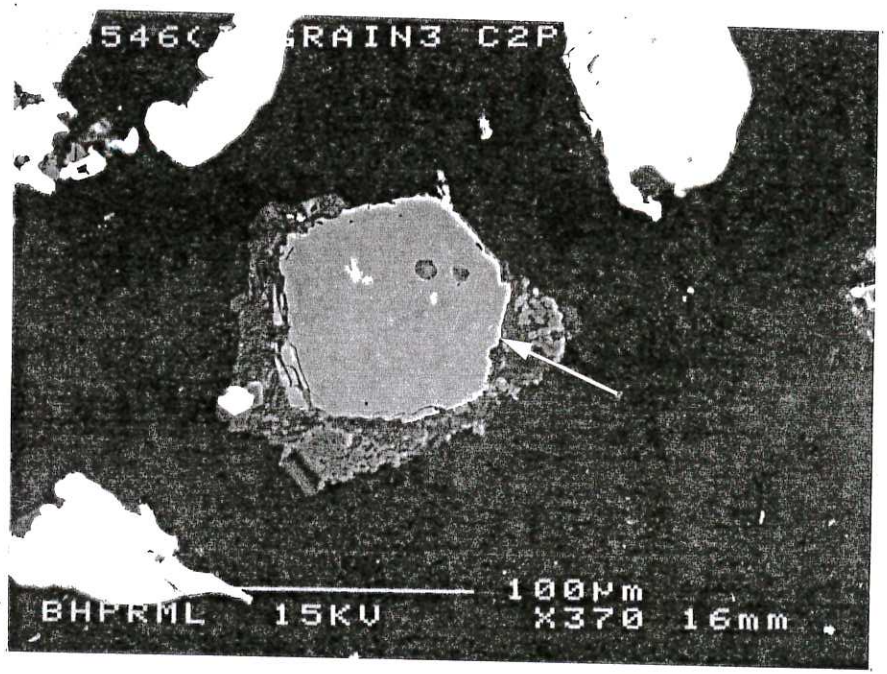
a Detrital grain of chrome spinel (see arrow) with two minute inclusions of a sodium magnesium aluminium silicate phase (? dravite) adjacent to silver-bearing gold (white). Grain 3, C2, phase 1, 1b.

b Inclusions of a copper-tin phase of uncertain origin (medium grey) within silver-bearing gold (light grey). Grain 3, C3, phase 1.

c Subrounded inclusion of chalcopyrite (dark grey) in silver-bearing gold (light-grey). Grain 4, C1, phase 1.

d Inclusion of galena (medium grey) in silver-bearing gold (light grey). Grain 4, C3, phase 1.


BHPRML 15KV
16mm


BHPRML 15KV
100µm
X370 16mm

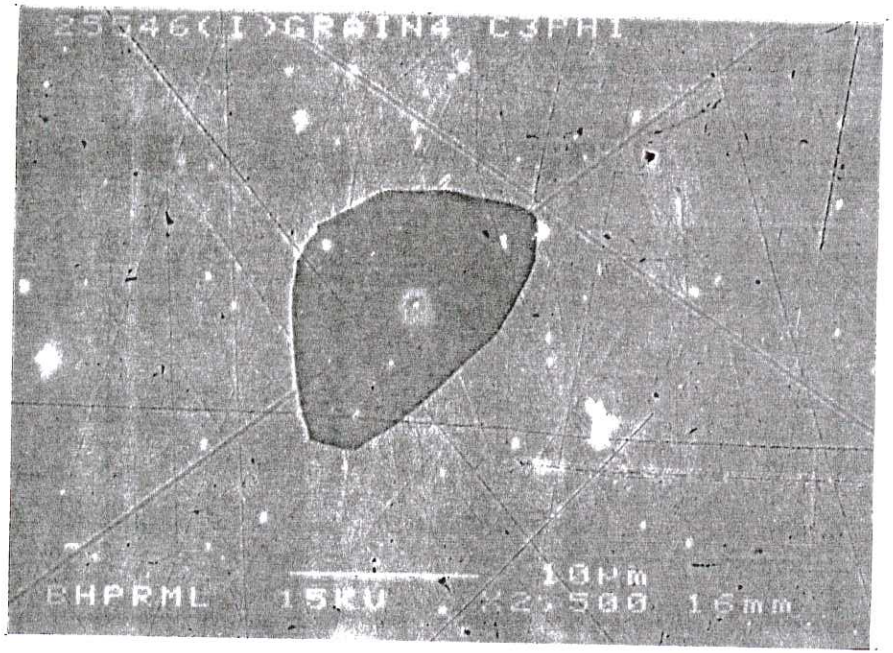

BHPRML 15KV
10µm
16mm

Plate 3

SEM photomicrographs of inclusions within a sectioned gold nugget, Comet Conglomerate, Bamboo Creek Area, Pilbara, W.A.

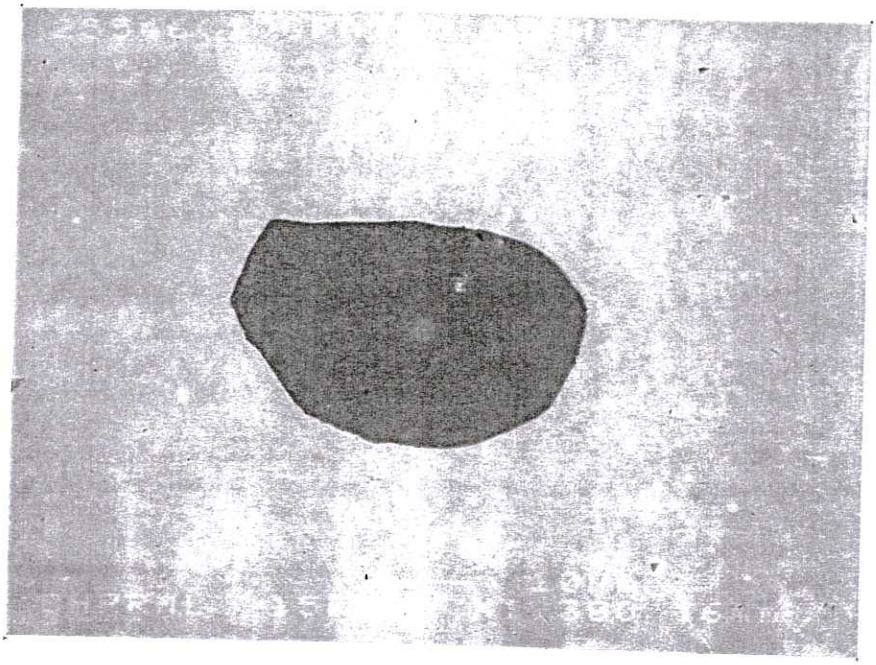
[MRL25546 (ii)]

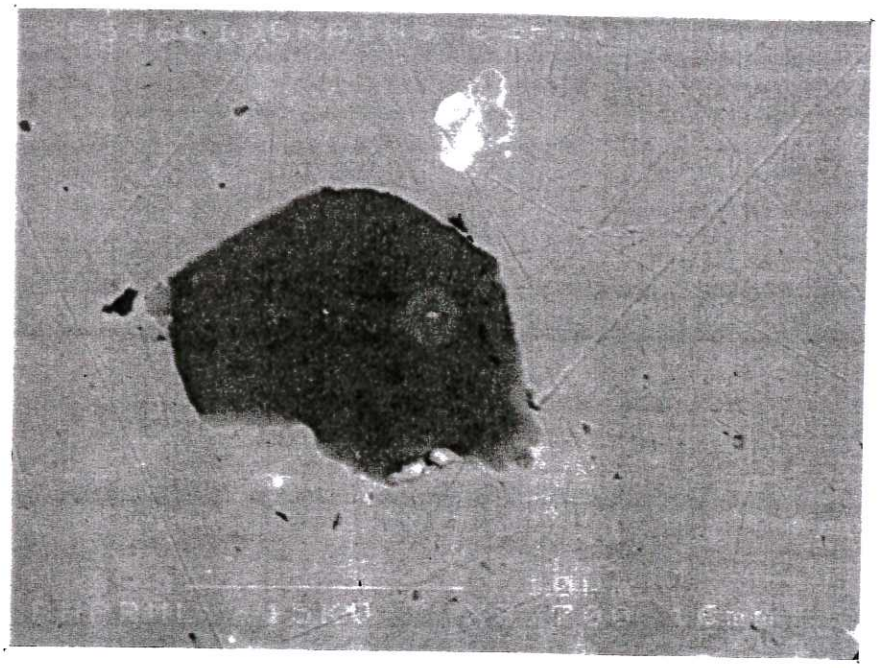
Bar scales shown in microns.

a Inclusion of chalcopyrite (darker grey) within silver-bearing gold (lighter grey). Grain 5, C1, phase 1.

b Inclusion of pyrite (darker grey) in silver-bearing gold (lighter grey). Grain 5, C2, phase 1.

3





Appendix 3: (Reported in Haoma's July 2017 Quarterly Report

1. Results from Test Work Trials on Bamboo Creek Tailings

Haoma shareholders were advised in Haoma's June 30, 2017 Haoma Quarterly Bamboo Creek Tailings tests produced **polymetallic dore** which contained significant gold (Au) and platinum (Pt) grades when measured by XRF. The average gold and platinum grades **calculated back to the five Bamboo Creek Tailings samples tested** were **319g/t gold and 35g/t platinum.**

In addition to the above five tests, two additional tests were conducted on a 4 kg sample of Bamboo Creek Tailings using a **'modified' Elazac Process**.

The two 300g sub-samples produced **polymetallic dore** with the grades of gold and platinum (Pt) measured by XRF. The average gold and platinum grades **calculated back to the two Bamboo Creek Tailings samples tested** were **147g/t gold and 131g/t platinum.**

2. Current Test Work Trials on Bamboo Creak Tailings

A two tonne bulk sample of Bamboo Creek Tailings has now being processed using the Elazac Process.

Sub-samples of 20kg (a commercial quantity) are now being processed using different **combinations of ore concentrations, acids, heat and smelting fluxes.** The tests are not yet completed; shareholders will be advised of the results when available.

3. Results from Test Work Trials on Mt Webber Iron Ore 'Slimes fraction'

Haoma shareholders advised that during July 2017 a 12 kg sample of low grade Mt Webber iron ore (54.85% Fe)[1] was beneficiated using a 'water wash' process. (See Appendix 2 for previous Haoma results when a 'water wash' process was used to beneficiate low grade Mt Webber iron ore (54.85% Fe).)

In addition to the upgraded 'iron ore fraction', a 2.4kg 'slimes fraction' was recovered representing 19.85% of the Mt Webber low grade iron ore.

Four 300g sub-samples were taken from the 2.4 kg 'slimes fraction' and assayed by the Elazac Process used to assay the Bamboo Creek Tailing Samples 1-5 above.

The tests produced **polymetallic dore** with the percentage of gold and platinum in the **polymetallic dore** measured by XRF.

The average precious metal grades measured over the four samples **calculated back to the Mt Webber Iron Ore 'Slimes fraction'** were **117g/t gold and 151g/t platinum.**

Additional tests were conducted on two of the four Mt Webber samples using a 'modified' Elazac Process. Table 3 below shows the precious metal grades calculated back to the Mt Webber Iron Ore 'Slimes fraction'.

[1] The sample was provided to Haoma Mining by Atlas Iron from Atlas' M45/1209 lease where Atlas is now mining at Mt Webber. M45/1209 is adjacent to M45/1197 where Haoma has a **royalty entitlement** and **a right to access and explore**. (See Appendix 3).

Table 3:

Average grades (Released July 13, 2017)	**Gold grade**	**Platinum grade**
Four samples	**117g/t**	**151g/t**
Two samples **re-treated** using a 'modified' Elazac Process	**85g/t**	**110g/t**
Two samples **NOT** re-treated	**148g/t**	**195g/t**

The polymetallic dore produced from the two **re-treated** samples (using a 'modified' Elazac Process) measured **3% gold and 3% platinum** by XRF. **The dore grade of 6% gold and platinum is at a level that would be accepted by a precious metal refiner.**

The latest results shows a significant up-grade in the quantity of gold and platinum measured in the dore recovered.

The average gold and platinum grades **calculated back to the Mt Webber Iron Ore 'Slimes fraction'** were **888g/t gold and 946g/t platinum.**

Table 4:

Mt Webber 'slimes fraction'

	Initial test results		**Results after re-treating using 'modified' Elazac Process**	
	Gold grade	**Platinum grade**	**Re-treated Gold grade**	**Re-treated Platinum grade**
Average precious metal grades of two samples re-treated using a 'modified' Elazac Process	**85g/t**	**110g/t**	**888g/t**	**946g/t**

The above Haoma results were achieved using traditional plant processing equipment which recovered precious metal dore from concentrates produced at Bamboo Creek.